PLAINTIFF'S EXHIBIT

TEX-16

NO. 2000-3418

EDUARDO L. AGUILAR, ET AL.	§	IN THE COUNTY COURT
	§	
VS.	§	AT LAW NO. 3
	§	
GAF CORPORATION, ET AL.	§	EL PASO COUNTY, TEXAS

DEFENDANT TEXACO INC.'S DESIGNATION OF EXPERTS
SUBJECT TO MOTION TO TRANSFER VENUE

TO THE HONORABLE JUDGE OF SAID COURT:

COMES NOW Defendant **TEXACO INC.**, and files this its designation of experts as follows: see attached.

Respectfully submitted,

HAYS, McCONN, RICE & PICKERING

By: _____

B. STEPHEN RICE
TSB No. 16838000
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Attorneys for Defendant TEXACO INC.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing instrument has been forwarded to counsel for Plaintiffs by certified mail, return receipt requested, and to all other counsel of record by regular mail, on this 25th day of _____, 2001.

_____
B. Stephen Rice

1. John Pendergrass, CIH, CSP, PE
6700 Milkhouse Court
Mobile, Alabama 36695
334-607-0946

Mr. Pendergrass is a certified industrial hygienist who will testify from an industrial hygiene point of view the state of the medical and scientific knowledge regarding asbestos particularly in regard to the time period involved during which the Plaintiffs were allegedly on the premises of Defendant. The subject matter will also include the use of asbestos during this time period, its importance, the lack of substitute products, the employer's responsibility pre- and post-OSHA, and the other matters described in the report attached hereto. He will also testify as to the role of manufacturers as suppliers of asbestos products and their responsibility to provide premises owners with knowledge of the known hazards of the products they were selling and installing to the end users, the premises owners. He will also testify that based on the state of the knowledge and judgment as it has developed over time that premises owners acted appropriately in the circumstances. Mr. Pendergrass will also testify based on certain Defendant's industrial hygiene monitoring results concerning the expected levels of exposure to be experienced at those facilities.

Mr. Pendergrass' resume and bibliography have been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

2. Patrick N. Conoley, M.D.
KELSEY SEYBOLD CLINIC
6624 Fannin, Suite 1800
Houston, Texas 77030
713-791-8787

Dr. Conoley is an M.D. and a "B"-reader who may testify concerning his review of the radiographs, CT scans, and other records of the Plaintiffs and the significance of various x-ray findings on the radiographs of the Plaintiffs and whether those radiographs contain abnormalities consistent with an asbestos disease.

Dr. Conoley is expected to provide testimony concerning the anatomic structure and functioning of the lung, the defense mechanisms and functioning of the lung, the responses of the lung to various stimuli, and the role of various components of the respiratory system in the proper functioning of the lung. Dr. Conoley is expected to describe and distinguish various types of asbestos fibers; to describe the things which affect the ability of asbestos fibers to affect various structures within the respiratory system; and to describe the body's specific responses to fibers of asbestos that are inhaled, whether or not they are retained.

Dr. Conoley will define and distinguish various conditions, such as asbestosis, pleural changes and other nonmalignant changes that may be attributable in some persons to the results of long term inhalation and retention of some forms of asbestos fiber. Dr. Conoley

is further expected to testify concerning the types of asbestos and their association with disease.

Dr. Conoley is further expected to offer testimony concerning the effects of inhaled tobacco smoke and other factors on the occurrence of disease in populations who are also alleged to be exposed to asbestos products, and how the effects of tobacco smoke can confound the apparent results of certain epidemiologic studies.

Dr. Conoley may testify as to the general medical aspects of the diagnosis and treatment of asbestos-related disease and may also testify as to the relationship of asbestos exposure and the incidence of certain types of cancer and that certain types of cancer such as colon cancer are not established as being related to asbestos exposure in the valid medical and scientific literature. He will also testimony concerning the significance of asbestos related abnormalities and neoplastic disease, that asbestos related pleural plaques and pleural thickening are not asbestosis and do not in ordinary circumstances have an effect on a person's lung function and have no relationship to any type of neoplasm.

Dr. Conoley will also testify as to the likelihood of whether a plaintiff will develop an asbestos related malignancy based on the valid medical and scientific literature.

Dr. Conoley is also expected to testify concerning the anatomy and function of the respiratory and circulatory systems and the diagnosis and treatment of disease affecting such systems; the symptomatology, disease process and diagnosis of asbestosis and certain cancers associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of an association of obstructive pulmonary disease with asbestos fiber exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system, and other causes of obstructive and restrictive disease or defects of the respiratory system; methods of diagnosis of various diseases, particularly means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos related diseases; incidence of lung cancer among individuals with asbestosis or asbestos exposure without asbestosis, compared with non-asbestotic asbestos workers, non-asbestos exposed workers, and with the general population; the relationship of cigarette smoking to cancer of the lung and cancer of the other sites with reference to epidemiological studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis, or asbestos exposure without asbestosis, on disability and life expectancy; and the effect of pleural plaques or other pleural manifestations of asbestos exposure on lung function or life expectancy; cancer incidence in the general population and among asbestos workers and its potential causes.

Dr. Conoley's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one

3. Dorsett Smith, M.D.
4310 Colby Avenue
Everett, Washington 98203
425-259-5171

Dr. Smith is an internal medicine physician with a sub-specialty in pulmonary disease and a "B"-reader. Dr. Smith will testify concerning the state of the medical knowledge as it pertains to asbestos and disease as the knowledge has evolved over time. He may also testify as to the Plaintiffs' disease and its alleged association with asbestos exposure.

The general substance of Dr. Smith's mental impressions and opinions is that prior to the 1970s the state of the medical and scientific knowledge pertaining to the hazards of asbestos did not establish that workers working in an environment such as the Plaintiffs were at an increased risk of asbestos related disease. Dr. Smith's opinions are also that the level of dust control required using asbestos products was 5 million particles per cubic foot. This level of dust control was thought to be safe, and no significant change was offered until 1968.

Dr. Smith's resume and bibliography have been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

4. Dr. John Craighead
Department of Pathology
UNIVERSITY OF VERMONT
College of Medicine
Burlington, Vermont 05405
802-656-2154

Dr. Craighead is an M.D. pathologist who will testify concerning the state of the medical knowledge as it has existed from time to time as it relates to the effects of asbestos on the human body.

The general substance of Dr. Craighead's mental impressions and opinions and a summary of the basis for them are as follows. Dr. Craighead will provide an overview of the history of asbestos utilization in this country for industrial purposes and to relate, in general, the developing concepts regarding its potential role in the causation of disease. The discussion is divided into three units related to the three disease processes attributable to asbestos, or at least some forms of asbestos.

Asbestosis: This disease process is a scarring of the lung which simulates scarring due to a variety of causes, some of which are unknown. Thus, asbestosis in many respects is similar clinically and pathologically to the fibrotic disease of the lung that occurs in persons who have no environmental exposure to dusts. It develops over a protracted period of exposure and in only a small proportion of the numerous individuals who work with the material. In 1993, we consider asbestosis to be the result of exceedingly heavy exposure to asbestos over

an extended period of time. This was the concept that evolved in the early 1900's when asbestos first was used in large amounts in industry.

Historically, asbestosis as a disease process was first recognized in 1900 at autopsy. There was little new information in the literature until the mid 1920's when the asbestos bodies that are typical of the disease were described and more detailed microscopical features of the disease were noted by pathologists. In the - 1920's and 1930's, asbestosis continued to be a disease process associated with heavy and prolonged exposure to asbestos in an era where industrial dust controls were largely lacking. From a historical perspective, the Second World War is noted as a landmark, for during the period of hostilities, asbestos was used widely in all types of ships and war vehicles. Consumption of asbestos in this country increased exponentially and few, if any, serious attempts were made to control its use and the inhalation of the material by workers in the industrial setting. As a consequence of this almost uncontrolled use of asbestos, many cases of asbestosis appeared years after the cessation of hostilities.

In the early 1960's, Dr. Irwin Selikoff and his associates documented the industrial occurrence of this disease process, particularly in insulators. It soon became apparent that the major groups affected were insulators and workers in the ship building industry, particularly those employed during the Second World War. Thus, in 1965 when the first significant series of publications relating asbestos to disease in this country were published, asbestosis was considered a disease process limited to industrial groups, such as insulators who had heavy exposure to asbestos. Little consideration was given whatsoever to exposure occurring in outside air environments or when asbestos was used under controlled situations. In addition, there was no concern with respect to asbestos utilization in situations such as brake shoes, plastering material, electric wire, etc. This was the state of understanding during the period of time in the 1960's when Dr. Craighead was training in Pathology in Boston, an urban community where significant ship building activity had occurred during the Second World War. It was only in the 1970's and 80's that concern regarding low levels of asbestos exposure as a cause of asbestosis were voiced by federal agencies. Nonetheless, no definitive epidemiological evidence was available to indicate that asbestosis might be a significant problem for those working with low levels of asbestos or in outside environments. This situation continues today since we continue to recognize asbestosis as being a relatively uncommon condition occurring in individuals whose exposure has been unusually heavy. The list of major industries where asbestosis occurs has grown as we have learned more. We now include individuals who have worked in the asbestos textile industry where the material is readily aerosolized in the working environment and among workers in the mining and milling of asbestos, such as Canadian chrysolite miners and millers. Fortunately, we now are exceedingly cautious in insisting that exposure in these industries is controlled by personal respirator use or industrial controls. Frequently, workers in all types of industries have been shown to exhibit abnormal X-rays, and this, by some, has been falsely interpreted as an asbestos-related disease. Most often, the pulmonary abnormalities in these workers are due to cigarette smoking (fibrosis and emphysema) — the major cause of disability among industrial workers.

Lung Cancer: Bronchogenic cancer, a tumor originating from the walls of the airways, is the major cancer occurring in this country among middle-aged men today. It has a high fatality rate and often affects men in the prime of their working life. It is not surprising that concern arose as to the role of asbestos in the genesis of lung cancer. The first reports suggesting this possibility were published in the 1930's and many additional cases were observed in which an asbestos worker who smoked developed the cancer. In 1955, Sir Richard Doll established by epidemiological means a statistically significant relationship between asbestosis and the development of lung cancer. It is important to emphasize that the relationship was based on the disease process asbestosis as demonstrated at autopsy. In 1965, Selikoff and his associates demonstrated a high incidence of lung cancer in workers in trades where exposure was heavy. No attempt was made to define whether or not these individuals had asbestosis. No doubt those that were affected with the cancer often did have asbestosis, whereas in others, the cancer was related exclusively to cigarette smoking. This was the state of art when Dr. Craighead and his colleagues undertook studies in the early 1970's to elucidate the role of asbestos in lung cancer. These studies clearly showed that asbestos, in and of itself, was not a carcinogen, but in large amounts, enhanced the effects of the polycyclic aeromatic hydrocarbons and other carcinogens in cigarette smoke. This promoter concept is now well-established in the medical literature and relates to the fact that substances such as asbestos, enhance the effects of cigarette smoking but are not the cause of the cancer. Nonetheless, there were epidemiological reports that suggested that individuals with no smoking history who were exposed to asbestos develop lung cancer. No doubt, a few of these instances exist, but there is no clear epidemiological evidence to indicate that asbestos was the responsible agent. Establishment of the promoter concept of carcinogenesis with regard to lung cancer and asbestos awaited definitive studies in the mid-1980's, the first of which was carried out by Hans Weill and his associates among concrete asbestos workers in New Orleans. These studies and subsequent investigations by Selikoff and his group showed clearly that asbestosis demonstrated radiologically is a necessary precursor for the development of the disease. Asbestosis would appear to be a marker of heavy and prolonged exposure to asbestos as indicated above. The most recent definitive studies by Selikoff and his coworkers which incorporated observations on over 17,000 insulation workers have clearly shown that asbestos exposure in the absence of cigarette smoking cannot be considered a carcinogen. This work was published in abstract form in the late 1980's. In view of these findings, we can consider the lung cancer threat to be limited to those with very heavy and prolonged asbestos exposure in industry, not in those with fight exposure or after outside exposure.

