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Date 7/25/79

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Attached is a copy of the PEDCo report that I received from EPA on Monday.

Mary Ann

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jlh

Encl.

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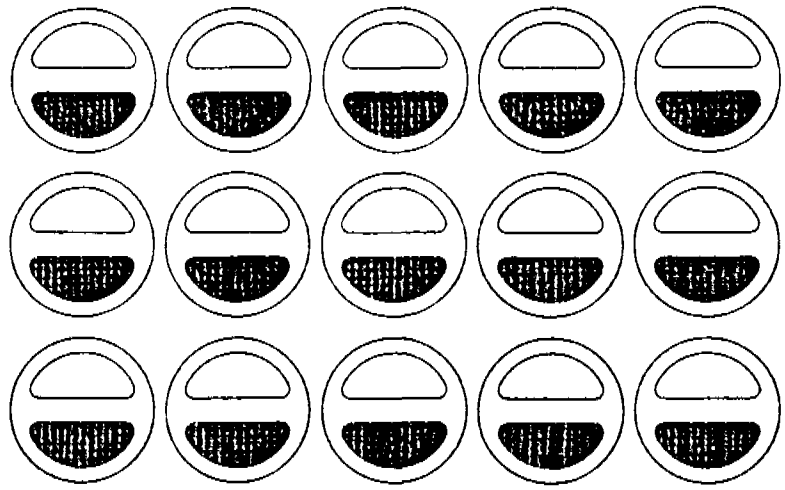

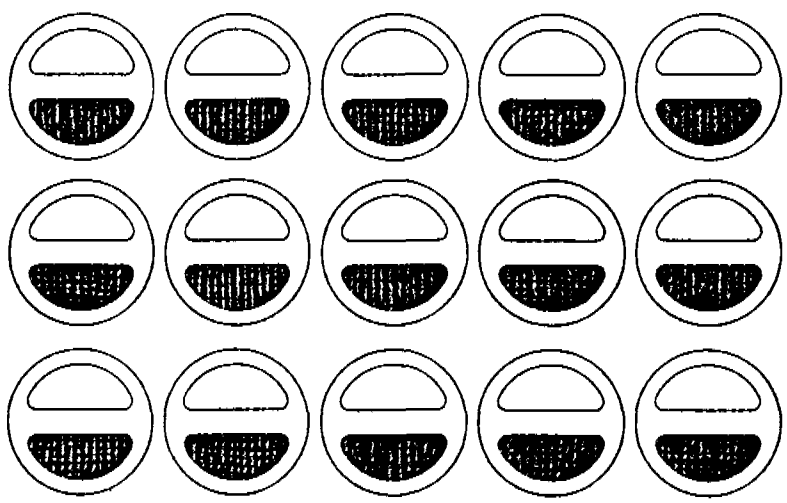

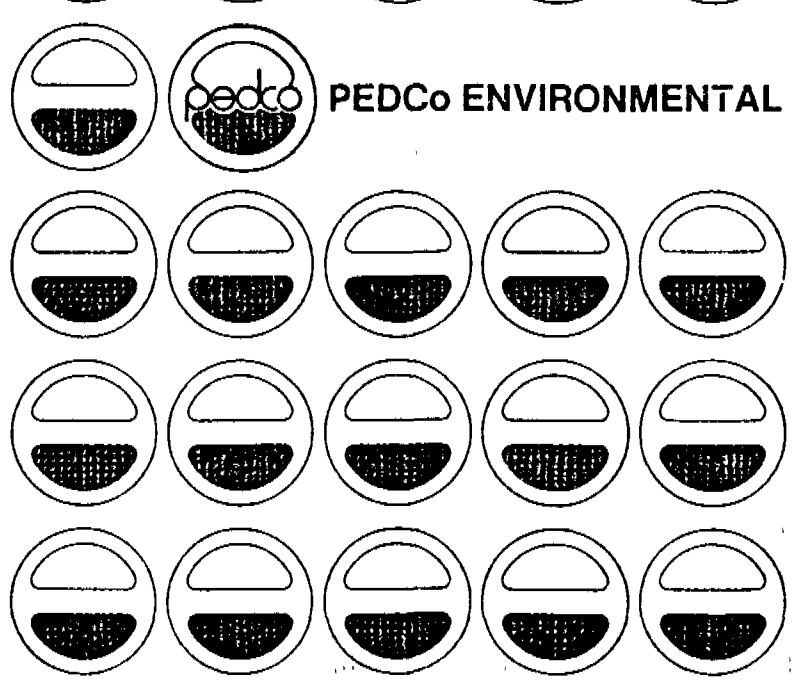

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INVESTIGATION AND ANALYSIS OF CIRCUMSTANCES ASSOCIATED WITH THE DELAYED COMPLIANCE OF FOUR VINYL CHLORIDE SOURCES IN REGION VI CONTINUING AFTER THE STATUTORY DEADLINE OF OCTOBER 21, 1978

(CONOCO REPORT)

Prepared by

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Contract No. 68-01-4147
Task No. 84

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Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF STATIONARY SOURCE ENFORCEMENT
WASHINGTON, D.C. 20460

July 1979

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DISCLAIMER

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CONFIDENTIALITY CLAIMS

Some of the information in this report have been labeled as "confidential" as claimed by Conoco Chemical Company and should be treated accordingly per secrecy agreement dated January 26, 1979.

ACKNOWLEDGMENTS

This report was prepared under the direction of Mr. Thomas C. Ponder, Jr., of PEDCo Environmental, Inc. Coauthors were Dr. Herbert J. Belknap and Mr. Dilip H. Mehta. Task Manager for the U.S. Environmental Protection Agency was Mr. Martin E. Brittain.

SUMMARY

On October 21, 1976, under the authority of Section 112 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) promulgated regulations for the control of the hazardous air pollutant vinyl chloride. The regulations are designed to limit vinyl chloride emissions from ethylene dichloride (EDC), vinyl chloride, and polyvinyl chloride manufacturing plants. In accordance with Section 112(2)(1)(B)(ii) of the Act, sources covered by the vinyl chloride regulations were required to achieve compliance within 90 days of the effective date of the regulations unless a waiver of compliance, to extend no later than October 21, 1978, was granted by the Administrator (authority delegated to the Regions).

On July 5, 1977, EPA granted Conoco Chemicals Company (Conoco) a waiver of compliance until October 21, 1978, for the completion of five compliance schedules at their EDC and vinyl chloride monomer (VCM) plants. Conoco did not meet the compliance date of October 21, 1978, for two schedules, partly because of delays caused by strikes and rainy weather.

Conoco began the VCM emission control project in 1975, long before the National Emission Standards for Hazardous Air Pollutants (NESHAPS) regulations for vinyl chloride were promulgated. Incinerator manufacturers were contacted in January 1976 to aid in the design, which was finalized in 1977. The incinerator was ordered from the John Zink Company in March 1977 for delivery on January 10, 1978.

Construction schedules developed in Conoco's Engineering Department in 1976 allowed 6 months, from January 1 to July 1, 1978, for installation of the incinerator and associated piping. Because

the project was 2 months behind the original schedule by March 1, 1978, the construction conractor, H.E. Wiese, Inc., Baton Rouge, Louisiana, prepared a new schedule with a completion date of September 1, 1978. As a result of a Teamsters' strike, the construction project was delayed another 50 calendar days, and Wiese prepared a revised schedule with a completion date of October 18, 1978. Wiese offered to move up the completion date and increase project manpower if Conoco awarded them the contract for a second incinerator that was planned. When Conoco agreed, Wiese made a new schedule showing an increase in manpower up to a maximum of 104 workers and a completion date of September 23, 1978. The number of workers on the No. 1 Incinerator project was increased. Wiese continually expressed confidence that they would complete the incinerator installation before October 1, 1978.

The Teamsters' strike lasted from May 1 to June 14, 1978, and work resumed on June 20, 1978. Because this strike was against the Associated General Contractors, Conoco could not avoid the delay it caused. Conoco acted during and immediately after the strike to try to make up for the delay. During the strike Conoco continued delivery of construction materials to Lake Charles, a town near the construction site, and stored part of them in rented warehouses offsite. Meanwhile Conoco had piping fabrication work continue in an outside shop. As soon as the strike ended, Conoco bargained to obtain more workers for the No. 1 Incinerator project by awarding the contract for the second incinerator to the same contractor.

Despite these actions, Conoco was unable to get the incinerator installed before the compliance date of October 21, 1978. It would have been possible for Conoco to finish installing the incinerator after the strike if they had taken stronger action. This action was not taken because (1) Conoco had a fixed price contract with the construction contractor, and any changes or requests would have cost Conoco additional money, and (2) the contractor expressed confidence that his installation completion date of September 23, 1978, would be met.

Opinion of Contractor Damaging out of context

vi Contractor doesn't perform or can't do better with additional $. Take over job or get new contractor.

After reviewing the information in the EPA files and the documents supplied by Conoco PEDCo believes that Conoco expected to complete the incinerator project before October 21, 1978. The capital expenditures for equipment and materials were made before October 21, 1978, and detailed plans were made for startup. Because operators were trained and paid in advance, Conoco did not save an appreciable amount of operating and maintenance costs from the delays; only supply and utility costs were saved. These savings were offset to some extent, however, by the cost of the Conoco engineers working on the project after the October 21 compliance date.

After the strikes were over, Conoco requested an extension of the compliance date for a number of days equal to the length of the strikes. Conoco wrote letters to the EPA on June 21, June 28, and July 7, 1978, requesting the extension of the final compliance date to December 15, 1978. EPA reported that no written response to these letters was sent to Conoco.

In other EPA regions, 9 companies subject to the VCM compliance deadline were issued 30-day compliance notices after October 21, 1978, which presented them the opportunity to make an all out effort to gain compliance (or shutdown), and in all cases reviewed compliance was accomplished.

Damages if any Conoco can have to us. Positive if dig at EPA

PEDCo made the following findings regarding Conoco's options and subsequent actions to achieve compliance:

1. During the concrete haulers' strike, the following methods were available to reduce construction delays and Conoco took the actions shown:

   a. Obtain concrete from H & H Concrete Company.

      Conoco obtained concrete for 7 days from H & H Concrete Company during the strike. Conoco agreed to pay overtime rates to H & H Concrete Company and the Vincent Construction Company. Approximate cost in overtime for concrete and underground work was $9355.

b. Obtain concrete in Orange, Texas.

Conoco contacted a number of concrete suppliers in Orange, Texas. These concrete suppliers refused to furnish concrete in the Lake Charles area, indicating that they could not deliver concrete to a point as far away as Lake Charles.

c. Erect a concrete batch plant at construction site.

Conoco examined in detail the possibility of erecting a concrete batch plant at the construction site. The strike ended, however, before Conoco could implement this plan.

d. Utilize spot overtime.

Conoco had contractors work overtime to compensate for delays caused by the concrete haulers' strike. Conoco spent $9355 for overtime work on the concrete and underground phase of the No. 1 Incinerator project.

Doesn't seem like much but with wet weather to-do in it was a way short to catch up.

2. During the Teamsters' strike, the following methods were available to reduce construction delays:

a. Continue work by the piping contractor.

Conoco decided against the offer of H. E. Wiese to work under a national contract, because of a long history of labor turmoil in the Lake Charles area. Moreover, because Wiese was the only contractor having a national contract, other contractors' workers may have refused to cross the picket lines, further limiting construction activities. Of the contractors only Wiese had a national contract.

b. Continue material deliveries.

To continue deliveries of materials during the strike, Conoco had shipments delivered to the Lake Charles area and held at the local carriers' terminals. Arrangements were then made for carrier supervisors (who were able to cross the picket lines) to deliver the materials at the job site. In some cases warehouse space was leased where the materials could be stored until the strike ended.

c. Continue piping fabrication

Much piping fabrication, which otherwise would have been performed in the field proceeded in outside shops during the strike.

3. The Millwrights' strike did not last long enough for Conoco to consider or implement any corrective actions to reduce the construction delays it caused.

4. During the rainy weather, the following methods were available to reduce construction delays:

a. Place shell on muddy roads and around the construction site to improve vehicle traction.

Roads and parking lots around the construction site were made accessible by placing shell on them. The approximate cost of this action was $27,000. ← Did some good but was mostly a waste with time pressure could not have done it.

b. Provide temporary shelters over work areas.

c. Continue shop work whenever possible.

PEDCo was unable to determine whether the latter two methods were used by Conoco to reduce delays caused by rain.

Damaging

5. Before October 21, 1978, 7 temporary control measures were considered by Conoco to reduce vinyl chloride emissions. PEDCo reviewed these control measures and determined that it was not feasible for Conoco to implement any of them in given time period (see Section 5.5.1).

No additional temporary control measures were identified by PEDCo, that were available to be implemented by Conoco.

6. After October 21, 1978, the following additional temporary control measures were available to reduce vinyl chloride emissions:

a. Reduce the plant production rate.

VCM plant production was reduced from about 8.85×10^5 kg/day (1.95×10^6 lb/day) to between 7.71×10^5 and 8.16×10^5 kg/day (1.7×10^6 - 1.8×10^6 lb/day) because of a problem with the pressure drop in the oxychlorination system.

b. Vent dip sticks to holding vessels during loading.

c. Remove from service tank cars containing oxygen in concentrations greater than 1,000 ppm, rather than purging them with nitrogen.

Conoco conducted a modeling study to determine the potential reduction in ground level concentrations of VCM if these measures were implemented. The analysis of the modeling effort revealed that the potential reduction amounted to only 0.3 ppb. As a result of this analysis Conoco decided not to implement these temporary control measures as their impact was inconsequential. PEDCo did not have enough information to support this claim.

Absolutely ask for it!

7. PEDCo analyzed the schedules supplied by Conoco and concluded that it was possible for Conoco to complete the installation of the VCM incinerator before October 21, 1978 (see Section 5.3). However, schedules One and Four were out of compliance on October 21, 1978. The construction work was completed for these schedules within an additional period equal to the number of strike days (see Table 3, Section 5.3). The compliance testing, however, was delayed for these schedules beyond the number of strike days (see Table 4, Section 5.3).

Damaging

Believe speaking of sched. nos. used in variance from EPA

The construction schedules prepared after October 21, 1978, were not available to PEDCo. Although Conoco did not work two shifts per day, it appears that construction work was completed in an expeditious manner. After October 21, 1978, Conoco assigned one of their own engineers to work directly with Wiese. Conoco's direct participation helped facilitate completion of desired systems, but Conoco was still dissatisfied with the overall efficiency of construction activities. Conoco deleted certain tasks from Wiese's contract, and avoided assigning any further work. These jobs were accomplished by another contractor after Wiese finished (see Appendix X).

8. The savings gained by Conoco from not meeting the compliance date were mainly in deferred capital expenditures. Savings in the operating and maintenance costs were made only on supplies and

Can't pay contractor till work finished

utilities and not on labor costs, since the operators were trained and paid before the compliance date. Moreover, these savings were offset, to some extent, by the expense of Conoco engineers working on the project after the compliance date (see Section 6).

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SECTION 1

INTRODUCTION

On October 21, 1976, under the authority of Section 112 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) promulgated regulations for the control of the hazardous air pollutant vinyl chloride. The regulations are designed to limit vinyl chloride emissions from ethylene dichloride, vinyl chloride, and polyvinyl chloride manufacturing plants. In accordance with Section 112(2)(1)(B)(ii) of the Act, sources covered by the vinyl chloride regulations were required to achieve compliance within 90 days of the effective date of the regulations unless a waiver of compliance, to extend no later than October 21, 1978, was granted by the Administrator (authority delegated to the Regions).

On July 5, 1977, EPA granted Conoco Chemicals Company (Conoco) a waiver of compliance until October 21, 1978, for the completion of five compliance schedules at their ethylene dichloride (EDC) and vinyl chloride monomer (VCM) plants. Conoco was unable to meet the compliance date of October 21, 1978 for two of the schedules partly because of delays caused by strikes and rainy weather.

The purpose of this task is to investigate and analyze the circumstances associated with the delayed compliance by Conoco. This report contains a brief description of the vinyl chloride plant, the control practices implemented to reduce vinyl chloride emissions at this plant along with the respective compliance schedules, causes of delayed compliance, and the corrective actions taken by the company. The last two sections of this report give PEDCo's analysis of the company's corrective actions and cost data.

SECTION 2

PLANT DESCRIPTION

2.1 INTRODUCTION

Ethylene dichloride and vinyl chloride monomer are manufactured in direct chlorination and oxychlorination processes. In these processes combined EDC stream is purified and thermally cracked in a gas-fired furnace to form VCM and anhydrous hydrogen chloride (HCl). The mixture is then distilled to separate the VCM from the HCl and uncracked EDC. This VCM is neutralized, dried, and stored in pressure vessels. (Figure 1 shows a block flow diagram for the plant.). The normal VCM capacity of a plant is 2.95×10^8 kg/yr (3.25×10^5 tons/yr), and the maximum capacity is 3.18×10^8 kg/yr (3.50×10^5 tons/yr).

2.2 EMISSION SOURCES

There are six vinyl chloride emission point sources and four sources of fugitive vinyl chloride emissions at this plant.

The point sources are:

1. C-500 vent stack.
2. EDC wash system vents.
3. Process wastewater.
4. EDC and light ends (L.E.) storage tanks.
5. VCM loading vent stack.
6. VCM dock vent stack.

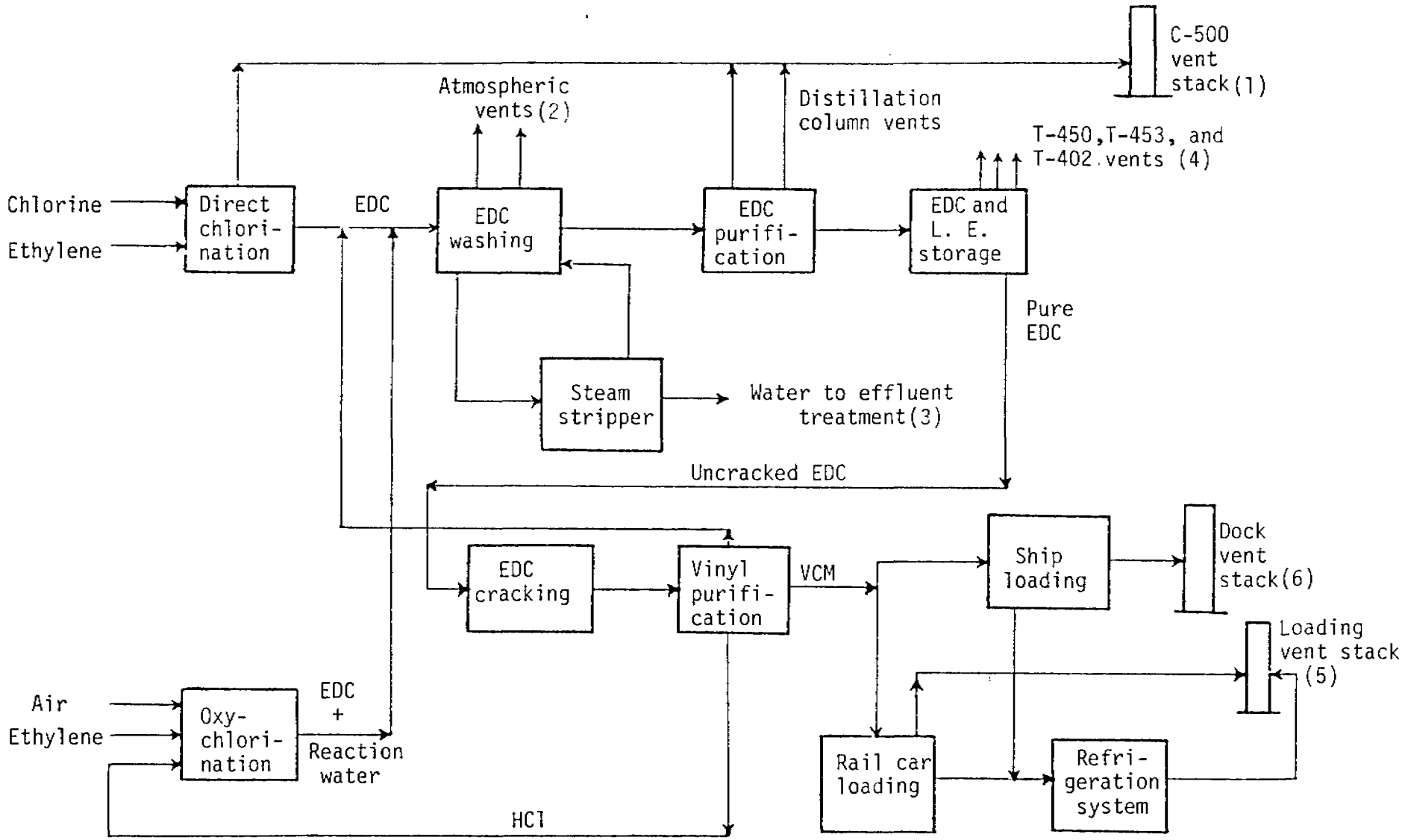

Figure 1. VCM plant block flow diagram and vent identification.
(Numbers in parentheses indicate point sources.)

The fugitive emission sources are:

7. Pumps.
8. Compressors.
9. Relief valves.
10. Vents (during manual venting).

2.3 CONTROL PRACTICES

The following sections discuss the new control devices installed and revisions made to enable existing controls to reduce VCM in process wastewater to concentrations within the regulation limit of 10 ppm.

2.3.1 Thermal Incineration System

Incineration is a combination of pyrolysis and oxidation. Pyrolysis occurs in seconds whereas oxidation takes only milliseconds. The temperatures and residence times necessary for complete destruction of different toxic substances vary widely, depending on the chemical and physical forms of the wastes to be incinerated. The relationship between temperature and residence time must be established before a given waste material can be effectively incinerated. If relationship are carefully observed, toxic air contaminant emissions from incineration can be minimized.

Two thermal incinerators have been installed at this plant, eventhough one is probably adequate to achieve compliance. The second incinerator is a backup device used during malfunctions or required maintenance of the first.

The incineration system includes two 14.07 MW (48×10^6 Btu/h) units each designed to operate at 1316°C (2400°F) with a 1.5 second residence time. Each incinerator has a waste heat boiler to recover part of the heat of combustion, an HCl absorption column to recover HCl, and a caustic scrubbing column to control residual HCl and chlorine. Figure 2 is a simplified flow diagram of the VCM incineration system. The HCl absorption column was not in operation at the time of PEDCo's on-site visit. ← ??? Means concentration section??

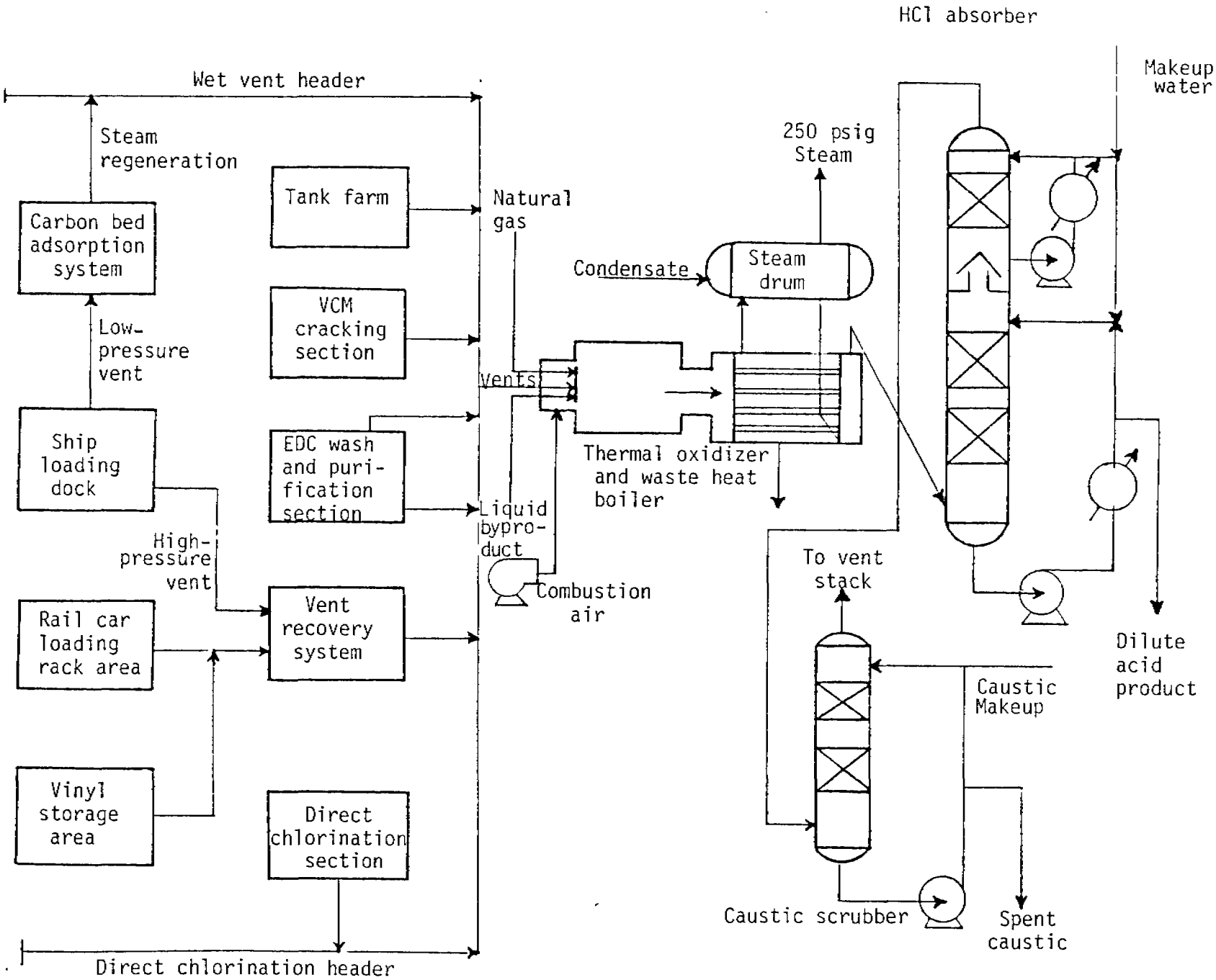

Figure 2. Simplified process flow diagram of the VCM plant thermal incinerator.

2.3.2 Oxychlorination Vent Cleanup Reactor

This catalytic reactor was installed in July 1975 to control ethylene emissions in the oxychlorination vent. This reactor can control the VCM emission to the limit specified in the emission standard, namely 0.2 g per kg of EDC produced by the oxychlorination process.

The efficiency or VCM removal depends greatly on the operation of the oxychlorination process and the chlorine feed. Small variations in the ethylene and VCM concentrations in the vented gas or in the chlorine flow to the reactor can cause large changes in the reactions and in reactor heat releases. Since the reactor contains more than 45,360 kg (100,000 lb) of catalyst and has no provision for cooling, a small change in the reaction and heat release can cause the reactor bed temperature to increase to the point that the reactor, the reactor catalyst, or downstream equipment can be damaged or destroyed. Modifications and optimization of this existing catalytic reactor were completed and tested prior to October 21, 1978.

2.3.3 Process Wastewater Stripper

All process wastewater streams are stripped in a steam stripper to recover chlorinated hydrocarbons, including VCM, from the water before discharge to the effluent treatment system. The VCM content of the wastewater leaving the stripper is below the 10 ppm VCM concentration limit required by the standard. The VCM recovered is routed to the thermal incinerator through the two EDC wash system vents and the light ends distillation column and light ends product tank vents.

A second spare steam stripper has been installed and instrumented in a way to ensure that VCM is removed from the process wastewater at all times. A simplified flow diagram of the steam stripper system is shown in Figure 3.

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Statement not true. Spare stripper is being installed, not completed.

2.3.4 Portable Carbon Adsorption System

A portable carbon-bed adsorption system has been installed to adsorb the VCM vented during sampling of the ship hold tanks and cleaning of the loading hoses as well as VCM vented from the hydroquinone injection system. The adsorption system uses four calgon vent-sorb adsorption beds in two parallel systems to recover the VCM in these vent streams. When saturated, the carbon-bed system is returned to the plant for regeneration. The VCM vapors from regeneration are routed to the thermal incinerator. The flow diagram of the dock recovery and carbon bed adsorption system is shown in Figure 4.

2.3.5 Installation of Rupture Discs under Pressure Relief Valves

All the relief valves on equipment used in vinyl chloride production in the EDC and VCM plants have been equipped with rupture discs to minimize VCM emissions due to leakage.

2.4 COMPLIANCE SCHEDULES

The compliance schedules proposed by Conoco in December 1976, were approved by EPA on July 5, 1977 (see Appendix A). The compliance schedules and the actual compliance dates are shown in Table 1. The actual compliance dates were obtained from the semiannual reports of March 15, 1979, and January 11, 1979, and the progress report of December 1, 1977 (see Appendix B).

Schedule 1-- This schedule provided for the installation of an incinerator system and necessary manifold ducting. The schedule required final compliance by October 21, 1978. Construction of the No. 1 Incinerator was completed by December 29, 1978, and the compliance tests were completed on January 12, 1979.

Schedule 2-- This schedule provided for the modification and optimization of a catalytic reactor. The reactor was placed back on stream on September 25, 1978. The compliance tests on the vent streams from the oxychlorination reactor were completed

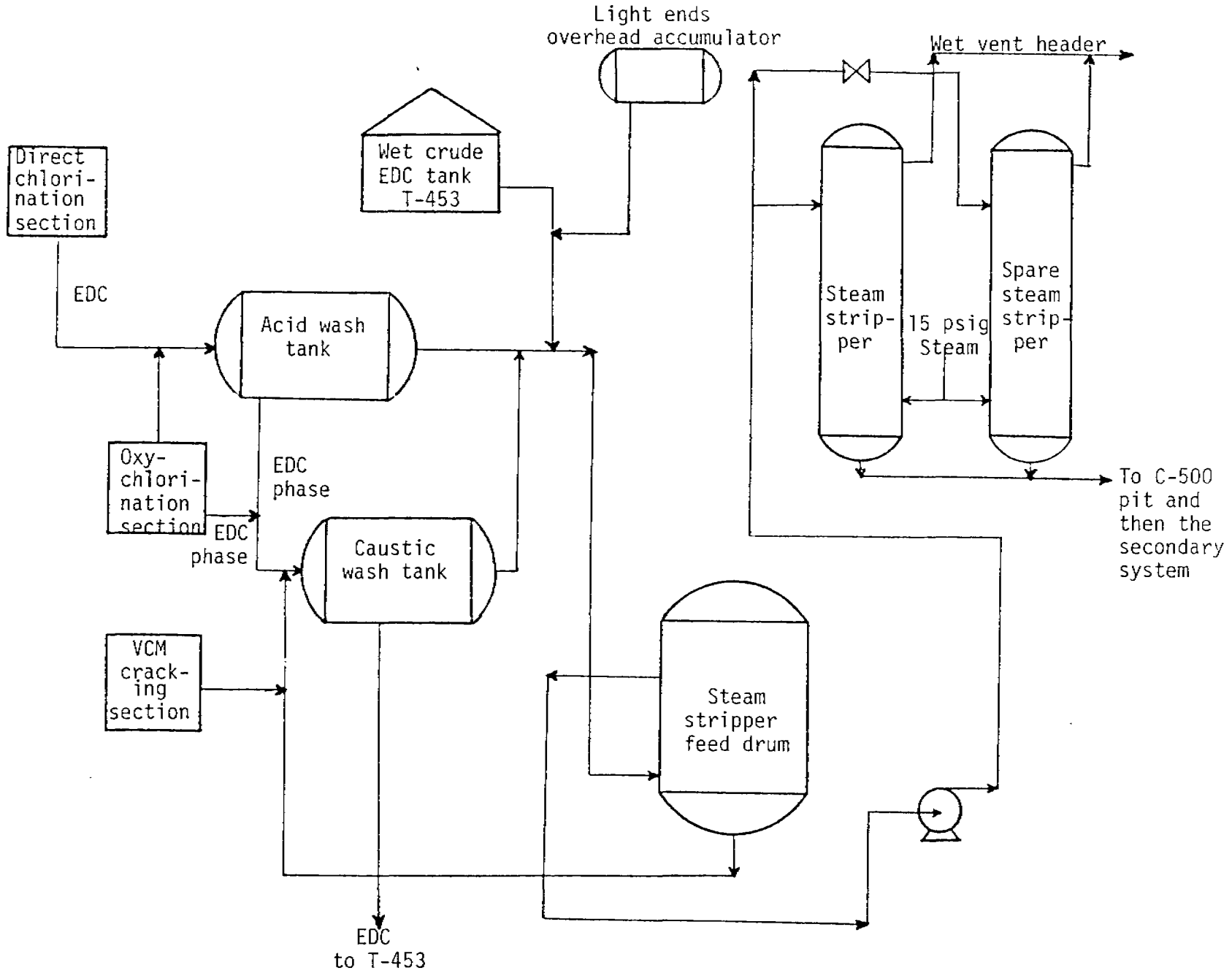


Figure 3. Simplified process flow diagram of the VCM plant steam stripper.

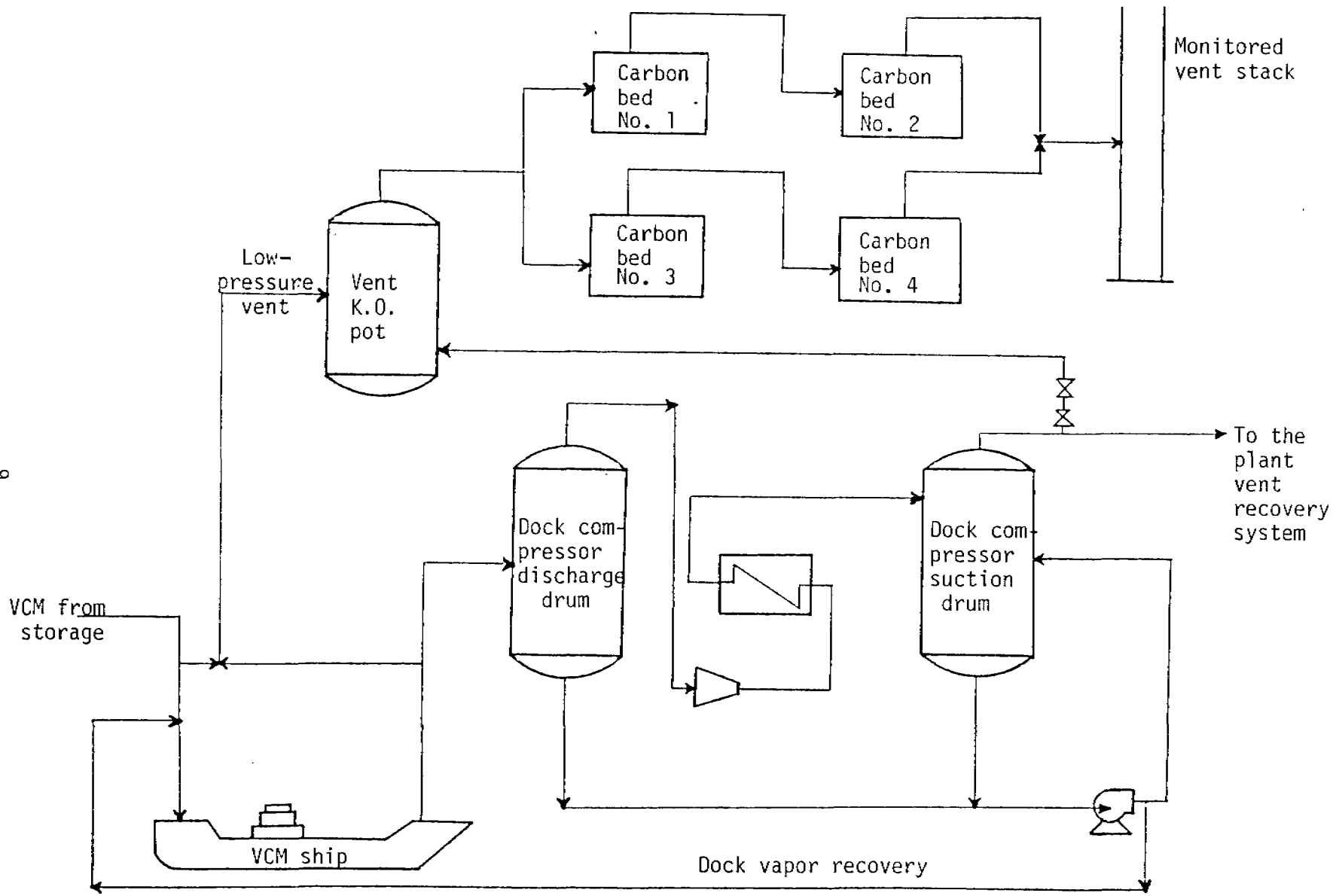


Figure 4. Simplified process flow diagram of the dock recovery and carbon-bed adsorption systems.

