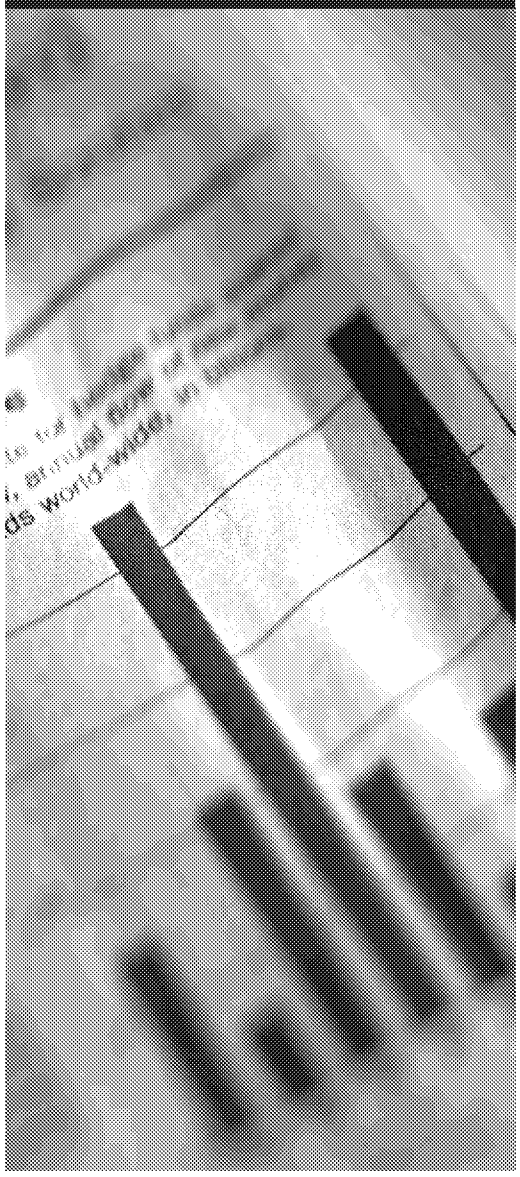
The Shareholder's Right To Know More



E.I. du Pont de Nemours and the Growing Financial Challenges of PFOA

Prepared by Sanford Lewis, Esq.
Strategic Counsel on Accountability
on behalf of
DuPont Shareholders for Fair Value

April 27, 2005

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Chief Executive Officer
E. I. Du Pont De Nemours & Co.
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Mr. Richard Goodmanson
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Dear Sirs,

The following analysis highlights past and present issues regarding disclosure to shareholders associated with PFOA and related compounds at E. I. Du Pont de Nemours & Co. This report shows substantial liability concerns and data gathering within the company long before such issues were disclosed to shareholders.

As you know, the Sarbanes-Oxley Act added to existing SEC disclosure requirements, by clarifying the duty of corporate officers and directors to establish and maintain an adequate internal control structure and procedure for financial reporting, and to certify that financial reports "fairly present" the company.

As our analysis demonstrates, we believe that extensive information could have qualified for earlier disclosure by DuPont management given its relevance to investors' interests; in any event, we believe that more extensive disclosure by DuPont as described in this report is appropriate as these issues proceed forward.

We trust that this document will help to inform and improve DuPont disclosure practices on these matters.

Sincerely,

Sanford Lewis, Esq.
DuPont Shareholders for Fair Value

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THE SHAREHOLDER'S RIGHT TO KNOW MORE

E.I. DU PONT DE NEMOURS & CO AND THE GROWING FINANCIAL CHALLENGES OF PFOA

E. I. Du Pont De Nemours & Co (DuPont) has been accused by the U.S. Environmental Protection Agency (EPA) of failing to disclose information to the EPA regarding potential risks of perfluorooctanoic acid (PFOA) and its salts[1] to health and the environment. The alleged violations consist of multiple failures to report to the EPA "information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment," during a period beginning in June of 1981 through July of 2004. Companies are required by the Toxic Substances Control Act (TSCA) to report such information immediately.

This report has been prepared on behalf of a group of DuPont shareholders concerned with whether, since the company allegedly withheld information from environmental regulators, it may have also withheld important information from shareholders. DuPont Shareholders for Fair Value (DSFV) is an informal group of DuPont shareholders organized by the Paper, Allied-Industrial, Chemical and Energy Workers International Union (PACE) and concerned with proper disclosure and accountability on the issues relative to PFOA. PACE is a DuPont shareholder, and also represents approximately 1,800 DuPont employees in New York, New Jersey, Delaware and Kentucky. DSFV includes PACE (599 shares of DuPont stock), Mr. John D. Kimmerle, the proponent of this resolution and a DuPont employee (1,073 shares of DuPont stock), United Steelworkers of America (26,876 shares of DuPont stock), Sisters of Mercy, Merion Regional Community, Merion, PA (100 shares of DuPont stock) and Green Century Capital Management (85 shares of DuPont stock).

Sanford Lewis, the author of this report, is an attorney and expert on corporate environmental disclosure issues, including requirements for disclosure under the securities laws.[2] His firm, Strategic Counsel on Corporate Accountability, serves in an advisory capacity to investors, nongovernmental organizations and unions concerned with the accountability of corporations on environmental and human rights issues and their financial implications.

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[1] In this document, PFOA and its salts, such as ammonium perfluorooctanoate, are used interchangeably.

[2] The author wishes to acknowledge the assistance of Jonas Kron, Karen Axelrod, Erin Neale, Shawn Gilchrist and April Dreeke in the preparation of this document.

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SUMMARY

The following report identifies a number of issues regarding PFOA which have come to the attention of DuPont management over the last 25 years. Many of these issues have been indicative of the potential for liability and/or market or regulatory risks associated with various DuPont products.

Past Disclosure: Investors Would Have Benefited From Knowing

In our opinion, some of the information that the company allegedly did not disclose to EPA on a timely basis would also have been of material interest to investors. Federal securities laws, including the recently passed Sarbanes-Oxley Act, put a premium on disclosure of material information, and we are concerned that DuPont has not yet provided full disclosure to shareholders on PFOA issues. Although the management reports on litigation in its SEC filings, typically as cases are mid-way, as conditions and evidence have mounted against PFOA, the management has not disclosed the trends and uncertainties that foreshadowed litigation, and regulatory and market risks. Investors would have benefited from knowing, for example, that:

- Studies available to DuPont indicated that workers exposed to PFOA could have heightened cholesterol and risk of stroke. In addition, workers at the Washington Works DuPont site in Parkersburg, West Virginia, a facility at which PFOA is used as a processing agent in the production of Teflon®, were found in DuPont's own studies to have higher than normal levels of leukemia, rheumatic heart disease, atherosclerosis and aneurysm, though the company reportedly did not gather the data needed to assess whether there is a link to PFOA exposure.[3]

- Testing done on behalf of DuPont beginning in the 1980's showed elevated levels of PFOA in drinking water of communities near its Washington Works facility. In February 2005, a class action lawsuit settlement was approved by a court. The suit resulted from the public's exposure to PFOA in water. The settlement will cost the company $108 million initially, with potential for hundreds of millions in additional liability dependent on an independent panel's evaluations of the potential health impacts of the PFOA exposures. See further discussion below.

