MEMORANDUM TO FILE 7-13-70

B-3009086
Michigan Silo
re: Master File

Because of the complexity of this claim, I have chosen to first recite a capsule description of the problem and thereafter treat the individual questions that came to mind throughout the course of this investigation.

First notice of the loss was received 5-19-70, and on 5-20-70, I phoned the insured and there spoke with Robert Egan, who is president and part owner of the Michigan Silo Company. Egan stated that he had recently been advised by Franklin Humphrey that condemnation of the enitre milk production from Humphrey's dairy herd by the Ohio Department of Agriculture since late February, 1970, had been caused by the insured's product, Cumar. Cumar is a paint like substance compounded by the insured which functions as a preservative for the interior of concrete block silo walls. Humphrey stated that the Agriculture Department's tests on milk from his herd disclosed high concentrations of chlorinated hydrocarbons, which necessarily rendered the milk unfit for human consumption and additionally unacceptable for use as swine feed. While the contamination was easily detected, its source remained a mystery; such contamination usually results from careless use of herbicides or pesticides near or on acreage devoted to cattle fodder production.

The cattle fodder in the Humphrey silo was found to be contaminated, but the state authorities were convinced after considerable research into the source of the contaminant that it did not result from injudicious spraying of pesticides, but rather was a result of a substance known as aroclor 12-54, either evaporating from the insured's silo paint and infiltrating the silage, or the alternative (and perhaps more reasonable) theory that the Cumar coating flaked off the silo walls, became part of the silage, and was ultimately ingested by the livestock.

Humphrey made no demands on the insured and discussed the matter with him under the guise of being informative solely. Humphrey's plight was reported to other Ohio dairy farmers via bulletin entitled Day Newsletter, volume 1-number 3 dated May, 1970, a copy of which is contained in the file.

The insured soon heard from Dr. David Hill, Chief of the Ohio Department of Agriculture, who corroborated Humphrey's description of this incident and requested a listing of individuals to whom Cumar was sold over the past four years. A copy of the insured's response to that request under date of April 10, is contained in the file. I learned via phone conversation with Dr. Hill that this list will be used as a guide for future investigations and it is hoped that each dairy farm can be checked by Department of Agriculture examiners as the man power becomes available. It becomes readily apparent, therefore, that numerous claims could conceivably arise from this

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product defect. But as of this writing, only two claims are being actively asserted.

DESCRIPTION OF THE INSURED CORPORATION

I visited the Michigan Silo Company on 5-22-70, at which time I interviewed Robert Egan at length. The insured's plant is composed of four rather l rge old fashioned buildings with a small office space adjacent to one of these. Many of the raw materials for the silo building are stored on the premises. Egan states that prior to the Cumar incident, business had been excellent and the company was showing substantial profits. The original Michigan Silo Company had been a Michigan corporation with locations in Bay City, Michigan, Bloomfield, Indiana and Massillon, Ohio. The Michigan corporation was founded by one Walter Brassert, a German chemist who is now deceased. Brassert's name will be mentioned later since he originated the Cumar formula. In 1957, Egan was appointed vice-president of the Michigan Silo Company and was placed in charge of the Massillon location. In April, 1966, the original Michigan Silo Company was disbanded, and the corporate officers in charge of the various locations were allowed to purchase controlling stock in their specific locations. Egan, in conjunction with a friend, then purchased all stock for the Massillon location and the company became an Ohio corporation in April, 1966. The other locations are now thriving as separate entities in other states, and the Massillon location retained the original corporate name. Basically, the insured company erects silos and repairs existing ones. As part of the repair function, the insured's workman would apply Cumar to silo walls. It was also possible for farmers to purchase Cumar for their own application. Cumar was not sold through retail outlets, but rather was special ordered through the insured's salesmen verbally. The Cumar was typically delivered in five gallon cans of one gallon cans which bore no lables or instructions.

DESCRIPTION OF INSURED'S PRODUCT

I obtained from Egan's records a document entitled mixture of silo paint, which reflects the components of Cumar coating. It is noted that aside from the vehicle components(Xylol, and two solvents) the offending substance, aroclor 12-54, is found in the greatest concentration. To the best of Egan's knowledge, this recipe has been in use since first concocted by the afore mentioned Walter Brassert, and has not undergone any recent changes.

The components are mixed in an electric mixing drum on the insured's premises in a device which resembles a small cement mixer. Suspicioning a mixing error as opposed to formula defect, I questioned Egan

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closely on the employee charged with the duty of mixing the Cumar. Egan states that a semi-retired employee, Clarence Still, generally mixed the product. The only other individual to do mixing was Egan himself and this was on rare occasions. He states that Still is quite competent and has mixed the product for years. The fact that the constituents are now purchased in readily divisible premeasured portions tends to support Egan's claim that the possibility of mixing error is remote.. The components are apparently readily miscible and Egan states that actually a one hour period in the mixing apparatus would be sufficient, but it is a policy to keep the drum rotating for a period of not less than 24 hours. I am convinced that the possibility of mixing error is quite slim and the nature of these losses, in any case, would tend to indicate that the proportion of aroclor (as opposed to its presence or absence) is not of great significance.

