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Deposition of Everett Shuman by Barry Castleman

DEPOSITION OUTLINE OF

EVERETT C. SHUMAN

(Deposition taken August 19, 1980)

(State College, PA)

- p.2-3 Discusses his wife's physical health and what he needs to do to care for her
- p.6 77 years old.
- p.7 Has been retired 12 years. Grade school and high school in Milwaukee. University of Wisconsin at Madison and obtained a degree in civil engineering in 1924 and a Master's degree in civil engineering in 1926. After graduation became employed by the Portland Cement Association, Research Laboratory, Chicago. Held that position from 1926 to 1938.
- p.8 1938 to 1941 was Head of Civil Engineering at Louis Institute in Chicago. 1941 joined the research laboratory of the North Atlantic Division of Army Engineers at West Point. And then his location was moved to Mount Vernon, New York where he continued research in concrete as applied to the war effort. In 1944 he joined Owens-Illinois Glass Company at Berlin, NJ as a research engineer in the development of calcium silicate thermal insulation. From 1944 to 1950 he was located at the Berlin Plant engaged in research and development of calcium silicate. 1950 was moved to home office in Toledo where he was Director of Research of the Division. Was also employed at Toledo as a consultant to the sales department until 1958 when the Kaylo Division was bought by Owens-Corning Fiberglass Corporation. From 1958 until 1961 he was employed one year in Toledo and two years in New York by Owens-Corning Fiberglass. In 1961 joined Penn State University in the Institute for Building Research in the College of Engineering where he remained until retirement at age 65 in 1968.
- p.10 First became aware of thermal insulation that contained asbestos "quite early" because pieces of equipment that I would build involved insulation and the equipment was insulated with materials that were on the market at that time, primarily 85% mag. First became involved in insulating of heating equipment when a dryer for the drying of concrete aggregates at the Portland Cement Association was insulated.

- p.11 Says that he believes Owens-Illinois Glass Company began making asbestos containing insulation products in 1943 and he learned that from John Seldon, the man who hired Shumann for Owens-Illinois.
- p.12 At the time he joined Owens-Illinois as a research engineer he was aware of whatever thermal insulations were on the market and would get samples or would have people get us samples and then from those samples he learned that several did contain asbestos.
- p.13 The principal insulation product containing asbestos was 85% mag and there were several manufacturers that made the products such as Johns-Manville, G.B.Mattison, Ehret and others. There were two others that he was aware of that made calcium silicate. One was Pavco in California and Rubberoid which was located in Gloucester, NJ. And there was another that made their insulation out of almost entirely African asbestos under the tradename of Unibestos.
- p.14 He claims that other asbestos-containing products had about 20% by way of asbestos fiber.
- p.15 Claims that Superex had about 20% by weight of asbestos and that Unibestos had about 80 to 90% by weight of asbestos. Talks about asbestos insulating cement.
- p.16 From time to time he was in the field and actually saw asbestos insulation being used and describes manner in which asbestos insulating cement was used.
- p.17 Describes manner in which 85% mag was used in the field.
- p.18 Describes the components of Kaylo.
- p.19 Says that over a period of time Kaylo contained 18% by weight of asbestos.
- p.19 Describes the wet slurry process by which Kaylo was made.
- p.21 Describes the difference between hydrous calcium silicate insulation and 85% mag insulation. Says that hydrous calcium silicate would insulate up to 1200°, 85% mag up to 450.
- p.22 Describes the sales and marketing of Kaylo in 1944 when Shuman joined Owens-Illinois. (Could fill small orders).
- p.23 Claims that Kaylo is less dusty than other materials because it is a stronger product and therefore not as fryable as other materials.