- Testing of workers and community residents at the Washington Works facility showed heightened levels of PFOA in their blood.

- Concerns were expressed by DuPont legal counsel and others, as early as 1984, about the course being taken regarding the management of PFOA issues, and the liability and reputational costs facing the company as a result.

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[3] Reported in EPA Draft Risk Assessment, January 2005, p. 16, citing DuPont 2003 Epidemiology surveillance report: Cancer incidence for Washington works site 1959-2001 US EPA AR226-1307

ED_002330_00132799-00004

As the above information has come to light within DuPont, it was not generally shared with investors in annual or quarterly reports or periodic (8-K) updates. The Supreme Court has defined the threshold of materiality of disclosure as whether the information in question is something which a reasonable investor would want to know given the total mix of information available.[4] In light of this definition, it seems likely that more information was material than was disclosed. Investors need to be informed about emerging trends early enough to make their own judgments and take responsive action. Waiting until the lawsuits are filed is too late.

In our opinion, had investors known these facts earlier, they may have differently evaluated the value of company stock, and the propriety of decisions being made by the management during this time period. Such information would have changed the mix of information available to investors, and:

- cast in a different light the decision of DuPont management to begin production of PFOA's ammonium salt, ammonium perfluorooctanoate (APFO) when the leading supplier, 3M, decided to end PFOA production;

- allowed shareholders to anticipate the likelihood of future EPA enforcement actions and liability lawsuits;

- enabled shareholders to anticipate the increasingly hostile market and regulatory climate that DuPont PFOA-based products face today.

In our opinion, had investors known these facts earlier, they may have differently evaluated the value of company stock, and the propriety of decisions being made by the management during this time period.

Current and Future Disclosures: An Ever-expanding Need to Know

In addition to the past issues, certain issues present ongoing concerns that merit better disclosures.

- Regulatory risks. Government agencies around the world have begun to scrutinize the toxicity and persistence of PFOA, with an eye toward potential restrictions on the use of this chemical. The ban of three perfluorinated compounds by Canada's environmental agency in December of 2004 represents the first government restriction on these DuPont product lines – and it is realistic to anticipate that more may follow. Better disclosure of the emerging trends as they may affect DuPont markets worldwide is appropriate. In the event that PFOA is restricted or that markets migrate away from the use of products made with or that break down into PFOA, the impact could be substantial. Analysts at JP Morgan have estimated that DuPont's PFOA-related product lines, fluoropolymers and telomers products, contributed about $1.23 billion to 2003 sales and $100 million to profit.

[4] TSC Industries, Inc. v. Northway, Inc. 426 US 438 (1976). A disclosure is material if there is a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the total mix of information available.

ED_002330_00132799-00005

DuPont's earnings in 2003 were $973 million on revenue of $27 billion.

- Market risks. Environmental organizations such as the Environmental Working Group have called for consumers to avoid DuPont products which involve PFOA in production or as breakdown products. DuPont has not disclosed the existence of this growing consumer education effort or its current or anticipated impact on sales.

- Other DuPont facilities. Though litigation has forced the issue of disclosure at DuPont's Washington Works facility, investors are currently ill-informed regarding the extent to which additional emissions, water contamination, blood levels, or other potential lawsuits may await regarding the several other DuPont facilities where PFOA is produced or used.

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Overview of Shareholder Rights to Fair Disclosure

Discussion and analysis of trends and uncertainties. The management discussion and analysis (MD&A) that accompanies financial reports is a narrative discussion which is required to identify and analyze trends, demands, commitments, events and uncertainties that could materially impact a company's liquidity, financial condition or operating results. According to SEC guidelines issued December 29, 2003, an item should be disclosed in the MD&A unless the management has concluded that such item cannot reasonably impose a material impact on the company.

Sarbanes-Oxley Act. The Sarbanes-Oxley Act Section 302 requires a certification by an issuer's principal executive officer or officers, and principal financial officer or officers, or persons performing similar functions. The certification, as adopted by the SEC, states that the financial disclosure **fairly presents**, in all material respects, the company's financial condition, results of operations and cash flows:

> "based on such officer's knowledge, the financial statements, and other financial information included in the report, fairly present in all material respects the financial condition and results of operations of the issuer as of, and for, the periods presented in the report…"

The purpose of this requirement in the Sarbanes-Oxley Act was to ensure that companies do not use loopholes in existing SEC, FASB and AICPA guidelines to avoid disclosure of items of substantial concern to investors. According to the SEC rule implementing the certification requirement, among the items to be examined in determining whether information has been fairly presented are the financial statements (including footnote disclosure), selected financial data, management's discussion and analysis of financial condition and results of operations and other financial information in a report. Certification of Disclosure in Companies' Quarterly and Annual Reports, *67 FR 57276 at 57279*

Sarbanes-Oxley Act Section 404 clarifies the responsibility of management for establishing and maintaining an adequate internal control structure and procedure for financial reporting.

SEC Rule 10b-5. SEC Rule 10b-5 provides that "It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange…
b. To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading… in connection with the purchase or sale of any security.

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BACKGROUND

What PFOA is used for

PFOA (perfluorooctanoic acid) is a surfactant, a water-soluble chemical that can emulsify oils or liquids in water, suspend small particles in water or act as a wetting agent. APFO (sometimes referred to as C-8) is the ammonium salt of PFOA and the chemical form used in fluoropolymer manufacturing. In this document, we will refer to PFOA so as to include interchangeably the salts (APFO and C-8) as well as its other formulations.

PFOA is used to help make fluoropolymers **and fluoroelastomers**. **Fluoropolymers** are used in architectural fabrics; chemical processing piping and vessels; automotive fuel systems; telecommunications and electronic wiring insulation; and computer chip processing equipment and systems, and consumer products such as cookware and apparel.[5] PFOA is used as a processing aid in the manufacture of fluoropolymers for use in non-stick surfaces such as Teflon coated cookware.

