



24 May 2001

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PLAINTIFF'S EXHIBIT

MBL-392

**Re: Charles and Theresa Gillespie vs. Mobil Oil Corp. et al**  
**Summary Report**  
**Evaluation of Asbestos Exposures from "Chimney Dum-Dum"**  
**EPI Project No. 21074**

Dear Mr. Biedrzycki:

The following report summarizes my opinions regarding Charles Gillespie's alleged exposure to respirable asbestos fibers when working with or near Mobil Oil Corporation's "Chimney Dum-Dum" product. I have been an industrial hygienist for more than 24 years. Currently, I am the President of Environmental Profiles, Inc. in Baltimore, Maryland. Formerly, I was with the National Institute for Occupational Safety and Health and led a group of industrial hygienists conducting research for the National Occupational Exposure Survey. As an industrial hygienist for the United States Coast Guard, I conducted thousands of exposure assessments inclusive of a wide range of products, including numerous asbestos-containing materials. My responsibilities also included the management of the occupational medical monitoring program for the 5<sup>th</sup> Coast Guard District. I was President of the Chesapeake Section of the American Industrial Hygiene Association (AIHA) and was a member of the national AIHA Product Health and Safety Committee and the Emergency Response Planning Committee. I have also authored the *Health and Safety Audits Manual*, published by Government Institutes, and the *AIHA Hazard Communication Guide*, published by the AIHA. The American Board of Industrial Hygiene certifies me as an industrial hygienist and the Board of Certified Safety Professionals certifies me as a safety professional.

As a certified industrial hygienist, I rely upon the following basic tools in order to conduct an exposure assessment of personal occupational exposures such as Mr. Gillespie's:

1. a characterization of the workplace;
2. a characterization of the job and tasks, (including frequency and duration of exposures);
3. a characterization of the products;
4. a characterization of the relevant safety and health regulations and the associated exposure limits;

5. an appropriate association of tasks, environment, job descriptions and chemical agents with the individual exposures being evaluated; and
6. use of the accepted air sampling and analytical techniques for occupational exposure to asbestos.

### **Mr. Gillespie's Use of the Mobil Product**

Upon review of Mr. Gillespie's deposition testimony, I have determined that according to Mr. Gillespie, he allegedly installed firebrick with Mobil Chimney Dum-Dum product while working at NL Industries/Dutch Boy Paints. He reports to have installed the Chimney Dum-Dum with a trowel and his hands. The manufacturer's recommended method of application for this material is to spray it on. In addition, Mr. Gillespie states that the Chimney Dum-Dum was sanded following installation. Although the surface of the material forms a somewhat hardened "skin," the material remains pliable underneath this skin, and is not suitable for sanding. At NL Industries/Dutch Boy Paints, Mr. Gillespie was employed as a Maintenance Mechanic in 1977, for a period of between 6-13 months. As a maintenance mechanic, he would rebuild fireboxes used to melt down batteries. The specifications for the Chimney Dum-Dum product indicated that the material was only used in situations where the temperature would not exceed 210°F. Lead (Pb), which is a major component of batteries, melts at a temperature of 620°F. It is unlikely that Mr. Gillespie used the Mobil product he identified for the use he specified.

Mr. Gillespie also testified to working in a variety of other positions where he was exposed to asbestos-containing products. He testified to working around friable asbestos products including pipe covering and cements. "Friable asbestos material" is defined in Appendix C of the EPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M) as any material containing more than 1 percent asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry. He also claimed exposure to asbestos from gaskets, packing, and brake products. It is important to note that the Mobil product allegedly used by Mr. Gillespie was non-friable, and thus was substantially different from the many friable products causally linked with asbestos-related disease. The Mobil product was a non-friable form of an asbestos-containing product. According to the data referenced in this report, the Chimney Dum-Dum allegedly used by Mr. Gillespie was an encapsulated material, which, by design, bound asbestos fibers into a resinated material, along with titanium dioxide and mica used for pigmentation. As a result of the non-friability of this type of product, similar products are currently sold in US commerce. The US Environmental Protection Agency did not ban these products for sale when friable asbestos products were removed from the marketplace.