Mesothelioma: Mesotheliomas were first described occurring in members of general population in the 1870's, long before asbestos became a commercially usable industrial product. It was exceedingly rare, pathological curiosity. During the Second World War and after the war, occasional cases of mesothelioma were noted in individuals with asbestosis, but an epidemiological association between the disease and exposure to asbestos was not established until 1960 when studies by Wagner and his associates clearly demonstrated that crocidolite asbestos was responsible for the condition among miners and members of the general population in a unique area of So. Africa. At that time, Wagner showed that amosite

asbestos and chrysolite asbestos played no role in the genesis of the disease in So. Africa. Mesotheliomas were next reported in 1965 by Selikoff and his associates among workers heavily exposed to asbestos in the insulation trade. Gradually, additional cases were reported in the medical literature, but few epidemiological studies comprised of large numbers of cases were described. The condition continued to be a sporadically observed cancer occurring among individuals exposed to amphibole asbestos types. A clear relationship of amphibole asbestos with mesothelioma, however, was not established until the mid-1980's when careful epidemiological studies discriminated between exposure to the two different types of asbestos among industrial workers.

Mesothelioma was considered to be a sporadic disease even in the late 1970's when Dr. Craighead undertook studies with a committee of experts through a contract with NIOSH. This investigation was an attempt to define the asbestos-associated diseases as carefully as one could for pathological evaluation. Since that time, increasingly large numbers of mesotheliomas have been reported in individuals who were exposed to asbestos many years in the past in the shipyard or where insulation material was used without careful control of dust. The long latency period of this disease was demonstrated and as time has passed, the latency period of many tumors has been found to be 30 and 50 years or more.

Dr. Craighead's curriculum vitae has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

5. Dr. William Hughson
UCSD Center for Occupational & Environmental Medicine
200 West Arbor Drive
San Diego, CA 92103-8800
619-220-5050

The subject matter on which Dr. Hughson will testify is from an epidemiological and medical standpoint as to the state of the medical and scientific knowledge as it existed from time to time and in particular in regard to the time period involved in the alleged exposures in this case. No documents have been submitted to, or reviewed by, or prepared by Dr. Hughson in anticipation of his testimony.

The general substance of Dr. Hughson's mental impressions and opinions and a summary of the basis for them are as follows. Dr. Hughson will describe the role of case reports in the development of the scientific and medical literature. Case reports cannot be used to describe risk, since there is no estimate of the expected number of cases. Lacking risk data, case reports cannot be used to determine causation. Retrospective studies are often plagued by bias and confounding, since the experimenters were not present when the injurious exposures occurred. Prospective studies provide the most robust data; such studies did not become available for asbestos until after Dr. Selikoff began publishing in the 1960s.

Dr. Hughson has also reviewed the epidemiologic method of proving causation, often referred to as the Bradford-Hill criteria. These criteria include the strength, consistency,

specificity, biological plausibility, dose-response, temporal relationship, and statistical significance of the association. Because of the need for replication (i.e. consistency) of data, and the long latency for developing asbestos-related diseases, it took decades for the health effects of asbestos to be truly appreciated.

Dr. Hughson has organized his opinions in decades:

Prior to 1930. Dr. Hughson will begin his testimony by discussing Cooke's article published in 1927. This described two cases of asbestosis. Following this article, Seiler published what is described as the first "pure" cases of asbestosis, where tuberculosis was not an issue. As a result of these publications, the British government requested a survey of the textile industry, which was performed by Dr. Merewether, and reported in 1930.

From 1930 to 1939. Dr. Merewether performed a survey of 374 textile workers in England. His results were reported both in England and in the United States. These articles described various aspects of the textile industry. Dr. Merewether concluded that asbestosis could be prevented if the dust levels could be reduced to the level pertaining to spinners. Those levels would be approximately 17 to 170 million particles per cubic foot (mppcf). Following Merewether's report, the British government passed the Asbestos Industry Regulations to reduce the level of exposure to asbestos dust. In 1933 and 1934, Merewether reviewed events to date, and concluded that keeping exposures below the dust level pertaining to spinners would prevent the development of asbestosis.

In 1935, Lanza surveyed five textile plants in the United States, and described findings in 126 people. In the same time frame, other articles reviewed asbestos fabricating methods, and the effects of various methods of dust control.

In 1938, Dreesen published a survey of four asbestos textile plants in the United States, and concluded that new cases of asbestosis would not occur if asbestos dust exposures were kept below 5 mppcf. In a subsequent article, Dreesen again predicted that new cases of asbestosis would not appear if asbestos dust concentrations were kept below 5 mppcf.

To summarize, by the end of the 1930's it was recognized that asbestosis was a pneumoconiosis distinct from silicosis or coal workers' pneumoconiosis, and that it was not a complication of tuberculosis. Most data came from individuals engaged in the primary production of asbestos products, such as the textile industry. It was generally believed that the disease could be prevented if exposure to asbestos dust was controlled. The 5 mppcf level recommended by Dreesen became widely accepted as a safe exposure limit, and was adopted as such by many States. The 5 mppcf level remained in force until 1968, when data indicated that new cases of asbestosis were occurring despite adherence to this standard.

From 1940 to 1949. Prior to 1940, the medical and scientific literature had focused on workers engaged in the primary production of asbestos products. In 1941, Brown reported on a survey of the New York Navy Yard pipe insulating shop and commented on findings

in two other yards; no cases of asbestosis were found. This was the first survey of end-users of insulation products.

In 1946, Fleischer reported a survey of 1074 pipe insulators working in four shipyards. Total dust and asbestos dust concentrations during various operations were described; with one exception, the asbestos counts were below 5 mppcf. There were only 3 cases of asbestosis in this population, and it was concluded that pipe covering was not a dangerous occupation. The authors felt that low prevalence of asbestosis was not surprising, considering the nature of shipyard pipe covering work.

In 1946, the American Conference of Governmental Hygienists (ACGIH) adopted 5 mppcf of asbestos dust as the Threshold Limit Value (TLV). As stated above, the 5 mppcf standard was widely accepted in the United States, and remained in place until 1968, when a new TLV of 2 mppcf (equivalent to 12 fibers/cc) was recommended.

In 1949, an editorial was published on the Journal of the American Medical Association. This described an increased frequency of lung cancer in people with asbestosis. The conclusion was that asbestosis was associated with an increased risk of lung cancer. Of course, it was generally believed that asbestosis could be prevented by reducing exposure to asbestos dust. Therefore the risk of lung cancer could be eliminated by the same methods.

To summarize, by the end of the 1940's the published literature concerning end-users of asbestosis indicated minimal or no risk, probably because exposure to asbestos dust was intermittent and relatively low compared to primary producers. The issue of lung cancer had been raised, but this was in the context of asbestosis, which was believed preventable by limiting asbestos dust exposure.

From 1950 to 1959. In 1952, Smith described a visit to England, where he met with Drs. Gloyne, Merewether and Wyers. The consensus of opinion was that the risk of lung cancer due to asbestosis no longer existed under current working conditions.

In 1953, Isselbacher and Hardy reported a case of asbestosis and bronchogenic cancer, and reviewed the existing literature. They indicated that 5 mppcf of asbestos dust was accepted as a safe working concentration and recognized the work of Doll and others implicating smoking as a cause of lung cancer.

In 1955, Richard Doll published the first epidemiological study indicating an increased risk of lung cancer in people with asbestosis. He studied workers employed at a textile factory in England and concluded that there was approximately a 10-fold risk of lung cancer compared to the general population. All of the cases included in his risk assessment had asbestosis, and all had been employed prior to 1923, at least 9 years prior to passage of the Asbestos Industry Regulations. Doll believed that the risk had become progressively less as duration of employment under the old dusty condition had decreased.

In 1958, Braun and Truan published a study of chrysolite miners. They concluded that lung cancer was not increased among the miners, or in areas contiguous to mining operations.

To summarize, by the end of the 1950's there was some epidemiological evidence that lung cancer risk was increased in people with asbestosis, though negative studies also existed.

From 1960 to 1969. In 1960, Wagner published a description of 33 cases of mesothelioma associated with crocidolite exposure in South Africa. He noted that pathological evidence for associating mesothelioma with asbestos exposure was not conclusive, since asbestos was found in only 8 of the 33 cases.

In 1962, the Public Health Service reviewed the amounts and uses of asbestos imported into the United States, and concluded that there were many unanswered questions concerning health effects. One of the questions was whether malignancies were all occupational risk among asbestos workers.

In 1964, Selikoff reported an increased risk of lung cancer and mesothelioma in a group of 632 insulation workers. In the same year, the Public Health Service again concluded that it was still unknown whether malignancies were an occupational risk among asbestos workers. The Public Health Service was aware of Dr. Selikoff's findings.

In October 1964, a major conference on the health effects of asbestos was held in New York. The proceedings of the conference were published in the Annals of the New York Academy of Sciences in December 1965. Among the articles published was a paper by Selikoff describing the occurrence of asbestosis among insulators. Selikoff pointed out that the only previous large scale survey of asbestos insulation workers (Fleischer 1946) had concluded that pipe covering was a relatively safe occupation. However, Fleischer's study had included few workers employed for more than 10 years. Selikoff indicated that counts for asbestos fibers were generally less than 5 mppcf during insulation activities.

In 1965, Selikoff published a paper concerning mesothelioma. He noted that crocidolite asbestos (implicated as a cause of mesothelioma by Wagner in 1960) had been imported to the United States. He questioned whether mesothelioma was due solely to crocidolite, or whether other types of asbestos could cause this tumor. The paper reported pathology and epidemiologic data indicating that mesothelioma was a problem in the United States, but available information could not determine whether crocidolite was responsible. That question was not answered until 1972, when Selikoff described 4 cases of mesothelioma in which he believed crocidolite had been excluded, and only amosite exposure had occurred.