Fluoroelastomers are synthetic, rubber-like materials used in gaskets, O-rings and hoses. Some types of fluoropolymers can withstand a wide range of high temperatures, others are extremely flame-resistant and anti-corrosive, and some have important non-stick properties.[6]

Fluorotelomer derivatives (telomers) are a family of compounds used as ingredients in making firefighting foams and coatings. They are also intermediates used to manufacture stain-, oil- and water-resistant additives for some textiles, paper, coatings and other surfaces.[7] DuPont manufactures fluorinated telomers used in soil, stain and grease repellants for the paper, apparel, upholstery and carpet industries (such as Gore-Tex clothing and STAINMASTER carpets).[8]

The degradation of telomers (fluorinated polymers) could also present a source of PFOA. Telomers are not made using PFOA; however, some data indicate that certain telomers may break down or degrade to form PFOA in the environment[9] (i.e. PFOA is an unintended reaction byproduct in some telomer-based products), and may be metabolized

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[5] What is PFOA? From Dupont website online: **http://www1.dupont.com/dupontglobal/corp/documents/US/en_US/news/releases/pdf/WhatisPFOA.pdf**

[6] What is PFOA? From pfoa-facts.com website online: **http://www.pfoa-facts.com/whatispfoa.html**

[7] What is PFOA? From Dupont website online: **http://www1.dupont.com/dupontglobal/corp/documents/US/en_US/news/releases/pdf/WhatisPFOA.pdf**

[8] Dupont: EPA Investigation and Legal Actions Related to PFOA" (US Equity Research, J.P. Morgan Securities, Inc.)

[9] A 2004 study by University of Toronto confirmed that Telomer alcohols degrade into PFOA through oxidation. Dinglasan, Mary J. A., Yun Ye, Elizabeth A. Edwards and Scott A. Mabury. 2004. "Fluorotelomer Alcohol Biodegradation Yields Poly- and Perfluorinated Acids." Environmental Science and Technology 38(10):2857-2863.

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to form PFOA by organisms. [10]

Summary of PFOA Health/Environmental Issues

PFOA has come under increasing scrutiny by government and non-governmental experts due to recognition of its persistence in the environment and in living organisms, including humans. The chemical has been detected by DuPont in the environment around DuPont facilities, and in the blood of DuPont workers and neighbors. Toxicity testing has indicated that the substance causes an array of health problems in animals, ranging from birth defects, to various cancers, to immune system damage. The issues identified in animals have caused concern for toxicology experts that some or all of these types of impacts are likely to also occur in humans. Furthermore, some studies have indicated that workers exposed to PFOA had heightened cancers, cerebrovascular disease (stroke) as well as increased cholesterol. Workers at the Washington Works facility in Parkersburg, West Virginia were found in DuPont studies to have higher than normal levels of leukemia, rheumatic heart disease, atherosclerosis and aneurysm, though the company reportedly did not gather the data needed to assess the relationship of these illnesses to PFOA exposure.

DuPont has had sufficient concern about these issues to monitor the levels of PFOA in workers' blood and in drinking water supplies near its Washington Works facility. Internal to the company, concerns were expressed about liability and reputation impacts at least as early as 1984. However, the company's disclosure of these issues despite the internal concern and tracking was minimal, until litigation has forced the issue, led to disclosure of the internal memoranda revealing the company's ongoing concerns and data gathering, and led the EPA to pursue the company for its lack of disclosure of these emerging issues to that agency.

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[10] Lange, Cleston C. Ph.D. November 6, 2002. "Biodegradation Screen Study for Telomer-Type Alcohols." http://www.ewg.org/reports/pfcworld/pdf/sludge_full.pdf; Lange, Cleston C. Ph.D. November 02, 2000. "The Aerobic Biodegradation of N-EtFOSE Alcohol by the Microbial Activity Present in Municipal Wastewater Treatment Sludge." http://www.ewg.org/reports/pfcworld/pdf/226-1030a078.pdf; 1981 A 3M study found fluorinated telomers fed to lab rats metabolized into PFOA. It was published in the journal Analytical Biochemistry. Referenced in: Biddle, Fred and Jennifer Goldblatt. 'Dupont's troubled chemical C-8 is widespread in the environment. How did it get there, and should we be worried?" The Delaware News Journal February 23, 2003.

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ANALYSIS OF INVESTOR DISCLOSURE ISSUES

A failure to disclose mounting scientific concerns

Scientific concerns have grown regarding persistence and toxicity of PFOA over the last twenty years. These concerns have included recognition of the extreme persistence of PFOA in the environment and in the human population, and evidence showing an array of toxicity issues in humans and animals exposed to PFOA. See Appendix A for an in-depth summary of the toxicity evidence by the Environmental Working Group.

As noted earlier, SEC rules require that a company report in its MD&A on trends, events and uncertainties that may reasonably pose material impacts on a company. At some point in time, the mounting evidence of concerns regarding product lines that are as central to a company as Teflon® and other PFOA-related products are in the DuPont product base could be expected to trigger either of those rules. To the extent that emerging studies warning of potential product hazards are reasonably likely to portend substantial liability suits, regulatory restrictions or consumer abandonment of product lines, the duty to disclose could be triggered. Internally, the company actually discussed the potential liability and reputational impact associated with these matters at least as early as 1984. However, it did not commence SEC disclosure until it was actually sued over alleged public exposures to PFOA.

Internally, the company discussed the potential liability and reputational impact associated with these matters at least as early as 1984. However, it did not commence SEC disclosure until it was actually sued over alleged public exposures to PFOA.

A second type of obligation to disclose exists where a company's existing statements would be misleading without providing further clarification or stating other facts. An example is the DuPont management statement regarding human health impacts – "Based on over fifty years of industry experience and extensive scientific study, DuPont believes there are no known human health effects caused by PFOA." Such a statement may be misleading if such a "belief" is ill-founded, or if it needs to be placed in context to be properly understood (e.g. existing studies on humans and animals demonstrating significant concerns for health).

Persistence

PFOA is proving to be widely distributed, in humans and the environment. It is a persistent chemical which does not break down. Based on 3M testing, it can be estimated that PFOA may be present in the bodies of more than 95% of Americans.[11] It

[11] Olsen GW, Burris JM, Lundberg JK, Hansen KJ, Mandel JH, Zobel LR. Final Report: Identification of fluorochemicals in human sera. III. Pediatric participants in a group A streptococci clinical trial investigation. AR226-1085. Washington, DC: U.S. Environmental Protection Agency.
Olsen GW, Burris JM, Lundberg JK, Hansen KJ, Mandel JH, Zobel LR. Final Report: Identification of fluorochemicals in human sera. I. American Red Cross Adult Blood Donors. AR226-1083. Washington, DC: U.S. Environmental Protection Agency.

