No. 3-11-0028 IN THE APPELLATE COURT OF ILLINOIS THIRD DISTRICT

Thomas M. Coyne, Individually and as Special Administrator of the Estate of Thomas I. Coyne, Deceased,

Plaintiff-Appellant,

Appeal from the Circuit Court of the Third Judicial Circuit, Peoria County, Illinois No. 08 L 375

VS.

CBS Corporation; Corn Products International; Crane Co.; Goodrich Corporation; Illinois Light Company d/b/a/ AmerenCILCO; Nestle USA Inc.; Pabst Brewing Co.; Parker-Hannafin Corporation; Rockwell Automation, Inc.; Trane U.S., Inc., Hon. Steven A. Kouri, Judge Presiding

Defendant-Appellees,

Archer-Daniels-Midland Company; Carrier Corp.;
Caterpillar, Inc., Copeland Corporation, LLC;
Deere & Company; Emerson Climate Technologies, Inc.;
Garlock Sealing Technologies; General Electric Co.; Goulds
Pumps, Inc.; ITT Corporation; Johnson Controls, Inc.;
JP Morgan Capital Corp.; Keystone Consolidated Industries, Inc.,
a/k/a Keystone Steel & Wire Company; Navistar, Inc.;
Owens-Illinois, Inc.; Ruyle Mechanical Services, Inc.;
Sprinkmann Sons Corp.; State Farm Fire and Casualty Company,

Defendants.

BRIEF AMICUS CURIAE OF
RICHARD WILSON, JOHN HENDERSON DUFFUS, RONALD E. GOTS,
JOHN HOSKINS, STEVEN H. LAMM, ARTHUR M. LANGER,
A. ALAN MOGHISSI, ROBERT P. NOLAN, MALCOLM ROSS,
EMANUEL RUBIN, AND ANIBAL L. TABOAS
IN SUPPORT OF DEFENDANTS-APPELLEES

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INTEREST OF AMICI

Amici are scientists who have studied the role that scientific issues play in public affairs and in particular the way in which they can illuminate disputes between different persons or elements of society in the courts of law. Amici include physicians, chemists, geologists, physicists, epidemiologists, and toxicologists. Several of them have devoted much of their careers to studying asbestos and its health effects. Amici are also aware of the significance of asbestos litigation nationally, and they are concerned that the mere utterance of "asbestos," no matter the asbestos fiber type, or the level of exposure, together with "mesothelioma" or "cancer" can have undue impact on juries, even though that impact is not justified by the known patterns of asbestos-related disease.

Amici also believe that the decision of Circuit Court was correct and properly based on the current state of scientific knowledge, on proper scientific methodology, and on the application of the law to these science issues.

RICHARD WILSON, D.Phil., is Mallinckrodt Research Professor of Physics at Harvard University and the past Director of the Regional Center for Global Environmental Change at Harvard University. He is an Affiliate of the Center for Science and International Affairs and of the Center for Middle Eastern Studies at Harvard University. Professor Wilson was Chairman of the Department of Physics at Harvard University. He is a past chairman and current member of the Cyclotron Operating Committee at Massachusetts General Hospital, and a current member of the visiting committee of the Radiation Medicine Department at Massachusetts General Hospital. He is a founder of the Society for Risk

¹ Amici curiae affirm that no counsel for any party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. The general counsel of Crane Co., one of the defendant-appellees, serves on the board of directors of Atlantic Legal Foundation, but he did not participate in the decision of the Atlantic Legal Foundation to act as counsel for amici in this case. The Crane Foundation has made financial contributions to the general operating expenses of Atlantic Legal Foundation for several years; those contributions have never exceeded 3.0% of the operating budget of the Atlantic Legal Foundation in any fiscal year.

Analysis. He is and has been a consultant to the United States government and the governments of numerous foreign countries on matters of toxicology, epidemiology, public health and safety, nuclear safety, and risk assessment. Professor Wilson's areas of expertise include elementary particle physics, radiation physics, chemical carcinogens, air pollution, ground water pollution by arsenic, and human rights. He is the author of many articles on high energy physics, environmental pollution and risk analysis, including Particles in Our AIR, EXPOSURES AND HEALTH EFFECTS (with John Daniel Spengler) (Harvard Center for Risk Analysis, 1996) and RISK-BENEFIT ANALYSIS (2nd ed., 2001) (with Edmund A.C. Crouch) (Harvard University Center for Risk Analysis). Professor Wilson is the author or co-author of more than 900 published papers on subjects including atomic particles, radioactive particle decay, acute toxicity and carcinogenic risk, carcinogenicity bioassays, statistical distributions of health risks, public health, cancer risk management, shielding of particle accelerators and nuclear reactors, nuclear energy production, health risks of nuclear power plant accidents, health effects of electromagnetic fields, risks and health impacts of radiation, risks of nuclear proliferation, risk-benefit analysis, global energy use, and global warming.

JOHN HENDERSON DUFFUS, B.Sc., Ph.D., D.Sc., CSci., CChem., FRSC, CBiol., MSB, is the Director of the Edinburgh Centre for Toxicology and the author of more than 200 publications, including books, book chapters, and research papers in refereed journals. He has also helped to organize postgraduate courses on toxicology in the United Kingdom and many other countries sponsored by international organizations such as the International Programme on Chemical Safety (World Health Organization, United Nations Environmental Programme, and International Labour Organization), and prepared distance learning material. He has defined terminology in toxicology for the International Union of Pure and Applied Chemistry (IUPAC), for the United States Society of Toxicology, and for TOXNET, the toxicology internet portal of the United States National Library of Medicine.

He has acted as a consultant on toxicology to the World Health Organization, to the European Commission, to the United Kingdom government, and to private individuals and international companies. He has never been connected with the asbestos industry in any way although his main area of expertise relates to the carcinogenicity and toxicity of inorganic substances, including the various forms of asbestos. He has been deeply involved with current developments relating to the chemical speciation of metallic elements in relation to toxicity, and he has contributed in various publications to the development of the underlying scientific concepts. He is currently the Chair of the IUPAC Chemistry and Human Health Division Subcommittee on Toxicology and Risk Assessment.