TABLE 1. CONOCO COMPLIANCE SCHEDULES[a]

Schedule	Start mechanical design	Award contracts and/or order equipment	Start of onsite construction	Completion of construction	Regulatory compliance date	Actual compliance date[b]
1) Thermal incineration system	1-15-77	5-1-77	1-1-78	10-1-78	10-21-78	1-12-79
2) Oxychlorination vent cleanup reactor, R-305	2-15-77	4-1-77	7-1-77	2-1-78	10-21-78	10-19-78
3) Process waste water steam stripper revisions	6-1-77	10-1-77	4-1-78	8-1-78	10-21-78	10-19-78
4) Portable carbon adsorption system	2-15-78	4-1-78	6-1-78	8-1-78	10-21-78	barges: 1-20-79 ship: 2-21-79
5) Rupture disc installation	2-15-77	4-1-77	8-1-77	2-1-78	2-1-78	12-1-77

Date tests of capacity stripper accomplished. New stripper not installed. First barge to test

First ship to test.

[a]These compliance schedules were approved by EPA on July 5, 1977 (see Appendix A).

[b]The actual compliance dates were obtained from the semiannual reports of March 15, 1979, and January 11, 1979, and the December 1, 1977, progress report (see Appendix B).

on October 19, 1978. The schedule required final compliance by October 21, 1978.

Schedule 3-- This schedule provided for the reduction of VCM emissions from the process wastewater leaving the steam stripper. The compliance tests were completed on October 19, 1978. (Control of the vinyl chloride stripped from the wastewater is covered under compliance Schedule 1.).

Schedule 4-- This schedule provided for the installation of a carbon-bed adsorption system to control VCM emissions from the following fugitive emission sources located in the EDC and VCM plants: 1) ship-loading lines and related hydroquinone injection system, 2) the compressor seals during inert purge, and 3) the ships' hold tanks during sampling. The construction work was completed on December 29, 1978. The compliance tests have been completed for the carbon adsorption system at the company's VCM ship and barge loading dock. A compliance test was conducted during the loading of two barges on January 20-21, 1979. Another compliance test was conducted during loading of a ship on February 21-22, 1979.

Where fir available after com

Schedule 5-- This schedule provided for the installation of the rupture discs on the relief valves on the equipment in the EDC and VCM plants. The final compliance was met on December 1, 1977, well ahead of the regulatory compliance date of February 1, 1978.

SECTION 3

CAUSES OF DELAYED COMPLIANCE

3.1 INTRODUCTION

The causes of delayed compliance at the Conoco plants were three labor strikes and inclement weather. These are discussed in detail in the following sections.

3.2 LABOR STRIKES

Three labor strikes that occurred in the Lake Charles area from December 1977 to June 1978 caused subtantial delays in the installation of the No. 1 Incinerator.

The first labor strike, involving concrete haulers, began on December 2, 1977 and lasted until January 9, 1978. H & H Concrete Company was the only concrete company in the Lake Charles area not affected. Although Conoco was able to obtain concrete on 7 days during the strike (through the Conoco-initial efforts explained in Section 4.1.1), 14 working days were lost as a result of the strike.

The Teamsters' strike against the Associated General Contractors began on May 1, 1978. H. E. Wiese, the piping and equipment installation contractor, could have continued to work under a national contract despite the picket lines imposed by the local Teamsters. Conoco officials decided against taking advantage of this national contract, however, because of the risk of developing bad relations with the unions that might cause further delays later. Also it was believed that despite the national contract some workers would quit rather than cross the picket lines.

Pickets were removed from the site on June 14, 1978 and work resumed on June 20, 1978. Thirty-six working days (50 calendar days) were lost as a result of this strike.

The Millwrights' strike against the Associated General Contractors began on June 26, 1978. Pickets were removed on June 29, 1978 and work resumed on June 30, 1978. Four working days were lost as a result of this strike.

These strike dates have been verified by union and construction contractor officials as follows:

1. Mr. Jim Welch, General Manager, Associated General Contractors of Louisiana verified the dates of all three strikes: the concrete haulers' strike from December 2, 1977 through January 9, 1978, the Teamsters' strike from May 1, 1978 through June 14, 1978, and the Millwrights' strike from June 26 through June 29, 1978.

   He also said that labor unions in the Lake Charles area were strong and that violence had erupted in the past when another union hiring multicraft workers attempted to work in the area. For these reasons, the labor unions were believed to be potentially volatile. Welch also confirmed that there was no shortage of workers in the Lake Charles area in the July through October 1978 period, except for some spot shortages of pipefitters and welders in October, November, and December, 1978.

2. Mr. Hollis Midkiff, Business Agent, Millwrights' local No. 1476 verified the Millwrights' strike dates as June 26 through June 29, 1978. He said that he was not aware of any labor shortages in the Lake Charles area in the fall of 1978.

3. Mr. Herman Rousseau, Assistant Business Agent, Teamsters' local No. 969 verified in a telephone interview the Teamsters' strike dates as May 1 through June 14, 1978.

4. Mr. Donnie R. Lee, Assistant Business Agent, Local 102 of the American Federation of Unions, Lake Charles District, confirmed the strike dates and said that he was not aware of any labor shortages in that area in the fall of 1978.

3.3 INCLEMENT WEATHER

Conoco maintained that during the period October 11, 1977, through October 21, 1978, 26 days were lost because of rainy weather (see Appendix C). Of these, 19 working days were lost between October 1977 and March 5, 1978, and 7 working days during the critical period between April 1, 1978, and October 21, 1978.

When contacted by telephone, the U.S. Weather Bureau at Lake Charles verified that there had been rain in the area on the days that Conoco said were lost (see Appendix C).

SECTION 4

COMPANY CORRECTIVE ACTIONS

4.1 CORRECTIVE ACTIONS TO ALLEVIATE DELAYED COMPLIANCE

This section identifies the corrective actions Conoco considered and/or implemented to avoid delays in compliance due to labor strikes and bad weather. (A third potential cause of delays, slow equipment delivery, was avoided through deliberate company action.).

No mention of contractor inability to perform.

4.1.1. Corrective Actions to Alleviate Delayed Compliance Due to Labor Strikes

Conoco considered a number of measures to avoid delays resulting from strikes. Some of these measures were implemented.

The concrete haulers' strike affected all concrete suppliers in the Lake Charles area except one, H & H Concrete Company. Conoco contacted the H & H Concrete Company and agreed to take available concrete on a spot basis (see Appendix D). Conoco was able to obtain concrete on 7 days during the strike period by agreeing to pay overtime rates to both H & H Concrete Company and Vincent Construction Company (see Appendices E and F).

Mr. Dan Kidd of Conoco called a number of concrete suppliers in Orange, Texas (see Appendix G). The notes reflect that these suppliers refused to furnish concrete in the Lake Charles area because it was too far away.

Conoco examined in detail the possibility of erecting a concrete batch plant at the construction site (see Appendix H). The strike ended, however, before this plan could be implemented.

In addition, Conoco had contractor employees work overtime to compensate for the delays caused by the concrete haulers' strike (see Appendix E). Conoco spent $9355 in overtime for the concrete and underground phase of the No. 1 Incinerator project (see Appendix F).

During the Teamsters' strike of May 1, 1978, H.E. Wiese advised Conoco that Wiese could continue to work under a national contract despite the picket lines imposed by local Teamsters. Conoco carefully considered this available option and decided against it because of the history of labor problems in the Lake Charles area (see Appendix I).

Damages out of context

During the Teamsters' strike, the delivery of materials to the site became difficult. Conoco decided to continue having materials shipped to the area and, to overcome these strike-related delivery problems, made special arrangements for delivery. When materials reached Lake Charles, several measures were employed. In some cases the shipments were held at the local carriers' terminals until carriers' supervisory personnel (who were able to cross the picket lines) could deliver the materials to the job site. In other cases warehouse space was leased where the materials could be stored until the strike ended.

During the Teamsters' strike, piping fabrication proceeded in outside shops at Conoco's insistence. This made possible more rapid installation when field work was resumed (see Appendix J).

During the Millwrights' strike, Conoco was unable to take any corrective actions because the strike lasted only 4 working days.

4.1.2 Corrective Actions to Alleviate Delayed Compliance Due to Inclement Weather

From November 1977 through March 1978, Conoco spent more than $27,000 to place shell on muddy roads and parking areas in and around the construction site (see Appendix K).

In addition, Conoco used overtime labor to partially overcome the effects of weather delays (see Appendix E).

4.1.3 Corrective Actions to Expedite Equipment Delivery

Two of the primary responsibilities of the engineering contractor, Litwin Corporation, were to procure the materials necessary for the project and to expedite delivery of those items (see Appendix L). Because Litwin performed well, Conoco did not cite equipment delivery as a cause of delay.

In addition, in March 1978, Conoco learned that the fabricator of the boiler (J. Zink) had completed the fabrication. Because there were only six railcars capable of transporting this unit available in the United States, a delay of 6 weeks or more was anticipated while awaiting a railcar. Conoco took extra measures to expedite delivery. A railcar of the proper type was quickly obtained and furnished to Zink. Conoco personnel followed the unit on its trip from the Zink plant to Westlake. These efforts expedited the unit's arrival by several weeks (see Appendix M).

On one occasion, arrangements were made to freight by air the fire brick for the incinerator to insure that no delays occurred (see Appendix N).

4.2 TEMPORARY CONTROL MEASURES

This section discusses in two parts the temporary control measures considered by Conoco before and after October 21, 1978.

4.2.1 Temporary Control Measures Considered by Conoco Before October 21, 1978

Conoco considered the following temporary control measures in response to the EPA inquiry.

1. Routing of VCM vents to a flare stack.
2. Routing of VCM vents to a boiler or cracking furnace.
3. Securing a portable incinerator.
4. Routing of plant vents to a controlled incinerator at another plant.
5. Routing of VCM vents through the existing oxy system vent control device.

6. Installing regenerable carbon-bed systems.

7. Storing VCM vapor from vents in a large pressure tank and shipping by tank car or tank truck to a controlled location.

4.2.2 Temporary Control Measures Considered by Conoco After October 21, 1978

After October 21, 1978, Conoco considered the following additional temporary control measures:

1. Reducing the plant production rate.

2. Venting dip sticks to holding vessels during loading.

3. Removing from service tank cars that contained oxygen in concentrations greater than 1000 ppm rather than purging them with nitrogen.

4.3 PROCESS MODIFICATION TO REDUCE VINYL CHLORIDE EMISSIONS

Conoco considered the following process changes to reduce VCM emissions but maintains that these process changes would have been impractical to implement.

1. Converting the oxy process from an air-based to an oxygen-based system. It is estimated that this would have taken 2 to 3 years to complete.

2. Taking EDC overhead in the vinyl product from the vinyl tower. This would reduce VCM in recycled EDC that vents in T-101, but the VCM would not be salable with EDC in it.

3. Eliminating caustic usage in the VCM neutralization system. This would eliminate the majority of VCM in the wash system and steam stripper vent, but the VCM would not be salable with HCl in it.

SECTION 5

DELAY ANALYSES

5.1 ANALYSIS OF PROCUREMENT AND PURCHASE PROCEDURES FOR EMISSION CONTROL EQUIPMENT

This section presents an analysis of Conoco's procurement and purchase procedures to show why no construction delays were attributed to slow equipment deliveries.

PEDCo has reviewed and analyzed the relevant documents furnished by Conoco to determine whether proper procedures were made and priorities established.

Judgement word that is not as good as "high"!

1. Conoco placed a fairly high priority on installation of vinyl chloride emission control system. This is shown by the following:

    a. Conoco's research staff began preliminary design work on a vinyl chloride destruction system early in 1975 (see Appendix O). They chose thermal incineration as the best method, after considering both catalytic oxidation and carbon adsorption. Engineering design work was begun in early 1976, when the John Zink Company and the Trane-Thermal Company were contacted concerning preliminary designs (see Appendix P).

    b. The awarding of an engineering contract to Litwin for the procurement and delivery of the majority of the equipment and materials for the project (see Appendices Q, R, S). Through the efforts of Litwin and Conoco, all equipment and materials were on hand when needed.

    c. Conoco assigned what appears to have been an adequate number of highly qualified and experienced construction engineers to this project (see Appendix T).

Judgement again, better if left out!

2. Conoco solicited bids for all major equipment and contracts in this project (see Appendices R, U).

An approved bidders list was compiled first for each procurement or contract and bid specifications were developed and sent to the qualified bidders. The bids for each phase were tabulated and compared, and awards were made on the basis of standard selection criteria.

The work was divided into three parts, each of which was bid on separately. Ten bids were recieved for the engineering contract, five for the piping and equipment installation contract, and one for the incinerator. In the opinion of Conoco, only the John Zink Company was qualified to build the incinerator to Conoco's design and reliability specifications. Trane-Thermal was rejected as a potential incinerator supplier because they wanted to utilize a higher temperature and a shorter residence time than specified by the Conoco design.

3. The selection criteria used by Conoco were standard criteria utilized by most companies receiving competitive bids. The following selection criteria were considered by Conoco (see Appendices R, U):

    a. Cost. (Because all bidders were qualified for the job, some preference was given to the lowest bidder.)

    b. Ability to bring about timely completion of the construction or delivery schedule.

    c. Expected quality or reliability of the equipment or completed work.

An important criterion for the engineering contract was the ability to provide qualified manpower to work on the project when needed (see Appendix S).

The bidder selected was carefully investigated before being awarded the contract. Conoco had previously investigated the H. E. Wiese Company and determined their qualification for the job.

PEDCo reached the overall conclusion that the procurement procedures used by Conoco were in accordance with standard company procedures and good engineering practice and are consistent with those used by other companies.

5.2 ANALYSIS OF CONOCO'S CORRECTIVE ACTIONS

5.2.1 Analysis of Conoco's Corrective Actions During the Labor Strikes

During the concrete haulers' strike Conoco took the following corrective actions:

1. Conoco obtained concrete for 7 days from H & H Concrete Company during the strike. Conoco agreed to pay overtime rates to H & H Concrete Company and the Vincent Construction Company.

2. Conoco contacted a number of concrete suppliers in Orange, Texas. These concrete suppliers refused to furnish concrete in the Lake Charles area, indicating that it was too far away.

3. Conoco examined in detail the possibility of erecting a concrete batch plant at the construction site. The strike ended, however, before Conoco could implement this plan.

4. Conoco had contractor employees work overtime to compensate for time lost to the concrete haulers' strike. Conoco spent $9355 in overtime for the concrete and underground phase of the No. 1 Incinerator project.

During the Teamsters' strike Conoco carefully considered taking advantage of Wiese's national contract but decided not to because of the following two incidents that occurred in the Lake Charles area.

1. In January 1975, the OCAW had a strike against Conoco's Westlake Refinery and Chemical Plant. Conoco states that its Gillis Gas Plant was deliberately sabotaged, causing big gas flares, the evacuation of 300 persons, and the interruption of natural gas supplies to several industrial users in southwest Louisiana.

   In this incident, chains holding valves open on the 24-inch pipeline were cut and the valves closed. The resulting pressure buildup caused the safety valve at the plant to pop open, which in turn caused big gas flares.

2. On January 15, 1976, in the Lake Charles area, work at the Jupiter Chemical Company ammonia plant construction site was halted after a flareup of labor violence. This incident left one person dead, four others injured, and 16 cars and trucks and two mobile offices damaged.

   The attack was believed to be the result of the labor dispute over the use of "multicraft" union workers belonging to Local 102 of the American Federation of Unions, a group not affiliated with the AFL-CIO. The Local 102 workers were employed by Payne and Keller of Baton Rouge, Louisiana. This attack occurred one week after a similar attack on a Payne and Keller project near Houston employing the multicraft workers.

These two incidents explain Conoco's apprehension and decision not to take advantange of Wiese's national contract.

During the Teamsters' strike, delivery of materials was continued and materials were stored in Lake Charles warehouses. Also, considerable piping fabrication was done in outside shops. These measures allowed high productivity when field work on the construction project was resumed. should have, but didn't.

During the Millwrights' strike, which lasted only 4 days, Conoco did not have enough time to take any corrective actions.

PEDCo concludes that Conoco took all the possible corrective actions to alleviate the delay caused by the concrete haulers' and the Teamsters' strikes.

5.2.2 Analysis of Conoco's Corrective Actions Taken to Alleviate Delays Due to Inclement Weather

1. Conoco spent $27,000 to place shell on muddy roads and parking areas in and around the construction site.
2. Conoco paid overtime to expedite concrete and underground work.

From the above mentioned measures, it can be seen that Conoco took some corrective actions required to alleviate the delay caused by the inclement weather. Other corrective actions that could have been taken by Conoco were: (1) build temporary shelters over work areas, and (2) continue shop work whenever rain made field work impossible. Thus Conoco did not use all the corrective actions available to alleviate delays due to inclement weather. Damaging out of context

5.2.3 Analysis of Conoco's Actions to Expedite Equipment Delivery

Litwin and Conoco made special efforts to expedite the equipment deliveries.

1. Litwin procured the necessary materials for the project and expedited delivery of those items.
2. Conoco furnished a railcar of the proper size to Zink for the timely delivery of the incinerator and waste heat boiler. not incinerator, just boiler. Incinerator came by truck.

3. On one occasion, arrangements were made to freight by air the fire brick for the incinerator.

As a result of the above measures no delays resulted from equipment deliveries.

5.3 ANALYSIS OF CONOCO'S CORRECTIVE ACTIONS AFTER THE TEAMSTERS' STRIKE

The construction contractor, H. E. Wiese, Inc., moved to the jobsite on March 13, 1978. Wiese's construction schedule showed a completion date of September 1, 1978, 24 weeks after start) using a maximum of 40 workers and requiring 32,560 man-hours. Wiese's schedule was evaluated by Joe Alix of Conoco on March 27, 1978 (see Appendix V). The schedule and manpower projections appeared to be realizable.

After the 50-day Teamsters' strike was over, the construction was 50-days behind schedule. A revised schedule prepared by Conoco's Central Engineering Department on July 7, 1978, showed a completion date for the mechanical portion of the work of October 14, 1978 (see Appendix W). A revised schedule issued by Wiese showed a completion date of October 14, 1978 (see Appendix X).

At this time, Conoco was preparing to award the construction contract for the installation of the second incinerator. Wiese proposed that if they were awarded the contract for the second incinerator, they would increase the manpower working on the first incinerator immediately and shorten the schedule. Wiese revised their schedule on June 19, 1978, showing a projected increase in workers up to 104 for the first incinerator and a completion date of September 23, 1978 (see Appendix Y). Although Wiese was not the low bidder for the second incinerator, Conoco awarded the contract to them as a means of obtaining the most workers for the first incinerator in the shortest time (see Appendices X, Y). Table 2 shows the construction schedule and manpower projections for the No. 1 Incinerator and piping contract. After the award of the second incinerator contract, Wiese expressed confidence in their revised construction schedule, which showed a completion date of September 23, 1978.

TABLE 2. MANPOWER PROJECTIONS AND CONSTRUCTION SCHEDULE FOR THE NO. 1 INCINERATOR PIPING AND INSTALLATION PROJECT

Week ending	Wiese schedule		Actual (projected)[a]				Actual (projected) % comp.
	Men employed	Cumulative man-hours	Men employed	Days	Weekly man-hours	Cumulative man-hours	
6-24-78			35	5	1,400	1,400	
7-1-78	28	1,360	30	1	240	1,640	
7-8-78	52	3,440	39.4	5	1,576	3,216	
7-15-78	78	6,560	58.4	5	2,336	5,552	35.5
7-22-78	102	10,640	63.8	5	2,522	8,104	
7-29-78	104	14,800	77	4	2,464	10,568	43.4
8-5-78	93	18,520	77.6	4.5	2,796	13,364	48.0
8-12-78	86	21,960	(80)		(3,200)	(16,564)	(59.2)
8-19-78	80	25,160	(95)		(3,800)	(20,364)	(65.3)
8-26-78	68	27,880	(95)		(3,800)	(24,164)	(78.3)
9-2-78	50	29,880	(95)		(3,800)	(27,964)	(88.1)
9-9-78	32	31,160	(80)		(3,200)	(31,164)	(96.3)
9-16-78	27	32,240	(27)		(1,076)	(32,240)	(99.1)
9-23-78	8	32,560	(8)		(320)	(32,560)	(100.0)

[a]This table was made up after week ending August 5, 1978, showing actual men and days worked through week ending August 5, 1978. Entries after August 5, 1978, are projections and are shown in parentheses. This table was retyped from the table shown on p. Y-18.

Chronology of interactions between Wiese and Conoco from July to September 1978 (see Appendix Y):

7/15/78	Conoco data showed Wiese was ahead of schedule.
7/29/78	Conoco data showed Wiese was behind schedule.
8/5/78	Conoco data showed Wiese was behind schedule.
8/9/78	Conoco met with Wiese. Wiese expressed confidence in achieving their 9/16/78 completion schedule.
8/12/78	Conoco data showed Wiese was still behind schedule, but improving.
8/15/78	Conoco met with Wiese. They agreed to provide additional supervision.
8/23/78	An additional Wiese supervisor began work.
8/28/78	Conoco data showed Wiese's progress was poor.
9/6/78	Mr. L. B. McCormick of Conoco's Maintenance Engineering Department began evaluation of Wiese's schedule (CPM). A critical path analysis was developed.
9/20/78	Conoco met with Wiese and presented Conoco requirements for phased completion by 10/9/78. Wiese management was committed to that schedule.

During August and September 1978, Wiese expressed confidence that the project would be completed on schedule.

Conoco took some actions to speed up progress in the first week of October 1978, but earlier they preferred not to interfere with the contractor because of the fixed price contract. Wiese had a fixed price, turnkey contract, and any interference by Conoco would have added to the cost of the project. Conoco did inform Wiese, however, that their productivity level was low, and they were lacking sufficient supervision.

Damages out of context.

Conoco maintained an overtime reserve for this project. The overall allocation was $175,000, of which $78,761 was allocated to the piping and equipment installation project (see Appendix F). As of October 31, 1978, $24,130 had been committed, but only $8,749 had been expended. Conoco had authorized and encouraged, Wiese to use spot overtime labor whenever Wiese thought it feasible. Scheduled overtime labor was not used, however, because, in Conoco's opinion, in the Lake Charles labor market scheduled

Damages out of context

overtime labor was not productive. Jim Welch, Business Manager, Associated General Contractors, supports this statement.

Conoco arranged to have the instrumentation contractor perform work in parallel with the piping and electrical work to expedite installation. (Generally, instrumentation contractor work follows behind the piping work.). To do this Conoco arranged for the instrumentation contractor to supply additional workers. Because the addition of these workers necessitated the use of a "nonworking" supervisor, Conoco agreed to pay for the time of that supervisor (see Appendix Z).

An analysis of the Wiese construction schedules and manpower projections shows that Wiese contracted to construct the facility in 24 weeks using an average of 34 workers per week and a total of 32,560 man-hours. After the strike, on July 1, 1978, there were 12 weeks before September 22, 1978 (the last date that would allow compliance demonstration by October 21, 1978). Projected manpower loadings were up to a maximum of 104 workers with an average of 66 workers each week and a total of 32,040 man-hours after the strike. This projected manpower appears to have been entirely sufficient to complete this project on time.

Conoco recognized the poor productivity of the Wiese workers as early as July 1978. They said the major cause was the lack of Wiese supervision. Wiese said they had the normal amount of supervision on the job, that is, one supervisor for 40 to 80 workers in addition to the working foremen and general foremen required by the union.

Wiese stated that the following factors contributed to the low productivity:

1. Conoco's strict welding inspection requirements.
2. High rate of worker turnover (see Appendix AA).
3. Frequent rainouts.
4. The difficulty in working the furan pipe.
5. The strong union shop in the area.

One major impact of the Teamsters' strike was to prevent Conoco from recognizing Wiese's low productivity and generally poor performance until late in the project. If Conoco had been able to recognize these earlier, they might have taken over from Wiese in time to complete the installation by October 21, 1978.

From the above schedules and analyses, PEDCo concludes that it was possible for Conoco to complete the installation of the VCM incinerator before October 21, 1978.

Schedules One and Four were out of compliance on October 21, 1978. The construction work was completed for these schedules within an additional period equal to the length of strike (see Table 3); however, compliance testing was delayed for these schedules beyond the number of strike days (see Table 4).

The construction schedules prepared after October 21, 1978, were not available to PEDCo. It appears that the construction work was completed in an expeditious manner for one shift operation. (Conoco was led to believe that a two-shift schedule would not have been significantly faster.).

After October 21, 1978, Conoco assigned an engineer to work directly with Wiese to:

1. List for Wiese the work required to complete a system.
2. Plan the procedure for hydrostatic testing.
3. Witness the testing.

This direct participation by Conoco resulted in completion of desired systems. Conoco was still dissatisfied, however, with the efficiency of construction activity. Conoco deleted certain tasks from Wiese's contract, and avoided assigning any further work. These items were accomplished by another contractor after Wiese left the project (see Appendix X).

5.4 ANALYSIS OF THE COMPANY CORRECTIVE ACTIONS IN OTHER REGIONAL AREAS

Company corrective actions implemented in Regions II, III, IV, V, and IX are discussed in detail in the following sections. There are no vinyl chloride sources in Regions I, VII, VIII, and X.

TABLE 3. NUMBER OF EXCESSIVE DAYS OVER STRIKE DAYS FOR STARTUP OF INCINERATOR AND CARBON ADSORPTION SYSTEM

Schedules	Regulatory compliance date	Actual startup date	Number of days past compliance date	Number of days lost due to strikes			Total number of days lost due to strikes	Number of days unaccounted for
				Concrete haulers'	Teamsters'	Millwrights'		
1 (incinerator)	10-21-78	12-29-78	69	18	50	4	72	--
4 (barges)	10-21-78	12-29-78	69	18	50	4	72	--
4 (ship)	10-21-78	12-29-78	69	18	50	4	72	--

TABLE 4. NUMBER OF EXCESSIVE DAYS OVER STRIKE DAYS FOR COMPLIANCE TESTING OF SCHEDULES 1 AND 4

Schedules	Regulatory compliance date	Compliance test date	Number of days past compliance date	Number of days lost due to strikes			Total number of days lost due to strikes	Number of days unaccounted for
				Concrete haulers'	Team-sters'	Mill-wrights'		
1 (incinerator)	10-21-78	1-12-79	83	18	50	4	72	11
4 (barges)	10-21-78	1-20-79	91	18	50	4	72	19
4 (ship)	10-21-78	2-21-79	123	18	50	4	72	51

Without reasons why looks damaging.

Section 5.4.1 – 5.4.3 would indicate that if we had done it we would have made Nov. 21. Also could be dig at Reg. VI for not getting on it & issuing extension.

5.4.1 Company Corrective Actions in Region II

Three vinyl chloride sources in this region--a Hooker Chemicals plant and two Tenneco plants--did not meet the statutory deadline. These sources were issued 30 day notices to comply with the VCM emission standard. Marcus Kantz, EPA Region II reported, that Hooker Chemicals had spent $500,000 in overtime to meet the November 21, 1978, deadline. The remaining two vinyl chloride sources also met the November 21, 1978, deadline.

The Panasote Company in Puerto Rico would have been out of compliance on October 21, 1978. To meet standards, however, they used a temporary control measure to comply with the VCM emission standard by transporting VCM in a pressurized tank car to the PPG incinerator.

5.4.2 Company Corrective Actions in Region III

Six vinyl chloride sources in this region did not meet the statutory deadline. These sources were issued 30-day notices postponing the compliance deadline for the VCM emission standard by November 20, 1978.

Peter Schaul, EPA Region III, reported that Stauffer Chemical Company had experienced labor problems during the construction period. The corrective action taken by the company was to work until midnight for 1 month to meet the November 20, 1978, deadline. Diamond Shamrock also had experienced labor problems during the construction period. The company's corrective action taken was to work two shifts for 1 month to meet the November 20, 1978, deadline.

Also, Diamond Shamrock had experienced labor problems during the construction period. The corrective action taken was to work two shifts for one month to meet the November 20, 1978, deadline.

All six vinyl chloride sources in this region met the November 20, 1978, deadline.

5.4.3 Company Corrective Actions in Region IV

Air Products was the only vinyl chloride source in this region that did not meet the statutory deadline. To comply with

standards, Air Products was replacing the existing plant with a new one. The company was fined for operating the old plant past the October 21, 1978, deadline because of delays, they had been unable to start up the new unit.

5.4.4 Company Corrective Actions in Region V

All vinyl chloride sources in this region met the statutory deadline of October 21, 1978.

5.4.5. Company Corrective Actions in Region IX

All vinyl chloride sources in this region met the statutory deadline of October 21, 1978.

5.5 ANALYSIS OF TEMPORARY CONTROL PRACTICES

5.5.1 Analysis of Temporary Control Measures Considered by Conoco Before October 21, 1978

A number of temporary measures were considered by Conoco before October 21, 1978. PEDCo has evaluated all of these measures to determine whether it was feasible for the company to implement them in the given time period.

1. Route VCM vents to flare stack.

   No flares existed at the plant prior to October 1978. Design, purchase, and installation would have been required, including rerouting of the vent system piping. Equipment design, procurement, and installation would have taken 6 to 9 months.

2. Route VCM vents to boiler or cracking furnace.

   This VCM plant does not have fired boilers. Extensive design modifications to the plant vent systems would have been required to route vents to cracking furnaces. Because the furnaces are induced draft type, changes would have been required to assure sufficient oxygen for vent combustion. The time required for delivery of the air blowers and combustion control was estimated to be 3 to 4 months. The hydrogen chloride formed on combustion would have gone uncontrolled to the atmoshpere.

3. Secure a portable incinerator.

   After contacting various incinerator manufacturers PEDCo was informed that portable incinerators can not be rented or purchased on short notice but must be designed specifically for the job for which they are to be used. It would have taken incinerator manufacturers approximately 6 to 9 months to deliver a pallet-mounted portable incinerator (see Appendix BB).

4. Route plant vents to an existing controlled incinerator at another plant.

   Incinerators were available at the PPG plant, 3 miles from the Conoco plant. The installation of pipelines and a compressor system would have been required to route plant vents to PPG incinerators. Conoco maintains that even if installing of pipelines and a compressor were feasible, they did not believe PPG would have had any spare incinerator capacity, because PPG was installing an additional incinerator at the plant to meet their own needs. PEDCo did not have enough information to support this conclusion.) Should ask for it from PPG?

5. Route VCM vents through the vent control device for the oxy system.

   Significant vent piping modifications would have been required to route vents to the oxy system. In addition, compressors would have been needed to vent emissions into the oxy system, because it operates at higher pressure than any of the other venting process equipment.

6. Install regenerable carbon-bed systems.

   Design, procurement, and installation of regenerable carbon bed systems were not feasible in the given time period. Furthermore, regeneration would have been impossible without a control device such as a flare or incinerator.

7. Store VCM vapors from vents in a large pressure tank and ship by tank car or tank truck to a disposal site.

   Equipment such as compressors, a refrigeration system, piping, and loading facilities would have been required to store VCM vents in a pressure tank and then ship to an incinerator. Design, procurement, and installation of the system would have taken approximately 6 to 9 months.

by Pedco!

An overall conclusion was reached that Conoco did not have enough time to implement any of these temporary control measures before October 21, 1978.

5.5.2 Analysis of Temporary Control Measures Considered by Conoco After October 21, 1978

Conoco considered the following additional temporary control measures after October 21, 1978.

1. Reduce the plant production rate.
2. Vent dip sticks to holding vessels during loading.
3. Remove from service tank cars that contained oxygen in concentrations greater than 1,000 ppm, rather than purging them with nitrogen.

Conoco conducted a modeling study to determine the potential reduction in ground level concentrations of VCM if these measures were implemented. The modeling effort revealed that the potential reduction amounted to only 0.3 ppb. As a result of this analysis Conoco concluded that implementation of these measures would not be worthwhile. PEDCo did not have enough information to support this conclusion. deduct points for it!

Plant production of VCM was reduced from about 8.85×10^5 kg/day (1.95×10^6 lb/day) to between 7.71×10^5 and 8.16×10^5 kg/day (1.7×10^6 to 1.8×10^6 lb/day), because of a problem with the pressure drop of the oxychlorination system (see Appendix CC).

SECTION 6

COST OF NON-COMPLIANCE

6.1 TOTAL CAPITAL EXPENDITURE

Conoco has estimated total capital expenditure for the No. 1 Incinerator project from the project report (see Appendix DD). It is divided into expenditures made through October 1978, and those made after October 31, 1978.

Expenditures through 10/31/78	$5,523,124
Expenditures after 10/31/78	356,876
Total capital expenditures	$5,880,000

The capital expenditures for equipment and materials were made before October 21, 1978. The deferred capital expenditure was mainly for labor used in the delayed construction. Can't pay before work done.

6.2 OPERATING AND MAINTENANCE (O&M) COSTS

O&M costs are based on budget projections because Conoco did not have operating experience when they submitted these O&M costs.

Operating costs include operating payroll, processing supplies and paying for utilities. Payroll cost was incurred for the operator training and prestartup before the control equipment was not in operation. Costs for supplies and utilities however, were deferred.

