



Interoffice Communication

RECEIVED

JUL 13 1979

To J. J. Hall - Houston
From W. V. Henry
Date July 9, 1979
Subject Daily Log of Persons Entering Regulated Areas

After receiving your letter of June 12, 1979 informing us that OSHA has revoked the requirement that a daily roster be made of persons who enter a regulated area, the VCM Plant, effective July 16, 1979 will no longer require personnel to sign in before entering a regulated area. We will still require that access to regulated areas be limited to "authorized persons".

This decision was made after careful consideration and we determined that this particular requirement is of a limited benefit in achieving the intended purpose, and therefore add unnecessary detail and do not substantially contribute to employee safety and health.

W. V. Henry
W. V. Henry *BGR*
Safety Director

br
cc:
JAD-RDG-DAK

VVC 000012550

VCM Plant

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

CERTIFIED MAIL #315645
RETURN RECEIPT REQUESTED

July 5, 1979

RECEIVED
JUL 10 1979

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

Dear Mr. Coerver:

The CONOCO Chemicals' VCM Plant in Westlake, Louisiana hereby requests a one year variance from LAC 14-11:22.8 for the vent from our direct chlorination reactor. The referenced regulation requires the incineration of waste gases containing halogenated hydrocarbons which have sufficient heating value to support combustion. The direct chlorination reactor vent falls under this regulation and is currently being incinerated. We feel, however, that there is a significant safety risk in continuing to incinerate this vent.

On January 2, 1979 the VCM Plant experienced an explosion in the direct chlorination vent knockout drum, S-500. Although it has been impossible to unequivocally explain the cause of the detonation, the most likely cause was a flash back from the vent gas incinerator which was propagated through a flammable mixture in the vent header. Damage from the explosion was not severe, however, there was some damage at the incinerator end of the header and at the direct chlorination reactor end of the header in addition to the knockout drum. Therefore, it is our evaluation that there was the potential for severe damage to the operating units as well as the entire vent header.

Currently, natural gas is charged to the direct chlorination reactor to prevent formation of flammable gas mixtures. The natural gas addition rate is set to maintain the system on the fuel rich side of the flammability envelope calculated for the system. In addition, in line flame arrestors at the incinerator are used to prevent flame flash back should a flammable mixture occur during a system upset. The recent explosion in S-500 has prompted concern over the safety of this system. Specific concerns are in the following areas:

- a) The chlorine feed to the direct chlorination reactor is supplied by PPG Industries. PPG frequently experiences upsets in their chlorine cells. Historically, elevated levels of air (oxygen

VVC 000012551

and nitrogen) have appeared in the chlorine feed supplied by PPG during these upsets. During these upsets the oxygen concentration in the direct chlorination reactor rapidly increases. Tremendous amounts of natural gas are required during upset conditions to maintain the gas mixtures in the system in a non-flammable region. The present natural gas addition system cannot supply the required amounts of natural gas. Also, the system itself limits the amount of natural gas which can be added. Therefore, flammable gas mixtures are present in the direct chlorination system during PPG chlorine cell upsets.

- b) Questions have recently been raised concerning the accuracy of the calculated flammability envelope currently used to set the natural gas addition rates. The present envelope applies for atmospheric pressure conditions. The direct chlorination system, however, is operated at pressures substantially greater than atmospheric. Data for calculating flammable compositions at pressures greater than atmospheric is unavailable at this time.
- c) Recent investigations have yielded concern over the present flame arrestors used on the direct chlorination vent. Contacts with companies and agencies which have tested flame arrestors similar to ours in pipeline service have indicated that the arrestors provide protection only within a limited range of gas mixtures. Our conclusion after these contacts is that our arrestors are not adequate for the service.

Granting a one year variance for the direct chlorination reactor vent would allow us to reroute the vent to the oxychlorination vent stack, C-500. This would allow us to isolate the vent from the flame source. Natural gas addition would be continued to prevent flash back from any other ignition sources such as lighting, static electricity, etc. Recycle EDC from the EDC recycle chlorinator will be by-passed around the direct chlorination system. This will reduce the vinyl concentration in the direct chlorination system to less than 10 ppm. Therefore, the VCM Plant will continue to comply with all federal vinyl chloride standards even though the vent will not be incinerated.

Rerouting the direct chlorination vent to C-500 will add 6.9% to the hydrocarbon emission listed in the present Emission Inventory Questionnaire (EIQ). Since this is less than a 10% increase, a revised EIQ is not being submitted at this time. A table of the present EIQ values as well as the increase associated with the rerouting of this vent is attached.