RONALD E. GOTS, M.D., Ph.D., DABT, is CEO of the International Center for Toxicology and Medicine. He is a physician and board certified toxicologist, specializing in toxicology and environmental medicine. He is a member of the Society of Toxicology and the American College of Occupational and Environmental Medicine. Dr. Gots is Adjunct Professor of Pharmacology at Georgetown University School of Medicine. He has been Coordinator of the Pharmaceutical Class Labeling Project of the U.S. Food and Drug Administration; Medical Director and Examining Physician of the Occupational Health Units of the Bureau of Economic Analysis, the Census Bureau and the Immigration and Naturalization Service. He was Senior Investigator/Chief in the Department of Gastroenterology, Walter Reed Army Institute of Research. Dr. Gots has focused on scientific methods for assessing causation of diseases allegedly associated with chemical and biological agents, the causal analysis of chemically-induced illnesses, workplace exposures, worker protection, and environmental risk communication. He has provided medical oversight for chemically-exposed individuals. Dr. Gots has chaired two international symposia on "Multiple Chemical Sensitivities: The State of the Science." He was a member of a United Nations committee convened by the International Programme on Chemical Safety (UNEP-ILO-WHO) to evaluate the "chemical sensitivity" issue. Dr. Gots is the

author of six books, and has written chapters in six additional books and has published more than 70 articles on biochemistry and toxicology. Recent book chapters include "Toxic Risks: Science, Regulation, and Perception"; "Risk Analysis and Communication" in Occupational, Industrial, and Environmental Toxicology; and "Applying Principles of Science to *Daubert* Motions in Toxic Tort Claims" in *Wiley Expert Witness Update 2000*. His most recent books are Chemical Sensitivity: The Truth About Environmental Illness and Keeping Buildings Healthy.

JOHN HOSKINS, Ph.D., is an independent toxicology consultant. He is a Fellow of the Royal Society of Chemistry and a Chartered Chemist. Prior to his current consultancy work he was employed as a senior scientist by the UK Medical Research Council, latterly as an inhalation toxicologist working on potential diagnostic tests for cancer development due to asbestos exposure. He is the author or editor of more than 140 publications including books, book chapters, and research papers in refereed (peer reviewed) journals. He has studied the toxicology of mineral fibres for over twenty years and during this time he has undertaken occasional consultancy work for the Montreal based Chrysotile Institute. More recently his interests have expanded to include other nanomaterials and nanotechnology. Dr. Hoskins is a committee member of the Royal Society of Chemistry Toxicology Group and the Royal Society of Chemistry Environment, Health and Safety Committee. He is also a member of the Royal Society of Chemistry nanotechnology steering group, the UK government run DEFRA Nanotechnology Stakeholder Forum and represents the Royal Society of Chemistry on the EuCheMS Expert Group on Nanosciences and technologies. He was recently appointed to the BSI nanotechnologies group. He has been a Scientific Advisor to the House of Commons Select Committee on the Environment and recently gave evidence to the House of Lords Committee investigating nanomaterials on behalf of the Royal Society of Chemistry. He has spoken at international meetings around the world on subjects including asbestos and other mineral fibres, air pollution, chemical safety and sustainability

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A. ALAN MOGHISSI, Ph.D., is President of the Institute for Regulatory Science (RSI), a non-profit organization whose major activity is conducting scientific peer reviews for government agencies, and which is dedicated to the idea that societal decisions must be based on the best available scientific information. Activities of RSI include research, scientific assessment, and science education at all levels – particularly the education of minorities. Dr. Moghissi held positions at the U.S. Public Health Service and the U.S.

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MALCOLM ROSS, Ph.D., is a research mineralogist with 41 years of service with the U.S. Geological Survey. He received a B.S. degree in Zoology from Utah State University, an M.S. degree in Physical Chemistry from the University of Maryland, and a Ph.D. degree in Geology from Harvard University. His main scientific interests were the crystal structure of micas, pyroxenes, and amphiboles; the petrology and mineralogy of igneous and metamorphic rocks; studies of lunar rocks; the effects of acid rain on building stone; and the health effects of mineral dusts, particularly of asbestos minerals. After retiring from the U.S. Geological Survey in 1995, he became Senior Scientist with the Environmental Sciences Laboratory, Institute of Applied Sciences, The City University of New York. His research at CUNY is directed towards analyzing various mine dusts, evaluating their possible effects on human health, and advising on possible mitigation procedures to reduce health risks to miners in the United States and abroad. In 1986 Dr. Ross received the U.S. Department of Interior's highest honor, the Distinguished Service Award, for his contributions to a better understanding of the health effects of the several asbestos minerals. He is past President of the Mineralogical Society of America, and in 1990 he received that Society's first Public Service Award for his work on the health effects of minerals. He has published 109 papers and 67 abstracts in peer reviewed journals. He is a co-author of the book, ASBESTOS AND OTHER FIBROUS MINERALS and is cited in Who's Who in America, and in Who's Who in Medicine and Healthcare. At present he is particularly concerned with the proper application of scientific information to public policy topics.

EMANUEL RUBIN, M.D., is currently Distinguished Professor of Pathology, Anatomy and Cell Biology at Jefferson Medical College in Philadelphia, Pennsylvania and Chairman Emeritus of the department. He has also served as Chairman of the Department of Pathology at the Mount Sinai School of Medicine and at Drexel University Medical School. He held the position of Adjunct Professor of Biochemistry and Biophysics at the University of Pennsylvania School of Medicine for 10 years. Dr. Rubin is the author of some 300 papers in the medical and scientific literature and has been continuously funded by NIH for over 45 years, during which time he has served as Principal Investigator on more than \$100,000,000 in research grants. As editor-in-chief he authored one of the major textbooks in the field of pathology, Rubin's Pathology, the sixth edition of which is in press. Dr. Rubin is a frequently cited expert in Environmental Pathology, and he has authored numerous book chapters in that field and in Pulmonary Pathology. He is recognized as an authority on the effects of asbestos on the human body.

