

PPG II 15425  
 CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

[illegible]

PPG II SERIES

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY PRODUCT REPORT

CONFIDENTIAL:

Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

[illegible]

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CHEMICAL DIVISION

LAKE CHARLES, LOUISIANA

## LABORATORY PRODUCT REPORT

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

SL 013159

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

## LABORATORY PRODUCT REPORT

| SODIUM CHLORATE SHIPMENTS                                                                      |        |         |         |         |         |         |         |         |      |         |         |          |              |         |
|------------------------------------------------------------------------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|------|---------|---------|----------|--------------|---------|
| 1970<br>AVG.                                                                                   | JAN    | FEB     | MAR     | APR     | MAY     | JUNE    | JULY    | AUG     | SEP  | OCT     | NOV     | DEC      | 1971<br>AVG. |         |
| PRODUCT - %                                                                                    |        |         |         |         |         |         |         |         |      |         |         |          |              |         |
| NaClO <sub>3</sub>                                                                             | 99.96  | 99.97   | 99.97   | 99.98   | 99.98   | 99.97   | 99.97   | 99.97   | -    | 99.94   | 99.96   | 99.96    | -            | 99.97   |
| NaCl                                                                                           | 0.04   | 0.03    | 0.03    | 0.02    | 0.02    | 0.03    | 0.03    | 0.03    | -    | 0.06    | 0.04    | 0.04     | 0.04         | 0.03    |
| Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>                                                 | .00038 | .00031  | .00034  | .00024  | .00027  | .00042  | .00045  | .00023  | -    | .00043  | .00063  | .00064   | .00046       | .00040  |
| Na <sub>2</sub> SO <sub>4</sub>                                                                | 0.001  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | -    | (0.001) | (0.001) | (0.001)  | (0.001)      | (0.001) |
| Fe                                                                                             | .00004 | .00005  | .00003  | .0003   | .00001  | .00006  | .00004  | .00001  | -    | .00005  | .00005  | (.00000) | (.00000)     | .00003  |
| RESIDUE                                                                                        | .001   | (.001)  | .002    | .001    | (.001)  | (.001)  | (.001)  | (.001)  | -    | (.001)  | (.001)  | (.001)   | (.001)       | (.001)  |
| MOISTURE                                                                                       | 0.02   | 0.02    | 0.02    | 0.04    | 0.02    | 0.04    | 0.03    | -       | -    | 0.04    | 0.04    | 0.06     | 0.09         | 0.04    |
| * SIEVE ANALYSIS                                                                               |        |         |         |         |         |         |         |         |      |         |         |          |              |         |
| % LARGER THAN SCREEN SIZE                                                                      |        |         |         |         |         |         |         |         |      |         |         |          |              |         |
| MESH                                                                                           | 20     | 34.1    | 35.9    | 31.4    | 39.9    | 33.1    | 30.6    | 29.3    | 27.8 | -       | 20.6    | 47.0     | 27.2         | 44.2    |
|                                                                                                | 40     | 80.4    | 79.5    | 72.3    | 82.5    | 74.8    | 81.8    | 73.2    | 78.3 | -       | 74.5    | 80.0     | 90.0         | 87.0    |
|                                                                                                | 100    | 86.1    | 93.2    | 89.4    | 94.4    | 92.9    | 95.1    | 91.9    | 93.4 | -       | 92.6    | 97.2     | 99.8         | 93.4    |
| CONFIDENTIAL:<br>Subject to Protective Order<br>of 14th Judicial District Court<br>No. 91-1145 |        |         |         |         |         |         |         |         |      |         |         |          |              |         |

SL 013161

\*Screen Test - U.S. Standard

## PROCESSES

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY PRODUCT REPORT

| TRICHLOR SHIPMENTS                    | 1970<br>AVG. | JAN   | FEB    | MAR    | APR    | MAY   | JUNE  | JULY   | AUG   | SEP                             | OCT   | NOV   | DEC   | 1971<br>AVG. |
|---------------------------------------|--------------|-------|--------|--------|--------|-------|-------|--------|-------|---------------------------------|-------|-------|-------|--------------|
| TYPE 122 (Degreasing & Solvent Grade) |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| COLOR APHA                            | (5           | 7     | 7      | 6      | 8      | 9     | 9     | (5     | 7     | 7                               | 9     | 9     | 10    | 8            |
| SPECIFIC GRAVITY 20/20 °C             | 1.460        | -     | 1.461  | 1.460  | 1.463  | 1.461 | 1.461 | 1.460  | 1.460 | 1.460                           | 1.460 | 1.460 | 1.462 | 1.461        |
| DISTILLATION RANGE °C                 |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| LOW                                   | 86.3         | -     | 86.0   | 86.0   | 86.0   | 86.5  | 86.4  | 86.3   | 86.2  | 86.1                            | 86.3  | 86.3  | 86.2  | 86.2         |
| HIGH                                  | 87.7         | -     | 87.8   | 87.7   | 88.2   | 87.8  | 87.8  | 87.9   | 88.0  | 87.9                            | 88.0  | 87.8  | 87.6  | 87.9         |
| WATER CONTENT CLOUD POINT °C          | (-10         | (-10  | (-10   | (-10   | (-10   | (-10  | (-10  | (-10   | (-10  | (-10                            | (-10  | (-10  | (-10  | (-10         |
| NON-VOLATILE %                        | .0013        | -     | .0006  | .0021  | .0011  | .0018 | .0019 | .0015  | .0018 | .0015                           | .0016 | .0018 | .0012 | .0015        |
| ACID ACCEPTANCE % AS NaOH             | 0.15         | -     | 0.15   | 0.15   | 0.14   | 0.15  | 0.15  | 0.16   | 0.16  | 0.15                            | 0.14  | 0.14  | 0.16  | 0.15         |
| pH                                    | 7.6          | 7.4   | 7.6    | 7.4    | 7.7    | 7.8   | 7.7   | 8.1    | 8.1   | 8.0                             | 8.0   | 8.2   | 8.6   | 7.9          |
| Acidity/Alkalinity                    | .0002        | .0002 | .0002  | .0001  | .0002  | .0002 | .0002 | .0002  | .0002 | .0002                           | .0002 | .0002 | .0003 | .0002        |
| TYPE E.110                            |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| COLOR APHA                            | 5            | -     | 7      | 7      | -      | -     | -     | 5      | -     | 7                               | 10    | 13    | -     | 8            |
| SPECIFIC GRAVITY 20/20 °C             | -            | -     | -      | -      | -      | -     | -     | -      | -     | -                               | -     | -     | -     | -            |
| DISTILLATION RANGE °C                 |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| LOW                                   | -            | -     | -      | -      | -      | -     | -     | -      | -     | -                               | -     | -     | -     | -            |
| HIGH                                  | -            | -     | -      | -      | -      | -     | -     | -      | -     | -                               | -     | -     | -     | -            |
| WATER CONTENT CLOUD POINT °C          | (-10         | -     | (-10   | (-10   | -      | -     | -     | (-10   | -     | -                               | (-10  | (-10  | -     | (-10         |
| NON-VOLATILE %                        | -            | -     | -      | -      | -      | -     | -     | -      | -     | -                               | -     | -     | -     | -            |
| ACID ACCEPTANCE % AS NaOH             | -            | -     | -      | -      | -      | -     | -     | -      | -     | -                               | -     | -     | -     | -            |
| TYPE 113 (High Purity Grade)          |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| COLOR APHA                            | 5            | 7     | 7      | 7      | 8      | -     | 9     | (5     | 6     | 6                               | 8     | 9     | 8     | 7            |
| SPECIFIC GRAVITY 20/20 °C             | -            | -     | -      | -      | -      | -     | -     | -      | 1.460 | -                               | -     | -     | -     | -            |
| DISTILLATION RANGE °C                 |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
| LOW                                   | -            | -     | -      | -      | -      | -     | -     | -      | 86.6  | -                               | -     | -     | -     | -            |
| HIGH                                  | -            | -     | -      | -      | -      | -     | -     | -      | 88.0  | -                               | -     | -     | -     | -            |
| WATER CONTENT CLOUD POINT °C          | (-10         | (-10  | (-10   | (-10   | (-10   | -     | (-10  | (-10   | (-10  | (-10                            | (-10  | (-10  | (0    | (-10         |
| NON-VOLATILE %                        | (.0001       | .0001 | (.0001 | (.0001 | (.0001 | -     | .0002 | (.0001 | .0003 | .0001                           | .0001 | .0002 | .0002 | .0001        |
| SL 013162                             |              |       |        |        |        |       |       |        |       |                                 |       |       |       |              |
|                                       |              |       |        |        |        |       |       |        |       | CONFIDENTIAL:                   |       |       |       |              |
|                                       |              |       |        |        |        |       |       |        |       | Subject to Protective Order     |       |       |       |              |
|                                       |              |       |        |        |        |       |       |        |       | of 14th Judicial District Court |       |       |       |              |
|                                       |              |       |        |        |        |       |       |        |       | No. 91-1145                     |       |       |       |              |

## PPG INDUSTRIES

CHEMICAL DIVISION

LAKE CHARLES, LOUISIANA

## LABORATORY PRODUCT REPORT

[illegible]

SL 013163

|                                 |                             |               |  |
|---------------------------------|-----------------------------|---------------|--|
|                                 |                             | CONFIDENTIAL: |  |
|                                 | Subject to Protective Order |               |  |
| of 14th Judicial District Court |                             |               |  |
|                                 | No. 91-1145                 |               |  |

BPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY PRODUCT REPORT

| PERCHLOR SHIPMENTS                                             | 1970<br>AVG. | JAN | FEB    | MAR    | APR   | MAY    | JUNE   | JULY   | AUG   | SEP    | OCT    | NOV   | DEC | 1971<br>AVG. |
|----------------------------------------------------------------|--------------|-----|--------|--------|-------|--------|--------|--------|-------|--------|--------|-------|-----|--------------|
| TYPE 207                                                       |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| COLOR APHA                                                     | 8.           | 8   | 9      | 8      | 12    | 12     | 10     | 10     | 12    | 11     | 9      | 12    | 14  | 11           |
| SPECIFIC GRAVITY 20/20 °C                                      | 1.624        | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| DISTILLATION RANGE °C                                          |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| LOW                                                            | 121.4        | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| HIGH                                                           | 121.9        | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| WATER CONTENT CLOUD POINT °C                                   | (0           | (0  | (0     | (0     | (0    | (0     | (0     | (0     | (0    | (0     | (0     | (0    | (0  | (0           |
| NON-VOLATILE WT. %                                             | (.0001       | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| PH                                                             | 8.3          | 8.1 | 8.4    | 8.2    | 8.2   | 8.1    | 8.2    | 8.2    | 8.0   | 8.4    | 8.6    | 8.4   | 8.4 | 8.3          |
| ACID ACCEPTANCE % AS NAOH                                      | -            | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| COPPER CORROSION                                               |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| ACIDITY ML OF 0.01 N NAOH                                      | 3            | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| FLASK MG/30 CM <sup>2</sup>                                    | 1            | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| SOXHLET MG/30 CM <sup>2</sup>                                  | 6            | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| CONDENSER MG/30 CM <sup>2</sup>                                | 6            | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| CHLORIDES PPM                                                  | 0.25         | -   | -      | -      | -     | -      | -      | -      | -     | -      | -      | -     | -   | -            |
| TYPE 208                                                       |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| COLOR APHA                                                     | 8            | 8   | 8      | 8      | 8     | 10     | 10     | 8      | 8     | 10     | 11     | 12    | 12  | 9            |
| SPECIFIC GRAVITY 20/20 °C                                      | 1.624        | -   | -      | -      | 1.624 | 1.624  | 1.625  | 1.623  | 1.623 | 1.624  | 1.624  | 1.624 | -   | 1.624        |
| DISTILLATION RANGE °C                                          |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| LOW                                                            | 121.2        | -   | -      | -      | 120.9 | 120.9  | 121.1  | 121.1  | 121.0 | 121.2  | 121.2  | 121.0 | -   | 121.1        |
| HIGH                                                           | 121.9        | -   | -      | -      | 122.0 | 121.9  | 121.9  | 122.0  | 122.0 | 122.0  | 122.0  | 122.0 | -   | 122.0        |
| WATER CONTENT CLOUD POINT °C                                   | (0           | (0  | (0     | (0     | (0    | (0     | (0     | (0     | (0    | (0     | (0     | (0    | (0  | (0           |
| NON-VOLATILE WT. %                                             | .0004        | -   | (.0004 | (.0001 | .0002 | (.0001 | (.0001 | (.0001 | -     | (.0001 | (.0001 | .0003 | -   | .0001        |
| PH                                                             | 6.7          | 6.6 | 6.7    | 6.4    | 6.4   | 6.3    | 6.5    | 6.4    | 6.5   | 6.6    | 6.4    | 6.3   | 6.2 | 6.4          |
| COPPER CORROSION                                               |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| ACIDITY ML OF 0.01 N NAOH                                      | 2            | -   | 1      | 3      | 1     | 4      | 2      | 1      | 1     | 4      | 1      | 2     | -   | 2            |
| FLASK MG/30 CM <sup>2</sup>                                    | (1           | -   | 1      | (1     | 2     | (1     | 2      | 1      | 2     | 2      | 2      | 1     | -   | 1            |
| SOXHLET MG/30 CM <sup>2</sup>                                  | 5            | -   | 1      | 3      | 5     | 6      | 6      | 5      | 7     | 6      | 6      | 5     | -   | 5            |
| CONDENSER MG/30 CM <sup>2</sup>                                | 5            | -   | 1      | 3      | 5     | 6      | 10     | 5      | 5     | 6      | 5      | 5     | -   | 5            |
| CHLORIDES PPM                                                  | 0.08         | -   | 0.12   | 0.06   | 0.06  | (0.06  | (0.06  | 0.05   | (0.06 | (0.06  | 0.06   | 0.08  | -   | 0.06         |
| CONFIDENTIAL.                                                  |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| Subject to Protective Order<br>of 14th Judicial District Court |              |     |        |        |       |        |        |        |       |        |        |       |     |              |
| No. 91-145                                                     |              |     |        |        |       |        |        |        |       |        |        |       |     |              |

SL 013164

PPG INDUSTRIES  
 CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA  
 LABORATORY PRODUCT REPORT

CONFIDENTIAL:  
 Subject to Protective Order  
 of 14th Judicial District Court  
 No. 91-1145

| PERCHLOR SHIPMENTS              | 1970<br>AVG. | JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEP | OCT | NOV | DEC | 1971<br>AVG. |
|---------------------------------|--------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|--------------|
| TYPE 203                        |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
| COLOR APHA                      | (5           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| SPECIFIC GRAVITY 20/20 °C       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| DISTILLATION RANGE °C           |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
| LOW                             | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| HIGH                            | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| WATER CONTENT CLOUD POINT °C    | (-10         | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| NON-VOLATILE wt. %              | (.0001       | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| PH                              | 9.5          | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| ACID ACCEPTANCE % AS NaOH       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| COPPER CORROSION                | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| ACIDITY ML OF 0.01 N NaOH       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| FLASK MG/30 CM <sup>2</sup>     | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| SOXHLET MG/30 CM <sup>2</sup>   | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| CONDENSER MG/30 CM <sup>2</sup> | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| CHLORIDES PPM                   | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
|                                 |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
|                                 |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
| TYPE 209                        |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
| COLOR APHA                      | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| SPECIFIC GRAVITY 20/20 °C       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| DISTILLATION RANGE °C           |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
| LOW                             | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| HIGH                            | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| WATER CONTENT CLOUD POINT °C    | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| NON-VOLATILE wt. %              | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| PH                              | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| ACID ACCEPTANCE % AS NaOH       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| COPPER CORROSION                | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| ACIDITY ML OF 0.01 N NaOH       | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| FLASK MG/30 CM <sup>2</sup>     | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| SOXHLET MG/30 CM <sup>2</sup>   | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| CONDENSER MG/30 CM <sup>2</sup> | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
| CHLORIDES PPM                   | -            | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -            |
|                                 |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
|                                 |              |     |     |     |     |     |      |      |     |     |     |     |     |              |
|                                 |              |     |     |     |     |     |      |      |     |     |     |     |     |              |

SL 013165

PPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY PRODUCT REPORT

[illegible]

LABORATORY PRODUCT REPORT

| VINYL CHLORIDE SHIPMENTS                    |     | 1970<br>AVG. | JAN  | FEB  | MAR  | APR   | MAY  | JUNE | JULY | AUG   | SEP  | OCT  | NOV   | DEC  | 1971<br>AVG. |
|---------------------------------------------|-----|--------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|--------------|
| H <sub>2</sub> O                            | PPM | 35           | 37   | 31   | 35   | 29    | 33   | 31   | 34   | 39    | 28   | 27   | 35    | 41   | 33           |
| HCl                                         | PPM | (1           | (1   | (1   | (1   | (1    | (1   | (1   | (1   | (1    | (1   | (1   | (1    | (1   | (1           |
| PHENOL                                      | PPM | 11.3         | -    | -    | -    | -     | 50   | -    | 40   | 50    | 48   | -    | 40    | 40   | 45           |
| FC                                          | PPM | 0.1          | 0.1  | 0.1  | 0.1  | 0.1   | 0.2  | (0.1 | 0.1  | (0.1  | 0.1  | (0.1 | (0.1  | (0.1 | (0.1         |
| SULFUR                                      | PPM | (1           | (1   | (1   | (1   | (1    | (1   | (1   | (1   | (1    | (1   | (1   | (1    | (1   | (1           |
| ACETYLENE                                   | PPM | (1           | (1   | (1   | (1   | (1    | (1   | (1   | (1   | (1    | (1   | (1   | (1    | (1   | (1           |
| ALDEHYDES, AS ACETALDEHYDE                  | PPM | (1           | (1   | (1   | (1   | (1    | (1   | (1   | (1   | (1    | (1   | (1   | (1    | (1   | (1           |
| PEROXIDES, AS H <sub>2</sub> O <sub>2</sub> | PPM | 0.01         | 0.02 | 0.02 | 0.02 | (0.01 | 0.02 | 0.03 | 0.01 | (0.01 | 0.01 | 0.02 | (0.01 | 0.02 | 0.02         |
| NON-VOLATILE RESIDUE                        | PPM | 4            | 1    | 3    | 3    | 9     | 6    | 5    | (1   | 10    | 11   | 9    | 4     | 3    | 5            |
| OXYGEN IN VAPOR SPACE                       | PPM | (100         | -    | -    | -    | -     | -    | -    | -    | -     | -    | -    | -     | -    | -            |

SL 013167

CONFIDENTIAL;  
 Subject to Protective Order  
 of 14th Judicial District Court  
 No. 91-1145