In 1968, Balzer and Cooper published a paper which questioned the safety of the 5 mppcf standard. In the same year, the ACGIH recommended lowering the standard to 2 mppcf, which the equated to 12 fibers/cc. This began a series of reductions in the allowable concentration of asbestos (see below).

1970 and thereafter. Legislation creating the Occupational Safety and Health Administration (OSHA) was passed in 1970. In 1972, OSHA promulgated its first Permissible Exposure Limit (PEL) for asbestos; the limit was set at 5 fibers/cc as a time-weighted average (TWA). Following this, there was a succession of new PEL's in 1976, 1986, and 1994. The current PEL is 0.1 fiber/cc.

Dr. Hughson's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

6. Allen Peterson
1838 Baxter Ridge
St. Louis, Missouri 63017
314-537-9084

Mr. Peterson will testify on the issue of contractor control of the worksite.

The general substance of Mr. Peterson's mental impressions and opinions and a brief summary of the basis for them are that he will testify not only from a factual standpoint but also to the extent that his testimony may be considered to be opinion testimony, he therefore is designated as an expert as well. Mr. Peterson's opinions are that in petrochemical plant work, it is the contractor who controls its employees and subcontractor employees and not the premises owners concerning the work to be performed by the contractor. Mr. Peterson's opinions will be that the contractors would have been in charge and control of their workers and sub-contractors' workers including but not limited to the installation of asbestos materials. Mr. Peterson's testimony is based on his long experience of working in the industry as a contractor.

No documents have been submitted to, or reviewed by, or prepared by Mr. Peterson in anticipation of his testimony.

Mr. Peterson's resume or bibliography have been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

7. J. LeRoy Balzer
408 Horse Trail Court
Alamo, California 94507
925-274-0826

Mr. Balzer is an industrial hygienist who will testify concerning the state of the industrial hygiene knowledge concerning asbestos as it has existed from time to time and the availability of substitute products. Mr. Balzer's opinions are further summarized in the report attached hereto.

A copy of his curriculum vitae has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

8. Dr. Janet M. Hughes
School of Medicine
TULANE UNIVERSITY
1700 Perdido Street
New Orleans, Louisiana 70112
504-588-5265

Dr. Hughes is an M.D. pulmonologist who will testify concerning the state of the medical knowledge as it has existed from time to time as it relates to the effects of asbestos on the human body.

9. Dr. Elliot Henkies
301 N. Prairie, #311
Inglewood, California 90301
310-674-0050

Dr. Henkies is a pulmonologist and oncologist who will testify concerning the state of the medical knowledge as it has existed from time to time and possibly concerning the medical condition of the Plaintiffs and its causes including the relationship of cigarette smoking.

10. Lawrence R. Birkner
McKintyre Birkner & Associates, Inc.
Thousand Oaks, California
805-494-8173

Mr. Birkner is a certified industrial hygienist and certified safety professional. He received a Bachelor of Science degree from Portland State University in 1973 and a Masters Degree in Occupational Safety and Health at New York University in 1975. Between 1974 and 1976, Mr. Birkner worked closely with Dr. Irvin Selikoff and others at Mount Sinai while employed as a safety and health research specialist at Environmental Sciences Laboratory in New York. From 1976 through 1996, Mr. Birkner worked extensively as a practicing industrial hygienist in American industry; in the course of that employment, Mr. Birkner worked as a corporate industrial hygienist for Celanese Corporation 1977-1981. Mr. Birkner is a fellow of the AIHA and a member of the other professional industrial hygiene organizations reflected on Mr. Birkner's curriculum vitae.

Mr. Birkner will provide testimony regarding the history of industrial hygiene, industrial hygiene methods, exposure levels which trigger diseases associated with dust exposure, good housekeeping measures, and other related matters. He is prepared to testify about respiratory history, what constitutes good hygiene practice, and the periods of time from an industrial hygiene standpoint when people and companies became aware of associated health risks. Mr. Birkner may give testimony regarding the level of fiber release, if any, from asbestos-containing products in the occupational setting and may testify regarding the availability of materials as substitutes for asbestos-containing products. He may testify as to issues involving re-entrainment and fiber drift. Mr. Birkner may also testify regarding work

practices applicable to various types of occupations using products that contain asbestos, and he will provide a retrospective assessment or estimate of the Plaintiffs' likely exposure to asbestos in particular work environments based on historical literature and the facts available in this case.

Mr. Birkner has personal knowledge of relevant facts, but he also possesses generalized expertise in his field based on his specialized knowledge, skills and training. He may provide testimony regarding the applicability of the ACGIH, OSHA and EPA guidelines as they relate to occupational exposures to various types of asbestos-containing products. Mr. Birkner may testify regarding the size, construction, layout and working environment of facilities such as where the Plaintiffs worked. He may testify about the nature of the working environment in such locations. He may testify about his knowledge of the composition and asbestos content, if any, of products present in the Plaintiffs' work place and may testify concerning the ability of such products to emit asbestos fibers under certain conditions. Mr. Birkner may testify to the dust levels produced by particular occupational operations and products, to include those associated with the use of pipe and block insulation.

Mr. Birkner may testify about the development of literature and information about asbestos-related diseases as they relate to the gradual development of knowledge within industry and within the field of industrial hygiene about asbestos exposure and appropriate control measures. He will address the evolution of work place practices available to control exposures, to include the historical development of the use of respiratory protection in association with the handling of asbestos-containing products. Mr. Birkner will testify regarding the development over time of governmental standards and regulations pertaining to asbestos, to include the historical evolution of permissible exposure levels to asbestos developed by professional organizations and governmental agencies. He will discuss his own research into asbestos-related diseases as they relate to industrial hygiene, the carcinogenicity of various fiber types as they relate to industrial hygiene, and the relationship, if any, between asbestos and various diseases. Mr. Birkner will provide testimony regarding the epidemiology of asbestos-related diseases, latency, state-of-the-art, and other related matters as they impact industrial hygiene.

Based on the above evidence developed in this case, Mr. Birkner will testify that the Plaintiffs had little or no opportunity for any harmful exposure to asbestos while working at particular facilities because of the nature of Plaintiffs' occupation and particular working environment. He will also testify that the Defendant's approach to the handling and control of any asbestos-containing materials on its premises were reasonable in light of available information and industrial hygiene practices at different points of time. He may also testify as to any matter raised by experts called by the Plaintiffs or any co-Defendant in this action.

Mr. Birkner's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

11. James D. Crapo, M.D.
National Jewish Medical and Research Center
1400 Jackson Street
Denver, CO 80206
(303) 398-1436

Dr. Crapo received a Bachelor of Science degree from Brigham Young University in 1967 and his medical degree from the University of Rochester, New York, in 1971. He taught medicine for many years at Duke University in Durham, North Carolina. Dr. Crapo is board certified in internal medicine with a sub-specialty certification in pulmonary disease. He presently practices medicine at the National Jewish Medical Center in Denver, Colorado, and teaches at the University of Colorado Health Science Center. Dr. Crapo is a fellow of the American Thoracic Society, the American College of Chest Physicians, and other professional organizations reflected on Dr. Crapo's curriculum vitae. Dr. Crapo may testify live or by deposition at trial in this matter.

Dr. Crapo is expected to testify about the pulmonary aspects of asbestos exposure, including matters such a dose response, pathogenicity, carcinogenicity and the potential for asbestos-related disease as a result of exposure to the different types of fiber. Dr. Crapo is also expected to testify as to general medical issues and physiology.

Dr. Crapo's testimony is based in part on the personal knowledge of relevant facts, but he also possesses general expertise in his field based upon specialized knowledge, skills and training. Dr. Crapo is expected to testify about alleged occupational exposure - as described by Plaintiffs and Plaintiffs' witnesses - and whether such exposure occurred for a sufficient period of time and in a sufficient dose to be of medical consequence, and whether such exposure could be considered a substantial contributing factor to the Plaintiffs' alleged disease. In connection with this, based on his own experience and a review of the medical, scientific and/or technical literature and the opinions and conclusions contained in that literature, Dr. Crapo will provide historical state-of-the-art testimony on the gradual development of knowledge within the medical profession of the asbestos-related illnesses. Dr. Crapo may provide testimony regarding the reasonableness of Defendant' usage and control of asbestos at their premises from a medical standpoint, based on the developing state of medical knowledge concerning asbestos overtime.

Dr. Crapo is expected to testify about the principles of epidemiology and what is involved in an epidemiologic study. He is expected to testify that studies of particular groups or occupations of people are not necessarily applicable to other groups or occupations. Dr. Crapo is expected to testify as to the information necessary to determine whether a group of people or persons are at risk for contracting an asbestos-related disease and if it is scientifically possible to attribute a disease to a particular exposure. Dr. Crapo is expected to discuss epidemiological analysis of asbestos-related disease in the context of given levels of exposure, and to discuss how such analysis may be applied to the evidence regarding the Plaintiffs.

Finally, Dr. Crapo may testify regarding Plaintiffs' medical condition, cigarette smoking and lung disease, and generally about the pulmonary system and its functions as well as conditions and diseases of the pulmonary system. Dr. Crapo may also testify regarding the diagnosis and prognosis of asbestos-related markers and diseases, and the risks associated with developing cancers. Dr. Crapo may also testify about any matter raised by experts called by Plaintiffs or any Co-defendant, to include but not limited to the Plaintiffs' medical condition, the state of medical knowledge concerning asbestos, asbestos-related disease and other occupational diseases.

Dr. Crapo's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

12. Peter J. Barrett, M.D.
10 Martin's Lane
Hingham, MA 24043
617-749-5876

Dr. Barrett is currently a Staff Radiologist and former Chairman of Radiology Department and President of the medical staff at Quincy City Hospital, Quincy, Massachusetts. He is also Director of Radiologic Services at the Massachusetts Respiratory Hospital in Braintree. He is board certified in diagnostic radiology and nuclear medicine and has been a "B" reader from NIOSH since 1984. He is a fellow of the American College of Radiology and a member of the American Roentgen Ray Society, the American Thoracic Society, and the Massachusetts Radiological Society in which he has held several offices including the president 1977-1978. He has been a consultant to the U.S. government regarding asbestos concerns and a consultant to the Department of Labor Black Lung Program.

Dr. Barrett is an M.D. and a "B"-reader who may testify concerning his review of the radiographs, CT scans and other records of the Plaintiffs and the significance of various x-ray findings on the radiographs of the Plaintiffs and whether those radiographs contain abnormalities consistent with an asbestos disease.

Dr. Barrett is expected to provide testimony concerning the anatomic structure and functioning of the lung, the defense mechanisms and functioning of the lung, the responses of the lung to various stimuli, and the role of various components of the respiratory system in the proper functioning of the lung. Dr. Barrett is expected to describe and distinguish various types of asbestos fibers; to describe the things which affect the ability of asbestos fibers to affect various structures within the respiratory system; and to describe the body's specific responses to fibers of asbestos that are inhaled, whether or not they are retained.