### **The Mobil Product Was Encapsulated**

The Mobil product, if used at all by Mr. Gillespie, was an encapsulated material, which, by design, bound asbestos fibers into a resinous material, thus eliminating the release of free respirable fibers. According to the data referenced in this report, the surface of this material would "skin" in 4-6 hours, but the under-surface was designed to remain pliable. Further, according to the deposition testimony of a plaintiff in another case, Charles Rassier, the Dum-Dum had an elastic quality so that the material would not crack or break as it heated and cooled. Data reveals that there is no occupational exposure to free asbestos fibers during the application or removal of the Mobil Chimney Dum-Dum product.

OSHA also has investigated the potential for fiber release in conjunction with asbestos-containing materials the same or similar as those previously sold by Mobil. In a correction to its 1994 asbestos regulations, the agency stated that, "[b]ecause the use of most asbestos products has been phased out, the only asbestos-containing products currently being installed on roofs are certain cements, mastics, and coatings. These materials are installed in a liquid or semi-liquid state in which the asbestos fibers are encapsulated in the bituminous or resinous binders used in these products, and new paragraph (g)(11) therefore does not require special work practices to prevent fiber release during installation." Presently, OSHA allows the use of products such as the Mobil product at issue, without implementation of air monitoring or employee medical monitoring.

Based on my professional judgement and a review of available literature, if Mr. Gillespie had used the Dum-Dum product he identified, it would not have presented any airborne asbestos fiber exposure during the course of Mr. Gillespie's workplace activities. Asbestos fibers were encapsulated in the material matrix. Therefore, the release of free respirable asbestos fibers when working with the Dum-Dum product was eliminated due to this encapsulation process.

#### **Mobil Product Warning**

Mobil provided product warnings affixed to each container. Although no free asbestos fibers or asbestos fiber bundles were rendered airborne from the use of this product, the Mobil product warning was more than adequate for providing worker protection from any potential airborne contaminant generated from the product use.

#### **Ambient Levels of Asbestos in the General Environment**

Various researchers have also evaluated the ambient airborne levels of asbestos in our living environments, separate from the workplace. It is evident from the reported results that the airborne asbestos fiber concentrations were dependent upon geographic location. Asbestos fiber concentrations were higher in urban environments, as well as in locations that had geologic asbestos mineral formations. In urban settings researchers have found ambient fiber concentrations of 0.02 f/cc and greater. The measured asbestos fiber levels found when working with the Mobil products were below the measured ambient or background asbestos fiber concentrations.

#### **Historical Occupational Exposure Regulations and Guidelines**

Occupational exposure limits, including the American Conference of Governmental Industrial Hygienists, (ACGIH), Threshold Limit Values, (TLV), changed historically from more than 30 f/cc to today's limit of 0.1 f/cc. The Occupational Safety and Health Administration (OSHA), Permissible Exposure Limits (PEL), also changed from 12 f/cc to 0.1 f/cc. Both the TLV and PEL are based on an eight-hour, time-weighted average. It is clearly evident from my professional experiences that Mr. Gillespie had no exposure to asbestos from any Dum-Dum material. If Mr. Gillespie had been regulated by present day OSHA standards, his employers would not have had to perform any medical surveillance, periodic monitoring, or respiratory protection programs as required by the OSHA Asbestos Standard (29 CFR 1910.1001) based on his work place activities involving the use of the Dum-Dum product alone.

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**Conclusions**

In conclusion, based on the workplace practices of Mr. Gillespie and the data from studies of encapsulated material, the Dum-Dum product could not have released respirable airborne asbestos fibers. It is my opinion that working with or nearby to the Dum-Dum product presented no health risk from the asbestos encapsulated within the products allegedly handled by Mr. Gillespie. The Dum-Dum product was manufactured using materials that effectively encapsulated asbestos fibers. Based on Mr. Gillespie's testimony, it was much more likely that he had significant exposure to airborne asbestos during his workplace activities with or nearby to friable asbestos-containing products. Finally, one cannot distinguish asbestos from non-asbestos fibers in the Mobil product or in any other products, or whether the fibers would have been respirable or encapsulated without the appropriate instrumentation.

My conclusions regarding potential asbestos exposures to workers like Mr. Gillespie during his workplace activities were based on my interviews of persons knowledgeable of standard trade practices, as well as assessments of many similar work place environments. My opinions were also based on exposure assessments I have conducted of similar or the same asbestos-containing products and those of other qualified exposure assessment professionals.