SL 013167

CONFIDENTIAL;  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

[illegible]

\*UNLESS OTHERWISE SPECIFIED

|                                 |               |  |
|---------------------------------|---------------|--|
|                                 | CONFIDENTIAL: |  |
| Subject to Protective Order     |               |  |
| of 14th Judicial District Court |               |  |
| No. 91-1145                     |               |  |

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

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•UNLESS OTHERWISE SPECIFIED

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

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CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

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CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

[illegible]

## LABORATORY OPERATIONS REPORT

Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

SL 013174

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

| "TRI-ETHANE". <sup>(A)</sup> | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| ICE REACTOR WT.%             |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| ETHYL CHLORIDE               | (0.01        | (0.01 | 0     | 0     | (0.01 | 0     | (0.01 | (0.01 | (0.01 | 0     | 0     | 0     | 0     | (0.01        |
| TRANS 1,2 DICHLOROETHYLENE   | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | (0.01 | 0     | 0     | 0     | 0     | 0            |
| CIS 1,2 DICHLOROETHYLENE     | (0.01        | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01        |
| METHYL CHLOROFORM            | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0.02  | 0     | 0     | 0     | 0     | 0            |
| 1,2 DICHLOROETHANE           | 70.96        | 78.48 | 72.50 | 63.38 | 59.85 | 73.22 | 73.84 | 75.44 | 82.01 | 66.05 | 61.07 | 72.26 | 70.43 | 70.71        |
| TRICHLOROETHYLENE            | (0.01        | (0.01 | (0.01 | (0.01 | (0.01 | (1    | (0.01 | 0     | 0     | 0.01  | (0.01 | 0     | (0.01 | (0.01        |
| 1,1,2 TRICHLOROETHANE        | 25.75        | 19.97 | 25.03 | 32.47 | 34.92 | 28.31 | 23.95 | 22.08 | 34.46 | 30.09 | 34.20 | 26.88 | 26.27 | 28.22        |
| U-TETRACHLOROETHANE          | 1.02         | 0.62  | 1.22  | 1.78  | 2.30  | 1.34  | 0.87  | 0.72  | 0.68  | 1.58  | 2.05  | 1.14  | 1.30  | 1.30         |
| S-TETRACHLOROETHANE          | 1.22         | 0.66  | 1.29  | 2.02  | 2.55  | 1.44  | 0.91  | 0.82  | 1.01  | 1.87  | 2.41  | 1.30  | 1.50  | 1.48         |
| PENTACHLOROETHANE            | 0.06         | 0.02  | 0.05  | 0.11  | 0.22  | 0.07  | 0.02  | 0.07  | 0.03  | 0.08  | 0.12  | 0.05  | 0.07  | 0.08         |
| H <sub>2</sub> O PPM         | 86           | -     | -     | 86    | -     | 72    | 44    | 40    | 0     | 76    | 0     | 0     | 0     | 35           |
| FE PPM                       | 1            | 2     | 2     | 2     | 3     | 2     | 2     | (1    | 3     | 12    | 2     | 1     | 1     | 3            |
| HEAVIES STILL REFLEX WT.%    |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| TRANS 1,2 DICHLOROETHYLENE   | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| CIS 1,2 DICHLOROETHYLENE     | 0            | 0     | 0     | 0     | (0.01 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| 1,2 DICHLOROETHANE           | (0.01        | (0.01 | 0     | 0.02  | 0.01  | (0.01 | 0.01  | (0.01 | 0.02  | 0.16  | 0     | 0     | 0     | 0.01         |
| TRICHLOROETHYLENE            | 0.04         | (0.01 | 0.01  | 0.05  | 0.33  | 0.12  | 0.02  | 0.01  | 0.01  | 0.04  | 0.01  | (0.01 | (0.01 | 0.05         |
| 1-BROMO-2-CHLOROETHANE       | (0.01        | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| 1,1,2 TRICHLOROETHANE        | 99.84        | 99.94 | 99.89 | 99.78 | 99.36 | 99.72 | 99.82 | 99.59 | 99.69 | 98.53 | 99.16 | 99.53 | 99.96 | 99.58        |
| U-TETRACHLOROETHANE          | 0.09         | 0.02  | 0.05  | 0.14  | 0.09  | 0.03  | 0.09  | 0.09  | 0.19  | 0.54  | (0.01 | 0.20  | (0.01 | 0.12         |
| H <sub>2</sub> O PPM         | 30           | -     | -     | 66    | -     | (1    | -     | -     | -     | 84    | 42    | -     | -     | 48           |
| FE PPM                       | 1            | 3     | 30    | (1    | (1    | (1    | (1    | (1    | -     | 2     | 3     | (1    | -     | 4            |
| LIGHT STILL REFLEX PPM       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| H <sub>2</sub> O             | 135          | -     | -     | -     | -     | 67    | 70    | 47    | -     | 88    | 30    | -     | -     | 60           |
| FE                           | 1            | 3     | 3     | 3     | 2     | 2     | 3     | 5     | 4     | 19    | 1     | (1    | (1    | 4            |

**CONFIDENTIAL:**  
Subject to Protective Order  
of 14th Judicial District Court  
N. 81-1145

**SL 013175**

SL 013175

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

## LABORATORY OPERATIONS REPORT

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

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## LABORATORY OPERATIONS REPORT

| 'TRI-ETHANE'®                   | 1970<br>AVG. | JAN   | FEB    | MAR   | APR   | MAY   | JUNE  | JULY   | AUG    | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|---------------------------------|--------------|-------|--------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------------|
| TYPE 324 STABILIZATION WT. %    |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| VINYLIDENE CHLORIDE             | 0.02         | 0.02  | 0.02   | 0.01  | 0.01  | (0.01 | 0.01  | (0.01  | (0.01  | 0.01  | 0.01  | 0.01  | 0.01  | 0.01         |
| BLM                             | 0.38         | 0.36  | 0.34   | 0.32  | 0.36  | 0.30  | 0.39  | 0.33   | 0.36   | 0.38  | 0.36  | 0.38  | 0.41  | 0.36         |
| BTE                             | 0.78         | 0.76  | 0.74   | 0.73  | 0.42  | 0.71  | 0.72  | 0.70   | 0.71   | 0.74  | 0.70  | 0.69  | 0.77  | 0.70         |
| 1,1-DICHLOROETHANE              | 0            | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0     | 0     | 0     | 0     | 0            |
| METHYL CHLOROFORM               | 93.96        | 94.14 | 94.13  | 94.14 | 94.20 | 94.24 | 94.24 | 94.36  | 94.23  | 94.09 | 93.48 | 93.90 | 93.36 | 94.04        |
| DOL                             | 1.06         | 1.06  | 1.08   | 1.08  | 1.03  | 1.02  | 1.03  | 1.01   | 1.03   | 1.03  | 1.02  | 1.05  | 1.11  | 1.05         |
| CIS 1,2-DICHLOROETHYLENE        | 0.03         | (0.01 | 0      | (0.01 | (0.01 | (0.01 | 0     | (0.01  | 0      | 0     | 0     | 0     | (0.01 | (0.01        |
| TRICHLOROETHYLENE               | 0.03         | 0.01  | 0.01   | 0.02  | 0.03  | 0.01  | 0.01  | (0.01  | (0.01  | 0.01  | 0.02  | 0.01  | 0.01  | 0.01         |
| 1,2-DICHLOROETHANE              | 0.02         | (0.01 | 0.01   | 0.02  | 0.03  | (0.01 | 0     | 0      | (0.01  | (0.01 | 0.06  | 0.04  | 0.02  | 0.02         |
| TOL                             | 0.76         | 0.74  | 0.75   | 0.80  | 0.75  | 0.78  | 0.78  | 0.75   | 0.75   | 0.79  | 0.88  | 0.82  | 0.85  | 0.79         |
| NDE                             | 2.05         | 2.01  | 2.01   | 2.00  | 1.61  | 1.91  | 1.91  | 1.99   | 2.01   | 2.10  | 2.34  | 2.16  | 2.40  | 2.04         |
| ETHOETHANE                      | 0.05         | 0.06  | 0.06   | 0.06  | 0.07  | 0.06  | 0.05  | 0.20   | 0.05   | 0.06  | 0.05  | 0.05  | 0.06  | 0.07         |
| 2-NITROPROPANE                  | 0            | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0     | 0     | 0     | 0     | 0            |
| TLE                             | 0.83         | 0.79  | 0.83   | 0.78  | 0.93  | 0.78  | 0.81  | 0.63   | 0.82   | 0.75  | 1.07  | 0.88  | 0.91  | 0.83         |
| 1,1,2-TRICHLOROETHANE           | 0.06         | 0.03  | 0.01   | 0.04  | 0.04  | 0.04  | 0.02  | 0.04   | 0.01   | 0.02  | 0.05  | 0.06  | 0.07  | 0.04         |
| EPE                             | 0            | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0     | 0     | 0     | 0     | 0            |
| STABILIZING TANKS               |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| MOISTURE PPM                    | 63           | 54    | 31     | 46    | 47    | 47    | 31    | 47     | 58     | 60    | 73    | 100   | 102   | 58           |
| PH                              | 7.0          | 6.9   | 6.9    | 6.7   | 6.6   | 6.7   | 6.8   | 6.8    | 6.9    | 6.9   | 7.0   | 6.8   | 6.8   | 6.8          |
| HCL ACIDITY PPM                 | (1           | (1    | (1     | (1    | 2     | 3     | 2     | (1     | 1      | (1    | (1    | 1     | 2     | 1            |
| NON-VOLATILE RESIDUE %          | .0001        | .0001 | (.0001 | .0003 | .0001 | .0003 | .0001 | (.0001 | (.0001 | .0002 | .0002 | .0004 | .0002 | .0001        |
| COLOR APHA                      | 7            | 7     | 7      | 7     | 7     | 10    | 8     | 5      | 6      | 6     | 7     | 15    | 7     | 8            |
| SPECIFIC GRAVITY                | 1.304        | 1.303 | 1.303  | 1.302 | 1.303 | 1.303 | 1.303 | 1.304  | 1.303  | 1.303 | 1.304 | 1.304 | 1.303 | 1.303        |
| AVG. DISTILLATION RANGE °C      |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| LOW                             | 73.5         | 73.6  | 73.8   | 73.5  | 74.2  | 73.4  | 73.4  | 73.2   | 73.5   | 73.6  | 73.5  | 73.5  | 73.4  | 73.5         |
| HIGH                            | 82.8         | 83.2  | 84.3   | 84.1  | 83.0  | 84.8  | 83.8  | 82.6   | 83.9   | 80.6  | 84.0  | 83.4  | 84.0  | 83.5         |
| SOLUBLE CHLORIDES PPM           | (0.5         | (0.5  | (0.5   | (0.5  | (0.5  | (0.5  | (0.5  | (0.5   | (0.5   | (0.5  | (0.5  | (0.5  | (0.5  | (0.5         |
| AL. SCRATCH                     | 25           | -     | -      | -     | -     | -     | -     | -      | -      | -     | -     | -     | -     | -            |
| CONFIDENTIAL:                   |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| Subject to Protective Order     |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| of 14th Judicial District Court |              |       |        |       |       |       |       |        |        |       |       |       |       |              |
| No. 91-145                      |              |       |        |       |       |       |       |        |        |       |       |       |       |              |

SL 013178

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

| SODIUM CHLORATE                                  |  | 1970<br>AVG. | JAN    | FEB    | MAR    | APR    | MAY    | JUNE   | JULY   | AUG    | SEP    | OCT    | NOV     | DEC    | 1971<br>AVG. |
|--------------------------------------------------|--|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------------|
| CELL LIQUOR FEED GPL                             |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| NaClO <sub>3</sub>                               |  | 566          | 591    | 573    | 580    | 590    | 586    | 586    | 567    | 575    | 579    | 563    | 552     | 604    | 579          |
| NaCl                                             |  | 128          | 128    | 121    | 124    | 127    | 129    | 125    | 125    | 127    | 124    | 124    | 129     | 126    | 126          |
| Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>   |  | 1.9          | 1.5    | 1.5    | 1.6    | 1.9    | 2.0    | 1.6    | 1.8    | 1.8    | 1.5    | 1.6    | 1.5     | 1.4    | 1.6          |
| Na <sub>2</sub> SO <sub>4</sub>                  |  | 6.05         | 4.21   | 4.66   | 4.60   | 5.12   | 3.68   | 6.76   | 1.87   | 0.31   | 2.32   | 3.47   | 2.82    | 3.63   | 3.62         |
| CA & MG AS CAO                                   |  | 0.008        | 0.026  | 0.023  | 0.034  | 0.030  | 0.025  | 0.020  | 0.008  | 0.034  | 0.010  | 0.034  | 0.046   | 0.028  | 0.026        |
| COOLING TOWER                                    |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| IN                                               |  | 6.5          | 6.0    | 7.3    | 8.7    | 8.4    | 8.7    | 8.8    | 8.7    | 7.6    | 8.1    | 8.8    | 9.0     | 9.0    | 8.3          |
| CR <sub>2</sub> O <sub>4</sub> PPM               |  | 27           | 27     | 18     | 7      | 12     | 10     | 7      | 7      | 4      | 12     | (1     | -       | (1     | 9            |
| NaCl PPM                                         |  | 1174         | 668    | 924    | 1102   | 1260   | 2277   | 1109   | 961    | 990    | 2079   | 1089   | 743     | 627    | 1152         |
| SiO <sub>2</sub> PPM                             |  | 141          | 90     | 116    | 124    | 138    | 134    | 109    | 117    | 123    | 103    | 77     | 56      | 43     | 102          |
| Fe PPM                                           |  | 11           | 9      | 8      | 3      | 3      | 2      | 3      | 5      | 4      | 6      | 3      | 5       | 6      | 5            |
| WELL WATER PPM                                   |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| NaCl                                             |  | 308          | 270    | 313    | 333    | 297    | 377    | 382    | 191    | 276    | 153    | 381    | 162     | 282    | 285          |
| SiO <sub>2</sub>                                 |  | 48           | 47     | 44     | 47     | 48     | 42     | 43     | 42     | 40     | 37     | 37     | 37      | 22     | 40           |
| PRODUCT                                          |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| NaClO <sub>3</sub> %                             |  | 99.96        | 99.96  | 99.97  | 99.97  | 99.98  | 99.96  | 99.97  | 99.97  | 99.94  | 99.96  | 99.95  | 99.96   | 99.96  | 99.96        |
| NaCl %                                           |  | 0.05         | 0.05   | 0.03   | 0.03   | 0.03   | 0.03   | 0.03   | 0.03   | 0.06   | 0.04   | 0.05   | 0.04    | 0.04   | 0.04         |
| Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> % |  | .0004        | .0004  | .0003  | .0005  | .0004  | .0004  | .0004  | .00058 | .00076 | .00071 | .00105 | .00052  | .00044 | .00052       |
| Na <sub>2</sub> SO <sub>4</sub> %                |  | 0.001        | 0.001  | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | 0.001   | -      | (0.001       |
| Fe %                                             |  | .00005       | .00001 | .00009 | .00004 | .00010 | .00008 | .00007 | .00004 | .00002 | .00005 | .00002 | (.00001 | -      | .00004       |
| Residue Water Ins. %                             |  | 0.001        | 0.001  | 0.001  | 0.001  | 0.001  | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001 | (0.001  | (0.001 | (0.001       |
| Moisture %                                       |  | 0.04         | 0.04   | 0.05   | 0.08   | 0.05   | 0.07   | 0.08   | 0.06   | 0.06   | 0.07   | 0.05   | 0.05    | 0.08   | 0.06         |
| Bulk Density #/cu.ft.                            |  | 78           | 77     | 78     | 81     | 80     | 80     | 79     | 81     | 80     | 81     | 79     | 80      | 82     | 80           |
| * SIEVE ANALYSIS                                 |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| % LARGER THAN SCREEN SIZE                        |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |
| MESH 20                                          |  | 40.2         | 41.2   | 48.4   | 36.3   | 42.8   | 32.8   | 43.0   | 57.8   | 39.2   | 24.6   | 32.1   | 28.7    | 23.2   | 37.5         |
| 40                                               |  | 84.6         | 87.7   | 94.4   | 83.9   | 89.3   | 87.6   | 90.0   | 96.6   | 80.9   | 86.6   | 80.2   | 88.8    | 90.0   | 88.0         |
| 100                                              |  | 97.2         | 98.6   | 99.3   | 98.4   | 99.0   | 98.8   | 98.7   | 99.7   | 95.9   | 98.1   | 98.1   | 98.8    | 98.7   | 98.5         |
| Screen Test U. S. Standard                       |  |              |        |        |        |        |        |        |        |        |        |        |         |        |              |

SL 013179

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

## LABORATORY OPERATIONS REPORT

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

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PPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

[illegible]

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

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CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