Dr. Barrett will define and distinguish various conditions, such as asbestosis, pleural changes and other nonmalignant changes that may be attributable in some persons to the results of long term inhalation and retention of some forms of asbestos fiber. Dr. Barrett is further expected to testify concerning the types of asbestos and their association with disease.

Dr. Barrett is further expected to offer testimony concerning the effects of inhaled tobacco smoke and other factors on the occurrence of disease in populations who are also alleged to be exposed to asbestos products, and how the effects of tobacco smoke can confound the apparent results of certain epidemiologic studies.

Dr. Barrett may testify as to the general medical aspects of the diagnosis and treatment of asbestos-related disease and may also testify as to the relationship of asbestos exposure and the incidence of certain types of cancer and that certain types of cancer such as colon cancer are not established as being related to asbestos exposure in the valid medical and scientific literature. He will also testimony concerning the significance of asbestos related abnormalities and neoplastic disease, that asbestos related pleural plaques and pleural thickening are not asbestosis and do not in ordinary have an effect on a person's lung function and have no relationship to any type of neoplasm.

Dr. Barrett will also testify as to the likelihood of whether a plaintiff will develop an asbestos related malignancy based on the valid medical and scientific literature.

Dr. Barrett is also expected to testify concerning the anatomy and function of the respiratory and circulatory systems and the diagnosis and treatment of disease affecting such systems; the symptomatology, disease process and diagnosis of asbestosis and certain cancers associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of an association of obstructive pulmonary disease with asbestos fiber exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system, and other causes of obstructive and restrictive disease or defects of the respiratory system; methods of diagnosis of various diseases, particularly means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos related diseases; incidence of lung cancer among individuals with asbestosis or asbestos exposure without asbestosis, compared with non-asbestotic asbestos workers, non-asbestos exposed workers, and with the general population; the relationship of cigarette smoking to cancer of the lung and cancer of the other sites with reference to epidemiological studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis, or asbestos exposure without asbestosis, on disability and life expectancy; and the effect of pleural plaques or other pleural manifestations of asbestos exposure on lung function or life expectancy; cancer incidence in the general population and among asbestos workers and its potential causes.

Dr. Barrett's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

13. Dr. David Garabrant
University of Michigan
School of Public Health
1420 Washington Heights
Ann Arbor, Michigan 48109
(734) 936-0753

Dr. Garabrant is a medical doctor and epidemiologist who has done epidemiological studies on populations including those exposed to asbestos and, based on those epidemiological studies and the preponderance of medical and scientific evidence, is of the opinion that colon cancer is not caused by asbestos exposure, and he will relate those opinions to the Plaintiffs. He will also offer opinions based on epidemiological studies as to whether other cancers are established as being caused by asbestos exposure.

Dr. Garabrant's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

14. Gregory H. Foster, M.D.
6808 Helen Court
Plano, TX 75023

Dr. Foster is an M.D. and a "B"-reader who may testify concerning his review of the radiographs, CT scans, and other records of the Plaintiffs and the significance of various x-ray findings on the radiographs of the Plaintiffs and whether those radiographs contain abnormalities consistent with an asbestos disease.

Dr. Foster is expected to provide testimony concerning the anatomic structure and functioning of the lung, the defense mechanisms and functioning of the lung, the responses of the lung to various stimuli, and the role of various components of the respiratory system in the proper functioning of the lung. Dr. Foster is expected to describe and distinguish various types of asbestos fibers; to describe the things which affect the ability of asbestos fibers to affect various structures within the respiratory system; and to describe the body's specific responses to fibers of asbestos that are inhaled, whether or not they are retained.

Dr. Foster will define and distinguish various conditions, such as asbestosis, pleural changes and other nonmalignant changes that may be attributable in some persons to the results of long term inhalation and retention of some forms of asbestos fiber. Dr. Foster is further expected to testify concerning the types of asbestos and their association with disease.

Dr. Foster is further expected to offer testimony concerning the effects of inhaled tobacco smoke and other factors on the occurrence of disease in populations who are also alleged to be exposed to asbestos products, and how the effects of tobacco smoke can confound the apparent results of certain epidemiologic studies.

Dr. Foster may testify as to the general medical aspects of the diagnosis and treatment of asbestos-related disease and may also testify as to the relationship of asbestos exposure and the incidence of certain types of cancer and that certain types of cancer such as colon cancer are not established as being related to asbestos exposure in the valid medical and scientific literature. He will also testimony concerning the significance of asbestos related abnormalities and neoplastic disease, that asbestos related pleural plaques and pleural thickening are not asbestosis and do not in ordinary circumstances have an effect on a person's lung function and have no relationship to any type of neoplasm.

Dr. Foster will also testify as to the likelihood of whether a plaintiff will develop an asbestos related malignancy based on the valid medical and scientific literature.

Dr. Foster is also expected to testify concerning the anatomy and function of the respiratory and circulatory systems and the diagnosis and treatment of disease affecting such systems; the symptomatology, disease process and diagnosis of asbestosis and certain cancers associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of an association of obstructive pulmonary disease with asbestos fiber exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system, and other causes of obstructive and restrictive disease or defects of the respiratory system; methods of diagnosis of various diseases, particularly means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos related diseases; incidence of lung cancer among individuals with asbestosis or asbestos exposure without asbestosis, compared with non-asbestotic asbestos workers, non-asbestos exposed workers, and with the general population; the relationship of cigarette smoking to cancer of the lung and cancer of the other sites with reference to epidemiological studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis, or asbestos exposure without asbestosis, on disability and life expectancy; and the effect of pleural plaques or other pleural manifestations of asbestos exposure on lung function or life expectancy; cancer incidence in the general population and among asbestos workers and its potential causes.

Dr. Foster's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

15. Sam Cade, M.D.
Baylor University Medical Center, Department of Radiology
3500 Gaston Avenue
Dallas, TX 75246
214-820-3219

Dr. Cade is an M.D. and a "B"-reader, who will testify concerning his review of the radiographs and CT scans of the Plaintiffs in this case and the significance of various x-ray

findings on the radiographs of the Plaintiffs. He will also testify as to the likelihood of whether a plaintiff will develop asbestos-related malignancies, based upon the valid medical and scientific literature. Dr. Cade's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

16. John R. Holcomb, M.D.
4410 Memorial Drive, Suite 440
San Antonio, Texas 78229
(210) 692-9400

Dr. Holcomb is a specialist in the area of respiratory diseases. Dr. Holcomb may testify as to all matters pertaining to his examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiffs' family members; the diagnostic criteria used to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; the Plaintiff's current medical condition and his prognosis thereof, the anatomy and function of the respiratory and circulatory systems; the natures of asbestos; the symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system; methods of diagnosis of various diseases, especially the means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos-related diseases; incidence of lung cancer among individuals with asbestosis as compared to non-asbestotic asbestos workers and to the general public. He will also testify as to smoking and its relation to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; and the lack of relationship between the presence of pleural plaques and a later development of any form of cancer.

Dr. Holcomb's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

17. Dr. John Pettigrove
7121 South Padre Island Drive
Suite 300
Corpus Christi, TX
361-696-6163 or 6162

Dr. Pettigrove is a specialist in the area of respiratory diseases. Dr. Pettigrove may testify as to all matters pertaining to his examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiffs' family members; the diagnostic criteria used

to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; the Plaintiff's current medical condition and his prognosis thereof, the anatomy and function of the respiratory and circulatory systems; the natures of asbestos; the symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system; methods of diagnosis of various diseases, especially the means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos-related diseases; incidence of lung cancer among individuals with asbestosis as compared to non-asbestotic asbestos workers and to the general public. He will also testify as to smoking and its relation to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; and the lack of relationship between the presence of pleural plaques and a later development of any form of cancer.

18. Dr. William Burgin
2601 Hospital Blvd.
Corpus Christi, Texas 78405

Dr. Burgin is a specialist in the area of respiratory diseases. Dr. Burgin may testify as to all matters pertaining to his examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiffs' family members; the diagnostic criteria used to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; the Plaintiff's current medical condition and his prognosis thereof, the anatomy and function of the respiratory and circulatory systems; the natures of asbestos; the symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system; methods of diagnosis of various diseases, especially the means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos-related diseases; incidence of lung cancer among individuals with asbestosis as compared to non-asbestotic asbestos workers and to the general public. He will also testify as to smoking and its relation to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; and the lack of relationship between the presence of pleural plaques and a later development of any form of cancer.

Dr. Burgin's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

19. Richard J. Lee, Ph.D.
R. J. Lee Group, Inc.
350 Hochberg Road
Monroeville, PA 15146

Dr. Lee is expected to testify about the development of scientific knowledge and techniques regarding the measurement of levels of asbestos in the air and in lung tissue. Dr. Lee may comment upon techniques used by plaintiffs' experts to generate and analyze air, dust and lung tissue samples and conclusions drawn therefrom. Dr. Lee may also testify concerning the propensity of gasketing materials to release fibers and the specific fiber levels generated therefrom during normal use.

Dr. Lee's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

20. Phillip Cagle, M.D.
Baylor School of Medicine
Dept. of Pathology
1200 Moursund Street
Room 286A
Houston, Texas 77030
713-798-3671

The words and language used in this statement are the words and language of counsel who prepared the statement, and not of the witness. Dr. Cagle has not as yet prepared a report; if he does, a copy will be provided to Plaintiffs.

Dr. Cagle will be offered by these Defendant as an expert physician, with particular expertise in pathology, in the process of carcinogenesis, as a researcher in the field of asbestos related conditions and their etiology, in the pathologic diagnosis and grading of non-malignant conditions associated with exposure of certain populations to asbestos-containing products and/or materials, and in the epidemiologic and etiologic aspects of certain cancers that are alleged to be causally associated with exposure of certain populations to asbestos containing products and/or materials.

Dr. Cagle is expected to provide testimony concerning the anatomic structure and functioning of the lung from a pathologic perspective, the defense mechanisms and functioning of the lung in health and otherwise, the responses of the lung to various stimuli, and the role of various components of the respiratory system in the proper functioning of the lung. Dr. Cagle is expected to describe and distinguish various types of asbestos fibers; to describe the things which affect the ability of asbestos fibers to affect various structures within the respiratory system; and to describe the body's

specific responses to fibers of asbestos that are inhaled, whether or not they are retained.

It is further believed that Dr. Cagle will define and distinguish various conditions, such as asbestosis, pleural changes and other nonmalignant changes that may be attributable in some persons to the results of long term inhalation and retention of some forms of asbestos fiber. Dr. Cagle is further expected to be able to testify concerning the circumstances under which exposure to certain forms and types of asbestos may be associated with the incidence of some forms of mesothelioma in some persons, and will testify concerning the results of his own experiences, the medical and scientific literature, and existing epidemiologic studies concerning associations that are alleged to exist epidemiologically between exposure to asbestos in some populations and the mortality and/or incidence of some forms of cancer.

