



UNION CARBIDE CORPORATION
CHEMICALS AND PLASTICS

P. O. BOX 471, TEXAS CITY, TEXAS 77590

*REO → VCM INFO
FILE.
EQUIVALENCES*

February 25, 1977

Mr. Gary Bernath
Air Compliance Branch
U. S. Environmental
Protection Agency
First International
Bank Building
1201 Elm Street
Dallas, TX 75270

Dear Mr. Bernath:

Subject: VCM Standard, Destruction of VCM Vapors in a Flare

At the conference on the VCM Standard conducted at your location last November 19th, we brought up the question of the use of a flare to incinerate vapor streams of VCM under certain temporary or emergency situations. Our notes indicate that your major concern would be whether or not the flare could actually burn all the VCM adequately to meet a 10 ppm emission limit. The burden of proof would be on those of us who might petition for an equivalency to use this method, if we could demonstrate that sufficiently complete combustion could occur in a particular flare system. Since residence time and temperature are among the major variables in flare flame effectiveness, we had inquired whether pilot data on a test stand flare (which could be properly monitored) would be considered in preparing such an equivalency request. We recall that Mr. Farenthold had indicated a willingness to consider such a presentation, since he was aware of the problems of monitoring emissions from an operating flare in the field.

The major purpose for our desire to use a flare for burning VCM-containing gas streams is to provide a way to prevent the overloading and upsetting of process systems, boilers, furnaces or incinerators when diverting normally abated streams into them should be a disturbance occur in a primary abatement device.

For example, when a boiler or furnace is the primary abatement device for a VCM-containing stream and it incurs a process upset which results in a shutdown, an alternate boiler or furnace is generally available for picking up this stream. However, the new furnace normally requires a manual cut-back before the new stream can be added in, to avoid over-ranging the controls and possibly knocking the new boiler off the line. The time period

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between the loss of the first boiler and the pick-up by the second is where a flare can be used at great advantage to burn the emissions until the new boiler can be lined out at the new condition.

The nature of a flare is to accommodate variable flows of gases for relatively short periods of time and without prior notice or adjustment, until the processes causing the VCM stream change can be better stabilized without direct air emissions on an emergency basis. This "elasticity" provided by a flare improves the options in maintaining safe, low emission operation, thus preventing larger VCM losses to the air that might result if there were no flare to go to.

Because of the versatility and improved emission control that we believe could be achieved if a flare were permissible under certain conditions, we have arranged through our Engineering, R&D and Operations Departments to conduct a series of tests with a company of demonstrated flare expertise to determine, if possible, the effectiveness of a flare for this purpose. If these tests are favorable, we will consult with your staff on the submission of a request for equivalency to cover operations at this location, using the test work as a basis for our request.

Very truly yours,



J. F. Erdmann
Environmental Protection
Coordinator

JFE:ir

bcc: Mr. W. D. Bradbury - 511
; Mr. H. P. Brady
Mr. W. E. Burndrett - 519
Mr. S. W. Clark - 511
Mr. M. E. Eisenhour
Mr. R. L. Frantz
Mr. W. T. Gray, Jr.
Mr. R. A. Herrington

Mr. J. B. Leverton/R. E. O'Bryan
Mr. D. C. Macauley - 511
Mr. W. R. Manning - 511
Mr. W. A. Mazzolini
Mr. R. P. Melton
Mr. F. S. Provenzano
Mr. G. F. Tacquard
Mr. R. N. Wheeler - 514

per RNW 2/25/77

→ When ready - invite them to witness these tests } if they will do that kind of tests -

check the VCM std → to fully utilize the info they about reactor venting + protection of people, etc. + bring out some of these advantages in the light of the flare!!

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NO

CHEMICALS AND PLASTICS

P. O. BOX 8361, SOUTH CHARLESTON, WEST VIRGINIA 25303

To (Name)

Division

Location

Texas City

Date

February 11, 1977

Originating Dept.

Engineering

Copy to

Mr. W. D. Bradbury
Mr. W. E. Burndrett
Mr. S. W. Clark
Mr. M. E. Eisenhower
Mr. W. T. Gray, Jr.
Mr. D. C. Macauley

Subject

Vinyl Chloride
Flare Testing

Dear Hal:

I have discussed with Bill Bradbury and Stan Clark your proposal for flare testing at National Air Oil for disposal of vinyl chloride vent streams.

We have agreed to accept the charges, up to a maximum of \$10,000, on our Engineering Manager's budgets. Please charge each of the following engine ring order numbers with one-third of the charges:

938XX - 2301 - Solvent Vinyl Resins
938XX - 2304 - Suspension Vinyl Resins
938XX - 2525 - Ethyleneamines

Thanks.

Sincerely,

W. R. Manning

W. R. Manning

WRM/kb

*Brady from plant
to Spearhead
V. R. D. (Macauley) as tech source
Director + review test plans
have Brady call Dennis H. Brady
to Spearhead + then plan
they can work on program*

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