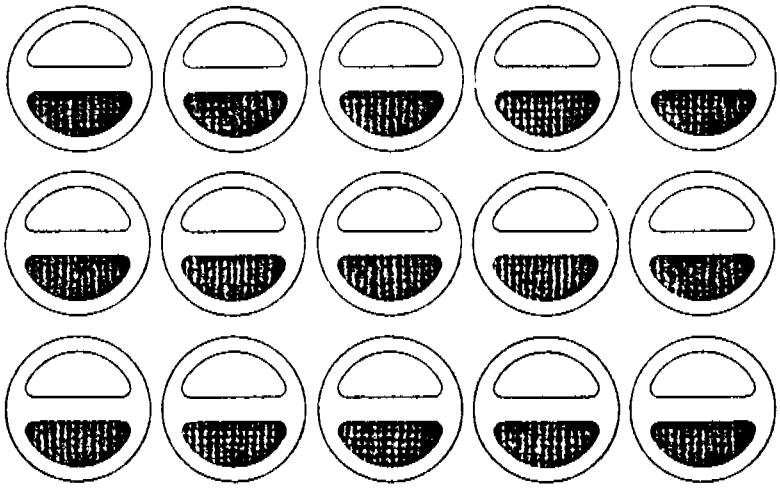
Maintenance costs include maintenance payroll and materials and contract costs. Money was spent before startup on precommissioning activities. Conoco estimates that the cost of these

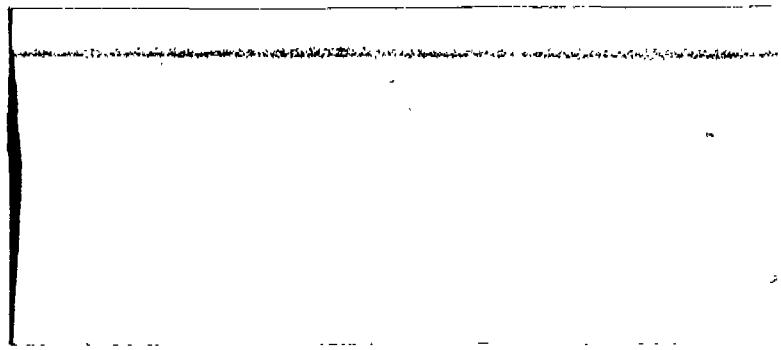
activities about equalled the cost budgeted for maintenance. Therefore, no maintenance cost savings were realized from delays of project completion.

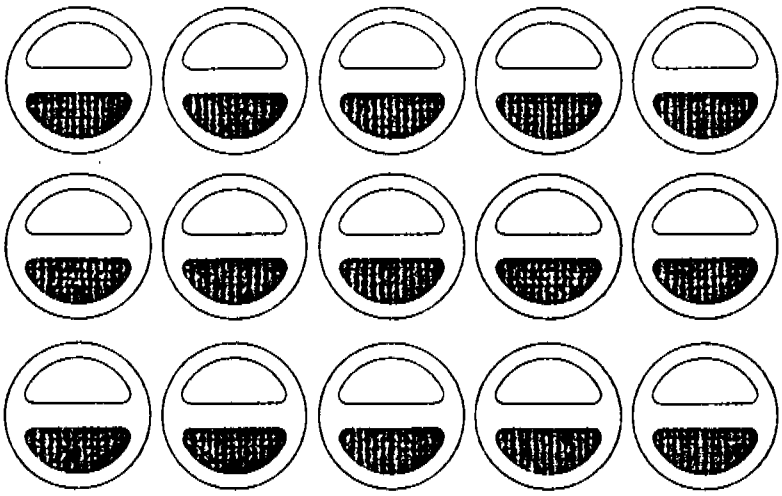
Conoco estimates deferred operating and maintenance costs at $349/day (see Appendix DD).

Total savings from deferred operating and maintenance cost for 83 days (for the period from October 21, 1978, through January 12, 1979) is $28,967. These savings, representing supplies and utilities, however, were offset to some extent by the Conoco personnel working on the project after the compliance date.

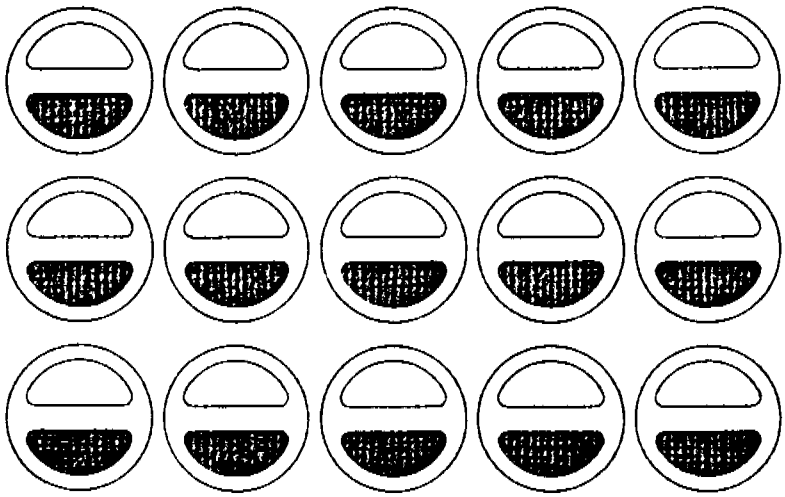
Out of context at this stage for fine!







PEDCo ENVIRONMENTAL



APPENDIX A

APPROVED WAIVER OF COMPLIANCE

SAO-1-1(1977)

JUL 0 5 1977

Mr. J. A. DeBernardi
Plant Manager
Continental Oil Company
P. O. Box 605
Westlake, Louisiana 70669

Dear Mr. DeBernardi:

Your letter dated December 21, 1976, supplemented by information on March 23, 1977 requesting a waiver of compliance from certain requirements of the national hazardous emission standard for vinyl chloride (40 CFR Part 61, Subpart F) for your EDC and VCM facilities located in Westlake, Louisiana has been received and reviewed.

A waiver of compliance from 40 CFR Part 61, Subpart F, is hereby granted for your EDC and VCM plants located in Westlake, subject to the specifications and conditions delineated in the enclosure to this letter. All requirements of 40 CFR Part 61, including Subpart F, must be complied with in all respects during the period of October 21, 1976 to the termination date of the waiver unless specifically discussed in the enclosure to this letter.

The Enforcement Division Director, Region VI, Environmental Protection Agency, 1201 Elm Street, Dallas, Texas 75270, must be notified no later than 10 days after each increment of progress has been achieved.

Prior to the termination date of the waiver, you are required to test emissions, using an approved test method, from the sources listed in the enclosure to demonstrate compliance with the vinyl chloride standard. This office must be notified at least 30 days prior to such emission test so that we may have an opportunity to observe the test. The emission test shall be conducted and reported as required by 40 CFR Part 61.

For the remaining subject sources and vents which require testing, that are not delineated in the enclosure, i.e., those sources and vents which you consider to be in compliance with the standard, you are also required to conduct appropriate emission tests. The schedule for conducting these tests will be arranged through our Surveillance and Analysis Division. For this purpose, please notify Mr. Philip Schmidt of the Surveillance and Analysis Division within 10 days of the receipt of this letter so that a test date and pre-conference, if necessary, can be arranged. Mr. Schmidt may be contacted by telephone at (214) 749-7120.

JAP-2-11077

Please be advised that, unless stated otherwise in the enclosed waiver, you are required to report, on a semiannual basis, all the information contained in Section 61.70, Semiannual report. Your first report will be due on September 15, 1977.

Any deviation from the conditions of this waiver, unless previously approved by the Director of the Enforcement Division, shall be grounds for the immediate termination of this waiver. In addition, a situation of imminent endangerment may warrant the immediate intervention of the Environmental Protection Agency.

Other requests you may have submitted, such as equipment and test method equivalencies, will be addressed under separate cover. Additionally, we intend to discuss and evaluate your leak detection program during an on site inspection, to be scheduled in the near future.

Should you have any questions concerning the substance of this waiver, you may contact Mr. Cary A. Bernath of my staff by letter to this office or by telephone at (214) 749-7675.

Sincerely,

ORIGINAL SIGNED BY

Howard G. Dargman
Director, Enforcement Division

Enclosure

cc: Louisiana Air Control Commission
P. O. Box 60630
New Orleans, Louisiana 70160

bcc: Surveillance & Analysis Division (6ASA)
Rich Biondi, DSSE
Susan Wyatt, ESED

Continental Oil Company
Westlake, Louisiana
EDC-VCM Plants

Applicable Regulation	Emission Point	Description
§61.62(a)	EDC-VCM Plants	As described in Continental's submittal of March 23, 1977
§61.65(b)(9)(ii)	EDC-VCM Plants	
§61.65(b)(3)(i)	EDC-VCM Plants	
§61.65(b)(3)(iv)	EDC-VCM Plants	
§61.65(b)(5)	EDC-VCM Plants	
§61.65(b)(6)(ii)	EDC-VCM Plants	
§61.65(b)(7)	EDC-VCM Plants	
§61.65(b)(1)(ii)	EDC-VCM Plants	
§61.65(b)(2)	EDC-VCM Plants	

Compliance Schedule Number 1:

1. Date by which equipment will be ordered	May 1, 1977
2. Date of commencement of on site construction	January 1, 1978
3. Date of completion of on site construction	October 1, 1978
4. Date of final compliance and date on which this waiver terminates	October 21, 1978

Applicable Regulation	Emission Point	Description
§61.62(b)	EDC Plant	[redacted] for oxychlorination reaction vent emissions.

Compliance Schedule Number 2:

1.	Date by which equipment will be ordered	April 1, 1977
2.	Date of commencement of on site construction	July 1, 1977
3.	Date of completion of on site construction	February 1, 1978
4.	Date of final compliance and date on which this waiver terminates	October 21, 1978

Applicable Regulation	Emission Point	Description
§61.65(b)(9)(i)	EDC-VCM Plants	Wastewater stream leaving existing process waste water

CONFIDENTIAL

Compliance Schedule Number 3:

1.	Date by which equipment will be ordered	October 1, 1977
2.	Date of commencement of on site construction	April 1, 1978
3.	Date of completion of on site construction	August 1, 1978
4.	Date of final compliance and date on which this waiver terminates	October 21, 1978

V-6

Applicable Regulation	Emission Point	Description
§61.65(b)(1)(ii) 61.65(b)(3)(iii) 61.65(b)(7)	EDC-VCM Plants	Deck vent stack, VS-600, containing vent gas emissions as identified in Continental's submittal of March 23, 1977.

A-7

Compliance Schedule Number 4:

1. Date by which equipment will be ordered	April 1, 1978
2. Date of commencement of on site construction	June 1, 1978
3. Date of completion of on site construction	August 1, 1978
4. Date of final compliance and date on which this waiver terminates	October 21, 1978

Applicable Regulation	Emission Point	Description
§61.65(b)(4)	EDC-VCM Plant	45 relief valves on equipment in VC service, as identified in Continental letter dated March 23, 1977.

Compliance Schedule Number 5:

1.	Date by which equipment will be ordered	April 1, 1977
2.	Date of commencement of on site construction	August 1, 1977
3.	Date of completion of on site construction	February 1, 1978
4.	Date of final compliance and date on which this waiver terminates	February 1, 1978

APPENDIX B

SEMIANNUAL REPORTS - VCM PLANT'S COMPLIANCE PLAN

VCM Plant

Conoco Chemicals
Continental Oil Company
P.O Box 605
Westlake, Louisiana 70669
(318) 491-5211

CERTIFIED MAIL #315633
RETURN RECEIPT REQUESTED

March 13, 1979

File: 4.41-
#04148

Diana Dutton
Director, Enforcement Division
Environmental Protection Agency, Region VI
First International Building
1201 Elm Street
Dallas, TX 75270

Dear Ms. Dutton:

The following is the March 15, 1979 semiannual report of non-compliance information as required by Section 61.70 of the Vinyl Chloride Emission Standard for the CONOCO VCM Plant at Westlake, Louisiana. As was reported in our previous semiannual reports, all vent sources at the CONOCO VCM Plant had been included in a Waiver of Compliance granted on July 5, 1977. With this waiver, no initial compliance tests had been conducted nor continuous emission monitoring begun until October 19, 1978. Therefore, we have no information to report as required by Section 61.70 prior to that October date.

Initial compliance tests were conducted and successfully completed on the vent streams from the oxychlorination reactor and steam stripper on October 19, 1978. The initial compliance test on the effluent from the spent caustic collection drum, S-108, was successfully completed on November 3, 1978. The results and details from these tests were included in the emission test report sent to your office on November 15, 1978.

The initial compliance test on the vent stream from the plant's new Thermal Incineration System was successfully completed on January 12, 1979. The results and details from this test were included in the emission test report sent to your office on January 15, 1979. In addition, initial compliance tests were successfully completed for the Carbon Adsorption System at the company's VCM ship and barge loading dock. An emission test was conducted during the loading of two barges on January 20-21, 1979. An emission test was also conducted during the loading of a ship on February 21-22, 1979. Results and details from these tests were submitted to your office in emission test reports dated February 8, 1979 and February 23, 1979, respectively.

The following is a record of vinyl standard emission non-compliance at the Westlake plant as required by Section 61.70 of the standard. The report covers each area in the plant from the time of initial testing through March 15, 1979. For clarity purposes, each area has been listed separately.

cpt
on 7/16/79

1) Oxychlorination Reactors

(Initial compliance test completed October 19, 1978)

The vinyl chloride emissions from the oxychlorination reactors exceeded the limit of 0.2 grams/kilogram of EDC produced, as prescribed in paragraph 61.62(b) of the vinyl standard, during the hours listed below:

Date	Hour	Vinyl Emissions (G/KG EDC)
November 7, 1978	1700	0.2165
(Hourly average for the entire day was 0.0883 G/KG EDC)		
November 8, 1978	0100	0.2174
	0300	0.3673
	0400	0.3297
	0500	0.2942
	0600	0.2481
	0700	0.2123
(Hourly average for the entire day was 0.1196 G/KG EDC)		
December 13, 1978	0500	0.2055
(Hourly average for the entire day was 0.0761 G/KG EDC)		
January 2, 1979	2200	0.2140
	2300	0.4311
(Hourly average for the entire day was 0.0943 G/KG EDC)		
January 3, 1979	0100	0.3264
	0200	0.2918
	0300	0.2589
	0600	0.6044
	0700	0.2305
	0800	0.2227
	0900	0.2417
	2100	0.2069
(Hourly average for the entire day was 0.1799 G/KG EDC)		
January 5, 1979	1500	0.3087
	1700	0.2186
	1800	0.2066
(Hourly average for the entire day was 0.1291 G/KG EDC)		

January 6, 1979	0100	0.2127
	0500	0.2087

(Hourly average for the entire day was 0.0749 G/KG EDC)

January 9, 1979	0100	0.2731
	0200	0.2643
	0300	0.2012
	0400	0.2628

(Hourly average for the entire day was 0.1521 G/KG EDC)

February 1, 1979	1500	0.3342

(Hourly average for the entire day was 0.0598 G/KG EDC)

February 23, 1979	1500	0.8678
	1600	0.3423
	1900	0.2974
	2000	0.2301
	2100	0.3119
	2200	0.3400
	2300	0.3170

(Hourly average for the entire day was 0.3230 G/KG EDC)

February 24, 1979	0000	0.2462
	0100	0.2486
	0200	0.2490
	0300	0.2369
	0400	0.2420
	0500	0.2307
	0600	0.2492
	0700	0.2067
	1400	0.4126
	1500	0.5442
	1600	0.4591
	1700	0.6664
	1900	0.2543
	2000	0.5832
	2100	0.4974
	2200	0.7237
	2300	0.5795

(Hourly average for the entire day was 0.3057 G/KG EDC)

February 25, 1979	0000	0.5620
	0100	0.3484
	0200	0.3660
	0300	0.3705
	0400	0.2767
	0600	0.5980
	0700	0.5979
	0800	0.5420

(Hourly average for the entire day was 0.1660 G/KG EDC)

February 26, 1979	0500	0.3175
	0600	0.3169
	0700	0.2623
	0800	0.6071
	1000	0.2559
	1100	0.2161
	1300	0.3306
	1400	0.3190
	1500	0.2914
	1600	0.4126
	2000	0.3646
	2100	0.4166
	2200	0.2912
	2300	0.4489

(Hourly average for the entire day was 0.2328 G/KG EDC)

February 27, 1979	0000	0.5310
	0100	0.3692
	0200	0.3712
	0300	0.2031
	0700	0.3429
	0800	0.2901
	1100	0.2131
	1500	0.3389
	1600	0.2452

(Hourly average for the entire day was 0.1768 G/KG EDC)

February 28, 1979	0600	0.2127

(Hourly average for the entire day was 0.1244 G/KG EDC)

March 1, 1979	1000	0.2397
	1500	0.2737
	1600	0.2298
	1800	0.2063

(Hourly average for the entire day was 0.1156 G/KG EDC)

2) Steam Stripper

(Initial compliance test completed October 19, 1978)

The vinyl chloride concentration in process wastewater discharged to the atmosphere exceeded the limit of 10 ppm, as prescribed in paragraph 61.65 (9) of the Vinyl Standard, during the hours listed below:

Date	Hour	Concentration
January 15, 1979	2100	14.2 ppm
January 16, 1979	0100	12.6 ppm

3) S-108 Slops Caustic

(Initial compliance test completed November 3, 1978)

No violations occurred during this period.

4) Thermal Incinerator

(Initial compliance test completed January 12, 1979)

All major vent streams at the Westlake plant, with the exception of the oxychlorination vent, are piped to the new thermal incineration unit to reduce the vinyl chloride content to less than 10 ppm. The incinerator is fed by two main headers, the wet vent header and the direct chlorination vent header. Exhaust gases from the EDC purification section and the vinyl chloride formation and purification sections are discharged to both the wet and direct chlorination vent headers. Vent gases from the tank farm are piped into the wet vent header, and the exhaust gases from the ship and railcar loading vent recovery system are discharged to the direct chlorination vent header.

No violations occurred at the incinerator stack during this period; however, the thermal incinerator was down or various feed gases were by-passing the control unit during the time listed below:

January 13, 1979 -
The direct chlorination vent by-passed the incinerator from 0655 to 0700 and from 1355 to 1505

January 14, 1979 -
The direct chlorination vent by-passed the incinerator from 1130 to 1300 and from 1455 to 1555.

January 15, 1979 -
The direct chlorination vent by-passed the incinerator from 0530 to 0605, from 0640 to 0650, from 1215 to 1220 and from 1455 to 2030.

January 16, 1979 -
The direct chlorination vent by-passed the incinerator from 0500 to 0600 and for a number of very brief periods between 0700 to 2345.

January 17, 1979 -
The direct chlorination vent by-passed the incinerator from 0635 to 0730 and from 0920 to 1315.

The wet vent by-passed the incinerator from 1230 to 1330.

January 19, 1979 -
The wet vent by-passed the incinerator from 1330 to 1400.

January 20, 1979 -
The direct chlorination vent by-passed the incinerator from 0032 to 0104.

January 24, 1979 -
The direct chlorination vent by-passed the incinerator from 0140 to 0142.

Incinerator shutdown due to low combustion air from 1140 to 1215.

January 26, 1979 -
The direct chlorination and wet vents by-passed the incinerator from 0725 to 0845.

January 30, 1979 -
The direct chlorination vent by-passed the incinerator from 1215 to 1220.

February 1, 1979 -
The direct chlorination vent by-passed the incinerator from 1633 to 1647.

The wet vent by-passed the incinerator from 1645 to 1755.

February 2, 1979 -
The incinerator was shut down due to flame failure from 0615 to 0830 and from 2245 to 2310.

The direct chlorination and wet vent by-passed the incinerator from 1432 to 1522.

February 4, 1979 -
The wet vent header by-passed the incinerator from 0704 to 0715.

February 12, 1979 -
The incinerator was shut down at 0300 for a scheduled natural gas outage, as outlined in our letter to your office dated February 1, 1979. The unit was totally on stream again by 1800 on February 13, 1979.

The outage occurred during the February plant turnaround period. During this 18-day period the entire VCM and EDC processing unit was shut down and cleared of all VCM and EDC thereby assuring no VCM emissions to the atmosphere from the processing area. All tank car and ship loading operations were secured during the period of incinerator downtime to assure no venting of VCM to the atmosphere as a result of loading operations. Storage tanks in EDC service were either empty or stagnant, and thus due to the cool February weather, no tank breathing occurred during the incinerator outage. Finally, the light ends tank was temporarily emptied into tank cars to prevent any VCM emissions.

February 22, 1979 -
The direct chlorination vent by-passed the incinerator from 0520 to 0538.

March 2, 1979 -
The wet vent by-passed the incinerator from 0800 to 1040.

March 6, 1979 -
The tank farm vent system was shut down from 0445 to 1230.

March 9, 1979 -
The direct chlorination and wet vent headers by-passed the incinerator from 0903 to 0920.

5) Carbon Adsorption System at the VCM Loading Dock

(Initial compliance tests completed January 20-21, 1979 and February 21-22, 1979)

No violations occurred during this period.

Please let us know if you have any questions concerning this report or require any additional information.

Sincerely,

J. A. DeBernardi
Plant Manager

CCR 000019102

CC: J. F. Coerver, LACC

VCM Plant

Conoco Chemicals
Continental Oil Company
P.O. Box 605
Westlake, Louisiana 70669
(318) 491-5211

January 11, 1979

Mr. James F. Coerver
Technical Secretary
Louisiana Air Control Commission
P. O. Box 60630
New Orleans, LA 70160

Dear Mr. Coerver:

This is the semiannual report on the VCM Plant's Compliance Plan for the period July 1, 1978 to December 31, 1978.

Item I - R-305 Catalytic Reactor on Oxychlorination Vent

R-305 continues to effectively reduce ethylene, VCM, and chlorine concentrations in the oxychlorination vent and has been on stream continuously since September 25, 1978. From April 21, 1978 to May 10, 1978 the VCM Plant was down for a scheduled plant turnaround. Although the remainder of the plant was started up on May 10, R-305 start up was delayed to allow steam tracing and nozzle repairs as well as catalyst recharge. A strike by Teamsters' Local #969 against the Associated General Contractors, lasting from May 1 until June 19, delayed the R-305 repair work. Another labor dispute between Millwright Local #1476 and the Associated General Contractors from June 26 until June 29 further delayed repair work. During these labor disputes it was impossible for contractors to complete the scaffolding and insulation removal work necessary to allow nozzle and steam tracing repairs. With the resolution of the disputes, repair work was finally completed in mid-September. The reactor was recharged and then placed back on stream on September 25, 1978.

Item II - Dock Vent Return Pipeline and Vapor Recovery System

All ship, barge, and railcar vents were processed through this system with the exception of those loaded during the first week of November when the vent recovery compressor, B1-410, was down for repairs. Both the return pipeline and the vapor recovery system continue to operate satisfactorily.

Item III - VCM Incinerator Vent

CCR 000019103

Construction has been completed on the thermal incineration system. In addition to the incineration unit, construction is also complete on the associated vent collecting systems and the neutralization system for the HCl produced by the vent combustion. Incinerator warm-up was begun on December 14,

1978 and the plant continued in the process of starting up and checking out the complete systems throughout the end of December.

Please contact the plant should further information on this semiannual report be required.

Sincerely,

J. A. DeBernardi
Plant Manager

is ✓
CC: Director of EPA Enforcement Division
EPA, Region VI Permits Branch (6AEP)
1201 Elm Street
Dallas, TX 75270

CCR 000019104

PERSONNEL & CERTIFICATION

anager of the facility, on location at the plant site, is as follows:

	JAMES A. DeBERNARDI
	PLANT MANAGER
Company:	CONTINENTAL OIL COMPANY
Street address/ P. O. Box:	P. O. BOX 605
an, parish, Zip code:	WESTLAKE, LA 70669
area code/ telephone No.:	318/491-5023

n to contact at the site of the facility about air pollution control, if nt from the above:

	GARY L. FOSHEE
	CHIEF PROCESS ENGINEER
telephone No./ extension:	318/491-5052

e company's air pollution control correspondence and documents are prepared dquarters office, at a different site, give the information on the person to ted below:

	H. J. Neeld
	DIRECTOR OF ENVIRONMENTAL CONTROL
pany; or parent company:	CONTINENTAL OIL COMPANY
treet address/ P. O. Box:	P. O. BOX 727
tate, Zip code:	WESTLAKE, LA 70669
area code; telephone No.:	318/491-5437

son who prepared this report: (If one of the above, just check appropriate block:)
☐ A. ☐ B. ☐ C.

	KENNETH G. KaLEOO
	PROCESS ENGINEER
(if prepared by a consultant)	CONTINENTAL OIL COMPANY
(If prepared in-house)	P. O. BOX 605
address/ P. O. Box:	WESTLAKE, LA 70669
state, Zip code:	318/491-5075
, telephone #, extension:	

TIFICATION. *I certify, under the provisions in Louisiana and United States d provide criminal penalties for false statements, that this Emission y Questionnaire, including all attachments thereto, contains information is true and correct to the best of my knowledge and belief.*

(signature of manager, or other company agent)

James A. DeBernardi, Plant Manager
(printed or typed name & title of person above)

1/12/79
(date signed)

(27)

conoco

VCM Plant

Conoco Chemicals
Continental Oil Company
P O. Box 605
Westlake, Louisiana 70669
(318) 491-5211

December 1, 1977

Mr. Howard G. Bergman
Director, Enforcement Division
Environmental Protection Agency, Region VI
First International Building
1201 Elm Street
Dallas, TX 75270

Dear Mr. Bergman:

Increments of progress are hereby submitted on the completion schedule for two of the emission points at the CONOCO VCM Plant, Westlake, Louisiana. The increments of progress for the subject sources are as outlined in CONOCO's letter of December 21, 1976.

Compliance Schedule Number 2--Oxy Vent Heater, H-312, for Oxychlorination Reaction Vent Emissions. On site construction of the Oxy-Vent Heater revisions has been completed. Scheduled completion date for this increment of progress was February 1, 1978.

Compliance Schedule Number 5 - Rupture Discs for Relief Valves in VCM Service. Installation of rupture discs under relief valves in vinyl service has been completed. The scheduled completion date for this increment of progress was February 1, 1978.

Future reports will be issued as per the compliance schedule requirements.

Sincerely,

J. A. DeBernardi
Plant Manager

is
CC: James F. Coerver - LACC

CCR 000019106

APPENDIX C

NUMBER OF DAYS LOST DUE TO INCLEMENT WEATHER

[illegible] 2/1/79 [illegible]

Lost Time [illegible] → 30 days

10/11/77
11/21/77
11/25/77
11/29/77
11/30/77
12/28/77 ½ day lost
12/29/77
1/16/78 ½ day lost
1/18/78
1/19/78
1/20/78
1/23/78
1/24/78
1/25/78
1/30/78
1/31/78
2/1/78
2/7/78 ½ day lost
2/9/78
2/17/78 lost ¼ day
3/7/78
4/11/78
4/12/78
7/24/78 lost ½ Day
7/27/78 lost ½ Day.
7/31/78 lost ½ Day
8/15/78 lost ¼ day
8/28/78
9/8/78
9/11/78
9/15/78 lost ½ day.
11/6/78
11/27/78
12/4/78
12/6/78

CCR 000019108

PEDCo ENVIRONMENTAL, INC.

MEMORANDUM

TO: Project File

DATE: March 13, 1979

SUBJECT: Communication With U.S. Weather Bureau, Lake Charles, Louisiana

FROM: Herb Belknap

FILE: PN 3470-1-H

cc:

A call was made to verify the amount of rainfall recorded by the U.S. Weather Bureau at the Lake Charles airport on the days listed by Conoco as rainout days.

Days listed by Conoco as lost due to rainy weather	Official rainfall (in.)
10/11/77	1.46
11/21/77	1.10
11/25/77	0.03
11/29/77	3.14
11/30/77	0.09
12/28/77(½ day)	0.64
12/29/77	0.70
1/16/78(½ day)	0.90
1/18/78	0.23
1/19/78	0.45
1/20/78	Trace
1/23/78	0.40
1/24/78	2.10
1/25/78	0.35
1/30/78	0.17
1/31/78	0.35
2/1/78	0.44
2/7/78(½ day)	0.32

CCR 000019109

(continued)

Days listed by Conoco as lost due to rainy weather	Official rainfall (in.)
2/9/78	0.26
2/17/78(¼ day)	0.36
3/5/78	None
4/11/78	0.08
4/12/78	0.37
7/24/78(½ day)	Trace
7/27/78(½ day)	1.92
7/31/78(½ day)	0.02
8/15/78(¼ day)	0.15
8/28/78	5.88
9/8/78	0.13
9/11/78	0.02[a]
9/15/78(½ day)	0.01
11/6/78	0.77
11/27/78	0.57
12/4/78	0.05
12/8/78	0.51

[a] Rainfall for 9/9/78 (Saturday) and 9/10/78 (Sunday) was 2.2 in. and 1.5 in. respectively.

CCR 000019110

APPENDIX D

CORRESPONDENCE WITH VINCENT CONSTRUCTION COMPANY

Vinnell AFE VCM-102
VCM-102
Contract

January 26, 1970

Vinnell Construction Company
P. O. Box [illegible]
Sulphur, Louisiana 70663

Attention: Mr. Ed Lester

Gentlemen:

Distribution of Change Order Number Two (2) to Contract Number VCM-102

Concrete Structural, Piping & Electrical
VCM Vent Gas Incinerator
AFE No. 0896
VCM Plant
Lake Charles, La.

Attached is a fully executed copy of Change Order Number Two (2) dated January 19, 1970 on the above subject project for your file. Please proceed with the work on this change order.

Very truly yours,

Original signed by:
Daniel E. Kidd
Daniel E. Kidd
Field Engineer
Central Engineering Department

DEK/nn
Attachment
CC: JRH, JEA, GLK, CTW, JMB

CCR 000019112

Vincent's Construction, Inc.

P. O. Box 267
Sulphur, Louisiana 70663

Telephone
882-1576

January 5, 1977

Conoco Chemicals
P.O. Box 727
Westlake, Louisiana

Attention: Mr. D. E. Kidd

Re: Conoco - VCM Incinerator Foundations
Contract No. VCM-102
Our Job No. 77-028

Gentlemen:

At your request we hereby submit to you a credit for all concrete purchased by Conoco and delivered to the jobsite of $37.60-per cubic yard of 3000 psi mix.

41.30 EDL 1/7/78

Based on your furnishing 300 cubic yards of concrete we will credit you with $11,280.00.

12,465.00 EDL 1/7/78

Sincerely,

Edward I. Lanier, P.E.
Vice-President

EIL/sd

CCR 000019113

LAKE CHARLES CHEMICAL PLANT
P. O. Box 727
Westlake, Louisiana 70669

CHANGE ORDER NO. Two (2) CONTRACT NO. VCM-102

W.F.E. OR CHARGE 6196-10-102 DATE January 10,1978

JOB TITLE & LOCATION Concrete, Structural, Piping and Electrical for VCM Vent Gas Incinerator

REQUESTED CHANGE & REASON Delete 300 cubic yards of concrete from original bid price. Conoco is buying 300 cubic yards from H & H Concrete. The unit price of the concrete that is being deleted is $41.36 per cubic yard.

CHANGE REQUESTED BY: Daniel E. Ridd DEPT. Central Engineering Dep
Daniel E. Ridd

TO CONTRACTOR: Vincent Construction Co.

THE ABOVE CHANGE WILL BE: $ 12,408.00 (DEBIT - CREDIT)

IF REQUESTED WORK IS APPROVED, ADJUSTMENT OF THE CONTRACT PRICE SHALL BE MADE ON YOUR NEXT BILLING AFTER WORK COMPLETION.

CONTRACTOR'S SIGNATURE: Edward A. Stone

APPROVED: Daniel E. Ridd DATE: 1/17/78

APPROVED: J.E. Lee DATE: 1-17-78

APPROVED: J.A. Lebreton DATE: 1/18/78

DISTRIBUTION: JEL, JEH, DER, CFW

CCR 000019114

APPENDIX E

DAILY LOG OF INCINERATOR PROJECT

Doc 49.

1/3

Notes from DEK daily diary — 2/21/79 [illegible]

11/4/77	Board approved on concrete
11/7/77	Vimcrete / DEK — schedule of concrete work.
11/14/77	Completion of drain diagram
11/12/77	Vimcrete / DEK schedule of concrete work.
11/22/77	Regan Welding P.R.
12/2/77	Dunham Price & Concrete Pipe Dimensions on strike H & H still obtaining.
12/6/77	Conduit set Concrete.
12/7/77	" " "
12/8/77	" " "
12/9/77	" " "
12/12/77	" " "
12/13/77	" " "
12/14/77	" " "
12/15/77	" " "
12/16/77	" " "
★ 12/17/77 (Sat)	O.T. poured 21 cy from H & H
12/19/77	Conduit set Concrete
12/20/77	" " "
12/21/77	" " "
12/22/77	" " "
12/23/77	" " "
12/27/77	Poured 15 cy from H & H.
12/30/77	Poured 3½ cy from H & H.
1/3/78	Poured 3½ cy " "
1/4/78	Poured 21 cy " "
1/5/78	Poured 24 cy " "
★ 1/7/78 (Sat)	O.T. poured 5½ cy from H & H.
1/11/78	Concrete strike over poured 7½ cy from Dunham Price.
★ 2/11/78 (Sat)	O.T. Backfill before rain arrive.
3/1/78	met w/ Paul Odum & Joe Hurd (Supt.) of Vimcrete.
★ 3/18/78 (Sat)	Vimcrete worked 8 hrs O.T.
3/13/78	Debris removed on site.
★ 3/21/78	Vimcrete worked 2 hrs O.T.

CCR 000019116

3/28/78	Vinatie worked 2 Hrs OT
3/29/78	" " " "
3/30/78	" " " "
3/31/78	" " " "
4/1/78 (Sat)	" " 2 hrs OT
4/5/78	Wire ork I-701
4/20/78	S-701 arrived @ Refinery
4/24/78	Wire unloaded S-701
4/28/78	Wire shop with short fittings
5/1/78	Transition began Site
	Went to B.R. w/ Ford gave them list of to buy - any others should to be reported to me.
5/4/78	B.R. w/ Ford & SAH met began fabrication.
6/14/78	Pickets removed @ 12:00 Noon
6/15/78	Contractors moved back on site no production
6/16/78	" " " " " " "
6/19/78	First work done since 4/28/78
6/26/78	Millwrights on site
6/29/78	" pickets removed - 1:00 PM
6/30/78	All Contractors back to work.
8/7/78	Wire expended 2600MH to accomplish 600MH (7/24 → 7/2
8/8/78	Discussed w/ Ford (Wire) on Conoco calculated efficiency over past 2 weeks (=2% & 22%)
8/9/78	Met w/ Bud Oliver & Ben Tiller on Wire's efficiency Wire will fill comfortable w/ 9/10 completion
8/10/78	Conoco is doubtful of 4 pipes completion by 9/15. Decided to work Sprd O.T.
8/11/78 (Sat)	Wire worked = 1½ of total crew all day.
8/15/78	Met in B.R. w/ Wire - discussed 1) eff. 2) schedule 3) Completion date Wire to send out daily manning field requirements.
8/23/78	Wire sent Conoco Daves to job with no assistance
8/26/78 (Sat)	Wire Worked all people Time.
8/28/78	2 hrs OT Maintenance

CCR 000019117

3/3

[illegible]/78 4 Weiss PF(w) quit for Olin T/A.

[illegible]/16/78 MED have to make CPM of #1 VGF
MED " " Monitor CPM

[illegible]/20/78 Met w/ Paul Olivier & Louis Orosco on valuation.

[illegible]/22/78 (sat) Weiss worked all 8 hrs.

10/4/78 Met w/ [illegible] & Paul Olivier — Weiss production [illegible] M.H.

10/7/78 (sat) Weiss worked all 8 hrs.

10/10/78 (sat) Weiss worked OT 8 hrs all.

10/19, 20/78 Weiss [illegible] [illegible] (10/21) will receive production following week.

10/21/78 (sat) Weiss worked 8 hrs.

11/1/78 [illegible] [illegible] Weiss piping completion.

11/20/78 1/2 of Weiss people released — 40% production.

12/14/78 Plant started up #1 VGF

CCR 000019118

APPENDIX F

OVERTIME RESERVE FOR THE INCINERATOR PROJECT

2.7

CONFIDENTIAL

Interoffice Communication

To Distribution

From J. J. Brooks

Date November 29, 1978

Subject Vent Gas Incinerator Projects Cost Reports

The attached report reflects the status of the Vent Gas Incinerator Projects as of October 31, 1978.