ANIBAL L. TABOAS, Ph.D., is a consultant on strategic leadership and risk management, and invests (pro-bono) in environmental governance (e.g. Center of Excellence for Hazardous Materials Management). Previously, he had a distinguished career in environmental and risk management as an executive in federal civil service in life-cycle management of products from atomic energy defense activities to the operation of major research and development facilities (e.g., Argonne National Laboratory), including issues involving asbestos. Dr. Taboas is a Fellow of the American Society of Mechanical Engineers, and frequently chairs the series of International Conference on Environmental Management (e.g., ICEM '10 in Japan and ICEM '11 in France). He is internationally recognized for advocating Independent Peer Review and Assessment, Use of Best Available Science in decision-making, and transparency in governance. Dr. Taboas has contributed to more than 50 peer-reviewed publications, including the leading handbook on Decontamination and Decommissioning. His personal interests include promoting diversity

and education of emerging populations, with emphasis on science, technology, engineering, and mathematics. Dr. Taboas earned graduate degrees in Physics (Indiana State University), and Mechanical and Nuclear Engineering (Northwestern University). Some of his accomplishments have been recognized by numerous awards, including the Vice President's Hammer Award, the Secretary of Energy Gold Medal, the University of Chicago Medal for Distinguished Performance, the ASME Dedicated Service Award, an honorary Ph.D. in Environmental Management by the UPAEP, Mexico, and various exceptional service medals.

None of the *amici* is employed by, has received funding from, or has testified as experts for, any of the parties in this case.

INTRODUCTION

This action was brought to recover damages arising from the death of Thomas I. Coyne ("Coyne"). Plaintiff² alleges that Coyne died from mesothelioma caused by his exposure to (1) asbestos-containing products made or distributed by certain defendants (the "product defendants") or (2) asbestos found on the premises of certain defendants (the "premises defendants"). (V.10, C2201-2202, C2207-2212).

The nine defendants in this appeal were granted summary judgment on plaintiff's claims. (V.43, C10696) The trial court granted summary judgment to each defendant and gave essentially the same reasons for each. The trial court found that plaintiff's allegations in response to defendants' motions for summary judgment failed to satisfy the "frequency, regularity, and proximity" test of *Thacker v. UNR Indus., Inc.,* 151 Ill.2d 343, 177 Ill.Dec. 379, 603 N.E.2d 449 (1992).

Plaintiff appeals the grant of summary judgment as to each of the appellees. For the reasons set forth below, *amici* believe the trial court arrived at the correct result and this appeal should be dismissed.

² Thomas I. Coyne died shortly after filing his complaint and Thomas M. Coyne ("Plaintiff"), the Decedent's son, was named as Special Administrator of his father's estate and substituted as Plaintiff.

STATEMENT OF THE ISSUES PRESENTED FOR REVIEW³

- 1. Whether the trial court erred in finding no material question of fact exists about causation when plaintiff presented medical opinions and scientific evidence that mesothelioma can be caused by brief exposures to asbestos, all exposures contribute to cause mesothelioma, and the exposures at issue were high levels.
- 2. Whether the trial court can utilize the substantial factor test to arbitrarily pick and choose amongst the defendants when asbestos exposures for which each defendant is responsible are similar and differ only in quantity.
- 3. Whether the trial court erred by granting summary judgment to defendants based on the sufficiency of the evidence when plaintiff was unable to obtain discovery due to a court ordered freeze on discovery pending the resolution of summary judgment motions.

Amici will address the first issue.

³ These are the issues set forth by plaintiff-appellant in his opening brief.

STATEMENT OF FACTS⁴

Thomas I. Coyne ("Coyne") was a service technician who repaired and maintained cooling systems in commercial and industrial settings in central Illinois. (V.36, C8804-8806, C8809). At issue in this appeal is his work beginning in 1957 for two companies: Carrier and Baker & Hauser. (V.36, C8804-8806 [Affidavit of Richard Coyne]; V.35, C8578-8579 Deposition of Richard Coyne at 68-69]; V.10, C2201, 2215).

Coyne's work and exposure history is primarily derived from two sources of evidence. The first was Coyne's daily work records, recording each job he worked on and its location. (V.36, C8805-8806 [Richard Coyne Affidavit]; C8846-8847 [Richard Coyne Affidavit]) for the years 1960 to 1963, 1965 to 1968, 1970 to 1977, and 1987. (V.36, C8806-8807; C8846-8847). Coyne's work records do not describe the actual work he performed each day. The second was testimony of Coyne's son, Richard Coyne ("Rick"), who testified on deposition as to *his* experiences as an HVAC service technician. Coyne and Rick both worked as service technicians for Carrier from 1977 to1984 and often worked together on the same jobs or for the same customers. (V.36, C8804). Rick stated that he knew what asbestos-containing products he was exposed to at the various premises where he and his father worked. (V.36, C8945-8946, C8981; V.37, C8984 [Richard Coyne Affidavit]). Rick also kept a Rolodex that contained information about the types of equipment present at each of the facilities where Rick might have needed to work during the years he worked for Carrier. (V.25, C6151-6152 [Richard Coyne Affidavit]).

⁴ This Statement of Facts is based largely on plaintiff-appellant's opening brief on appeal. *Amici* accept these facts, but not their characterization, as accurate, *arguendo*. The description of the knowledge and opinions of plaintiff's medical experts is based on a review of those witnesses' affidavits and the report and deposition of Dr. Jerrold Solomon.

⁵ By citing and restating the information from these sources, *amici* do not concede the admissibility of records not kept by Thomas I. Coyne himself or of testimony of Rick Coyne as to what he did, with the implication that Thomas I. Coyne did the same things. Defendants challenged the admissibility of much of the material proffered by plaintiff.

According to Rick Coyne, Coyne worked on or around various pieces of equipment, or the components of such equipment, that are used in refrigeration and cooling systems and contained asbestos. This equipment consisted primarily of large industrial air conditioning units. (V.36, C8804-8806; V.36, C8945-8946; V.43, C10642-10643 [Affidavit of William M. Ewing]).

Plaintiff claims that the process of disassembling and reassembling the refrigeration and cooling equipment required Coyne to work with asbestos-containing materials such as gaskets, packings, and joint compounds or other pipe covering insulation. (V.26, C6152; V.35, C8516 at 75; V.36, C8812 [Letter from Dr. Abraham], C8981 [Richard Coyne Affidavit]; V.37, C8945, C8982-8984 [Richard Covne Affidavit]; V.43, C10642-10644 [Ewing Affidavit]). Plaintiff alleged that the integrity of these materials deteriorated as time passed and this enhanced the exposures when the materials were disturbed. (V.37, C8983-8984 [Richard Coyne Affidavit]). Plaintiff further asserts that asbestos exposures occurred wherever Coyne worked on chillers (air conditioning units). (V.35, C8729 at 24 [Deposition of Richard Coyne]). Rick Coyne testified that working on chillers involved breaking loose insulation (V.26, C6135 at 222 [Deposition of Richard Coyne]), and that Coyne scraped old gaskets out and made new gaskets to put in, which created dust. (V.35, C8516 at 75 [Deposition of Richard Coyne]; V.36, C.8981-V37, C8982-8983 [Richard Coyne Affidavit]). Rick Coyne also testified that the wiring in starters was insulated with asbestos and that to change the starter, wires had to be disconnected from overload heaters (V.35, C8557 at 241 [Deposition of Richard Coyne]; V.35, C8714 at 297 [Deposition of Richard Coyne]); if the starters did not engage smoothly the contacts had to be sanded, which generated dust. (V.35, C8715 at 302-303 [Deposition of Richard Coyne]).