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has been found in environmental testing, even in remote regions such as the Arctic.[12] Two years of research by a team lead by University of Toronto chemist Tim Marbury documented the presence of PFOA, and its relatives, in the arctic air and animals.[13]

As issues have mounted regarding the persistence of PFOA in the environment, the management of DuPont has not flagged this issue in investor reports. The persistence of fluoropolymers caused competitor and PFOA supplier 3M to exit fluoropolymer chemistry in 2000. In May 2000, 3M announced it was phasing out the use of perfluorooctanyl chemistry. "Our decision anticipates increasing attention to the appropriate use and management of persistent materials," said Dr. Charles Reich, executive vice president, Specialty Material Markets. The precautionary response was to phase out the chemical. "…Our decision to phase out production is based on our principles of responsible environmental management."[14]

As issues have mounted regarding the persistence of PFOA in the environment, the management of DuPont has not flagged this issue in investor reports.

Without explaining how and why it was bypassing the precautionary approach of 3M, DuPont proceeded to build its own PFOA production capacity in 2002. The company never disclosed to investors that it was bucking an important public policy trend – toward the phase-out of substances like PFOA that are persistent and show warning signs of toxicity.

Health impact

The company reports in its 10-K for 2004 (March 2005) that:

> Based on over fifty years of industry experience and extensive scientific study, DuPont believes there are no known human health effects caused by PFOA. However, DuPont respects the EPA's position raising questions about exposure routes and the potential toxicity of PFOA and is undertaking voluntary programs concerning PFOA and fluorinated telomers.

Prior to 2002, the company did not even mention the persistence and toxicity issues associated with PFOA in its shareholder reports. Among the data which DuPont management had been aware of, but did not disclose in its annual and quarterly reports to

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Olsen GW, Burris JM, Lundberg JK, Hansen KJ, Mandel JH, Zobel LR. Final Report: Identification of fluorochemicals in human sera. II. Elderly participants of the adult changes in thought study, Seattle, WA. AR226-1084. Washington, DC: U.S. Environmental Protection Agency.

[12] Environmental Working Group (EWG). 2003. PFCs: A chemical family that contaminates the planet. Available online at http://www.ewg.org/reports/pfcworld/

[13] Rebecca Renner, Tracking the Dirty Byproducts of A World Trying to Stay Clean, Science Magazine Vol. 306 p. 1887 (December 10, 2004) and Canada bans fluoropolymer stain repellents, Environmental Science and Technology (December 15, 2004).

[14] 3M press release, May 16, 2000.

ED_002330_00132799-00011

investors were:

• Various studies in which workers exposed to PFOA had higher than normal levels of cholesterol -- a risk factor for heart attack and stroke – and higher levels of stroke (cerebrovascular disease).[15] Workers at the Washington Works facility also were found in DuPont studies to have higher than normal levels of leukemia, rheumatic heart disease, atherosclerosis and aneurysm, though the company reportedly did not gather the data needed to assess the relationship to PFOA exposure. [16]

• Studies reporting birth defects in the eyes of rat fetuses exposed to PFOA.[17]

• Studies showing blood sampling of pregnant DuPont employees indicating PFOA in their blood and in an umbilical cord (showing exposure of the fetus). [18]

• Sampling results determining that PFOA was reaching the public water supply in communities in the vicinity of the Washington Works facility where Teflon® is manufactured.[19] Water tests were conducted in Little Hocking, Ohio and Lubeck, West Virginia. In March, 1984 a DuPont sponsored test of a well in Lubeck showed levels at 1.5 ppb. In June of 1987, additional testing at Lubeck showed levels at 1.9 ppb. Four years later in 1991 the company found Lubeck levels at 3.9 ppb. None of these test results were provided to the municipalities at the time of the tests even though the company had an internal community exposure guideline for drinking water of 1 ppb during this

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[15] Alexander, B. 2001. Mortality study of workers employed at the 3M Cottage Grove Facility. Final Report. Division of Environmental and Occupational Health, School of Public Health, University of Minnesota. AR 226-1136. Washington, DC: U.S. Environmental Protection Agency.
Olsen GW, Burlew MM, Burris JM, Mandel JH. 2001a. A cross-sectional analysis of serum perfluorooctanesulfonate (PFOS) and perfluorooctanoate (PFOA) in relation to clinical chemistry, thyroid hormone, hematology and urinalysis results from male and female employee participants of the 2000 Antwerp and Decatur fluorochemical medical surveillance program. Final report. 3M medical department.
Olsen GW, Burlew MM, Burris JM, Mandel JH. 2001b. A longitudinal analysis of serum perfluorooctanesulfonate (PFOS) and perfluorooctanoate (PFOA) in relation to lipid and hepatic clinical chemistry test results from male employee participants of the 1994/95, 1997, and 2000 fluorochemical medical surveillance program. 3M final report.

[15] E.I. Du Pont De Nemours. 2005. DuPont Reports First-Phase Results of Health Study Examining PFOA Exposure. News Release, January 11. Available online at: http://www1.dupont.com/NASApp/dupontglobal/corp/index.jsp?page=/content/US/en_US/news/releases/2005/nr01_11_05a.html.

[16] Reported in EPA Draft Risk Assessment, January 2005, p. 16, citing DuPont 2003 Epidemiology surveillance report: Cancer incidence for Washington works site 1959-2001 US EPA AR226-1307

[17] Studies conducted by 3M, provided to DuPont in 1981.

[18] Dupont Internal Memoranda, 1981.

[19] DuPont records, various dates in the 1980's and 1990's.

ED_002330_00132799-00012

period.[20] Today, the wells in the nearby city of Little Hocking, Ohio are contaminated with PFOA at levels exceeding 18 ppb, and the community's water supplier has taken one of its four production wells offline because of high PFOA levels.[21]

• Human serum sampling of twelve members of the general population living near the Washington Works facility showing levels of PFOA in those individuals higher than in the general population.[22] In a study conducted through DuPont and its contractor Exygen dated July 29, 2004, DuPont learned of high levels of PFOA in serum from 12 people living near the company's Washington Works facility. The study shows that on average, Teflon chemical serum levels in this group — all of whom had consumed tap water contaminated with the Teflon chemical from DuPont's Washington Works operations and only one of whom had ever worked at the facility — are 12 times higher than levels measured previously from among the general population (67.5 ppb versus 5.6 ppb). DuPont found PFOA in one-quarter of the people tested at levels higher than have ever before been measured in the U.S. general population. The three highest levels were found in the serum of men and women who had consumed local tap water for more than 20 years.[23]

Instead of disclosing to investors a summary of the array of data mounting against PFOA, the management states its believe that PFOA does not harm human health but says that it "respects the EPA position" investigating the health issues related to the substance. The EPA is in the process of assessing the impact of PFOA on human health. In 2002 and 2005, the EPA published draft risk assessments which noted:

- exposure to PFOA caused liver, testicular and pancreatic cancer in animals, and those effects might occur in people.
- animal studies showing weight loss and developmental effects including low birth weight from PFOA exposure.
- PFOA targets the liver, with half of a given dose remaining in the human body for an average of 4.4 years.