J. J. Brooks

JJB/sn

Distribution:
J. A. DeBernardi
K. G. McLeod
J. H. Brunson
R. D. Gamblin
R. G. Gantz
G. L. Krautzer
D. E. Kidd
S. A. Hegener
R. D. Beck
C. T. Wyatt
J. C. Counter
R. E. Lehmkuhl
B. D. Ratliff
J. R. Holcomb
J. E. VanZant
J. D. Stone

CCR 000019120

#1 INCINERATOR

AFE 8196

Overtime Reserve

Description	Allocation	Committed To Date	Estimated To Complete	Forecasted Total	Forecasted Under (Over)	Expended To Date
Site Preparation	0	0	0	0	0	0
Concrete & Underground	48222	9355	0	9355	38867	9355
Structural Erection	5800	0	0	0	5800	0
Piping & Equip. Erection	78761	24130	5576	29706	49055	8749
Cooling Tower	0	0	0	0	0	0
Electrical	17144	3912	0	3912	13232	3300
Instrument	13883	777	341	1118	12765	613
Building	11190	0	0	0	11190	0
Painting	0	0	0	0	0	0
Insulation	0	0	0	0	0	0
Fencing	0	0	0	0	0	0
Total	175000	38174	5917	44091	130909	21017

APPENDIX G

CORRESPONDENCE WITH CEMENT MANUFACTURERS

12/28/77

1) H&H - Will not be ready before 1st of year.
- Will try & supply as much as possible.
Will schedule regular customers first.
- No firm commitment.

2) Diamond Rock - will meet again Tues. (?) -
Ted Pace Jr. - Feels like contract will be accepted
will not know til after meeting.

3) Ed Carter - ~$60/cy. Based on 1500 cy 2 mo.
Batch Plant & Ready Mix Equip. to make Concrete.
Mixer.
Mats: Sand OK
Cement ?
Aggregate - Limestone OK
$22/cy Above Bid Cost of Concrete.
6 yd Batch.
Should not have Carter Problems.
~2 wks Set-Up Time
Includes Quality Control
Concrete Supply Water & Electricity
Any Permit or EPA Requirements. Costs not Included.

Concrete

VS 901	10 cy	
C-902	10 cy	
T-902	12.5 cy	
S-902	6 cy	
S-901	1.5 cy	
T-955	3.1 cy	
S-412	3 cy	O.S.
BL-412 A	2 cy	O.S
BL-412 B	2 cy	O.S.
H-412	.5 cy	O.S.
P-902 A&B	3 cy	
P-904 A&B	3 cy	
P-905 A&B	3 cy	
P-906 A&B	6.5 cy	
VENT GAS STACK	6 cy	O.S.
C-901	40 cy	
BL-701	5 cy	
BL-902	8 cy	
CT-950	78 cy	W/AIT.
ESA-910	2 cy	
	226 cy	

PS 211 → 206	15 cy	
PS 225 → 233	24 cy	8x TYP VIII
PS 308	1 cy	
PS 307	1.5 cy	
PS 256	3 cy	
PS 309	1 cy	
PS 255	1 cy	
PS 238	1 cy	
PS 216	4	
	51	

POUR 277 cy

LARGEST MONOLITHIC POUR

35 cy

277 cy

12/22/77

Transit Mix - Mr. A.C. Tom/ Orange, Tx. 713-886-4005

1) Too far to haul even w/out water
2) Short of material.
3) Very Doubtful No!! Even if he had material he would not haul that far (Lake Charles)

Harbins & Lawrence Mr. Charles Lawrence Orange, Tx. 713-883-4371

1) Cement No Pozzolan Aggregate Short
2) Trucks - not enough to handle
3) Too far to haul Would not consider supplying us any concrete.

Smith Materials - Curtis Smith Orange, Tx (Beaumont) 713-883-6118

1) Labor Problems.
2) May be able to help us. Will call back.
3) No. Too far Company Policy not to haul to CA.

Bernice Williams

Orange — [illegible] Co. [illegible] ([illegible])

C. TERRY ✓ Transit Mix Concrete & Find. Co. 713 886-4015

HARVEY HONEYCUTT ✓ Harding & Lawler — 835-4371

BILL MOORHEAD ✓ American Ready Mix Con Co. 882-4077

No [illegible] Ready Mix Corp 898-2507

No Harding & Lawler, P.A., 722-9131

DANNY VINCENT / WARREN GEFFINGER Church Mat'l Corp 835-5076

Trans Mix Conc. & Fnd Co 835-4133

"Keown Supply - 835-0311"

Other

DEQUINCY 786-2351

CCR 000019126

76-318 [illegible] [illegible] Bernice Tillman

Lafayette - Berry Ready Mix
Boston Concrete Co.
Laf Concrete

(318) 235-7542
235-5641
234-5166

CCR 000019127

12/21/77

BILL & ED

CONCRETE - SIGNS.

~ $500/ea TO

30 DAYS TO MAKE CONCRETE.

REICE - DEAL W/ TRANSIT MIX IN ORANGE, TX. NO
~ 4 LOADS 225
SUPPOSE TO GET

PRECAST - PIPE SUPPORT FOOTINGS

CALL ALL SUPPLIERS FROM B.R → BEAUMONT.

1) SUPPLY CONCRETE?
2) ADD WATER HERE.
3) WELDMENTS?
4) CONOCO SUPPLY CEMENT?

CCR 000019128

APPENDIX H

PROPOSAL FOR AN ON SITE CONCRETE BATCH PLANT

G. F. [illegible]

D. E. Kidd

January 8, 1970

Proposal for on Site Concrete Batch Plant

Please find enclosed a copy of the proposal Vincent Construction Co. submitted to [illegible] for furnishing a Batch Plant at the VCT [illegible] jobsite.

Daniel E. Kidd
Field Engineer
General Engineering Department

DEK/ms

CC w/Enclosure JAD, JRH, GHR, CTW

CCR 000019130

Vincent's Construction, Inc.
P. O. Box 267
Sulphur, Louisiana 70663
Telephone
882-1576

January 4, 1977

Conoco Chemicals
P.O. Box 737
Westlake, Louisiana

Attention: Mr. D. E. Kidd

Re: Conoco VCM Incinerator Foundations
West Lake, Louisiana
Contract #VCM-102
Our Job #77-028

Gentlemen:

We propose to furnish concrete for the subject job, by mixing components per your specifications on the jobsite instead of buying ready-mixed concrete from a local vendor, for an additional $22.00/cubic yard.

The unit cost is based on a job requirement of approximately 1300 to 1500 cubic yards. This unit also includes all equipment and materials required to mix, transport and deposit the concrete. Inspection and mix control by an independent laboratory is included.

A fixed cost of $30,000.00 is to be paid by the increased unit cost. If Conoco would not want to pour all concrete at this price and ready-mix would become available, we would charge Conoco $30,000.00 plus $22.00/cubic yard of concrete poured, less $20.00/cubic yard for each yard poured which would be credited against the $30,000.00 fixed cost. Therefore if 1500 cubic yards are poured, the only added cost would be $22.00/cubic yard.

Example:

1. Initial Cost $30,000.00
   Concrete poured 500 cy. @22.00 11,000.00
   Less credit for 500 cy. @20.00 (10,000.00)
   $31,000.00

   Average Cost = $\frac{31,000}{500 \text{ cy.}}$ = $62.00/cy.

2. Initial Cost $30,000.00
   Concrete poured 1500 cy. @22.00 33,000.00
   Less credit for 1500 cy. @20.00 (30,000.00)
   $33,000.00

   Average Cost = $\frac{33,000}{1500 \text{ cy.}}$ = $22.00/cy.

CCR 000019131

Vincent's Construction, Inc.
P. O. Box 267
Sulphur, Louisiana 70663

Telephone
882-1576

The requirements for the job batching operation which would be furnished by Conoco are:

(1) Water supply.
(2) Electrical power supply.
(3) Operating permits from state or federal agencies.

Please contact us if there are any questions concerning this proposal.

Sincerely,

Edward L. Lanier

Edward L. Lanier, P.E.
Vice-President

ELL/sd

CCR 000019132

APPENDIX I

HISTORY OF LABOR TURMOIL IN LAKE CHARLES AREA

Conoco claims sabotage responsible for stoppage

Continental Oil Co. said today, Jan. 28, that "deliberate sabotage" was responsible for an early morning interruption of service to other area industries from the company's Gillis Gas Plant but an attorney for the striking Oil, Chemical and Atomic Workers Union said he is certain the union was not involved.

In a statement issued at 10 a.m. today, Continental said the company "has informed the union officers that the negotiation meeting previously scheduled for 1:00 p.m. Wednesday had been canceled. The OCAW was informed that no further meetings can be set unless the illegal picketing activities, including the obstruction of the rights of company personnel and equipment to enter and leave the plant are curtailed."

The strike against Continental's West Lake refinery and chemical plant entered its 56th day with apparent quiet on the picket lines and a temporary restraining order against both sides in the dispute extended until Feb. 15.

Continental's Lake Charles coordinator, Ed Lively, said drums locking valves open on all 8 of which pipeline were cut and the valves closed, causing pressure to build up in the line.

When pressure built too high, Lively said, safety valves at the plant activated and the gas automatically ignited through flares.

It was first thought an explosion had occurred and about 300 persons were evacuated from the area. The flareup occurred at 2:00 a.m. and company officials said the pipeline was back in operation shortly before 3 a.m.

Tom Powell, director of special projects for Continental, said the interruption in service affected Firestone, Olin, PPG, Gulf States Utilities and Continental.

Meanwhile, 14th Judicial District Judge Earl Veron said he had extended until Feb. 15 a temporary restraining order against OCAW and Continental.

Veron said he signed the order after an unusual evening session Monday in his home in which he met with attorneys for both Continental and the OCAW. Veron said both sides agreed to the extension.

The temporary order was issued Jan. 17 by Veron for a 10-day period. It prohibited OCAW members from blocking the entrance to the Continental plants or interfering with entry of exit from the sites by Continental employes.

Continental employes were ordered to drive slowly through the gate.

While Veron's action Monday evening canceled out a scheduled 9 a.m. court hearing today on the same subject, it did not affect another hearing scheduled for 9 a.m. Thursday, Jan. 30. That hearing centers around a Continental motion filed Friday asking Veron to hold the OCAW in contempt of court for allegedly violating Veron's original restraining order.

Shortly after 7 a.m. today, Jan. 28, only a few pickets were on duty at Continental's refinery and chemical plant in West Lake. They included several women, marking the second straight day that wives of striking employes have been on the picket lines.

A six-hour stalemate at the chemical plant ended shortly before 2 p.m. Monday when four cars carrying contract guards left after being parked since about 8:00 a.m. Pickets had blocked the cars after a fifth guard vehicle allegedly struck two pickets while attempting to enter the plant.

The Calcasieu Parish Sheriff's Department said an intensive investigation into the pipeline incident is underway.

Lively said the incident "was a deliberate act of sabotage to the plant and major industries it supplies." However, he would not speculate on who was responsible.

Vic Hess, an attorney for OCAW, said the union will cooperate fully with law enforcement agencies in investigating the incident. "It's obvious something happened and that the safety equipment worked properly to take care of the problem," Hess said. "I'm certain the striking locals had nothing to do with the incident. We're doing everything possible to comply with the restraining order issued by Judge Veron and seek only a peaceful and just settlement of the contract dispute."

Percy Rogers, president of OCAW Local 4-620, said workers at the Gillis plant are members of that local, which also represents workers at Cities Service Oil Co., and are not involved in the dispute between Continental and Local 4-555.

I-2

CCR 00001913 4

MONROE, LA.
WORLD
D. 31,563 S. 45,000

JAN 29 1975

Called 'Deliberate Sabotage'

Pipeline Damaged; Firm Halts Talks

LAKE CHARLES, La. (AP) — Continental Oil Co. cancelled further negotiations with striking refinery workers Tuesday following what a spokesman called "deliberate sabotage to a pipeline."

Two valves were closed on a 24-inch pipeline early Tuesday, causing a temporary gas curtailment to some local businesses.

The company said it cancelled a negotiating session with the Oil, Chemical and Atomic Workers Union scheduled for this afternoon.

"The OCAW has been informed that no further meetings can be set unless the illegal picketing activities, including the obstruction of the rights of company personnel and equipment to enter and leave the plant, are curtailed," the company said.

Dist. Judge Earl Veron had ordered strikers not to block plant entrances more than a week ago. He extended his temporary order Monday night until Feb. 18.

Company spokesman Ed Lively said chains and locks were cut from two main valves on a 24-inch line from the Gillis gas processing plant, allowing the valves to close and build up pressure in the line.

When the pressure built too high, he said, safety valves at the plant popped up and the natural gas automatically ignited and flared.

"There was no explosion and no plant equipment on fire," Lively said.

The Calcasieu Parish Sheriff's office first reported an explosion and fire at the plant, adding it was evacuating a few families as a precaution.

Lively said Continental workers reclosed the two main valves and the pressure was restored at the plant, but not before several major industries in west Calcasieu Parish supplied by the Gillis plant lost part of their gas supply.

"It was a deliberate act of sabotage to the plant and major industries it supplies," said Lively.

Continental Oil in Houston released a statement, saying: "The act was a grave criminal offense and those responsible will be prosecuted to the full extent of the law when apprehended."

Vick Hess, an OCAW attorney, said his union will cooperate fully with law enforcement authorities investigating the incident, but said he was certain the union was not involved.

He also said the union was doing all it could to comply with Judge Veron's restrain order.

GALVESTON, TEXAS
NEWS
D. 18,000

JAN 29 1975

Sabotage Claimed In Conoco Fires

LAKE CHARLES, La. (UPI) — Continental Oil Co. said Tuesday its Gillis plant was sabotaged, causing big gas flares, the evacuation of 300 persons and interruption of natural gas supplies to several industrial users in Southwest Louisiana.

An attorney for the striking Oil, Chemical, and Atomic Workers Union (OCAW) said he is certain the union was not involved.

Ed Lively, Continental's coordinator, said chains holding valves open on a 24-inch valveline were cut and the valves closed. Lively said this pressure activated a safety valve and gas automatically ignited through flares.

The incident was first thought to be an explosion and 300 persons were evacuated at 3 a.m. Continental said gas service was interrupted to Firestone, Gulf State Utilities, Olin, and PPG, and Continental.

The Calcasieu Parish Sheriff's Department said investigations into the pipeline valve opening are under way Lively said, "Its a deliberate act of sabotage to the plant and main industries it supplies".

Continental said, "The company has informed the union officers that the meeting scheduled for 1:30 p.m. Wednesday has been cancelled. The OCAW was informed that no further meetings can be set unless illegal picketing activites are curtailed."

The strike against Continental's West Lake refinery and chemical plant entered its 10th day.

Judge Earl Veron, 14th Judicial District Court, issued a temporary restraining order Jan. 17 prohibiting union pickets from blocking the entrance to the Continental plant.

ONE DEAD IN CALCASIEU CONSTRUCTION VIOLENCE

LAKE CHARLES, La. (UPI) — One man was shot to death and five others were wounded today in labor violence at a chemical plant construction site.

Witnesses said more than 100 men attacked workers at the Jupiter Chemical Co. site in western Calcasieu Parish, shooting rifles, pistols and shotguns, overturning cars and damaging trailers.

The attack was believed to be the result of a labor dispute over use of "multi-craft" union workers belonging to Local 102 of the American Federation of Independent Unions, a group not affiliated with the AFL-CIO.

A spokesman for Local 102 said his men had expected violence and had warned law enforcement officials about the possibility.

The dead man was identified as Joe A. Hooper, 26, Lake Charles, who died of a bullet wound.

Those wounded by the gunfire were Mike Lebouef, 25, Lake Charles; Thomas Lee Edwards, 23, Sulphur; Arthur Deer, 65, Alexandria, and Cary Ledoux, 26, Lake Charles. Lutcher LaBove, 53, Vinton, a plant guard, suffered a knee injury but was not shot.

Authorities said the attack started when an earth-moving machine tore through the construction gate and rammed a nearby trailer occupied by eight or nine workers. Gunmen on the machine and in cars then opened fire on the work site.

Edwards, who suffered wounds of the back and thigh, said he heard Hooper shout from inside a trailer, "They're shooting me! They're shooting me!"

Hooper was dead on arrival at a hospital.

The Local 102 workers were employed by Payne and Keller of Louisiana, a Baton Rouge firm. The attack occured one week after a similar attack on a Payne and Keller project employing the multi-craft workers near Houston.

The Calcasieu Parish sheriff's office and other law enforcement agencies were investigating the incident, but no immediate arrests were made.

Possible Texas link in labor violence

A possible link between labor violence in Houston, Tex., and a mob attack early today, Jan 15, near Lake Charles that left one dead and five injured has been noted by labor observers.

The target of the attack today at the Jupiter Chemical Co. site in West Calcasieu Parish was Payne and Keller of Louisiana, Inc., and workers laboring to Local 102 of the American Federation of Independent Unions.

Payne and Keller of Texas, Inc., was the target of an attack by 3,000 union workers in Houston early Wednesday that resulted in $1 million in damages and brought a restraining order from a state district judge.

Members of Local 102 who were working on the Jupiter Chemical Co. job in West Calcasieu are said to be "multi-craft" journeymen able to perform more than one skilled job, observers said.

Local 102 was formed in Baton Rouge after the 1966-67 construction boom died down, observers said. Union workers who had been working on permits were refused membership in regular union locals and formed their own local.

Observers said Local 102 was refused official recognition by the AFL-CIO and later petitioned the National Labor Relations Board for official status as an independent union.

An official of Local 102 in Baton Rouge was quoted as saying Local 102 members were working on the Houston job when the violence erupted Wednesday.

Payne and Keller of Louisiana is said to be completely union while Payne and Keller of Texas operates as open shop, or non-union.

Named as defendants in the restraining order issued in Texas prohibiting further picketing or mass violence were the Houston Gulf Coast Area Building and Trades Council and 15 union locals.

Police ring site in Texas

HOUSTON (AP) — Protesters failed to appear today after 1,000 police ringed an oil refinery where three days of labor dispute violence had left an estimated $1 million in damage.

Deputy Police Chief R. G. McKeehan said further violence and destruction was deterred by the presence of the officers and by a court order against violence and mass picketing.

Working on overtime, the police began assembling at the Charter International Oil Co. plant at 3 a.m. Five hours later they began to disperse but McKeehan said about 200 would remain at the plant during the day.

Site like a 'battlefield'

The Jupiter Chemical Co. construction site on Price Madeus Road looked like a battlefield after today's attack by a mob which left one man dead and five others injured.

The house trailers used as offices were mangled masses of sheet metal after being rammed by a piece of heavy equipment. A security guard's hut at the gate was overturned.

Cars and trucks were battered, scarred with bullet holes and overturned.

The gunfire could be heard by employes inside the Cajun Kitchen Restaurant about three-quarters of a mile away from the job site.

"It sounded like cannons were going off," said one restaurant employe. "On my way to work, my car was run off the road just before I reached the parking lot.

"I gave them a good piece of mind. Now that I know what happened, I'm surprised I wasn't shot."

One trailer had at least 25 bullet holes in it. The angle of the holes indicated the shots came straight ahead from the north and others at an angle were from the northeast.

Thirteen cars and four trucks sustained heavy damage from the attacking mob.

Car and truck windows were shattered with heavy objects, fenders were ripped off and one car had its hood punctured with an ax.

Inside the trailers, furniture was splintered and strewn about. A refrigerator inside one trailer was heavily dented and the door ripped open. Its contents were scattered about except for a few cans of soft drinks which were left upright in their place.

The attack happened with the suddenness of a perfectly executed ambush, observers said.

Luther LaSove, a security guard who had only been working three days, said, "It happened so fast I don't believe anyone knows what happened."

Thomas Edwards, one of the injured men, said "I had been here five minutes when I looked out the window to see a forklift with men shooting from it and men behind it coming through the gate.

"I went to the back of the trailer and got on the floor. When that group left, a passing car came by and started shooting at the trailer. That's when I was hit in the leg. Today was my first day on the job."

Law enforcement officers, hospital employes, ambulance drivers were outraged and bewildered about why the violence erupted.

"It's just crazy," said one restaurant employe.

"It's senseless, what's the reason for it?" a hospital employe said.

Another hospital employe whose husband belongs to a union deplored the act.

"There's just no reason for something like this," she said. "There's no need for it."

Officials promise action

An all-out investigation into violence at a West Calcasieu construction site in which one man was killed and five injured was promised today, Jan. 15, by Calcasieu Parish Sheriff Henry A. Reid Jr.

"This is a terrible thing. This is murder, and the sheriff's department is doing and will do everything in its power to see that those responsible are caught. You can depend on that," said Reid.

Dist. Atty. Frank Salter Jr. also went on record today, promising action by his office.

Salter said, "The events of this morning are reprehensive and of great consequence to the people of this area. Every step will be taken to discover the persons who committed these crimes and upon apprehension they will be prosecuted. We will not stand for violence. Every type of violence must be suppressed."

Construction site attack blamed on strikebreakers

Officials of the Southwest Louisiana Building and Construction Trades Council blamed shootings at a West Calcasieu construction site on "professional strikebreakers employed by the company."

Officials made it clear they were referring to Payne and Keller of Louisiana, Inc., the company whose own work force was attacked early today in a violent incident which left one man dead and five others hurt.

Trades Council Business Manager Donald Lovett and attorney William Baggett made the comments in a statement shortly before noon after a lengthy conference with law enforcement officials.

"We know from past experience that some companies bring in professional strikebreakers to provoke violence, so that they can go into court and seek injunctions or restraining orders against the union on the grounds that violence has occurred," said Baggett. "We suspect that such professionals, employed by the company, were involved in this morning's incident."

Baggett added that Payne and Keller work sites reportedly were involved in similar acts of violence Wednesday in the Houston, Tex., area.

Asked about a possible dispute with other labor groups, Baggett added: "We were picketing that contractor (Payne and Keller) and have no dispute with any other labor organization."

In a prepared statement, Lovett said local labor leaders do not condone violence, were not involved in this morning's incident and promised full cooperation with law enforcement agencies.

"We, the labor leaders of Southwest Louisiana, were shocked and dismayed by the violence that occurred this morning at the Jupiter Chemical site. We do not condone violence in any form.

"Yesterday, Jan. 14, we put a peaceful picket line on Payne and Keller to protest substandard wages and working conditions. We instructed the pickets on how to conduct a peaceful picket line.

"They were instructed to report to the union office any violence or threat of violence. We are in no way connected with the incident that occurred this morning and have assured the local law enforcement agencies that we will cooperate in any way to assure that the guilty parties are apprehended and convicted.

"We are sure that when this incident is fully investigated, the law enforcement agencies will find that professional strikebreakers were used," Lovett concluded.

Victims listed in plant violence

Identification of the one man killed in labor violence and those injured at a construction site today were reported by local hospital sources.

Dead is Joe A. Hooper, 26, Rt. 1, Box 1315, Lake Charles.

Hospitalized in St. Patrick Hospital were:

Thomas Lee Edwards, 23, of General Delivery, Sulphur, gunshot wounds in back and thigh, satisfactory condition

Lutcher LaBove, 53, 1613 Hartridge St., Vinton, treated and will be released.

Mike LeDoux, 25, 211 Louie St., bullet wound in chest, stable condition.

Treated and released at Lake Charles Memorial Hospital were:

Arthur Dear, 65, of Alexandria, one gunshot wound in leg.

Gary Ladner, 26, of Forest Village Apartments, gunshot wound in leg.

Hooper, Edwards and LaBove were taken to the hospital in Fondel Memorial Chapel ambulances.

CCR 000019140

ONE MURDERED AND FIVE HURT AS ARMED MOB HITS LABOR SITE

Murder and violence erupted at a West Calcasieu construction site about 7 a.m. today, Jan. 15, leaving one man shot to death and five others hurt in what one witness described as "mob action."

Joe A. Hooper, 26, of Moss Bluff was killed.

"It started so fast nobody knows what happened," one man at the Jupiter Chemical Co. construction site said. Payne and Keller of Louisiana, Inc., a Baton Rouge construction firm, is contractor for the new ammonia plant.

One of the injured men, Thomas Lee Edwards, said, "Hooper hollered four or five times: 'They're shooting me, they're shooting me.'" He said there was gunfire in front of the trailer. The first group of men left, then a second car passed by and started shooting at the trailer.

An official of the union doing the construction work for Payne and Keller said he notified local authorities Wednesday of the possibility of violence at the site, but no action was taken.

Chief Deputy Albert Manuel of the sheriff's department said today that to his knowledge no one from Local 102 had contacted his department yesterday.

First reports were that about 100 men rushed the plant behind a piece of heavy earth moving equipment and began blasting away at a construction trailer containing about eight or nine men.

The heavy machine rammed two trailers and a pickup truck. Glass was broken on about a dozen cars in the parking lot, including three cars that had been overturned. A portable guard house was also overturned.

Other workers for the company said they came out of one of the permanent buildings and a "mob with guns" ordered them back inside.

A company spokesman said about 15 men, members of a local pipefitters union, Local 102, came to the site on Pete Manena Road Wednesday. The site is on the road between Columbia Southern Road and Sulphur.

Mike Pharis, an attorney for the construction company, said the Central Trades and Labor Council put up a picket line Wednesday claiming substandard wages and working conditions.

H. B. Weberstrandt, business agent for Local 102, American Federation of Independent Unions, said the attack on the construction workers was part of a continuing campaign by the AFL-CIO to run his organization out of the state.

Victor Bussie, president of the state AFL-CIO, said he knew nothing of the Lake Charles incident and denied that his organization has attempted to break the independent union.

An attorney for Payne & Keller said that after a 14-man crew began work at the site Wednesday, the Calcasieu Parish Central Trades and Labor Council, a coalition of several AFL-CIO construction workers' unions, set up a picket line.

Frank Roth, president of the labor council, denied that the pickets came from his organization. He also said he had no knowledge of any attempts to put Weberstrandt's union out of business.

Richard E. Reid, an investigator for B&L Associates of Baton Rouge, a company called by Payne and Keller Wednesday to take pictures of the picketing, said he contacted State Police on his Citizens Band emergency frequency 45 minutes before the violence took place, but he said police ignored his request for help. "They told me nothing was going to happen," Reid said.

Pharis said telephone lines to the site have been cut. Reid made the emergency call after the road was blocked in the areas.

Sgt. Raymond Hoffpauir of Troop D, State Police, said they received the CB call about a road being blocked. "We were sending a unit to check on it. You never know who's going to try to stir up violence over CB radios. A unit drove by and the road was clear."

January 15, 1976 LAKE CHARLES AMERICAN PRESS

CCR 000019141

Law officers said at scene of Jupiter

By DON GINGERY
American Press Staff Editor
(Other story on page 16)

GRETNA – A man who went through the gate at the Jupiter Chemical Co. site riding a forklift and waving a 44-caliber Magnum pistol spelled out detail after detail of that Jan. 15 violence before staring jurors here Friday.

Kenneth E. "Pee Wee" Hooper, escorted by a cordon of armed deputies as he entered the 14th Judicial District Courtroom here to appear as a state witness during the second-degree murder trial of Wilbur J. LeLeux Jr., said the Jupiter violence was planned like a commando attack.

"We heard since Dec. 1 about Local 162 moving in," said Hooper. "My unions didn't like it at all. They told us we would have to stop them."

Hooper said as many as 300 men massed along Pete Manena Road across from the Jupiter site about 6:15 a.m. on Thursday, Jan. 15.

Asked whether he had seen any law enforcement officers in the area before the attack, Hooper said bluntly, "There was a State Police car parked near the gate. He seen us with our guns and he took off."

Asked whether any other law officers were around, Hooper said, "Yes, we had special deputies with us."

"With you?" asked a startled defense Rusley Triche.

TESTIMONY DETAILS ON PAGE 16

Testimony by Kenneth E. "Pee Wee" Hooper in the death of his second cousin, Joe Harper, on Jan. 15 at the scene of the Jupiter violence is on Page 16 of today's Lake Charles American Press.

"We had special deputies with guns in our bunch," said Hooper.

Hooper, testifying under oath, said the Jupiter violence was planned during earlier meetings and guns were distributed to the group he was with at a pre-dawn meeting at a restaurant in Lake Charles.

Hooper testified that after the violence ended, he met with several men – again at the restaurant – and "we had coffee and talked about how we stopped them."

Hooper testified that later in the day he "drank some gin" and cried in the presence of Lou Portenot, manager of a Lake Charles rental firm and a friend of both Hooper and LeLeux.

"Yes, I cried that I thought I might have killed my cousin," said Hooper.

Killed with a single bullet in the Jupiter violence was Joe A. Hooper, a 26 year old Lake Charles man who was reporting

the state as prosecuting attorneys neared the end of their presentation. With only two more state witnesses slated to be heard today, July 10, there were indications that the case might be turned over to the jury as early as Sunday evening.

Judge Alvin Oser, an Orleans Parish Criminal District Court judge sitting as a special judge for the Jupiter violence trials which were moved here from Lake Charles, has been conducting 12 and 14-hour daily sessions since the trial got under way Wednesday.

In other testimony Friday, witnesses said the bullet that killed Joe Hooper fell out of his clothes when an orderly began undressing the body in a St. Patrick Hospital emergency room after the body was brought in from the Jupiter site.

The state sent 14 witnesses to the stand in an attempt to tie that bullet to a 9 mm Browning automatic pistol the state claims was fired by LeLeux during the Jupiter attack.

Empty 9 mm shell cases, bullets test fired from the gun, testimony claiming the bullet penetrated a jacket, shirt and T-shirt on one side of Hooper's body but only penetrated the T-shirt after it came out the other side of the body, and ballistic reports were entered as evidence for the state.

After the state rests its case during the morning today, the defense will begin presenting its case.

APPENDIX J

PROJECT REVIEW MEETING - VCM INCINERATOR

Interoffice Communication

To Distribution

From J. F. Alix

Date May 18, 1978

Subject PROJECT REVIEW MEETING - #1 & #2 INCINERATORS
LAKE CHARLES VCM PLANT - MAY 16, 1978

Attendees: G. L. Kreutzer
J. A. DeBernardi
J. R. Holcomb
K. C. McLeod
S. A. Wagener
D. E. Kidd
J. F. Alix

Field work on this project has been shut down since May 1, 1978, by a Teamsters' strike against the contractors. Current speculation is that a settlement before early June is unlikely.

Design

Mechanical design is complete except for the Condensate Storage System. Construction drawings for the SO_2 System will issue in about one week.

(1) The Plant continues to be concerned about use of wafer valves and instrument tees in Furan piping. They fear that the unsupported portions of the Furan flanges will be overstressed and broken.

G. L. Kreutzer will arrange a demonstration to show:

a) that the flanges will bear the required bolting torque.

b) how much over-torque the flanges will take before failure.

(2) The "HYCAR" gaskets specified for the Furan piping are unsuitable for the service. G. L. Kreutzer will recommend a gasket material which will resist the chlorinated hydrocarbons, etc.

This needs to be resolved promptly to avoid further delays when the Strike is over.

(3) A portion of underground Furan piping has already been installed with "HYCAR" gaskets. Action to correct this will be determined later.

(4) The basis for accommodating thermal expansion in the Furan piping was reviewed. It was concluded that there is no problem with the current design.

(5) Valve support requirements for the Furan piping have been reviewed. Additional supports have been added as necessary.

(6) K. D. McGee has furnished comments on the Insulation Package. K. G. Retzer will review the Package in detail and furnish revised line specification to G. L. Kreutzer by June 16, 1978 (#1 and #2 Incinerators). G. L. Kreutzer will have the Insulation Bid Packages revised and re-issued.

(7) G. L. Kreutzer will prepare a Design Change Order to revise the safety shower water supply.

(8) J. F. Alix will initiate a Change Order to cover the Condensate Storage System. Materials will not be purchased until the Change Order is approved.

Procurement

With Litwin P.O. 5416-116, all materials for the #1 Incinerator are on order. With Litwin P.O. 5437-71, all materials (except two valve positioners) are on order for the #2 Incinerator.

No materials have been ordered for the Condensate Storage System, but major equipment has been bid.

(1) The #2 Incinerator waste-heat-boiler is being held up at the vendor's pending end of strike.

(2) The main control panel is likewise ready for shipment, but is being held.

Construction

Based on the Contractor's estimated man-hours and "normal" manning, mechanical completion of the #1 Incinerator is projected at 22 weeks after end-of-strike. There are several areas where improvements can probably be made. D. F. Kidd and S. A. Regener will continuously explore alternatives, including:

(1) Any work which can be done off-site
(2) Priority lists for piping work to advance electrical and instrumentation.

(3) Increased manning
(4) Multiple shifts
(5) Overtime

The object is to develop cost and schedule effects of all feasible alternatives, so a revised plan can be assembled quickly at the end of the strike.

Piping fabrication is proceeding in outside shops. The backlog of spool pieces should allow high productivity when field work resumes.

Incoming materials shipments have been held up at the local carriers' terminals. Arrangements will be made to receive materials at the site to the extent that this can be done without incident and to the extent that Plant labor can be provided for unloading heavy shipments.

Materials are on hand for all shop fabricated piping and electrical and instrument materials are in good shape. Areas requiring continuous attention and expediting are:

- Balance of McJunkin order
- Monel valves
- Lined valves
- Orifice flanges
- Furan/FRP piping

J. F. Alix

sj

Distribution: Attendees
C. T. Wyatt
D. A. Lewis
R. G. Ganz
M. D. McGee
B. D. Ratliff
R. E. Lelsakuhl
R. W. McPherson
D. A. Kuhn/J. E. Cearley

APPENDIX K

WORK ORDER COST CONTROL - SHELL PURCHASE

[illegible]

A. F. E. Number [illegible]
Work Order Number 8034
Contractor Harless, Inc.
Charge Number 05-034

Description SHELL FOR ROADS & PARKING

INVOICE NO.	INVOICE DATE	DATE PASSED		IN PROCESS $	RUN DATE	PAID $	PERCENT ALLOCATIONS AFE 8196 44%	AFE 8217 18%	AFE 8257 19%	AFE 8327 1[illegible]%
1127	11-15-77	11-18-77			12-13-77	1,044 09				
1137	"	"			"	2715 10				
1215	12-15-77	02-07-78		4845 [illegible]	03-11-78	1815 [illegible]				
[illegible]	01-13-78	02-15-78		[illegible]	"	2179 12				
1237	01-31-78	02-07-78		[illegible]	"	[illegible]				
[illegible]	[illegible]	02-17-78		13,326 30	"	12,[illegible] 31	529 57	[illegible] 73	[illegible]	[illegible]
[illegible]	[illegible]-27-78	03-27-78	W.T. [illegible]	[illegible]	04-13-78	[illegible]				
[illegible]	[illegible]	"		[illegible]	"	[illegible]				
[illegible]	03-15-78	04-27-78	W.T. [illegible]	[illegible]	06-13-78	[illegible]				
						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

57

K-2

CCR 00019148

APPENDIX L

LITWIN'S EXPEDITING REPORTS

Litwin CORPORATION

Report #II-23

PAGE --1-- OF --1--

EXPEDITING REPORT

DISTRIBUTION:
PROJ. MGR.
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PURCH. DEPT. T. Taylor

FIELD ☐ EXPEDITER
P.O. FILE ☐ INSPECT. FILE

VENDOR Union Carbide
ADDRESS Cleveland, Ohio
PHONE 312-454-2600 (Chicago)

LITWIN:
ORDER NO. 5410-13-001
ORDER DATE 4-25-77
ITEM Pumps
TAG: P-904-A/B & P-905-A/B
VENDOR 9A511450 (2)
JOB NO 9A511460 (2)

SHIPPING PROMISE ORIGINAL 10-7-77 PREVIOUS 8-26-77 PRESENT 9-9-77

INTERVIEWED, DATE 8-22-77 VISIT ☐ PHONE ☒ TEL. ☐

NAME Scott Straight — SALES
NAME — ENGINEERING
NAME — PURCHASING
NAME — PRODUCTION
NAME — INSPECTION
NAME — SHIPPING

Description: Two (2) Union Carbide Model 4-CA-10 "Karbate" centrifugal pumps complete with Falk spacer couplings, coupling guard, John Crane type 9 mechanical seal, steel fabricated base plate and 40 HP motor driver with space heater, Tag: P-904-A/B.