Coyne conducted this work at many locations, including premises owned by the premises defendants. This work included regularly scheduled maintenance work on equipment at the premises and unscheduled repairs. (V.36, C8981- V.37, C8684 [Richard

Coyne Affidavit]). Richard Coyne stated that the maintenance and repair work required that the same types of products be used repeatedly. (V.35, C8516 at 75, V.35, C8518, at 83; V.35, C8521 at 95 [Deposition of Richard Coyne], V.35, C8659 at 79 [Deposition of Richard Coyne]; V.37, C8982-8984 [Richard Coyne Affidavit]).

Coyne was diagnosed with mesothelioma on or about July 25, 2007. (V.36, C8810 [Affidavit of Jerrold Abraham]). As a result of this condition, he died in August of 2007. (V.36, C8789 at 16 [Deposition of Thomas M. Coyne]; V.36, C8812 [Abraham letter]).

Plaintiff brought suit against numerous premises defendants and several product defendants, including the appellees Corn Products International ("Corn Products"), Illinois Light Company, d/b/a/ AmerenCILCO ("CILCO"), Goodrich Corporation ("Goodrich"), Pabst Brewing Co. ("Pabst"), CBS Corporation ("Westinghouse"), Crane Co. ("Crane"), Parker Hannifin Corp. ("Parker Hannifin")⁶, Rockwell Automation, Inc. ("Rockwell"), and Trane U.S., Inc. ("Trane"). (V.10, C2201).

The nine defendant-appellants in this appeal were granted summary judgment. The trial court denied Copeland Corporation's motion for summary judgment because plaintiff presented sufficient evidence to raise an issue of material fact, "based on Rich Coyne's statement of the product's general presence, and supplemented with several specific instances." (V.43, C10696). The court reserved ruling on three defendants' motions for summary judgment and allowed additional discovery as to General Electric Company, Navistar, Inc., and State Farm Insurance Company.

Plaintiff alleges that all of the "product defendants" manufactured or sold asbestos-containing products that Coyne came into contact with when he worked in the cooling industry. The product manufacturing defendants in this appeal are CBS (Westinghouse), Crane Co., Parker Hannifin, Rockwell, and Trane.

⁶ We use the correct spelling of the name of this company; it is sometimes incorrectly spelled in the caption on various court filings.

The premises defendants in this appeal are CILCO, Corn Products, Goodrich, and Pabst. Daily work records kept by Coyne show the premises or location where he worked. (V.36, C8805-8807 [Affidavit of Richard Coyne]), but Coyne's available work records are incomplete and could only be located for the years 1960 to 1963, 1965 to 1968, 1970 to 1977, and 1987. (V.36, C8806-8807; C8846-8847 [Thomas I. Coyne's work journal]). Based on the work records, Coyne worked at different premises defendants' locations for different lengths of time. (V.36, C8846-8847). Plaintiff alleges that all of the premises defendants had equipment with asbestos-containing parts that Coyne worked on and that this work exposed him to asbestos.

Plaintiff proffered no evidence as to the type of asbestos used in the equipment supplied by any of the product defendants or present in any of the equipment on which Coyne worked at any of the locations involved in this case. There is no evidence as to the extent of exposure to any particular type of asbestos from Coyne's work on the equipment or parts manufactured by any product defendant.

Plaintiff's industrial hygiene expert, William M. Ewing, opined that Coyne was exposed to significant levels of asbestos when working with gaskets, removing and installing packing, and removing pipe insulation. (V.43, C10643-10644 [Affidavit of William Ewing]). However, Mr. Ewing did not provide any information as to Coyne's exposure to asbestos at particular premises or exposure to asbestos from products of particular product defendants.

Plaintiff's medical expert, Jerrold Abraham, M.D., a pathologist, opined that "each and every exposure" contributed to the development of Coyne's mesothelioma. (Affidavit of Jerrold Abraham, Aug. 10, 2010, V. 26, C6155-6156; Deposition of Jerrold Abraham, June 24, 2010, V.31, C7611 at 34, C7615 at 55-56). At the time of his deposition he had not seen

⁷ We understand that defendants challenged the admissibility of much of the Ewing affidavit.

any product or premises specific information and in fact was relying only on information supplied by Plaintiff's counsel regarding Decedent's work and asbestos exposures. *Id.* Dr. Abraham admitted that he did not evaluate any exposures to any particular product or at any particular premises in this case. (V. 31, C7614–C7615), and he had no information as to the extent of Coyne's exposure to asbestos at any particular location nor to asbestos from any equipment manufactured or supplied by any specific product defendant. Dr. Abraham was only provided with a one page "exposure history" (Abraham deposition at 33, V.31, C.7611), and he did not compare Coyne's various exposures to asbestos at different locations and from different equipment. (Abraham deposition, *id.* and at 33, V.31, C7611, and at 40, V.31, C7616). Further, Dr. Abraham did not know what type of asbestos Coyne was exposed to (Abraham deposition at 64, V.31, C7622).⁸

The trial court found that there were no issues of material fact as to the motions for summary judgment by the premises defendants-appellees and that plaintiff offered no evidence that any of those defendants knew of the presence or danger of asbestos at the time plaintiff was present, as required under Section 343(a) of the Restatement (Second) of Torts (1965), citing *Gregory v. Beazer East*, 384 Ill.App.3d 178, 892 N.E.2d 563, 322 Ill.Dec. 926 (1st Dist. 2008) and *Brewster v. Colgate-Palmolive Co.*, 279 S.W.3d 142 (Ky.2009) and that plaintiff failed to satisfy the "frequency, regularity, and proximity" test set forth in *Thacker v. UNR Indus., Inc.*, 151 Ill.2d 343, 177 Ill.Dec. 379, 603 N.E.2d 449 (1992). (V. 43, C10702-C10706; Appendix A15-A19).