- p.24 Claims that Owens-Illinois got all of its asbestos from Johns-Manville.
- p.25 While he was at Berlin from 1944 to 1949 he claims he was never made aware of any health hazard associated with the inhalation of asbestos fibers.
- p.25 Says in the 1949-50 period Johns-Manville began manufacturing thermobestos, a hydrous calcium silicate product.
- p.26 While in the field he observed tools of trade that were used by insulation workers and the workers used the same tools for Kaylo as for other materials.
- p.26 While at Owens-Illinois he claimed there was an attempt to find a substitute for the asbestos and kaylo because it was the highest priced ingredient.
- p.27-28 Says Owens-Illinois tried glass fibers, mineral wool, and organic materials such as bagasse and wood fibers. And he says "we knew if there ever was a time that we'd have to abandon the asbestos that organic fibers would work."
- p.29 In 1958 when he became employed by Owens-Corning he was used in the sales department as a consultant to help the sales people and of course with the acquisition many of the sales people weren't entirely familiar with kaylo and its properties. So I would help any of the sales people or the sales offices that requested help as a consultant. On occasion he would contact contractors directly.
- p.30 Claims that in his capacity as "Manager of Engineering Services" for Owens-Corning Fiberglass he never received any complaints about the dustiness of Kaylo products.
- p.30 Discusses "solubility" in connection with the asbestos insulation business and talks about it being relevant in terms of accidental wetting of the material.
- p.32 Compares solubility of calcium silicate to 85% mag. (Note argument that can be made to jury that 85% mag would be soluble in the lungs whereas calcium silicate would not be soluble in the lungs).
- p.34 When Shuman began at Owens-Illinois he initially reported to John Seldon and later reported to Mr. U.E. Bowes who

was Director of Research of Owens-Illinois. Says he first began reporting to Mr. Bowes a few months after he began with Owens-Illinois in 1944. In other words, before 1945 he was reporting as a research engineer to Mr. Bowes. Mr. Bowes was Director of Research for the entire Owens-Illinois Glass Company.

- p.35 He reported to Mr. Bowes continually until Mr. Bowes became ill and it would be in the later 1940's and then a Mr. Tom Collins became in charge of the Kaylo Division and then Shuman reported to Tom Collins. Mr. Bowes' offices were located in Toledo. Between 1944 until the late 1940's Shuman reported directly to Mr. Bowes and got assignments directly from Mr. Bowes. Between 1945 and 1947 Mr. Shuman was Berlin, NJ plant manager.
- p.36 In 1950 Shuman went to Toledo as Director of Research for the Kaylo Division of Owens-Illinois. He believes there was a Director of Research for the entire Owens-Illinois Company in 1950 but cannot remember his name. Between 1950 until 1958 his position as Director of Research for the Kaylo Division did not change and his position also included his consulting to the sales department. Between 1950 and 1958 Shuman would travel from Toledo to Berlin, NJ about twice a month.
- p.36 He is familiar with Saranac Laboratories and can't remember when he first became familiar with it.
- p.37 It was explained to Shuman that the company had a policy of being careful in its plant to avoid any hazards that it could avoid. So they employed the so-called Saranac Laboratory which he understands it, was a large industrial research laboratory that looked into hazards in plants. Owens-Illinois had employed them for a number of years as I understood it. Shuman arranged for a sample of Kaylo dust to be sent to Saranac but he never went to Saranac personally. In between 1947 and 1949 he caused Kaylo dust to be sent to Saranac Laboratory. Not until a recent deposition did he ever see written results of analysis done on Kaylo dust by Saranac. However, prior thereto he had heard verbal reports of the results of analysis or testing of dust from Mr. William Hazard.
- p.38 During the whole period that Shuman was employed by Owens-Illinois, Hazard was checking on plant operations.
- p.39 Bill Hazard's function wasn't to tell us how to do it but what he was concerned with was the result. If he

felt that the condition in a certain area was undesirable he would say this, it would have to be changed. And then we would change it and he would check to see if we had the change.

- p.40 The installations we were doing all along because that was part of the plan as to minimize the amount of dust that was in the area and the purpose for trying to minimize the amount of dust in the area was because it was recognized in the industry that dust was a hazard regardless of what the dust might be.
- p.40-43 Describes the Sayreville, NJ Owens-Illinois Kaylo Plant for making roof tile and describes in detail the wet slurry process by which the product is manufactured.
- p.42 The asbestos that went into the product at the mixing end was the same as the asbestos that came out of the product at the finished end. After the product was removed from the molds it was initially hauled by carts but later conveyors were installed and the conveyors were installed in 1948 or 49.
- p.43 Respirators were available all throughout the plant.
- p.43 The man handling the tiles after they were taken out of the molds and either carried to the shaping room or put on a conveyor belt created dust "to a small extent because you see the product then had been reacted so it wasn't dusty in the sense of a cloud of dust because there were no loose fibers or maybe I should see loose particles that would create dust. But like everything else if you bumped it a little particles of dust might fly out. But it was not considered to be a dusty operation.
- p.44 One was able to see dust in the air at that point of the operation only momentarily if something had happened to bump it.
- p.44 He visited the Sayreville, NJ Owens-Illinois facility and observed the production line in operation and first observed the facility while it was being constructed. And after the plant was in operation he visited it periodically and observed the production process.
- p.45 The processes were essentially the same for the Kaylo process in Berlin, NJ and Sayreville, NJ "in principals they were identical".

