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INTER-OFFICE CORRESPONDENCE

To Wilfrido Torres

Date: July 19, 1977

From: P. Cappas

Location: Laboratory

Subject: VCM Monitoring Program -
Monthly Report

Areas and personnel monitoring program for VCM determination in the VCM plant and in other areas at PPG Caribe plant, during June 1977.

TABLE I

<u>Name</u>	<u>Job No.</u>	<u>Date</u>	<u>Starting Time</u>	<u>Sample Duration (min)</u>	<u>Results (ppm)</u>
H. Rivera	2	6-2-77	08:45	375	< 0.1
A. Alvarez	1	6-2-77	08:50	360	0.1
C. González	5	6-4-77	01:00	330	0.15
J. Luciano	Shift Super.	6-5-77	09:00	330	< 0.1
E. Rivera	5	6-7-77	08:10	380	0.6
C. Gutierrez	Maint.	6-14-77	08:25	370	0.6
Carlos Torres	3	6-15-77	08:27	341	< 0.1
Rubén Torres	5	6-16-77	01:30	330	0.96
L. Rivera	1	6-17-77	09:00	370	< 0.1
A. Alvarez	1	6-20-77	08:00	440	< 0.1
Carlos Torres	3	6-20-77	08:30	390	0.1
Rubén Torres	5	6-21-77	08:00	420	0.1
José L. Colón	Loader	6-22-77	15:45	465	0.1
H. Rodríguez	Loader	6-22-77	15:50	455	0.1
R. Morel	4	6-25-77	23:50	240	< 0.1
V. Lugo	2	6-25-77	24:00	360	< 0.1
F. Andújar	Shift Super.	6-29-77	15:35	415	0.2
E. Vega	Lab Analyst	6-30-77	08:20	385	0.1

Comments: Refer to Table I

A total of 18 TWA samples were taken. Based on this total, the average concentration was 0.19 ppm VCM. None of the samples was over the PPG Internal Standard (1.0 ppm VCM - TWA samples).

The average concentration of the TWA samples for each job was:

<u>Jobs</u>	<u>No. of Samples Taken</u>	<u>Average - ppm VCM</u>
1	3	0.1
2	2	< 0.1
3	2	0.1
4	1	< 0.1
5	4	0.5

VCM Monitoring Program -
Monthly Report
Page 2

The average concentration of the TWA samples for each job was: (continued)

<u>Jobs</u>	<u>No. of Samples Taken</u>	<u>Average - ppm VCM</u>
Shift Super.	2	0.1
Loaders	2	0.1
Lab. Analyst	1	0.1
Maintenance	1	0.6

TABLE II

VCM PERSONNEL MONITORING (15 min. samples) SHORT SAMPLE PROGRAM

The short sample program include a sampling during a period of (15 min.) suspected high vinyl chloride concentrations.

<u>Name</u>	<u>Job No.</u>	<u>Date</u>	<u>Starting Time</u>	<u>Sample Duration (min)</u>	<u>Results (ppm)</u>
R. Santiago	Lab. Analyst	6-1-77	10:10	15	0.5
H. Rivera	2	6-2-77	14:10	15	1.0
C. González	5	6-4-77	06:15	15	1.0
R. Santiago	Lab. Analyst	6-6-77	21:15	15	0.1
E. Rivera	5	6-7-77	14:00	15	3366.4
O. Pabón	5	6-8-77	14:07	15	N.F.
E. Bruno	5	6-9-77	02:25	15	N.F.
C. González	5	6-9-77	09:40	15	0.6
Rubén Torres	5	6-9-77	13:30	15	0.3
E. Vega	Lab. Analyst	6-10-77	08:40	15	0.4
E. Rivera	5	6-12-77	05:00	15	3.8
V. Lugo	2	6-13-77	12:15	15	0.4
O. Pabón	5	6-13-77	14:33	15	0.2
C. Gutierrez	Maint.	6-14-77	08:27	15	8.2
Rubén Torres	5	6-16-77	01:50	15	12.5
Rubén Torres	5	6-17-77	05:50	15	10.1
Rubén Torres	5	6-21-77	11:10	15	0.5
H. Rodríguez	Loader	6-22-77	16:30	15	0.1
José L. Colón	Loader	6-22-77	16:30	15	0.3
H. Rodríguez	Loader	6-22-77	17:20	15	1.5
José L. Colón	Loader	6-22-77	17:20	15	0.5
P. Torres	Loader	6-23-77	05:30	15	90.4
N. Silva	Loader	6-23-77	05:30	15	43.9
P. Torres	Loader	6-23-77	05:45	15	11.6
N. Silva	Loader	6-23-77	05:45	15	49.9
N. Silva	Loader	6-23-77	06:00	15	41.5
P. Torres	Loader	6-23-77	06:05	15	12.2
Rubén Torres	5	6-29-77	18:00	15	0.8
H. Rivera	2	6-29-77	22:20	15	0.6
E. Vega	Lab. Analyst	6-30-77	08:32	15	0.7