The trial court also found there were no issues of material fact as to the products defendants-appellees and that plaintiff had failed to present evidence of exposure to asbestos-containing products produced by each of those defendants. (V. 43, C10707-C10708; Appendix A20-A21).

⁸ We understand that some of the defendants challenge the admissibility of Dr. Abraham's affidavit. *Amici* submit that even if that affidavit were admissible and considered, plaintiff's proof is insufficient to create a triable issue of fact for a jury.

ARGUMENT

I.

Summary Judgment Was Appropriate Because Plaintiff Could Not Show Causation as to Each Defendant

The trial court granted summary judgment to the defendants in this appeal based on *Thacker v. UNR Indus., Inc.*, 151 Ill.2d 343, 177 Ill.Dec. 379, 603 N.E.2d 449 (1992). The trial court found plaintiff did not prove the exposures from five asbestos suppliers' products and at four premises owners' facilities were sufficient to be a "substantial factor" in causing Coyne's mesothelioma. (V.43, C10698, C10702-10708).

A. Summary Judgment Standard

Summary judgment is proper where the pleadings, depositions, admissions, and affidavits demonstrate that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law. 735 ILCS 5/2-1005 (West 2005); *Williams v. Manchester*, 228 III.2d 404, 417, 320 III.Dec. 784, 888 N.E.2d 1, 9 (2008); *Zimmer v. Celotex Corp.*, 192 III.App.3d 1088, 140 III. Dec. 230, 549 N.E.2d 881 (1st Dist. 1989).

Summary judgment in an asbestos case is appropriate where plaintiff cannot or does not show a factual basis to support each element of its claim. *Ross v. Doe Julie, Inc.*, 341 Ill.App.3d 1065, 275 Ill.Dec. 588, 793 N.E.2d 68 (1st Dist. 2003). These elements may be proven by direct or circumstantial evidence, but liability cannot be based on mere speculation, guess, or conjecture. *Nolan v. Weil-McLain*, 233 Ill.2d 416, 430, 331 Ill.Dec. 140, 148, 910 N.E.2d 549, 556 (2009); *Thacker v. UNR Industries, Inc.*, 151 Ill.2d 343, 354. Where circumstantial evidence is relied upon, the circumstances must justify an inference of probability as distinguished from mere possibility. *Naden v. Celotex Corp.*, 190 Ill.App.3d 410, 415, 137 Ill.Dec. 821, 824, 546 N.E.2d 766, 769 (1989); *Mateika v. LaSalle Thermogas Co.*, 94 Ill.App.3d 506, 508, 49 Ill.Dec. 649, 651, 418 N.E.2d 503, 505 (3rd Dist. 1981).

B. Burden of Proof

In a products liability action the plaintiff must identify the manufacturer of the product and establish a causal relationship between the injury and the product. *Schmidt v. Archer Iron Works, Inc.*, 44 Ill.2d 401, 405-06, 256 N.E.2d 6, 8 (1970), *cert. denied*, 398 U.S. 959, 90 S.Ct. 2173, 26 L.Ed.2d 544 (1970). "A fundamental principle of tort law is that the plaintiff has the burden of proving by a preponderance of the evidence that the defendant caused the complained-of harm or injury." *Smith v. Eli Lilly & Co.*, 137 Ill.2d 222, 232, 560 N.E.2d 324, 328 (1990); *Nolan v. Weil-McLain*, 233 Ill.2d 416, 331 Ill.Dec. 140, 910 N.E.2d 549 (2009). In civil cases the plaintiff bears the burden of producing evidence sufficient to establish each element of the claim and causation requires proof of both 'cause in fact' and 'legal cause.' *Thacker v. UNR Industries, Inc.*, 151 Ill.2d 343, 354; *Nolan v. Weil-McLain, supra* at 431.

In a cause of action for negligence or strict products liability arising from alleged exposure to asbestos, a plaintiff must prove that the defendant's asbestos was the cause in fact of the injury. *Thacker v. UNR Industries, Inc.*, 151 Ill.2d 343 (1992). To prove causation in fact, the plaintiff must prove medical causation, *i.e.*, that exposure to asbestos caused the injury, and that it was the defendant's asbestos-containing product which caused the injury. *Thacker*, 151 Ill.2d 343; *Johnson v. Owens-Corning Fiberglass, Corp.*, 284 Ill.App.3d 669, 672 N.E.2d 885 (3rd Dist. 1996); *Zimmer v. Celotex Corp.*, 192 Ill.App.3d 1088, 140 Ill.Dec. 230, 549 N.E.2d 881 (1st Dist. 1989).

In the case at bar, as in *Thacker*, the plaintiff chose to prove that the defendants were a cause in fact of decedent's injuries through the "substantial factor" test. In *Thacker*, the Supreme Court discussed that test at length:

The substantial factor test requires that the alleged tortfeasor's conduct be somehow "responsible" for producing the injury at issue. (See Restatement (Second) of Torts § 431, Comment a (1965).) The question of whether an alleged tortfeasor's conduct meets this test is usually a question for the trier of fact, but if a contrary decision is clearly evident from a review of all the evidence, Illinois courts rule in favor of the defendant as a matter of law. Put

in a slightly different way, Illinois courts have, as a matter of law, refused to allow a plaintiff to take the causation question to the jury when there is insufficient evidence for the jury to reasonably find that the defendant's conduct was a cause of the plaintiff's harm or injury.

Thacker, 151 Ill.2d at 355, 177 Ill.Dec. 379, 603 N.E.2d 449 (internal citations omitted); *see also Nolan v. Weil-McLain*, 233 Ill.2d at 431.

Thacker reaffirmed the rule that a plaintiff alleging personal injury in any tort action – including asbestos cases – must adduce sufficient proof that the defendant caused the injury. Thacker, 151 Ill.2d at 354-55; Nolan v. Weil-McLain, 233 Ill.2d 416, 434. In a products liability action, the plaintiff is required to identify the manufacturer of the product and establish a causal relationship between the injury complained of and that manufacturer's product. Johnson, 284 Ill.App.3d at 676.