[illegible]

| VINYL CHLORIDE            |       | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |       |
|---------------------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|-------|
| FEED TO UNIT              |       | % EDC        | 99.95 | 99.98 | 99.98 | 99.98 | 99.96 | 99.98 | 99.97 | 99.95 | 99.98 | 99.97 | 99.90 | 99.93 | 99.94        | 99.96 |
| VAPORIZING FURNACE        |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |       |
| FEED                      |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |       |
| VINYLIDENE CHLORIDE       | WT. % | (0.01        | (0.01 | (0.01 | (0.01 | 0.01  | 0.01  | 0.01  | 0.01  | 0.02  | 0.02  | 0.02  | 0.02  | 0.01  | 0.01         |       |
| 1,1-DICHLOROETHANE        | WT. % | 0.05         | 0.05  | 0.05  | 0.06  | 0.05  | 0.27  | 0.05  | 0.08  | 0.06  | 0.06  | 0.07  | 0.06  | 0.07  | 0.08         |       |
| CHLOROFORM                | WT. % | 0.06         | 0.04  | 0.06  | 0.10  | 0.21  | 0.13  | 0.09  | 0.12  | 0.13  | 0.16  | 0.33  | 0.59  | 0.27  | 0.19         |       |
| 1,2-DICHLOROETHANE        | WT. % | 99.40        | 99.42 | 99.25 | 99.33 | 99.05 | 99.08 | 99.20 | 99.47 | 99.17 | 99.34 | 99.09 | 98.61 | 97.66 | 99.06        |       |
| OTHERS                    | WT. % | (0.01        | 0     | 0.01  | 0.02  | (0.01 | (0.01 | 0.02  | 0.01  | 0.04  | (0.01 | (0.01 | 0     | (0.01 | 0.01         |       |
| H <sub>2</sub> O          | PPM   | 38           | 31    | 23    | 34    | 56    | 57    | 57    | 47    | 57    | 80    | 66    | 41    | 88    | 53           |       |
| HCl                       | WT. % | 0.04         | 0.03  | 0.02  | 0.02  | 0.01  | 0.02  | 0.02  | 0.07  | 0.03  | 0.02  | 0.02  | 0.03  | 0.03  | 0.03         |       |
| Fe                        | PPM   | 0.27         | 0.14  | 0.20  | 0.02  | 0.14  | 0.23  | 0.19  | 0.29  | 0.80  | 0.39  | 0.23  | 0.39  | 0.30  | 0.27         |       |
| Cl <sub>2</sub>           | PPM   | 3            | 4     | 6     | 2     | 9     | 1     | 10    | 4     | 20    | 13    | 5     | 7     | 6     | 7            |       |
| ABSORBER-STRIPPER COLUMNS |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |       |
| GAS ENRICH LIQUOR         |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |       |
| VINYL CHLORIDE            | WT. % | 12.26        | 13.51 | 11.99 | 11.89 | 11.12 | 12.02 | 11.53 | 7.15  | 10.89 | 10.83 | 10.78 | 14.30 | 11.82 | 11.49        |       |
| VINYLIDENE CHLORIDE       | WT. % | (0.01        | (0.01 | (0.01 | 0.01  | 0.02  | 0.01  | 0.01  | 0.01  | 0.02  | 0.02  | 0.03  | 0.03  | 0.02  | 0.01         |       |
| 1,1,2-DICHLOROETHYLENE    | WT. % | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |       |
| 1,1-DICHLOROETHANE        | WT. % | 0.10         | 0.07  | 0.08  | 0.10  | 0.06  | 0.63  | 0.12  | 0.12  | 0.10  | 0.48  | 0.12  | 0.10  | 0.12  | 0.17         |       |
| CHLOROPRENE               | WT. % | 0.05         | 0.05  | 0.04  | 0.06  | 0.02  | 0.04  | 0.05  | 0.06  | 0.03  | 0.02  | 0.07  | 0.04  | 0.08  | 0.05         |       |
| CHLOROFORM                | WT. % | 0.09         | 0.05  | 0.10  | 0.17  | 0.26  | 0.18  | 0.13  | 0.20  | 0.19  | 0.21  | 0.47  | 0.87  | 0.43  | 0.27         |       |
| 1,2-DICHLOROETHANE        | WT. % | 86.46        | 85.40 | 86.96 | 86.87 | 87.58 | 86.56 | 87.21 | 91.73 | 87.99 | 87.77 | 87.72 | 83.71 | 86.05 | 87.11        |       |
| OTHERS                    | WT. % | 0.11         | 0.11  | 0.12  | 0.12  | 0.48  | 0.15  | 0.12  | 0.09  | 0.15  | 0.17  | 0.12  | 0.12  | 0.10  | 0.15         |       |
| H <sub>2</sub> O          | PPM   | 122          | 78    | 37    | 73    | 221   | 126   | 154   | 279   | 586   | 517   | -     | -     | -     | -            |       |
| HCl                       | WT. % | 0.98         | 0.88  | 0.79  | 0.67  | 0.72  | 0.76  | 0.75  | 0.74  | 1.00  | 0.66  | 0.68  | 0.84  | 0.97  | 0.79         |       |
| Fe                        | PPM   | 5.06         | 1.38  | 3.22  | 2.62  | 5.55  | 13.75 | 9.77  | 0.48  | 20.33 | 17.28 | 2.90  | 4.77  | 1.71  | 6.98         |       |
| HCl BY-PRODUCT            |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |       |
| ACETYLENE                 | PPM   | -            | -     | -     | -</   |       |       |       |       |       |       |       |       |       |              |       |

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

SL 013186

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1143

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## LABORATORY OPERATIONS REPORT

[illegible]

**CONFIDENTIAL:**

**CONFIDENTIAL:**  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

ii. CONCLUSIONS

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

SL 013188

## LABORATORY OPERATIONS REPORT

| VINYL CHLORIDE            |       | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|---------------------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| HEAVIES STILL             |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| FEED                      |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| VINYL CHLORIDE            | WT. % | (0.01        | 0     | 0     | 0     | 0     | (0.01 | 0     | 0     | 0     | 0.03  | 0     | -     | -     | 0            |
| VINYLIDENE CHLORIDE       | WT. % | 0.01         | 0.01  | (0.01 | 0.01  | 0.02  | 0.01  | 0.02  | 0.01  | 0.02  | 0     | 0.04  | 0.04  | 0.02  | 0.01         |
| 1,1,2-DICHLOROETHYLENE    | WT. % | 0            | 0     | 0     | (0.01 | 0     | 0     | 0     | 0     | 0     | 0.11  | 0     | 0     | 0     | 0            |
| 1,1-DICHLOROETHANE        | WT. % | 0.09         | 0.09  | 0.10  | 0.11  | 0.08  | 0.10  | 0.11  | 0.16  | 0.10  | (0.01 | 0.13  | 0.14  | 0.12  | 0.10         |
| 1,1,2-DICHLOROETHYLENE    | WT. % | (0.01        | 0     | (0.01 | 0     | 0     | (0.01 | 0     | 0     | 0     | 0     | 0     | 0.01  | 0.02  | (0.01        |
| CHLOROFORM                | WT. % | 0.11         | 0.07  | 0.12  | 0.18  | 0.37  | 0.22  | 0.18  | 0.18  | 0.21  | 0.30  | 0.62  | 1.27  | 0.46  | 0.35         |
| 1,2-DICHLOROETHANE        | WT. % | 98.50        | 98.54 | 98.58 | 98.40 | 98.26 | 98.72 | 98.61 | 98.75 | 98.65 | 98.64 | 98.02 | 96.87 | 97.88 | 98.33        |
| 1,1,2-TRICHLOROETHANE     | WT. % | 0.10         | 0.10  | 0.12  | 0.10  | 0.16  | 0.18  | 0.18  | 0.18  | 0.18  | 0.14  | 0.16  | 0.17  | 0.15  | 0.15         |
| OTHERS                    | WT. % | 0.16         | 0.12  | 0.11  | 0.18  | 0.13  | 0.13  | 0.12  | 0.13  | 0.16  | 0.16  | 0.18  | 0.17  | 0.13  | 0.14         |
| H <sub>2</sub> O          | PPM   | 39           | 35    | 22    | 26    | 44    | 44    | 41    | 46    | 40    | 63    | 60    | 41    | 83    | 45           |
| HCl                       | WT. % | 0.11         | 0.03  | 0.04  | 0.04  | 0.03  | 0.04  | 0.04  | 0.04  | 0.04  | 0.14  | 0.19  | 0.09  | 0.03  | 0.06         |
| FC                        | PPM   | 1.95         | 0.47  | 3.85  | 2.30  | 3.26  | 4.44  | 5.24  | 5.11  | 7.73  | 7.29  | 7.13  | 7.28  | 4.50  | 4.88         |
| Cl <sub>2</sub>           | PPM   | 4            | 2     | 2     | 8     | 15    | 10    | 25    | 7     | 22    | 24    | 10    | 14    | 13    | 13           |
| BOTTOMS                   |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| CHLOROFORM                | WT. % | (0.01        | 0.01  | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | (0.01 | 0.01  | (0.01 | 0.01  | (0.01 | (0.01 | (0.01        |
| 1,2-DICHLOROETHANE        | WT. % | 72.61        | 80.98 | 80.72 | 77.94 | 79.00 | 77.00 | 73.93 | 85.22 | 78.31 | 85.93 | 85.82 | 87.03 | 83.29 | 81.26        |
| TRICHLOROETHYLENE         | WT. % | 0.01         | 0.01  | 0.01  | 0.02  | (0.01 | 0.02  | 0.08  | 0.05  | 0.13  | 0.05  | 0.05  | 0.09  | 0.22  | 0.06         |
| 1-BROMO, 2-CHLOROETHANE   | WT. % | (0.01        | 0     | 0     | 0     | 0     | (0.01 | 0.02  | (0.01 | 0.02  | 0.03  | 0.02  | 0.02  | 0.01  | 0.01         |
| PERCHLOROETHYLENE         | WT. % | 0.09         | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| 1,1,2-TRICHLOROETHANE     | WT. % | 19.17        | 12.44 | 11.19 | 12.99 | 16.23 | 17.39 | 19.38 | 10.70 | 10.71 | 9.04  | 10.24 | 8.77  | 9.30  | 12.38        |
| 1,1,1,2-TETRACHLOROETHANE | WT. % | 0.06         | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| 2,2,3,4-TETRACHLOROETHANE | WT. % | 0.19         | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| OTHERS                    | WT. % | 7.62         | 6.66  | 6.61  | 9.04  | 3.99  | 5.60  | 6.90  | 4.41  | 10.86 | 4.34  | 4.80  | 3.22  | 6.49  | 5.58         |
| HCl                       | WT. % | 0.02         | 0.02  | 0.01  | 0.02  | 0.02  | 0.02  | 0.01  | 0.04  | 0.02  | 0.02  | 0.01  | 0.01  | 0.01  | 0.02         |
| FC                        | PPM   | 33.32        | 18.88 | 49.17 | 20.20 | 18.55 | 29.61 | 32.34 | 88.74 | 35.42 | 29.30 | 26.87 | 20.63 | 29.60 | 33.28        |
| WASTE-DOOP KETTLE BOTTOMS |       |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| 1,2-DICHLOROETHANE        | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| PERCHLOROETHYLENE         | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| 1,1,2-TRICHLOROETHANE     | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| 1,1,1,2-TETRACHLOROETHANE | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| 2,2,3,4-TETRACHLOROETHANE | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| PENTACHLOROETHANE         | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| OTHERS                    | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| FC                        | PPM   | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| TARS                      | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| RESIDUE                   | WT. % | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

[illegible]

# LABORATORY OPERATIONS REPORT

SL 013190

**CONFIDENTIAL:**

|                                 |  |  |  |
|---------------------------------|--|--|--|
| Subject to Protective Order     |  |  |  |
| of 14th Judicial District Court |  |  |  |
| No. 91-1145                     |  |  |  |

\* Unless Otherwise Indicated

CHEMICAL DIVISION  
LANE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

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LAKE CHARLES, LOUISIANA  
LABORATORY OPERATIONS REPORT

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P. 0111 1011113  
 CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA  
 LABORATORY OPERATIONS REPORT

| VINYLDENE CHLORIDE<br>MONOMER                  | 1970<br>AVG. | JAN | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEP.  | OCT.  | NOV.  | DEC.  | 1971<br>AVG. |
|------------------------------------------------|--------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| VDCM REACTOR CRUDE                             |              |     |       |       |       |       |       |       |       |       |       |       |       |              |
| Acetylene PPM                                  | -            | -   | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| Monochloroacetylene PPM                        | 7            | -   | 2     | (1    | 5     | -     | -     | -     | -     | -     | -     | -     | -     | 3            |
| Dichloroacetylene PPM                          | 33           | -   | 7     | 4     | 595   | 2     | 2     | 1     | -     | -     | -     | -     | -     | 102          |
| Vinylidene Chloride Wt. %                      | 99.55        | -   | 99.40 | 99.36 | 99.49 | 99.99 | 99.99 | 99.99 | -     | -     | -     | -     | -     | 99.70        |
| trans-1,2 Dichloroethylene PPM                 | 2067         | -   | 538   | 477   | 511   | -     | -     | -     | -     | -     | -     | -     | -     | 508          |
| cis-1,2 Dichloroethylene PPM                   | 26           | -   | 22    | 7     | 69    | -     | -     | -     | -     | -     | -     | -     | -     | 33           |
| Trichloroethylene PPM                          | 643          | -   | 1     | 3     | 271   | -     | -     | -     | -     | -     | -     | -     | -     | 92           |
| 1,2-Dichloroethane PPM                         | 433          | -   | (1    | (1    | 9     | -     | -     | -     | -     | -     | -     | -     | -     | 3            |
| Unknowns (Total) PPM                           | 2226         | -   | 6     | 9     | 26    | -     | -     | -     | -     | -     | -     | -     | -     | 14           |
| Toluene PPM                                    | 750          | -   | 667   | 541   | 571   | -     | -     | -     | -     | -     | -     | -     | -     | 593          |
| DAY TANK                                       |              |     |       |       |       |       |       |       |       |       |       |       |       |              |
| Acetylene PPM                                  | -            | -   | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| Monochloroacetylene PPM                        | 8            | -   | 3     | 1     | 1     | 3     | (1    | 4     | 6     | 8     | 2     | 1     | 1     | 3            |
| Dichloroacetylene PPM                          | 9            | -   | 4     | 6     | 8     | 3     | 4     | 2     | 7     | 17    | 3     | 3     | 4     | 6            |
| Vinylidene Chloride Wt. %                      | 99.93        | -   | 99.97 | 99.97 | 99.98 | 99.89 | 99.94 | 99.99 | 99.99 | 99.99 | 99.99 | 99.99 | 99.99 | 99.97        |
| trans-1,2 Dichloroethylene PPM                 | 618          | -   | 300   | 258   | 192   | 576   | 417   | 137   | 14    | 60    | 39    | 17    | 45    | 187          |
| cis-1,2 Dichloroethylene PPM                   | 2            | -   | 3     | 2     | 6     | (1    | (1    | -     | 0     | (1    | (1    | -     | -     | 2            |
| Trichloroethylene PPM                          | 18           | -   | (1    | (1    | 2     | (1    | 1     | -     | 0     | 0     | (1    | -     | -     | (1           |
| 1,2-Dichloroethane PPM                         | (1           | -   | 0     | (1    | 0     | (1    | 2     | 13    | 0     | (1    | (1    | -     | -     | 2            |
| Unknowns (Total) PPM                           | 7            | -   | 3     | 2     | 1     | 3     | 2     | 2     | 1     | 4     | 2     | 1     | 3     | 2            |
| Toluene PPM                                    | 6            | -   | 2     | 1     | 2     | 2     | 1     | (1    | (1    | (1    | 1     | (1    | (1    | 1            |
| H <sub>2</sub> O PPM                           | 30           | -   | 22    | 29    | 21    | 24    | 25    | 27    | 39    | 33    | 30    | 24    | 85    | 33           |
| Acidity, As HCl PPM                            | (1           | -   | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1           |
| Color APHA                                     | (5           | -   | (5    | (5    | (5    | (5    | (5    | (5    | 5     | (5    | (5    | 5     | (5    | (5           |
| Peroxide, As H <sub>2</sub> O <sub>2</sub> PPM | (1           | -   | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1    | (1           |
| HQMME PPM                                      | 194          | -   | 187   | 146   | 149   | 220   | 206   | 190   | 143   | 187   | 191   | 199   | 256   | 189          |
| Phenol Wt. %                                   | 2.5          | -   | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| Appearance                                     | Clear        | -   | Clear | -     | Clear | Clear | Clear | Clear | Clear | Clear | Clear | Clear | Clear | Clear        |
| Morpholine PPM                                 | 1.0          | -   | 2.0   | 2.0   | 1.0   | 2.0   | 2.0   | -     | 11.0  | -     | 2.0   | (1.0  | 1.0   | 2.6          |
| Specific Gravity 20°/20°                       | 1.212        | -   | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |

CONFIDENTIAL

 Subject to Protective Order  
 of 14th Judicial District Court

No. 91-1145

SL 013193

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

LIQUID PHASE ETHYLENE DICHLORIDE DEPARTMENT OPERATIONS REPORT

| GENERAL DEPARTMENT                                    |                 | 1970<br>AVG. | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEP.   | OCT.   | NOV.   | DEC.   | 1971<br>AVG. |
|-------------------------------------------------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
| EDC Production                                        | T/D             | 1073.9       | 1052.7 | 869.5  | 947.8  | 1109.2 | 1017.7 | 984.5  | 1035.6 | 1074.9 | 1080.2 | 1116.2 | 1124.3 | 1082.9 | 1041.3       |
| EDC Area Production                                   | T/D             | 1075.2       | 1051.1 | 883.2  | 951.6  | 1112.9 | 1018.7 | 984.8  | 1037.4 | 1078.8 | 1072.4 | 1119.7 | 1125.6 | 1082.0 | 1043.2       |
| EDC Shipments                                         | T/D             | 218.4        | 240.6  | 2.7    | 101.2  | 61.3   | 9.6    | 155.4  | 193.5  | 143.0  | 246.8  | 51.3   | 250.9  | 337.5  | 149.5        |
| Purchased Ethylene to EDC                             | T/D             | 312.3        | 306.4  | 254.7  | 274.8  | 321.7  | 291.2  | 284.8  | 298.4  | 310.7  | 317.0  | 325.2  | 324.7  | 308.6  | 301.5        |
| % C <sub>2</sub> H <sub>4</sub> in Purchased Ethylene |                 | 99.69        | 99.86  | 99.86  | 99.84  | 99.79  | 99.90  | 99.81  | 99.97  | 99.95  | 99.95  | 99.92  | 99.93  | 99.97  | 99.90        |
| Cl <sub>2</sub> to EDC                                | T/D             | 786.3        | 770.5  | 642.9  | 696.3  | 829.7  | 748.0  | 725.6  | 755.3  | 787.6  | 794.9  | 826.3  | 821.5  | 794.1  | 766.1        |
| YIELDS                                                |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Area Production Basis                                 | Cl <sub>2</sub> | 97.9         | 97.9   | 98.4   | 97.9   | 96.1   | 97.6   | 97.2   | -      | -      | -      | -      | -      | -      | -            |
|                                                       | C               | 97.8         | 97.4   | 98.3   | 98.3   | 98.1   | 99.2   | 98.0   | -      | -      | -      | -      | -      | -      | -            |
| Records Production Basis                              | Cl <sub>2</sub> | 97.9         | 97.8   | 96.9   | 97.5   | 95.8   | 97.5   | 97.2   | -      | -      | -      | -      | -      | -      | -            |
|                                                       | C               | 97.7         | 97.3   | 96.8   | 97.9   | 97.7   | 99.0   | 98.0   | -      | -      | -      | -      | -      | -      | -            |
| Area Prod. + Trans. Credits                           |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Basis                                                 | Cl <sub>2</sub> | 98.8         | 99.0   | 99.2   | 98.8   | 97.1   | 98.4   | 98.0   | 99.0   | 99.6   | 98.3   | 97.8   | 99.4   | 98.3   | 98.6         |
|                                                       | C               | 98.4         | 98.6   | 98.9   | 99.0   | 98.8   | 99.7   | 98.6   | 98.9   | 99.4   | 97.3   | 98.1   | 99.2   | 99.9   | 98.9         |
| Records Prod. + Trans.                                |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Credits Basis                                         | Cl <sub>2</sub> | 98.8         | 99.1   | 97.7   | 98.4   | 96.8   | 98.3   | 98.0   | 98.8   | 99.3   | 97.6   | 97.5   | 99.3   | 98.4   | 98.3         |
|                                                       | C               | 98.3         | 98.3   | 97.4   | 98.6   | 98.5   | 99.6   | 98.6   | 98.8   | 99.1   | 96.6   | 97.8   | 99.1   | 100.0  | 98.5         |
| Excess C <sub>2</sub> H <sub>4</sub>                  | %               | 2.4          | 2.8    | 1.7    | 1.9    | 1.9    | 0.8    | 2.0    | 1.4    | 1.6    | 3.5    | 2.4    | 1.7    | 0.6    | 1.9          |
| Excess C <sub>2</sub> H <sub>4</sub>                  | T/Mo.           | 213.9        | 259.5  | 122.0  | 157.0  | 186.5  | 76.7   | 170.3  | 134.9  | 153.0  | 324.4  | 241.3  | 169.4  | 58.0   | 171.1        |
| Stillbottoms To P/T                                   | T/D             | 8.7          | 11.7   | 6.3    | 7.9    | 10.5   | 7.3    | 7.1    | 5.1    | 14.1   | 9.6    | 7.4    | 12.7   | 7.1    | 8.9          |
| Total Losses                                          | T/D             | .7           | -1.3   | 13.7   | 3.8    | 3.7    | 1.0    | 0.3    | 1.8    | 3.9    | 7.8    | 3.5    | 1.2    | -1.0   | 3.2          |
| Loading Losses                                        | T/D             | .7           | -1.3   | 13.7   | 3.8    | 3.7    | 1.0    | 0.3    | 1.8    | 3.9    | 7.8    | 3.5    | 1.2    | -1.0   | 3.2          |
| EDC Inventory                                         | Tons            | 8097.4       | 6922.6 | 8023.8 | 3599.3 | 6136.0 | 6814.4 | 2500.9 | 8104.2 | 9107.2 | 6409.5 | 7594.3 | 7137.8 | 5261.0 | 6492.6       |
| EDC REACTOR NO. 1                                     |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Pressure Bottom                                       | PSIG            | 14.5         | 17.8   | 18.1   | 17.9   | 18.4   | 18.1   | 18.2   | 18.5   | 13.8   | 19.3   | 19.0   | 18.8   | 18.7   | 18.5         |
| Temp. °F Bottom                                       |                 | 213          | 221    | 221    | 220    | 222    | 222    | 222    | 223    | 223    | 224    | 224    | 223    | 223    | 222          |
| Top                                                   |                 | 202          | 212    | 211    | 210    | 212    | 212    | 212    | 213    | 213    | 215    | 214    | 213    | 213    | 212          |
| EDC REACTOR NO. 2                                     |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Pressure Bottom                                       | PSIG            | 13.9         | 16.8   | 17.5   | 17.8   | 18.5   | 18.2   | 18.4   | 18.4   | 18.9   | 18.7   | 18.8   | 18.7   | 18.7   | 18.3         |
| Temp. °F Bottom                                       |                 | 209          | 217    | 218    | 217    | 220    | 219    | 219    | 219    | 220    | 219    | 219    | 219    | 219    | 219          |
| Top                                                   |                 | 199          | 210    | 209    | 210    | 211    | 210    | 211    | 209    | 212    | 212    | 212    | 211    | 211    | 211          |
| EDC REACTOR NO. 3                                     |                 |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Pressure Bottom                                       |                 | 28.4         | 23.4   | 46.6   | 35.9   | 33.0   | 32.1   | 27.6   | 37.4   | 47.7   | 25.5   | 24.8   | 24.5   | 25.1   | 32.0         |
| Temp. °F Bottom                                       |                 | 229          | 226    | 224    | 225    | 225    | 224    | 226    | 230    | 228    | 228    | 229    | 229    | 228    | 227          |
| Top                                                   |                 | 220          | 218    | 216    | 217    | 217    | 216    | 219    | 222    | 220    | 220    | 223    | 220    | 219    | 219          |

PPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

# ETHYLENE DICHLORIDE DEPARTMENT OPERATIONS REPORT

| GENERAL DEPARTMENT            | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|-------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| EDC STRIPPER NO. 1            |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| PRESSURE TOP PSIG             | 5.6          | 8.3   | 8.1   | 8.6   | 9.2   | 9.1   | 9.5   | 9.7   | 9.7   | 9.7   | 10.0  | 10.0  | 9.4   | 9.2          |
| TEMP. °F BOTTOM               | 200          | 210   | 210   | 210   | 211   | 211   | 212   | 211   | 211   | 212   | 212   | 212   | 211   | 211          |
| TOP                           | 198          | 204   | 202   | 204   | 204   | 207   | 207   | 208   | 207   | 208   | 211   | 209   | 205   | 206          |
| FEED RATE GPM                 | 63.5         | 58.1  | 48.7  | 51.0  | 66.1  | 62.9  | 58.6  | 62.7  | 68.1  | 66.4  | 69.7  | 65.1  | 65.6  | 61.9         |
| EDC STRIPPER NO. 2            |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| PRESSURE TOP PSIG             | 13.4         | 14.0  | 12.7  | 12.8  | 13.1  | 13.1  | 14.4  | 16.1  | 15.2  | 15.1  | 16.7  | 15.2  | 14.1  | 14.4         |
| TEMP. °F BOTTOM               | 220          | 219   | 218   | 218   | 219   | 220   | 223   | 227   | 226   | 226   | 230   | 227   | 226   | 223          |
| TOP                           | 213          | 213   | 211   | 212   | 214   | 216   | 218   | 221   | 220   | 221   | 226   | 223   | 219   | 218          |
| FEED RATE GPM                 | 83.4         | 82.1  | 67.9  | 88.7  | 93.4  | 85.9  | 81.0  | 83.1  | 91.3  | 93.8  | 94.6  | 101.0 | 92.1  | 87.9         |
| EDC STILL NO. 1               |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| TEMP. °F BOTTOM               | 217          | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| TOP                           | 195          | 196   | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | 196          |
| FEED RATE GPM                 | 49.2         | 44.4  | 33.3  | 38.4  | 49.1  | 43.1  | 38.5  | 46.2  | 47.8  | 48.3  | 45.0  | 48.2  | 47.8  | 44.2         |
| REFLUX RATE GPM               | 21.4         | 21.9  | 22.0  | 21.3  | 22.0  | 21.9  | 22.2  | 22.5  | 21.8  | 22.0  | 22.2  | 23.3  | 23.0  | 22.2         |
| PRODUCTION GPM                | 48.6         | 46.4  | 36.9  | 40.8  | 51.2  | 44.5  | 39.4  | 47.9  | 50.3  | 51.1  | 47.9  | 51.2  | 51.4  | 46.6         |
| EDC STILL NO. 2               |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| TEMP. °F BOTTOM               | 236          | 245   | 243   | 245   | 247   | 247   | 249   | 248   | 255   | 256   | 255   | 263   | 260   | 251          |
| TOP                           | 194          | 194   | 193   | 194   | 195   | 195   | 194   | 193   | 199   | 197   | 198   | 198   | 196   | 196          |
| FEED RATE GPM                 | 106.1        | 108.2 | 98.5  | 109.2 | 117.4 | 112.0 | 107.5 | 104.8 | 118.1 | 117.6 | 121.3 | 121.7 | 115.8 | 112.7        |
| REFLUX RATE GPM               | 75.1         | 68.2  | 68.0  | 68.0  | 70.7  | 73.9  | 73.1  | 71.0  | 71.2  | 74.3  | 77.9  | 77.8  | 74.4  | 72.4         |
| PRODUCTION GPM                | 100.0        | 105.3 | 93.0  | 102.5 | 110.0 | 105.5 | 101.5 | 99.4  | 111.9 | 111.5 | 114.9 | 115.5 | 108.5 | 106.6        |
| STEAM (140# BASIS) LBS./T EDC |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                               | 555          | 504   | 461   | 454   | 394   | 395   | 399   | 411   | 441   | 455   | 452   | 411   | 457   | 436          |
| KWH/T EDC                     | 12.9         | 14.4  | 14.9  | 13.9  | 12.6  | 14.0  | 10.3  | 15.5  | 10.1  | 13.8  | 12.4  | 12.9  | 13.1  | 13.2         |
| WELL WATER M GALS./T EDC      | 0.48         | 0.64  | 0.45  | 0.39  | 0.39  | 0.37  | 0.41  | 0.36  | 0.73  | 0.37  | 0.29  | 0.27  | 0.40  | 0.42         |
| GAS MCF/T EDC                 | 0.24         | 0.25  | 0.30  | 0.30  | 0.20  | 0.16  | 0.15  | 0.12  | 0.13  | 0.13  | 0.13  | 0.13  | 0.15  | 0.18         |
| NITROGEN TONS/T EDC           | 0.022        | 0.025 | 0.013 | 0.012 | 0.009 | 0.012 | 0.022 | 0.023 | 0.024 | 0.027 | 0.027 | 0.028 | 0.026 | 0.021        |
| OPERATING TIME %              |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                               | 99.6         | 100.0 | 94.4  | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 98.7  | 98.0  | 100.0 | 98.6  | 98.4  | 99.0         |
| SL 013195                     |              |       |       |       |       |       |       |       |       |       |       |       |       |              |

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

ETHYLENE DICHLORIDE DEPARTMENT OPERATIONS REPORT

[illegible]

\* TOTALS  
\*\* OPERATIONS + MAINTENANCE

CONFIDENTIAL:

Page 1 Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

PROT. ORDER  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

SL 013197

## "TRI-ETHANE" @ DEPARTMENT OPERATIONS REPORT

| GENERAL DEPARTMENT                       |                 | 1970<br>AVG. | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEP.  | OCT.  | NOV.  | DEC.  | 1971<br>AVG. |
|------------------------------------------|-----------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| MC Production                            | T/D             | 74.4         | 69.8  | 29.3  | 70.6  | 41.0  | 89.3  | 82.2  | 65.5  | 64.9  | 51.1  | 77.3  | 109.3 | 84.6  | 69.6         |
| MC Area Production                       | T/D             | 77.7         | 65.7  | 28.1  | 75.2  | 43.5  | 97.1  | 82.8  | 72.7  | 66.3  | 44.2  | 88.7  | 112.4 | 81.9  | 72.4         |
| "Tri-Ethane" @ Production                | T/D             | 78.7         | 76.4  | 31.1  | 72.9  | 48.3  | 95.3  | 81.4  | 72.8  | 68.3  | 55.2  | 86.8  | 114.3 | 91.4  | 74.5         |
| "Tri-Ethane" @ Shipments                 | T/D             | 76.1         | 37.8  | 54.0  | 77.8  | 105.6 | 86.4  | 46.7  | 86.3  | 68.6  | 47.2  | 122.4 | 88.6  | 73.6  | 73.8         |
| Chlorine Consumed                        | T/D             | 91.4         | 72.3  | 98.6  | 109.6 | 71.1  | 100.9 | 95.6  | 89.7  | 84.4  | 90.4  | 124.0 | 106.2 | 79.7  | 93.4         |
| EDC Consumed                             | T/D             | 117.2        | 101.8 | 127.6 | 147.5 | 100.6 | 130.3 | 122.3 | 105.8 | 105.0 | 120.5 | 159.7 | 138.8 | 112.4 | 122.7        |
| C <sub>2</sub> H <sub>4</sub> Consumed   | T/D             | (0.1)        | 0.0   | 0.0   | 0.4   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | (0.1)        |
| YIELDS                                   |                 |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| Area Production Basis Cl <sub>2</sub>    |                 | 83.2         | 82.0  | 84.0  | 79.2  | 74.2  | 81.3  | 84.7  | -     | -     | -     | -     | -     | -     | -            |
| C                                        |                 | 79.6         | 80.6  | 80.6  | 73.0  | 69.1  | 75.3  | 81.6  | -     | -     | -     | -     | -     | -     | -            |
| Records Production Basis Cl <sub>2</sub> |                 | 81.1         | 85.0  | 77.8  | 77.0  | 72.4  | 77.1  | 84.3  | -     | -     | -     | -     | -     | -     | -            |
| C                                        |                 | 77.4         | 83.6  | 74.3  | 70.7  | 67.3  | 70.9  | 81.2  | -     | -     | -     | -     | -     | -     | -            |
| Area Prod. + Trans. Credits              |                 |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| Basis                                    | Cl <sub>2</sub> | 90.6         | 89.3  | 95.0  | 92.1  | 92.8  | 94.2  | 91.0  | 83.0  | 90.4  | 94.9  | 91.1  | 100.2 | 95.6  | 92.5         |
| C                                        |                 | 80.0         | 88.3  | 93.0  | 87.5  | 88.9  | 89.6  | 88.8  | 89.8  | 95.0  | 89.0  | 86.9  | 97.0  | 89.8  | 90.3         |
| Records Prod. + Trans.                   |                 |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| Credits Basis                            | Cl <sub>2</sub> | 88.5         | 92.3  | 88.9  | 89.9  | 91.0  | 90.0  | 90.7  | 78.4  | 89.5  | 97.6  | 86.0  | 98.6  | 97.4  | 90.9         |
| C                                        |                 | 86.1         | 91.3  | 86.7  | 85.2  | 87.1  | 85.2  | 88.4  | 84.7  | 93.9  | 96.6  | 81.6  | 95.4  | 91.5  | 89.0         |
| TCE TO PER-TRI                           | T/D             | 45.5         | 43.4  | 23.2  | 63.1  | 48.3  | 22.0  | 41.3  | 46.3  | 50.2  | 64.2  | 60.8  | 40.4  | 36.9  | 51.0         |
| HCl to HCl Pross.                        | T/D             | 21.2         | 18.8  | 19.6  | 30.4  | 19.3  | 18.9  | 19.6  | 14.7  | 16.7  | 26.7  | 32.2  | 19.7  | 18.2  | 21.2         |
| VDC to VDCM                              | T/D             | 6.4          | 0.0   | 8.2   | 8.4   | 0.6   | 11.5  | 9.8   | 24.6  | 1.1   | 17.3  | 12.7  | 14.3  | 4.6   | 9.4          |
| Tons Cl <sub>2</sub> /T TCE              |                 | 0.686        | 0.670 | 0.630 | 0.697 | 0.709 | 0.708 | 0.692 | 0.764 | 0.699 | 0.638 | 0.672 | 0.630 | 0.610 | 0.676        |
| Tons EDC/T TCE                           |                 | 0.874        | 0.942 | 0.817 | 0.939 | 1.003 | 0.914 | 0.885 | 0.901 | 0.870 | 0.850 | 0.866 | 0.823 | 0.859 | 0.859        |
| Tons C <sub>2</sub> H <sub>4</sub> /T MC |                 | 0.000        | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | (0.001)      |
| Tons N <sub>2</sub> /T MC                |                 | 0.172        | 0.160 | 0.227 | 0.081 | 0.028 | 0.075 | 0.096 | 0.111 | 0.111 | 0.097 | 0.095 | 0.076 | 0.088 | 0.104        |
| Steam (140# Basis) Lbs./T MC             |                 | 10379        | 11047 | 11778 | 5728  | 3455  | 963   | 3870  | 5463  | 5686  | 8047  | 1923  | 2512  | 2768  | 5270         |
| Well Water M Gals./T MC                  |                 | 15.9         | 23.3  | 38.8  | 15.0  | 29.0  | 11.8  | 14.9  | 17.8  | 18.6  | 24.7  | 16.0  | 10.8  | 13.8  | 19.5         |
| Tons Cell Liquor/T MC                    |                 | 0.394        | 0.345 | 0.517 | 0.305 | 0.356 | 0.410 | 0.403 | 0.381 | 0.423 | 0.552 | 0.471 | 0.433 | 0.509 | 0.425        |
| Catalyst Lbs./T MC                       |                 | 2.7          | 2.4   | 3.7   | 2.4   | 1.6   | 2.4   | 2.5   | 5.8   | 4.4   | 2.9   | 4.7   | 1.4   | 3.8   | 3.2          |
| IPP Lbs./T MC                            |                 | 6.3          | 8.8   | 9.8   | 7.1   | 10.3  | 6.4   | 5.6   | 10.2  | 12.0  | 17.4  | 11.6  | 7.2   | 6.5   | 9.4          |
| HQMME Lbs./T VDC                         |                 | 0.9          | 3.4   | 3.3   | 2.0   | 2.4   | 0.2   | 2.4   | 3.8   | 5.9   | 4.0   | 4.4   | 1.0   | 2.9   | 3.0          |
| AlBN Lbs./T TCE                          |                 | 0.108        | 0.108 | 0.078 | 0.113 | 0.179 | 0.224 | 0.092 | 0.176 | 0.182 | 0.146 | 0.389 | 0.156 | 0.146 | 0.166        |
| "Tri-Ethane" @ Invent ry Tons            |                 | 3255         | 3933  | 3292  | 3141  | 1423  | 1698  | 2739  | 2319  | 2300  | 2530  | 1422  | 2194  | 2485  | 2456         |
| Operating Time                           | %               | 88           | 100   | 100   | 85    | 51    | 99    | 100   | 100   | 97    | 63    | 49    | 100   | 71    | 85           |

"TRI-ETHANE" @ DEPARTMENT OPERATIONS REPORT

[illegible]

CONFIDENTIAL:  
 Subject to Protective Order  
 of 14th Judicial District Court  
 No. 91-1145

