



UNION CARBIDE CORPORATION

P. O. BOX 8004, SOUTH CHARLESTON, W. VA. 25303

Silicones and Urethane Intermediates
South Charleston Plant



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March 31, 1981

Ms. Ellen Shapiro
West Virginia Air Pollution Control Commission
1558 Washington Street, East
Charleston, West Virginia 25311

Dear Ms. Shapiro:

Subject: North Charleston Bulk Terminal;
Ethyl Acrylate Operations

Reference: Telephone Conversation,
Ms. Ellen Shapiro to J. L. Worstell
March 19, 1981

In response to your telephone call of March 19, 1981:

1. Chemicals handled at the North Charleston Bulk Terminal:
A list is attached.
2. Operating and regeneration criteria for scrubbers and absorbers:

Refer to the attached SOP dated May 29, 1979.

The vapor scrubbing solution is sampled every thirty days and the pH and alkalinity are determined (note that the frequency of solution testing has been increased from that given in the 1979 SOP). If the pH is below 9.0, the solution is drained to the process sewer and a new solution is prepared.

The carbon absorbers are regenerated and additional activated carbon added as needed after regeneration. The regeneration is on a semi-annual schedule unless the exhaust vapor samples from the absorbers indicate a need for quicker regeneration. The activated carbon pellets are not removed from the absorber. The caustic, organics, water, and steam condensate used during regeneration go to the process sewer.

3. 10 ppm criteria for regeneration:

We are uncertain of the origin of this information. There are no such criteria used from the operation or regeneration of the vapor scrubbers or absorbers. Can you clarify the origin of this information?

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4. Ethyl acrylate transfers since January 1, 1981:

- One barge receipt
- Six tankcar receipts
- Twenty-five tank truck shipments

Anticipated transfers for the remainder of 1981:

- Three barge receipts
- Six tankcar receipts
- Eighty tank truck shipments

5. History of tankcar receipts:

- About four - six tankcars per year during the period 1970 - 1979
- Sixteen receipts in 1980
- Twelve tankcar receipts anticipated for the year 1981

Future annual tankcar receipts, after 1981, should average about four - six cars per year.

6. Barge receipts:

Normally, most ethyl acrylate is received by barge. Typically, four barges are received each year.

7. Automation of the storage tank scrubber:

Presently, the vent valve to the scrubber opens automatically by a pressure regulator. The scrubber, however, must be activated manually. The criteria for activation are attached.

Plans are to fully automate this system. Barring any complications created by safety concerns, this should be completed by the end of the second quarter of this year. The automated system will be tied into the computer in the control room: When the scrubber system is energized, the operator will receive a visual and a typewritten message. The scrubber will be automatically energized when the storage tank pressure reaches 2 oz. pressure and will de-energize at 1 oz. pressure.

8. Tank Pressure:

At this time, there is a pressure indicator at the tank. By the end of the second quarter, this will be upgraded to a pressure recorder, and the pressure signal will be tied into the control room computer. The computer will automatically activate a visual alarm and type out a written alarm message for the operator when the tank pressure exceeds a set limit.

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9. Tank Temperature:

This is tied into the control room computer. When the tank temperature exceeds 25°C, the computer automatically activates a visual alarm and a typewritten alarm for the operator. The operator also has access to tank temperature, upon demand, through the computer. The temperature is logged at least nine times a day.

I believe that this answers all of your questions except for the update on the emission inventory. We expect to have this completed in the near future.

If I can help you in any way, please contact me at 747-3169.

Very truly yours,

A handwritten signature in dark ink, appearing to read "J L Worstell".

J. L. Worstell
Environmental Protection
Coordinator

JLW:co

Attachments

cc: J. R. Soice, UCC

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