The Supreme Court in *Nolan v. Weil-McLain*, 233 Ill.2d at 434, noted that *Thacker* "reiterated black-letter, general principles of tort causation law, and repeated the well-settled rule that proof which relies on conjecture, speculation or guesswork is insufficient. Although we noted that asbestos plaintiffs face unique challenges in showing causation, we did not carve out an exception for asbestos cases which relieved those plaintiffs from meeting the same burden as all other tort plaintiffs."

To meet this burden, a plaintiff must show that the injured party was exposed to each defendant's asbestos through proof that the injured party regularly worked in an area where that particular defendant's asbestos was frequently used and that the injured party worked in sufficient proximity to this area so as to come into contact with the defendant's product. *Thacker*, *supra*. "[T]he plaintiff has two burdens with respect to causation-in-fact. First, the plaintiff must prove medical causation -- that asbestos was a cause of the injury. Second, plaintiff must show that the defendant's asbestos was a cause of the plaintiff's injuries." *Johnson*, 284 Ill.App.3d at 673. This test is often referred to as the "frequency, regularity and proximity" or "substantial factor" test. *See Lohrmann v. Pittsburgh Corning Corp.*, 782 F.2d 1156, 1162-63 (4th Cir. 1986).

C. Plaintiff Did Not Meet His Burden Because He Failed to Identify Exposure to Any Particular Defendant's Asbestos-Containing Product

The evidence before the trial court was insufficient to create the inference that plaintiff was exposed to asbestos from a particular defendant's products. The trial court was correct in finding that there was no genuine issue of material fact and that defendants were entitled to judgment as a matter of law. If such a case had been sent to a jury, the verdict would necessarily be based upon mere speculation, guess, or conjecture.

The *Thacker* test requires the plaintiff to show that (i) he regularly worked in an area where asbestos was frequently used; and (ii) plaintiff did, in fact, work in sufficiently close proximity so as to come in contact with the particular defendant's product. *Nolan v. Weil-McLain*, 233 Ill.2d 416, 433, 434 (2009).

The plaintiff's failure to identify any asbestos-containing product of the specific defendant to which the plaintiff had been exposed is fatal to his claims and provides a sufficient basis for the trial court to have granted each defendant's motion for summary judgment. *See Zimmer v. Celotex Corp.*, 192 Ill.App.3d 1088, 140 Ill.Dec. 230, 549 N.E.2d 881 (1st Dist. 1989); *Naden v. Celotex Corp.*, 190 Ill.App.3d 410, 414, 137 Ill.Dec. 821, 824, 546 N.E.2d 766, 769 (1989); *Estate of Henderson v. W.R. Grace*, 185 Ill.App.3d 523, 528-29, 133 Ill.Dec. 594, 597, 541 N.E.2d 805, 808 (1989).

Thacker v. UNR Indus., Inc., 151 III.2d 343, 177 III.Dec. 379, 603 N.E.2d 449 (1992) rejected the argument advanced by plaintiff that so long as "there is any evidence that the injured worker was exposed to a defendant's asbestos-containing product," there is sufficient evidence of causation in fact to allow the issue of legal causation to go to the jury. Nolan v. Weil-McLain, 233 III.2d 416, 434. Such an approach is contrary to the concept of substantial causation, because without the minimum proof required to establish frequency, regularity and proximity of exposure, a reasonable inference of substantial causation cannot be made. Nolan v. Weil-McLain, id.

There must be a threshold level of proof required to establish frequency, regularity, and proximity of exposure that would allow a reasonable inference of *substantial* causation in fact. Such proof is absent in this case. Mere proof of use of an asbestos-containing product is not sufficient. Plaintiff must establish that a particular defendant was a "substantial factor" in causing the injury. *Thacker* cites the Restatement (Second) of Torts §431, Comment a (1965), which provides: "The word 'substantial' is used to denote the fact that the defendant's conduct has such an effect in producing the harm as to lead reasonable men to regard it as a cause, using that word in a popular sense, in which there always lurks the idea of responsibility, rather than in the so-called 'philosophic sense' which includes everyone of the great number of events without which any happening would not have occurred." In Leonardi v. Loyola University of Chicago, 168 Ill.2d 83, 212 Ill.Dec. 968, 658 N.E.2d 450 (1995), the Supreme Court emphasized that "[i]n any negligence action, the plaintiff bears the burden of proving not only duty and breach of duty, but also that defendant proximately caused plaintiff's injury" and that "[t]he element of proximate cause is an element of the *plaintiff's* case * * * [and] the law in no way shifts to the defendant the burden of proof." (Emphasis in original.) Leonardi, 168 Ill.2d at 93-94, 212 Ill.Dec. 968, 658 N.E.2d 450; see also Nolan v. Weil-McLain, 233 Ill.2d 416, 441.

Moreover, as the court in *Nolan v. Weil-McLain* recognized, plaintiff's exposure to a particular defendant's asbestos-containing product must be assessed in the context of all the other possible exposures by plaintiff to determine whether a particular defendant could be considered a substantial factor in causing the injury. *See Nolan v. Weil-McLain*, 233 Ill.2d 416, 444-445 (2009). Plaintiff's evidence in this case does not enable a trier of fact to do this.

PLAINTIFF'S EXPERT EVIDENCE IS FATALLY DEFECTIVE

A. Plaintiff's Single Fiber Hypothesis Is Not Scientifically Viable

Dr. Abraham, plaintiff's sole medical expert, bases his conclusory opinion on what is a "single fiber" hypothesis – that is that each and every exposure to asbestos of whatever type and whatever quantity and whatever duration contributes to the development of mesothelioma. *See* Dr. Abraham's report (V.26, C6158), affidavit (V.26, C6155-C6156) and deposition testimony (V.31, C7611, C7615). The "single fiber" hypothesis is that every cancer, or other adverse medical condition, starts with the inhalation of "one fiber." This hypothesis overlooks the important questions of cumulative exposures and asbestos type and instead focuses on which fiber out of the totality of the exposure is responsible for the plaintiff's disease. The "single fiber" hypothesis remains unproven and untested. This hypothesis has not even advanced to the level of a generally accepted theory. It is, therefore, speculative.⁹

The risk or probability of developing a disease is proportional to the extent of the exposure or cumulative exposure. Therefore, scientists have emphasized a difference between a practical threshold below which it is unknown whether a risk exists and a theoretical threshold which is generally used in a regulatory setting. No epidemiological studies which exist have the ability to assess the risk due to extremely low levels of exposure, and therefore there is a practical threshold.

