



Air Products and Chemicals
INC.

ESCAMBIA PLANT
INTEROFFICE MEMORANDUM

To: Mr. T. L. Carey

Date: 16 May 1974

From: A. K. McMillan

Copies:

Re:

The attached memo from E. A. Primeau answers in detail the concerns expressed in Dr. Kotin's memo of May 1, 1974. I toured Dr. Kotin through the PVC plant and offer the following comments on the items in his memo.

1. Dr. Kotin was concerned about dust exposure in the finishing building. The dust observed on the I-beams led him to the conclusion that the particle is such that the polymer is air borne in higher than desired concentration. Finishing building operators were instructed immediately after Dr. Kotin's visit to use dust masks at all times.
2. Dr. Kotin observed a reactor cleaner using rolled down plastic gloves, his regular shoes and was not wearing his air mask. Dr. Kotin felt it would be desirable to use gloves that would protect the operators from VCl exposure. The gloves are a standard type, and we will look at other types. We have not directed the use of or furnished special shoes for reactor cleaners. This was previously discussed with J. Novak and we were advised not to do anything as yet. The operator was following the required procedure of connecting the air mask when exposure reached 50 ppm as indicated by a portable Bendix sensing monitor that is kept in the reactor during the cleaning operation. I had pointed this out to Dr. Kotin at the time. We have since changed our procedure to require the wearing of an air mask during the entire cleaning operation.
3. I showed Dr. Kotin the air masks and header system. Dr. Kotin feels that everyone in the building should have a mask on his person similar to hard hat policies. We have 20 masks and are waiting on delivery of 30 more. At this time it will be done.

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systems installed during the first quarter of FY 1975.

2. Replacement of the Rotex Screen covers.

A second source of dust in the building is resin discharge from the rotex screens into the building area. This discharge is due to the condition of the screen covers and the necessity to open the covered hatches on the screen covers to discharge steam blown into the resin stream entering the rotex to break static electricity which causes the screens to blind.

New covers have been ordered for the screens which will reduce the losses now escaping around the cover. We are also studying methods to discharge the steam without opening the hatch covers. This may require a small blower exhaust system.

3. Installation of a central vacuum system to facilitate the cleaning of the building.

A CEA is being prepared to install a vacuum cleaning system throughout the drying and bagging area. This system would be used to routinely collect dust from the building on a shift basis. The product collected would then be sold as tailings or floor sweeps.

Estimated cost of the vacuum system is \$13M and could be installed by November, 1974.

4. Installation of a collection trough beneath the bagging machine filling spouts.

Another source of dust is the small quantity of resin spilled when each bag drops off the filling spout. We are proposing to put a trough at floor level under the filling spouts to collect this resin. This resin would be accumulated and sold as prime or off-grade resin dependent on quality control analyses.

In addition to the above items, we have instituted the wearing of dust masks in the finishing area and are investigating a way to reclaim small losses from the air exhaust vent on the bagging machine.

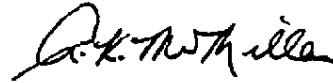
If all of the above work is done, the dust conditions in the finishing building will be markedly reduced.

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4. Dr. Kotin's last observation is general and he did not mention it during our tour. We have been monitoring the lab for VCI and the fume hoods checked for proper operation. Will see that S. Spiegelhalter is on top of this.

My impression from our tour was that Dr. Kotin's most important concern was wearing dust masks in the finishing and bagging areas.



A. K. McMillan

AKM:fls

Attachment

AP00034958



ESCAMBIA PLANT
INTEROFFICE MEMORANDUM

To: Mr. R. E. Jones Date: 16 May 1974

From: E. A. Primeau Copies: J. T. Barr
T. L. Carey
A. K. McMillan

Re: Comments on Letter from Dr. Paul Kotin
to Richard Fleming dated 1 May 1974

In the letter from Dr. Paul Kotin to Richard Fleming dated 1 May 1974, there were included three observations by Dr. Kotin on conditions he noted during his visit to the Escambia PVC plant. The items were:

1. The dusty condition of the finishing building.
2. Use of protective clothing and air mask while an operator is inside a reactor.
3. The general use of air masks in the PVC plant.