Dr. Cagle is further expected to offer testimony concerning the effects of inhaled tobacco smoke and other factors on the occurrence of disease in populations who are also alleged to be exposed to asbestos containing products, and additionally concerning how the effects of inhaled tobacco smoke and other factors can confound the apparent results of certain epidemiologic studies.

Dr. Cagle is also expected to testify that it cannot be said, to a reasonable degree of medical probability, that any hypothetical person's alleged "exposure" to products that may have contained asbestos was of importance to that individual, without reference to that specific person's individual work history, medical history, findings on physical examination and pathological examination of tissue, if any, information concerning the individual's use of protective equipment, specific types of asbestos containing product(s) used and/or handled, resolution of questions regarding exposures to substances other than asbestos-containing products, and other known etiologies for whatever conditions are found to exist.

It is further expected that Dr. Cagle's testimony will generally respond to the pathologic, scientific and epidemiologic testimony which may be offered by plaintiffs' experts, and in that sense his testimony is dependent upon the prior testimony of such experts and cannot be specifically predicted.

In expressing his opinions, Dr. Cagle will rely on his own training, education, experience, research and publications, as well as the published medical and scientific literature that has been available to him over his career.

Dr. Cagle may testify as to the general medical aspects of the diagnosis and treatment of asbestos-related disease and the pathological effect of asbestos on the lung. He may also testify as to the relationship of asbestos exposure and the incidence of cancer. Dr. Cagle is expected to provide testimony in the following areas:

(a) Anatomy and function of the respiratory and circulatory systems and the diagnosis and treatment of disease affecting such systems;

(b) The nature of asbestos and asbestosis;

(c) The symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum, and peritoneal cavity;

(d) The nature and extent of medical and scientific knowledge regarding any association of obstructive pulmonary disease with asbestos fiber exposure;

(e) The effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system and other causes of obstructive and restrictive disease or defects of the respiratory system;

(f) Methods of diagnosis of various diseases, particularly means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos related diseases;

(g) Incidence of lung cancer among individuals with asbestosis or asbestos exposure without asbestosis, compared with non-asbestotic asbestos workers, non-asbestos exposed workers, and with the general population;

(h) The import of any exhibit (including without limitation, corporate documents of Defendant) introduced as evidence, or any items prepared for use or used for demonstrative purposes by any witness;

(i) Cigarette smoking and its effect on the lung and other organs;

(j) The relationship of cigarette smoking to cancer of the lung and cancers of the other sites with reference to epidemiological studies and physiologic effect;

(k) Difference between impairment and disability;

(l) Effect of asbestosis, or asbestos exposure without asbestosis, on disability and life expectancy; effect of pleural plaques or other pleural manifestations of asbestos exposure on lung function or life expectancy;

(m) The lack of relationship between presence of pleural plaques and a later development of any form of cancer;

(n) Cancer incidence in the general population and among asbestos workers and its potential causes;

(o) The history of evolution and knowledge of asbestos-related diseases;

(p) The fiber types and exposure levels considered to be substantial in causing asbestos-related disease, specifically mesothelioma.

Additionally, Dr. Cagle may testify concerning the diagnosis of plaintiffs. Dr. Cagle may also testify as to his findings and diagnosis after examination and analysis of tissue, slides or other pathologic materials, medical records, reports, radiographs and plaintiffs' work history. He may give testimony concerning his review of any report purported to be diagnostic of any oncological condition and the methods of and procedures for conducting fiber counts. He may give testimony regarding malignancies associated with asbestos exposure or cigarette abuse and other malignancies from which they must be differentiated, the appropriate protocols for the diagnosis of those conditions, prognosis and information relating to the known cause of those malignancies. He may testify concerning the literature relevant to any malignancy purported to be asbestos-related and any other malignancies from which it must be distinguished, including data relevant to contentions of increased risk of asbestos-related disease or cancer, prognosis, the relevant standards of care and considerations relating to medical monitoring. His testimony may include discussions of any relevant epidemiology, anatomy and physiology.

Finally Dr. Cagle may render various opinions relevant to a *Daubert/Havner/Robinson* Analysis. Dr. Cagle's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

21. Dr. Andrew Churg
Associate Professor
Chief, Laboratory of Anatomic Pathology
University of British Columbia
Health Sciences Center Hospital
2211 Westbrook Mall
Vancouver, B.C., Canada V6T1W5

The words and language used in this statement are the words and language of counsel who prepared the statement, and not of the witness. Dr. Churg has not as yet prepared a report; if he does, a copy will be provided to Plaintiffs.

Dr. Churg will testify about the pathology of asbestos related diseases, his research into asbestos related diseases, the carcinogenicity of various fiber types, and the relationship, if any, between asbestos and various disease.

Dr. Churg is a specialist in the pathology of occupational lung disease.

He is also expected to testify that some asbestos-containing products do not create a health hazard and that any asbestos exposure from these products played no role in the genesis of plaintiffs' lung diseases, if any.

Dr. Churg may testify, either live or by deposition, regarding general pathology and the pathology of plaintiffs. He may also testify as to any matter raised by experts called by plaintiffs or any co-Defendant.

In addition, Dr. Churg may testify regarding general medical issues, including but not limited to the following:

(a) The anatomy and function of the respiratory and circulatory systems, including the protective systems of the body with regards to the inhalation and retention of dust, and the diagnosis and treatment of disease affecting such systems;

(b) The nature of asbestos and asbestos-related disease;

(c) The symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum and peritoneal cavity;

(d) The nature and extent of medical and scientific knowledge regarding any association of obstructive pulmonary disease with asbestos fiber exposure;

(e) The effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system and other causes of obstructive and restrictive disease or defects of the respiratory system;

(f) Methods of diagnosis of various diseases with other non-asbestos-related diseases;

(g) Incidence of lung cancer among individuals with asbestosis or asbestos exposure as compared to non-asbestotic asbestos workers, non-asbestos exposed workers and to the general population;

(h) Cigarette smoking and its effects on the lungs and other organs;

(i) The relationship of cigarette smoking to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect.

Dr. Churg's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

22. Dr. Scott G. Donaldson
North Texas Pulmonary Associates
375 Municipal Drive, Suite 140
Richardson, Texas 75080
(972) 680-0666

Dr. Donaldson is a specialist in the area of respiratory diseases. Dr. Donaldson may testify as to all matters pertaining to his examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiffs' family members; the diagnostic criteria used to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; the Plaintiff's current medical condition and his prognosis thereof, the anatomy and function of the respiratory and circulatory systems; the natures of asbestos; the symptomatology, disease process and diagnosis of asbestosis and cancer associated with the respiratory system, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system; methods of diagnosis of various diseases, especially the means of establishing the differential diagnosis of alleged asbestos-related diseases with other non-asbestos-related diseases; incidence of lung cancer among individuals with asbestosis as compared to non-asbestotic asbestos workers and to the general public. He will also testify as to smoking and its relation to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; and the lack of relationship between the presence of pleural plaques and a later development of any form of cancer.

Dr. Donaldson's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

23. Kathryn A. Hale, M.D.
Assistant Professor of Medicine
Baylor College of Medicine and
The Methodist Hospital
6550 Fannin
Smith Tower #1236
Houston, Texas 77030
(713) 790-2076

Dr. Hale is a specialist in the area of respiratory diseases. Dr. Hale may testify as to all matters pertaining to her examination of plaintiff and/or review of plaintiff's medical records, x-rays and reports and supplemental reports of plaintiffs' experts; any

communications with plaintiff or plaintiff's family members; the diagnostic criteria used to diagnose asbestos-related diseases; her opinions as to whether plaintiff suffers from asbestos-related diseases and the basis of such opinions; plaintiff's medical conditions. Dr. Hale may also testify regarding the anatomy and function of the respiratory and circulatory systems; the symptomatology, disease process and diagnosis of asbestosis and cancer of the respiratory systems, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos fiber and the effect of exposure to substances other than asbestos in the development and manifestation of diseases of the respiratory system; the methods of diagnosis and means of establishing the differential diagnosis of asbestos-related diseases with non asbestos-related disease; the incidence of lung cancer in the general population and those individuals exposed to asbestos; cigarette smoking and its effect on the lungs; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; the lack of relationship between pleural plaques and development of any cancer; the history of evolution and knowledge of asbestos-related diseases; the evolution of the medical community's awareness of the increased risks for an asbestos-related disease in cases of prolonged exposure. In addition, Dr. Hale may also offer various opinions relevant to a *Daubert/Havner/Robinson* Analysis.

Dr. Hale's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

24. Arthur Langer, Ph.D.
Institute of Applied Sciences
Brooklyn College of the City University
New York, New York
(718) 951-4793

Dr. Langer is a mineralogist with a Ph.D. from Columbia University. He is a Professor of Mineralogy at City University, New York, New York and Director of the Environmental Sciences Laboratory of the Institute of Applied Sciences a Brooklyn College of the City University of New York.

Dr. Langer is expected to identify and describe the various methods by which inorganic material from aerosols, bulk samples or tissue may be analyzed chemically, crystallographically and structurally.

Dr. Langer is expected to testify about the various types of asbestos fiber, the geographic locations where the fibers can be found, the potential biologic activity of the various fibers in the human lung (including inorganic toxicity), the physical and chemical characteristics of the various asbestos fibers, and the identification and characterization of asbestos fibers.

Dr. Langer is expected to testify as to the types of inorganic minerals found in the lung tissue of persons with malignant mesothelioma and which are associated with the incidence of malignant mesothelioma in humans. He is expected to identify the types of fibers that have been shown to create an increased risk for malignant mesothelioma. Dr. Langer is expected to testify as to the physical and chemical characteristics of the fibers that have been shown to create an increased risk of malignant mesothelioma.

Dr. Langer is expected to testify as to the potential for certain finished asbestos containing products to be contaminated with inorganic minerals and the amounts of the types of trace contaminants that may be found in the products. Dr. Langer is expected to offer testimony as to the amount of contaminants that are found in finished asbestos-contaminated products, if any, and the chemical, crystallographic and structural composition of the contaminants that can be generated from a finished product, if any.

Dr. Langer is expected to testify, based upon his review of the literature and of evidence of exposure, that exposure to certain encapsulated products did not result in a release of any contaminants sufficient to cause disease in persons such as plaintiff's decedent. Dr. Langer is expected to testify that his work and the literature do not establish that certain encapsulated products are contaminated with tremolite asbestos.

Dr. Langer may review the pathology, slides and other records available in this case and perform a fiber burden analysis. Dr. Langer will report on his findings as to whether there could have been an occupational exposure to asbestos.