DuPont management maintains that it believes that PFOA does not harm human health. However, it does not disclose the array of scientific findings mounting against PFOA.

The EPA, however, did not reach any firm conclusions and stated that its intention in releasing the Draft Assessment was to seek scientific peer review from an outside panel of scientific experts as it revises the Assessment.[24]

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[20] Note that acceptable exposure criteria have evolved. A drinking water guideline of 150 ppb was established by West Virginia after input from DuPont. By contrast, Minnesota officials set a level of 7 ppb.

[21] Little Hocking Water Association, Inc. January 2005 Supplemental Notice of Contamination.
[22] Exygen Research, Analysis of PFOA in Human Serum Sampling, prepared for DuPont, 2004.

[23] Letter from Kenneth A. Cook, President, Environmental Working Group to Michael Leavitt, Administrator, U.S. Environmental Protection Agency (November 17, 2004) (Citations omitted).
[24] EPA PFOA Homepage online: http://www.epa.gov/opptintr/pfoa/pfoainfo.htm

ED_002330_00132799-00013

DuPont disclosed the existence of the EPA risk assessment. For instance, the 2004 DuPont 10K states in part that:

> In 2003, the EPA issued a preliminary risk assessment on PFOA. It indicates potential exposure of the U.S. general population to PFOA at very low levels and states that there could be a potential risk of developmental and other effects associated with PFOA exposure. The EPA states that there remains considerable scientific uncertainty regarding potential risks associated with PFOA. However, the EPA has said that it does not believe there is any reason for consumers to stop using any consumer or industrial-related products because of questions about PFOA.

Such a statement, however, does not fairly reflect the range of scientific concern about PFOA. Although the EPA has not yet concluded that PFOA-related products should be removed from consumer and industrial uses, the EPA's draft assessment apparently suffered from a very narrow characterization of the available science. The nonprofit environmental watchdog, the Environmental Working Group (EWG) has been following this issue closely. On February 22, 2005, scientists with the EWG provided the EPA's Science Advisory Panel with a critique of the EPA's January 2005 Draft PFOA risk assessment. Specifically, the EWG identified information that it believes was omitted or erroneously dismissed by the EPA.[25]

EWG says that more than 10 percent of all women exceed a 1 in 1000 excess lifetime cancer risk from their exposures to PFOA, and nearly 7 percent of all women exceed a safe dose for ovarian effects.

EWG calculates that:

- More than **10 percent of all women exceed a 1 in 1000 excess lifetime cancer risk from their exposures to PFOA**, and nearly **7 percent of all women exceed a safe dose for ovarian effects.**
- **At least 143 million people are exposed to PFOA in excess of reference concentration (safe dose) levels.**[26]
- **The majority of the female population is above the 1 in 100,000 risk for mammary tumors and the majority of those occupationally exposed are above the 1 in 10,000 risk for both leydig cell and pancreatic acinar cell tumors.**

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[25] Timothy Kropp, Ph.D., and Jane Houlihan, M.S., Evaluating Human Health Risks from Exposure to Perfluorooctanoic Acid (PFOA):Recommendations to the Science Advisory Board's PFOA Review Panel, Environmental Working Group, February 22, 2005.

[26] The EWG calculation is based on a benchmark dose (BMD) approach for assessing non-cancer risks (in accordance with recent applications and guidance from the EPA and the National Academy of Sciences and in keeping with the methodology used by 3M in its evaluation of PFOA).

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- A **large number of women are at a high risk (1 in 1,000) of mammary tumors. These estimates imply that 1,238 of the 216,000 breast cancers diagnosed in 2004 may be attributable to PFOA exposure.**[27]

The DuPont approach based on a company "belief" in its product safety poorly informs investors of the depth of challenges facing the company on this issue – a litany of toxicity issues facing DuPont's PFOA-related product lines. In our opinion, more complete and less misleading disclosure of the array of concerns mounting around PFOA is warranted.

Characterization of the TSCA Case

The EPA Charges of Failure to Disclose[28]

EPA's Office of Enforcement and Compliance Assurance (OECA) has filed an administrative action against DuPont alleging multiple violations of the Toxic Substances Control Act (TSCA) and the Resource Conservation and Recovery Act (RCRA). The allegation was made by the EPA under section 8(e) of the Toxic Substances Control Act which states that:

> "Any person who manufactures (includes imports), processes or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment shall immediately inform the (EPA) Administrator of such information unless such person has actual knowledge that the (EPA) Administrator has been adequately informed of such information."

EPA has the authority to seek a penalty of $25,000 per day for violations occurring before January 30, 1997, and up to $27,500 per day for violations occurring thereafter, for each day that DuPont failed to report the information. DuPont denies that it had a duty to disclose the information in question. Because of the penalties provided by law, the total penalty could be in the hundreds of millions of dollars.

Specifically, EPA allegations include accusations that the following information was not reported as required by law:

- In 1981, the 3M Company, DuPont's supplier of PFOA, advised DuPont about the potential for PFOA to cause birth defects in rats. Specifically, 3M advised DuPont that researchers observed what appeared to be treatment related damage to the eye lenses of some rat pups.

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[27] These EWG calculations are based on an ED10 approach for assessing cancer risks (in accordance with recent applications and guidance from the EPA and the National Academy of Sciences) .

[28] EPA Press Advisory: EPA Takes Enforcement Action Against DuPont For Toxic Substances Reporting Violations, (July 8, 2004); In the Matter of E.I. du Pont de Nemours and Company, Complaint and Notice of Opportunity for Hearing (December 6, 2004)

ED_002330_00132799-00015

- ∞ In 1981, the company observed PFOA in blood samples taken from pregnant workers at the Washington Works facility and at least one woman had transferred the chemical to her fetus.
- ∞ DuPont detected the chemical in public water supplies as early as the mid-1980s in West Virginia and Ohio communities in the vicinity of the Washington Works facility. By 1991, DuPont had information that the chemical was in water supplies at a greater level than the company's exposure guidelines indicated would cause no effect to members of the community.
- ∞ In 2004, DuPont had data concerning human serum sampling of twelve members of the general population living near the Washington Works facility after it had obtained this information from its contractor, Exygen. The study shows that on average, Teflon chemical serum levels in this group — all of whom had consumed tap water contaminated with the Teflon chemical from DuPont's Washington Works operations and only one of whom had ever worked at the facility — were 12 times higher than levels measured previously from the general population (67 ppb versus 5 ppb).[29]

DuPont's characterization of the EPA TSCA Case

In the course of its discussion of the EPA TSCA enforcement proceeding in its 10K for 2004, DuPont states that:

> The EPA's allegations are about **administrative reporting and not about the safety of products that use PFOA in their manufacture.** (emphasis added)

Thus, the management characterizes the Toxic Substances Control Act violations as mere "administrative" or paperwork violations. It is true that the violations involved the alleged failure of DuPont to submit ***documents*** to the Environmental Protection Agency. However, the section 8(e) obligation is far from simply an administrative paperwork type of violation. The purpose of Section 8(e) is to allow the Environmental Protection Agency to track emerging toxicity information for the purposes of determining appropriate levels of regulation or even a prohibition of the use of chemicals. The failure to disclose this information therefore could interfere with the agency's key regulatory obligations under the Toxic Substances Control Act, namely the duty to regulate, and if necessary prohibit, a substance that may be causing harm to health or the environment. **It is a serious alleged violation, not one that should be discounted as "administrative."**

A Culture of Concealment?