TRICHLORILENE  
 CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA

SL 013199

TRICHLORILENE DEPARTMENT OPERATIONS REPORT

| MATERIAL BALANCE            | 1970<br>AVG. | JAN    | FEB    | MAR    | APR    | MAY    | JUNE   | JULY   | AUG    | SEP    | OCT    | NOV    | DEC    | 1971<br>AVG. |
|-----------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
| CARBON - TONS               |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| TOTAL CARBON IN FEED        | 864.1        | 765.6  | 866.8  | 1109.7 | 736.1  | 981.6  | 890.5  | 796.0  | 790.2  | 877.4  | 1201.9 | 1010.9 | 845.5  | 906.0        |
| CARBON IN PRODUCTION        | 741.2        | 696.7  | 857.5  | 1005.0 | 660.4  | 860.9  | 846.8  | 751.4  | 688.4  | 625.2  | 1167.3 | 1020.3 | 812.3  | 832.7        |
| CARBON LOSS IN PROCESS      | 122.9        | 68.9   | 9.3    | 104.7  | 75.7   | 120.7  | 43.7   | 44.6   | 101.8  | 252.1  | 34.6   | -9.4   | 33.2   | 73.3         |
| ACCT. LOSS IN STILL BOTTOMS | 77.7         | 64.8   | 107.7  | 160.7  | 145.3  | 140.8  | 64.4   | 67.0   | 97.8   | 105.2  | 127.8  | 89.4   | 61.7   | 102.7        |
| MISC. ACCT. LOSSES          | 0.0          | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0          |
| UNACCOUNTABLE CARBON LOSS   |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| IN PROCESS                  | 45.2         | 4.1    | -98.3  | -56.0  | -69.6  | -20.1  | -20.7  | -22.4  | 4.0    | 146.9  | -93.2  | -98.8  | -28.5  | -29.4        |
| CARBON LOADING LOSS         | 18.2         | -23.1  | 44.3   | 25.4   | 13.2   | 43.2   | 3.4    | 40.1   | 8.2    | -37.2  | 63.8   | 16.8   | -14.8  | 15.3         |
| TOTAL CARBON LOSS           | 141.1        | 45.8   | 53.6   | 130.1  | 89.0   | 163.9  | 47.0   | 84.7   | 110.0  | 214.9  | 98.4   | 7.3    | 18.4   | 88.6         |
| CHLORINE - TONS             |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| TOTAL CHLORINE IN FEED      | 5327.3       | 4502.9 | 5270.8 | 6673.4 | 4298.2 | 6022.3 | 5497.7 | 5131.3 | 4949.5 | 5300.8 | 7392.4 | 6171.7 | 4967.3 | 5514.9       |
| CHLORINE IN PRODUCTION      | 3811.2       | 3534.3 | 4716.8 | 5349.5 | 3535.4 | 4334.3 | 4288.3 | 3843.0 | 3703.7 | 3323.4 | 6107.4 | 5131.9 | 4080.5 | 4329.0       |
| CHLORINE LOSS IN PROCESS    | 1516.1       | 968.6  | 554.0  | 1324.0 | 762.8  | 1688.0 | 1209.4 | 1288.3 | 1245.8 | 1977.4 | 1285.0 | 1039.8 | 886.8  | 1185.9       |
| ACCT. LOSS IN STILL BOTTOMS | 412.9        | 359.8  | 582.1  | 859.1  | 799.3  | 774.6  | 349.0  | 361.6  | 521.9  | 565.1  | 691.5  | 488.5  | 328.2  | 556.7        |
| MISC. ACCT. LOSSES          | 0.0          | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0          |
| LOSS FROM VDC REACTION PLUS |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| OTHER UNACCOUNTABLE LOSSES  | 1103.2       | 608.8  | -28.1  | 464.8  | -36.5  | 913.4  | 860.4  | 926.7  | 723.9  | 1412.3 | 593.5  | 551.2  | 558.6  | 629.1        |
| CHLORINE LOADING LOSS       | 79.5         | -103.3 | 207.7  | 119.1  | 62.2   | 202.5  | 15.8   | 188.4  | 33.8   | -174.7 | 299.6  | 78.6   | -69.4  | 71.7         |
| TOTAL CHLORINE LOSS         | 1595.6       | 860.3  | 761.7  | 1443.1 | 825.0  | 1890.6 | 1225.2 | 1476.7 | 1284.6 | 1802.6 | 1584.5 | 1118.4 | 817.4  | 1257.6       |
| ICE REACTOR SYSTEM          |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| TEMP. BOTTOM OF             | 229          | 220    | 192    | 169    | 173    | 145    | 152    | 187    | 184    | 177    | 185    | 211    | 220    | 185          |
| PRESS. TOP PSIG             | 44           | 45     | 47     | 48     | 48     | 47     | 47     | 47     | 47     | 46     | 47     | 48     | 47     | 47           |
| EDC ABSORBER                |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| TEMP. CHILLED HCL OF        | 17           | 22     | 9      | 17     | 16     | 16     | 6      | 7      | 6      | 21     | 22     | 7      | 14     | 14           |
| FEED FLOW GPM               | 11.8         | 12.0   | 12.0   | 12.0   | 9.6    | 11.9   | 12.0   | 12.0   | 12.0   | 12.3   | 12.5   | 12.0   | 11.9   | 11.9         |
| LIGHTS STILL                |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| TEMP. BOTTOM OF             | 234          | 291    | 292    | 295    | 297    | 292    | 292    | 291    | 294    | 294    | 287    | 283    | 283    | 291          |
| VAPOR OF                    | 201          | 206    | 208    | 212    | 211    | 207    | 208    | 207    | 210    | 211    | 200    | 192    | 193    | 205          |
| FEED FLOW GPM               | 86.7         | 85.4   | 85.0   | 83.2   | 87.5   | 89.7   | 91.3   | 86.9   | 85.7   | 87.3   | 86.2   | 100.2  | 108.1  | 89.7         |

## FIG. 4. SERIES

"TRI-ETHANE"® DEPARTMENT OPERATIONS REPORT

| HEAVIES STILL        |                   |      | 1970<br>AVG. | JAN  | FEB  | MAR  | APR  | MAY  | JUNE | JULY | AUG  | SEP  | OCT  | NOV  | DEC  | 1971<br>AVG. |      |
|----------------------|-------------------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|--------------|------|
| TEMP.                | STEAM             | °F   | 284          | 283  | 283  | 280  | 283  | 284  | 284  | 284  | 282  | 284  | 283  | 285  | 283  | 283          |      |
|                      | TOP               | °F   | 235          | 235  | 233  | 230  | 234  | 233  | 233  | 233  | 234  | 234  | 234  | 234  | 234  | 233          |      |
| FEED FLOW            |                   | GPM  | 20.6         | 16.6 | 23.5 | 24.7 | 31.9 | 22.4 | 19.0 | 16.5 | 18.5 | 17.7 | 12.5 | 24.5 | 19.0 | 20.6         |      |
| INVENTORY            |                   | TONS | -            | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -            |      |
| VDC REACTOR SYSTEM   |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| FLOWS                | ICE FEED          | GPM  | 11.6         | 16.6 | 6.2  | 12.6 | 14.7 | 14.9 | 11.4 | 9.6  | 9.8  | 11.4 | 14.3 | 15.1 | 15.1 | 12.6         |      |
|                      | C.L. FEED         | GPM  | 40.8         | 27.5 | 18.4 | 27.7 | 40.1 | 49.7 | 42.0 | 33.6 | 34.0 | 36.5 | 50.6 | 58.8 | 71.2 | 40.8         |      |
| BOTTOM COLUMN PRESS. |                   |      | PSIG.        | 18.3 | 20.1 | 20.0 | 19.8 | 19.8 | 19.0 | 19.3 | 19.2 | 19.4 | 19.0 | 21.9 | 21.7 | 19.8         | 19.9 |
| TEMP.                | BOTTOM            | °F   | 217          | 230  | 212  | 213  | 230  | 227  | 228  | 229  | 228  | 228  | 231  | 230  | 228  | 226          |      |
|                      | VAPOR             | °F   | 131          | 130  | 129  | 130  | 130  | 131  | 129  | 128  | 130  | 130  | 126  | 129  | 129  | 129          |      |
| MC REACTOR SYSTEM    |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| FLOWS                | VDC FEED          | GPM  | 9.6          | 8.3  | 5.9  | 11.0 | 11.7 | 12.1 | 10.0 | 9.0  | 8.6  | 9.2  | 10.6 | 12.7 | 13.4 | 10.2         |      |
|                      | HCL FEED          | SCFH | 370          | 271  | 147  | 344  | 364  | 389  | 312  | 280  | 274  | 281  | 380  | 419  | 431  | 324          |      |
| TEMP.                | VDC VAP. BOTTOM   | °F   | 138          | 135  | 138  | 137  | 136  | 137  | 138  | 138  | 137  | 136  | 134  | 138  | 138  | 137          |      |
|                      | BOTTOM            | °F   | 101          | 96   | 95   | 90   | 96   | 97   | 96   | 98   | 98   | 99   | 99   | 97   | 98   | 97           |      |
|                      | TOP               | °F   | 101          | 98   | 97   | 98   | 96   | 97   | 97   | 95   | 96   | 95   | 94   | 95   | 94   | 96           |      |
| FLASHER SYSTEM       |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| TEMP.                |                   | °F   | -            | -    | -    | -    | -    | -    | -    | -    | 180  | 178  | 180  | 179  | 178  | 179          |      |
|                      | Dopp Kettle Temp. | °F   | 177          | 175  | 176  | 177  | 181  | 178  | 179  | 174  | 174  | 170  | 174  | 173  | 175  | 176          |      |
| STRIPPER SYSTEM      |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| FEED FLOW            |                   | GPM  | 17.5         | 11.9 | 10.3 | 18.0 | 17.6 | 17.8 | 16.7 | 17.2 | 17.3 | 16.6 | 21.1 | 21.8 | 21.2 | 17.3         |      |
| TEMP.                | BOTTOM            | °F   | 233          | 230  | 231  | 230  | 232  | 231  | 229  | 231  | 233  | 232  | 236  | 235  | 233  | 232          |      |
|                      | VAPOR             | °F   | 220          | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -            |      |
| TOP PRESS.           |                   | PSIG | 21.6         | 20.4 | 20.9 | 20.9 | 20.4 | 20.1 | 19.8 | 21.0 | 20.9 | 21.1 | 22.7 | 22.5 | 21.3 | 21.0         |      |
| TOPPING STILL SYSTEM |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| TOP TEMP.            |                   | °F   | 167          | 165  | 167  | 167  | 168  | 168  | 168  | 168  | 168  | 168  | 169  | 169  | 169  | 163          |      |
| MC PRODUCT           |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |
| FLOW                 |                   | GPM  | 12.8         | 9.0  | 11.8 | 12.4 | 12.9 | 14.0 | 13.5 | 13.0 | 9.4  | 8.3  | 11.9 | 12.8 | 13.1 | 11.8         |      |
| SL 013200            |                   |      |              |      |      |      |      |      |      |      |      |      |      |      |      |              |      |

## PPG INDUSTRIES

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

SL 013201

## PERCHLORETHYLENE - TRICHLOROETHYLENE DEPARTMENT OPERATIONS REPORT

| GENERAL DEPARTMENT                     | 1970<br>AVG. | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEP.   | OCT.   | NOV.   | DEC.   | 1971    |
|----------------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Records Per Prod. T/D                  | 96.7         | 103.8  | 158.2  | 136.2  | 132.8  | 121.5  | 120.8  | 99.2   | 71.7   | 108.6  | 118.9  | 38.2   | 6.8    | 101.4   |
| Shipments T/D                          | 94.1         | 147.9  | 125.1  | 128.6  | 148.7  | 134.1  | 61.6   | 110.2  | 48.0   | 131.1  | 104.6  | 98.6   | 36.6   | 106.3   |
| Inventory Tons                         | 4026.9       | 1450.8 | 2195.8 | 2715.6 | 2303.5 | 1815.0 | 3592.1 | 3250.3 | 3987.1 | 3311.2 | 3755.8 | 2954.8 | 2029.8 | 2780.1  |
| Records Tri Prod. T/D                  | 118.5        | 107.6  | 119.1  | 126.4  | 118.3  | 128.2  | 113.8  | 116.8  | 102.6  | 117.1  | 118.2  | 42.1   | 11.7   | 101.8   |
| Shipments T/D                          | 117.5        | 85.5   | 117.4  | 73.8   | 105.0  | 144.1  | 115.1  | 102.8  | 93.6   | 147.3  | 125.3  | 113.2  | 44.2   | 105.6   |
| Inventory Tons                         | 2880.2       | 2517.9 | 2752.0 | 4457.1 | 4892.9 | 4314.7 | 4273.9 | 4707.0 | 4987.1 | 4079.8 | 3859.1 | 4995.8 | 1789.2 | 3710.5  |
| Area Per Prod. T/D                     | 89.4         | 103.4  | 153.1  | 141.1  | 138.4  | 120.9  | 106.8  | 101.5  | 83.7   | 112.5  | 117.2  | 36.2   | 11.5   | 102.2   |
| EDC T/T                                | 0.474        | 0.440  | 0.354  | 0.383  | 0.424  | 0.495  | 0.520  | 0.489  | 0.397  | 0.361  | 0.411  | 0.302  | 1.093  | 0.472   |
| Cl <sub>2</sub> as Cl <sub>2</sub> T/T | 0.361        | 0.375  | 0.319  | 0.352  | 0.391  | 0.457  | 0.487  | 0.494  | 0.412  | 0.419  | 0.461  | 0.432  | 0.345  | 0.412   |
| Cl <sub>2</sub> as HCl T/T             | 0.001        | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0       |
| NH <sub>3</sub> Lbs./T                 | 5.0          | 4.9    | 2.9    | 3.5    | 2.3    | 3.7    | 3.5    | 3.5    | 3.9    | 4.0    | 4.0    | 4.9    | 5.4    | 3.9     |
| Area Tri Prod. T/D                     | 118.8        | 107.6  | 126.0  | 127.0  | 120.3  | 126.4  | 115.0  | 116.7  | 98.8   | 123.3  | 112.9  | 43.3   | 9.1    | 102.2   |
| EDC T/T                                | 0.599        | 0.555  | 0.447  | 0.483  | 0.536  | 0.624  | 0.657  | 0.618  | 0.501  | 0.456  | 0.519  | 0.382  | 1.380  | 0.596   |
| Cl <sub>2</sub> as Cl <sub>2</sub> T/T | 0.228        | 0.236  | 0.201  | 0.222  | 0.246  | 0.288  | 0.307  | 0.312  | 0.260  | 0.264  | 0.291  | 0.273  | 0.217  | 0.260   |
| Cl <sub>2</sub> as HCl T/T             | 0.001        | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0       |
| NH <sub>3</sub> Lbs./T                 | 2.9          | 3.7    | 2.9    | 3.1    | 2.7    | 3.0    | 3.0    | 3.1    | 3.1    | 3.0    | 3.8    | 3.2    | 15.3   | 4.2     |
| Total Area Prod. O <sub>2</sub> T/T    | 0.232        | 0.219  | 0.215  | 0.225  | 0.230  | 0.241  | 0.242  | 0.232  | 0.225  | 0.180  | 0.226  | 0.225  | 0.102  | 0.214   |
| N <sub>2</sub> T/T                     | 0.081        | 0.008  | 0.079  | 0.076  | 0.080  | 0.097  | 0.081  | 0.062  | 0.045  | 0.044  | 0.023  | 0.059  | 1.381  | 0.170   |
| Catalyst Lbs./T                        | 3.06         | 4.76   | 1.27   | 2.95   | 1.48   | 3.11   | 3.80   | 4.32   | 7.27   | 1.60   | 2.19   | 14.72  | 69.74  | 9.77    |
| 400 # Stm.(actual) Lbs./T              | 3744         | 4197   | 3170   | 3144   | 3276   | 3390   | 3574   | 3633   | 4652   | 2990   | 3385   | 4081   | 5862   | 3780    |
| KWH/T                                  | 68.1         | 61.2   | 51.3   | 54.7   | 52.4   | 62.2   | 48.6   | 65.4   | 76.2   | 65.0   | 69.6   | 104.0  | 179.8  | 74.2    |
| Total Stillbottoms T/T                 | 0.334        | 0.572  | 0.459  | 0.391  | 0.461  | 0.478  | 0.599  | 0.627  | 0.494  | 0.382  | 0.595  | 0.722  | 0.089  | 0.489   |
| MAN HRS./T RECORDS PROD.               |              |        |        |        |        |        |        |        |        |        |        |        |        |         |
| Production                             | 0.373        | 0.388  | 0.276  | 0.302  | 0.298  | 0.334  | 0.281  | 0.365  | 0.460  | 0.340  | 0.367  | 0.506  | -      | 0.356   |
| Maintenance                            | 0.369        | 0.518  | 0.196  | 0.379  | 0.226  | 0.293  | 0.331  | 0.447  | 0.804  | 0.392  | 0.303  | 2.186  | -      | 0.552   |
| Salaried                               | 0.135        | 0.128  | 0.107  | 0.116  | 0.114  | 0.110  | 0.105  | 0.130  | 0.163  | 0.125  | 0.124  | 0.352  | -      | 0.143   |
| Total                                  | 0.877        | 1.034  | 0.579  | 0.797  | 0.638  | 0.737  | 0.717  | 0.942  | 1.427  | 0.857  | 0.794  | 3.044  | -      | 1.051   |
| Contract Man Hrs. Included             | 0.002        | 0.000  | 0.003  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -      | (0.003) |
| MAN HRS./T SHIPPED                     |              |        |        |        |        |        |        |        |        |        |        |        |        |         |
| Bulk                                   | 0.069        | 0.017  | 0.056  | 0.056  | 0.044  | 0.037  | 0.055  | 0.038  | 0.079  | 0.033  | 0.040  | 0.049  | -      | 0.046   |
| Drum                                   | 0.651        | 0.694  | 0.671  | 0.536  | 0.247  | 0.850  | 0.580  | 1.441  | 0.550  | 0.853  | 0.884  | 0.709  | -      | 0.729   |
| Salaried                               | 0.008        | 0.005  | 0.007  | 0.008  | 0.004  | 0.004  | 0.008  | 0.006  | 0.010  | 0.005  | 0.008  | 0.014  | -      | 0.007   |
| TCE T/T PER AREA PROD.                 | 0.180        | 0.181  | 0.301  | 0.209  | 0.166  | 0.078  | 0.163  | 0.186  | 0.244  | 0.239  | 0.234  | 0.444  | -      | 0.222   |
| TCE T/T TRI AREA PROD.                 | 0.227        | 0.229  | 0.180  | 0.264  | 0.210  | 0.098  | 0.206  | 0.235  | 0.308  | 0.302  | 0.295  | 0.560  | -      | 0.281   |