- p.45 At the point of the operation when the product was being handled by workers after removal from the mold he would say there was less dust generated at Sayreville than the equivalent process at the Berlin, NJ plant.
- p.45 The finishing room is where the product as it came from the molds was taken and then whatever was necessary to end up with the sizes that were desired was accomplished and then the product was packaged in cartons for shipping. The product was manufactured into the desired size by use of saws or sanders. (p.46)
- p.46 When the product was sawed it generated dust and dust collecting equipment was installed in that area. After the product was sawed it was handled by workers who placed it in cartons and that handling process did "not particularly" generate dust.
- p.47 There would be local or localized dust generated where somebody might rub the finished product but it was not what "you would call a cloud of dust or dusty area per se".
- p.47 Depending upon the destination of the finished product, it was shipped by truck or by boxcar. And there were workers at Berlin, NJ whose job it was to load the boxed Kaylos onto boxcars and that would be at the shipping room.
- p.48 In the finishing room at Sayreville there was no sawing, only sanding on the top surface because from the autoclave the top surface of the Kaylo roofing tile would be rough. There were dust collectors all around the finishing room where the sanding was going on. The finished Kaylo roof tile was put on pallets because they were large pieces and it was easier to work with the product in the field when it was shipped in pallets. He says the Sayreville plant went on line in about 1948.
- p.49 David Innes was the Plant Manager at Sayreville.
- p.49 Between 1944 and 1949 Mr. Hazard sampled the air to test the dust concentration in the air at Berlin, NJ. This would usually occur when there were changes being made and Hazard would check an area where a change was made to see what effect that had on the dust concentration.
- p.53 With regard to the frequency with which he communicated with Mr. Bowes while reporting to Mr. Bowes between 1944 and 1949 it was highly variable and it might be frequent

and there might be a lull in between. "In addition, of course since I was reporting to him I would mail him a monthly activity report as was done for all departments." The monthly activity report would discuss things that were physically under way such as research and development or something that happened in the field that was unusual. And he did not report to Mr. Bowes about any visits that William Hazard had made to the Berlin, NJ plant because he presumed that Mr. Bowes was aware of what Mr. Hazard was doing. Mr. Shuman in return received a few reports or letters periodically from Mr. Bowes. The nature of written correspondence he would receive from Mr. Bowes was in the line of inquiry or suggestions as to something that might be investigated.

- p.53 He is asked if he ever discussed with Mr. Bowes any health hazards that might be associated with inhalation of asbestos dust and fibers and he says this would come up as a routine thing because he was aware that the plant was improving its operating facilities and that we had been working with Mr. Hazard so if he had some specific question he might ask it. But he presumed that work was under way as had been planned. (p.54). That would include asbestos related health hazards among other things. But then says he "we didn't know anything about the significance of the inhalation of asbestos and he says we refers to the Berlin operation.
- p.54 Shuman learned from Bill Hazard about the Saranac Laboratory's research which found a reaction that was described as asbestosis.
- p.55 He would have had these discussions with Mr. Hazard in the early 50's probably 1952 or 1953.
- p.56 Based upon what he saw in the field there was no change in Kaylo before 1958 or after 1958.
- p.56 He was a fulltime employee of Owens-Corning Fiberglass from 1958 until 1961.
- p.56 To the extent that there was something that had been prepared by the Sales Department regarding a catalogue or the drafting of product catalogues, Shuman might be asked to check over what had been put together to make sure that there was nothing technically wrong in what had been done.
- p.57 While employed by Owens-Corning Fiberglass, Shuman reported to Mr. H.T. Williams. Mr. Williams was a sales manager for industrial insulations. There was usually a monthly sales

meeting that Shuman would attend and the meetings were conducted by Mr. H.T. Williams. Periodically there was a vice president who attended these monthly meetings but Shuman cannot remember his name.