Several indicators suggest a DuPont corporate culture that leans toward cover up, rather than disclosure, of bad news, because of the company's concern about public perception.

[29] Letter from Kenneth A. Cook, President, Environmental Working Group to Michael Leavitt, Administrator, U.S. Environmental Protection Agency (November 17, 2004) (Citations omitted).

ED_002330_00132799-00016

According to an article in Chief Executive magazine, CEO Chad Holliday receives "sometimes daily reports from his public relations staff that track media coverage including C-8-related developments." [30]

According to the same article in Chief Executive magazine, former employees pointed to signs of a corporate culture that downplayed environmental issues.

> Ronnie Murray worked [at the Washington Works plant] 30 years before retiring in 1997, most of that time with a unit that managed the plant's water, waste and power. Murray recalls seeing dead fish and a crust on the river where DuPont discharged waste. But when called to the attention of supervisors, he said, such findings were often shrugged off. Records of spills were recorded in pencil, not pen, he and other workers said. "DuPont will go to any extent to protect their public image," says Murray. Jimmy Carder, who spent 17 years working with Teflon, says if there was an accident or spill, the first thought was to "cover it up," adding, "everyone knew the drill."

Gerald Kennedy, a DuPont toxicologist, was found by the Wood County court hearing on the Parkersburg water pollution case to have destroyed documents relating to the investigation of the water contamination. DuPont acknowledges that Kennedy destroyed email and other materials, but says they were not substantive. [31]

DuPont corporate executives quietly considered a plan in 1984 to eliminate air and water releases of PFOA after the company tests found contaminated tap water in two communities near the West Virginia plant that used the compound to make Teflon. But instead of adopting a plan to stop off-plant pollution at its Teflon factory, estimated at 37,000 pounds per year in 1984, DuPont proceeded to more than double it, to 86,806 pounds per year in 1999. According to an internal company memorandum dated May 23, 1984, and marked "Personal & Confidential," DuPont staff had concluded that the chemical "is moderately toxic" and "has an estimated biological half life of two years in human blood." Gerald Kennedy Seniior toxicologist on PFOA was in attendance.

> "There was a consensus reached that the issue which will decide future action is one of corporate image, and corporate liability… Liability was further defined as the incremental liability from this point on if we do nothing as we are already liable for the past 32 years of operation. Corporate image discussion centered around the perceived diligence versus our policies if we elected to stop work…"

The memo summarized a May 22, 1984 meeting of at least eleven DuPont staff in Wilmington, Delaware, the company's corporate headquarters. According to the memo:

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[30] Amy Cortese, DuPont's Teflon dilemma: how Chad Holliday, the champion of sustainability, is managing an environmental challenge; Chief Executive, November 1, 2003.
[31] Cortese, Id.

ED_002330_00132799-00017

> "Looking ahead, legal and medical will most likely take a position of total elimination. They have no incentive to take any other position. The product group will take a position that the business cannot afford it. The end result, in my opinion, will be that we eliminate all C-8 emissions at our manufacturing sites in a way yet to be developed which does not economically penalize the business, and addresses the C-8 emission and exposures of our dispersion customers."[32]

The memorandum then reads:

> "Some information which we just developed 5/21/84 is that detectible [sic] levels of C-8 are in both the Lubeck, W.V. and the Little Hocking, Ohio water systems. We should have more quantitative numbers in the next two weeks."[33]

The test results were allegedly kept secret from the two communities and state regulators for nearly two decades, as well as from investors. EPA was never voluntarily informed by DuPont of the tap water contamination or the company's internal debate about eliminating all C-8 emissions. Instead, the information came to light and was submitted to EPA as a result of discovery in litigation brought by people allegedly exposed to PFOA contamination.

We believe that much of the information discussed in this report could have qualified for earlier disclosure by DuPont management given its relevance to investors' interests.

In 1999 local West Virginia farmers Della and Wilbur Tennant sued DuPont after witnessing hundreds of their cows die after drinking from the creek near DuPont's Washington Works plant. DuPont settled with the Tennant family for an undisclosed amount in 2001. Part of the agreement was a gag order, by which the Tennants or the lawyers are required not to discuss the amount of the settlement or disclose any research the lawyers obtained. During the suit, DuPont tried unsuccessfully to impose a restraining order on the Tennants' lawyer to prevent him from discussing PFOA, citing the damage that might be done if it were to reach the media.[34]

Today the company and its investors are beginning to pay the price of its approach to PFOA. The EPA has accused the company of inappropriately concealing the information from them; investors also should ask whether they were owed more disclosure – and whether a culture of greater transparency would better serve their long term investment needs.

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[32] DuPont Memo, From J.A. Schmid to T.M. Kemp and T.L. Shrenk, CC: R.E. Putnam, May 23, 1984, C-8 Meeting Summary 5/22/84 – Wilmington.
http://www.ewg.org/issues_content/PFCs/20030813/pdf/dupont_elim_PFOA_1984.pdf
[33] DuPont Memo, Id.
[34] Amy Cortese, DuPont's Teflon dilemma: how Chad Holliday, the champion of sustainability, is managing an environmental challenge; Chief Executive, November 1, 2003, citing court documents.

ED_002330_00132799-00018

Assessing DuPont's PFOA Management Strategy

The strategy chosen by DuPont management of sticking with PFOA chemistry, and of continuing to emit PFOA to the environment, has run contrary to other businesses as well as internal counsel.

In May 2000, 3M announced it was phasing out the use of perfluorooctanyl chemistry. "Our decision anticipates increasing attention to the appropriate use and management of persistent materials," said Dr. Charles Reich, executive vice president, Specialty Material Markets. The precautionary response was to phase out the chemical. "…Our decision to phase out production is based on our principles of responsible environmental management."[35]

In contrast to 3M, which stopped producing PFOA, DuPont decided to **commence** production of PFOA – despite the evidence that had persuaded 3M to move away from it. DuPont company spent $23 million to build a new PFOA production building to expand its Fayetteville plant[36] – setting aside the concerns that caused 3M to move out of these product lines.

