

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO Len Bryant

DATE April 17, 1979

FROM J. E. Wyche

SUBJECT Loss of Incineration for VC Vents During
Per/Tri Fire

In response to your questions on subject topic, attached is the non-compliance report written by Bill Schwarzauer along with a supplement thereto. These VC releases will be reported to the EPA in the next semi-annual report as required by the VCM regulations. Whether or not the failure to take emission reduction measures in Tri-Ethane II during this time was the appropriate response should perhaps be examined. I would guess, however, that due to the relatively short periods of time involved that the total quantity of VCM emitted probably wouldn't have been much less even if a shutdown had been instituted.

/as
Attachments

cc: T. G. Taylor
J. Jordan
C. Muery
W. J. Peard

SL 048662

SUPPLEMENT TO APRIL 4, 1979 NON-COMPLIANCE REPORT

(based on conversations with B. Schwarzauer & C. Muery)

At the time of the Per/Tri fire April 4, there were no emissions from the VCM and CHC plants as they were down.

The Tri-Ethane II plant which was in operation has the following vents affected by the VCM regulations:

- (1) VC Heavies Still Vent - non-continuous (usually no flow)
- (2) Fugitive VC Section Vents - non-continuous (pump seals, etc.)
- (3) DCE Reactor Vent - continuous (the major source of VCM)

Streams (1) and (2) are normally incinerated, otherwise scrubbed. Stream (3) is normally compressed and sent to the plant HCl distribution system (usually to OHC, sometimes to EC). If there are no HCl consumers, this stream is incinerated. The last alternative for stream (3) is scrubbing.

When the Per/Tri fire occurred, both OHC and EC were down. Therefore, since there were no HCl consumers, stream (3) was being incinerated along with streams (1) and (2). Thus, for the 2½ hours (3:30 - 6:00 p.m.) the incinerators were down, all three streams were scrubbed resulting in a VCM release of ~100 pounds. When the incinerator was restarted, all three streams from Tri-Ethane II were again incinerated. During the evening, EC was started and stream (3) was removed from the incinerator and sent as feedstock to EC. This was the situation later that evening when, due to a communications foul up, the Tri-Ethane II vent header was inadvertently taken out of the incinerator again for about three hours. During this time (9:00-12 p.m.) streams (1) and (2) were scrubbed. The quantity of VCM released is not known but is believed to be insignificant.

Jim Wyche
4/12/79

PLANT B POLLUTION CONTROL DATA SUMMARY

Date 4/4/79 - 4/5/79

Gases to Incinerators	Hours Vented to Atmosphere		% Capacity	Comments	Times Vents Out
	#1	#2			
EDC	3.5	3.5	—		
OHC	0	—	—	PLT DOWN	
Per-Tri	16.33	—	—	#3 P/T DN 11 AM #2,4,5 DN ~ 3 PM	
DH Vent	16.33	—	—	#1 P/T DN 12:50 PM	
- VCM	2.75	—	—	DOWN	
T/E II	5.5	8.75	59.2	3:30 - 6:00 PM 9:00 - 12:00 M	
Btms Plt	9.33	—	—		
MCA Unit	0	—	—		

VCM Violations
VENTS OUT DUE TO PER-TRI UPSET WITH DOWNTOWN FURNACE

See attachment

Strippers		OPERATING HOURS	
WTU	24	Feed 649.2 GPM	
OHC	0		
HCl Recovery	5.5		
EC VENT TO OHC	0	OHC DN EC DN & UP & DOWN	

Vents to Compressors	
Tetra	0
T/E Lt	
Still	0

Component	Composite			
	001 Mob #2	018 COS	010 Storm	018 A
VC			★	
VDC		Tr		
Trans/EC*				
MeCl ₂				
CCl ₄				
Cis/CCl ₃ **		.4		1.6
Tri				
1,1 EDC				
MC				
Per				
1,2 EDC		.4		1.9
TCE		.2		
Unsym		Tr		
Sym				
Total		1.0	21.23	3.5
Lbs/Day (420)		60.9	214.5	2.6
Flow	150,000	5072	842	61
Chrome ppm	—	.08	.07	—
Lbs/Day (8)	—	4.87	.71	—

*as Trans
**as CCl₃

Total Cr	.71	165/DAY
ClHC	277.9	165/DAY
pH O10	6.9	

Nitrogen Accountability		
Total N ₂ into Complex	350.6	TPD
Unaccountable N ₂	54.4	TPD
Per-Tri	140.8	TPD
OHC	13.7	TPD
VCM	11.9	TPD
MC	39.4	TPD
T/E II	34.8	TPD

Surge Pond 5'-2"
WTU: Feed 456.1 ppm
Btms 29.9 ppm 233 lbs

Major Contributors:
(1)

★ COMPOSITOR DID NOT PICK UP SAMPLE; WTU LAB SHEET AVERAGE WAS USED

SL 048664

ENVIRONMENTAL

NPDES: NONCOMPLIANCE EFFLUENT REPORT

TO: C. A. Burns

FROM: PLANT B

* Effluent: AIR Sample Period: Date 4/4/79 Time 7:30 AM To: Date 4/5/79 Time 7:30 AM
Effluent Characteristics: VCM