I've obtained a sample of the product and additionally have examined a demonstration cinder block with the correctly applied coating. The substance dries to a brownfinish which is porcelain-like in appearance. I also viewed a panal painted with a solution containing all the Cumar components except aroclor 12-54. This panal remained tacky and did not have the glossy and hard properties of the other coating. This readily demonstrates aroclor 12-54's function as a plasticizer and is consistent with the Monsanto bulletins I have obtained which relate that aroclors serve the afore mentioned function when used in masonry paints.

Cumar is applied by brush. The function of the coating is to prevent deterioration of the concrete block silo walls caused by acids normally produced by the fermentation process. Under the severest conditions, the coating may have a projected life of only one year, but the normal range is one to three years. As the coating deteriorates, it does tend to flake off the silo walls in fahsion typical of basement wall paint. Insured makes no claims as to Cumar's effectiveness in preventing deterioration, but it is generally felt that it is of significant value in prolonging the life of concrete block silos. This exact Cumar formula is used in the other locations which branched off the now defuct original Michigan Silo Company, and Egan, having been in correspondence with presidents of those companies, has found that no such incidents have been reported.

All new silos are coated with an epoxy coating which is much superior to Cuma in resistence to deterioration. Epoxy, however, does not adhere to concrete block that has been exposed to acids; hence, unless the silo is a new one, another coating must be chosen, hence Cumar was used for all recoat jobs. Cumar is never mixed with

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epoxy as reflected in the Dairy Newsletter warning of the dangers.

COVERAGE

I have delayed discussion of the most important aspect of this investigation in order to provide the reader with background material. The purposes of use under this KSLG relate to products of concrete, concrete construction, and cement or cinder blocks. There is no mention made of coatings or chemical mixings, the specific area which would have been in point in this instance. I had a very brief discussion of the matter with agent Walter Sorg, who states it was his intent to provide complete products coverage. It is my personal feeling on the matter that in view of the fact that the chemical mixing operation is such a minimal portion of the insured's overall operation along with contract phraseology which, according to my reading of the agent's daily does not delineate each and every conceivable product that coverage will ultimately be afforded.

It would also appear that the exclusion relating to failure of the assured's product due to mistake or deficiency in formula would have no application in this instance since the formula for Cumar was not developed by the insured; certainly the originator of the formula, Wlater Brassert, could in no way be considered an additional insured under the contract.

We were supplied with an incorrect registration, which should list as limits of liability for PD $50,000 per occurance; $100,000 aggregate. It appears we have the aggregate limits on the line in this instance. While this a technically not covered claim, it is the writer's opinion that coverage should ultimately be afforded.

BIOLOGICAL ASPECTS

With the current pollution craze, the question comes to mind as to the merits of the Department of Agriculture's decision that presence of aroclor 1254 in milk justifies condemnation. It seemed at least a possiblity that the Department of Agriculture's concern was political and that perhaps some of their investigatiors were using this problem to "make a name for themselves". I researched the problem hoping to establish the scope of the dileterius effects of aroclors on human life. I came upon an article from Environment magazine, volume 12, number 1, January-February, 1970, pages 16 through 27, which appears to be on all fours with our current problem. A photocopy of this article, save the photos, is contained in the file and on review justifies the state's contention that minimal contamination renders the milk unfit for human use. I'll mention

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that despite its crusading format, Environment magazine, appears to be a scientific publiscation of considerable merit. The reader's attention is drawen to a coy statement from Monsanto contained on pages 26 and 27 of this article. Our insured was advised by the Ohio Solvents and Chemicals Company, via letter dated June 9, that Monsanto has come to a decision to discontinue the sale of its PCB products for plastizer application effective August 30, 1970. Timeliness of this particular announcement indicates it may have been predicated on Environment's probings.

I have had two lengthy long distance phone conversations with Dr. David Hill, a veterinarian of some renown who is in charge of the state Department of Agriculture. Hill had originally promised to give me copies of all laboratory and field reports as I requested in my letter of May 27, but later rescinded that offer at the request of one of the plaintiff's attorneys who asked that the records be "frozen". At our second phone conversation, Hill was corresponding with the State Attorney General's office regarding honoring this request. I didn't wish to alienate him by arguing the public record status of these reports and contented myself for the time being to a verbal description of what investigation had been accomplished to definitely establish that our insured's product caused the damages alleged.