The contamination of the environment in the use of PFOA had caused severe internal concerns at DuPont. DuPont lawyer John R. Bowman wrote in an internal memo of November 2000 regarding PFOA emissions, in unsuccessfully urging a more proactive response, that:

- "We are going to spend millions to defend these lawsuits and have the additional threat of punitive damages hanging over our head."

- "Our story is not a good one, we continued to increase our emissions into the river in spite of internal commitments to reduce or eliminate the release of this chemical into the environment because of our concern about the biopersistence of this chemical."

Today, however, the concerns have begun to catch up with DuPont. In February 2005, the management announced that it would move to reduce, but not eliminate, its use of PFOA – reflecting a new understanding that this is a real issue:

- PFOA will be 90% replaced in Teflon coatings and other paint-like formulations by the end of 2006. Those uses represent 15% of the use of PFOA. No plans were announced to eliminate PFOA in other areas such as wire coatings.

> *The company's handling of the PFOA issue "presents concerns about systemic problems at management level."*
>
> - Heather Langsner
> Innovest Strategic
> Value Advisors

[35] 3M press release, May 16, 2000.

[36] Nomee Landis, Company officials say process is safe; Fayetteville Observer, March 9, 2003.

ED_002330_00132799-00019

• Some form of reformulation is planned for fluorotelomers but no further details on DuPont's plans with fluorotelomers were made available. Fluorotelomers are used to make fabrics stain resistant and in fast-food packaging and textile products.[37]

Investors could reasonably wonder what has been the cost of the DuPont strategy of lingering in PFOA chemistry after 3M has exited. What are the projected future costs, such as liability, lobbying, and market share?

Some financial analysts have also started to raise questions regarding the management's approach. For instance, financial analyst Heather Langsner, of Innovest Strategic Value Advisors has noted that the company's handling of the PFOA issue "presents concerns about systemic problems at management level." Her firm, Innovest Strategic Advisors, has downgraded DuPont from AAA in 2002 to BB in 2005, in part because of its handling of PFOA issues.[38]

What is happening at other DuPont sites?

The course of litigation in Parkersburg has led to many of the disclosures of information the company has regarding PFOA and the Washington Works site. In the absence of parallel litigation at other sites, there has been no disclosure in SEC reports regarding the extent to which other sites within the company are having releases of PFOA. Has other testing been done of drinking water supplies or human blood samples around other DuPont facilities using PFOA? Does DuPont sell PFOA or telomers to other companies where worker exposure could lead to tort suits against DuPont by exposed neighbors or employees?

Facility Location	Usage or Production of PFOA or Products Containing PFOA	Any Public Disclosures Regarding PFOA Releases and Human Exposures?
Fayetteville, NC	Production	Voluntary employee blood monitoring is underway
Parkersburg, WV	Usage; production of telomers	Extensive disclosure from litigation
Deepwater, NJ	Treatment of waste and discharge; production of	18,500 pounds of PFOA discharged to water in 1999

[37] Delaware News Journal, March 15, 2005.

[38] "EPA PFOA Assessment Raises Questions," Chemical Week, January 19, 2005.

ED_002330_00132799-00020

	telomers	(DuPont Voluntary disclosure to USEPA)
Parlin, NJ	Usage	?
Richmond, VA (Spruance Plant)	Usage	?

Market and Regulatory Risks

Regulatory risks

Although no bans have been put into effect in the US pending the outcome of the EPA risk assessment, the Environmental Working Group is actively campaigning for the EPA to require the phase-out of PFOA and industrial chemicals that break down into PFOA.

PFOA and related compounds are not faring as well elsewhere. The company does not mention in its March 2005 Management Discussion and Analysis that one major market, Canada, has already banned three fluoropolymer stain repellents for two years as of December, 2004. Canada's environmental protection agency banned three fluorinated polymers used as stain repellents. The 2-year ban, which can be made permanent (or lifted, if new information exonerates the chemical) was initiated in the summer of 2004.[39] John Arseneau, director general of Environment Canada's risk assessment directorate in Ottawa says "Ours is a preventative program. In the face of emerging science, a growing body of data, and uncertainty about what these chemicals mean to the environment, we judged that it is time to take action."[40]

In the absence of parallel litigation at other sites, there has been no disclosure in SEC reports regarding the extent to which other sites within the company are having releases of PFOA.

In October 2004, the UK proposed a regulatory phase-out of the related compound, perfluorooctane sulfonate (PFOS),.[41]

Government scrutiny of PFOA with an eye toward potential restrictions has gone beyond the U.S. EPA risk assessment to include other markets including Europe and Australia. Various European countries and Australia are collecting data on PFOA and the related compound, PFOS due to concerns regarding health and the environment. Australia's chemical regulator, National Industrial Chemicals Notification and Assessment Scheme (NICNAS), has

[39] Environ. Sci. Technol. 2002, 36, 146A–152A

[40] Rebecca Renner, Canada bans fluoropolymer stain repellents, Environmental Science and Technology – Policy News(Dec. 15, 2004) online http://pubs.acs.org/subscribe/journals/esthag-w/2004/dec/policy/rr_canada.html

[41] UK DEFRA, press release, October 19, 2004. http://www.defra.gov.uk/news/2004/041019a.htm

ED_002330_00132799-00021

included information-gathering on telomers as well.[42]

The Organisation for Economic Co-operation and Development (OECD) is an intergovernmental organization with representatives of 30 industrialized countries. As a result of assessments of PFOA conducted by the United States and the United Kingdom, the OECD has begun to collect data of its own on PFOA.[43]

By only mentioning the U.S. reassessment process in its SEC filings, the company fails to give investors a fair presentation of the extent of regulatory risk, worldwide, that the company's PFOA-related product lines face.

Market Risk

Another trend which the DuPont management should disclose is the extent of adverse publicity and consumer education which may affect its products sales. The Environmental Working Group (EWG), a national organization, is spearheading a grassroots education campaign against DuPont products containing PFOA. From November 2002 to present, at least 183 news stories have appeared in U.S. newspapers and wires mentioning EWG and Teflon® or PFOA. Most of these articles highlighted the risks allegedly associated with DuPont products. Coverage has included national media outlets such as the Washington Post, New York Times and Investor's Business Daily as well as local and regional press.