Courts do not, and should not, accept unproven and untestable theories as evidence. Scientific methodology is based on generating hypotheses and testing them to see if they can

⁹ The Pennsylvania Supreme Court rejected the "each and every exposure" or "any breath" theory of causation advanced by plaintiff-appellant as a "fiction" in *Gregg v. V-J Auto Parts Co.*, 596 Pa. 274, 292, 943 A.2d 216, 226-227 (2007): "[W]e do not believe that it is a viable solution to indulge in a fiction that each and every exposure to asbestos, no matter how minimal in relation to other exposures, implicates a fact issue concerning substantial-factor causation in every 'direct-evidence' case."

be falsified; this methodology is what distinguishes science from other fields of inquiry. "[T]he criterion of the scientific status of a theory is its falsifiability, or refutability, or testability." K. Popper, Conjectures and Refutations: The Growth of Scientific Knowledge 37 (5th ed. 1989); *see also* C. Hempel, Philosophy of Natural Science 49 (1966) ("[T]he statements constituting a scientific explanation must be capable of empirical test").

B. Plaintiff Cannot Prove Either General Causation or Specific Causation

Dr. Abraham has ignored a procedure that is generally accepted in the scientific community, in which causation evidence is considered in two steps – general causation and specific causation. General causation addresses the question of whether exposure to the agent of concern has ever caused the disease in question. This is usually discussed by showing that a group of people with high levels of exposure have developed the adverse outcome, significantly more frequently than among a similar unexposed group. If general causation cannot be proven, then it is superfluous to ask the specific causation question.

If general causation is established, then specific causation can be addressed through the exposure history specific to the case: did the specific individual develop his malady from his specific exposure? It is obvious that this requires knowledge of the individual's exposure level. Dr. Abraham was silent as to Mr. Coyne's asbestos exposure history, and could not properly address specific causation.

C. Plaintiff Proffered No Evidence as to Exposure to Particular Asbestos Types To Which Plaintiff Was Exposed and the Source of Each Asbestos Type

A review of Dr. Abraham's deposition in this case (V.31, C7606-C7624), his one page expert report (V.26, C6158), and his two page affidavit (V.26, C6155-C6156), shows that plaintiff's medical expert had no information regarding the type(s) of asbestos to which plaintiff was exposed, and no information about the type(s) of asbestos used by the various product defendants or present at the various locations of the premises defendants at which he worked or the extent of exposure to each type of asbestos. Similarly, plaintiff's industrial

hygiene expert, Mr. William M. Ewing, provided no information about the type(s) of asbestos used by the various product defendants or present at the various locations of the premises defendants at which he worked or the extent of exposure to each type of asbestos. (Affidavit of William M. Ewing, October 13, 2010, V.43, C10642-C10644).

It has long been known, and has become ever clearer in the last 10 years, that we must distinguish between six different minerals in commerce called asbestos. Asbestos forms naturally as polyfilamentous bundles. Asbestos fibers crystallize in a way that imparts to them markedly higher biological activity than fragments of the bulk mineral. But these asbestiform fibers can, as between different types of asbestos, behave very differently.

Two major groupings are important, those which form "amphibole asbestos" (actinolite, amosite, anthophyllite, crocidolite, and tremolite) and those which form "serpentine asbestos" (chrysotile). Chrysotile asbestos has historically been the dominant type of asbestos used commercially and is the only type of asbestos still in commerce worldwide; all of the amphibole asbestos minerals have been out of world commerce since 1997. The types of asbestos can be easily distinguished using analytical transmission electron microscopy.

The use of the generic term "asbestos" ignores or obscures the significance of fiber type, fiber properties (physical, chemical, and structural), biopersistence in biological hosts, and properties that may be altered due to how the asbestos is used in service. These are the properties that drive biological activity. A specific fiber type may have profound differences in biological potential based on fiber grade (principally the result of differences in length and diameter). See A.M. Langer, R.P. Nolan, Chrysotile: Its Occurrence and Properties as Variables Controlling Biological Effects, in G.W. Gibbs (ed.), Workshop on Health Risks Associated with Chrysotile Asbestos, Jersey Channel Islands, November 14-17, 1993, published in 38 Annals of Occup. Hyg. 427 (1994) (outlining these properties and their effects on the range of diseases observed in different cohorts); A.M. Langer, Reduction of

the Biological Potential of Chrysotile Asbestos Arising from Conditions of Service on Break Pads, 38 Reg. Toxicology & Pharmacology 71 (2003); see generally M. Ross, et al., The Mineral Nature of Asbestos, 52 Reg. Toxicology & Pharmacology S26 (2008).¹⁰

The differences in carcinogenic potency for mesothelioma causation between the three major commercial asbestos types has been known and generally accepted since at least 1965. In his lecture on asbestos-related disease, Dr. John C. Gilson found that the largest number of mesothelioma deaths occurred among workers exposed to crocidolite. Among workers with high exposure to chrysotile, small numbers, or no, mesothelioma cases were reported. J.C. Gilson, *Wyers Memorial Lecture 1965: Health Hazards of Asbestos – Recent Studies on its Biological Effects*, 16 Transactions Soc'y Occupational Med. 62 (1966).

Recent research has focused mainly on two questions: (1) whether long asbestos fibers, generally greater than 5 micrometers, are principally responsible for asbestos disease, and (2) whether chrysotile asbestos (which breaks down easily into short sections) is less potent than other forms. An EPA panel, after reviewing the extensive literature, concluded, by consensus, that chrysotile asbestos fibers are far less likely to cause disease than amphiboles, by a factor of at least two orders of magnitude. U.S. EPA, *Report on the Peer Consultation Workshop to Discuss a Proposed Protocol to Assess Asbestos-Related Risk*, viii (May 30, 2003), *available at* http://www.epa.gov/oswer/riskassessment/asbestos/pdfs/asbestos_report.pdf (last accessed August 19, 2011): "The panelists also agreed that the available data suggest that the risk for fibers less than 5 µm in length is very low and could be zero," (*Id.* at vii-viii), and that "for *mesothelioma*, the panelists supported the use of different relative carcinogenic potencies for different fiber types. The panelists unanimously agreed that the available epidemiology studies provide compelling evidence that the

¹⁰ Even different grades of the same fiber type do not have the same biological potential. See A.M. Langer, R.P. Nolan, The Properties of Chrysotile Asbestos As Determinants of Biological Activity: Variations in Cohort Experience and Disease Spectra As Related to Mineral Properties, in J.C. Wagner (ed.), The Biological Effects of Chrysotile, General Motors Cancer Research Series, 1 Accompl. Oncol. 30 (1986).

carcinogenic potency of amphibole fibers is two orders of magnitude greater than that for chrysotile fibers." (*id.* at viii).