Two (2) Union Carbide Model 3-CA-10 "Karbate" centrifugal pumps with Falk spacer couplings, coupling guards, John Crane type 9 mechanical seal, steel fabricated base plate and 15 HP motor driver with space heater, Tag: P-905-A/B.

Engineering: Complete.

Material: The crane seals have slipped delivery to 9-2-77 from 8-15-77.

Fabrication: Fabrication has started but is not far enough advanced to warrent an inspection trip.

Completion: The completion date has slipped to 9-9-77 due to the seal delivery; however, the original date of 10-7-77 will not be exceeded. Mr. Straight will notify writer in time to arrange for an inspection trip for the hydro and run test.

cc: G. L. Kreutzer, J. C. Counter, B. D. Robertson, L. Harms, M. French, H. H. Butt, J. F. Alix, J. R. Holcomb, J. O. Gibson, J. G. Pogue, J. Friend, J. A. DeBernardi, J. Whitt/B. Getchell, R. Mathia

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J. Whitt/B. Getchell
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EXPEDITING REPORT

VENDOR Union Carbide
ADDRESS Cleveland, Ohio
PHONE 312-454-2083

LITWIN:
ORDER NO. 5116-15-001
ORDER DATE: 4-25-77
ITEM Pumps
TAG: P-901-A/B & P-905-A/B
VENDOR 9A511450(2)
JOB NO. 9A511450(2)

SHIPPING PROMISE ORIGINAL 10-[illegible] PREVIOUS 9-9-77 PRESENT 10-20-77

INTERVIEWED, DATE 9-20-77 VISIT ☐ PHONE ☒ TEL. ☐

NAME Scott Straight	SALES	NAME	PRODUCTION
AME	ENGINEERING	NAME	INSPECTION
AME	PURCHASING	NAME	SHIPPING

Description: Two (2) Union Carbide Model 4-CA-10 "Karbate" centrifugal pumps complete with Falk spacer couplings, coupling guard, John Crane type 9 mechanical seal, steel fabricated base plate and 40 HP motor driver with space heater, Tag: P-901-A/B.

Two (2) Union Carbide Model 3-CA-10 "Karbate" centrifugal pumps with Falk spacer couplings, coupling guards, John Crane type 9 mechanical seal, steel fabricated base plate and 15 HP motor driver with space heater, Tag: P-905-A/B.

Engineering: Complete.

Material: Union Carbide's Mr. Scott Straight advised the writer that the John Crane Co. has not given a firm delivery date on the seals. Litwin's Mr. Roger Mathia has been advised of this problem.

Fabrication: Vendor has completed as much fabrication as they can without the seals.

Shipping: Slipped to 10-20-77 due to the seal delivery.

cc: G. L. Kreutzer
J. C. Counter
B. D. Robertson
L. Helms
M. French
H. H. Butt
J. R. Holcomb
J. O. Gibson
J. G. Pogue
J. Friend
J. A. DeBernardi

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F. Alix J. Frost
Whitt/B. Getchell
FIELD EXPEDITER
P.O. FILE INSPECT. FILE

EXPEDITING REPORT

VENDOR: Union Carbide
ADDRESS: Cleveland, Ohio
PHONE: 513-454-2000

LITWIN:
ORDER NO.: 511e-15-001
ORDER DATE: 4-25-77
ITEM: Pumps
TAG: P-904-A/B P-905 A/B
VENDOR: 9A511450 (2)
JOB NO.: 9A511e0 (2)

SHIPPING PROMISE ORIGINAL: 10-7-77 PREVIOUS: 9-9-77 PRESENT: 11-12-77

INTERVIEWED. DATE: 10-26-77 VISIT ☐ PHONE ☒ TEL. ☐
NAME: Scott Straight SALES NAME: PRODUCTION
AME: ENGINEERING NAME: INSPECTION
AME: PURCHASING NAME: SHIPPING

Description: Two (2) Union Carbide Model 4-CA-10 "Karbate" centrifugal pumps complete with Falk spacer couplings, coupling guard, John Crane type 9 mechanical seal, steel fabricated base plate and 40 HP motor driver with space heater, Tag: P-904-A/B.

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PM

Two (2) Union Carbide Model 3-CA-10 "Karbate" centrifugal pumps with Falk spacer couplings, coupling guards, John Crane type 9 mechanical seal, steel fabricated base plate and 15 HP motor driver with space heater, Tag: P-905-A/B.

Engineering: Complete.

Material: All material deliveries complete. John Crane seals delivered 10-15-77.

Fabrication: Complete: The pumps are ready for final run and hydro tests. Scott Straight advised that November 4th would be earliest date possible for use of their test stand.

Shipping: Slipped to 11-12-77. Late delivery of John Crane seals reason for delay.

cc: G. L. Kreutzer
J. C. Counter
B. D. Robertson
L. Barnas
M. French
H. H. Butt
J. R. Holcomb
J. O. Gibson
J. G. Pogue
J. Friend
J. A. DeBernardi
J. F. Alix
R. Mathia

CCR 000019152

R. Parkinson (bk)

PUR-211 SIGNED R. Parkinson DATE Oct. 26, 1977

Report No. 10

PAGE 1 OF 1

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- ☐ P.O FILE
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- ☐ INSPECT FILE

FINAL INSPECTION REPORT

FABRICATOR Union Carbide
ADDRESS Cleveland, Ohio
DATE INSPECTED 11-10-

LITVIN:
ORDER NO 811-15-001
ORDER DATE 1-25-77
ITEM Pump
TAG P-905 A/B, B & P-905 A
VENDOR 9A511350 (2)
JOB NO 9A511300 (2)

SHIPPING PROMISE ORIGINAL 10-7-77 CURRENT 11-12-77 SHIPPED 11-11-77

Description: Two (2) Union Carbide Model 3-CA-10 "Karbate" centrifugal pumps complete with Falk spacer couplings, coupling guard, John Crane type 9 mechanical seal, steel fabricated base plate and 40 HP motor driver with space heater, Tag: P-904A/B.

Two (2) Union Carbide Model 3-CA-10 "Karbate" centrifugal pumps with Falk spacer couplings, coupling guards, John Crane type 9 mechanical seal, steel fabricated base plate and 15 HP motor driver with space heater, Tag: P-905A/B.

Interviewed: Randy Daley, Quality Control.
Mario Muratori, Production Control.

On 11-10-77 a final inspection was held on the above mentioned items.

The inspection was performed using "A" approved drawing CP-8445-EA (Item P-904 A & B) and drawing CP-8448-B (Item P-905 A/B). All items were found to be in accordance with said drawings and Conoco's data sheets.

The items were accepted by the writer and released for shipment (Shipped 11-11-77).

Attached please find copies of the vendor's test records.

cc: G. L. Kreutzer
J. C. Counter
B. D. Robertson
L. Barms
M. French
H. H. Butt
J. R. Holcomb
J. O. Gibson
J. G. Pogue
J. Friend
J. A. DeBernardi
J. Buller

CCR 000019153

FORM P-21

SIGNED [signature] DATE November 11, 19

Report 11-59 PAGE 1 OF 1

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P.O. FILE INSPECT. FILE

EXPEDITING REPORT

VENDOR: Hayes Clarion Division
ADDRESS Kilmington, Delaware
PHONE 302-885-3700

LITVIN:
ORDER NO. 5716-11-01
ORDER DATE 6-9-77
ITEM HCL Absorber
TAG C-901
VENDOR
JOB NO 6521

SHIPPING PROMISE ORIGINAL 10-26-77 REV. DUE 2-20-78 PRESENT 1-13-78

INTERVIEWED, DATE 11-11-77 VISIT ☐ PHONE ☐ TEL. ☐

WE Mr. Glen Brewer	SALES	NAME	PRODUCTION
NAME	ENGINEERING	NAME	INSPECTION
NAME	PURCHASING	NAME	SHIPPING

Description: One (1) Hayes 41 Composite L.T. Absorber 95 3/8" I.D. X 56'6" including shield and sleeve. Wall thickness of Absorber to be 1½" thick Haveg 41 plus ¼" thick filament wound Epoxy glass.

Engineering: Complete.

Material: Complete.

Fabrication: Six (6) shell sections are molded. Nipples and manholes are complete.

Bottom section- Three (3) rings, bottom head, and skirt are fitup and polyglass lining has been applied to the outside. Being machined this date. Approximately 60% complete.

Top section- One (1) ring and top head are fitup. Polyglass lining is scheduled to be applied the week of 12-9-77. Approximately 50% complete.

Mid section- Two (2) rings are presently being machined for fitup. Fitup to be complete the week of 12-9-77. Approximately 20% complete.

The grid bars for the demister are approximately 75% complete.

Shipping: Presently holding for shipment of 1-13-78.
Now Looks Like W/O 1st Dec

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LITVIN EXPEDITING DEPT.
DEC 8 1977
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

cc: G. L. Kreutzer, J. C. Counter, B. D. Robertson, L. Harris, H. French, H. H. Butt, J. R. Holcomb, J. G. Gibson, J. G. Payne, J. Friend, J. A. DeBernardi, J. F. Alix

D. Bachenfeld

L-7

CCR 000019154

EXPEDITING REPORT

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White/B. Getchell
Mathia J. F. Alix
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P.O. FILE / INSPECT

INTERVIEWED DATE [illegible] VISIT / PHONE / TEL.

NAME [illegible]	SALES	NAME	PRODUCTION
NAME	ENGINEERING	NAME	INSPECTION
NAME	PURCHASING	NAME	SHIPPING

Description: One (1) Haveg 41 Composite HCl Absorber 93 5/8" I.D. X 36'0" including shield and sleeve. Wall thickness of absorber to be 1½" thick Haveg 41 plus ½" thick filament wound Epoxy glass.

Engineering: Complete.

Material: Complete.

Fabrication: Fabrication in progress. (Shell Section) Fuse scheduled to start 11-28-77.

Shipment: January 15, 1978.

cc: G. L. Kreutzer, J. C. Hunter, B. D. Robertson, L. Harms, M. French, H. H. Bett, J. R. Holcomb, J. O. Gibson, J. G. Pogue, J. Friend, J. A. DeBernardi

CCR 000019155

DISTRIBUTION:
PROJ MGR
PROJ ENGR C. Houseman
DESIGN DEPT G. Moon
SCHED DEPT T. Taylor
Greer (2) R. Mitola
White/B. Getchell
FIELD
TO FILE

EXPEDITING REPORT

VENDOR Haveg
ADDRESS Wilmington, Delaware
PHONE (302) 995-3800

LITWIN:
ORDER NO. 5410-11-01
ITEM LCL Absorber
TAG T-901
JOB NO. 6421

SHIPPING PROMISE 10-26-77 / early Jan. '78 / 1-13-78

INTERVIEWED DATE 11-8-77 VISIT [x] PHONE [ ] TEL [ ]
NAME Dudley Barton, Plant Manager
NAME Ron Smith, Sales
NAME Glen Brewer, Customer Service
NAME PRODUCTION
NAME INSPECTION
NAME SHIPPING

Progress meeting was held at Haveg's Plant in Wilmington, Delaware on 11-8-77. Points of discussion as follows:

ENGINEERING:

1. Engineering was complete, however Haveg failed to pick up the addition of Gas Injection Beams as per Revision 4. C. Houseman made the change on drawing #2276R2. G. Brewer of Haveg advises that this will not cause a delay in fabrication. (Note: Haveg picks up comments on Litwin's original drawings only. All other changes must be made on Haveg's drawings.)
2. G. Brewer will advise Litwin of the additional cost for adding the Gas Injection Beams. This cost will vary from Job 5437.
3. Litwin to check their drawings versus Haveg's to verify all changes have been made. Haveg is to also double check drawings.

MATERIAL:

G. Brewer stated that all material is complete except for two (2) 4" Flanges, which should be received shortly.

FABRICATION:

1. Fabrication was released on 10-3-77.
2. G. Brewer stated that small fittings (Haveg 41 material) are complete.
3. The Shell Section is to be molded in six (6) sections. Section 1 was molded on 11-8-77. Schedule for the remaining sections forthcoming.

CCR 000019156

Form PUR-911

SIGNED [signature] DATE 11-[illegible]

DISTRIBUTION:
- ☐ PROJ MGR
- ☐ PROJ ENGR
- ☐ DESIGN DEPT
- ☐ SCHED DEPT
- ☐ FIELD
- ☐ EXPEDITER
- ☐ P.O. FILE
- ☐ PROJECT FILE

EXPEDITING REPORT

VENDOR Haveg
ADDRESS
PHONE

LITWIN
ORDER NO. 6-11-01[illegible]
ORDER DATE
ITEM
TAG
VENDOR
P.O. NO.

SHIPPING PROMISE

INTERVIEWED DATE ... VISIT ☐ PHONE ☐ TELEX ☐

NAME ... SALES ... NAME ... INSPECTION
NAME ... ENGINEERING ... NAME ... EXPEDITION
NAME ... PURCHASING ... NAME ... SHIPPING

SHIPPING STATUS:

1. January 1st, 1978 was quoted to Haveg as an outside date for shipment. Haveg will try to improve this date as much as possible.
2. Shipment had been scheduled via rail. That has been changed to exclusive use of trucks to expedite delivery to jobsite. Also Minimize Damage Risk

REMARKS:

1. G. Brewer is to mail an updated fabrication schedule to Litwin on 11-9-77.
2. Haveg has production meetings every Wednesday afternoon. G. Brewer is to advise Litwin of the current status every Thursday.
3. This job now carries a priority #4 at Haveg. Haveg stated that this was the highest priority in their plant.
4. Haveg works two (2) shifts with approximately 250 - 200 shop employees. The second shift is a reduced shift.
5. Plant is to be closed for normal holidays only. (Thanksgiving and Christmas)
6. J. Whitt to advise Mr. Girman (Hercules) on 11-14-77 on progress of meeting.

cc: G. L. Kreutzer, J. C. Counter, B. D. Robertson, L. Harris, M. French, H. H. Butt, J. F. Alix, J. R. Holcomb, J. O. Gibson, J. G. Pogue, J. Friend, J. A. DeBernardi, J. Frost

CCR 000019157

Form PUR-311

Litwin Corporation

PAGE 01

DISTRIBUTION:
- ☐ PROJ MGR
- ☐ PROJ ENGR C. Houseman
- ☐ DESIGN DEPT C. Heen
- ☐ SCHED DEPT T. Taylor

F. Alix G. Covington

☐ FIELD ☐ EXPEDITER
☐ P.O. FILE ☐ INSPECT. FILE

EXPEDITING REPORT

VENDOR
ADDRESS
PHONE

LITWIN:
ORDER NO 5416-11-017
ORDER DATE 6-9-77
ITEM BCL Absorber
TAG C-901
VENDOR
JOB NO 64321

SHIPPING PROMISE 12-20-77 2-20-78 Late 12-7

INTERVIEWED: DATE 11-3-77 VISIT ☐ PHONE ☒ TEL ☐

NAME Mr. Lou Karman	SALES	NAME	PRODUCTION
NAME Division Mgr. - Plastic Div.	ENGINEERING	NAME	INSPECTION
NAME Hercules Corporation	PURCHASING	NAME	SHIPPING

Contacted Mr. Karman in reference to the slippage of C-901 from 12-20-77 to 2-20-78 as reported by Mr. Glen Brewer of Haveg.

Mr. Karman stated the unit went to manufacturing on 10-3-77. Completion and shipment are scheduled for late December or early January 1978.

Arrangements were made for a progress meeting between Litwin/Conoco and Haveg for November 8, 1977, at Haveg's plant in Wilmington, Delaware.

Karman also stated that he would advise Mr. Dudley Barton (Haveg) to update the fabrication schedule dated 10-11-77.

Following will be in attendance at 11-8-77 meeting:

J. Whitt - Litwin
C. Houseman - Litwin
R. Mathia - Litwin
G. L. Kreutzer - Conoco

Updated report forthcoming after meeting.

cc: R. Mathia
J. Frost
J. Whitt/B. Getchell
G. L. Kreutzer

CCR 000019158

Form PUR-011

SIGNED J. D. Whitt, CPM

DATE 11-4-77

DISTRIBUTION:
1. PROJ. MGR.
PROJ. ENGR. C. Hentschel
DESIGN DEPT. C. Skeen
SCHED DEPT. T. Taylor
Cathia J. Frost J. F. Al
Whitt, B. Getchell
☐ FIELD ☐ EXPEDITER
☐ P.O. FILE ☐ INSPECT. FILE

EXPEDITING REPORT

VENDOR Raveg Chemical Equipment
ADDRESS Wilmington, Delaware
PHONE 302-998-3880

LITWIN:
ORDER NO. 5316-11-012
ORDER DATE 6-9-77
ITEM HCL Absorber
TAG C-901
VENDOR JOB NO. 04521

SHIPPING PROMISE ORIGINAL 10-20-77 PREVIOUS 12-26-77 PRESENT 2-20-78

INTERVIEWED DATE 10-27-77 VISIT ☐ PHONE ☒ TEL. ☐

NAME Glen Brewer	SALES	NAME	PRODUCTION
NAME	ENGINEERING	NAME	INSPECTION
NAME	PURCHASING	NAME	SHIPPING

Description: One (1) Raveg 41 Composite HCL Absorber 95 3/8" I.D. X 56'9" including shield and sleeve. Wall thickness of Absorber to be 1½" thick Raveg 41 plus ½" thick filament wound Epoxy glass.

Engineering: Complete.

Materials: All major material deliveries as well as Raveg 41 complete.

Fabrication: Scheduled to start December 9, 1977, (Shell section) thru 12-28-77. Base scheduled to start W/O 12-19-77.

Final inspection scheduled for February 16, 1978.

Shipment: Now scheduled for February 20, 1978. Late drawings is the reason given for fabrication start delay.

RECEIVED
LITWIN EXPEDITING DEPT.
OCT 31 1977
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM
JAF

cc: G. L. Kreutzer, J. C. Counter, B. D. Robertson, L. Harms, M. French, H. H. Butt, J. R. Holcomb, J. O. Gibson, J. G. Pogue, J. Friend, J. A. DeBernardi

CCR 000019159

Litwin Corporation

Report No. [illegible] PAGE 1 OF 1

DISTRIBUTION:
PROJ. MGR. [illegible]
PROJ. ENGR. C. Houseman
DESIGN DEPT. [illegible]
ASSIGNED DEPT. F. Taylor
Schitt/B. Getchell
J. K. Mathia
FIELD ☐ EXPEDITER
TO FILE ☐ INSPECT FILE

EXPEDITING REPORT

VENDOR HAVEG Chemical Equipment
ADDRESS Wilmington, Delaware
PHONE 302-995-3500

LITWIN:
ORDER NO. 3110-11-012
ORDER DATE 6/28/77
ITEM HCL Absorber
TAG C-901
VENDOR
JOB NO. 64521

SHIPPING PROMISE OR REQ'D. 10-20-77 PREVIOUS 10-20-77 PRESENT [illegible]

REVIEWED. DATE 8-23-77 VISIT ☐ PHONE ☐ TEL. ☐
BY Dave Robeson SALES NAME PRODUCTION
NAME Glen Brewer (Asst. Sales) ENGINEERING NAME INSPECTION
TITLE PURCHASING NAME SHIPPING

Description: One (1) Haveg 41 Composite HCL Absorber 95 3/8" I.D. X 56'6" including shield and sleeve. Wall thickness of Absorber to be 1½" thick Haveg 41 plus ¼" thick filament wound Epoxy glass.

Engineering: The drawings were returned by Litwin to HAVEG and received 8-4-77. They were "A" approved as noted. HAVEG's policy is that no fabrication started or material purchased until drawings are received.

RECEIVED
LITWIN EXPEDITING DEPT.
AUG 29 1977
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

On 8-23-77 in a phone conversation with Glen Brewer of HAVEG, he stated that they have the drawings complete this date and will have a bill of material with delivery dates by 8-26-77. Writer notified Litwin's Scott Cathy on 8-23-77 of the drawing situation.

G. L. Brentzer
J. G. Gunter
R. D. Robertson
L. [illegible]
M. [illegible]
H. B. Butt
J. F. Alix
J. R. Holcomb
J. O. Gibson
J. G. Pogue
J. [illegible] Friend
J. A. DeBernardi

The main problem at this time is that after the return to Litwin of the drawings plus three weeks for squad checks the date will be approximately 9-9-77. HAVEG has a 13 week fabrication time after receiving the drawings. The projected delivery date would be 12-10-77.

Scott Cathy discussed this with the client and it is acceptable to them; however, no slippage past mid December is acceptable. Mr. Brewer of HAVEG stated that they would still try to hold the 10-26-77 delivery and writer will endeavor to maintain the 10-26-77 with the foreknowledge that there will be some slippage. In this manner writer hopes to hold slippage to a minimum.

Material: Now ordered but Haveg 41 is shop made.

Fabrication & Completion: None started. Completion is still stated 10-26-77.

Note: Writer will make expediting phone calls for the drawing approval and plan on inspection and expediting trip as soon as the shell is laid up and ready for nozzle lay out.

CCR 000019160

J. [illegible]

8196.032

Report #H-13

EXPEDITING REPORT

VENDOR	HAVEG Chemical Equipment
ADDRESS	Wilmington, Delaware
PHONE	302-995-3800
LITWIN: ORDER NO.	5416-11-017
ORDER DATE	6/9/77
ITEM	HCL Absorber
TAG	C-901
VENDOR JOB NO	64321

PROMISE ORIGINAL 10/26/77 PREV. DUE ______ PRESENT 10/26/77

[ ] PHONE [ ] TEL. [ ]

______ SALES NAME ______ PRODUCTION

I. Ser ENGINEERING NAME ______ INSPECTION

______ PURCHASING NAME ______ SHIPPING

(1) Haveg 41 Composite HCL Absorber 35 3/8" I.D. x 10'6" including shield and sleeve. Wall thickness of Absorber to be 1½" thick Haveg 41 plus ¼" thick filament wound Epoxy glass.

Approved Drawings were sent 7/11/77 to Mr. B. Getchell of Litwin.

Demister of Teflon and Hastelloy internals and all other material will be ordered on receipt of approved drawings. The Haveg 41 is made in the shop.

Fabrication will start upon receipt of approved drawings. At the time of the drawing release the vendor requested a 13 week delivery from that date. In order to make the delivery date Haveg should receive the drawings by 7/26/77.

RECEIVED
LITWIN EXPEDITING DEPT.
AM JUL 22 1977 PM
7,8,9,10,11,12,1,2,3,4,5,6
R.P.

cc: G. I. Kreutzer
J. L. Gunter
E. ". Robertson
L. Harms
M. French
". W. Butt
J. R. Holcomb
J. O. Gibson
J. G. Pogue
J. Friend
J. A. DeBernardi
J. Whitt/B. Getchell
R. Pierce

CCR 000019161

APPENDIX M

COMMUNICATIONS WITH JOHN ZINK

E. H. Kallemeyn

conoco

To J. A. DeBernardi Date 2-26-79

O.C.M.

Lake Charles La.

Here is the Communication file on H/W Con Sog. 050018, Whitehall, Okla., to Lake Charles La.

File shows J. Zink Co began working on Con 3-16-78 We were requested to assist on 3-29-78 and ultimately secured con for the fabrication.

Kallemeyn

Doc. 47(a) Part 2

CCR 000019163

JOHN ZINK

JOHN ZINK Company

"HEAT MAKERS" 4401 SOUTH PEORIA • BOX 7388, SOUTHSIDE STATION • TULSA, OKLA. 74105 (918) 747-1371

PLEASE REMIT TO
JOHN ZINK COMPANY
BOX 94273
TULSA, OKLAHOMA 74194

S. O. NUMBER	ORDER NUMBER	DATE	INVOICE NUMBER
TO 089580	790061	MAY 26 78	19,843 TOF

CONTINENTAL OIL CO
PURCHASING DEPT
P O BOX 2197
HOUSTON TEXAS 77001

REF JZ. INV 19,764TO

FREIGHT CHARGES PREPAID BY US FOR YOUR ACCOUNT
(PER ATTACHED PAID COPIES)

PURCH. JUN 5 1978

MISSOURI PACIFIC
F/B 389003

VENDOR	DISC	COM	
DISB	PUR ORD NO 790066/HM		SALES TAX / TAX RATE
DUE DATE 6 23	DATE PASSED 6-5	PRICE OK	TAX EXEMPT
ACP KHM	ORD BY 0150		
DISTRIBUTION 3050-8-8196-95			

3,241.29

3,241.2

THIS INVOICE IS DUE ON RECEIPT

POSTED

CCR 000019164

494 — MISSOURI PACIFIC R R CO — 494 B

ORIGINAL FREIGHT BILL

19764TO

CAR INITIAL & NUMBER	KIND	TRAILER INIT. & NO.	TOFC PLAN	BILL OF LADING NO.	DATE OF SHIPMENT	WAYBILL NUM
SCU 050018	FHD				04 14 78	389003
				R/T	04/14 09:18	

DESTINATION CITY	ST	Billed at Stn. #	ORIGIN CITY	ST.
WEST LAKE	LA	349	355 SKIATOOK	OK

CONSIGNEE	CODE #	SHIPPER	CODE #
CONOCO CHEMICALS. D.E. KIDD V.C.M. PLANT CONSTR. WHSE.		JOHN ZINK COMPANY	9520

ROUTE

M.P. SHERMAN SP

SPECIAL INSTRUCTIONS

HIGH-WIDE LOAD
CTR 704 ITEM 600 COL B

PATTERN NUMBER	COMMODITY CODE NO.
CSC 67 355-10686	3433510

FILE CL-427-77-W

PACKAGES	LADING DESCRIPTION	WEIGHT		RATE	A	FREIGHT	ADVANCES	PREPAID
1	BOILER. HEATING OR POWER	85.540		245		2.095.73		2.095.7
	STEEL UFC ITEM 12230		A	114556	P		1.145.56	1.145.5
3	CRATES PARTS							
65	PCS PARTS							
	USER CHG HEAVY DUTY							
	FLAT CAR $1145.56							
	TOTALS	85.540				2.095.73	1.145.56	3.241.2

TO-089580 4770

POSTED

CCR 000019165

conoco

To

Date

CONOCO

To

Date 4/15/75

CCR 000019167

E. H. Kallemeyn

CONOCO

To

Date

CCR 000019168

CS 5403-A

Southern Pacific
Transportation Company

SERVING THE GOLDEN EMPIRE WITH
TRAINS
TRUCKS
INTERMODAL
PIPELINES

1/17/78 3:30 PM

EHR called & says the car is in Whitesboro, Texas & MKT will pull it to Sherman, Texas to be hopefully to arrive Sherman no later than 3 AM so an interchange can be made to SP which has a train leaving Sherman, Tex at 6PM for Ennis (then ...) & it don't make connection until 12 hours later.

JES

CCR 000019169

DATE 4/3/78 HOUR 2:50 PM

TO [illegible]

WHILE YOU WERE OUT

M [illegible]

OF [illegible]

PHONE ______ AREA CODE ______ PHONE NUMBER

TELEPHONED		RETURNED CALL		LEFT PACKAGE	
PLEASE CALL		WAS IN		PLEASE SEE ME	
WILL CALL AGAIN		WILL RETURN		IMPORTANT	

MESSAGE

[illegible] 50018 [illegible]

[illegible]

[illegible] Tulsa [illegible]

4/7/78 or 4/10/78

SIGNED

Order No. 09301 from Stationers Inc. 627-1500

[illegible]oco

4/10 - SOU 50018 arrived Tulsa yd + was to be spotted for loading beginning Monday P.M.

4/11 - 9:20 A.M. advised loading will require at least 2 days. Looking at release on Thursday 4-13-
Car is at the suppliers Skiatook plant - 17 miles North of Tulsa. (Mr. Tom Stanton 918-2887206) in charge.

CCR 000019170

Need equipment similar to

SOU - 50014	SCL 679103
Loading Platform 35' long	31' long
9' wide	9' wide
2' ATR	2' ATR
170,000	210,000

[illegible] Schultz V.P. St. Louis
trying to get a car.

[illegible] [illegible] 427-77-01

AHE 202-278-4000 [illegible]

CCR 000019171

-2

3/27 Davis (AHR) Washington D.C.
advises only 6 cars available for
a shipment of this size, 1 - Columbus,
2 - N.Y. - 1 Canada - 2 Washington
State. The balance are will be
available in - 2 weeks

T/W
Also
To
Stokes
La.

- We have #1 priority on first available
car.
(The cars assigned are going to Conrail
at Edison City, Del., however our
Conrail experience has been far from
favorable. - Washington State car
might be best bet. He will
keep us informed.

CCR 000019172

4½" W Dimensional

ERIAL

SIZE | WEIGHT | RANGE

Thermal Oxidizer
30' Long
17'-2" High
9' Wide
Included
Ceramic
Brick & Cement

P FROM

J. I. Hailey - Corpus Christi, Texas
Turner Brothers - Edmund, Oklahoma
B. F. Walker Inc., - Casper, Wyoming
B. F. Walker Inc., - Odessa, Texas
Lufkin Industries - Lufkin, Texas
American Mfgr., Co., - Fort Worth, Texas
Continental Oil Company

Estimated Weight 75,
Distance:
Rate

Send Prepaid/Collect

ER: John Zink Co. (Marvin Dunsing 918 747)
4401 South Peoria Tulsa Okla

P TO: CONTINENTAL OIL COMPANY — INTERMEDIATE CONSIGNE

ER: V.C.M. Plant
RESS: Westlake La. (Jim Bernard De
AT: (HO-5063)
WELL:
ATTN:

CTIONS: MP Gas Clearance File 427-77-W

CCR 000019173

RGE:

A.F.E. TRANSFER PURCHASE ORDER NO.

M-12

4/11/77

3/15/78
1 30 PM

[illegible] - VCM Plant - Lake Charles, La
410-5063

+ Truck

1. Thermal Oxidizer →
1 Firetube Boiler Waste Boiler with steam drum
30 ft long X 12 ft 2 in High X 9 ft wide 75000#

no more truck service.

John Zink Co. C.O.D.
Tulsa, Okla 4401 S. [illegible]
Hand Trans. [illegible] phone 412-2176
11371
to
Continental Oil Co
VCM Plant
West Lake, La.

Now ready to move it. truck - if we can.
Zink advises they will ship out via rail 4/2/78.

3/15/78 1 30 PM I checked E.T. [illegible] + they say they don't have equipment in Tulsa & Houston says they can't get clearance on certain equip [illegible] + 3 ft high which would make it [illegible] + lots of problems with [illegible] telephone & elec. co.
3/15/78 1 [illegible] [illegible] - no - [illegible].

CCR 000019174

3/16 - Car to be loaded Monday Tues. April 3-4
3-16-78 - To be routed M.P. [illegible] Tex - S.P.
Double drop, heavy duty car ordered
Not in [illegible]

APPENDIX N

RECEIPT FOR THE DELIVERY OF FIRE BRICK

Cessna
CHARTER SERVICE

GENE ALLEN AIR SERVICE, INC.

AIRCRAFT RENTAL

REMIT AND DIRECT INQUIRIES TO: P.O. BOX 212 SULPHUR, LOUISIANA 70663
(318) 625-3613

Located at DeQuincy Industrial Air Park ☐

Located at Jennings Airport ☐

NO. 2712 DATE 12-30 19 71

CUSTOMER CITIES SERVICE OIL CO.

P. O. BOX 605

WESTLAKE, LA. 70669

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT	MDSE. RTD.	PAID OUT	
C.J.			✓				

QTY	DESCRIPTION	PRICE	AMOUNT
200	HOT MIX ST. LOUIS		765 70
	FOR HCA PLANT		
	ATT: CLEO PACE		
	3050-8- 8196-20-053-05		
	TAX		
	TOTAL		765 70

501

2540

REC'D BY

PLATPANE & MOORE BUSINESS FORMS, INC., - N

CCR 000019176

56

APPENDIX O

VCM EMISSIONS MEETING - ALTERNATE CONTROL MEASURES

VCM Emission Survey
B.F. Plant and R&D 10/28/75

Activated Carbon Adsorption

John Shinnecker indicated that some VCM must be on carbon bed before complete adsorption is possible (ie considerable VCM slippage occurs at the start of each cycle). If you don't strip all VCM off bed (ie cut regeneration cycle) the drying air following steam out will contain VCM.

Carbon destruction may be a real problem. At 4 hr/cycle, there are 6 cycles/day or 180/month. [illegible] will begin regeneration studies in early August. They will try to [illegible].

John Shinnecker [illegible] [illegible] [illegible] conditions, [illegible] [illegible] [illegible] above [illegible] F, bed temp rose to 200°F.

Drying air must be heated, [illegible] to determine how much.

CONFIDENTIAL

60(e)

CCR 000019178

Catalytic Oxidation

[illegible] Al_2O_3 [illegible]

VCM Emission Meeting
R&D, Plant, and A&D July 24/75

Activated Carbon Adsorption

John [illegible] indicated that some VCM must be on carbon bed before complete adsorption is possible (ie considerable VCM slippage occurs at the start of each cycle). If you don't steam all VCM off bed (ie cut regeneration cycle) the drying air following steam out will contain VCM.

Carbon deactivation may be a real problem. At 4 hr/cycle then 6 cycles/day or 180 month. [illegible] will begin regeneration studies in early August. They will try to achieve [illegible]

John [illegible] regenerated satisfactorily at 70 Golbed conditions, [illegible] as suggested above 300 °F, Bed temp rose to 270 °F

Drying air must be heated, A&D [illegible] determine how much.

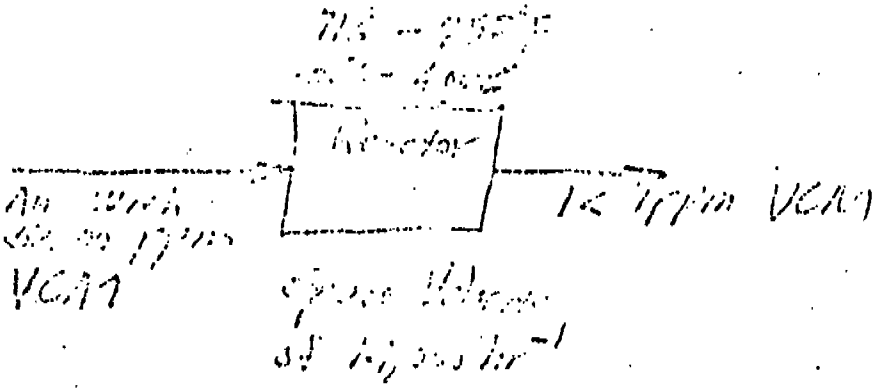
CONFIDENTIAL

60(e)

CCR 000019179

[illegible]

[illegible] Yang of A&D reported on [illegible] [illegible] [illegible] [illegible] to develop. It is catalytic oxidation [illegible] Ruthenium on Al_2O_3 [illegible] It [illegible] [illegible] [illegible] [illegible] [illegible]



After 30 days service activity is only slightly diminished. Service will probably last 3-4 months

Pd, Rh, Pt, Co alloys will not work in this service

Ten months had SS tubes and showed no visible corrosion after the 30 days. Tubes were 1"ID x 2' high.