Comments - Refer to Table II

During June 1977, at total of 30 ceiling samples were taken. The average concentration was 10.1 ppm VCM. This number is based on 29 results. The higher concentration found on 6-7-77 (3366.4 ppm VCM) is not included in the average. From the total of 30 samples collected, 10 were over the PPG Internal Standard (one overexposure). These 10 samples represent the 33%.

From the ten samples over the standard, six were from the loaders during the SSPR VCM loading, 6-22-77 - 6-23-77, Voyage 119. The contribution of the loader to the 33% over standard samples was 20%.

Note: Refer to sample dated 6-7-77 - 3366.4 ppm VCM.

This sample was taken to Mr. Eddie Rivera, while working at the VCM Storage Area. He was opening and closing valves on Bullet E. This case was investigated and it was found that the valves on this bullet leaks every time they are operated. The VCM supervisor was notified. This man and other personnel working in this area were monitored again several times. Some of them were performing the same work during the sampling. The results obtained were lower.

The average concentration (15 min. samples) for each job was as follows:

<u>Job</u>	<u>No. of Samples Taken</u>	<u>Average (ppm VCM)</u>
2	3	1.0
*5	11	2.7
Lab.	4	0.4
Loaders	10	25.2
Maintenance	1	8.2

*Sample dated 6-7-77 taken to Eddie Rivera is not included in the average.

TABLE III

<u>Area Name</u>	<u>Date</u>	<u>Starting Time</u>	<u>Sample Duration (min)</u>	<u>Results (ppm)</u>
Lab. Wet Lab Hood	6-1-77	08:00	465	< 0.1
Area 2 Near VCM	6-2-77	08:50	410	< 0.1
Neut. A				

Comments - Refer to Table III

The average VCM concentrations based on 2 samples taken was < 0.1 ppm.

SSPR VCM MONITORING

The SSPR was monitored on 6-22-77- 6-23-77 on Voyage 119. Some of the personnel from the loading department were monitored while connecting and disconnecting the VCM hoses and also during the loading (see table I, and II for the results obtained on samples taken to the loaders). The ship was also checked several times for VCM vapor detection with the OVA (organic vapor analyzer). A total of 12 personal samples were taken. From this total, ten samples were ceiling samples (15 min) and two TWA samples. From the ceiling samples, six were over the PPG Internal Standard (5.0 ppm). All the samples over the standard were taken during the hose disconnection operation. This number represent the 60%.

OFF-SITE VCM MONITORING PROGRAM - Sampling Date 6-14-77

Every month samples for VCM determination are being taken at different points outside of PPG complex. This sampling is conducted by the Omni Research Laboratory personnel. Six different points were selected according to the wind direction. The points selected and the results obtained are as follow:

1A - North-West	(1000 ft of VCM plant)	<1.95
2A - North-West	(2000 ft of VCM plant)	<1.95
3A - South-West	(1000 ft of VCM plant)	<1.95
5A - West	(1000 ft of VCM plant) (morning sample)	<1.95
5B - West	(1000 ft of VCM plant) (afternoon sample)	<1.95
6A - West	(2000 ft of VCM plant)	<1.95
7A - Front of Rico Chemical Industries offices		<1.95

Attached to this report you will find the following:

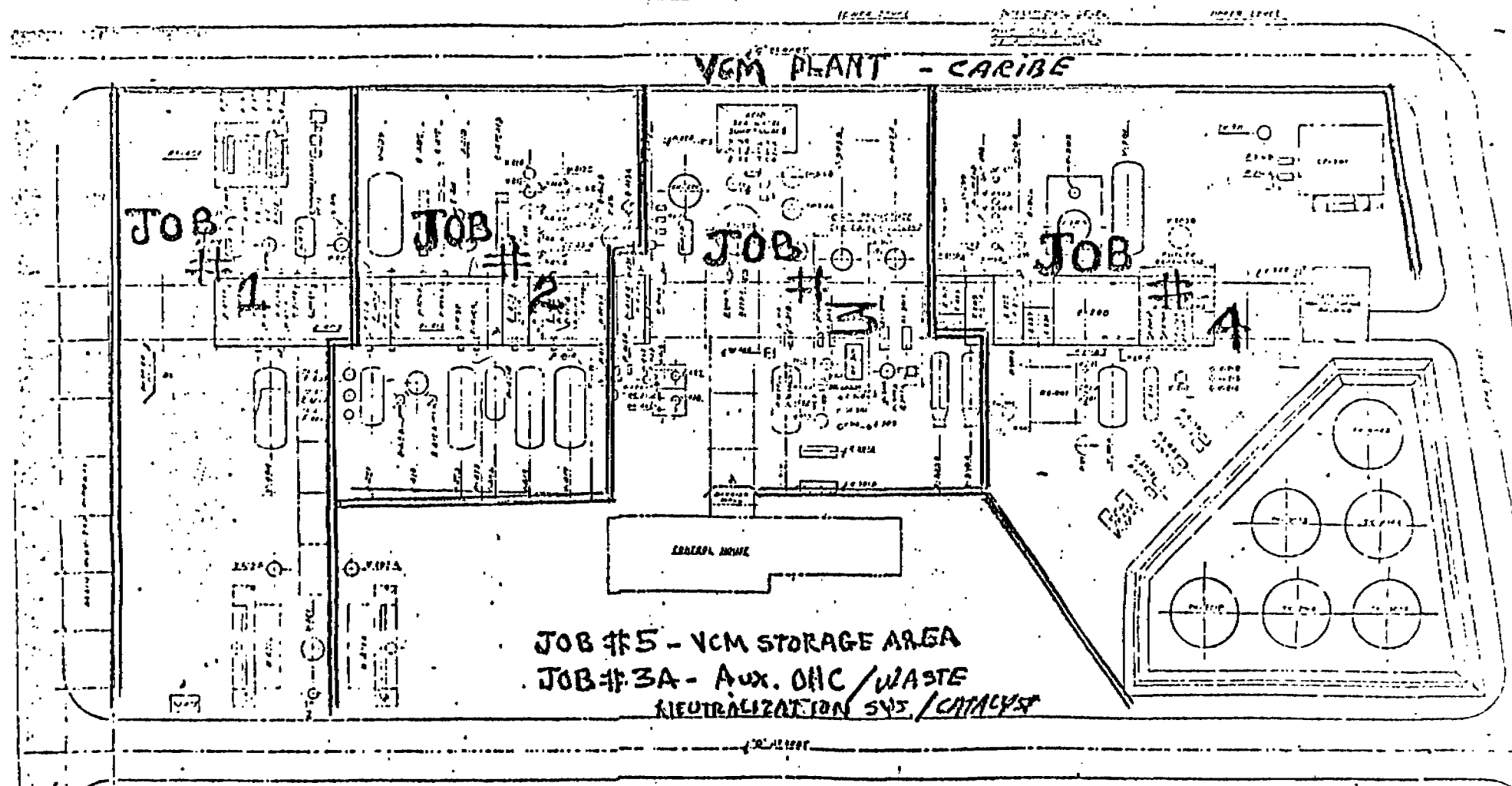
1. VCM Plant Job Areas Map
2. VCM Storage Area Map
3. Off-Site Sampling Point Map


Pedro Cappas

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Attachments

cc D.F. Ferguson
K.R. Mesloh
K. Ezelle
M. Juves
J. Torres
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VGM STORAGE AREA JOB #5

