July 26, 1978

Permit: APC - 78/597-OPERATION
Getty Refining & Marketing Company
Heater (21-H-2) Crude Unit - Delaware City

Getty Refining & Marketing Company
Delaware City, DE 19706

Attention: R. W. Ladd, Specialist - Air & Water Conservation

Gentlemen:

Pursuant to the State of Delaware Regulations Governing the Control of Air Pollution, Regulation No. II, Section 3, approval of the Department of Natural Resources and Environmental Control is hereby granted for the operation of a Foster Wheeler (21-H-2) fuel oil or desulfurized refinery gas fired vacuum column heater, rated heat input of 340 milion BTU per hour, in the Crude Unit at the Getty Delaware Refinery in Delaware City, Delaware.

This permit is issued subject to the following conditions:

1. Air contaminant emission levels shall not exceed those prescribed by the State of Delaware Regulations Governing the Control of Air Pollution.

2. Representatives of the Department of Natural Resources and Environmental Control may, at any reasonable time, inspect this facility.

3. This permit supersedes Permit: APC-75/717-0.

4. The sulfur content of fuel used to fire this unit shall not exceed 1.0 percent by weight.

5. The emission of visible air contaminants from this unit shall not exceed either a #1 of the Ringelmann Smoke Chart or 20 percent opacity for an aggregate of more than three (3) minutes in any one (1) hour period or more than fifteen (15) minutes in any twenty-four hour period.

6. This permit expires on June 17, 1981. Application for renewal must be made not earlier than 60 nor later than 30 days prior to expiration.

7. This permit shall be available on the premises.

8. Failure to comply with the provisions of this permit shall be grounds for suspension or revocation.

Sincerely yours,

Robert R. French, P. E.
Manager, Air Resources Section
Division of Environmental Control
Telephone: (302) 678-4791

RRF:HJM:bh

June 17, 1975

Permit: APC - 75/717 - OPERATION
Getty Oil Company (Eastern Operations) Inc.
Heater (21-H-2) - Crude Unit Area - Delaware City

Getty Oil Company (Eastern Operations) Inc.
Delaware City, Delaware 19706

Attention: C. A. Phillips, Director, Projects Development and
Air and Water Conservation

Gentlemen:

Pursuant to the State of Delaware Regulations Governing the Control of Air Pollution, Regulation No. II, Section 3, approval of the Department of Natural Resources and Environmental Control is hereby granted for the operation of a Foster-Wheeler (21-H-2), fuel oil or desulfurized refinery gas fired vacuum column heater, rated at 340 million BTU per hour, in the Crude Unit Area at the Getty Oil Company Delaware Refinery in Delaware City, Delaware.

This permit is issued subject to the following conditions:

1. Emission levels shall not exceed those prescribed by the State of Delaware Regulations Governing the Control of Air Pollution.

2. Representatives of the Department of Natural Resources and Environmental Control may, at any reasonable time, inspect this facility.

3. The sulfur content of fuel used to fire this unit shall not exceed 1.0 percent by weight.

THE NAME [illegible] INC.
[illegible]
[illegible]

4. The emission of visible air contaminants from this unit shall not exceed either a #1 of the Ringelmann Smoke Chart or 20 percent opacity for an aggregate of more than three (3) minutes in any one (1) hour period or more than fifteen (15) minutes in any twenty-four hour period.

5. This permit expires on June 17, 1978. Application for renewal must be made no later than ninety days prior to expiration.

6. This permit shall be available on the premises.

7. Failure to comply with the provisions of this permit shall be grounds for suspension or revocation.

Sincerely yours,

Robert R. French, P.E.
Manager, Air Resources Section
Division of Environmental Control

RRF/HJN/bl

Department of Natural Resources and Environmental Control

Division of Environmental Control
Tatnall Building
Dover, Delaware

Date MAR. 23 1973

General:

1. Name and address of plant or establishment (correct if necessary)

Getty Oil Company
Delaware City, Delaware 19706
0096

Getty Oil Company
(Eastern Operations), Inc.
Delaware Refinery
Delaware City, Delaware 19706

2. Name and address of owner if different from #1. (If same, write SAME).

SAME

3. Name of responsible person at this location Mr. R. W. Ladd

Telephone Number 834-4581

4. Pursuant to Section 6007, Chapter 442, Volume 55, Laws of Delaware, we (do) X (do not) _____ wish to waive our right to public hearing in regard to this application for a Certificate of Approval.

Signed E. A. Phillips

Title Director of Air & Water Conservatic and Project Development

Phone 834-4581

ETION FOUR - BOILERS, HEATERS AND FURNACES USING MORE THAN 100,000,000 TU/HR. (APPROXIMATELY 700 GALLONS PER HOUR).

A. Manufacturer of Boiler, Heater or Furnace:

Foster Wheeler Corporation (21-H-2)

B. Size of Unit (gallons per hour, tons of coal per day, pounds of steam per hour, horsepower, etc.):

340,000,000 BTU/HR

C. Purpose of Unit (comfort heating, power, processing, etc.):

Processing

D. Type and Grade of fuel: (1)

Type Fuel Gas or Oil Grade Desulfurized Refinery Gas or Fuel Oil

E. Sulfur content of fuel (percent):

Fuel Mixture - 0-1%

F. Source of makeup combustion air (if opening, give dimensions; if fan system is used, give capacity of fan, cfm):

Opening - 48-6 in., 48-10½ in.

G. Type draft (natural, mechanical):

Natural

H. Fuel preheat capability? Yes _____ No _____

I. Is flue gas smoke monitor provided? Yes _____ No X

If answer is yes, is it recording type _____,

indicating type _____, Audio Alarm _____,

Visual Alarm _____

J. Annual fuel consumption, gallons, tons, etc.

3×10^9 SCF or 476,000 Bbl.

K. Stack Data:

1. Height above grade, feet 350
2. Diameter, feet 11
3. Flue gas temperature, °F. 775
4. Flue gas flow rate, cfm (actual) 275,000

(1) See attached page for [illegible]

This heater normally fires desulfurized refinery fuel gas. During periods that fuel gas availability may be limited, oil is used to supplement or replace the fuel gas within the sulfur in fuel limits of Regulation VIII.

On infrequent occasions (normally every 24 to 36 months) during shutdown of the refinery fuel gas desulfurization facilities or associated Sulfur Recovery Plant, the sulfur level in the refinery fuel gas will exceed the limits of Regulation VIII. The shutdown period is normally from one to three weeks. The exact effect on emissions is not predictable and depends on other refinery operations at the time. Shutdown of these facilities is scheduled to coincide with shutdown of other major processing operations (usually the Fluid Catalytic Cracking Unit) to minimize the impact on emissions. Other refinery operations are also modified for this purpose.

During this period when undesulfurized refinery fuel gas is burned, visible emissions may exceed those as set forth by Regulation XV.

The effect on air quality is minimal. Close examination of air quality measurements during such periods in the past substantiates this fact. The tall stack originally installed on process heaters designed to operate on desulfurized refinery fuel gas were installed solely for such abnormal periods to minimize the effect on ambient air quality.