p.57 After the early 1950's information he learned about some of the results of the Saranac studies with Kaylo and asbestos reaction, he learned no additional information about potential health hazards associated with inhalation of asbestos or Kaylo. And he received no information from Mr. Hazard in that regard.

p.58 During the period he was employed by Owens-Illinois he was acquainted with Dr. Shook who was the medical director for Owens-Illinois. Dr. Shook was the medical director for Owens Illinois when Shuman started in 1944. Shook later became ill and Shuman can't remember what year it was that he dropped out of active service.

p.59 Shuman had no occasion to see Shook other than Shook's administration of the routine x-ray program for all employees. And Shuman never had any discussions with Dr. Shook regarding potential health hazards associated with inhalation of asbestos fiber.

p.59 It was important to Shuman to see how the Kaylo product was being used in the field and it was important to know this so that he could make any changes or alterations in the manufacturing process to make a better product. And it was important to know where it would be used and under what conditions it would be used. (p.60)

p.60 And when asked if it would be fair to say that it's important to know whether or not a product, for example Kaylo, can be used by applicators of the product safely and without hazards to themselves he says that would be implied that we were concerned of how the applicators would use it and the concern was for among other reasons, the safety of the applicators.

p.61 I asked him to assume as a fact that in 1948 Saranac Laboratory wrote a letter to Owens-Illinois telling Owens Illinois that Kaylo inhalation in guinea pigs caused asbestosis and should be handled as an industrially hazardous product .

p.61 After asking Shuman to assume the existence of the 1948 Saranac Letter, I asked him if it would have made a difference to him in his development of the Kaylo product to have the information and the only answer he makes is

that "the only way I would make a change is if the orders came down from top management." And when asked him (62) for him to make a change in the product he would have in the ordinary chain of command in communication Owens-Illinois would have received an order from Mr. Bowes to do so and Shuman says he would follow whatever he was asked to do and says that when he was asked to do things the person who asked him to do them was the person to whom he reported Mr. Bowes.

- p.62-64 I asked him about exhibit OI-11 which is a copy of an article published by him in the April 1952 edition of Petroleum Engineer Magazine.
- p.64 He's asked what foundation or research he had available to him to indicate that hydrous calcium silicate is non-toxic and easy on the hands and his answer is "the word toxic as I was brought up in chemistry was poison and there were no known poisons in calcium silicate and the lime and silica had reacted so that they were a calcium silicate, not either lime or silica. So there was no known poison substances in the material. And I asked him if it was his understanding in April of 1952 that asbestos was non-toxic and he says "that's right, asbestos was non-toxic, meaning poison." And it is Shuman's understanding that poison is something that "reacts chemically". And in 1952 it was his understanding that asbestos did not react chemically in any way with animals or people in handling it, and he says that "the effect was more mechanical than chemical." (p.65). At least that was his understanding in 1952.
- p.65 Shuman is handed Exhibit OI-2 which is a two-page document dated February 12, 1943 signed by U.E. Bowes, Director of Research and, p.66, Shuman says that he believes that the signature is Mr. Bowes'.
- p.66 And, with regard to Exhibit OI-2 Shuman agrees that on the first page of the document it looks like a reproduction of an Owens-Illinois letterhead and that is the type of letterhead that he was familiar with while working with Owens Illinois during that time.
- p.66 Shuman says he did correspond with Dr. Vorwald.
- p.67 The correspondence with Vorwald had to do with sending Saranac a sample of Kaylo dust with which to conduct research.