In addition, Dr. Langer may testify about issues relevant to a *Daubert/Havner/ Robinson* Analysis. Dr. Langer's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

25. Robert M. Ross, M.D.- FCCP
6550 Fannin Street, Suite 2403
Houston, Texas 77030
(713) 383-6100

Dr. Ross is a specialist in the area of respiratory diseases. Dr. Ross may testify as to all matters pertaining to his examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiff's family members; the diagnostic criteria used to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; plaintiff's medical conditions; his prognosis with regard to such medical conditions; and, if applicable, his opinions as to the cause of death. Dr. Ross may also testify about general medical issues with emphasis on the respiratory system and the effect that asbestos and other substances have on human health generally and with respect to plaintiff specifically. Dr. Ross may testify concerning his examination and diagnosis of the physical condition of plaintiff and the relationship, if any, of such condition of plaintiff's exposure, if any, to asbestos.

Dr. Ross may also testify regarding the anatomy and function of the respiratory and circulatory systems; the symptomatology, disease process and diagnosis of asbestosis and cancer of the respiratory systems, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos fiber and the effect of exposure to substances other than asbestos in the development and manifestation of diseases of the respiratory system; the methods of diagnosis and means of establishing the differential diagnosis of asbestos-related diseases with non asbestos-related diseases; the incidence of lung cancer in the general population and those individuals exposed to asbestos; cigarette smoking and its effect on the lungs; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; the lack of relationship between pleural plaques and development of any cancer; the history of evolution and knowledge of asbestos-related diseases; and the evolution of the medical community's awareness of the increased risks for an asbestos-related disease in cases of prolonged exposure.

In addition, Dr. Ross may testify about issues relevant to a *Daubert/Havner/Robinson* Analysis. Dr. Ross' C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

26. Gail D. Stockman, M.D., Ph.D.
Longview Pulmonary Consultants
703 East Marshall, Suite 4002
Longview, Texas 75601
(903) 753-0787

Dr. Stockman is a specialist in the area of respiratory diseases. Dr. Stockman may testify as to all matters pertaining to her examination of plaintiff and/or review of plaintiff's medical records, x-rays, and reports and supplemental reports of plaintiffs' experts; any communications with plaintiff or plaintiff's family members; the diagnostic criteria used to diagnose asbestos-related diseases; her opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; plaintiff's medical conditions; her prognosis with regard to such medical conditions; and, if applicable, her opinions as to the cause of death. Dr. Stockman may also testify about general medical issues with emphasis on the respiratory system and the effect that asbestos and other substances have on human health generally and with respect to plaintiff specifically. Dr. Stockman may testify concerning her examination and diagnosis of the physical condition of plaintiff and the relationship, if any, of such condition of plaintiff's exposure, if any, to asbestos.

Dr. Stockman may also testify regarding the anatomy and function of the respiratory and circulatory systems; the symptomatology, disease process and diagnosis of asbestosis and cancer of the respiratory systems, peritoneum and peritoneal cavity; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos fibers and the effect of exposure to substances other than asbestos in the development and manifestation of diseases of the respiratory system; the methods

of diagnosis and means of establishing the differential diagnosis of asbestos-related diseases with non asbestos-related diseases; the incidence of lung cancer in the general population and those individuals exposed to asbestos; cigarette smoking and its effect on the lungs; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; the history of evolution and knowledge of asbestos-related diseases; and the evolution of the medical community awareness of the increased risks for asbestos-related disease in cases of prolonged exposure.

Dr. Stockman may testify regarding the historical review and state of the art of pulmonary medicine and asbestos-related conditions; the state of scientific and medical art and the history and knowledge of asbestos-related disease in general; and epidemiology and general medicine regarding asbestos exposure. Dr. Stockman may provide opinions on the probable time period(s) of asbestos exposure with relation to the causation of various disease processes. In doing so, Dr. Stockman may also provide percentages of probability of causation for exposure to asbestos from first exposure to last exposure.

In addition, Dr. Stockman may offer opinions relevant to a *Daubert/Havner/Robinson* Analysis. Dr. Stockman's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

27. Hans Weill M.D.
Tulane University - School of Medicine
1700 Perdido Street
Second Floor
New Orleans, Louisiana 70112

Dr. Weill is a pulmonary specialist. Dr. Weill will testify generally about asbestos-related diseases and diseases of the lungs, chest, respiratory system and other organs of the body. He may offer general testimony relating to cigarette smoking, cancer of various organs, cancer risk associated with cigarette smoking, asbestos exposure and other causative factors, and the pathogenesis and diagnosis of disease, including asbestos-related diseases. Dr. Weill may testify as to the various types of asbestos fibers and their role in the causation of disease. He may also testify as to state-of-the-art medical as it relates to knowledge of health hazards associated with exposure to asbestos-containing dust in varying doses and in varying industries, based on his review of asbestos-related literature, and his own experience. Dr. Weill may testify specifically about plaintiffs' medical condition by relating these general principles to plaintiffs' or plaintiffs' decedents' specific medical history through review of records, x-rays, or by hypothetical.

Dr. Hans Weill, may testify, in general, concerning the epidemiology of asbestos exposure to asbestos upon persons in occupational settings, including related diseases

and the criteria for diagnosis of an asbestos related disease. He may also testify regarding the existence or non-existence of any asbestos related disease in the plaintiffs, including but not limited to pleural plaques, asbestosis, lung cancer, mesothelioma, laryngeal cancer, esophageal cancer and stomach cancer.

He may also testify on whether any asbestos related disease allegedly suffered by plaintiffs was medically or proximately caused by exposure to asbestos containing gasket and packing products. He may also testify on the existence of a dose response relationship between exposure to asbestos and asbestos related disease. He may also testify on increased risk of cancer issues and whether a particular plaintiff has a reasonable fear of cancer due to exposure to asbestos. He may also testify on the health consequences of smoking. With respect to particular plaintiffs, he may testify as to review and interpretation of x-ray films, review and interpretation of pulmonary function testing, the nature and extent of any impairment or disability, whether the condition is progressive and whether other disease or conditions are present in plaintiffs.

Dr. Weill's testimony will be based on his training, experience, education, and review of the medical literature concerning asbestos related disease.

In addition, Dr. Weill may testify about issues relevant to a *Daubert/Havner/Robinson* Analysis. Dr. Weill's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

28. Dr. Frank Weir
5629 FM 1960, Suite 340
Houston, Texas 77069
(281) 893-4003

Dr. Weir is expected to testify in the field of pharmacology, toxicology and industrial hygiene, generally, and particularly as they relate to asbestos fiber exposure in various work places. Also may offer testimony that it is improbable, and scientifically unlikely that plaintiff ever received physiologically meaningful exposures to asbestos fibers. He may also testify regarding the knowledge of the toxicology and appreciation for the hazards relating to the use of asbestos-containing materials at various intervals of time that are of interest in this matter. Dr. Weir may comment upon techniques used by plaintiffs' experts to generate and analyze air, dust and lung tissue samples and conclusions drawn therefrom.

Dr. Weir may also respond to testimony of certain witnesses offered at the time of trial. He therefore reserves the right to supplement, amend or to otherwise modify the opinions to be offered accordingly. He will continue to review material which may come to his attention regarding this material. Dr. Weir may utilize this material to

develop additional opinions and conclusions or modify his opinions and conclusions if such further evidence of information so warrants.

Dr. Weir may testify as to state-of-the-art of the hazards of asbestos insulation products and the conduct of various industries and companies based on that knowledge.

Dr. Weir's opinions are based upon his education, experience and professional training, his review of relevant medical, epidemiological, scientific and technical literature, and his review and analysis of the case specific materials provided to concerning this matter. He may also render various opinions relevant to a *Daubert/ Havner/Robinson* Analysis.

Dr. Weir's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

29. Mark Wick, MD, FCAP
University of Virginia Health Systems
Department of Pathology
Box 214
OMS-Bldg., Room 3882
Charlottesville, Virginia 22908
(804) 924-9038

The words and language used in this statement are the words and language of counsel who prepared the statement, and not of the witness. Dr. Wick has not as yet prepared a report; if he does, a copy will be provided to Plaintiffs.

Dr. Wick is expected to provide testimony concerning the anatomic structure and functioning of the lung from a pathologic perspective, the defense mechanisms and functioning of the lung in health and otherwise, the responses of the lung to various stimuli, and the role of various components of the respiratory system in the proper functioning of the lung. Dr. Wick is expected to describe and distinguish various types of asbestos fibers; to describe the things which affect the ability of asbestos fibers to affect various structures within the respiratory system; and to describe the body's specific responses to fibers of asbestos that are inhaled, whether or not they are retained.

It is further believed that Dr. Wick will define and distinguish various conditions, such as asbestosis, pleural changes and other non-malignant changes that may be attributable in some persons to the results of long term inhalation and retention of some forms of asbestos fiber. Dr. Wick is further expected to be able to testify concerning the circumstances under which exposure to certain forms and types of asbestos maybe associated with the incidence of some forms of mesothelioma in some persons, and will testify concerning the results of his own experiences, the medical and scientific literature, and existing epidemiologic studies concerning associations that are alleged to

exist epidemiologically between exposure to asbestos in some populations and the mortality and/or incidence of some forms of cancer.

Dr. Wick is further expected to offer testimony concerning the effects of inhaled tobacco smoke and other factors on the occurrence of disease in populations who are also alleged to be exposed to asbestos containing products and additionally concerning how the effects of inhaled tobacco smoke and other factors can confound the apparent results of certain epidemiologic studies.

Dr. Wick is also expected to testify that it cannot be said, to reasonable degree of medical probability, that any hypothetical person's alleged "exposure" to products that may have contained asbestos was of importance to that individual without reference to that specific person's individual work history, medical history, findings on physical examination and pathological examination of tissue, if any, information concerning the individual's use of protective equipment, specific types of asbestos containing product(s) used and/or handled, resolution of questions regarding exposures to substances other than asbestos-containing products, and other known etiologies for whatever conditions are found to exist.

It is further expected that Dr. Wick's testimony will generally respond to the pathologic, scientific and epidemiologic testimony which may be offered by plaintiffs' experts, and in that sense his testimony is dependent upon the prior testimony of such experts and cannot be specifically predicted.

Dr. Wick's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

30. Arthur A. Cohen, M.D.
Curie Medical Building
1733 Curie Drive, Suite 309
El Paso, Texas 79902
915-533-9388

Dr. Cohen is a Diplomate of the American Board of Internal Medicine with a sub-specialty in pulmonary disease. Dr. Cohen will testify regarding his examination of the plaintiff and/or review of plaintiff's medical records, x-rays, and reports; the diagnostic criteria used to diagnose asbestos-related diseases; his opinions as to whether plaintiff suffers from asbestos-related disease and the basis of such opinions; the plaintiff's current medical condition and his prognosis thereof, the anatomy and function of the respiratory and circulatory systems; the nature and extent of medical and scientific knowledge regarding any association of pulmonary disease with asbestos exposure; the effect of exposure to substances other than asbestos on the development and manifestation of obstructive and restrictive conditions and diseases of the respiratory system; methods of diagnosis of various diseases, especially the means of establishing

the differential diagnosis of alleged asbestos-related diseases with other non-asbestos-related diseases. He will testify concerning the incidence of lung cancer among individuals with asbestosis as compared to non-asbestotic asbestos workers and to the general public. He will also testify as to smoking and its relation to cancer of the lung and cancers of other body parts with reference to epidemiology studies and physiologic effect; the difference between impairment and disability; the effect of asbestosis on disability and life expectancy; and the lack of relationship between the presence of pleural plaques and a later development of any form of cancer.