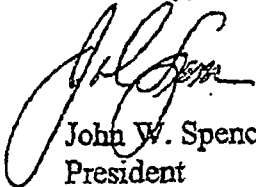
To date the following materials have been reviewed for this case:

1. Various occupational safety and health publications and articles developed by government agencies, professional and trade associations, voluntary consensus standards organizations, and researchers.
2. Code of Federal Regulations, 29 CFR Part 1910 and Part 1926.
3. Federal Register, U.S. Environmental Protection Agency, 40 CFR, Parts 763, Asbestos: Manufacturing, Importation, Processing and Distribution in Commerce Prohibitions; Final Rule; July 12, 1989.
4. American Conference of Governmental Industrial Hygienists, Documentation of Threshold Limit Values, 1946 to present.
5. Plaintiff's Complaint
6. Plaintiff's Answers to Interrogatories
7. Deposition of Charles Gillespie, dated 17 August 1999.
8. Deposition of Charles Gillespie, dated 08 September 1999.
9. Deposition of Charles Gillespie, dated 22 September 1999.
10. Video Deposition of Charles Gillespie, dated 22 September 1999.
11. Deposition of Charles E. Rassier, Volume I, dated 20 June 2000. (in Rassier vs. AP Green Industries, Inc., et al.)
12. Deposition of Charles E. Rassier, Volume III, dated 29 June 2000. (in Rassier vs. AP Green Industries, Inc., et al.)
13. Copy of label of Dum Dum Cement Gray 97-F-36 identified by Plaintiff at his deposition.

14. Expert Report of Harvey B. Spector, dated 14 July 2000.
15. Expert Report of Paul E. Epstein, dated 25 March 2001.
16. Gibbs, G. An Assessment of the Risk of Health Effects Resulting from the Use of Mobil Products Bearing the Name Dum Dum. June 1992.
17. Arthur D. Little, Inc. Evaluation of Asbestos Release from Chimney Weatherproofing Mastic During Application and Removal. August 1991.
18. Balzer, J.L. and Cooper, W.C., "The Work Environment of Insulating Workers," American Industrial Hygiene Association Journal. May-June 1968.
19. Tatum, C.H., "Occupational Exposure Estimates for Workers Compensation," 4 February 1983.
20. California Department of Health Services, Toxic Substances Control Division, Alternative Technology Section. Fact Sheet on Asbestos Handling, Transport and Disposal. March 1989.
21. Pigg, B. J. "The Uses of Chrysotile," Ann. Occup. Hyg. 38(4):453-458. 1994.
22. Department of the Navy, Long Beach Naval Shipyard. Long Beach Naval Shipyard Asbestos Control Manual. NAVSHIPYDLBEACHINST 5100.38A. 21 February 1979.
23. 51 FR 22612. 29 CFR Parts 1910 and 1926 Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules. Friday, June 20, 1986.
24. 59 FR 40964. 29 CFR Parts 1910, 1915, and 1926, Occupational Exposure to Asbestos. Wednesday, August 10, 1994.
25. 60 FR 33973. 29 CFR Parts 1910, 1915, and 1926, Occupational Exposure to Asbestos, Corrections. Thursday, June 29, 1995.
26. OSHA. CPL 2-2.63 (REVISED) - Inspection Procedures for Occupational Exposure to Asbestos Final Rule 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001. November 3, 1995.
27. Wendlick, Joseph D., CIH, Ambient Asbestos Fiber Levels at Selected Sites in Philadelphia, Pennsylvania, November 1984.
28. NIOSH Method 7400, Asbestos and Other Fibers by PCM, NIOSH Manual of Analytical Methods, 4<sup>th</sup> Edition, Issue 2, 15 August 1995.
29. NIOSH Method 7400, Revision No. 3, Issue 2, 8/15/94
30. Crane, Daniel T., Supervisory, Physical Scientist, USDOL, OSHA, Methods Applicability Correspondence for TEM and PCM use in Occupational Measurement, 24 June 1998.
31. NIOSH P&CAM 239, 3/30/77
32. NIOSH Method 7400, 2/15/84
33. NIOSH Method 7400, Revision No. 2, 8/15/87
34. NIOSH Method 7400. Revision No. 3, 5/15/89

This report is based on the information available to me at this time. Should additional information become available, I reserve the right to determine the impact, if any, of the new information on my opinions and conclusions, and to revise my opinions and conclusions if necessary.

Sincerely,



John W. Spencer, CIH, CSP  
President

JWS/sjc