

FACT SHEET  
WATER POLLUTION CONTROL DIVISION

Conoco, Inc., Westlake Refinery

Conoco, Inc. owns and operates a petroleum refinery located in Westlake, Louisiana. The attached proposed permit is to coincide with the issuance of the EPA "second round" NPDES permit and includes updated language and monitoring requirements, and provisions for planned expansions. The permit limitations are based on the EPA 1982 final "BAT" guidelines for petroleum refineries.

I. Receiving Streams

- A. Outfall 001 - Bayou Verdine
- B. Outfall 002 - Bayou Verdine
- C. Outfall 003 - Calcasieu River

II. Outfalls and Wastewater Sources

A. Present - flows based on May 29, 1981 EPA form 2C

- 1. Outfall 001 process wastewater - 1,538 gpm, 2.2 MGD

Desalter water, coker blowdown pond, ballast water, crude tank draw water, miscellaneous generation, cooling tower filter backwash, boiler blowdown water, 105°F pit overflow, cooling tower blowdown, sanitary sewer

- 2. Outfall 002 - stormwater runoff from process area - 0.12 MGD
- 3. Outfall 003 - stormwater runoff from tank farm area - 0.29 MGD

B. Proposed - September, 1983, first stage of planned expansion

- 1. Outfall 001 - some increase in flow, however, no values are included in permit application
- 2. Outfall 002 and 003 - no change

C. Proposed - January, 1984, full attainment of planned expansion

- 1. Outfall 001 process wastewater - 1,783 gpm, 2.57 MGD

Desalter water, closed coker blowdown, ballast water, crude tank draw water, miscellaneous generation, cooling tower filter backwash, boiler blowdown, 105°F pit overflow, cooling tower blowdown, sanitary sewer, fire water pond, stormwater diversion pond.

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2. Outfall 002 - stormwater runoff from process area, 0.17 MGD
3. Outfall 003 - stormwater runoff from tank farm area - 0.17 MGD

### III. Treatment

#### A. Outfall 001

API separator, CPI separator, dissolved air flotation, equalization basin, activated sludge, lagoon, additional dissolved air flotation. Coker blowdown undergoes initial induced air flotation.

#### B. Outfall 002

#### C. Outfall 003

No treatment

### IV. Wastewater Characteristics

#### A. Present

1. Outfall 001 and 002 - (limitations apply to sum of 001 and 002) - Based on proposed permit limits

| <u>Effluent Characteristic</u> | <u>Approximate<br/>Average concentration</u>                                                   | <u>lb/day</u> |             |
|--------------------------------|------------------------------------------------------------------------------------------------|---------------|-------------|
|                                |                                                                                                | <u>Avg.</u>   | <u>Max.</u> |
| BOD                            | Estimation not possible<br>due to two separate<br>sources contributing<br>to total mass values | 948           | 1,706       |
| TSS                            |                                                                                                | 757           | 1,188       |
| COD                            |                                                                                                | 6,629         | 12,778      |
| Oil & Grease                   |                                                                                                | 276           | 517         |
| Phenol                         |                                                                                                | 6.2           | 12.7        |
| Ammonia                        |                                                                                                | 513           | 1,129       |
| Sulfide                        |                                                                                                | 5.0           | 11.1        |
| Total Chromium                 |                                                                                                | 15.0          | 25.7        |
| Hexavalent Chromium            |                                                                                                | 0.96          | 2.1         |
| pH                             |                                                                                                | 6 - 9         |             |

2. Outfall 003 - based on proposed limits

| <u>Effluent Characteristic</u> | <u>lb/day</u> |             |
|--------------------------------|---------------|-------------|
|                                | <u>Avg.</u>   | <u>Max.</u> |
| Oil & Grease                   | ---           | 15          |
| TOC                            | ---           | 35          |
| pH                             | 9 - 10        |             |

- B. Proposed with increase in vacuum distillation and delayed coking - September, 1983

1. Outfall 001 and 002 (limitations apply to sum of 001 and 002)

Based on proposed limits

| <u>Effluent Characteristic</u> | lb/day      |             |
|--------------------------------|-------------|-------------|
|                                | <u>Avg.</u> | <u>Max.</u> |
| BOD                            | 1,278       | 2,300       |
| TSS                            | 1,021       | 1,602       |
| COD                            | 8,933       | 17,218      |
| Oil & Grease                   | 372         | 697         |
| Phenol                         | 8.3         | 17.1        |
| Ammonia                        | 693         | 1,525       |
| Sulfide                        | 6.7         | 15.0        |
| Total Chromium                 | 10.3        | 34.7        |
| Hexavalent Chromium            | 1.3         | 2.8         |

2. Outfall 003

No change

C. Proposed with increase in thermal cracking - January 1984

1. Outfall 001 and 002 - limitations apply to sum of 001 and 002)

| <u>Effluent Characteristic</u> | lb/day      |             |
|--------------------------------|-------------|-------------|
|                                | <u>Avg.</u> | <u>Max.</u> |
| BOD                            | 1,393       | 2,508       |
| TSS                            | 1,114       | 1,747       |
| COD                            | 9,740       | 18,772      |
| Oil & Grease                   | 405         | 760         |
| Phenol                         | 9.1         | 18.6        |
| Ammonia                        | 7.3         | 16.4        |
| Sulfide                        | 22.2        | 37.8        |
| Total Chromium                 | 1.4         | 3.0         |
| Hexavalent Chromium            | 756         | 1,663       |

2. Outfall 003

No change.

V. Plant History

- A. December 16, 1970, SCC approved discharge permit.
- B. 1974, a study on the Calcasieu Estuary recommended wasteload allocations for the area.
- C. 1981, an industry sponsored study by AWARE, Inc. suggested that industrial discharges were not the major element in D.O. problems in the Calcasieu Estuary.

- D. 1983, an updated wasteload allocation study is due by the fall of this year.
- E. During the 1982 calendar year, Conoco reported 8 excursions of federal permit limitations. This corresponds to greater than 99% compliance.