- p.67 And Mr. Shuman never became aware in a report dated January 30, 1954 to Owens-Illinois of Dr. Vorwald describing Kaylo as having because of its asbestos contents toxic properties and he never saw that, and if he had seen that it may have changed his belief about Kaylo being non-toxic. "Yes, I presume I certainly would have weighed the comments".
- p.67 By 1960, Shuman still claims that he had no understanding or belief that asbestos was a potentially toxic substance. However, to me it meant that it was like silicosis but somewhat different.
- p.68 Shuman identifies Exhibit OCF-8 which is an Owens Corning Products Catalogue dated October 1960.
- p.69 Exhibit OCF-8 contains certain technical information regarding Kaylo pipe covering and that is the type of technical information about which he would have been consulted by the sales department in Owens-Corning, "usually". And the technical information contained in Exhibit OCF-8 are data that had been accumulated by Owens-Illinois before Owens-Corning took it over so I presume these are the same data that Owens-Illinois had used.
- p.70 Mr. Williams (H.T.Williams) had been an employee of the Kaylo Division of Owens Illinois before he took over the sales manager job at Owens Corning.
- p.70 A Mr. Oscar Burch was the person who became director of research succeeding Mr. Bowes.
- p.71 He denies that he has any knowledge about a Mr. M.D. Burch who worked at Owens-Corning and denies any knowledge of Owens-Corning Fiberglas having a position entitled Director of Personnel and Industrial Relations.
- p.71 He knew Mr. Harold Boechenstein as President of Owens-Corning Fiberglas. And he identifies Mr. W.P. Zimmerman as one of the officials of Owens-Corning Fiberglas and met him occasionally.
- p.72 The name Mr. Edward C. Ames does not ring any bells although it does sound familiar and the fact that the name may have been connected to Public Relations Manager in Owens-Corning Fiberglas doesn't jog his memory. The name Ira Brought does not ring any bells for him. W.J. Stewart was with Owens Illinois but doesn't know if he was with Owens-Illinois in June of 1956. At one time he

was General Manager of the Kaylo Division. And they worked for Owens-Illinois at the same time.

- p.73 Identifies Exhibit OI-9 as a document dated June 12, 1956 and it bears the name E.C. Shuman. Shuman doesn't recollect that being a memorandum he received during his employment with Owens-Illinois and remembers nothing about the contents. (p.73)
- p.74 Says that in June 1956 Mr. Hazard was still working for Owens-Illinois.
- p.75 The name J.M. Robinson does not ring a bell.
- p.76 Claims that the Kaylo manufactured at Berlin contained only chrysotile asbestos and that when a sample of dust was taken from the Kaylo plant in Berlin, NJ and sent to Dr. Vorwald the dust samples would not have contained amosite.
- p.76 Says he does not remember ever meeting Dr. Gerritt Schepers.
- p.77 At the Berlin, NJ plant they actually used Kaylo to insulate equipment in the facility. It was applied by workers who initially were not members of the asbestos workers union but later on they were.
- p.78 The workers who applied the Kaylo at Berlin, NJ were supplied respirators "if there was a need to". Whether or not there was a need to depended on where the insulation work was being done. If it was in an enclosed area the respirators would be supplied. And respirators were supplied when the occasion arose "meaning closed areas where it might be dusty" and those closed areas would be pieces of equipment that were alongside of walls or places where it wasn't readily ventilated naturally. And most indoor uses for applications of Kaylo at the Berlin, NJ plant would involve a situation where the person applying it would be provided with a respirator.
- p.79 In the mid to late 40's the address of Owens-Illinois Glass Company was Toledo 1, Ohio and the 1 was a postal designation like a zip code.
- p.79 Shuman doesn't recollect the name Mr. H.H. Renn. He identifies Mr. M.M. Olander as being Director of Personnel for Owens-Illinois. Has no recollection of a Mr. A.C. Hirth.

- p.80 In the early to mid 40's the name of Mr. Bowes' secretary was Josephine Grice.
- p.80 Says in 1950 or 1951 he was never consulted with regard to putting together a brochure about the health aspects of Kaylo insulation. Claims that a Santocell product was never made by Owens-Illinois and thinks it was made by Johns-Manville.
- p.81 After Hazard took samples of atmospheric dust from the Berlin, NJ plant, Hazard would report back to Shuman about whether the value was too high and that they needed better pick-up equipment.
- p.81 The annual chest x-rays were sent to Saranac Lake to be read.
- p.82 He says just once did he send Kaylo dust from Berlin to Saranac and that the initial shipment was a mistake and they had sent block and then Vorwald or his secretary pointed out that they wanted dust so that dust was sent. That was the only shipment made.