Discharge Level: _____

Incident Report

Area: VENT SYSTEM Plant: B Unit: T/E II

Material: VCM, CHLORINATED ORGANICS Est. Amount Lost: 39.4 lbs/hr VC
x 2.5 hours

Period: From: _____ To: ~100 # VC

1. What were the circumstances causing the incident?

INCINERATORS WERE SHUTDOWN AT ~ 3:30 PM DUE TO OPERATIONAL PROBLEMS AT PER-Tri WITH DOWNTOWN FURNACE. INCINERATORS WERE STARTED BACK UP AND T/E II VENTS WERE BURNED AT 5:55 PM. ALL VENTS WERE SWITCHED FROM NO. 2 TO NO. 3 INCINERATOR AT 9:20 PM. THERE WAS SOME MISCOMMUNICATION WHEN VENTS WERE SUPPOSE TO BE PUT BACK IN INCINERATORS. ^{BACK IN ~ 12 MIDNIGHT} ALL VENTS WERE BEING BURNED EXCEPT T/E II VENTS. HOWEVER COMPRESSOR WAS RUNNING FROM 7:30 PM TILL 3:45 AM. THEREFORE NO VCM POLLUTION OCCURRED DURING THE LATE EVENING SHIFT. THE ONLY VCM POLLUTION TIME WAS WHEN ALL INCINERATORS WERE DOWN 3:30 PM - 5:55 PM DURING PER-Tri UPSET (2 1/2 HRS).

2. What actions were or are being taken to prevent reoccurrence?

A WORK ORDER HAS BEEN WRITTEN TO INSTALL LIGHTS ON INCINERATOR CONTROL BOARD TO INDICATE ^{INDIVIDUAL} A VENT FLOWS. COMPRESSOR AT T/E II IS RUN WHENEVER POSSIBLE SO THAT MAIN VC STREAMS ARE CONSUMED WITH HCl USERS. HOWEVER COMPRESSOR WAS DOWN AT THE FIRST INCINERATOR OUTAGE. OHC AND VCM PLANTS WERE ALREADY DOWN AND PURGED BEFORE PER-Tri UPSET. SO NO KNOWN VENT PROBLEMS EXISTED.

3. Additional remarks by the reporter:

* T/E II DESIGN
MATERIAL BALANCE
AT MAX RATES WOULD
BE 66.5 lbs/hr

Foreman's Signature: H. A. Schwaninger

SL 048665

* Report incident within 24 hours; to expedite reporting copies will be made by C. A. Burns and circulated to O. I. Compliance Area Supervisor.

ENVIRONMENTAL

NPDES: NONCOMPLIANCE EFFLUENT REPORT

TO: C. A. Burns

FROM: Plant B

* Effluent: Air Sample Period: Date Time Date Time
From: 8/26/79 12:30 AM To: 8/26/79 1:4
Effluent Characteristic: Vinyl Chloride

Discharge Level: _____

Incident Report

Area: Plant B

Plant: VC, TE IL, DHC Unit: _____

Material: Vinyl Chloride Est. Amount Lost: _____

Period: From: _____ To: _____

1. What were the circumstances causing the incident?

The Flame arrestors for #2 & #3 Inc. were changed out on late evening shift. The #3 Inc. would Not start-up due to problem in Electrical system. The Three Incinerators were having problems and all the problem were simultaneous.

2. What actions were or are being taken to prevent reoccurrence?

The type of problems and the simultaneousness of such problems are Not likely, but in the future each time a flame arrestor is plugged and replaced with a new one the plugged arrestor will be cleared as soon as possible to be better prepared for this type of simultaneous problem.

3. Additional remarks by the reporter:

The amount of VC lost to Atmos is Not Known because the VC units were blocked in a closed system type of situation and rate were being cut on the old process.

Foreman's Signature: _____

R. Brown

* Report incident to EPA

SL 048666

Called for repairs on the Vent GC #3
at PIT (2³⁰/pm) -

The flame arrestors for #2 & #3 Inc
were changed out on late eve shift (10³⁰/pm)

The #3 Inc would not restart due
to problem with the electrical system. (Timers)

The #2 Inc was started and had vents
(OHC-TE II & VC) in it till 12³⁰/pm. It

tripped out and would not restart
till 1³⁰/pm (OHC & TE II) and 1⁴⁵/pm

VC vents were back in #2 Inc -

We started cutting back on OHC -

VC - T/E II and Tetra rates at

1¹⁵/pm - back up to normal rates at 2⁰⁰/pm.

The Tri S. 2 sample was a little
low on GDL .02 and high on
THY .042. Needed production room
so it was moved to clock Stg.

Started burning lig in #1 Inc at 4¹⁵/pm

Also changed out flame arrestors on
the #1 Inc during the above problem.

Brisco will hold at OHC for split.

Winey will hold at PIT for HCL recovery.

PIT & EDC vents in #3 Inc } 4⁰⁰/pm

VC - OHC - T/E II vents in #2 Inc }