

MEMORANDUM

July 16, 1975

To: Central Region

From: Shirley Prescott *Shirley Prescott*

Subject: Union Collier Chemical

On June 11, 1975, Scott Jeane and I ran a survey on the above-referenced installation.

There is one discharge pipe located just under the dock on the river. Flow measurements are taken at this point. There is not any type of flow measuring device. They check the flow monthly with a five gallon bucket and reported flow averages of 5000 gal/day during the summer months and 4000 gal/day during the winter.

The discharge is condenser or cooling water from two bulk storage tanks of liquid  $NH_3$ . The tanks are designated as north and south and are shown as such on the following field test results:

| <u>SOUTH TANK</u> |     |              |       | <u>NORTH TANK</u> |     |       |       |             |
|-------------------|-----|--------------|-------|-------------------|-----|-------|-------|-------------|
| Time              | pH  | Conductivity | Temp. | Time              | pH  | Cond. | Temp. | Flows       |
| 1015              | 8.1 | 8000         | 18°C  | 1030              | 8.6 | 1150  | 17°C  | 325 gal/hr. |
| 1130              | 7.5 | 6000         | 19    | 1135              | 8.3 | 1000  | 17    | 237 gal/hr. |
| 1300              | 7.8 | 3800         | 19.5  | 1305              | 8.4 | 950   | 18    | 284 gal/hr. |
| 1400              | 7.7 | 300          | 18.5  | 1405              | 8.2 | 960   | 17.5  |             |

Approx. average hourly flow 282 gal/hr.  
Approx. average daily 6768 gal/hr.

The south tank condenser water overflow valve had been partially closed and we requested that it be opened to the normal position. Both conductivity and temperature were reduced.

Lab results on the composite sample are as follow:

| Parameter              | NORTH | SOUTH | AVG.  | #/Day (Based on Approx.<br>Daily Flow) |
|------------------------|-------|-------|-------|--|
| pH                     | 7.9   | 7.9   |       |  |
| Conductivity           | 2500  | 4000  | 3250  |  |
| NO <sub>3</sub> N mg/L | 200   | 360   | 280   | 15.64                                  |
| NO <sub>2</sub> N mg/L | ND    | ND    | ND    |  |
| NH-N mg/L              | 55    | 85    | 70    | 3.91                                   |
| OPO-P mg/L             | 0.02  | .02   | .02   | .001                                   |
| T.Phos.-P mg/L         | 0.04  | 0.12  | .08   | .004                                   |
| T. Solids mg/L         | 1412  | 2410  | 1911  |  |
| T.N.V.S. mg/L          | 546   | 945   | 742.5 |  |
| T. Sus. Solids<br>mg/L | 70    | 184   | 127   | 7.1                                    |
| Color Units            | 56    | 60    | 58    |  |

They would appear to be operating within permit limitations of maximum discharge of 7,500 gal/day, temperature 65°F, and pH of 6.5 to 8.5.

SP:ee



Union  
 Collier-Chemical = Bud Thorpe  
 Mike Dulich - 586 4162  
~~Atkins Chemicals~~

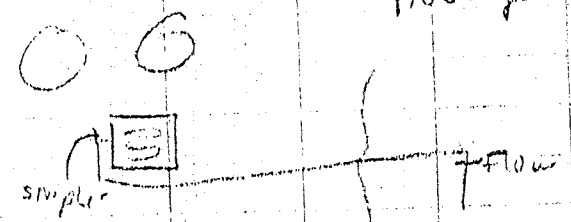
Chemicon - Frank Spornal - Dave Shamer -  
 Samvic Special Metals - Glyn Phillips 586 4131

Phillips = Ke Ray Pierce 586-6191

Phillips - Very High O&T POA values  
 influent & Effluent N+P -  
 is Phillips being contaminated by O

Chemicon - sample below Junction of N+P lines -  
 (flow) very high nutrients  
 oil at times (Line #)

Collier - Flow = 5 gal bucket - monthly -  
 Average 5,000 gal/day - summer  
 4,000 gal/day - winter



Dearborn Agua - Service C-370

shrink & seal Union Collier Chemical  
 6-11-75 Ruck Liquid N+P & Euron  
 storage -

water is condenser water off  
 bucket N+P storage

South side

| Time  | Sample | pH  | Cond | Temp   | Total Flow  |
|-------|--------|-----|------|--------|-------------|
| 10:45 | 400ml  | 8.1 | 8000 | 18°C   | 3.5 - 12000 |
| 11:30 | 400    | 7.5 | 6000 | 19°C   | 4.0 - 10000 |
| 13:00 | 400    | 7.8 | 3800 | 19.5°C | 4.0 - 1200  |
| 14:00 | 400    | 7.7 | 3000 | 18.5°C | -           |

6765.6 flow  
 .0067 mg/d

North side

|       |     |     |      |        |
|-------|-----|-----|------|--------|
| 10:30 | 400 | 8.6 | 1150 | 17.0°C |
| 11:35 | 400 | 8.3 | 1000 | 17.0°C |
| 13:05 | 400 | 8.4 | 950  | 16.0°C |
| 14:05 | 400 | 8.2 | 960  | 17.5°C |

Boil opened up valves to manual position

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO:  
G.S.J. II  
COPIES TO:  
.....  
.....  
LAB FILES .....

DATA SUMMARY

Source COLLIER CHEMICAL

Collected By G.S.J. II

Date Collected 6-11-75

Goal, Pro./Obj. \_\_\_\_\_

Log Number: 75- 2293 94 STORET

| Station:                     | NORTH      | SOUTH      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |
|------------------------------|------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| pH                           | 7.9        | 7.9        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00403 |
| Turbidity (JTU)              |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00070 |
| Conductivity (umhos/cm)@25°C | 2,500      | 4,000      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00095 |
| COD                          |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00340 |
| BOD (5 day)                  |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00310 |
| Total Coliform (Col./100ml)  |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 31504 |
| Fecal Coliform (Col./100ml)  |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 31616 |
| NO3-N (Filtered)             | 200.       | 360.       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00620 |
| NO2-N (Filtered)             | N.D.       | N.D.       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00615 |
| NH3-N (Unfiltered)           | 55.        | 85.        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00610 |
| T. Kjeldahl-N (Unfiltered)   |            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00625 |
| O-PO4-P (Filtered)           | 0.02       | 0.02       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00671 |
| Total Phos.-P (Unfiltered)   | 0.04       | 0.12       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00665 |
| Total Solids                 | 1412       | 2410       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00500 |
| Total Non Vol. Solids        | 546        | 945        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |
| Total Suspended Solids       | 70         | 184        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 00530 |
| Total Sus. Non Vol. Solids   | 46         | 137        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |
| <u>COLOR (COLOR UNITS)</u>   | <u>56.</u> | <u>60.</u> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |       |

Note: All results are in PPM unless otherwise specified. ND is "None Detected"  
Convert those marked with a \* to PPB (PPM X 10<sup>3</sup>) prior to entry into STORET

Summary By Stephen D. Bell Date 6-25-75