\*Includes purchased

PERCHLORETHYLENE - TRICHLORETHYLENE DEPARTMENT OPERATIONS REPORT

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

SL 013202

PPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

PERCHLORETHYLENE-TRICHLOROETHYLENE DEPARTMENT OPERATIONS REPORT

| MATERIAL BALANCE                | 1970<br>AVG. | JAN    | FEB     | MAR     | APR     | MAY     | JUNE    | JULY    | AUG    | SEP    | OCT     | NOV    | DEC    | 1971<br>AVG. |
|---------------------------------|--------------|--------|---------|---------|---------|---------|---------|---------|--------|--------|---------|--------|--------|--------------|
| CARBON - TONS                   |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| TOTAL CARBON IN FEED            | 1536.8       | 1900.0 | 2113.1  | 2011.7  | 2085.6  | 2110.0  | 1976.1  | 2049.0  | 1630.3 | 1707.7 | 2020.0  | 778.5  | 602.1  | 1748.7       |
| CARBON IN UNSTAB. PRODUCT       | 1372.0       | 1759.0 | 1916.0  | 1895.2  | 1883.8  | 1897.9  | 1804.6  | 1915.9  | 1432.8 | 1635.0 | 1919.4  | 704.7  | 115.5  | 1573.3       |
| PROCESS LOSS BY DIFFERENCE      | 166.8        | 141.0  | 197.1   | 116.5   | 201.8   | 212.1   | 171.5   | 133.1   | 197.5  | 72.7   | 100.6   | 73.8   | 486.6  | 175.4        |
| ACCOUNTABLE PROCESS LOSSES      |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| BLOWDOWN                        | 3.7          | 0.0    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    | 0.0          |
| REACTOR                         | 143.1        | 121.0  | 177.1   | 96.5    | 181.8   | 192.1   | 151.5   | 113.1   | 177.5  | 52.7   | 80.6    | 53.8   | 466.6  | 155.4        |
| MISCELLANEOUS                   | 20.0         | 20.0   | 20.0    | 20.0    | 20.0    | 20.0    | 20.0    | 20.0    | 20.0   | 20.0   | 20.0    | 20.0   | 20.0   | 20.0         |
| SUB TOTAL                       | 166.8        | 141.0  | 197.1   | 116.5   | 201.8   | 212.1   | 171.5   | 133.1   | 197.5  | 72.7   | 100.6   | 73.8   | 486.6  | 175.4        |
| UNACCOUNTABLE PROCESS LOSSES    | 0.0          | 0.0    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    | 0.0          |
| CARBON LOADING LOSS             | 4.1          | 13.9   | 24.8    | -26.9   | -4.2    | 10.8    | -13.8   | 6.5     | 6.6    | 47.3   | -26.4   | -36.7  | 32.1   | 2.8          |
| TOTAL CARBON LOSSES             | 170.9        | 154.9  | 221.9   | 89.6    | 197.5   | 222.9   | 157.7   | 139.7   | 204.1  | 120.0  | 74.2    | 37.1   | 517.8  | 178.2        |
| CHLORINE - TONS                 |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| TOTAL CHLORINE IN FEED          | 7632.3       | 9215.8 | 10405.4 | 10374.4 | 10645.8 | 10719.9 | 10085.5 | 10173.4 | 7913.6 | 9062.2 | 10591.9 | 4044.8 | 2555.0 | 8815.6       |
| CHLORINE IN UNSTAB. PRODUCT     | 6896.2       | 8498.3 | 9457.7  | 9633.2  | 9432.0  | 9403.0  | 8811.3  | 9070.0  | 6997.1 | 8114.3 | 9434.3  | 3394.8 | 579.9  | 7735.9       |
| PROCESS LOSS BY DIFFERENCE      | 736.1        | 717.5  | 947.7   | 741.2   | 1213.8  | 1311.9  | 1274.2  | 1103.4  | 916.5  | 947.9  | 1157.6  | 650.0  | 1975.1 | 1079.7       |
| ACCOUNTABLE PROCESS LOSSES      |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| BLOWDOWN                        | 20.3         | 0.0    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    | 0.0          |
| REACTOR                         | 615.8        | 617.5  | 847.7   | 641.2   | 1113.8  | 1211.9  | 1174.2  | 1003.4  | 816.5  | 847.9  | 1057.6  | 550.0  | 1875.1 | 931.4        |
| MISCELLANEOUS                   | 100.0        | 100.0  | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   | 100.0  | 100.0  | 100.0   | 100.0  | 100.0  | 100.0        |
| SUB TOTAL                       | 736.1        | 717.5  | 947.7   | 741.2   | 1213.8  | 1311.9  | 1274.2  | 1103.4  | 916.5  | 947.9  | 1157.6  | 650.0  | 1975.1 | 1079.7       |
| UNACCOUNTABLE PROCESS LOSSES    | 0.0          | 0.0    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    | 0.0          |
| CHLORINE LOADING LOSS           | 22.1         | 69.9   | 147.5   | -149.8  | -25.1   | 56.6    | -108.7  | 53.7    | 73.4   | 230.4  | -106.4  | -211.1 | 204.0  | 19.5         |
| TOTAL CHLORINE LOSS             | 758.2        | 787.4  | 1095.2  | 591.4   | 1188.6  | 1368.5  | 1165.5  | 1157.1  | 989.9  | 1178.3 | 1051.2  | 438.9  | 2179.1 | 1099.2       |
| CONFIDENTIAL:                   |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| Subject to Protective Order     |              |        |         |         |         |         |         |         |        |        |         |        |        |              |
| of 14th Judicial District Court |              |        |         |         |         |         |         |         |        |        |         |        |        |              |

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

PERCHLORETHYLENE-TRICHLOROETHYLENE DEPARTMENT OPERATIONS REPORT

| REACTOR NO. 1                | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC  | 1971<br>AVG. |
|------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------------|
| IN STREAM TIME HRS.          | 8127*        | 744   | 659   | 737   | 630   | 744   | 720   | 724   | 631   | 712   | 744   | 262   | 0    | 7307         |
| DISCH. PRESS. PSIG           |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| TEMP. OF VAPORIZER LIQUOR    | 290          | 287   | 283   | 282   | 276   | 275   | 267   | 266   | 284   | 289   | 271   | 272   | -    | 277          |
| DOWNSTREAM OUT               | 489          | 445   | 475   | 475   | 467   | 464   | 479   | 463   | 460   | 512   | 549   | 586   | -    | 489          |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| SEC. COND. DISCH             | 30           | 22    | 56    | 55    | 63    | 70    | 79    | 76    | 43    | 44    | 47    | 42    | -    | 54           |
| CATALYST CHARGED LBS.        | 51749*       | 1592  | 1984  | 4896  | 2720  | 4200  | 5056  | 6500  | 13707 | 1944  | 3128  | 7013  | -    | 52740*       |
| CATALYST FROM CENTRIFIX LBS. | 51749*       | 1592  | 1984  | 4896  | 2720  | 4200  | 5056  | 6500  | 13707 | 1944  | 3128  | 7013  | -    | 52740*       |
| LOW GPM EDC                  | 8.6          | 10.8  | 13.2  | 10.1  | 10.7  | 12.2  | 10.9  | 10.6  | 9.6   | 10.5  | 10.1  | 10.5  | -    | 10.8         |
| SCFH CL <sub>2</sub>         | 6215         | 7470  | 7527  | 8152  | 7836  | 7846  | 7245  | 6943  | 6544  | 6504  | 6680  | 5856  | -    | 7146         |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| O <sub>2</sub>               | 9574         | 10632 | 10350 | 10764 | 10262 | 10020 | 9774  | 8810  | 9612  | 9271  | 8464  | 7425  | -    | 9580         |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| PER-TRI RATIO                | 0.91         | 1.00  | 1.46  | 1.64  | 1.60  | 1.49  | 1.25  | 1.35  | 1.09  | 1.29  | 1.57  | 1.24  | -    | 1.36         |
| PER & TRI IN CRUDE %         | 86.92        | 90.53 | 91.43 | 91.78 | 91.74 | 94.12 | 90.02 | 89.14 | 83.80 | 86.8  | 89.3  | 88.7  | -    | 88.76        |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| REACTOR NO. 2                |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| IN STREAM TIME HRS.          | 8531*        | 640   | 672   | 744   | 696   | 744   | 720   | 624   | 0     | 385   | 73.1  | 286   | 117  | 6368*        |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| TEMP. OF VAPORIZER LIQUOR    | 295          | 293   | 288   | 280   | 278   | 273   | 270   | 256   | -     | 320   | 325   | 333   | 312  | 293          |
| DOWNSTREAM OUT               | 476          | 465   | 469   | 513   | 524   | 530   | 512   | 471   | -     | 559   | 578   | 556   | 607  | 528          |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| SEC. COND. DISCH.            | 39           | 28    | 32    | 37    | 38    | 40    | 41    | 42    | -     | 56    | 52    | 45    | 48   | 42           |
| CATALYST CHARGED LBS.        | 46074*       | 7992  | 1984  | 4896  | 2200  | 4200  | 5056  | 3229  | -     | 2424  | 3127  | 7656  | 8928 | 51692*       |
| CATALYST FROM CENTRIFIX LBS. | 46074*       | 7992  | 1984  | 4896  | 2200  | 4200  | 5056  | 3229  | -     | 2424  | 3127  | 7656  | 8928 | 51692*       |
| LOW GPM EDC                  | 8.3          | 8.2   | 9.8   | 9.6   | 9.8   | 9.4   | 9.8   | 9.7   | -     | 12.9  | 17.2  | 14.5  | 13.2 | 11.3         |
| SCFH CL <sub>2</sub>         | 6315         | 6434  | 7398  | 7779  | 7541  | 7814  | 7273  | 7455  | -     | 9460  | 9002  | 7703  | 6267 | 7648         |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| O <sub>2</sub>               | 9568         | 8836  | 10868 | 10641 | 9790  | 10444 | 10756 | 9865  | -     | 10044 | 10447 | 10380 | 9133 | 10109        |
|                              |              |       |       |       |       |       |       |       |       |       |       |       |      |              |
| PER-TRI RATIO                | 0.92         | 1.09  | 1.60  | 1.84  | 1.65  | 1.60  | 1.44  | 1.39  | 0.52  | 1.01  | 1.36  | 1.09  | -    | 1.33         |
| PER & TRI IN CRUDE %         | 87.62        | 85.06 | 91.32 | 92.74 | 91.71 | 91.44 | 90.12 | 92.13 | 78.99 | 74.50 | 80.2  | 77.4  | -    | 85.96        |

\*Totals

SL 013204

CONFIDENTIAL  
 Subject to Protective Order  
 of 14th Judicial District Court  
 No. 91-1145

CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA

SL 013205

PERCHLORETHYLENE-TRICHLOROETHYLENE DEPARTMENT OPERATIONS

| REACTOR NO. 3                | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| ON STREAM TIME HRS.          | 7207*        | 418   | 659   | 726   | 694   | 728   | 673   | 744   | 651   | 708   | 744   | 310   | 91    | 7146*        |
| TEMP. OF VAPORIZER LIQUOR    | 291          | 330   | 346   | 345   | 340   | 332   | 324   | 324   | 316   | 327   | 393   | 326   | 304   | 334          |
| DOWNTURN OUT                 | 491          | 548   | 502   | 501   | 481   | 474   | 470   | 456   | 455   | 473   | 482   | 461   | 642   | 495          |
| SEC. COND. DISCH.            | 32           | 26    | 24    | 28    | 36    | 33    | 34    | 37    | 38    | 38    | 40    | 39    | 52    | 35           |
| CATALYST CHARGED LBS.        | 48629        | 18392 | 1984  | 4896  | 2200  | 7395  | 5056  | 6500  | 13707 | 3064  | 3128  | 8298  | 17856 | 92476*       |
| CATALYST FROM CENTRIFUG LBS. | 48629        | 18392 | 1984  | 4896  | 2200  | 7395  | 5056  | 6500  | 13707 | 3064  | 3128  | 8298  | 17856 | 92476*       |
| FLOW GPM EDC                 | 9.0          | 13.0  | 16.0  | 17.3  | 17.5  | 17.0  | 17.1  | 15.3  | 16.1  | 12.2  | 12.6  | 14.1  | 13.2  | 15.1         |
| SCFH CL <sub>2</sub>         | 6051         | 6745  | 6612  | 5175  | 5739  | 6510  | 9406  | 9381  | 9230  | 9562  | 9984  | 9794  | 6233  | 7364         |
| O <sub>2</sub>               | 11328        | 11847 | 15344 | 15800 | 14347 | 14245 | 12328 | 11993 | 12323 | 12437 | 10400 | 11109 | 8439  | 11661        |
| PER-TRI RATIO                | 0.97         | 0.58  | 1.01  | 1.15  | 1.20  | 1.13  | 0.88  | 0.96  | 0.89  | 1.09  | 1.11  | 1.19  | -     | 1.02         |
| PER 1 TRI IN CRUDE %         | 83.77        | 78.31 | 85.34 | 86.19 | 82.24 | 80.29 | 76.59 | 76.11 | 75.93 | 79.97 | 79.0  | 80.7  | -     | 80.06        |
| REACTOR NO. 4                |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| ON STREAM TIME HRS.          | 8438*        | 744   | 672   | 704   | 684   | 726   | 641   | 744   | 684   | 704   | 744   | 238   | 0     | 7285*        |
| TEMP. OF VAPORIZER LIQUOR    | 290          | 282   | 285   | 282   | 270   | 267   | 278   | 278   | 283   | 262   | 243   | 250   | -     | 272          |
| DOWNTURN OUT                 | 486          | 464   | 494   | 482   | 504   | 522   | 511   | 494   | 475   | 516   | 554   | 579   | -     | 509          |
| SEC. COND. DISCH.            | 67           | 52    | 59    | 57    | 66    | 74    | 80    | 75    | 31    | 49    | 47    | -     | -     | 59           |
| CATALYST CHARGED LBS.        | 48354        | 1592  | 1984  | 4896  | 2200  | 4375  | 5056  | 6500  | 6853  | 1944  | 3128  | 6371  | -     | 44899*       |
| CATALYST FROM CENTRIFUG LBS. | 48354        | 1592  | 1984  | 4896  | 2200  | 4375  | 5056  | 6500  | 6853  | 1944  | 3128  | 6371  | -     | 44899*       |
| FLOW GPM EDC                 | 8.3          | 9.5   | 9.1   | 8.2   | 9.0   | 8.0   | 8.5   | 7.5   | 8.6   | 8.6   | 7.8   | 5.3   | -     | 8.2          |
| SCFH CL <sub>2</sub>         | 6341         | 7696  | 6734  | 7964  | 8356  | 8512  | 8139  | 7776  | 8022  | 6680  | 5783  | 5652  | -     | 7395         |
| O <sub>2</sub>               | 10396        | 10072 | 9404  | 10114 | 10962 | 10276 | 9849  | 9921  | 9900  | 8865  | 7451  | 6888  | -     | 9427         |
| PER-TRI RATIO                | 1.01         | 1.38  | 1.67  | 1.82  | 1.88  | 1.88  | 1.36  | 1.35  | 0.97  | 1.40  | 1.36  | 1.17  | -     | 1.48         |
| PER 1 TRI IN CRUDE %         | 87.99        | 88.33 | 87.50 | 91.13 | 87.85 | 91.35 | 87.98 | 91.98 | 88.26 | 88.53 | 89.4  | 88.0  | -     | 89.12        |

\* Total

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
PERCHLORETHYLENE-TRICHLOROETHYLENE DEPARTMENT OPERATIONS REPORT

| REACTOR NO. 5                                                                                  | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT  | NOV  | DEC   | 1971<br>AVG. |
|------------------------------------------------------------------------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|--------------|
| ON STREAM TIME HRS.                                                                            | 8434*        | 744   | 660   | 705   | 696   | 729   | 713   | 729   | 631   | 697   | 744  | 216  | 90    | 7354*        |
| TEMP. OF VAPORIZER LIQUOR                                                                      | 286          | 263   | 273   | 274   | 271   | 278   | 278   | 277   | 274   | 283   | 259  | 261  | 211   | 267          |
| DOWTHERM OUT                                                                                   | 490          | 496   | 512   | 494   | 517   | 523   | 539   | 500   | 486   | 500   | 616  | 602  | -     | 526          |
| SEC. COND. DISCH.                                                                              | 33           | 24    | 27    | 28    | 35    | 40    | 35    | 30    | 32    | 55    | 52   | 47   | 55    | 38           |
| CATALYST CHANGED LBS.                                                                          | 53814*       | 1592  | 1984  | 4896  | 2200  | 3650  | 5056  | 6500  | 6853  | 1944  | 3128 | 5782 | 17856 | 61441*       |
| CATALYST FROM CENTRIFUG LBS.                                                                   | 53814*       | 1592  | 1984  | 4896  | 2200  | 3650  | 5056  | 6500  | 6853  | 1944  | 3128 | 5782 | 17856 | 61441*       |
| FLOW GPM EDC                                                                                   | 8.2          | 9.7   | 10.0  | 8.8   | 8.5   | 8.6   | 9.3   | 8.6   | 9.3   | 8.1   | 9.5  | 5.8  | 5.1   | 8.4          |
| SCFH Cl2                                                                                       | 6361         | 6978  | 7094  | 7719  | 8187  | 9210  | 8996  | 7745  | 8150  | 8040  | 5972 | 6223 | 4975  | 7441         |
| O2                                                                                             | 10310        | 9737  | 13149 | 10712 | 10639 | 10574 | 10429 | 10010 | 10174 | 9376  | 7535 | 7074 | 6300  | 9642         |
| Per-Tri Ratio                                                                                  | 0.96         | 1.12  | 1.71  | 2.15  | 2.02  | 1.58  | 1.10  | 1.35  | 0.96  | 1.30  | 1.39 | 1.02 | -     | 1.43         |
| Per + Tri in Crude %                                                                           | 88.17        | 92.24 | 94.04 | 93.09 | 90.24 | 87.67 | 87.75 | 91.23 | 87.50 | 88.53 | 87.9 | 86.1 | -     | 89.66        |
| DRIED UNSTAB. TRICHLOR                                                                         |              |       |       |       |       |       |       |       |       |       |      |      |       |              |
| pH                                                                                             | 7.0          | 7.0   | 7.0   | 6.9   | 6.8   | 7.1   | 7.0   | 7.1   | 7.1   | 7.1   | 7.1  | 7.2  | -     | 7.0          |
| NaI Test - Oxides ppm                                                                          | NEG.         | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG. | NEG. | -     | NEG.         |
| DRIED UNSTAB. PERCHLOR                                                                         |              |       |       |       |       |       |       |       |       |       |      |      |       |              |
| pH                                                                                             | 6.8          | 6.8   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 7.0   | 7.0  | 7.0  | -     | 6.9          |
| NaI Test - Oxides ppm                                                                          | NEG.         | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG.  | NEG. | NEG. | -     | NEG.         |
| CONFIDENTIAL:<br>Subject to Protective Order<br>of 14th Judicial District Court<br>No. 91-1145 |              |       |       |       |       |       |       |       |       |       |      |      |       |              |
| SL 013206                                                                                      |              |       |       |       |       |       |       |       |       |       |      |      |       |              |

