

MONSANTO CHEMICAL COMPANY

Inter-Office Correspondence

From LOCATION Texas City, Texas

DATE November 13, 1963

SUBJECT "Super-Jumbo" VCM Cars - Insulated or Bare

REFERENCE T. E. Shirley to W. T. Anderson, 5/23/60,
"King-Size Cars - Insulated or Bare"

cc: W. T. Anderson
J. M. Chamberlin
~~O. O. Jones~~
R. R. Ludlam
J. G. McQuarrie
W. R. Nisbet

TO : G. T. Ryan

Concern has been expressed about the shipping of VCM in uninsulated tank cars. This letter is an attempt to clarify the potential problems by reviewing our operating experience and data.

Major polymer problems have occurred only when free water was present in the VCM. Many cases of VCM being put into a wet vessel and of water being put into a VCM tank have resulted in large amounts of "paper-polymer". With dry VCM the storage and handling is essentially polymer-free. Harry Leach (Research) tested a five pound sample of dry VCM for ten days at 100°C with no polymer formation being detected. We operated the VCM spheres (150,000 gallons) all this summer with bare walls and we found no more polymer than in previous years. Our past experience shows no polymer problems are expected with bare tank car walls provided the water concentration in VCM is maintained low enough to remain in solution. This control has been requested by Springfield because much water appeared in their storage tanks last winter.

Solar heating calculations and our recent sphere operations show no serious problem with high temperature in uninsulated vessels. A study made in 1960 on "king-size" cars showed the maximum internal car temperature would be significantly less than the 100°C storage test temperature. The bare tank cars were recommended at that time except for the cost and time delay to get ICC approval. "Super-jumbo" cars will operate with a lower internal temperature than would the "king-size" cars.

The foreseeable problem is low VCM temperature during cold weather with free water being present in the car. Research data on water solubility in VCM were published last week, and a continuous water analyzer will be installed soon in the VCM plant. A VCM drying system may be required to protect the storage and shipping vessels from cold weather effects and it will have to be provided if bare tank cars are ordered.

T. E. Shirley

pb

IN 10

CBY 1019555

RSV0031963

MONSANTO CHEMICAL COMPANY

Location: Texas City, Texas
Date: November 12, 1963
Subject: Laboratory Quality
Surveillance Program

J. G. McQuarrie
J. L. Price
G. T. Ryan
W. H. Slager
J. L. Young

TO: G. E. Pratt/J. W. Kongable
T. E. Shirley

In past years the Monomers Laboratory has directed most of its effort toward the analyzing of large numbers of samples prescribed by routine sample schedules and reporting the results of the analyses to the respective operating departments. It is recognized that the Laboratory has lacked adequate knowledge of the operating department processes to properly maximize Laboratory data requested by these departments.

In an effort to increase knowledge and total service effort of the Lab, we have developed an internal Laboratory work procedure entitled "Optimization of Lab Data," a copy of which is attached. To accomplish this program we will require close coordination and help from the Manufacturing and Technical Service Departments.

The immediate benefits of the program will be:

1. More knowledgeable Lab force.
2. Bases for improved precision and accuracy of methods.
3. Optimization of sample frequencies.
4. Elimination of duplicate testing in the units and Laboratory.
5. Better cost control of the total analytical effort.

To help clarify the program the Laboratory is initiating, the following diagram is presented.

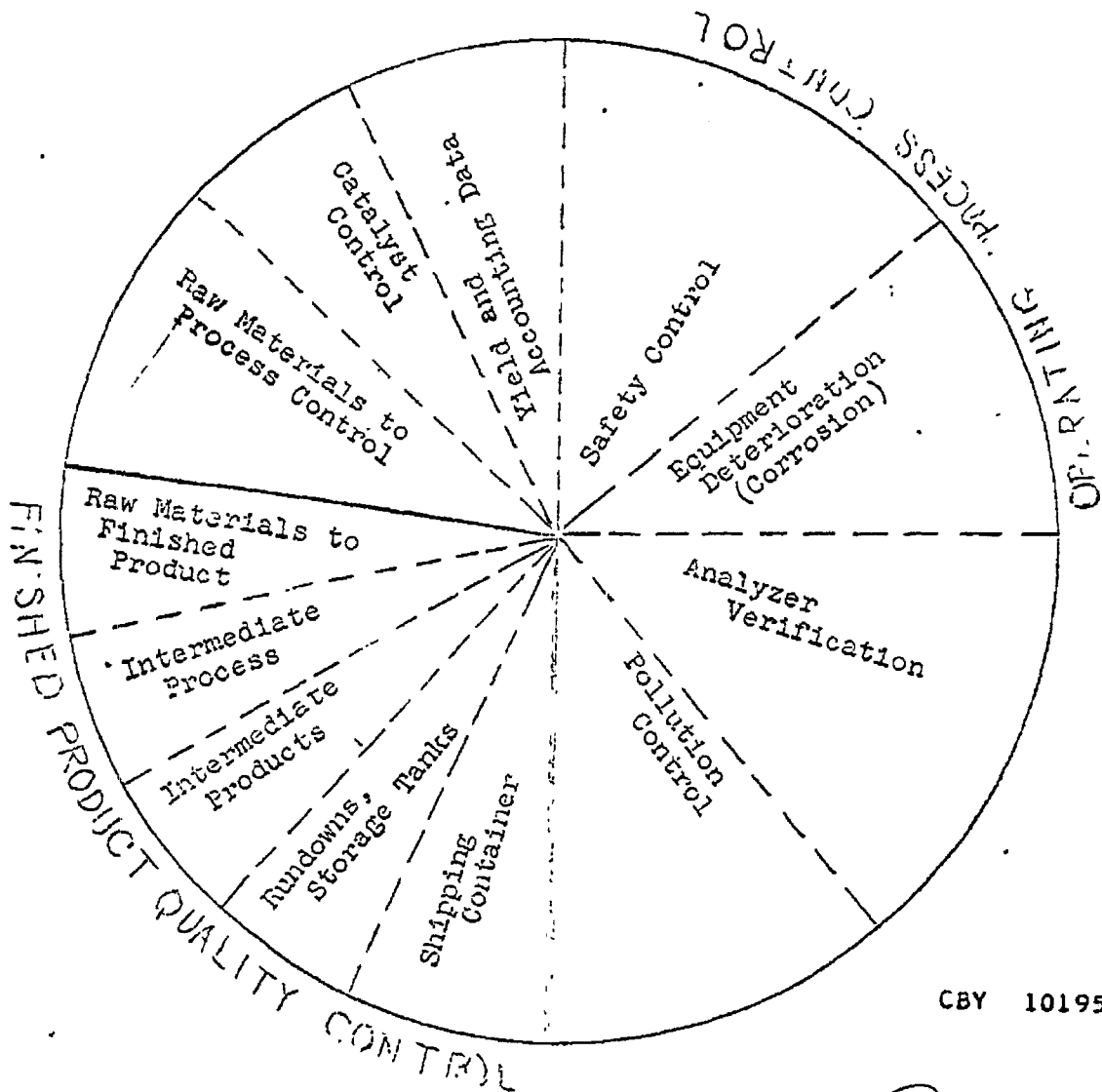
CBY 1019556

RSV0031964

This diagram is divided into two broad classifications of samples.

1. Operating process control.
2. Finished product quality control.

Under each main classification are several further sub-classifications.



CBY 1019557

GP
Gordon R. Stanford

ob