Similarly, a panel of the Agency for Toxic Substances Disease Research ("ATSDR"), part of the Centers for Disease Control, concluded by consensus that "there is a strong weight of evidence that asbestos [fibers] shorter than 5 µm are unlikely to cause cancer in humans." Agency for Toxic Substance and Disease Registry (ATSDR), *Report on the Expert Panel on Health Effects of Asbestos and Synthetic Vitreous Fibers: The Influence of Fiber Length*, sec. 4.0, Conclusions and Recommendations, *available at* http://www.atsdr.cdc.gov/HAC/asbestospanel/asbestostoc.html (last accessed August 19, 2011).

Hodgson, *et al.* show that the amphibole asbestos types (amosite and crocidolite) explain the mesothelioma distribution and that chrysotile has zero weight, indicating that chrysotile is unlikely to be responsible for any of the mesothelioma cases recently diagnosed in Great Britain. J.T. Hodgson, D.M. McElvenny, A.J. Darnton, M.J. Price and J. Peto, *The Expected Burden of Mesothelioma Mortality in Great Britain from 2002 to 2050*, 92 Brit. J. Cancer 587-593 at 590, fig. 5A (2005).

The United States Environmental Protection Agency commissioned a study by Berman and Crump which reached a similar conclusion. D.W. Berman, K.S. Crump, *Update of Potency Factors for Asbestos-Related Lung Cancer and Mesothelioma*, 38 Crit. Rev. Tox. (supp 1) 1 (2008); D.W. Berman and K.S. Crump, *A Meta-Analysis of Asbestos-Related Cancer Risk That Addresses Fiber Size and Mineral type*, 38 Crit. Rev. Tox. (supp 1) 49 (2008). Other researchers have recently concluded that chrysotile exposure does not cause mesothelioma to any appreciable extent. These include C. Yarborough, *Chrysotile as a Cause of Mesothelioma: an Assessment based on Epidemiology*, 36 Crit. Rev. Tox. 165 (2006); and J.S. Pierce, M.A. McKinley, D.J. Paustenbach, B.L. Finley, *An Evaluation of Reported No-Effect Chrysotile Asbestos Exposures for Lung Cancer and Mesothelioma*, 38 Crit. Rev. Tox. 191 (2008). Yarborough, *supra*, found that "[t]he review of 71 asbestos cohorts exposed to free asbestos fibers does not support the hypothesis that chrysotile,

uncontaminated by fibrous amphiboles, causes mesothelioma." Pierce, *et al.*, *supra*, summarized the cumulative exposure-response data for predominantly chrysotile-exposed cohorts in the published literature and found that the predominance of the cumulative "noeffects" exposure levels for mesothelioma fall in the range of approximately 15-500 fiber per milliliter multiplied by the number of years of exposure.

Health Canada, an agency of the Canadian government, convened a *Chrysotile Asbestos Expert Panel* to develop a consensus statement and summary on the risks of lung cancer and of mesothelioma with asbestos exposure. The panel issued its report, *Chrysotile Asbestos Expert Panel*, 2008 Chrysotile Asbestos Consensus Statement and Summary (available on request from panel@hc-sc.gc.ca). Most of the Health Canada panel members held that the relative carcinogenic potency of amphibole asbestos potency for mesothelioma was approximately 500-fold that of chrysotile, with a 95% confidence range of 20 to 1000. *Chrysotile Asbestos Expert Panel*, 2008 Chrysotile Asbestos Consensus Statement and Summary at 14. As the risk was proportional to the cumulative exposure, the likelihood that any individual's mesothelioma was attributable to his asbestos exposure was also related to the magnitude and nature of his exposure.

These findings support the hypothesis that there is an exposure-related response and a need for information Dr. Abraham did not obtain. When studying specific causation, it is necessary to have some idea of the exposure of the specific individual and the relationship of that exposure to the exposure of the group for which general causation has been established. No such evidence was ever presented by the plaintiff and certainly none was mentioned by Dr. Abraham.

The Illinois Supreme Court has recently recognized that chrysotile asbestos is "far less dangerous" than other forms of asbestos. *Nolan v. Weil-McLain*, 233 Ill.2d 416, 450, 331 Ill.Dec. 140, 150, 910 N.E.2d 549, 559 (2009). Dr. Abraham and Mr. Ewing provide no information on, and makes no comment on, the differences between the fiber types, implying that they behave biologically in the same way. Dr. Abraham does not discuss the important

steps in establishing whether the type of asbestos to which plaintiff was exposed in working

on particular equipment at each location is even a known cause of mesothelioma. In the

opinion of *amici*, plaintiff's evidence is insufficient and completely inadequate to prove

general or specific causation.

The lack of any evidence as to what type of asbestos was used in a particular product

defendant's equipment or at a particular premises defendant's facility makes it impossible

for a jury to assign responsibility to some, all, or none of the defendants; the jury's decision

would be based on nothing more than "conjecture, speculation or guesswork" and thus

indefensible. Nolan v. Weil-McLain, 233 Ill.2d 416, 434.

Plaintiff's experts' failure to consider the type or quantity of asbestos to which Coyle

was exposed renders their opinions incompetent to establish causation.

CONCLUSION

Amici submit that plaintiff failed to establish the "frequency, regularity, and

proximity" of Mr. Coyne's exposure to mesothelioma-causing asbestos or that a particular

defendant was a "substantial factor" in causing Mr. Coyne's mesothelioma and failed to raise

a material question of fact regarding causation.

For the reasons explained in the foregoing argument, this Court should affirm the

judgment of Circuit Court and deny the appeal.

Dated: September 8, 2011

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH SUPREME COURT RULE 341(a) AND 341(b)

I certify that this brief conforms to the requirements of Rules 341(a) and (b). The length of this brief, excluding the appendix pages containing the Rule 341(d) cover, the Rule 341(h)(1) statement of points and authorities, the Rule 341(c) certificate of compliance, the certificate of service, and those matters to be appended to the brief under Rule 342(a), is 29 pages...

Martin S. Kaufman
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