\* Total

## PERCHLORETHYLENE-TRICHLORETHYLENE DEPARTMENT OPERATIONS REPORT

| REFRIGERATED BRINE |            | 1970<br>AVG. | JAN  | FEB   | MAR   | APR   | MAY   | JUNE  | JULY | AUG  | SEP   | OCT   | NOV   | DEC  | 1971<br>AVG. |
|--------------------|------------|--------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|--------------|
| TEMP. °F           | WARM (OUT) | 16           | 9    | 14    | 17    | 19    | 19    | 18    | 21   | 19   | 26    | 25    | 28    | 25   | 20           |
|                    | COLD (IN)  | 10           | 3    | 9     | 12    | 13    | 12    | 10    | 12   | -    | 35    | 24    | 22    | 24   | 16           |
| * DRYING STILL     |            |              |      |       |       |       |       |       |      |      |       |       |       |      |              |
| TEMP. °F           | BOTTOM     | 201          | 201  | 148   | -     | -     | -     | -     | -    | -    | 189   | 184   | 180   | 165  | 178          |
|                    | TOP        | 160          | 143  | 114   | 147   | 144   | 148   | 152   | 149  | 148  | 152   | 141   | 139   | 33   | 134          |
| BOTTOM PRESSURE    | PSIG       | 1.14         | 1.12 | 1.00  | 1.12  | 1.09  | 1.35  | 1.42  | 1.67 | 1.88 | 1.61  | 1.73  | 1.72  | 0.85 | 1.38         |
| PER-TRI STILL      |            |              |      |       |       |       |       |       |      |      |       |       |       |      |              |
| FEED               | GPM        | 32.4         | 32.2 | 39.0  | 41.6  | 41.5  | 39.9  | 36.0  | 36.1 | 32.4 | 39.0  | 41.6  | 39.6  | 31.8 | 37.6         |
| REFLUX             | GPM        | 36.6         | 29.3 | 26.0  | 27.5  | 29.1  | 33.9  | 34.0  | 35.0 | 33.7 | 40.3  | 38.8  | 23.7  | 36.1 | 32.7         |
| BOTTOM TEMP.       | °F         | 292          | 287  | 288   | 284   | 285   | 295   | 293   | 294  | 292  | 301   | 303   | 294   | 293  | 292          |
| OVERHEAD TEMP.     | °F         | 189          | 188  | 190   | 185   | 186   | 190   | 190   | 190  | 189  | 191   | 186   | 186   | -    | 188          |
| HEAVIES STILL      |            |              |      |       |       |       |       |       |      |      |       |       |       |      |              |
| FEED               | GPM        | 15.4         | 12.6 | 17.8  | 20.7  | 20.9  | 20.4  | 18.4  | 19.3 | 16.5 | 19.1  | 19.4  | 19.1  | 20.5 | 18.7         |
| REFLUX             | GPM        | 95.6         | 97.2 | 130.6 | 139.0 | 145.0 | 138.0 | 116.0 | 98.0 | 91.0 | 102.0 | 108.0 | 126.0 | 96.3 | 115.6        |
| BOTTOM TEMP.       | °F         | 341          | 343  | 343   | 338   | 335   | 337   | 336   | 332  | 335  | 341   | 341   | 339   | 270  | 333          |
| OVERHEAD TEMP.     | °F         | 261          | 262  | 270   | 267   | 267   | 265   | 265   | 265  | 262  | 267   | 265   | 266   | 241  | 264          |
| PER STILL          |            |              |      |       |       |       |       |       |      |      |       |       |       |      |              |
| FEED               | GPM        | 11.3         | 11.2 | 15.1  | 16.4  | 15.7  | 14.5  | 13.2  | 13.8 | 11.0 | 13.9  | 13.7  | 13.0  | 9.7  | 13.4         |
| REFLUX             | GPM        | 15.5         | 14.6 | 14.6  | 14.4  | 14.5  | 13.8  | 14.5  | 16.8 | 16.8 | 17.5  | 18.1  | 17.0  | 7.1  | 15.0         |
| RECYCLE            | GPM        | 0.86         | 0.52 | 0.38  | 0.97  | 1.05  | 0.93  | 0.46  | 1.08 | 1.10 | 1.89  | 1.46  | 1.74  | 3.90 | 1.29         |
| TO WASH COLUMN     | GPM        | 12.2         | 14.7 | 14.0  | 14.2  | 13.8  | 11.7  | 11.2  | 9.5  | 10.0 | 10.2  | 10.7  | 10.4  | -    | 11.9         |
| BOTTOM TEMP.       | °F         | 286          | 295  | 287   | 283   | 284   | 288   | 289   | 287  | 286  | 287   | 287   | 286   | 250  | 284          |
| OVERHEAD TEMP.     | °F         | 245          | 245  | 253   | 252   | 251   | 253   | 254   | 254  | 249  | 250   | 248   | 246   | 226  | 248          |
| TRI- STILL         |            |              |      |       |       |       |       |       |      |      |       |       |       |      |              |
| FEED               | GPM        | 19.0         | 18.5 | 18.4  | 19.4  | 15.2  | 18.9  | 16.9  | 16.5 | 15.2 | 19.4  | 17.9  | 19.1  | 15.4 | 17.6         |
| REFLUX             | GPM        | 62           | 65   | 67    | 67.2  | 68.0  | 70.0  | 65.0  | 66.0 | 69.0 | 66.0  | 62.0  | 67.0  | 15.8 | 62.3         |
| BOTTOMS            | GPM        | 14.3         | 15.1 | 15.7  | 15.1  | 15.2  | 15.1  | 14.3  | 14.8 | 13.5 | 13.2  | 13.8  | 14.2  | 18.8 | 14.9         |
| RECYCLE            | GPM        | 1.94         | 1.73 | 1.46  | 1.50  | 1.80  | 2.10  | 1.90  | 1.97 | 1.91 | 2.33  | 2.84  | 3.00  | 6.10 | 2.41         |
| BOTTOM TEMP.       | °F         | 230          | 230  | 236   | 232   | 232   | 237   | 235   | 236  | 237  | 237   | 236   | 239   | 223  | 234          |
| OVERHEAD TEMP.     | °F         | 152          | 147  | 146   | 145   | 141   | 144   | 145   | 145  | 144  | 149   | 145   | 140   | 183  | 148          |

SL 013207

## PERCHLORETHYLENE-TRICHLORETHYLENE DEPARTMENT OPERATIONS REPORT

|         |                   |                  |  |
|---------|-------------------|------------------|--|
|         |                   | CONFIDENTIAL:    |  |
| Subject | to                | Protective Order |  |
| of 14th | Judicial District | Court            |  |
|         | No.               | 91-1145          |  |

SL 013208

[illegible]

HYDROGEN CHLORIDE DEPARTMENT OPERATIONS REPORT

[illegible]

#Totals

CONFIDENTIAL

Subject to Protective  
of 14th Judicial District Court  
No. 91-1145

| GENERAL DEPARTMENT                     | 1970<br>AVG. | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG. |
|----------------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| 62B WET HCL                            |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| WET HCL PRODUCTION T/O                 | 82.1         | 89.7  | 99.3  | 89.0  | 104.3 | 98.1  | 94.9  | 53.2  | 80.0  | 90.3  | 112.7 | 96.9  | 85.3  | 91.1         |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| HCL SOLD AS MONIATIC T/O               | 39.5         | 40.1  | 44.4  | 43.2  | 48.8  | 50.0  | 46.4  | 29.8  | 41.4  | 41.2  | 49.4  | 47.4  | 38.0  | 43.3         |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| EXCESS H <sub>2</sub> %                | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
|                                        |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| CL <sub>2</sub> TONS/TON WET HCL PROD  | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| H <sub>2</sub> MCF/TON                 | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| N <sub>2</sub> TONS/TON                | 0.138        | 0.072 | 0.089 | 0.072 | 0.064 | 0.066 | 0.097 | 0.197 | 0.111 | 0.101 | 0.072 | 0.086 | 0.095 | 0.094        |
| STEAM (ACTUAL) M LBS/TON               | 2722         | 1743  | 1661  | 1606  | 1656  | 1413  | 1723  | 1705  |       | 2236  | 2164  | 2295  | 2529  | 1796         |
| WELL WATER M GALS/TON                  | 5.3          | 0.9   | 0.7   | 0.9   | 1.4   | 1.4   | 1.5   | 2.1   | 1.0   | 0.8   | 0.7   | 0.8   | 0.9   | 1.1          |
| H <sub>2</sub> SO <sub>4</sub> LBS/TON | 2.3          | 2.2   | 3.0   | 2.3   | 1.5   | 2.5   | 0.9   | 3.1   | 5.9   | 2.6   | 2.2   | 4.0   | 4.1   | 2.9          |
| KWH/TON                                | 55.0         | 23.1  | 23.0  | 23.9  | 21.1  | 21.7  | 23.2  | 40.0  | 26.6  | 24.4  | 18.9  | 22.7  | 25.0  | 24.5         |
| KWH/Ton (Dry HCL)                      | -            | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -            |
| OPERATING TIME                         |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| NO 3 BURNER                            | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| NO 4 BURNER                            | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| NO 5 BURNER                            | 0            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0            |
| NO 1 STRIPPER                          | 6862*        | 543   | 672   | 476   | 720   | 481   | 668   | 397   | 549   | 645   | 720   | 712   | 622   | 7205*        |
| NO 2 STRIPPER                          | 6419*        | 678   | 423   | 709   | 718   | 688   | 675   | 387   | 471   | 633   | 735   | 640   | 616   | 7373*        |
| NO 1 COMPRESSOR                        | 5600*        | 744   | 656   | 744   | 586   | 668   | 563   | 545   | 554   | 600   | 559   | 643   | 736   | 7598*        |
| NO 2 COMPRESSOR                        | 7587*        | 614   | 381   | 744   | 586   | 594   | 672   | 432   | 725   | 624   | 669   | 614   | 726   | 7381*        |
| NO 3 COMPRESSOR                        | 46*          | 73    | 422   | 0     | 0     | 0     | 0     | 0     | 0     | 105   | 412   | 0     | 0     | 1012*        |

\*Totals

SL 013211

| GENERAL DEPARTMENT                | 1970<br>AVG | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | DEC   | 1971<br>AVG |
|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| 62B WET HCL<br>REFRIGERATION UNIT |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| PRESSURE PSIG                     |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| SUCTION                           | -23.8       | -23.3 | -23.0 | -23.5 | -22.1 | -22.1 | -22.9 | -22.9 | -21.1 | -17.5 | -19.3 | -21.7 | -20.3 | -21.6       |
| DISCHARGE                         | 10.1        | 8.6   | 7.9   | 8.2   | 9.2   | 10.4  | 12.0  | 11.1  | 12.3  | 13.3  | 11.3  | 9.2   | 9.5   | 10.2        |
| SEAL                              | 22.3        | 21.6  | 21.4  | 21.2  | 20.6  | 21.0  | 21.1  | 21.0  | 22.0  | 26.1  | 27.0  | 27.0  | 26.9  | 23.1        |
| TEMPERATURES OF                   |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| BRINE IN                          | 24          | 27    | 27    | 30    | 24    | 27    | 37    | 33    | 38    | 40    | 38    | 34    | 34    | 32          |
| BRINE OUT                         | 20          | 21    | 23    | 28    | 21    | 23    | 34    | 31    | 34    | 36    | 36    | 34    | 36    | 30          |
| AMPS                              | 155         | 151   | 148   | 147   | 152   | 154   | 158   | 155   | 157   | 157   | 154   | 150   | 149   | 153         |
| NO. 1 STRIPPER                    |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| FLOWS                             |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| STRONG ACID FEED GPM              | 40.7        | 42.9  | 42.9  | 42.8  | 39.8  | 42.1  | 43.7  | 42.0  | 45.6  | 44.9  | 49.1  | 47.5  | 48.4  | 44.3        |
| STEAM LBS/HR                      | 5462        | 5915  | 6138  | 6121  | 5691  | 5946  | 5624  | 5939  | 4726  | 6988  | 7528  | 6726  | 8059  | 6033        |
| TEMPERATURES OF                   |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| TOP                               | 237         | 236   | 234   | 234   | 233   | 234   | 236   | 240   | 243   | 249   | 251   | 251   | 253   | 241         |
| BOTTOM                            | -           | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -           |
| TERTIARY                          | 34          | 32    | 33    | 38    | 33    | 34    | 44    | 46    | 47    | 50    | 45    | 40    | 39    | 40          |
| NO. 2 STRIPPER                    |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| FLOWS                             |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| STRONG ACID FEED GPM              | 40.1        | 49.3  | 43.6  | 45.2  | 38.6  | 40.9  | 35.0  | 35.1  | 26.1  | 22.7  | 44.2  | 26.1  | 48.9  | 35.5        |
| STEAM LBS/HR                      | 2834        | 3586  | 2970  | 3160  | 2682  | 3106  | 2310  | 2349  | 2259  | 3810  | 4305  | 4059  | 4482  | 3256        |
| TEMPERATURES OF                   |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| TOP                               | 242         | 246   | 248   | 241   | 241   | 244   | 246   | 247   | 248   | 249   | 251   | 250   | 249   | 247         |
| BOTTOM                            | -           | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -           |
| TERTIARY                          | 33          | 29    | 31    | 36    | 32    | 36    | 45    | 48    | 47    | 49    | 44    | 38    | 39    | 40          |
| MAN HOURS/TON HCL                 |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| PRODUCTION                        | 0.200       | 0.142 | 0.122 | 0.137 | 0.120 | 0.127 | 0.129 | 0.227 | 0.157 | 0.138 | 0.104 | 0.123 | 0.148 | 0.140       |
| MAINTENANCE                       | 0.117       | 0.024 | 0.037 | 0.041 | 0.021 | 0.009 | 0.011 | 0.038 | 0.045 | 0.018 | 0.013 | 0.034 | 0.088 | 0.032       |
| SALARIED                          | 0.053       | 0.035 | 0.035 | 0.040 | 0.032 | 0.032 | 0.037 | 0.061 | 0.043 | 0.037 | 0.029 | 0.033 | 0.038 | 0.038       |
| TOTAL                             | 0.370       | 0.201 | 0.194 | 0.218 | 0.173 | 0.168 | 0.177 | 0.326 | 0.245 | 0.193 | 0.146 | 0.190 | 0.274 | 0.209       |
| CONTRACT MAINT. INCLUDED IN ABOVE | 0.008       | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000       |

## PPG INDUSTRIES

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## HYDROGEN CHLORIDE DEPARTMENT OPERATIONS REPORT

**CONFIDENTIAL:**  
Subject to Protective  
of 14th Judicial District Court  
No. 91-1145

| COMPRESSION     |      | 1970<br>AVG | JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEP | OCT | NOV | DEC | 1971<br>AVG |
|-----------------|------|-------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-------------|
| No 1 COMPRESSOR |      |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| PRESSURE        | PSIG |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | 165         | -   | 170 | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | 170         |
| TEMPERATURE     | °F   |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| No 2 COMPRESSOR |      |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| PRESSURE        | PSIG |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | 170         | 177 | 164 | 130 | 130 | 132 | 159  | -    | -   | -   | -   | -   | -   | 149         |
| TEMPERATURE     | °F   |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| No 3 COMPRESSOR |      |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| PRESSURE        | PSIG |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | 145         | -   | 107 | 84  | 87  | 146 | -    | -    | -   | -   | -   | -   | -   | 106         |
| TEMPERATURE     | °F   |             |     |     |     |     |     |      |      |     |     |     |     |     |             |
| SUCTION         |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |
| DISCHARGE       |      | -           | -   | -   | -   | -   | -   | -    | -    | -   | -   | -   | -   | -   | -           |

SL 013213

**CONFIDENTIAL:**  
 Subject to Protective Order  
 of 14th Judicial District Court  
 No. 91-1145

PPG INDUSTRIES

 CHEMICAL DIVISION  
 LAKE CHARLES, LOUISIANA

## ETHYL CHLORIDE DEPARTMENT OPERATIONS REPORT

SL 013214

| GENERAL DEPARTMENT                              | 1970<br>Avg | JAN   | FEB   | MAR   | APR   | MAY   | JUNE  | JULY  | AUG   | SEP   | OCT   | NOV   | EC    | 1971<br>Avg |
|-------------------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ETHYL CHLORIDE PRODUCTION T/D                   | 147.4       | 114.6 | 98.1  | 141.4 | 123.3 | 142.3 | 138.7 | 92.2  | 146.8 | 134.0 | 150.0 | 162.8 | 172.2 | 134.7       |
| EC AREA PRODUCTION T/D                          | 147.1       | 114.1 | 98.7  | 141.7 | 121.0 | 143.4 | 136.6 | 92.6  | 146.4 | 134.8 | 149.1 | 161.5 | 172.1 | 134.3       |
| EC SHIPMENTS T/D                                | 147.2       | 98.5  | 105.2 | 165.5 | 109.8 | 162.9 | 132.0 | 96.0  | 163.8 | 118.0 | 153.3 | 139.9 | 166.8 | 134.3       |
| HCL TO EC T/D                                   | 90.6        | 68.5  | 59.2  | 88.3  | 73.1  | 87.9  | 32.6  | 57.6  | 89.7  | 81.7  | 89.9  | 98.6  | 108.4 | 82.1        |
| PURITY %                                        | -           | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -           |
| ETHYLENE TO EC T/D                              | 66.6        | 50.8  | 43.2  | 63.5  | 54.7  | 65.1  | 59.5  | 44.7  | 65.3  | 60.8  | 67.8  | 73.4  | 76.3  | 60.2        |
| PURITY %                                        | 99.69       | 99.86 | 99.86 | 99.84 | 99.79 | 99.90 | 99.81 | 99.97 | 99.95 | 99.95 | 99.92 | 99.93 | 99.97 | 99.90       |
| HCL EFFICIENCY %                                | 91.8        | 94.7  | 92.1  | 91.9  | 94.4  | 92.2  | 94.2  | 91.4  | 93.0  | 94.0  | 94.4  | 93.0  | 89.7  | 92.9        |
| HCL YIELD %                                     | 91.8        | 94.4  | 91.0  | 90.7  | 93.5  | 92.1  | 93.4  | -     | -     | -     | -     | -     | -     | -           |
| CARBON EFFICIENCY %                             | 96.2        | 95.9  | 96.7  | 97.8  | 96.8  | 95.8  | 100.4 | 97.0  | 98.0  | 97.0  | 96.0  | 96.0  | 98.0  | 97.1        |
| CARBON YIELD %                                  | 96.2        | 95.8  | 96.0  | 97.0  | 96.1  | 95.7  | 99.8  | -     | -     | -     | -     | -     | -     | -           |
| EXCESS HCL T/D                                  | 4.1         | 2.5   | 3.1   | 5.7   | 2.0   | 3.3   | 5.2   | 3.4   | 4.8   | 2.7   | 1.7   | 3.2   | 9.2   | 3.9         |
| EXCESS HCL %                                    | 4.8         | 3.8   | 5.4   | 6.9   | 2.8   | 3.9   | 6.8   | 6.3   | 5.7   | 3.4   | 1.9   | 3.4   | 9.3   | 5.0         |
| HCL TO EC TONS/TON EC PROD                      | 0.409       | 0.601 | 0.621 | 0.623 | 0.604 | 0.613 | 0.604 | 0.622 | 0.612 | 0.606 | 0.603 | 0.610 | 0.629 | 0.612       |
| C <sub>2</sub> H <sub>4</sub> TO EC TONS/TON EC | 0.453       | 0.445 | 0.455 | 0.448 | 0.452 | 0.454 | 0.435 | 0.450 | 0.445 | 0.450 | 0.455 | 0.454 | 0.443 | 0.449       |
| N <sub>2</sub> TO EC TONS/TON EC                | 0.049       | 0.056 | 0.090 | 0.046 | 0.055 | 0.045 | 0.048 | 0.070 | 0.044 | 0.049 | 0.043 | 0.041 | 0.037 | 0.052       |
| FECL <sub>3</sub> LBS/TON EC                    | 8.3         | 7.1   | 5.3   | 5.7   | 6.8   | 6.7   | 10.0  | 21.9  | 11.3  | 10.1  | 12.8  | 9.0   | 6.7   | 9.4         |
| STEAM (ACTUAL) LBS/TON EC                       | 1838        | 2700  | 3341  | 2640  | 2461  | 2435  | 2549  | 1285  | 1019  | 1076  | 1056  | 1092  | 1953  | 1968        |
| WELL WATER M GALS/TON EC                        | 1.813       | 2.261 | 2.894 | 1.821 | 2.203 | 1.800 | 1.950 | 2.786 | 1.762 | 1.977 | 1.731 | 1.651 | 1.499 | 2.028       |
| KWH/TON EC                                      | 93.3        | 113.9 | 124.6 | 93.6  | 103.9 | 94.1  | 72.3  | 143.6 | 95.6  | 98.3  | 92.1  | 84.8  | 77.9  | 97.1        |
| MAN HOURS/TON EC                                |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| PRODUCTION                                      | 0.245       | 0.291 | 0.330 | 0.234 | 0.283 | 0.240 | 0.253 | 0.357 | 0.246 | 0.260 | 0.236 | 0.212 | 0.196 | 0.261       |
| MAINTENANCE                                     | 0.212       | 0.120 | 0.133 | 0.068 | 0.283 | 0.098 | 0.122 | 0.115 | 0.162 | 0.180 | 0.319 | 0.323 | 0.121 | 0.170       |
| SALARIED                                        | 0.087       | 0.104 | 0.133 | 0.096 | 0.106 | 0.083 | 0.099 | 0.135 | 0.089 | 0.096 | 0.084 | 0.076 | 0.072 | 0.098       |
| TOTAL                                           | 0.544       | 0.515 | 0.596 | 0.398 | 0.672 | 0.421 | 0.474 | 0.607 | 0.497 | 0.536 | 0.629 | 0.611 | 0.389 | 0.529       |
| CONTRACT MAINT. INCLUDED IN ABOVE               | 0.025       | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.044 | 0.004       |
| Man Hours/T EC Shipped                          |             |       |       |       |       |       |       |       |       |       |       |       |       |             |
| Bulk                                            | 0.019       | 0.022 | 0.026 | 0.019 | 0.028 | 0.015 | 0.021 | 0.023 | 0.020 | 0.025 | 0.020 | 0.023 | 0.021 | 0.022       |
| Salaried                                        | 0.002       | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002       |