By means of this communication, I will discuss each observation made by Dr. Kotin and describe what is being done to alleviate these conditions.

The first observation was the dusty condition of the PVC finishing building. This situation is due to the poor condition of the product collectors and rotex screens and to the lack of a good method of cleaning the building. We feel we can improve these conditions by the following:

1. Replacement of the existing product bag collection systems with twin cyclone units.

At present, the bag house support structures are in poor condition permitting dust to be discharged directly into the building. In addition, bags frequently break discharging resin to the atmosphere outside of the building. Part of the resin discharged then filters back into the building and increases the dust level in the building. In order to improve this situation, CEA's have been prepared to replace the bag houses with Ducon twin cyclone systems. These systems will improve the resin recovery efficiency from the present 98.9% level to 99.9+%, and thus reduce the dust load in the building. If the CE's are approved shortly, we can have these

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systems installed during the first quarter of FY 1975.

2. Replacement of the Rotex Screen covers.

A second source of dust in the building is resin discharge from the rotex screens into the building area. This discharge is due to the condition of the screen covers and the necessity to open the covered hatches on the screen covers to discharge steam blown into the resin stream entering the rotex to break static electricity which causes the screens to blind.

New covers have been ordered for the screens which will reduce the losses now escaping around the cover. We are also studying methods to discharge the steam without opening the hatch covers. This may require a small blower exhaust system.

3. Installation of a central vacuum system to facilitate the cleaning of the building.

A CEA is being prepared to install a vacuum cleaning system throughout the drying and bagging area. This system would be used to routinely collect dust from the building on a shift basis. The product collected would then be sold as tailings or floor sweeps.

Estimated cost of the vacuum system is \$13M and could be installed by November, 1974.

4. Installation of a collection trough beneath the bagging machine filling spouts.

Another source of dust is the small quantity of resin spilled when each bag drops off the filling spout. We are proposing to put a trough at floor level under the filling spouts to collect this resin. This resin would be accumulated and sold as prime or off-grade resin dependent on quality control analyses.

In addition to the above items, we have instituted the wearing of dust masks in the finishing area and are investigating a way to reclaim small losses from the air exhaust vent on the bagging machine.

If all of the above work is done, the dust conditions in the finishing building will be markedly reduced.

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The second observation made by Dr. Kotin concerned the lack of protective clothing worn by a reactor cleaner and the lack of an air supply to the mask he was wearing.

At the time of Dr. Kotin's visit, the reactor cleaners had instruction to carry an air mask into the reactor and connect onto the air supply line anytime the Bendix monitor indicated VCI levels in excess of 50 ppm. This procedure has now been changed to make it mandatory to wear an air mask supplied with breathing air at all times an operator is inside the reactor. In addition, the operators are required to wear air masks anytime they break a flange or open the bottom valve on a reactor.

The plant has not done anything to provide special shoes or clothing for isolation of the skin from monomer vapors as directed by J. Novak. As a result no special clothing or shoes have been supplied to the operators. The only special procedure that has been enforced is the wearing of gloves to protect the hands to prevent AOL. Dr. Kotin is suggesting that we look for a different glove that would not be rolled back. We are doing this.

The last observation made by Dr. Kotin was the lack of air masks in the plant. At the time of Dr. Kotin's visit, the breathing air system was in service with 20 masks available. These air masks had been placed throughout the building and were used anytime the Bendix monitor via an alarm indicated an area had a VCI level exceeding 50 ppm. Dr. Kotin was shown this system.

Since this time, an additional 30 masks have been ordered and when they arrive each person entering the PVC area will be issued a mask to carry on his person at all times he is in the area. Procedures will be established that the person must hook into the breathing area system when a predetermined VCI level alarm is actuated by the Bendix monitor. At present, this alarm is set for 50 ppm but can be reduced to lower VCI exposure levels.

In summary, we feel that the conditions observed by Dr. Kotin either have already been eliminated or can be eliminated by the end of calendar year 1974 if the work outlined in this project is done.



E. A. Primeau

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