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MCS-1238 BLENDING PROJECT

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DEC 25 1975

R. G. Potter

In order to bring you and the operating committee up-to-date on the status of the WGK plant MCS-1238 Blending Project and the need for you and the operating committee to approve and/or modify the current direction the project is heading, I have attached Manufacturing's recommendation to accomplish the lowest cost MCS-1238 production with available facilities until such time as a new MIPB and TXS complex is commissioned in 1978.

It is recognized the manufacturing recommendation does not satisfy Marketing's position for zero PCB's in the initial and on-going production of MCS-1238; nor does it accommodate continuing production of Inerteen 100-42 to protect against the loss of $500M in gross profits for 1976. These two major differences need resolution promptly in order to provide a base on which manufacturing and CED can proceed to engineer and construct an MCS-1238 blending facility supported by on-schedule availability of quality flashed MIPB and TXS.

Clyde Orr has requested a review with you relative to the many facets associated with the MCS-1238 blending project before a formal recommendation is approved on the engineering and implementation of the project.

It would be most desirable to review Manufacturing's recommendation at your operating committee meeting on Wednesday, December 24, and to provide the direction necessary to keep the MCS-1238 blending project moving forward.

R. A. Pohl

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DSW 185365

FUNCTIONAL PRODUCTS GROUP

MCS-1238 BLENDING PROJECT

ACTION

A. Situation

The need to again revise the W. G. Krummrich plant MCS-1238 blending project engineering scope exceeds the plant's engineering personnel resources to handle an increased workload without delaying the completion of the project by 3 to 5 months.

B. Recommendation

The Manufacturing Department recommends that the Functional Products group supports the MCS-1238 blending project premises and execution plan as follows:

1. That an "Engineering Task Force" be organized to engineer and install MCS-1238 blending facilities at the WGK plant to implement an expanded project engineering scope.

2. Clyde Orr, CED Manager, Engineering and Arthur Leisy, WGK plant General Superintendent with appropriate representatives from CED and the WGK plant establish an "Engineering Task Force" and define engineering project management responsibilities utilizing the present WGK plant MCS-1238 blending project engineering organization augmented with an engineering team from CED.

3. That the MCS-1238 blending project proceed on the following premises:

   a. That the first 1,000M pounds of MCS-1238 production quality will not exceed 5ppm PCB's with subsequent production not to exceed 1ppm.

   b. Inerteen 100-42 (54201CM) will be phased out as equipment is needed for the MCS-1238 blending project with a loss of $500M in gross profit for 1976.

   c. WGK plant idle facilities be activated to flash MCS-1238 instead of Dixie Chemical.

   d. MCS-1238 capacity is 11$\overline{M}$ pounds per year, seven days operation.

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4. Proceed with Plasticizer Division for Functional Products to take over the J. F. Queeny plant "00" manufacturing facilities to produce TXS from TSCl timed to eliminate the need for contracting TXS with a toll manufacturer.

C. Action Requested

Approval is requested from the Functional Products group's Director to implement the recommended MCS-1238 blending project execution plan.

BACKGROUND

A. Facts Bearing on the Issue

1. Production Rate

The original MCS-1238 blending project production rate was fixed at 12$\overline{M}$ pounds per year, 5 days per week. When Research set the MCS-1238 product quality specifications calling for lower moisture content in the finished MCS-1238 blend than earlier indicated, it was necessary to revise the engineering scope to include equipment to remove water from MIPB and TXS. With this change, production rate was revised downward to 8$\overline{M}$ pounds per year, 5 days per week equivalent to 11$\overline{M}$ pounds per year at seven days per week. Production rate can be stepped up to 15$\overline{M}$ pounds per year with a capital addition of a porocel column.

2. PCB Contamination

The original MCS-1238 blending project PCB decontamination premise assumed that the major dielectric customers would phase out of using PCB dielectrics at a rate that would accommodate an MCS-1238 slightly contaminated with PCB's in the beginning since the dielectric customers would not be able to completely free their equipment from PCB's immediately. By flushing the PCB contaminated equipment used in the MCS-1238 blending project with MIPB before start-up that a level of 5ppm could be achieved. The blending project was not scoped to include removal of all piping, gaskets, and/or stuffing box packing of pumps, valves, and agitators. It is now deemed necessary that every means be used to minimize the level of PCB contamination in MCS-1238 short of building a completely new blending facility or identify equipment

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within Monsanto and/or toll manufacturers which could produce the MCS-1238 blend free of any PCB's contamination. The additional cost to remove and replace all gasket and packing materials from equipment formerly in PCB's service is estimated at $100M expense, plus or minus 25%.