PPG INDUSTRIES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

ETHYL CHLORIDE DEPARTMENT OPERATIONS REPORT

CONFIDENTIAL:  
Subject to Protection  
of 14th Judicial District Court  
No. 91-1145

[illegible]

ETHYL CHLORIDE DEPARTMENT OPERATIONS REPORT

CONFIDENTIAL: ( )  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

[illegible]

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

SL 013217

# VINYL CHLORIDE DEPARTMENT OPERATIONS REPORT

SL 013218

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## VINYL CHLORIDE DEPARTMENT OPERATIONS REPORT

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CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## VINYL CHLORIDE DEPARTMENT OPERATIONS REPORT

[illegible]

CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA

## VINYL CHLORIDE DEPARTMENT OPERATIONS REPORT

[illegible]

F. C. M. STILES  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
OHC-EDC DEPARTMENT OPERATIONS REPORT

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

| GENERAL DEPARTMENT                                 |           | 1970<br>Avg. | JAN    | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEP.   | OCT.   | NOV.   | DEC.   | 1971<br>Avg. |
|----------------------------------------------------|-----------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
| OHC-EDC Production                                 | T/D       | 161.2        | 207.0  | 222.4  | 261.4  | 235.3  | 223.6  | 221.7  | 122.0  | 218.4  | 220.8  | 216.0  | 169.6  | 130.0  | 204.0        |
| HCL to OHC-EDC                                     | T/D       | 121.3        | 153.9  | 165.9  | 196.8  | 180.8  | 166.5  | 167.6  | 91.6   | 165.9  | 165.2  | 161.1  | 129.0  | 97.2   | 153.5        |
| HCL Consumed                                       | T/T EDC   | 0.749        | 0.744  | 0.742  | 0.753  | 0.755  | 0.744  | 0.755  | 0.750  | 0.759  | 0.748  | 0.745  | 0.761  | 0.747  | 0.750        |
| Purchased C <sub>2</sub> H <sub>4</sub> to OHC-EDC | T/D       | 47.5         | 61.2   | 65.0   | 78.2   | 68.1   | 64.6   | 63.7   | 34.8   | 62.8   | 64.2   | 63.3   | 48.6   | 37.0   | 59.3         |
| % C <sub>2</sub> H <sub>4</sub> Purity             |           | 99.69        | 99.86  | 99.86  | 99.84  | 99.79  | 99.90  | 99.81  | 99.97  | 99.95  | 99.95  | 99.92  | 99.93  | 99.97  | 99.90        |
| YIELD                                              | %         |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Cl <sub>2</sub> Basis                              |           | 97.9         | 99.1   | 99.3   | 97.8   | 97.5   | 99.0   | 97.5   | 98.1   | 97.0   | 98.5   | 98.8   | 96.8   | 98.6   | 98.2         |
| C <sub>2</sub> H <sub>4</sub> Basis                |           | 96.3         | 95.9   | 97.5   | 94.7   | 99.7   | 98.0   | 98.7   | 99.4   | 98.6   | 97.5   | 96.7   | 98.8   | 99.5   | 97.9         |
| Excess C <sub>2</sub> H <sub>4</sub>               | %         | 3.8          | 4.3    | 2.6    | 5.6    | 0.3    | 2.0    | 7.6    | 0.6    | 1.5    | 2.6    | 3.4    | 1.2    | 0.5    | 2.7          |
| Excess C <sub>2</sub> H <sub>4</sub>               | T/M       | 55.8         | 77.8   | 45.3   | 129.2  | 6.6    | 39.3   | 25.4   | 6.1    | 28.2   | 48.0   | 64.5   | 16.7   | 5.8    | 41.1         |
| Excess C <sub>2</sub> H <sub>4</sub>               | Lbs/T EDC | 22.7         | 24.2   | 14.5   | 31.9   | 1.8    | 11.3   | 1.34   | 3.22   | 8.32   | 14.5   | 19.3   | 6.6    | 2.9    | 11.7         |
| Oxygen to OHC-EDC                                  | T/D       | 28.2         | 37.6   | 39.3   | 47.9   | 43.5   | 38.2   | 38.5   | 21.3   | 39.9   | 38.6   | 38.0   | 35.0   | 23.7   | 36.6         |
| Oxygen to OHC-EDC                                  | T/T EDC   | 0.174        | 0.182  | 0.176  | 0.183  | 0.181  | 0.170  | 0.173  | 0.174  | 0.182  | 0.174  | 0.175  | 0.206  | 0.182  | 0.180        |
| Excess O <sub>2</sub>                              | %         | 5.5          | 10.2   | 7.1    | 10.9   | 9.6    | 4.7    | 4.7    | 6.0    | 9.6    | 6.4    | 7.5    | 23.6   | 11.4   | 9.3          |
| Excess O <sub>2</sub>                              | T/M       | 48.1         | 119.4  | 81.6   | 145.8  | 114.3  | 52.8   | 51.9   | 37.6   | 108.7  | 69.8   | 81.8   | 200.2  | 75.0   | 94.9         |
| Excess O <sub>2</sub>                              | Lbs/T EDC | 19.9         | 37.2   | 26.1   | 36.0   | 31.8   | 15.2   | 15.6   | 19.9   | 32.1   | 21.1   | 24.4   | 78.7   | 37.2   | 31.3         |
| CRUDE EDC INVENTORY                                | TONS      | 460.3        | 434.6  | 291.3  | 263.5  | 436.4  | 244.6  | 545.6  | 263.3  | 351.7  | 468.0  | 553.7  | 642.7  | 199.3  | 391.2        |
| For Per-Tri Feed                                   | TONS      | 187.0        | 229.9  | 141.5  | 143.6  | 160.2  | 223.9  | 319.4  | 138.6  | 140.4  | 263.5  | 299.3  | 331.9  | 126.1  | 209.9        |
| For EDC Still No. 2 Feed                           | TONS      | 151.6        | 204.7  | 149.8  | 119.9  | 276.2  | 20.7   | 226.2  | 124.7  | 211.3  | 204.7  | 254.4  | 310.8  | 73.2   | 161.4        |
| Transferred to Per-Tri                             | TONS      | 2903.3       | 3258.8 | 3095.8 | 3575.4 | 3597.7 | 4304.9 | 3888.4 | 1905.3 | 2477.9 | 2633.8 | 3004.8 | 826.1  | 781.0  | 277.9        |
| Transferred to EDC Still No. 2                     | TONS      | 1941.8       | 3301.7 | 3285.9 | 4551.2 | 3253.0 | 2800.9 | 2379.3 | 2101.8 | 4113.9 | 3710.8 | 3492.2 | 4170.0 | 3349.8 | 3375.9       |
| MAN HOURS/TON EDC PRODUCED                         |           |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
| Production                                         |           | 0.303        | 0.212  | 0.204  | 0.168  | 0.170  | 0.189  | 0.175  | 0.346  | 0.191  | 0.179  | 0.179  | 0.250  | 0.265  | 0.211        |
| Maintenance                                        |           | 0.148        | 0.080  | 0.069  | 0.044  | 0.133  | 0.136  | 0.067  | 0.304  | 0.073  | 0.108  | 0.097  | 0.144  | 0.255  | 0.126        |
| Salaried                                           |           | 0.148        | 0.100  | 0.102  | 0.091  | 0.094  | 0.092  | 0.105  | 0.178  | 0.104  | 0.101  | 0.100  | 0.126  | 0.167  | 0.113        |
| Total                                              |           | 0.599        | 0.392  | 0.375  | 0.303  | 0.397  | 0.417  | 0.347  | 0.828  | 0.368  | 0.388  | 0.376  | 0.520  | 0.687  | 0.450        |
| Contract Man Hours Included                        |           | 0.000        | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000        |
|                                                    |           |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
|                                                    |           |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
|                                                    |           |              |        |        |        |        |        |        |        |        |        |        |        |        |              |
|                                                    |           |              |        |        |        |        |        |        |        |        |        |        |        |        |              |

SL 013222

CONFIDENTIAL:  
Subject to Protective Order  
of 14th Judicial District Court  
No. 91-1145

PROHIBITED  
CHEMICAL DIVISION  
LAKE CHARLES, LOUISIANA  
OXYHYDROCHLORINATION OPERATIONS

SL 013223

| CHC-EDC REACTOR #1                       | 1970<br>AVG. | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEP.  | OCT.  | NOV.  | DEC.  | 1971<br>AVG. |
|------------------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| On-Stream Time Hrs.                      | 4695 *       | 658   | 608   | 694   | 650   | 688   | 712   | 422   | 646   | 616   | 674   | 286   | 154   | 6808 *       |
| Top Pressure psig                        | 16           | 15    | 17    | 19    | 14    | 14    | 13    | 13    | 14    | 15    | 14    | 14    | 14    | 15           |
| Dowtherm Temp. (From) °F                 | 365          | 383   | 381   | 359   | 369   | 373   | 380   | 357   | 370   | 361   | 370   | 356   | 375   | 369          |
| (Into) °F                                | 339          | 359   | 354   | 328   | 340   | 346   | 352   | 336   | 334   | 335   | 342   | 330   | 353   | 342          |
| Reactor Temp.                            |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| Catalyst Bottom °F                       | 569          | 569   | 572   | 569   | 565   | 562   | 568   | 568   | 563   | 578   | 592   | 586   | 565   | 571          |
| Middle °F                                | 527          | 525   | 525   | 518   | 518   | 504   | 520   | 529   | 522   | 533   | 534   | 546   | 526   | 525          |
| Top °F                                   | 512          | 518   | 514   | 511   | 509   | 511   | 515   | 516   | 521   | 509   | 510   | 520   | 513   | 514          |
| Vapor Space °F                           | 512          | 520   | 515   | 512   | 511   | 516   | 517   | 512   | 522   | 511   | 511   | 517   | 513   | 515          |
| Refrig. Cond. Outlet °F                  | 44           | 41    | 40    | 46    | 47    | 46    | 53    | 52    | 50    | 49    | 47    | 45    | 55    | 48           |
| FEEDS C <sub>2</sub> H <sub>4</sub> schf | 41200        | 39900 | 40900 | 45700 | 39700 | 38400 | 37100 | 35400 | 38800 | 40900 | 39300 | 39800 | 40000 | 39700        |
| O <sub>2</sub> schf                      | 21200        | 24300 | 20200 | 22800 | 20500 | 18900 | 18000 | 17100 | 19000 | 19300 | 18900 | 20000 | 19100 | 19800        |
| HCl schf                                 | 77000        | 69700 | 79600 | 87800 | 78500 | 74400 | 74100 | 71900 | 74400 | 73800 | 74000 | 75000 | 76600 | 75800        |
| RECYCLE ANALYSIS (Vol. %)                |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| CO <sub>2</sub> %                        | 25.8         | 27.7  | 32.2  | 32.3  | 35.1  | 31.6  | 40.7  | 31.3  | 34.0  | 37.4  | 34.4  | 34.3  | 28.5  | 33.3         |
| C <sub>2</sub> H <sub>4</sub> %          | 54.1         | 47.8  | 44.6  | 48.8  | 48.8  | 49.4  | 49.1  | 49.6  | 49.1  | 45.6  | 48.2  | 47.3  | 48.5  | 48.1         |
| O <sub>2</sub> %                         | 3.7          | 4.2   | 4.3   | 4.7   | 4.5   | 4.9   | 4.3   | 3.4   | 3.5   | 3.3   | 3.4   | 2.6   | 3.9   | 3.9          |
| Catalyst Charged Lbs.                    | 8226         | 9865  | 3606  | 10245 | 3983  | 21504 | 309   | 4066  | 8306  | 8946  | 5588  | 7047  | 9002  | 7706         |
| REACTOR #2                               |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| On-Stream Time Hrs.                      | 5684 *       | 628   | 542   | 692   | 716   | 658   | 716   | 400   | 656   | 622   | 672   | 550   | 404   | 7256 *       |
| Top Pressure psig                        | 18           | 16    | 18    | 18    | 18    | 16    | 12    | 14    | 15    | 14    | 12    | 20    | 22    | 16           |
| Dowtherm Temp. (From) °F                 | 368          | 378   | 367   | 357   | 358   | 365   | 395   | 390   | 377   | 367   | 363   | 346   | 351   | 368          |
| (Into) °F                                | 335          | 350   | 339   | 321   | 325   | 335   | 369   | 353   | 349   | 338   | 337   | 331   | 330   | 340          |
| Reactor Temp.                            |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| Catalyst Bottom °F                       | 565          | 573   | 573   | 570   | 574   | 574   | 580   | 575   | 548   | 581   | 573   | 573   | 578   | 573          |
| Middle °F                                | 524          | 521   | 519   | 523   | 536   | 522   | 520   | 520   | 518   | 516   | 519   | 530   | 542   | 524          |
| Top °F                                   | 510          | 510   | 508   | 508   | 518   | 509   | 508   | 511   | 523   | 506   | 509   | 516   | 524   | 512          |
| Vapor Space °F                           | 509          | 512   | 510   | 510   | 519   | 511   | 510   | 513   | 511   | 509   | 511   | 517   | 525   | 513          |
| Refrig. Cond. Outlet °F                  | 45           | 41    | 44    | 47    | 49    | 47    | 54    | 56    | 50    | 49    | 48    | 49    | 52    | 49           |
| FEEDS C <sub>2</sub> H <sub>4</sub> schf | 44300        | 39500 | 43100 | 44600 | 43500 | 40200 | 35800 | 35800 | 58400 | 39400 | 35600 | 44700 | 49000 | 42500        |
| O <sub>2</sub> schf                      | 22700        | 20500 | 21800 | 22900 | 22700 | 19800 | 18100 | 19400 | 20700 | 20000 | 18200 | 24000 | 26700 | 21200        |
| HCl schf                                 | 82900        | 74500 | 77600 | 83800 | 81100 | 73600 | 70000 | 70700 | 75400 | 72100 | 67200 | 83800 | 91500 | 76800        |
| RECYCLE ANALYSIS (Vol. %)                |              |       |       |       |       |       |       |       |       |       |       |       |       |              |
| CO <sub>2</sub> %                        | 24.6         | 34.8  | 35.4  | 37.5  | 38.7  | 35.7  | 31.3  | 34.3  | 30.6  | 26.6  | 27.1  | 29.7  | 26.6  | 32.4         |
| C <sub>2</sub> H <sub>4</sub> %          | 54.6         | 47.3  | 44.2  | 47.3  | 47.5  | 48.9  | 48.5  | 45.8  | 46.9  | 46.6  | 49.4  | 47.3  | 55.4  | 47.9         |
| O <sub>2</sub> %                         | 3.8          | 3.7   | 3.8   | 3.7   | 3.7   | 4.7   | 3.6   | 2.5   | 3.1   | 3.7   | 4.5   | 4.2   | 4.5   | 3.8          |
| Catalyst Charged Lbs.                    | 9183         | 9415  | 3214  | 10215 | 4387  | 20566 | 311   | 3854  | 8434  | 9034  | 5572  | 13553 | 23618 | 9348         |

Totals\*

## PPG Industries

CHEMICAL DIVISION

LAKE CHARLES, LOUISIANA

## OXYHYDROCHLORINATION OPERATIONS

**CONFIDENTIAL:**

|                                 |  |  |  |
|---------------------------------|--|--|--|
| Subject to Protective Order     |  |  |  |
| of 14th Judicial District Court |  |  |  |
| No. 91-1145                     |  |  |  |

SL 013224

CHEM. DIVISION  
LAKE CHARLES, LOUISIANA

|                                 |               |  |
|---------------------------------|---------------|--|
|                                 | CONFIDENTIAL: |  |
| Subject to Protective Order     |               |  |
| of 14th Judicial District Court |               |  |
| No. 91-1145                     |               |  |