Hill, of course, is farmer oriented and faces the unpleasant task of condemning milk herd which can mean economic ruin to the farmers involved. The contamination of milk with aroclors renders the farmer unable to seek governement reimbursement under the Milk Indemnity Program, which is limited to infestation of herbicides and pesticides only. Because of the question of indemnity under the MIP program, the state tests conducted on these contaminated herds were, according to Hill, quite extensive and it definitely ruled out via absorption testing any side contamination by Dieldrin, DDT, or other contaminants for which indemnity would be provided. Soil feed, and water tests on the contaminated farms were all negative.

Once the theory of contamination relating to the insured's product was developed, government examiners on the Humphrey farm took samples of silage from the Humphrey silos, noting that the concentration of aroclor 1254 was highest by a considerable margin in those samples taken near the wall area, and lowest in samples taken from the center of the silo. There was, however, contamination throughout, which is perhaps explained by the downward travel of the silage during the fermentation process. Such tests which were considerably more elaborate than reflected here serve to establish that the contamination

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occured in the silo rather than on the fields. The fact that the contaminent involved is aroclor 1254 is also well established via chemical tests. I questioned Dr. Hill as to the competency of his field examiners, lab technicians and laboratory equipment, suspicioning that perhaps the Agriculture Department's equipment was not sufficiently sophisticated to render accurate results. Hill assured me that laboratory functions for all routine matters were quite adequate, but hastened to point out that as a means of cross checking on these particular cases, he had sent silage and milk samples to biochemistry departments of Ohio State University and the University of Cincinnati where independent testing corroborated state results without exception. Written reports of these independent tests are in Hill's possession as mentioned earlier, despite my subtle urgings, he was not keen or releaseing the information at this time.

Tolerances for chloninated hydrocarbon contamination of milk are set by the FDA and permit maximum concentrations of 0.2 parts per million in milk fat as the maximum in house tolerence. All samples exceeding that amount are subject to immediate condemnation under FDA rules. To cite the Humphery farm as an example, the original contamination level on discovery was in the area of 1.9 parts per million aroclor in the milk fat. Subsequent tests tended to indicate the concentration had tapered off as the dairy herd purged the substance from their systems and by extrapolating on progress made in one month, it appeared that with original contamination in the 1.9 parts per million range, it would take herds from five to six months to purge their systems to the point where the milk would no longer be condemned. Hence, it can be seen that even with a small dairy operation, total loss of production over a six month period would reach a substantial amount.

CONCLUSION AS TO LIABILITY

The exposure on the insured is both obvious and substantial. I had originally felt, and still maintain, that Monsanto Chemical Company as purveyor of aroclor 1254 would be primarily liable. The insured purchases aroclor 1254 from Monsanto and shipment is made direct from Monsanto's Cleveland warehouse. A copy of Monsanto's customer's invoice is contained in the file, the reverse side of which contains a clause which endeavors to eliminate Monsanto's liability for loss or damage resulting from the use of the product in buyer's manufacturing processes or in combination with other substances. As I view it, such clauses as on the reverse side of purchase orders have little legal significance. There are no other contracts relating to purchases made from Monsanto by the insured. At this writing, one action has been filed which jointly names our insured along with Monsanto.

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The file contains several bulletins from Monsanto, two of which were secured from the insured's records, and the third which I requested via post card to Monsanto. These bulletins recite the chemical and physical properties of aroclors along with suggested applications, one of which is for plasticizing masonry paints, such as the insured used them for. It appears quite plain that the insured's use of aroclor 1254, therefore, was not so unusual that Monsanto could argue it was used in an application for which it was not designed. On the contrary, the insured's application could be described as typical. Monsanto's comments on toxicity in their bulletins are limited to industrial hazards and make no mention of environmental contamination. My review of these three bulletins indicates that the user is not cautioned against applications involving contact with human or animal food stuffs.

According to Dr. Hill, who had communicated with Monsanto earlier, theychose to make no comment on this situation, stating only that they were delving into the matter. The insured, as one of Monsanto's customers, received a letter which is undated, but was postmarked 4-1-70, from one W. E. Schalk, Director of Plasticizer Sales, which recites the contamination problem and draws attention to an article from Chemical Week. This communication is the only one received by the insured from Monsanto. As reflected earlier in this memo, the insured has learned via the Ohio Solvents and Chemicals Company that Monsanto is discontinuing sale of aroclors for plasticizer applications effective August 30, 1970. Monsanto has apparently convinced that although these aroclors have been marketed for years, that they now present a significant environmental hazard.

With an out of state corporate giant like Monsanto as codefendant, I feel we are in excellent shape as far as the local sympathy aspect on the first action which is filed in Stark County. The insured, of course, employs no staff of chemists and has no quality control with reference to Cumar production. I intend to review the matter at length with our defense counsel after the coverage aspect has been decided. There are, of course, in claims of this nature numerous minor facts stored in the investigators mind that should serve to fill most of the gaps in the foregoing.

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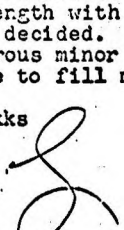

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