At 300°C

$LiCl \Rightarrow HCl + CH_2 = CH_2$

$CH_2=CHCl + NO_2 \rightarrow$ oil $C \rightarrow CO_2$

$H \rightarrow H_2O$

$\rightarrow HCl$

High temperatures $\rightarrow Cl \rightarrow$ 37% Cl_2

give higher HCl/Cl ratio $\rightarrow$ less HCl

No $COCl_2$, CO_2, $NOCl$ are formed,

Ru can decompose to NuO_4 but will further decompose to RCl in presence of HCl.

$Ru + 2HCl \rightarrow$ VOLATILE

Will not distill

Eden Tech

Eden-Tech has new oxy-pyrolysis process which they claim is excellent for VCM recovery. Kang Yang is very impressed with process. He will contact professor at Penn State.

Also

PVC + Sand $\xrightarrow[5\,min]{\text{Fluid bed}}$ HCl + HC

90% of feed PVC is recovered.

Summary & Conclusions

1. PEP to submit to additional alternatives for cost estimation.
   a) Incineration w/o HCl Recovery
   b) Catalytic oxidation w/ HCl Recovery

2. R&D will look at possible ways of reducing vinyl chloride generated in the process.

3. John McCulley will check with BASF on catalyst for oxy system to reduce residual vinyl chloride emissions.

4. Carbon Adsorption looks bad. Use solvent adsorption for oxy-vent for 1976 Expenditure

5. Ken Yang will check with professors at Penn State regarding Kolm-Tech process

6. R&D will conduct adsorption regeneration tests.

7. Catalytic oxidation tests will continue.

CONFIDENTIAL

CCR 000019182

APPENDIX P

CORRESPONDENCE WITH INCINERATOR MANUFACTURERS

Process Engineering Department

Continental Oil Company
P.O. Box 1267
Ponca City, Oklahoma 74601
(405) 762-3456

Mr. Jim Newburn
John Zink Company
4401 South Peoria
Tulsa, Oklahoma 74105

Dear Jim:

As we discussed on the telephone, we are involved in the process design of an incineration unit to control the emission from a vinyl chloride plant and would like to discuss several process and materials questions with you. You have already given me preliminary recommendations on several of our questions, but I have included a complete listing so that you might review these points based on a more complete definition of the feed. Table 1 shows the incinerator feed balances we have calculated for various operating conditions. Our design questions are as follows:

1. What combustion temperature is required to reduce the vinyl chloride concentration to less than 10 ppm?

2. What residence time is required at the above temperature?

3. How much excess air should be present in the combustion chamber?

4. Is supplemental fuel required to achieve your recommended operating temperature; if so how much? (Supplemental fuels available are liquids.)

5. What concentration of Cl_2 will be present in the combustion gases?

We would also like some information on your burner selection for this application and your recommended mode of operation. In particular:

1. What is the design duty of the recommended burner?

2. What is the minimum firing level which should be maintained (what are the turn down capabilities of the burner)?

60(a) 1

CCR 000019184

3. What are the materials of construction in the burner and the combustion chamber?

4. Is it necessary to control the combustion temperature at some upper level? If so, what medium should be used -- excess air, steam, or other?

5. Would air preheating normally be included in your design?

If supplemental fuel must be continuously added to the burner, or added during low vent conditions, several alternate sources are available. One of the sources would be a liquid by-product from the vinyl chloride plant. The composition of this material is given in Table 2. We would also like your opinion as to the suitability of this material as a supplemental fuel; either by itself or in combination with non-chlorinated fuels.

Our final area of concern involves the quenching of the combustion gases before HCl scrubbing. We have elected not to include any heat recovery. We also decided to not recover an HCl product. Thus, direct water quench would be used to lower the combustion gas temperature to a level suitable for entry into a dilute acid absorption column. Our questions on this area of the process are:

1. Is there a particular quench chamber design which you would recommend for use with your combustion chamber?

2. Should the quench chamber separate from the combustion chamber, or included in the same unit?

3. What is the rough size and configuration of the unit you would recommend for this service?

4. What materials of construction would you recommend for the chamber and sprays?

We look forward to hearing your comments and recommendations on these questions. Thank you very much for including this in your schedule.

Sincerely yours,

James O. Gibson

James O. Gibson
Process Engineer
Design Division
Process Engineering Department

mdn
Encs

CCR 000019185

Process Engineering Department

Continental Oil Company
P O Box 1267
Ponca City, Oklahoma 74601
(405) 762 3456

March 5, 1976

Mr. Charles K. McCracken
Trane Thermal Company
Brook Road
Conshohocken, Pennsylvania 19428

Dear Mr. McCracken:

As we discussed on the telephone, we are involved in the process design of an incineration unit to control the emissions from a vinyl chloride plant and would like to discuss several process and materials questions with you. You have already given me preliminary recommendations on several of our questions, but I have included a complete listing so that you might review these points based on a more complete definition of the feed. Table 1 shows the incinerator feed balances we have calculated for various operating conditions. Our design questions are as follows:

1. What combustion temperature is required to reduce the vinyl chloride concentration to less than 10 ppm?

2. What residence time is required at the above temperature?

3. How much excess air should be present in the combustion chamber?

4. Is supplemental fuel required to achieve your recommended operating temperature; if so how much? (Supplemental fuels available are liquids.)

5. What concentration of Cl_2 will be present in the combustion gases?

We would also like some information on your burner selection for this application and your recommended mode of operation. In particular:

1. What is the design duty of the recommended burner?

2. What is the minimum firing level which should be maintained (what are the turn down capabilities of the burner)?

6(a)(2)

3. What are the materials of construction in the burner and the combustion chamber?

4. Is it necessary to control the combustion temperature at some upper level? If so, what medium should be used -- excess air, steam, or other?

5. Would air preheating normally be included in your design?

If supplemental fuel must be continuously added to the burner, or added during low vent conditions, several alternate sources are available. One of the sources would be a liquid by-product from the vinyl chloride plant. The composition of this material is given in Table 2. We would also like your opinion as to the suitability of this material as a supplemental fuel; either by itself or in combination with non-chlorinated fuels.

Our final area of concern involves the quenching of the combustion gases before HCl scrubbing. We have elected not to include any heat recovery. We also decided to not recover an HCl product. Thus, direct water quench would be used to lower the combustion gas temperature to a level suitable for entry into a dilute acid absorption column. Our questions on this area of the process are:

1. Is there a particular quench chamber design which you would recommend for use with your combustion chamber?

2. Should the quench chamber be separate from the combustion chamber, or included in the same unit?

3. What is the rough size and configuration of the unit you would recommend for this service?

4. What materials of construction would you recommend for the chamber and sprays?

We look forward to hearing your comments and recommendations on these questions. Thank you very much for including this in your schedule.

Sincerely yours,

James O. Gibson

James O. Gibson
Process Engineer
Design Division
Process Engineering Department

mdn
Encs

TABLE 1

VENT GAS BALANCES

Component	Minimum Continuous Operation Mols/Hr	Typical Operation Mols/Hr	Design Maximum Mols/Hr
$C_2H_4Cl_2$	0.31	0.44	4.04
C_2H_3Cl	2.21	3.16	11.80
C_2H_5Cl	5.92	8.46	41.78
$CHCl_3$	0.13	0.18	4.93
CCl_4	0.03	0.05	2.47
CH_4	7.46	10.66	9.55
C_2H_4	11.79	16.84	19.26
C_2H_6	0.69	0.98	1.07
H_2	0.79	1.13	0.79
O_2	5.18	7.40	5.32
N_2	39.89	56.98	103.12
CO	0.78	1.12	0.94
CO_2	7.52	10.74	7.80
HCl	2.90	4.15	2.90
Total	85.60	122.29	215.77
Temperature, °F	40	40	60
Pressure	--- Essentially Atmospheric ---		

CCR 000019188

TABLE 2

BY-PRODUCT LIQUID COMPOSITION

Component	Mol %
$C_2H_4Cl_2$	9.88
C_2H_3Cl	8.48
C_2H_5Cl	58.70
$CHCl_3$	14.27
CCl_4	5.68
CH_4	0.23
C_2H_4	2.58
C_2H_6	0.18
	100.00

APPENDIX Q

PROPOSAL INVITATION OF ENGINEERING CONTRACT - INCINERATOR PROJECT

PROPOSAL INVITATION

VENT GAS INCINERATOR

VCM PLANT

LAKE CHARLES, LOUISIANA

...TIONS TO BIDDERS

...il Company (COMPANY) is seeking proposals from quali-
... the mechanical design and material procurement
... of vent gas incinerator facilities for the VCM
..., Louisiana.

... is defined in Section II, below. The project work
... follows: CONTRACTOR will provide mechanical design
...rement services for the facility (excluding the
...rating drawings, specifications, and other data
... and detail to allow COMPANY to solicit competitive
...r field construction.

...ll prepare a cost reimbursable contract proposal

...l include sufficient information to allow the COMPANY
... evaluation and, as a minimum, shall include the

... the CONTRACTOR'S reimbursable costs and overlay. The
...ll provide a "check list" of reimbursable and non-
... charges and show what is chargeable as:

... reimbursable at cost.

... reimbursable at cost plus overlay.

... non-reimbursable items which are covered by overlay.

... requires a single overlay percentage applied to base
... which covers all overheads, burdens, and profit.

b. ... rates by job classification such as draftsman, engineer,
... ject manager, etc.

c. The CONTRACTOR'S reply to this inquiry should:

(1) Indicate agreement with Section III, TYPICAL CONTRACT and

STANDARD CONTRACT DOCUMENTS, included in this Invitation, or state any exceptions so that any contractural differences may be resolved prior to screening of CONTRACTORS.

(2) A statement that he is willing to sign a Secrecy Agreement. See EXHIBIT I (to be furnished later).

d. Per diem rate for field trip (food and lodging).

e. Description of the organization which will be used on this work with resumes of key people who will be assigned. The CONTRACTOR shall also state how the work will be carried out, including the following activities:

(1) Planning and scheduling.

(2) Project engineering.

(3) Other home office activities and procedures.

f. Background information and experience in design of similar facilities.

g. Description of the CONTRACTOR'S present workload (manpower curve) and indication of presently anticipated future workload, sufficient to illustrate to the COMPANY that the CONTRACTOR has adequate manpower for the project.

5. At any time by written notice, COMPANY shall have the right to terminate CONTRACTOR'S work on the project. In the event of contract termination, COMPANY shall have the right to unrestricted use, for any purpose it shall deem necessary, of any and all design documents furnished to it by the CONTRACTOR. COMPANY shall remit charges for work performed.

6. Written proposals to perform the work shall be received in COMPANY'S Ponca City office no later than 4 p.m. on November 19, 1976. Three copies of the CONTRACTOR'S proposal shall be mailed to the following:

W. E. Taber
Continental Oil Company
P. O. Box 1267
Ponca City, Oklahoma 74601

7. The proposals are to remain firm for a period of 30 days.

8. The successful bidder will be furnished a Basis of Contract to govern his work on this project. The Basis of Contract will include special

job conditions, applicable COMPANY engineering and design specifications.

9. Design shall be in accordance with relevant portions of any federal, Louisiana, or local laws, regulations, ordinances, or codes applicable at the job site.

SECTION II - SCOPE OF WORK

1. GENERAL

On December 24, 1975, the Environmental Protection Agency added vinyl chloride to the list of hazardous air pollutants and proposed a standard for VCM emissions. Following a public comment period, a final standard was issued on October 21, 1976 (Federal Register, Vol. 41, No. 205, Pages 46560-46573). The purpose of the standard is to minimize vinyl chloride emissions from all known process and fugitive emission sources in ethylene dichloride-vinyl chloride plants.

The VCM control technology Conoco has selected is incineration. All process and fugitive vents, with the exception of the oxychlorination reaction vent, will be piped to a new incineration unit. By-product liquids will also frequently be burned for disposal or as a supplemental fuel. The combustion gases will be cooled in a waste heat boiler, and then scrubbed with water and caustic. Most of the HCl produced in the combustion process will be removed in the water scrubber, while the remainder of the HCl and Cl_2 will be removed by caustic scrubbing.

The scope of the VCM incineration project is as follows:

2. VENT COLLECTION SYSTEM

A project is currently in progress to collect all process vents into two vent headers. Dry vents will be collected in carbon steel headers, while furan piping will be utilized for the wet, HCl containing vents. These headers will be extended to the new incineration area, and a knockout pot added to the wet vent header. In addition, the vents from tankage in chlorinated hydrocarbon service and product loading will have to be piped to the incinerator feed system. Furan piping and a small blower will be required for the tankage vents. Product loading vents can be carried in carbon steel piping and will not require any additional pressure.

3. INCINERATOR BATTERY LIMITS

The main incineration system train will consist of the incinerator, a waste heat boiler with top-mounted steam drum, water scrubber, and caustic scrubber. The incinerator--waste heat boiler will be purchased from a single vendor by COMPANY. Inconel tubes and tube sheet will be

used in the fire-tube boiler to minimize HCl corrosion. A boiler feed water system will be installed in the incineration area to collect, treat, and pump condensate to the waste heat boiler. Steam will be returned to the main plant steam system, with tie-ins provided for a future HCl recovery system.

An inconel transition piece with expansion joint will carry hot gases from the waste heat boiler to the HCl scrubber. The scrubber will be a multi-bed packed column (8 feet - 0 inches x 56 feet) constructed of Haveg 41. Two acid circulation and cooling systems with graphite pumps and exchangers will be required. Piping will be teflon and polypropelene-lined steel. Expansion joints will be required at all process connections to the Haveg column. The scrubbed acid will be piped to a day tank, with future connections provided for an HCl recovery system.

The caustic scrubber will be a carbon steel-packed column (6 feet - 0 inches x 28 feet) with a pump-around system. Caustic make-up to the scrubber will be a slip-stream from the main plant caustic system. The caustic will be partially spent and returned to the main plant system. Vent gases from the caustic scrubber will be discharged to the atmosphere through a 75-foot tall 3 foot 0 inch-vent stack made of FRP.

In addition to the major systems outlined above, a by-product liquid charge tank and pumps are also required. There will be two 10,000 SCFM combustion air blowers. One will be driven by a steam turbine. A steam blowdown drum is also to be installed.

The incineration system design should also allow for two future projects. The HCl recovery project has already been mentioned. In addition, a second incinerator may be required in the future. Equipment and piping lay-out should allow for symmetrical vapor flow and common sparing of non-critical items.

4. OFFSITES

A new 11,000 GPM cooling cell and pump will be required to supply the incineration system. All other utilities systems will have to be expanded to the incineration area. A steam transfer line is also presently under consideration. This line would transfer the excess steam generated in the waste heat boiler to users in the adjacent chemical complex. Several thousand feet of piping would be required for the complete transfer system.

5. CONTRACTOR shall furnish project management, and material procurement and such other home office services required to design the facilities in accordance with COMPANY'S design basis.

6. The COMPANY will furnish the following:

6.1 Specification and procurement of incinerator.
6.2 Soils Investigation Report

CCR 000019194

6.3 Topographic maps of area.
6.4 Process Design .
6.5 Basis of Mechanical Design
6.6 Permits required to be in COMPANY'S name.
6.7 A COMPANY representative.

7. The approximate cost of this project is $5 million.

SECTION III - STANDARD CONTRACT DOCUMENTS

TABLE OF CONTENTS - GENERAL CONTRACT DOCUMENTS

Letter Contract	-	Typical attached
Certificate of Insurance	-	Form 6-11-S Revised 8-1-67
Secrecy Agreement	-	Will be provided later

Typical Letter Contract

Gentlemen:

Subject: Engineering Services

Your Proposal No. Dated

This letter includes certain of our standard conditions and it, along with your Proposal No. _____ dated _____, including Exhibits __, __, & __, constitutes the contract for this project.

_____ (Contractor), will, as an independent Contractor, furnish engineering, procurement, and drafting manpower and other services as requested and required by Continental Oil Company (Company) to design and prepare drawings and specifications and to purchase materials as instructed by Company for the _____. Company will provide Contractor overall general instructions but Contractor shall have the sole right to determine the manner and means in which such general instructions are to be implemented on a day-to-day basis. Contractor will provide construction drawings and specifications in a good workmanlike manner. The construction is not a part of this contract and Company is under no obligation to award the construction work to Contractor.

Only full time regular Contractor employees will be assigned to this project unless written approval is obtained from Company.

The work is to be performed on the following basis:

1. Payroll Rates

   The Proposal shall govern charges hereunder. Billing will be based on actual payroll within the salary ranges set forth in Exhibit ___ of the Proposal.

2. Items Covered in Overhead

   The overhead rate of ___% set forth in the Proposal will be applied to direct salaries as stated in the Proposal. This charge is to cover all home office overhead and profit as typically specified in Exhibit ___.

   All other charges will be at Contractor's actual cost as covered in the Proposal. If this project requires other than Contractor's full time regular employees, such employees will be billed to Company at Contractor's actual invoiced cost.

3. Insurance

Insurance to cover Workmen's Compensation and Occupational Diseases and General Public Liability with bodily injury limits of not less than $300,000 for one accident and a property damage limit of not less than $100,000. All insurance policies required to be provided by Contractor under the terms of this contract shall be written on policy forms and by insurance companies approved by the Company. Contractor agrees to furnish Company at Post Office Box 1267, Ponca City, Oklahoma, 74601, certificates of insurance on forms approved by Company listing all such policies. Such certificates must provide for not less than ten days prior written notice to Company in the event of cancellation or material change affecting Company's interest. Contractor shall therefore furnish Company certificates as outlined above for insurance coverages.

4. Premium Time

Premium time is established in the Proposal. Company approval shall be obtained before any premium overtime work is authorized.

5. Method of Payment

a. Advance Fund Material

During the life of this agreement, the Company shall advance funds that will permit the Contractor meeting substantially all its costs in connection with the job. Funds are to be advanced based on the Contractor's estimate of costs for the ensuing month for material.

Early in the project, the Contractor shall prepare a schedule showing the monthly estimated rate of expenditures covered by the Advance Fund over the life of the job.

The Contractor shall submit four copies of the request for advance, in the form of an invoice, prior to the last day of the month. The Company shall have ten days in which to check the request, approve, and pay.

The Contractor shall present Progress Invoices monthly, and upon approval by the Company, the amount of each Progress Invoice will be credited against the Advance Fund.

b. Invoices for Engineering

Invoices shall be submitted monthly for salaries and supported with a list by name of the individuals who have worked on the project, their classification, payroll costs and the number of

hours worked. The applicable overhead percentages will be shown separately in arriving at the total invoiced cost. Upon approval, the Company will pay _____ percent of each invoice. Invoices are to be addressed to the attention of _____.

6. Guarantees

Guarantees for specific items of equipment competitively purchased from vendors on the basis of an individual specification, including but not limited to pumps, compressors, heaters, exchangers, and similar items, Contractor agrees to use its best efforts to obtain supplier's guarantee of both mechanical condition and operating performance for a period of twelve months from the date of initial operation or eighteen months from date of shipment and pass on such guarantee to Company. In cases where suppliers refuse to extend their guarantee to Company for this period, Contractor agrees to notify Company prior to purchasing.

7. Travel and Living Expenses

Travel and living expenses will be in accordance with the Proposal. Commercial air travel will be economy class.

8. All Contractor expenditures and charges are subject to audit and approval by Company, and Company shall have full and free access to the Contractor's records regarding this work.

9. The Contractor shall indemnify and hold Company harmless and shall defend Company at the Contractor's expense from any and all claims, causes or action for damage or loss to property and persons, including Contractor's employees, arising out of the work to be performed under this contract.

10. The Contractor shall not permit his employees, vendors, visitors, labor representatives, deliverymen, salesmen, agents or subcontractors to enter any area of the Company's plant other than the work areas designated from time to time by the Company for the purpose of this contract. The Contractor shall (notwithstanding the provisions of Item 9 above) indemnify and hold the Company harmless as to any claim, cause of action, liability, obligation or expense whatsoever which may result from any injury to or death of persons or loss of or damage to property arising out of or as a result of any breach of this paragraph except to the extent that such injury, death, loss or damage be the result of any gross negligence or willful act by the Company or any of its employees.

11. Except as Company shall deprive Contractor of freedom of choice or Company shall independently elect, Contractor agrees hereby to indemnify and save Company harmless from all claims for all alleged patent infringement asserted against Company and growing out of the performance of work by Contractor under this contract, and as may arise from the

operation by Company of the facilities as designed under this contract, and Contractor shall defend, at Contractor's sole expense, any suit involving Company alleging patent infringement by reason of the foregoing causations or any thereof and shall hold Company harmless from any judgement entered in any such action.

12. Contractor shall comply with all federal, state and local laws, ordinances, rules and regulations affecting the work to be performed hereunder.

13. Contractor shall use care in the use of Company premises and observe local and plant safety rules.

14. The originals of all drawings, calculations, etc., used or developed hereunder are the sole property of Company and may be used for any purpose Company chooses. The Contractor shall give these items to Company upon termination of this contract.

15. Company shall have the right to terminate this contract at any time by notifying Contractor and making payment to Contractor for all costs incurred to the date of termination.

16. To complete the contract documents, the following are enclosed:

    1. Certificate of Insurance, Form 6-11-S, three copies. Please have your insurance carrier complete this form certifying that your insurance coverage is as required by this contract. Return two executed copies to me.

    2. Appendix L, Certification of Nonsegregated Facilities, two copies. Please return one executed copy to me.

    3. Appendix M, Equal Employment Opportunity. This for your information and file.

If the above meets with your approval, please so indicate and return two (2) signed copies of this contract for our files.

Yours very truly,

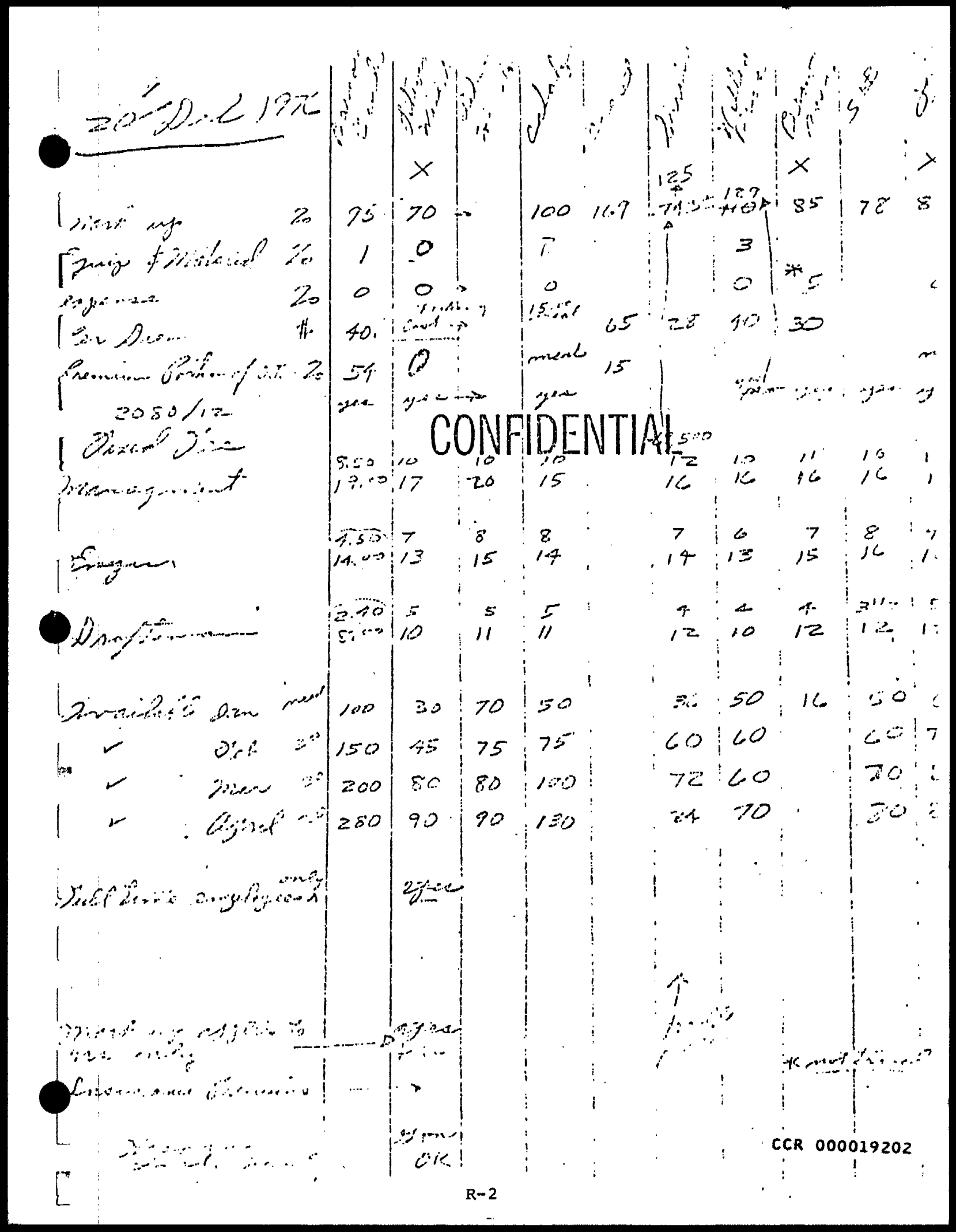
Accepted this ___ day of _____, 1976.

By:_____

Attest: _____

APPENDIX R

PROPOSAL EVALUATION - INCINERATOR PROJECT



APPENDIX S

ENGINEERING CONTRACT - INCINERATOR PROJECT

J B Hambleton, Jr.
Manager
Central Engineering Department

Continental Oil Company
P O Box 1267
Ponca City, Oklahoma 74601
(405) 762 3456

April 15, 1977

The Litwin Corporation
P. O. Box 1281
Houston, Texas 77001

Attention Mr. F. J. Trotter

Gentlemen:

Subject: Engineering Services, VCM Incinerator Project
Continental Oil Company, Lake Charles VCM Plant

This letter constitutes the contract for the above project, and cancels and supercedes the letter of intent dated December 21, 1976.

1. It is hereby agreed between CONTINENTAL OIL COMPANY, a Delaware Corporation (herein called "Company"), and the LITWIN CORPORATION of Houston, Texas (herein called "Contractor"), that Contractor will, as an independent contractor, furnish engineering, design, material procurement, expediting, and inspection services for a VCM Plant Incinerator - Waste Heat Boiler System for Company's VCM Plant, Lake Charles, Louisiana, as defined in EXHIBIT C, Scope of Work.

2. TERM

Said work is to be commenced not later than January 3, 1977, and Contractor shall use its best efforts to complete the work not later than August 15, 1977.

3. COMPENSATION

3.1 Contractor will be compensated on the following basis:

3.1.1 Contractor will be reimbursed for all reimbursable items as defined by EXHIBIT A. Charges for wages and salaries will be in the ranges defined by EXHIBIT B. The rate ranges in EXHIBIT B may, however, be changed at any time provided the Company is given a new schedule of rate ranges a minimum of two weeks prior to the effective date of the new schedule. Charges for use of Contractor's in-house facilities will be as follows:

a. Data Link Usage - $1 per connected minute plus $6 per manhour for keypunch operators.

CCR 000019204

APPENDIX T

LIST OF CONOCO PERSONNEL ASSIGNED TO INCINERATOR PROJECT

PTT 18

CONOCO PERSONNAL ASSIGNED TO VCM VENT GAS INCINERATOR PROJECTS:

DAN KIDD	MAY 1977 TO COMPLETION	FIELD ENGINEER
STAN HEGEMER	JAN 1978 TO COMPLETION ± 2 VGI	FIELD ENGINEER
RICHARD BECK	JUNE 1978 TO COMPLETION	FIELD ENGINEER
KEN LEMASTER	MARCH 1978 TO AUG 1978	M/ED INSPECTION
ALLEN BOOK	MAY 1978 TO AUG 1978	M/ED INSPECTION
KATSUMI SUZUKI	AUG 1978 TO COMPLETION	M/ED INSPECTION
MALCOLM MCNUTT	MARCH 1978 TO COMPLETION (PART TIME)	M/ED INSPECTION
JERRY GOSSAMON	SEPT 1978 TO COMPLETION ± 1 VGI	M/ED SCHEDULING
BOB FLANIGAN	SEPT 1978 TO COMPLETION ± 1 VGI	M/ED INSTRUMENT
CHARLIE ALWORTH	SEPT 1978 TO COMPLETION ± 1 VGI	M/ED INSTRUMENT
MIKE FRENCH	SEPT 1978 TO COMPLETION ± 1 VGI	CED INSTRUMENT
JOHN CAMPBELL	SEPT 1978 TO COMPLETION ± 1 VGI	CED INSTRUMENT
LANE JOHNSON	OCT 1978 TO MECH. COMPLETION ± VGI	FIELD ENGINEER
J. F. ALIX	MARCH 1977 TO COMPLETION	PROJECT MGR

APPENDIX U

BID TABULATION PIPING AND EQUIPMENT INSTALLATION

VCM-1
BDS

BID TABULATION

CONFIDENTIAL

LOCATION LAKE CHARLES, LOUISIANA DATE February 6, 1978

PROJECT VCM VENT GAS INCINERATOR CED B.O.B. EST $880,000.**

B.O.B. TITLE PIPING & EQUIPMENT INSTALLATION AFE AMOUNT $729,837.*

B.O.B. # DB-029-033-3 AFE #8196

CONTRACTOR	BASE BID	ALT 1	ALT 2	ALT 3	CALENDAR DAYS
H. E. WIESE	741,432.00	13,008.00	-for add'l welding	34,902	168
MORRISON ENGRS & CONSTR.	797,680.00			42,508	184
VINCENT'S CONSTRUCTION	849,133.00			36,350	175
INDUSTRIAL CONSTRUCTION	1,048,209.65			42,219	180
AUGENSTEIN CONSTRUCTION	1,079,350.00			50,000	180
REFRACTORY	----------	Declined to bid	----------	----------	----------

* The AFE amount includes shutdown work. Vincent's is contracted to do shutdown work for a firm price of $29,910. This makes a total of $54,513. over AFE amount.

** CED BOB Estimate doesn't include shutdown work.

COMMENTS: I recommend H. E. Wiese on basis of low bid

8

CCR 000019208

APPENDIX V

PROGRESS REPORT - INCINERATOR PROJECT

Interoffice Communication

DOE 27
Exhibit II not submitted by Conoco

To B. D. Ratliff

From J. F. Alix

Date March 27, 1978

Subject VENT GAS INCINERATION PROGRESS REPORT (AFE'S 1-34-8196, 8217, 8257, 8327)

With improvement in the weather, construction progress has been good. Prospects for startup of the #1 Incinerator in September and for compliance with the EPA schedule remain good. A potential obstacle is expiration of a number of construction labor contracts on April 30, 1978. We are monitoring this situation, but it does not appear that we can significantly influence the course of events.

Cost reports as of February 28, 1978, forecast expenditures for all AFE's to be within Budget. Although there are a few known problems remaining to be resolved, none of these are likely to cause overruns.

#1 INCINERATOR - AFE 8196

I. Construction

All Field Contracts except Painting and Insulation have been awarded. The Piping and Equipment Contractor started work March 13, 1978.

Although muddy conditions persisted in early February, weather conditions and work progress have otherwise been good.

II. Schedule

The schedule was re-evaluated in mid-March, using the contractors' proposed manpower loadings and calendar-day estimates. This projected a mechanical completion date of October 6, 1978. (Exhibit I).

The "critical path" centers about Instrumentation. To improve the October 6 projection, the basic plan is:

a) Apply "spot" overtime to complete critical areas of concrete work, to allow the Piping and Equipment contractor to proceed.

b) The Piping & Equipment contractor is willing to increase his maximum crew size if the work areas can be made available to him.

c) Start the Instrument Contractor as soon as the major pipe runs and equipment are in place. The Instrument Contractor has sub-contracted the electrical portion of his job to the Electrical Contractor. That portion of the Instrument package will start by May 1, instead of June 1.

d) A revised schedule will be developed with the Instrument Contractor for the balance of his work.

The target date for mechanical completion remains September 1, 1978.

III. Design and Procurement

All engineering packages are complete. Work remaining is mainly inspection and expediting of purchased materials. Current delivery dates do not conflict with the plan outlined above.

IV. Cost Accounting

Summary sheets for the February 28, 1978, cost report are attached (Exhibit II). These project an under-run of $160,535 for AFE 8196. This reflects:

Exhibit II not submitted

a) Material purchases 95% complete
b) Ouside engineering 100% complete
c) All field contracts bid, except Painting & Insulation (98%)

Uncommitted allocations for contingency and overtime total $352,894. Close control is being exercised in these areas.

#2 INCINERATOR AFE 8217

I. Construction

Except for certain work included in the #1 Incinerator packages, construction has not started. The Concrete & Underground package has been awarded.

II. Schedule

Mechanical completion is scheduled for late in November 1978.

CCR 000019211

III. Design and Procurement

All packages have been issued to CONOCO except for Piping & Equipment Erection.

Engineering is proceeding on a revised Condensate Storage System. Equipment will not be ordered until the Definitive Estimate is completed in Mid-April.

Scope changes for a Sulfur Dioxide Injection System and a Direct Chlorination Knock-Out Drum have been approved. A change order to add a Communication System is not yet approved.

IV. Cost Accounting

A net under-run of $136,360 is projected. This represents:

a) Purchased materials 80% complete
b) Outside engineering 73% complete
c) Field contracts about 19% bid.

An additional $81,463 of contingency funds is unallocated at this point.

NEUTRALIZATION SYSTEM - AFE 8257

I. Construction

A contract has been let to re-locate the guy wires for the wooden vent stack during turnaround. This is required to clear the area for the acid pits. The Concrete and Underground package is out for bids.

There is a potential conflict with a United Gas 6-inch natural gas pipeline. We will cross it with several sewer lines. A meeting is being set up with United Gas to determine action required.

II. Schedule

The current schedule prepared by CED-Design shows final mechanical completion on October 1, 1978. All required equipment for initial Incinerator start-up is to be in place by September 1, 1978.

III. Design and Procurement

Mechanical design is substantially complete. Purchasing is complete except for structural steel and above-ground FRP piping.

IV. Cost Accounting

We are projecting an under-run of $122,905, mainly due to outside engineering being below budget.

CONCENTRATION SYSTEM - AFE 8327

The Muriatic Acid sales contract was finalized on March 16, 1978. The hold on cash commitments has therefore been released.

The Concentration Unit (absorber and tail column) has been ordered. Other major equipment will be ready to order after a review on April 6, 1978.

A Project Schedule will be issued during April.