EMISSION INVENTORY - C-500 STACK

AVERAGE EMISSIONS IN TONS/YR

<u>Components</u>	<u>Present C-500 Vent as Defined in 1977 EIQ</u>	<u>Direct Chlorination Vent</u>
Carbon Monoxide	1,776	71
HCl	245	-
Cl ₂	29.9	-
Methane	172	668
Ethane	20	23
Total Non-Photochemically Reactive Components	<u>2242.9</u>	<u>762</u>
 VCM	 55.8	 1.9
C ₂ H ₄	479	196
Ethyl Chloride	2,001	.5
EDC	1,694	106
Others	188	1.0
Total Photochemically Reactive Hydrocarbons	<u>4,417.8</u>	<u>305.4</u>

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James F. Coerver
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July 5, 1979

This situation is temporary. Investigations into solvent adsorption and carbon adsorption which would remove the EDC and other chlorinated hydrocarbons from the vent are currently underway. Also, studies are being conducted to determine the feasibility of a pure oxygen based oxychlorination system. A pure oxygen oxy would allow the direct chlorination vent to be rerouted directly to oxy, thus eliminating the vent. In the meantime, development of better flammability data and investigation into adequate flame arrestors for the direct chlorination vent are continuing.

In view of the above information, we request a variance for this vent. If you have any questions, please contact G. L. Foshee, Chief Process Engineer at (318) 491-5052.

Sincerely,



J. A. DeBernardi
Plant Manager

is
BCC:
REL-DAK-CRH-HJN-MAF
GLF-PLF-JOG-JWW

VVC 000012554

J
VCM Plant

CERTIFIED MAIL #315643
RETURN RECEIPT REQUESTED

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

June 22, 1979

RECEIVED
JUN 26 1979

Mrs. Linda Hunter
Environmental Protection Agency
Permits Branch (6AEPAP) Region VI
First International Building
1201 Elm Street
Dallas, TX 75270

Dear Mrs. Hunter:

This letter is in response to your Public Notice dated May 26, 1979 (A.O. #9T-1133NALX) concerning CONOCO Chemicals Company VCM Plant's NPDES Permit No. LA0003476. Several errors have been noted in the fact sheet and in the proposed permit.

The following changes need to be made on the fact sheet:

- 1) In Sections 1.e.(1), 1.e.(2), and 1.e.(3), the outfall number should be changed from 001 to 201. Outfall 001 is the combination of the secondary waste treatment effluent (designated outfall 201) and the neutralization system effluent (designated outfall 101). In general, the combined effluent at 001 would be essentially the same as outfall 201. However, the effluent characteristics listed in Sections (1) and (3) are not monitored at 001. The permit should be referenced for specific monitoring location for each pollutant.
- 2) In Section 1.e.(3), the daily average COD concentration (mg/l) should be changed from 22.4 to 224.
- 3) In Section 2, Item Number (2) Modification request submitted January 4, 1978 should have the date changed to January 4, 1979. The order of the references should then be: 1) NPDES Standard Form C dated April 14, 1978; 2) Existing NPDES Permit effective December 15, 1978; 3) Modification request submitted January 4, 1979.
- 4) In Section 3.a., the proposed daily maximum limit on BOD in outfall Number 201 should be changed from 1375 lbs./day to 1350 lbs./day.

VVC 000012555

Mrs. Linda Hunter
Page 2
June 22, 1979

The following change should be made on Page 4 (Section A-3) of the proposed permit.

- 1) In the last statement on this page, the samples should be taken at the combined effluent box instead of the weir. There is no weir at this particular point.

Under Applicant Number 2 in the Public Notice, the applicant's mailing address should be changed to:

Conoco Chemicals Company - VCM Plant
Division of Conoco, Inc.
P. O. Box 605
Westlake, LA 70669

All addresses in the Permit and Fact Sheet should be changed accordingly since Continental Oil Company will officially change its title to Conoco, Inc. on July 1, 1979.

If there are any questions concerning these comments, please contact G. L. Foshee, Chief Process Engineer at (318) 491-5052.

Sincerely,


J. A. DeBernardi

is

CC: Diana Dutton - EPA
R. A. LaFleur - LSOC

BCC:
REL-DAK-CRH-HJN-MAF-RLH
GLF-PLF-JOG-JWW-HDG-DAP

VVC 000012556



VCM Plant

CERTIFIED #315644

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

June 21, 1979

RECEIVED
JUN 28 1979

High E. Wise, Jr.
Project Officer
Organic Chemicals Branch
Effluent Guidelines Division (WH-552)
United States Environmental Protection Agency
Washington, DC 20460

Dear Mr. Wise:

After receipt of your letter of June 7, 1979, we reviewed our files and found no record of the December, 1977 request for BAT Data as referenced in your letter. Mr. Paul Casidy of your office confirmed in a phone conversation that no data was requested in 1977. However, he stated that the data request of January 14, 1979 was also made under the authority of Section 308 of P.L. 92500; and our response would also be released to Catalytic, Inc. as part of the EPA contracts.

As was noted on our response to the January 14, 1979 request, CONOCO Chemicals Company considers the information supplied in the questionnaire confidential and requests that it be treated as such. We view the confidentiality agreement between the EPA and Catalytic, Inc. as binding between CONOCO and Catalytic, Inc., and feel that it gives CONOCO adequate protection. Therefore, we agree to the release of this information under these conditions.

Sincerely,

J. A. DeBernardi

sj

BCC

REL - DAK - CRH - HJN - MAF - GLF - PLF - JOG - JWW - HPG

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