Dr. Cohen's C.V. has been previously provided to Plaintiffs' counsel. If another copy is desired, Defendant will, on request, provide one.

The above designated witnesses may also give testimony about the historical "state-of-the-art," the development of medical knowledge about asbestos, and presence or absence of medical consequences relating to low-dose exposure to asbestos emanating from asbestos containing products. They may offer general testimony-relating to the development of asbestos-related disease, cigarette smoking, cancer of various organs, pneumonia, chronic obstructive lung disease, the pathology of cigarettes and asbestos, the pathogenesis of cigarette related diseases, and the pathogenesis of asbestos related diseases. These witnesses may also testify generally about specific abnormalities that might be in the medical records of the decedent. These witnesses may also testify about the presence or absence of health disease or health risks associated with exposure to low levels of asbestos emanating from asbestos containing products. They may also testify specifically about diseases, such as chronic obstructive pulmonary disease, even though they may not have seen decedent, or reviewed decedent's medical records.

Defendant also designates the following experts:

31. Ronald Richards
15877 West Laurel Canyon Court
Surprise, Arizona 85374
602-546-7811

Mr. Richards is an industrial hygienist who graduated from the University of Pittsburgh Graduate School of Public Health with a Master of Science in industrial hygiene. Mr. Richards began his industrial hygiene career with the State of Pennsylvania, Department of Health in the early 1960s until 1969 when he joined the staff of Texaco Inc. Mr. Richards will testify concerning his experience with the State of Pennsylvania and his evaluation of asbestos exposure in product plants which produced asbestos containing materials. He will testify concerning the judgment among the industrial hygienists during this time period and during his graduate school activities as to the potential hazards of asbestos during the 1960s, and who was perceived to be at risk regarding potential asbestos disease. He will testify based on his knowledge and experience concerning the principles of industrial hygiene and the use of judgment as an important factor in the practice of industrial hygiene. He will testify that the persons perceived to be at risk from asbestos exposure were those who worked in the mining and textile fields, and it was not

until the 1970s that individuals in a refinery type of atmosphere were perceived to be at risk for asbestos related disease, and at that time the insulator was the craft perceived to be potentially affected and that it was not until later that other crafts were identified as potentially at risk.

Mr. Richards will testify concerning the industrial hygiene issues at Texaco and the actions taken by Texaco concerning issues related to asbestos. He will testify as to the state of the knowledge concerning asbestos and industrial hygiene as it existed from time to time during his graduate school career and thereafter, beginning in the early 1960s.

Mr. Richards will testify concerning the industrial hygiene program at Texaco and the steps taken to monitor the working environment for asbestos levels and protect workers, and that based upon the results of monitoring that Texaco was in substantial compliance with the TLV and OSHA standards. Mr. Richards will also testify that persons not assigned to insulation jobs would at most have had incidental exposure to asbestos dust and that the time weighted averages for such workers were generally significantly below mandated limits. He will also testify that training for the proper handling of asbestos and asbestos containing products were conducted to ensure protection for employees.

Mr. Richards will also testify that based upon his knowledge and judgment that purchasers and users of asbestos containing insulation materials such as Texaco relied on research by the producers and manufacturers of asbestos containing products as well as the government for informative information on asbestos.

Mr. Richards will also testify concerning the policies that Texaco had regarding contractor employees' work on Texaco's premises. The documents that Mr. Richards has reviewed include the Texaco documents relating to industrial hygiene policies and procedures regarding asbestos at Texaco including many industrial hygiene monitoring reports. He will testify as to the substitution of asbestos-free products as those products became practicable and available for use in the Texaco refineries.

32. David Watts
Equiva Services
12700 Northborough Drive
Houston, TX 77067
281-874-3830

Mr. Watts is an industrial hygienist who began performing industrial services for Texaco in 1977. He will testify concerning the corporate industrial hygiene program at Texaco. He will testify concerning the levels of exposure found among those monitored at the Texaco facilities. He will testify as to the substitution of asbestos free products as those products became practicable and available for use in the Texaco refineries. Mr. Watts will also testify concerning the role of contractors and the fact that they were to provide their own safety equipment and monitoring of their own employees as required under the OSHA standards. He will testify concerning the requirements of the contractual relations

between Texaco and the contractor that required the contractor to comply with applicable rules and regulations including OSHA standards.

33. James L. Castille CIH, CSP
2709 Miller Street
Port Neches, TX 77651
409-727-0691

Mr. Castille is an industrial hygienist who began performing industrial services for Texaco in the early 1970s. He will testify concerning the industrial hygiene program at the Texaco facilities in the Jefferson County area. He will testify concerning the levels of exposure found among those monitored at the Texaco facilities and that the levels of exposure were in his opinions acceptable and were within the prescribed permissible exposure limits. He will testify as to the substitution of asbestos free products as those products became practicable and available for use in the Texaco refineries. Mr. Castille will also testify concerning the role of contractors and the fact that they were to provide their own safety equipment and monitoring of their own employees as required under the OSHA standards. He will testify concerning the requirements of the contractual relations between Texaco and the contractor that required the contractor to comply with applicable rules and regulations including OSHA standards.

Defendant also designates the following depositions taken in previous litigation which may contain opinions constituting expert knowledge and opinions:

1. Joe Shrode in the case of ***Claude J. Tomplait v. Combustion Engineering, et al.***; U.S. District Court for the Eastern District of Texas, Beaumont Division; and/or in ***Samuel R. Porter v. Fibreboard Corporation, et al.***, also in the U.S. District Court for the Eastern District of Texas, Beaumont Division, and/or Mr. Shrode's deposition testimony in the ***Clarence Borel*** trial, also in the U.S. District Court for the Eastern District of Texas

2. Dr. Corwin Hinshaw, expert regarding state of the medical art, in the cases of ***Jimmie L. Vaughan v. Johns-Manville***, CA-3-01-0070-F, USDC, N.D. Tex; ***Antonio Mendoza, et al. v. Fibreboard Corporation, et al.***, CA-2-80-006, USDC, N.D. Tex; ***In Re: Related Asbestos Cases***, C-83-6251-RFP, USDC, N.D. Calif

3. Andrew T. Haas in the cases of ***Barsh v. Keene Corp., et al.***, 1986; and ***Jackie R. Starnes, et ux vs. Combustion Engineering Inc., et al.***, No. 2-75-122, USDC, Eastern District of Tennessee, Northeastern Division, Knoxville, Tennessee, deposition testimony May 10, 1976

4. Roy Steinfurth in the case of ***Jackie R. Starnes v. Combustion Engineering Inc., et al.***, No. 2-75-122, USDC, Eastern District of Tennessee, Northeastern Division, Knoxville, Tennessee, deposition testimony May 10, 1976

5. Dr. Stephen M. Ayres in the cases of ***James F. Srite v. A. C. & S., Inc.***, trial testimony taken April 26, 1991; and ***Lloyd Galveston 82***, Cause No. 6-82-344, June 11, 1987

6. Dr. Kenneth Wallace Smith in the case of ***James Roy DeRocco & Andrew v. Carollo v. Forty-eight Insulation, Inc., et al.***; In the Court of Common Pleas of Allegheny County, Pennsylvania, Civil Action No. 7880, July Term, 1974

7. William Nicholson in Cause No. B-126,986; ***Russell Allen, et al. vs. American Petrofina, Inc., et al.;*** In the 60th Judicial District Court of Jefferson County, Texas

8. Stephen Levine in Cause No. B-126,986; ***Russell Allen, et al. vs. American Petrofina, Inc., et al.;*** In the 60th Judicial District Court of Jefferson County, Texas.

Defendant reserves the right to amend and supplement this response as additional information is located.

Defendant reserves the right to call any person designated by any other party in this case as an expert witness, whether or not such party is still a party at the time of trial as well as all expert witnesses listed by Plaintiffs, custodians of records of any and all physicians, health care facilities, hospitals, clinics and health care providers who have treated or examined Plaintiffs in this case who may have records concerning Plaintiffs, and any physician who has examined and/or treated Plaintiffs not identified.

JOHN A. PENDERGRASS, CIH, CSP, PE
CONSULTANT

ASBESTOS AND WORKER EXPOSURE

INTRODUCTION

Even though asbestos is an ubiquitous component of the earth's crust, Canada and South Africa are the principle producers with lesser amounts coming from Russia, Finland, Australia, New Zealand and the United States.

Asbestos is the name given to minerals that have different physical and chemical compositions but with many similar properties. Fibers of the two types most important commercially (serpentine and amphibole) are strong, chemically resistent, essentially fire proof and excellent thermal and electrical insulators. It is not unexpected that the two types of asbestos would have different and similar toxicological properties.

All forms of asbestos are complex silicates with varying combinations of other chemicals. The physical characteristics of the serpentine and amphibole types are distinctly different. Chrysotile is a serpentine asbestos that has soft curly fibers and is the principle product from Canadian mines and the type most frequently used in the United States. Crocidolite and amosite, amphiboles, are the types normally produced in the South African mines and used extensively in Europe and U.S. Navy ships during World War II. These fibers are essentially straight.

HISTORICAL DEVELOPMENTS

The discovery and first use of asbestos has not been established, but probably goes back several hundreds of years. We do know that miracle fabrics made from asbestos fibers were enjoyed by royalty during the Middle Ages. Commercial development was very slow and correlated with the Industrial Revolution and the development of the use of steam and electrical power and the need for insulation. Early in this century additional uses for asbestos were found in textiles, coatings, fillers, filters, brake linings, clutch facings, etc. Workers in the textile, construction, manufacturing, shipbuilding, electrical power and, of course, the asbestos mining, milling and manufacturing industries were in contact with asbestos. The number of workers with potential exposure to asbestos fibers increased with the more wide spread use of the minerals.

The fact that there could be a physiological response in humans to asbestos was not recognized until about the turn of the century. In 1906 Murray reported a case of lung changes in a worker, that he attributed to exposure to asbestos. It was not until the mid 1920's that the word asbestosis was used to describe the pneumoconiosis caused by asbestos exposure. The results of a study

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of asbestos textile workers in England, reported by Merewether et al. in 1930, showed a significant number of cases of asbestosis among workers performing certain tasks. Dust control measures were required for the dusty operations which influenced a subsequent report that asbestosis was a disease of the past because of the favorable results among the asbestos textile workers. Asbestosis latency was not recognized at this time.

