

ALLIED CHEMICAL CORPORATION
MEMORANDUM

RECEIVED BY
MAY 14 1974

J. M. QUINN
May 8, 1974

TO: Mr. J. M. Quinn

Attached is R. J. Curtis' memo to file covering our recent visit from the EPA group as listed.

P. B. Cornell
P. B. Cornell, Manager
Baton Rouge North Works

PBC:ef

cc: Mr. E. E. James

ENVIRONMENTAL
SERVICES

	INFO	ACTION
JMQ		
JMD		
WFS		
GK		
LMF		
WCK		
CNM		
SK		
RJM	✓	
LJG		
F	WORKS	
I	PRODUCT	
L	TICKLE	
E	RET. TO	

ASI 000018936

MEMORANDUM

DATE: May 7, 1974

SUBJECT: EPA VISIT TO BRNW - MAY 1, 1974

TO: FILE

1) EPA visitors included:

Paul Fahrenthold - Enforcement Division, Dallas, Texas

Oscar Ramirez, Jr. - Surveillance & Analysis Division
1600 Patterson St., Dallas, Texas
(Phone - 214-749/1121)

B. J. Pritchard - Surveillance & Analysis Division
Box 885, Slidell, La.

Thomas F. Beckers - Surveillance & Analysis Division
Box 885, Slidell, La.

2) Purpose of Visit

As a result of VCM angiosarcoma emphasis the EPA Surveillance and Analysis Group were visiting Louisiana vinyl producers to become more familiar with the operations, to review environmental contamination by VCM, and to review analytical procedures for detection of VCM in air and water effluents. For clarification, the visitors were reviewing environmental exposure. Employee or personnel exposure is being followed by OSHA Division of DOL.

3) Following a meeting and review of EPA request for permit data in plant manager's office with P. B. Cornell and R. J. Curtis, the visitors toured the VCM and loading operating with R. J. Curtis.

Areas reviewed were:

- a. Neutralization pond.
- b. Tank car vents (we were drying a car recently returned from the shop with a nitrogen purge. Discussed and proposed system).
- c. Tank car loading hose. Advised them of our plan to vent back into operation.
- d. Tank car level gauge.
- e. Oxychlor system vents.
- f. Lights column atmosphere vent.
- g. Decoking procedure
- h. Caustic scrubber recharging procedure

ASI 000018937

- i. Pump design for minimum release.
- j. Heads column condensate recovery.
- k. Vacuum column bottoms
- l. EDC open ditch and sump system
- m. Discussed proposed recovery system

Mr. Ramirez asked how we analyzed for VCM in the vacuum column bottoms and EDC sump. He was told that we do not routinely analyze for VCM in either stream. We analyze for EDC and trichloroethane. We have analyzed for VCM in the air immediately above the EDC sump by taking a bomb sample and analyzing in a Bendix flame--ionization gas chromatograph. No VCM was found present. He asked for our analytical procedure since he was a chemist.

Attached is ICD procedure for "Determination of Impurities in Crude Stream".

The visitors left on an apparent tight time schedule for Dow in Plaquemine at 12:00 P.M.

R. J. Curtis

R. J. Curtis

RJC:ef

Attach.

cc: Mr. J. M. Quinn

INDUSTRIAL CHEMICALS DIVISIONALLIED CHEMICAL CORPORATION

ED-1.5-4

Ethylene Dichloride
Specific Procedure
Impurities
Gas Chromatographic

DETERMINATION OF IMPURITIES IN CRUDE STREAMS

APPLICATION

This procedure is designed to test for impurities in organic or crude streams of ethylene dichloride. The instrument is set up in such a manner to allow manual step attenuation or automatic peak area readouts on an Infotronic Model CRS 100 integrator.

PRINCIPLE

A sample is injected into a Perkin Elmer gas chromatograph and the peak areas are compared to known standards to determine the impurity level.

SPECIAL PRECAUTIONS

Avoid excessive contact of ethylene dichloride with the skin. Wash contacted areas with large amounts of water. Avoid inhalation of ethylene dichloride fumes.

APPARATUS

1. Perkin Elmer Model 154D gas chromatograph.
2. 1/4" x 18' copper columns packed with 5% carbowax 20M on Chromosorb W - 60/80 mesh.
3. Precision Sampling Corp. No. 304101-C liquid syringe or equivalent.
4. 0-1 MV Recorder
5. Paragon K&E 56-3280 ruler or equivalent.
6. Infotronic Model CRS 100 Digital Readout System (optional).

REAGENTS

None.

PROCEDURE

1. The following conditions should exist prior to starting the analysis:
 - a) Column temperature - 100°C
 - b) Injection port and block temperature - 100°C
 - c) Bridge current - 8 volts
 - d) Helium flow - 45 cc/min

ASI 000018939

2. A stable baseline should exist before injection of samples.
3. Flush the syringe with several portions of sample being certain to dispose of the flushings outside of the sample container.
4. Take the required 10 microliter sample and inject through the liquid injection port into the column.
5. Mark your injection or starting point on the recorder chart. If integrating, push the start button at the same time you inject the sample.
6. Attenuate all peaks as necessary to prevent them from going off scale. If using the Infotronic integrator, set the scale on the position used for standardization.
7. After the last component (trichloroethane) has eluted, return to standard conditions before injecting the next sample. Total integrated areas after the analysis is completed.

CALCULATIONS

Hand Attenuation

Peak Height x 1/2 peak width x attenuation setting x factor = ppm component

Integrator

Area x factor = ppm component

Approximate Elution Times:

<u>Component</u>	
1. Ethyl chloride	1.9 minutes
2. Carbon tetrachloride	
1,1 dichloroethane	3.3
3. Benzene	4.3
4. Trichloroethylene	5.0
5. Chloroform	5.5
6. Tetrachloroethylene	5.9
7. Ethylene Dichloride	6.6
8. Trichloroethane	18.1

INTERFERENCES

None.

*NOTE: ON VACUUM BOTTOMS & RECLAIM TANK
WE ANALYZE FOR EDC & TRICHLOROETHANE
ONLY.*