J. F. Alix

sj

cc: JDB, LNV, REL, DAK, JEC, RJA, RWMc, JJL, BRJ,

J. F. Petersen
D. M. Lewis
J. E. Van Zant
G. L. Kreutzer
R. E. Hanna
S. Burnam - J. D. Stone
C. T. Wyatt

D. M. Sanders
R. G. Gantz
M. D. McGee
E. J. McGuire

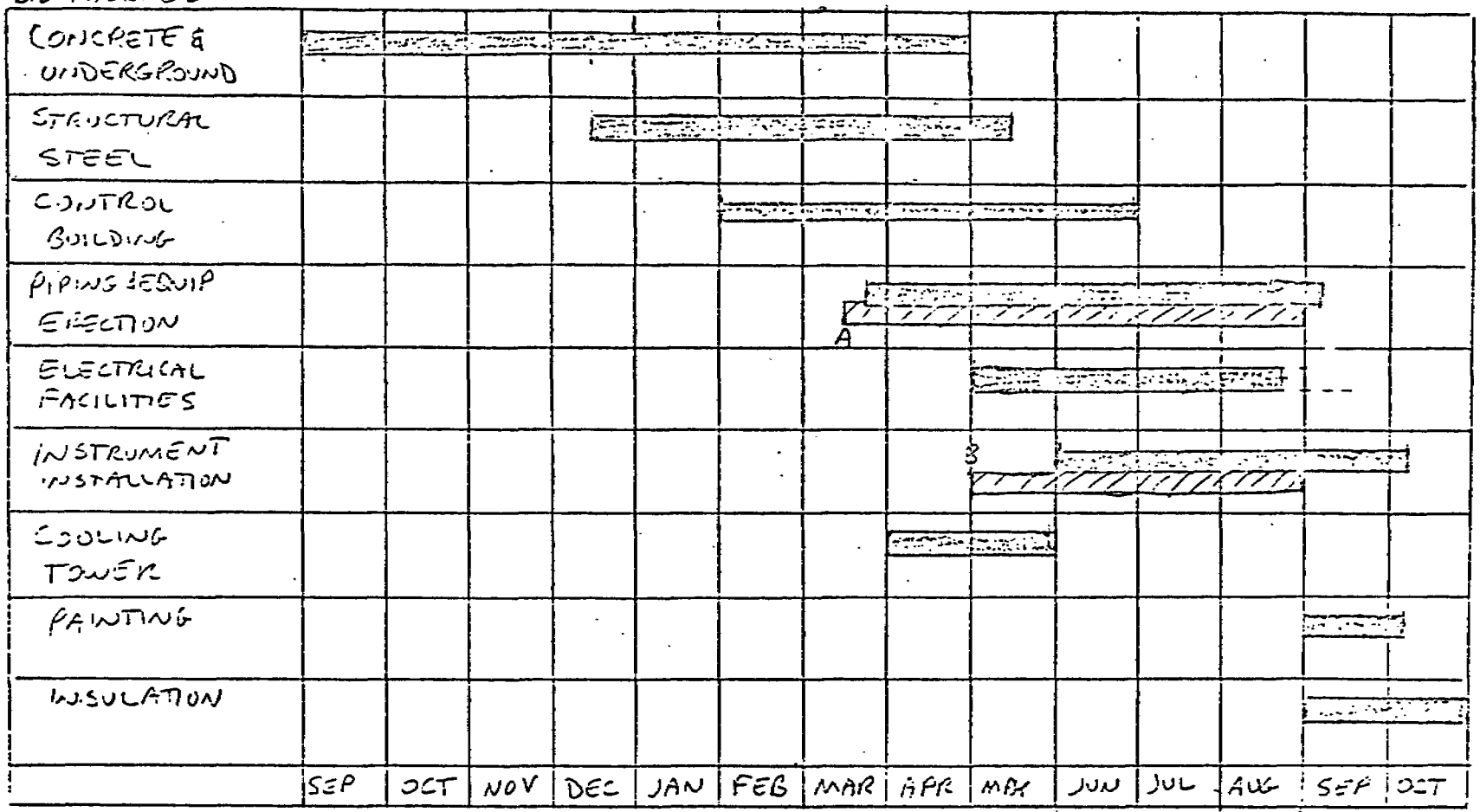
J. A. DeBernardi
K. G. McLeod
(DEK-SAM-JJB)

R. D. Gamblin

CCR 000019213

PROJECT SCHEDULE
#1 INCINERATOR - AFE 8196

EXHIBIT



CONSTRUCTION

— MARCH 13 SCHEDULE REVIEW, (SAH-DEK)

— PROPOSED REVISION

(A) ACTUAL START

(B) ELECTRICAL PORTION OF INSTRUMENT PACKAGE WILL BE DONE BY ELECTRICAL CONTRACTOR

MECHANICAL COMPLETION

V-6

CCR 00001921

APPENDIX W

CONSTRUCTION SCHEDULE - INCINERATOR PROJECT

E - ENGINEERING
M - MATERIALS
C - CONSTRUCTION

CENTRAL ENGINEERING DEPARTMENT

ESTIMATED COMPLETION SCHEDULE FOR

[illegible]

PAGE [illegible] OF [illegible]
DATE [illegible]

JOB DESCRIPTION		[illegible]	9-1	9-8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9-2	9-9	[illegible]	[illegible]	[illegible]		
[illegible]	E																	
[illegible]	M																	
	C																	
[illegible]	E																	
	M																	
[illegible]	C																	
[illegible]	E																	
[illegible]	M																	
	C																	
[illegible]	E																	
[illegible]	M																	
[illegible]	C																	
[illegible]	E																	
[illegible]	M																	
	C																	
[illegible]	E																	
[illegible]	M																	
	C																	
[illegible]	E																	
	M																	
	C																	
[illegible]	E																	
	M																	
	C																	
	E																	
	M																	
	C																	
Scheduled	E																	
Actual	M																	
Lost Time	C																	

W-2

CCR 000019216

E – ENGINEERING
M – MATERIALS
C – CONSTRUCTION

CENTRAL ENGINEERING DEPARTMENT

ESTIMATED COMPLETION SCHEDULE FOR

[illegible]

DATE [illegible]

JOB DESCRIPTION		[illegible]	[illegible]	[illegible]	[illegible]	O.T	Nov	Dec										
#1 [illegible]	E																	
	M																	
[illegible]	C																	
#2 [illegible]	E																	
[illegible]	M																	
	C																	
#3 [illegible]	E																	
[illegible]	M																	
	C																	
#4 [illegible]	E																	
[illegible]	M																	
	C																	
	E																	
	M																	
	C																	
	E																	
	M																	
	C																	
	E																	
	M																	
	C																	
	E																	
	M																	
	C																	
	E																	
	M																	
	C																	
[illegible]	E																	
[illegible]	M																	
[illegible]	C																	

↖ Mechanical completion Nov. 24.

W-3

CCR 000019217

APPENDIX X

PERFORMANCE OF H. E. WIESE - INCINERATOR PROJECT

ADDENDUM RESPECTING
PERFORMANCE OF H. E. WIESE, INC.

Near the end of the Teamsters' strike in June, 1978, H. E. Wiese, Inc. prepared a schedule showing the normal completion of piping work on the Number 1 Incinerator at October 14, 1978. Allowing one week for instrumentation completion and three weeks for startup, this would have delayed compliance until mid-November.

At the same time, Conoco Chemicals was bidding the Number 2 Incinerator. Wiese proposed that, if they were awarded the Number 2 contract, they would complete the Number 1 Incinerator by September 16, 1978. They would accomplish this by increasing their peak manpower from about 40 to 104 workmen. They would also put more equipment on the job. This alternative was the most attractive of any considered, and offered a good chance of achieving timely compliance.

Plans were made to assure that the other facets of the job would be consistent with the Wiese schedule.

With the resumption of work, Conoco Chemicals monitored Wiese's progress on a weekly basis. By late July it was apparent that Wiese was not achieving their schedule. Based on their performance, Conoco was projecting piping completion at mid-October.

Conoco met with Wiese management on August 9, 1978 and reviewed the problem with them. They assured Conoco that they would still be close to the September 16 completion. They would add more people and supervision. Additionally, they committed to provide weekly work schedules.

When their progress did not sufficiently improve, and the promised schedules were not provided, Conoco again met with Wiese management in Baton Rouge on August 15. Although Wiese did not yet agree that their productivity was poor, they committed to assigning a planner/scheduler to the job. Conoco agreed to provide Wiese with a priority list, excluding some systems not required for startup. Arrangements were made for joint monitoring of progress on a weekly basis.

On August 28 Wiese presented a revised schedule, showing completion of the high priority work by September 18.

Conoco's monitoring continued to show that Wiese was not meeting the schedule. (See Doc. 64). Conoco presented Wiese with their requirements for a phased turnover, requiring completion of the last system by October 9. Conoco also had the remaining work analyzed by L. B. McCormick, MED, who concluded that such a schedule was feasible.

Wiese committed to meet the schedule, and on September 20, 1978 Wiese management was still predicting completion by October 9.

In all these activities and efforts to improve job progress, Conoco continuously considered several options:

1) Overtime Work.
Conoco authorized overtime work on several Saturdays and evenings. This was not generally effective. It seemed that the limiting factor was Wiese's capability of planning and directing the work.

2) Replace the Wiese Superintendent.
This would undoubtedly have introduced confusion and delay. Even if performance could be improved by this

move, the judgment was that time would be lost.

3) Cancel the Contract.

The judgment was that, even with the expectation of improving work progress by obtaining another contractor, this approach would have been counter-productive.

4) More Direct Supervision by Conoco.

This alternative was discussed extensively. It was a step that substantially increases Conoco's liability and exposure to added cost claims.

On October 4, in a weekly meeting with Wiese management, Wiese told Conoco they were projecting a labor over-run of over 20,000 man-hours. They also presented a list of grievances and problems, and asked for Conoco's help.

A major problem stated by Wiese was that they felt the inspection requirements were unrealistically strict. In fact, it was obvious that the real problem was Wiese's inability to determine what is to be done and to assign their forces to get it done.

In addition to going to any extreme to resolve Wiese's stated problems, Conoco assigned an engineer to work directly with the Wiese forces to:

1) List for them the work required to complete a system.

2) Plan the procedure for hydrostatic testing.

3) Witness the testing.

Wiese expressed a willingness to proceed this way, and to assign the appropriate crews to this work.

The more direct Conoco participation resulted in achieving completion of desired systems for the first time, although overall efficiency was still below normal.

Conoco deleted certain work from Wiese's contract, and avoided assigning any further work. These items were accomplished with another contractor after Wiese moved out.

APPENDIX Y

MANPOWER PROJECTIONS AND CONSTRUCTION SCHEDULE - INCINERATOR PROJECT

(04)

WICSE PROBLEM

WICSE REVISED SCHEDULE FOR 9-16 COMPLETION

WICSE MOVED IN
TEAMSTER STRIKE STARTED
PICKETS DOWN @ NOON
CONDITIONS MOVING BACK IN
WORK RESUMED
MILLWRIGHTS STRIKE
PICKETS DOWN @ 1ES
WORK RESUMED
CONOCO DATA SHOWED WICSE AHEAD OF SCHED)
WICSE BEHIND
MET WITH WICSE THEY SAID THEY WERE CONFIDENT OF 9-16
CONOCO DATA SHOWED WICSE STRUGGLING, BUT IMPROVING
MET WITH WICSE - THEY AGREED TO PROVIDE ADDL SUPV
ADDL WICSE SUPV ON JOB
CONOCO DATA SHOWED WICSE PROGRESS POOR
WICSE PROVIDED NEW PLAN FOR IN PRIORITY COMPL 9-16
McCORMICK (CMED) STARTED EVALUATION
OF SCHEDULE (CCPM)

MET WITH WICSE - PRESENTED OUR REQT FOR
PHASED COMPLETION BY OCT 9 - WICSE
COMMITTED TO THAT
MET WITH WICSE - THEY SAID THEY WOULD GET
BACK TO US OVER

ESTABLISHED THAT CONOCO WOULD
1) REVIEW ANALYSIS
2) PLAN TESTING
3) VERIFY SCHEDULE
ALSO AGREED TO SEND ADDITIONAL MATERIALS

#1 INCINERATOR
PIPING & EQUIPMENT

THRU TUESDAY 9-26-78

	TOTAL EST. MH.	EARNED M.H.	%	MH TO GO
EQUIPMENT	3940	3557	90	383
PIPING INSTALL.	14050	11034	79	3016 *
FABC 1" & LESS)	2808	2387	85	421
STRUCT	1639	1147	70	492
STEAM TRACE	282	0	0	282
S.T. FIELD	22719	18,125	80	4594
SHOP FAB 3"+	5717	5602	98	115
SHOP FAB 1½ & 2"	3149	3149	100	0
TOTAL	31585	26876	85	4709

* includes ca 1000 hrs. testing

OCT 16

16858

#1 INCINERATOR
PIPING & EQUIPMENT

THRU TUES, 9-19-78

	TOTAL EST MH	EARNED MH	%	MH TO GO	
EQUIPMENT	3940	3441	87		499
PIPING INSTALLATION	14050	9705	69	C346-8	4345
FABRICATION (1" & LESS)	2808	2106	75		702
STRUCTURAL	1639	1131	69		508
STAGING	282	0	0		282
" ST. FIELD	22719	16383	72.1		6336
~~Shop~~ FAB 3"+	5717	5602	98		115
SHOP FAB 1½ & 2	3149	3149	100		0
TOTAL	31585	25134	79.6		6451

6876
5134
1742
290
1452
6424

JFA
9-20-78

CCR 000019227

#1 INCINERATOR

PIPING & EQUIP (WICSE)

THRU TUESDAY 8-29-78

	TOTAL MH	EARNED MH	%
EQUIPMENT	3940	3073	78
PIPING INSTALL.	14050	8054	57
FABS (1" thru)	2808	1825	65
STRUCT	1639	934	57
STM TRACE	282	0	0
SUBTOTAL FIELD	22719	13866	61
SHOP FAB 3"+	5717	5602	98
SHOP FAB 1½"&2"	3149	3149	100
TOTAL	31585	22637	71.7
		22067	
		Rosemary	69.6

58

WICSE THRU 9-5 71.4

JCA
8-29-78

#1 INCINERATION
PIPING & EQUIPMENT (UNITS)
(THRU FRIDAY, 8-18-78)

	TOTAL EST. M-H	EARNED M-H	%
EQUIPMENT	3940	2976	76
PIPING INSTALLATION	14050	6727	48
FABRICATION (1" & less)	2808	1544	55
STRUCTURAL	1639	802	49
STM. TRACE	282	0	0
SUBTOTAL FIELD	22719	12049	53%

per movement 44. low

SHOP FAB			
" 3"+	5717	5431	95%
1½ & 2"	3149	3149	100%
GRAND TOTAL	31585	20629	65.3

PIPING INST. DETAIL

IN PLACE	6244	3480	56%
WELD OUT	6622	3243	49%
TEST	1184	4	—
TOTAL	14050	6727	48%

CCR 000019229

FOR W/

	% COMP
EQUIP.	43 %
EQ. STEEL	66 %
UNDER	25%
2-6"	55%
-12"	55%
"24"	47 %
28"	0
SUPPORTS	44%
PIPE	44%
JOB	44%

TIME 3/10/10

EQUIP.	55 %	10
STEN. STEEL	78 %	20
2" & UNDER	32 %	
2½" - 6"	66 %	
8" - 12"	61 %	
14" - 24"	65 %	
OVER 24"	0	
MISC. P.E.	53 %	
TOTAL PIPE	52.5 %	
TOTAL JOB	53.1 %	

ATTN.

JOE FORD

7.25 7-14

35.5

8/2/78

Wiene

43.4% Complete as of 7/20/78

From Rosemary Tucker:

Week End	Est. M.P.	Est. % Comp.	Actual M.P.	Actual Comp.
8/4	92	55		
8/11	90	65		
8/18	84	75		
8/25	74	83		
9/1	62	90		
9/8	46	95		
9/16	29	98		
9/22	10	100		

Peak @ 90 men

4-14: 9 1/2

631

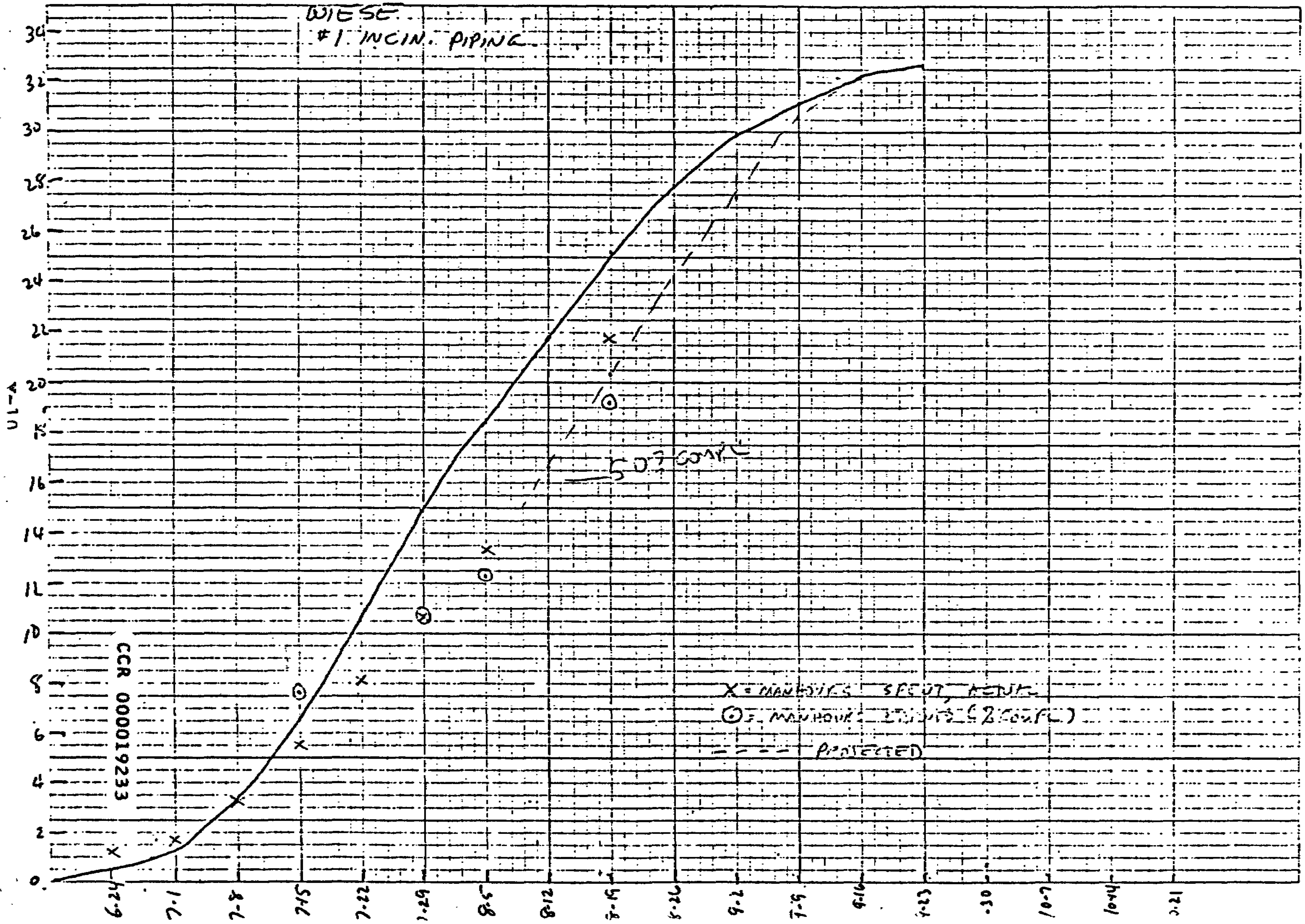
384

35,722

~~30,000~~

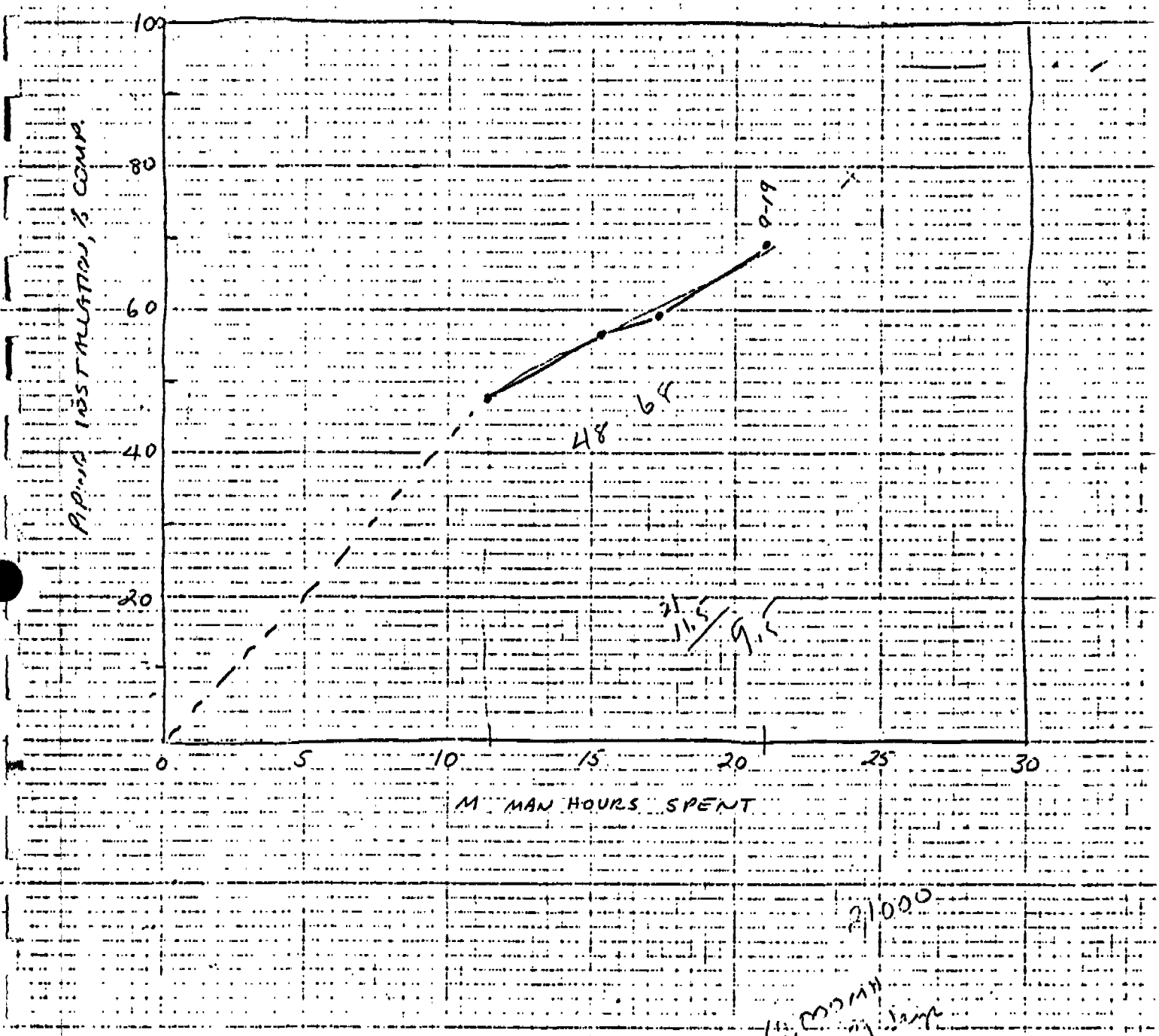
22,000

CCR 000019232



#2 INCINERATOR

PIPING INSTALLATION - WELSH



21000

11,500 man hrs

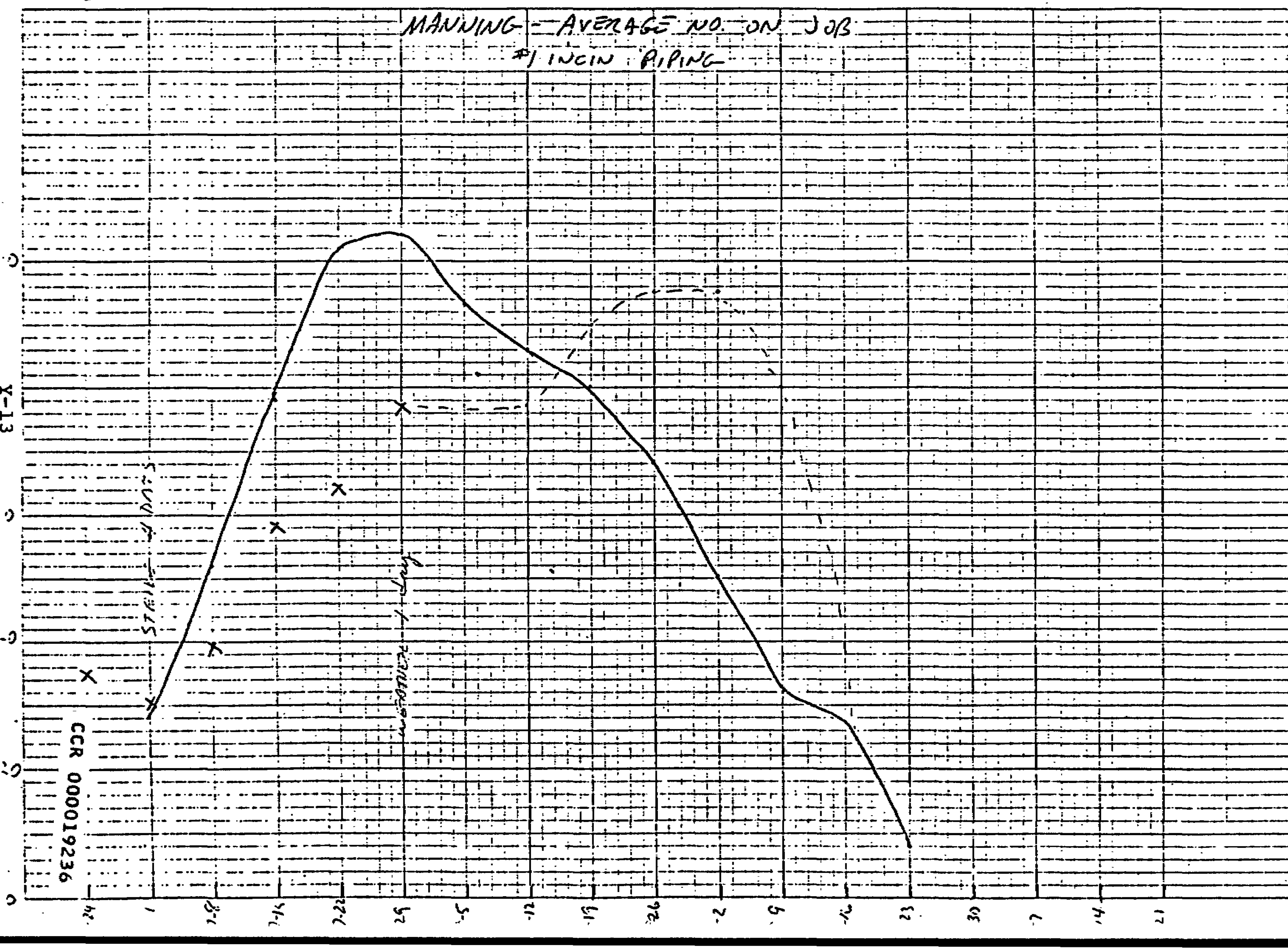
WEEK ENDING	"TARGET" MEN	"TARGET" CUM MH.	ACTUAL (PROJ) MEN	DAYS	WEEKLY M.H.	CUM. M.H.		% COMPL	MH EARNED
								16	0
6-24			35	5	1400	1400			
7-1	28	1120	30	1	240	1640			
7-8	52	[illegible]	39.4	5	1576	3216			
7-15	78	[illegible]	[illegible]	5	2336	5552		35.5	7566
7-22	102	[illegible]	63.8	5	2522	8104			
7-29	104	[illegible]	77.0	4	2464	10568		43.4	10631
8-5	93	[illegible]	77.6	4 1/2	2796	13364		48.0	12416
8-12	70	[illegible]	([illegible])		([illegible])	([illegible])		(52.2)	
8-19	80	[illegible]	([illegible])		([illegible])	([illegible])		([illegible]) 55.3	19128
8-26	68	27880	(95)		(3800)	(24164)		(78.3)	
9-2	50	29880	(95)		(3800)	(27964)		(88.1)	
9-9	32	31160	(80)		(3200)	(31164)		(96.3)	
9-16	27	32240	(27)		(1076)	(32240)		(99.1)	
9-23	8	32560	(8)		(320)	(32560)		(100.0)	
9-30	0								
10-7									
10-14									
10-21									

MH EARNED = (% COMPL - 16) 3[illegible]8

Y-12

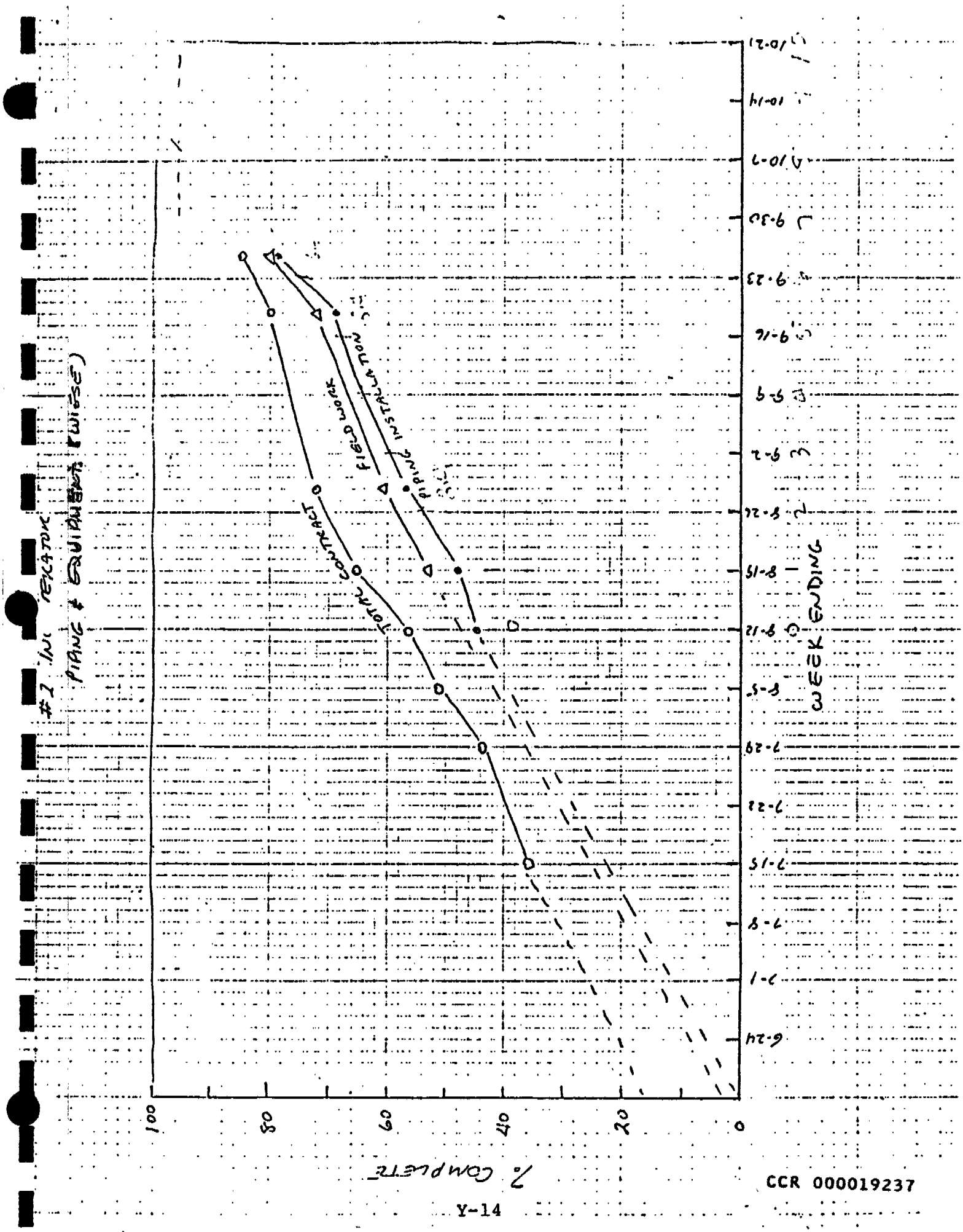
CCR 000019235

2.2



X-13

CCR 00019236



JIM DOYLE

The attached was prepared by me between July 29 and Aug 5, 1978.

The solid line shows the wire 9-16 completion schedule adjusted to 9-23-78 completion (to allow for 1 week strike.

The dotted line is a projection from the 7-29 actual data which shows the path required to recover to the 9-23 target.

JTA

10-15-78

% CONTRACT COMPLETE
#1 INCIN: PIPING
X = ACTUAL CONTRACT %
Δ = ACTUAL FIELD WORK %
o = ACTUAL PIPING INSTALLATION
% COMPLETION, 1-17-X
100
80
60
40
20
0
7-24
7-1
7-8
7-15
7-22
7-29
8-5
8-12
8-19
8-26
9-2
9-9
9-16
9-23
9-30
10-7
10-14
CCR 000019239

#1 LINE - DK

PIPING

WEEK ENDING	(A) WIESE 6-19: MEN	(A) WIESE 6-19: CUM MANHOURS	(A) WIESE ADJ. MEN	(A) WIESE ADJ. CUM MH.	(B) ACTUAL (PROJECTED) MEN	(B) ACTUAL (PROJECTED) CUM. MH.	8 FROM (A)	9 FROM (B)	10 ROCHMAN PLANNING	10 ROCHMAN %	ACTUAL (Proj.)	ACTUAL (Proj.) %
							16.0	16.0				10.0
6-24	28	1360				1400	16.0	17.6				
7-1	52	3440	28	1360		1640	17.5	20.2				
7-8	78	6560	52	3440		3216	24.9	24.3				
7-15	102	10640	78	6560		5552	32.9	30.3				35.5
7-22	104	14800	102	10640		8104	43.4	36.9				
7-29	93	18520	104	14800		10568	58.2	43.3		43.4		43.4
8-5	86	21960	93	18520	(77)	(13648)	63.8	51.2	92	55	77	55
8-12	80	25160	86	21960	(77)	(16728)	72.7	59.2	90	61	77	59
8-19	68	27880	80	25160	(50)	(20528)	80.9	69.4	54	75	50	69
8-26	50	29950	68	27880	(55)	(24128)	87.9	77.2	74	83	55	77
9-2	32	31160	50	29880	(95)	(27728)	93.1	86.1	62	90	95	86
9-9	27	32240	32	31160	(50)	(31128)	96.4	96.3	46	95	50	96
9-16	8	32560	27	32240	27)	(32247)	99.2	99.2	29	98	27	98
9-23	0		8	32560	(7)	(32567)	100.0	100.2	10	100	7	100.0
9-30			0	-								
10-7												
10-14												
10-21												

MANHOURS EARNED = (% COMPL - 16) (32560 / (100 - 16)) = (% - 16) 387

Y-18

CCR 000019240

APPENDIX Z

FOREMAN'S DAILY/WEEKLY REPORT

NT FORM 108 - 4/24/73

Foreman's Daily/Weekly Report

SUPERINTENDENT J. DAVIES

DATE

CHARGE NO.

N.T. JOB No.

BADGE NO.	NAME	CRAFT	S. T. Hours	O. T. Hours	Total Hours	Hourly Rate	Amount
1	J. DAVIES						

EQUIPMENT

WELDING MACHINE, GAS														
WELDING MACHINE, ELECTRIC														
PICKUP TRUCK														
CALIBRATION TRAILER & EQUIPMENT														
PIPE THREADING MACHINE														
HYDRAULIC CRANE														

TOTAL

CCR 000019242

NT NEWTON, INC.
INDUSTRIAL INSULATION SPECIALISTS
BATON ROUGE, LOUISIANA

NT FORM 103 - 4/24/73

Foreman's Daily / Weekly Report

SUPERINTENDENT J. DAVIES

DATE

CHARGE NO.

NT JOB No.

