

Celanese Chemical Company
TECHNICAL CENTER
Corpus Christi, Texas

To: Mr. J. M. Sawyer - Bishop

From: R. H. Maurer

RHM-1278-70

September 11, 1970

Air Monitoring Program

A reply to the questions asked in JMS-172 and JMS-174 is given.

Particulates - Bishop has property line ambient air measurements — upwind and downwind — dating back several years. The sampling frequency for the past year has been based on the National Air Surveillance Program. The data obtained have been in compliance with the ambient air and emissions standards stipulated in Regulation I of the Texas Air Control Board (TACB).

Pampa and Bay City have obtained similar data with the same favorable results. It is suggested that the particulate determinations now be discontinued throughout the company since we have sufficient background information. The high volume air samplers should be maintained in tact for future checks should process changes occur which dictate that additional particulate checks should be made.

Sulfur Compounds Covered In Regulation III - These compounds — hydrogen sulfide, sulfur dioxide, and sulfuric acid — should continue to be checked only in the isolated places in the company where they exist to confirm that any emission is in compliance with Regulation III. An example of this is the small periodic emission of sulfur compounds during regeneration of activated carbon in the Hydrogen Plant and the M.S. Unit.

Toxic Materials Currently Covered In Regulation V — beryllium and flouride - We know that we do not have these compounds, therefore, we need not analyze for them.

Anticipated Hydrocarbon Regulation - Each Texas plant is obtaining a NAPCA developed Union Carbide hydrocarbon analyzer to obtain background information. This is felt to be the most important part of our air monitoring program at this time.

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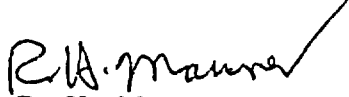
Oxidants - Procurement of an analytical instrument to determine extensive background information is probably not needed at this time. Determination of periodic ambient air samples for oxidants by a laboratory method for comparison with hydrocarbon content of the same sample (when the hydrocarbon analyzer is received) would provide good background data.

One method for determination of oxidants is given in "Selected Methods for Measurement of Air Pollutants" published by and available from the U.S. Department of Health, Education and Welfare, National Air Pollution Control Administration, Durham, North Carolina (Public Health Service Publication No. 999-AP-11).

Formaldehyde - As you know, formaldehyde will be only partially indicated by the forthcoming hydrocarbon analyzer. It will be valuable information to develop a satisfactory laboratory method for obtaining background information of ambient air formaldehyde content. It is understood that you are obtaining information from Bill Flook of Edmonton on a formaldehyde method.

It is agreed that where several plants have common problems and development work must be done on analytical methods, it would be profitable to divide these among the several locations to eliminate overlapping work. It is understood that you plan to contact Bay City to determine if they will develop an analytical method for nitrogen oxides.

You asked about a short meeting between the plant coordinators, Dr. Klepinger, and Mr. Hayden Head on this subject of air monitoring. It is suggested that we wait until the plants receive the hydrocarbon analyzers and have a chance to get at least some background information before we meet. At the same meeting we might profitably discuss process engineering techniques and methods for design of hydrocarbon emission control facilities.


R. H. Maurer

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