During the 1930's and 1940's asbestosis was a rarely reported occupational disease in the United States. However studies were conducted to learn more about the disease. In 1938 Dreessen reported on studies conducted in asbestos textile plants where they found a relationship between exposure to high levels of asbestos dust and abnormal clinical findings. The Dreessen report expressed the opinion that dust exposures below 5,000,000 particles per cubic foot (mppf) of air would probably prevent the development of asbestosis. Later other reports in the medical and scientific literature indicated agreement with the Dreessen opinion. This was reaffirmed by the Flaischer, et al. report of U.S. Navy authorized studies of insulation workers in shipyards during World War II.

The American Conference of Governmental Industrial Hygienists (ACGIH) published its first list of guidelines for occupational exposures in 1946. The level for asbestos was 5 mppcf. It was 1974 before ACGIH adopted a change in the Threshold Limit Value (TLV) for asbestos when it was changed to 5 fibers per cubic centimeter of air (f/cc). The next change, in 1980, reflected the differences in health risks associated with the various forms of the asbestos minerals. The resulting TLV's were 0.2 f/cc for crocidolite, 0.5 f/cc for amosite and 2.0 f/cc for chrysotile and tremolite. The current Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for asbestos is 0.1 f/cc. This has evolved from many proposals and recommendations over the years. Both the TLV and the PEL are exposure limits based on exposures of eight hours per day, five days per week for a working life time without adverse affect on worker health or well being.

A review of the literature reveals that while there was a continuing awareness among occupational health professionals about asbestos and asbestosis, it was not considered to be a high risk for workers. This can be attributed to a number of factors including:

1. the latency period for disease development,
2. the number of asbestos workers was relatively small prior to World War II,
3. the dose received by workers was below the disease threshold,
4. the type of asbestos used in the United States (chrysotile) is less hazardous than the crocidolite and amosite used in England, Europe and by the U.S.Navy.

In my own experience, starting in 1948 with the Tennessee Valley Authority (TVA), a federally owned and operated electric utility

and chemical corporation, using hydroelectric and coal fired steam generating facilities to produce electricity, asbestos was not an exposure of high priority. This was the case with the TVA Occupational Health and Safety Branch and other occupational health groups of industrial users of asbestos products. The construction, operation and maintenance of steam generating plants included the use of tons of insulating materials, including asbestos. TVA had a comprehensive occupational health program for its employees. To my knowledge there has been no evidence of asbestosis even though many of the construction and maintenance workers had been with TVA for more than twenty years. In addition to TVA, my industrial hygiene experience has been in manufacturing, chemicals, petro chemicals and pharmaceuticals. I cannot recall a reported case of asbestos related disease.

ASBESTOSIS AND LUNG CANCER

Prior to the mid to late sixties the scientific and medical literature did not contain convincing evidence that there was a connection between asbestos exposure and lung cancer. To the contrary, studies conducted in this country and in England indicated that asbestosis was the primary concern and that existing conditions and practices were sufficient to protect workers.

Lung cancer among workers exposed to asbestos is rare unless the worker has asbestosis and is a regular cigarette smoker. In 1968 and again in 1976 Dr. Selikoff reported that his studies had not found a significant increase in lung cancer among the non-smoking asbestos workers he had examined.

Other studies failed to detect a significant increase of lung cancer among workers exposed exclusively to chrysotile asbestos.

ASBESTOS AND MESOTHELIOMA

Historically mesothelioma was a more rarely diagnosed disease than asbestosis. In 1960 Wagner reported case histories of mesothelioma among people in South Africa, and an association with known and possible asbestos exposure. In 1990 Wagner reviewed the 1960 data and offered some updates reaffirming the association between asbestos exposure and mesothelioma while stressing that mesotheliomas occur without exposure to asbestos.

In the years following the 1960 Wagner report many scientists have conducted epidemiological studies of varying size groups of people trying to better define the association between asbestos and mesothelioma. By the late 1970's there was general agreement that:

1. some mesothelioma cases were associated with exposure to asbestos,
2. a significant number of mesothelioma cases could not be related to asbestos exposure,
3. a threshold exposure to asbestos must occur prior to development of mesothelioma,

4. quantification of the threshold for asbestos and mesothelioma had not been accurately determined.

Scientific data show that with a substance related disease, i.e. asbestos and mesothelioma, there is an exposure level below which disease will not occur. With an ubiquitous substance like asbestos that threshold must be greater than the ambient concentration level.

ASBESTOS EXPOSURE AND EVALUATION

Evaluation of worker exposure to asbestos is governed by the same industrial hygiene principles as all other workplace stresses. Not only must a cause and effect relationship be established but the dose response levels must be quantitatively determined.

The qualitative cause and effect relationship for inhalation of asbestos and the disease asbestosis was established early in this century. The first dose response level for asbestos was suggested by Dreessen in 1938. This level was accepted by the occupational health professionals for the next 25 to 30 years. In 1968 the administrators of the Walsh-Healy Law published a list of acceptable exposure limits that included asbestos at 12 fibers per cubic centimeter of air (f/cc).

The Occupational Safety and Health Administration (OSHA) has issued several iterations of Permissible Exposure Limits (PEL) for asbestos since 1971. The current OSHA PEL for asbestos is 0.1 f/cc, an extremely low level.

WORKER EXPOSURES TO ASBESTOS

Every disease or condition due to workplace exposure means that the exposure threshold for the chemical, energy source or biological agent has been exceeded for a long enough period of time to cause the disease or condition. Exposure limits are the concentration that is believed, when experienced by workers for eight hours per day, five days a week for a working lifetime, will not result in ill health or cause adverse effects.

For the past thirty years there has been considerable uncertainty as to what the proper exposure limit should be for asbestos. The Selikoff reports did not contribute to the knowledge of what the exposures had been for the insulation workers he studied. The exposure limit of 5 mppcf had seemed to protect most people who worked with asbestos. As the OSHA asbestos standards were promulgated more air sampling was done to establish compliance with the legal requirements. This compliance directed sampling demonstrated that the previous professional judgement that asbestos concentrations had been in compliance with the existing guidelines was correct. The open construction of the refineries, petrochemical plants and other chemical production installations, typical of the south and southwest areas, are conducive to limiting asbestos exposure of insulators, helpers, laborers, bystanders and

others who at times might be in the area where removal or application of insulation was being done.

RESPONSIBILITY FOR WORKER HEALTH AND SAFETY

It has been my experience that the responsibility for conditions in the work place rested with the employer. This included responsibility for protecting the health and well being of employees. The Occupational Safety and Health Act made this the initial requirement of the law. Historically OSHA has defined the employer as the party that signs the worker's pay check.

It is my professional opinion that prior to the late 1960's into the 1970's that there was no reason for premises owners and operators of chemical and petro chemical operations in the South and Southwest to have been concerned about possible asbestos exposures of insulators, much less other crafts that had only bystander exposures.

The opinions expressed here are based on my education and industrial hygiene experience in chemical and petro-chemical plants during the past fifty years.

John A. Pendergrass CIH,CSP,PE
January 8, 1999

J. Leroy Balzer
1052 Wickham Drive
Moraga, California 94556
(510) 376-7897

March 10, 1993

J.LeRoy Balzer - Industrial Hygienist

Qualifications:

I hold a Bachelor of Science degree in Public Health Microbiology and a Master of Science degree in Preventive Medicine/Public Health which were awarded by the University of California at Los Angeles in 1962 and 1963 respectively. I earned the Doctor of Philosophy Degree in Environmental Health Science - Industrial Hygiene from the University of California at Berkeley in 1971. From 1963 to 1965 I worked as an Environmental Health Scientist for the University of California at Berkeley and from 1966 to 1971 I was employed by the University of California School of Public Health as a research associate and research fellow. In 1966 I became involved in a coordinated research program of occupational medicine, industrial hygiene and education of Insulation Contractors and the Western States Conference of Asbestos Workers in the San Francisco bay area and later the thirteen Western United States. This intense study of the construction industry, including petro-chemical and power plants was sponsored through grants from the United States Public Health Service and involved observing the work

environment of the insulators. I performed additional research which included ambient air studies for fibrous materials and also product development in the manufacturing of insulation materials. Along with my PhD and University research, I was an Industrial Hygiene consultant for the firm of Tabershaw-Cooper and Associates. The focus of this work was to study issues associated with the effects of fibrous materials such as asbestos and fiberglass and resulted in more than a dozen peer reviewed publications. From the fall of 1971 until August of 1987 I was employed by Utah International Inc., a natural resources company, as the Director of Environmental Health and Safety and as Director of Market Research. I was a certified Industrial Hygienist from 1973 until 1987 when I became an assistant vice chancellor at the University of California health sciences campus in San Francisco. In this capacity I have lectured in occupational/environmental health and safety in the United States and internationally. I am a member of the American Conference of Governmental Industrial Hygienists, American Industrial Hygiene Association and other professional organizations.

History:

The threshold limit value of five million particles per cubic foot for asbestos was suggested in 1938 and recommended as a standard in 1946 by the American Conference of Governmental Industrial Hygienists . This method counted the particles present and did not differentiate fibers from

particles. A fiber counting method of twelve fibers per cubic centimeter or two million particles per cubic foot was suggested by the same group in 1968. In 1972 the fiber standard of five fibers per cubic centimeter was adopted by the United States Occupational Health and Safety Administration.

Research:

Between 1966 and 1971 I visited most major construction sites in the western United States and found mixed exsposures to asbestos fibers, both amosite and chrysotile. Amosite was the recommended fiber for insulation materials used during World War II and was slowly being replaced by chrysotile fibers during the 1960's. In my studies of insulators and their use of insulation materials containing asbestos, I found that the time-weighted average for asbestos exposures did not exceed the current threshold limit value of five million particles per cubic foot and was below the later 1972 limit of five fibers per cubic centimeter, even when the insulation workers used asbestos 100% of their time. Exposure for other crafts, when in the same area as the insulators, were lower. Remote preparation of products, sequencing of the work and the strict requirement that only insulators do insulation work led to the conclusion that other crafts were not at similar risk. Work out of doors, intermittent use of materials, education, continued industrial hygiene surveys and personal protective equipment contributed further to reducing exposures to

asbestos fibers. Employee mobility and the independent nature of insulating workers required the continued presence of a joint union-management occupational health and safety program. The Tabershaw-Cooper firm concluded that the responsibility for carrying out these programs was the union's and contractor's, and not the premises owner's. Our results were openly discussed and debated with local, national and interrnationally interested parties including management , unions and the insulation manufacturers.

In our role as researchers at the University of California at Berkeley and as managers of the Occupational Health Program of The Western States Asbestos Health Plan we were able to discuss the potential hazards of asbestos use and the need for logical plans to substitute non-asbestos containing insulation materials. The complex nature of perfomance specifications, health issues and engineering requirements led to the development of new experimental non-asbestos containing insulating materials in the late 1960's and early 1970's. I was never influenced or discouraged from being acively involved in this complex process. The occupational health professionals, unions and insulation contractors all demonstrated interest in the health and safety of their employees.