BADGE NO.	NAME	CRAFT	S. T. Hours	O. T. Hours	Total Hours	Hourly Rate	Amount
	J. DAVIES						

EQUIPMENT

WELDING MACHINE, GAS

WELDING MACHINE, ELECTRIC

PICKUP TRUCK

CALIBRATION TRAILER & EQUIPMENT

PIPE THREADING MACHINE

HYDRAULIC CRANE

TOTAL

CCR 000019243

NT FORM 108 - 4/24/73

Foreman's Daily / Weekly Report

SUPERINTENDENT J. DAVIES

DATE

CHARGE NO.

NT JOB No.

BADGE NO.	NAME	CRAFT	9-4-78	9-5-78	9-6-78	9-7-78	9-8-78				S. T. Hours	O. T. Hours	Total Hours	Hourly Rate	Amount
	J. DAVIES														

EQUIPMENT

WELDING MACHINE, GAS

WELDING MACHINE, ELECTRIC

PICKUP TRUCK

CALIBRATION TRAILER & EQUIPMENT

PIPE THREADING MACHINE

HYDRAULIC CRANE

TOTAL

[illegible]

Foreman's Daily [illegible] Report

SUPERINTENDENT J. DAVIES

DATE

CHARGE NO.

[illegible] JOB No.

BADGE NO.	NAME	CRAFT	9/11/78	9/12/78	9/13/78	9/14/78	9/15/78				S.T. Hours	O.T. Hours	Total Hours	Hourly Rate	Amount
	J. DAVIES		8	8	8	8	8					40			617.6

EQUIPMENT

WELDING MACHINE, GAS

WELDING MACHINE, ELECTRIC

PICKUP TRUCK

CALIBRATION TRAILER & EQUIPMENT

PIPE THREADING MACHINE

HYDRAULIC CRANE

TOTAL

APPROVED BY

Z-5

CCR 000019245

NEWMAN, INC.

NT FORM 100 - 4/24/73

Foreman's Daily / Weekly Report

SUPERINTENDENT J. DAVIS

DATE

CHARGE NO.

NT JOB No

BADGE NO.	NAME	CRAFT	S. T. Hours	O. T. Hours	Total Hours	Hourly Rate	Amount
							617.6

EQUIPMENT

WELDING MACHINE, GAS

WELDING MACHINE, ELECTRIC

PICKUP TRUCK

CALIBRATION TRAILER & EQUIPMENT

PIPE THREADING MACHINE

HYDRAULIC CRANE

TOTAL 617.6

APPROVED BY: _____ 4-7

CCR 000019246

APPENDIX AA

PIPEFITTERS AND WELDERS - HIGH RATE OF TURNOVER

IDER	PFW		
	Bill Gardner	3-16-78	3-27-78
45 ✓	A. W. Graham	4-5-78	8-7-78
16 ✓	Kenneth Sandy	3-22-78	8-23-78
	Robert L. Fontenot	8-11-78	8-23-78
23	J. W. Wilson	3-30-78	4-12-78
97	Billy M. Williamson	8-8-78	9-5-78
	~~Joe J. Wilkie~~	~~9-28-78~~	~~9-29-78~~
26	James Venable	3-29-78	4-7-78
169	Joseph P. Vegina	8-25-78	9-5-78
97 ✓	Joseph R. Manuel	8-21-78	8-23-78
76	Kenneth W. Miller	7-14-78	9-26-78
	~~Louis E. Elender~~	~~3-29-78~~	~~3-29-78~~
	~~Ronald Chargois~~	~~4-11-78~~	~~4-12-78~~
34 ✓	Jerry Bratches	8-15-78	8-21-78
54	Norman Arena	8-21-78	8-25-78
17 ✓	Ronnie W. Nairn	7-28-78	8-11-78
78 ✓	Vernon L. Gilbert Jr.	9-5-78	11-7-78
23 ✓	A. D. Lyons	8-15-78	9-12-78
25	Robert L. Ford	8-23-78	9-19-78
19	Ernest Cather	8-25-78	9-5-78
✓	Dexter Helent	9-8-78	9-26-78
55	A. B. Highsmith	4-17-78	7-7-78
	~~Alvin Fabillary~~	~~3-30-78~~	~~3-31-78~~
13	Gilbert Greenidge	9-29-78	still out here
46 ✓	Harold Sandy	8-28-78	still out here
53	Donald Chasson	8-28-78	still out here
7 ✓	R. E. Vincent		still out here
58 ✓	Cash Reniers	8-17-78	still out here

Pass Number	Name PEW	Hired	Quit
22 ✓	Terry Istre	9-6-78	still out here
179	Roger Chaisson	8-28-78	still out here
49	Faye Hamilton	4-10-78	still out here
59	Thomas Johnson	4-20-78	still out here
✓	Joseph R. Manuel	8-31-78	8-31-78
	~~Ronnie Williamson~~	~~8-24-78~~	~~8-24-78~~
✓	Bill Gardner	9-14-78	9-20-78
	Ernest McInnis Cathey	8-22-78	8-23-78
	Robert McClarity	4-5-78	14-6-78
	~~Steve Radosevich~~	~~9-26-78~~	~~9-27-78~~
	~~Calvin Rushell Jr.~~	~~8-24-78~~	~~8-24-78~~
	~~C. M. Brooks Jr.~~	~~9-5-78~~	~~9-6-78~~
	~~Earl Tuttle~~	~~8-8-78~~	~~8-9-78~~
	~~Kenneth Mallory~~	~~8-31-78~~	~~9-1-78~~
	~~Charles N. Pitalloy~~	~~9-13-78~~	~~9-13-78~~
	~~Fred Lee~~	~~9-6-78~~	~~9-6-78~~
	[illegible]	[illegible]	[illegible]

(This document is supplied by H.E. Wiese)

APPENDIX BB

PEDCo'S CORRESPONDENCE WITH INCINERATOR MANUFACTURERS

BRULÉ INCINERATORS
13920 South Western Avenue, Blue Island, Illinois 60406
DIVISION OF BRULÉ C. E. & E., INC.

Telephone: 388-7900
Area Code 312
Cable Address: BRUINCIN
Telex 25-3287

March 12, 1979

Pedco Environmental, Inc.
P. O. Box 20337
Dallas, Texas 75220
Attn: Mr. Herbert J. Belknap

RE:

Dear Mr. Belknap,

In response to your letter of February 27, 1979 we offer the following comments.

1) Brule' did not have one or more portable incinerators available for use on a temporary basis for incinerating vinyl chloride.

2) The original delivery schedule was approximately 13 weeks after receipt of approved drawings.

   Shipment of equipment was made on August 25, 1978. A copy of the bill of lading is attached for reference.

3) The delivery of the equipment was extended due to design improvements, for added corrosion protection, and equipment life.

   It should be noted that the equipment proposed and ordered by was designed to meet the 10 ppm vinyl chloride emission limit.

4) On July 6, 1978, Brule' advised by letter that shipment was scheduled for approximately August 1, 1979. As noted previously, Brule' made shipment on August 25, 1979.

We trust the above answers your questions concerning this program.

Yours truly,

BRULE' ("BRU-LAY") INCINERATORS
BRULE' C. E. & E., INC.

L. J. Moore

LJM:lsh
Enclosures

CCR 000019251

PEDCo ENVIRONMENTAL, INC.

MEMORANDUM

TO: Project File

DATE: March 13, 1979

SUBJECT: Communication With Incinerator Manufacturers

FROM: Dilip Mehta

FILE: PN 3470-1-H

cc:

On March 9, 1979, Dennis Carson, John Zink Pollution Research Division, Tulsa, Oklahoma was contacted to determine the availability of the portable incinerator on a temporary basis. It was learned that a portable incinerator must be designed specifically for the job and it would take John Zink approximately six to nine months to deliver a skid mounted portable incinerator.

On March 9, 1979, Product Manager, Trane Thermal Company, Conshocken, Pennsylvania was contacted to determine the availability of portable incinerator. It would take Trane Thermal approximately nine months to deliver a portable incinerator.

APPENDIX CC

INVENTORY SUMMARY

INVENTORY SUMMARY
PERIOD ENDING 6:00* 1/ 1/79

---EDC---

TANK	SERVICE	INVENTORY	% FULL
450	DRY CRUDE	1155826.	18.5
451	PURE	8662965.	83.1
-452	SALES EDC	105.	0.0
453	WET CRUDE	1499770.	34.7
460	SLOP	37643.	11.3
	SUB TOTAL	11356309.	
	DOCK LINE	109242.	
T-415	DOCK TANK	5836892.	39.4
	LOADED CARS	0.	
	SUB TOTAL	17302443.	
	PROCESS INVENTORY	1303300.	
	TOTAL EDC	18605744.	

PRODUCTION
PERIOD
8546628.

MONTH TO DATE
91212952.

YEAR TO DATE
1099335274.

6396.8
410.4
6757.2

---BY PRODUCTS---

TANK	SERVICE	INVENTORY	% FULL.
T-402	LIGHT ENDS	243458.	36.0
	STORED	0.	
	TOTAL INV.	243458.	
T-405	TAR	542905.	84.2
	STORED	0.	
	TOTAL INV.	542905.	

---TARS PRODUCTION---

DAILY	CUMULATIVE
90224.	1157142.

---VINYL CHLORIDE---

TANK	INVENTORY	% FULL	METER	PRODUCTION PERIOD	#2
T-401A	79577.	11.4			
-401B	512488.	77.8	5,001,200	3 (531776. / 1.77)	5,286,763
-401C	152094.	22.5			
T-411A	6177271.	91.6		MONTH TO DATE	
T-411B	6470669.	95.7	51,204,600	54157041.	53,843,473
-411C	6056321.	90.8			
T-411D	3508756.	34.9			
	SUB TOTAL 22957176.			YEAR TO DATE 662309814.	
	VINYL LINE 561142.				
	CERTAINTEED 139079.				
	LOADED CARS 0.				

TOTAL LOADED CARS = 0.

	CAR SIZE	CARS OFF SPEC	READY TO SHIP	TOTAL STORAGE
SUB TOTAL 23657397.	20	0	0	0
PROCESS INVENTORY 196670.	26	0	0	0
	30	0	0	0
TOTAL VINYL 23854067.	38	0	0	0

CC: DAS, JAD, HLS, JHB, PLF, SHIFT SUPERVISORS

CCR 000019254

** INVENTORY SUMMARY **
PERIOD ENDING 09/12/ 1778

--EDC--

TANK	SERVICE	INVENTORY	% FULL	PRODUCTION
450	DRY CRUDE	2063042.	34.1	PERIOD
451	PURE	6409511.	60.8	3031704.
452	SALES EDC	105.	0.0	
453	WET CRUDE	2238493.	51.4	MONTH TO DATE
460	SLOP	38613.	11.5	87852934.
	SUB TOTAL	10749764.		YEAR TO DATE
				1008156271.
	DOCK LINE	109242.		
415	DOCK TANK	13808869.	94.0	
	LOADED CARS	0.		
	SUB TOTAL	24667875.		
	PROCESS INVENTORY	1303300.		
	TOTAL EDC	25971175.		

2016.2
145.9
2161

--BY PRODUCTS--

TANK	SERVICE	INVENTORY	% FULL
102	LIGHT ENDS	253536.	37.8
	STORED	0.	
	TOTAL INV.	253536.	
405	TAR	488749.	75.2
	STORED	0.	
	TOTAL INV.	488749.	

--TARS PRODUCTION--

DAILY	CUMULATIVE
18713.	1073325.

--VINYL CHLORIDE--

TANK	INVENTORY	% FULL	METER	PRODUCTION	PROGRAM #2
401A	82083.	11.8		PERIOD	
401B	154745.	22.9	1,663,000	1692337.	1,876,177
401C	466527.	74.1			
411A	143224.	1.5		MONTH TO DATE	
411B	2892083.	42.8		52958724.	
411C	2658979.	39.2	50,532,000		52,363,695
411D	358515.	3.0			
	SUB TOTAL 6776961.			YEAR TO DATE	
				608173771.	
	VINYL LINE 561142.				
	CERTAINTEED 139079.				
	LOADED CARS 0.				

TOTAL LOADED CARS = 0.

	SUB TOTAL 7477182.
	PROCESS INVENTORY 196670.
	TOTAL VINYL 7673852.

CAR SIZE	CARS OFF SPEC	READY TO SHIP	TOTAL STORAGE
20	0	0	0
26	0	0	0
30	0	0	0
38	0	0	0

BDG,JAD,BDC,JBB,PLF,SHIFT SUPERVISORS

CCR 000019255

[illegible]

--EDC--

	SERVICE	INVENTORY	% FULL		PRODUCTION
					PERIOD
50	DRY CRUDE	43450.	0.7		3230906.
51	PURE	8220334.	85.0		
52	SALES EDC	165.	0.0		
53	WET CRUDE	1074490.	24.9		MONTH TO DATE
50	SLOP	39431.	11.9		103655036.
	SUB TOTAL	10147609.			YEAR TO DATE
					920264375.
	DOCK LINE	109242.			
15	DOCK TANK	12144500.	82.7		
	LOADED CARS	0.			
	SUB TOTAL	22401551.			
	PROCESS INVENTORY	1303300.			
	TOTAL EDC	23704851.			

2063.9
157.4
22213

--BY PRODUCTS--

	SERVICE	INVENTORY	% FULL		
402	LIGHT ENDS	324728.	48.6		
	STORED	0.			
	TOTAL INV.	324728.			
405	TAR	515233.	80.6	--TARS PRODUCTION--	
				DAILY	CUMULATIVE
	STORED	0.			
	TOTAL INV.	515233.		65010.	1,441,807.

--VINYL CHLORIDE--

		INVENTORY	% FULL	METER	PRODUCTION	PROGRAM #2
01A		81704.	11.7		PERIOD	
01B		84872.	12.4	1,690,000	1730080.	1,779,457
01C		416723.	63.9			
11A		6001123.	90.7		MONTH TO DATE	
1B		4999176.	75.6	54,467,700	58150669.	58,118,986
1C		1842459.	27.3			
11D		659173.	5.9			
	SUB TOTAL	14085290.			YEAR TO DATE	
					555194048.	
	VINYL LINE	561142.				
	LOADED CARS	417784.				
	SUB TOTAL	15064216.				
	[illegible] INVENTORY	120670.				
	TOTAL VINYL	[illegible]				

TOTAL LOADED CARS = 0.

CAR SIZE	CARS OFF SPEC	READY TO SHIP	TOTAL STORAGE
20	0	0	0
26	0	0	0
30	0	0	0
33	0	0	0

[illegible]

[illegible] SUMMARY [illegible]
[illegible] 1/73
CORPUS CHRISTI USA

--EDC--

	SERVICE	INVENTORY	% FULL
00	DRY CRUDE	43289.	0.7
1	PORT	8806349.	85.1
02	SALES RDC	109.	0.0
23	WET CRUDE	1033640.	24.1
0	SLOP	40722.	12.3
	SUB TOTAL	9924109.	
	DOCK LINE	109242.	
15	DOCK TANK	11943647.	79.0
	LOADED CARS	0.	
	SUB TOTAL	21976998.	
	PROCESS INVENTORY	1303389.	
	TOTAL EDC =	23280195.	

PRODUCTION
PERIOD
5945220.

MONTH TO DATE
100504722.

YEAR TO DATE
817337847.

--BY PRODUCTS--

	SERVICE	INVENTORY	% FULL
02	LIGHT ENDS	281603.	42.4
	STORED	0.	
	TOTAL INV.	281603.	
05	TAR	508136.	80.4
	STORED	0.	
	TOTAL INV.	508136.	

--TARS PRODUCTION--

DAILY	CUMULATIVE
48782.	1312162.

--VINYL CHLORIDE--

	INVENTORY	% FULL	METER	PRODUCTION PERIOD	PROGRAM #2
401A	82229.	11.8			
401B	260819.	39.6	3,515,000	3640834.	3,765,879
01C	489531.	75.9			
11A	1934109.	28.8		MONTH TO DATE	
411B	6138913.	93.3	56,025,100	58342529.	57,585,176
11C	6312601.	96.0			
11D	195353.	1.1			
	SUB TOTAL 19412810.			YEAR TO DATE 497043359.	
	VINYL LINE 561142.				
	LOADED CARS 0.			TOTAL LOADED CARS = 0.	

IS 401B GOING DOWN IN 5 HRS ... PLEASE LOAD OFF 401 C(14)
IS 401B GOING DOWN IN 2 HRS ... LOAD OFF 401 C(14)

		CAR SIZE	CARS OFF SPEC	READY TO SHIP	TOTAL STORAGE
	SUB TOTAL 1597395.	20	0	0	0
	PROCESS INVENTORY 196070.	25	0	0	0
		30	0	0	0
	TOTAL VCM 1793465.	33	0	0	0

CCR 000019257

[illegible] 3,863,011. [illegible]

INVENTORY SUMMARY

PERIOD ENDING** 0600*09/01/78

--EDC--

SERVICE	INVENTORY	% FULL	PRODUCTION PERIOD
DRY CRUDE	3855660.	0.2	
PURE	8910394.	82.0	3431743.
SALES EDC	105.	0.0	
WET CRUDE	1200210.	28.1	MONTH TO DATE
SLOP	41217.	12.6	98918439.
SUB TOTAL	10143466.		YEAR TO DATE
			716883125.
DOCK LINE	109242.		
DOCK TANK	5106846.	35.0	
LOADED CARS	0.		
SUB TOTAL	15359553.		
CESS. INVENTORY	1303300.		
TOTAL EDC	16662853.		

--BY PRODUCTS--

TARS PRODUCTION

SERVICE	INVENTORY	% FULL	DAILY	CUMULATIVE
LIGHT ENDS	233692.	35.4		
TAR	467152.	73.7	33,448	1,269,115

--VINYL CHLORIDE--

	INVENTORY	% FULL	METER	PRODUCTION PERIOD	PROGRAM #2
01A	78126.	11.1			
1B	82018.	11.7	1,856,000	1711265.	1,909,397
1C	489333.	70.3			
11A	71517.	0.0		MONTH TO DATE	
1B	1798779.	26.8	53,976,700	57111144.	56,901,784
1C	1471393.	21.7			
11D	196425.	1.0			
SUB TOTAL	4187594.			YEAR TO DATE 438700630.	
VIRTL LINE	961142.				
LOADED CARS	0.			TOTAL LOADED CARS = 0.	

		CAR SIZE	CARS OUT OF SERVICE	READY TO SHIP	TOTAL STORAGE
SUB TOTAL	4748736.	20	0	0	0
LESS INVENTORY	196670.	70	0	0	0
		80	0	0	0
TOTAL VIRTL	4948406.	38	0	0	0

APPENDIX DD

COST DATA - INCINERATOR PROJECT

conoco

Conoco Chemicals Company
A Division of Continental Oil Company
5 Greenway Plaza East
P O Box 2197
Houston, Texas 77001

December 4, 1978

Mr. Howard G. Bergman, Director
Enforcement Division
U.S. Environmental Protection Agency
First International Building
1201 Elm Street
Dallas, Texas 75720

Dear Mr. Bergman:

The information in this letter responds to your request sent in a Telex to Mr. Jim DeBernardi, our VC plant manager, on 11/28/78. Please understand that the answers to your questions can vary many ways, depending upon interpretation. As we have discussed with you and your staff by phone, it is our intent to provide answers using assumptions consistent with what we believe to be the final use of this information. Specifically, we understand the answers will provide a basis to assess a penalty for noncompliance using the EPA formula and we believe that it attempts to match the penalty to the money saved by the company during the period of their noncompliance. We therefore attempted to quantify the money not spent because the emission control system was not in operation. Only capital expenditures and O&M costs that are associated with equipment necessary to comply with the standard are given. Please keep us advised of questions that arise in using this information so no misunderstandings about our case arise before the penalty panel.

TOTAL CAPITAL EXPENDITURE

Total capital expenditure was estimated from the most recent project report (dated 11/29/76). It is divided into expenditures actually made through October, 1978 and the projected amount left to be spent until completion of the project. These are set out below.

Total spent through 10/31/78	$ 5,523,124
Expenditures projected after 10/31/78	356,876
Total capital expenditure	5,880,000

OPERATING AND MAINTENANCE COSTS

O&M costs must be based on budget projections because we have no operating experience with the control system. The budgets were prepared from design calculations and factors normally used in estimating economics of capital projects.

Operating cost includes operating payroll, processing supplies and utilities. Payroll cost is already being incurred for operator training and prestart-up even though the control equipment is not in operation. Costs can be deferred, however, for supplies and utilities. These are estimated to be as follows:

Deferred Operating and Maintenance Cost	$349/Day

The annual deferred O&M cost requested is not given because an operation change will occur during the year. At first, we will burn natural gas to sustain incineration of the process vents. Later we plan to utilize light ends and/or bottoms to conserve the natural gas. Estimate the annual cost by multiplying the daily cost by 365.

Maintenance costs include maintenance payroll, materials and contract costs. Even though the control system is not operating, money is being spent here prior to start-up on precommissioning activities. It is estimated that the cost of these activities about equals the cost budgeted for maintenance and will continue to do so throughout the prestart-up period so even though the equipment is not operating, no maintenance cost savings are being realized.

ESTIMATED ADDITIONAL COSTS DUE TO DELAYED START-UP

Because it is recognized that EPA's penalty policy attempts to penalize the company for money "saved" by delayed compliance, the EPA should therefore be interested in estimated additional costs we have incurred because of the strike delay. Examples of some, but not all, of these are:

Office rental	$ 876.00
Toilet rental	519.00
Office equipment rental	1,102.00
Temporary personnel	6,414.00
Total	$8,911.00

Sincerely,

David A. Kuhn
Director of Biomedical and
Environmental Affairs

/vm

CCR 000019261

Jim DeBernardi

CONOCO

To Mary Ann Fisher Date 3/16/79

Attached is info. I received from Welsh of AGC related to the Pedco visit to his office. I kept a copy for my file, & did not send one to Berry St. John.

LAKESIDE INDUSTRIAL RELATIONS AND SERVICES

816-818 North Lakeshore Drive
JAMES R. WELCH
General Manager

Telephone: (318)436-1576
P. O. Box 836
Lake Charles, Louisiana 70602

March 12, 1979

Continental Oil Company
Attn: Mr. Ed Lively
9001 Lakeshore Drive, Suite 1004
Lake Charles, LA 70601

Dear Ed:

Enclosed are copies of the calling cards presented to me by representatives of Pedco Environmental, Inc. on March 1st and the written questions they presented me.

I did not give written responses to the questions. I did respond orally and they wrote their own answers. They seemed to be interested in the availability of pipefitters after the strike. Listed below are the figures I gave them for pipefitters as being employed and emphasized that they did not include all industrial projects in the area.

Pipefitters Employed:

April	1978		764
May	1978	Strike-partial reports	96
June	1978	Strike not settled until 6/14/79 partial reports	449
July	1978	Report reflects	707
August	1978		834
September	1978		773
October	1978		841
November	1978		867
December	1978		870

I told Pedco that there is a total membership of construction journeymen pipefitters in Local 106 of 800-900. They wanted to know the possibility of working scheduled overtime after the strike and I explained the impracticality due to loss in productivity cost overruns and effects upon other jobs in the area.

Pedco did not ask any specific question about any particular job or industrial owner. All of the questions concerned the area in general. During the discussion they volunteered that they were also investigating PPG Industries and Certain-Teed Corporation.

On March 8th during discussions with W. E. Vincent, Secretary to the Building Trades Council, he stated they had called him and stated they were investigating Olin. He said he was unsure as to who they were and that if they wanted to talk about Olin that maybe Olin's people should participate in the discussion. He has not heard anything further from them and has since contacted Herring at Olin.

Sincerely,

James R. Welch
Manager

THOMAS C. PONDER, JR. P.E.

Charlotte Chas. 882-6230

PEDCo ENVIRONMENTAL, INC.
P.O. BOX 20337
DALLAS, TEXAS 75220
(214) 259-3577

HERBERT J. BELKNAP, PH.D.

PEDCo ENVIRONMENTAL, INC.
P.O. BOX 20337
DALLAS, TEXAS 75220
214/259-3577

DILIP MEHTA

PEDCo ENVIRONMENTAL, INC.
P.O. BOX 20337
DALLAS, TEXAS 75220
(214) 259-3577

Interview Guide-Labor Officials

1. Copy of union contract and rules.

2. What is your assessment of the labor market in May 1978?

3. What was the work load and the labor supply in May 1978?

4. Did the labor force migrate out of the area during the strike?

5. Is there a seasonal labor force migration in and out of the area? Explain.

6. Was there any way that the companies could have kept the construction workers on the job during the strike?

7. Could the strike have been avoided? Explain.

8. How long in advance did the companies or the unions know that a strike was likely to occur? That a strike was inevitable?

9. What was the work load and the labor supply after the strike?

July_____

August_____

September_____

October_____

10. After the strike, was the possibility of working day and night shifts practical?_____

_____

_____

11. Considering local conditions, was the use of scheduled overtime to reduce construction time practical? Explain.

_____

_____

_____

United States
Environmental Protection
Agency

Region 6
1201 Elm Street
Dallas TX 75270

Arkansas, Louisiana,
Oklahoma, Texas,
New Mexico

EPA

FEB 27 1979

Mr. Berry St. John
Lisgow and Lewis
One Shell Square, 54th Floor
New Orleans, Louisiana 70139

Re: National Emission Standards for Hazardous Air Pollutants
Standards for Vinyl Chloride, 40 CFR Part 61, Subpart F

Dear Mr. St. John:

As agreed at our meeting on Thursday, February 15, 1979, with your client, Conoco Chemicals Company, and EPA's contractor, PEDCO Environmental, Inc., transmitted herewith is a signed copy of the Task Request which outlines the scope of work for which PEDCO has been contracted.

This is to also affirm our agreement to provide to you a copy of PEDCO's Final Task Report on Conoco Chemicals Company's vinyl chloride plant at Westlake, Louisiana when the subject report has been completed and received by this office.

Sincerely,

Martin E. Brittain

Martin E. Brittain, P.E.
Chemical Engineer
Air Compliance Branch (6AEAE)

Enclosure

cc: Ms. Nancy Long w/enclosure
U. S. Department of Justice

Ms. Frances O. Allen w/enclosure
Assistant U. S. Attorney

Ms. Diana Dutton, Director
Enforcement Division (6AE)
EPA Region 6

CCR 000019268

TASK REQUEST

CONTRACT # 68-01-4147

ENVIRONMENTAL PROTECTION AGENCY

CONTRACTOR PEDCO

Division of Stationary Source Enforcement

TASK 84

TECHNICAL SERVICE AREA 1

TASK

The contractor shall furnish facilities, materials, and the necessary professional, technical, and supporting personnel for performance of the work required by this task.

TITLE	Investigation and analysis of circumstances associated with the delayed compliance of four vinyl chloride sources in Region 6 continuing after the statutory deadline of October 21, 1978.
MANHOURS	1000
MONTHS	4 months

	Address	
CONTRACT OFFICER	Mr. Edward McLean (PM-214-C) Environmental Protection Agency Contract Operations, Crystal Mall 2 401 M Street, S.W. Washington, D.C. 20460	Phone (703) 557-7432
	Signature	Date - Work Plan Approval
PROJECT OFFICER	Address Mr. John R. Busik (EN-341) Environmental Protection Agency 401 M Street, S.W. Washington, D. C. 20460	Phone (202) 755-2560
	J. R. Busik Signature	12-12-78 Date - Effective
TASK MANAGER	Address Martin Brittain Air Compliance Branch Enforcement Division US EPA Region 6 1201 Elm Street Dallas, TX 75270	Phone (FTS 729-2755)
REQUESTOR	Address Steve Hitte (EN-341) S.H. 12-12-78 401 M. Street S.W. W.D.C. 20460	Phone (202) 755-7927

	SIGNATURE APPROVALS	DATE
Acting SECTION CHIEF	Steven J. Hitte	12-12-78
BRANCH CHIEF	Richard Bronk for John Rasnic	12-12-78
BRANCH CHIEF		
DIVISION DIRECTOR	C. E. Rausch	12/12/78

I. Title

Investigation and analysis of circumstances associated with the delayed compliance of four vinyl chloride sources in Region 6 continuing after the statutory deadline of October 21, 1978.

II. Task Manager

Martin Brittain
Air Compliance Branch
Enforcement Division, Region 6
1201 Elm Street
Dallas, Texas 75270
(214) 767-2755
FTS-729-2755

III. Level Of Effort

Manhours: 1000 hours
Duration (from effective date): 4 months

IV. Background

On October 21, 1976, EPA under the authority of Section 112 of the Clean Air Act, promulgated NESHAPS Standards for the control of vinyl chloride emissions from certain sources. These standards are delineated in 40 CFR Part 61, Subparts A and F. Sources subject to these standards were allowed to request a Waiver of Compliance for a period of up to two years after the promulgation date. Thus, at the latest, final compliance with the NESHAPS Standards was required by October 21, 1978.

Four vinyl chloride sources located in Louisiana did not complete their compliance program by October 21, 1978, and are therefore in violation of Section 112, of the Clean Air Act. These four sources are the following:

1. PPG - Lake Charles, Louisiana
2. CONOCO - Westlake, Louisiana (Lake Charles Area)
3. Certain-Teed - Sulphur, Louisiana (Lake Charles Area)
4. Vulcan Materials - Geismar, Louisiana

Three of the sources (PPG, CONOCO and Vulcan Materials) indicated that unavoidable strikes were the cause of their delay, while Certain-Teed has cited a number of excuses including a strike, equipment delay, and bad weather.

Region 6's general strategy regarding these four sources is to proceed into federal court immediately with a temporary injunction in order to obtain a court ordered compliance schedule. The question of possible penalties will be left for a later decision pending the outcome of the investigation under this task order. Hopefully, this will avoid possible slippage of the compliance schedule because of extended litigation on the penalty question. Simultaneously, data will be obtained under this task order to assist in the determination of the amount of penalty to be assessed in each case, if any.

Specifically this task order will require the contractor to review records, conduct interviews and consult the literature and equipment vendors to determine the control measures that could have been implemented by the companies during and after the strike (equipment delay) that would have resulted in avoiding or reducing the delay of the compliance schedule. In addition, in their defense the companies have made certain statements as to what they were able to do and what they were not able to do to avoid part or all of the delay. The contractor will need to obtain independent information so as to substantiate or refute these company statements.

V. Scope of Work

The contractor will perform a detailed investigation and analyis of circumstances associated with the delayed compliance of the four vinyl chloride sources mentioned above. Specifically, the approach for this study will include the following:

1. Review EPA files on the four companies to obtain basic information such as plant and process data, specific waivers of compliance, and relevant company correspondence.

2. Review NESHAPS regulations, 40 CFR Part 61, Subparts A and F.

3. Conduct an investigation, including on site-visits as required, of the four companies to obtain relevant information to be used in the analysis. Specific objectives of the investigation will be to:

a. Identify methods which were available during all delayed construction periods and particularly between May 1, 1978, and October 21, 1978, to avoid or reduce construction delays caused by strikes (or equipment delays).

b. Determine whether the methods in a. could have been used.

c. Determine any adverse effects of the use of methods in a.

d. Determine the approximate cost of the methods in a.

e. Determine the extent that the methods in a. could have prevented emissions of vinyl chloride in excess of the standard after October 21, 1978.

In conducting the investigation the contractor shall employ a methodology that shall include, but not be limited to, the following:

a. Obtaining sworn statements from company officials;

b. Obtaining sworn statements from union officials and workers;

c. Evaluation of union contracts and rules, including obtaining relevant copies;

d. Identifying work practices in the Lake Charles and Geismar areas;

e. Identifying worker migration patterns.

4. Conduct on-site investigations at the four companies to obtain the following:

a. Identify methods which were available during all delayed construction periods and particularly between May 1, 1978, and October 21, 1978, to reduce vinyl chloride emissions by October 21, 1978, even using temporary methods.

b. Determine whether such methods in a. could have been used to reduce emissions of vinyl chloride to 10 ppm at some or all of the violating emission points.

c. Determine any adverse effects of the use of such methods in a., including delaying completion of the permanent control equipment and interferring with other plant operations.

d. Determine the approximate cost of such methods in a.

In addition to the on-site investigation the contractor shall review relevant literature and consult with vendors.

5. Review each of the proposed construction schedules and determine if it is the most expeditious for each of the four subject companies.

6. Provide data from which can be determined the capital cost and the operating and maintenance cost saved by each of the companies because of the delay in completion of the respective construction schedules, including the following:

a. A detailed listing of the nature (capital or operating and maintenance or other as specified), purpose, dates, and amounts of the cash flows, for the period of time from the first reported delay in the respective construction schedule, which each company

1. should have experienced in order to meet the October 21, 1978, deadline,

2. planned to experience to meet the October 21, 1978, deadline, and

3. did or will experience in order to comply fully with the vinyl chloride standard.

b. A comparison of the cash flows listed in subparagraph a above with a determination of which were delayed and for what reason.

VI. Phases of Investigation

1. Preparation - This phase pertains to steps 1 and 2 in the scope of work.

a. Outline of Task: Review EPA files and NESHAPS regulations.

b. Allotted length for completion: Two weeks.

c. Output at the end of the allotted length for preparation: Outline on course of action for investigation phase, including methodology.

2. Investigation - This phase pertains to steps 3 to 6 in the scope of work.

a. Outline of Task: Field investigation and collection of data.

b. Allotted length for completion: Two months.

c. Output at the end of the allotted length for investigation: Report relating to this phase of the study.

3. Analysis of Results

a. Outline of Task: Analysis of data obtained, conclusions developed.

b. Allotted length for completion: One month.

c. Output at the end of the allotted length for analysis of results: Final report.

VI. REPORTING REQUIREMENTS

Within fifteen (15) days from the effective date of this task, the Contractor shall prepare a work plan with estimated cost for accomplishing this task and submit one (1) copy of each to the Contract Negotiator, Project Officer, Task Manager and Requestor. The work plan shall include an introduction, project approach, schedule of work and staffing. The estimated cost shall include direct labor, overhead, special testing, special equipment, travel, consultants and subcontractors, other direct cost, administrative fee and profit. The cost estimate may be submitted using the Contract Pricing Proposal Form DD 633-4 or Option Form 60.

Within fifteen (15) calendar days after receipt of the work plan submitted by the Contractor, the Contracting Officer shall issue to the Contractor written approval or disapproval of the work plan. If EPA disapproves this work plan, the Contractor shall immediately stop work on the task for which the disapproved work plan was submitted pending resolution of the problem.

The Contractor shall submit monthly progress reports which summarize the data obtained and identify the manhours and cost expended during the previous calendar month. Each report shall be submitted on the fifteenth (15th) day of the calendar month which is the subject of the report. A copy of this report shall be sent to the Contract Negotiator, Project Officer, Task Manager and Requestor.

During the period of performance of this task, the Contractor shall immediately inform the Task Manager by telephone of any problems that may impede performance along with any corrective actions needed by the contractor or EPA to solve the problem.

The Contractor shall submit a Final Task Report summarizing the work completed under the task to the Contract Negotiator, Project Officer, Task Manager and Requestor at the end of the work period for the task. The Contractor shall maintain a file on all work documentation including raw data, calculations, assumptions, interpretations of regulations and source of information.

The Contractor may also be required to present expert testimony at administrative and/or legal proceedings on the results of his task for EPA, and State and local air pollution control agencies which EPA may designate.

The Contractor shall notify the Contract Negotiator, Project Officer, Task Manager and Requestor when 85% of all allocated manhours are expended in this task. The Contractor shall not exceed 110% of the manhours approved by the Contracting Officer for this task without written approval from the Contracting Officer.

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