3. Flashed MIPB

It was not until December 5, 1975 that Dixie Chemical presented Manufacturing with a firm proposal for flashing MIPB. The proposal included a $0.03 per pound surcharge on the first 17M pounds of flashed MIPB to cover their additional capital expenditures for flashed MIPB plus $0.14 per pound for unflashed MIPB. The original project premise assumed $0.15 per pound for MIPB with a biphenyl content of less than 0.5% from Dixie Chemical. Research later requested the MIPB biphenyl content be less than 0.05% which required an additional processing step at Dixie Chemical. WGK plant has idle equipment available that can be readily modified for $200M capital and $50M expense monies to flash MIPB.

4. Inerteen 100-42

The original blending project premise of using equipment currently used to manufacture Inerteen 100-42 is being challenged by Marketing. Last week concern came to light within Marketing that this premise is not valid at this time. Evaluations were made to accommodate Marketing's "wants" relative to the availability of transformer fluids and the MCS-1238 dielectric for 1976 without sacrificing the time restraints, economics, and manpower resources of the MCS-1238 blending project. Manufacturing was not successful to come up with a plan to satisfy Marketing's "wants".

5. TXS Production

Plasticizer Division has expressed a tentative plan to decommission their JFQ plant "00" building operations in 1976. If the Functional Products group was to need the facilities by the second quarter 1976, the Plasticizer Division could be out of the facilities as early as April 1 on the assumption their business plan to eliminate one of their products is approved in the first quarter 1976. Two TXS toll manufacturers have been contacted for manufacturing capability and conversion costs. Anderson Development Company submitted

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a quotation of $0.555 per pound conversion fee, bulk FOB, in addition to a $60M set-up charge. They can be in production within 60-90 days at rates to supply our interim requirements. Anderson has notified us their proposal is valid only until January 1, 1976 because the TXS equipment for Monsanto is being offered to another potential customer. Millikan Chemical Company has not to date submitted a formal proposal although they have indicated they are capable of producing TXS.

B. Conclusions

A review of the situation has led to the following conclusions:

1. The WGK plant engineering resources cannot handle the expanded MCS-1238 blending project scope plus MIPB flashing in the time frame for commercializing MCS-1238 without assistance from CED.

2. Research and Manufacturing will pool their technology and experience to remove residual PCB's to an acceptable level from the PCB's contaminate equipment before start-up.

3. Inerteen 100-42 equipment will be used as planned and forego $500M gross profit in 1976 in order not to delay the MCS-1238 blending project or to incur an engineering and equipment charge write-off of $50-$75M plus the need for an additional $200M capital.

4. To achieve MCS-1238 forecasted sales, blending facilities will operate seven days per week for an annual rate of 11$\overline{M}$ pounds. Delay installation of a second porocel column until sales forecast exceed 11$\overline{M}$ pounds per year.

5. Install MIPB flashing capability at WGK plant at a cost of $200M in capital and $50M expense monies instead of having Dixie Chemical toll manufacture flashed MIPB at a premium of $510M for the first 17$\overline{M}$ pounds of flashed MIPB. Evaluate Everett facilities as a possible site to produce MIPB on an interim/permanent basis.

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ALTERNATE SOLUTION CONSIDERED

1. Have the WGK plant handle the MCS-1238 blending project and MIPB flashing without CED's assistance. The proposal was rejected for the following reasons:

   a. Product availability would be delayed until fourth quarter 1975.

   b. The cost to produce 17$\overline{M}$ pounds of flashed MIPB at Dixie Chemical is approximately $250M more than up-grading the quality of MIPB at the WGK plant.

2. Install a new MCS blending facility to assure zero level of PCB's in MCS-1238. This proposal was rejected for the following reasons:

   a. The time to engineer and install a completely new MCS-1238 blending facility would take a minimum of a year and would not meet dielectric industry time schedule for phasing out of PCB's.

   b. The cost to install a new MCS-1238 blending operation is "guess estimated" to cost in excess of a 1\overline{M}$ level.

   c. JFQ plant proposed to produce MCS-1238 but was rejected on costs.

3. Protect the 1976 Inerteen 100-42 forecasted sales by installing additional equipment. The proposal was rejected for the following reasons:

   a. Availability of MCS-1238 would be delayed 3-5 months from the current MCS-1238 July 1 schedule.

   b. Approximately 75% of the completed MCS-1238 blending engineering would be aborted at a cost of $25-$40M plus the possible write-off $15-$20 of purchased equipment.

   c. An additional $200M of capital would be required.

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4. Toll manufacture all TXS until permanent facilities are available. The proposal was rejected for the following reasons:

   a. Assuming the JFQ plant "00" building equipment is released by the Plasticizer Division, and with some debottlenecking and up-grading of the equipment in the "00" building, this facility could produce enough TXS from TSCl during the conversion period of PCB dielectrics to MCS-1238. The "00" building facility may be capable of producing TXS from TSCl at quantities to satisfy the long term market forecast of 15M pounds per year of MCS-1238 cheaper than a new plant. Preliminary COGS numbers suggest TXS can be produced at $0.25-$0.35 per pound cheaper than at Anderson Development Company.