The Environmental Working Group has urged consumers to:

- Phase out the use of Teflon and other non-stick cookware.
- Decline optional treatments for stain and dirt resistance when purchasing furniture or carpet
- Avoid buying clothing that bears a Teflon label or other indication that it has been coated for water, stain, or dirt repellency.
- Minimize packaged food and greasy fast foods.
- Avoid buying cosmetics and other personal care products with the phrase "fluoro" or "perfluoro" on the ingredient list. (possibly in lotions, pressed powders, nail

EWG has called for a phaseout of PFOA products. It has also asked the CEOs of fast food corporations Burger King, KFC, Krispy Kreme, McDonald's, Pizza Hut, Taco Bell, Starbucks, Subway and Wendy's to disclose the use of the fluorinated telomers — which can break down into perfluorooctanoic acid (PFOA).

[42] National Industrial Chemicals Notification and Assessment Scheme (NICNAS). June 3, 2003. Call for Information on Use of Perfluorooctanoic Acid and its Derivatives. *Chemical Gazette,* Commonwealth of Australia. No. C6. Available online: http://www.nicnas.gov.au/publications/gazette/pdf/2003jun_whole.pdf

[43] Environment Directorate OECD, Results of Survey on Production and Use of PFOS, PFAS and PFOA, Related Substances and Products/Mixtures Containing These Substances, Paris 2004 (http://www.olis.oecd.org/olis/2005doc.nsf/43bb6130e5e86e5fc12569fa005d004c/9dccc1c0ae173bbdc1256f88005917c6/$FILE/JT00176885.PDF)

ED_002330_00132799-00022

polish, and shaving cream)[44]

The EWG has also asked the CEOs of nine major fast food corporations to disclose the use of the fluorinated telomers — which can break down into perfluorooctanoic acid (PFOA). "We are writing you to request information that the chemical industry is unable or unwilling to provide, in the hope that your answers will give your customers knowledge of, and confidence in, the safety of your products," EWG president Ken Cook wrote in his letters to the CEOs of Burger King, KFC, Krispy Kreme, McDonald's, Pizza Hut, Taco Bell, Starbucks, Subway and Wendy's.[45]

DuPont has not discussed these initiatives in its SEC filings, nor the impact that have had or may be anticipated to have.

Potential Impact on Product Lines

In the event that PFOA is restricted through regulation, or in the event that markets migrate away from the use of products made with PFOA, or that break down into PFOA, the impact on DuPont could be substantial. Analysts at JP Morgan have estimated that DuPont's PFOA-related product lines, fluoropolymers and telomers products, contributed about $1.23 billion to 2003 sales and $100 million to profit. DuPont's earnings in 2003 were $973 million on revenue of $27 billion.

DuPont's Disclosure Response was Similar with Benlate, which has Cost the Company in Excess of $1.9 Billion

In 1991, DuPont began receiving claims by growers that use of Benlate® 50 DF fungicide had caused crop damage, as well as claims of other personal injuries and property damages.

The Company wrote in its 10-K report in 1993:

> "DuPont believes that "Benlate" DF 50 fungicide did not cause the alleged damages. DuPont had earlier paid claims based on the belief that, at the time, "Benlate" DF 50 would be found to be a contributor to the reported plant damage. In 1992, after eighteen months of extensive research, DuPont scientists concluded that "Benlate" DF 50 was not responsible for plant damage reports received since March 1991. Concurrent with these research findings, DuPont stopped paying claims relating to those reports." [46]
>
> **"Based on our science, we are convinced that our product did not cause any damage and that it is safe when applied at label rates."** [47]

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[44] Part 10: Recommendations for Action on PFCs. From PFCs: A family of chemicals that contaminate the planet (March 2003). Available online at the Environmental Working Group website, at the following URL: http://www.ewg.org/reports/pfcworld/part10.php

[45] July 10, 2003, EWG press release.

[46] Form 10-K, filed with SEC, for the year ended December 31, 1993, page 11

[47] Form 10-K, filed with SEC, for the year ended December 31, 1993, Annual Report to security holders, page 5.

ED_002330_00132799-00023

Shareholders reviewing the company's Benlate® disclosures, and the costly liabilities resulting from Benlate®, **alleged in a securities fraud class action that DuPont made false and misleading statements and omissions about Benlate® 50 DF, with the effect of inflating the price of DuPont's stock between June 19, 1993 and January 27, 1995.** DuPont settled the suit for $77.5 million in 2003.

While DuPont has asserted that it does not believe that Benlate ® caused any damages nor that it has committed securities fraud, **the company reports in its 10K report for 2004 that the Benlate® issue has so far cost the company over $1.9 billion to fight or settle the array of Benlate related cases, including the torts as well as the securities fraud cases.**

DuPont also denied that Benlate® caused any harm. The Benlate® issue has so far cost the company over $1.9 billion to fight or settle tort and securities fraud cases.

The West Virginia settlement illustrates liabilities are significant and were underestimated by the company.

Since at least 1984, DuPont knew that PFOA was being discharged from its Washington Works facility. The company conducted, but did not at the time publicly disclose, testing of drinking water supplies in the communities near the facility showing elevated levels of PFOA.

In 2001, after learning of the contamination, a class action lawsuit was filed by local residents over releases from the Washington Works facility. Today, the court-approved settlement on behalf of 80,000 people includes PFOA water treatment facilities for area communities and creation of a DuPont-funded independent expert panel to conduct a community study to assist it in evaluating whether there is a probable link between PFOA exposure and any human disease. The settlement calls for cash payments and expenditures of over $100 million.

DuPont could also be required to spend an additional $235 million for a medical monitoring program for area residents if the expert panel finds a link between PFOA exposure and disease. In that event, residents would also retain their rights to pursue personal injury suits against the company.

For most of the pendency of the Washington Works tort litigation the management noted in SEC filings that because "DuPont does not believe that its use of PFOA has caused... any deleterious health effects, the company has not established a reserve related to ... the lawsuit." So far settling the case has cost the company $108 million, with potential for hundreds of millions more.

Although the WV class action lawsuit was filed in 2001, for most of the period that it was pending, DuPont did not establish a reserve. Instead, for most of the pendency of the

ED_002330_00132799-00024

litigation the management noted in SEC filings that because "DuPont does not believe that its use of PFOA has caused... any deleterious health effects, the company has not established a reserve related to ... the lawsuit." Only two months prior to the settlement of the case, in July 2004, the company finally established a $45 million reserve for the case. Then in September 2004, when the case was settled, DuPont set aside $108M, reflecting the actual initial amount of the settlement.

CONCLUSION

According to the SEC's published guidance, when in doubt, the balance should tip towards disclosure in financial reports, and discussion in the Management Discussion & Analysis (MD&A) section of a company's 10-K, unless management can objectively determine that each fact or circumstance that it chooses not to disclose to shareholders is either not reasonably likely to occur or is unlikely to have a material effect on the registrant's operations.[48]

We believe that much of the information discussed in this report could have qualified for earlier disclosure by DuPont management given its relevance to investors' interests; in any event, more extensive disclosure by DuPont as described in this report is appropriate as these issues proceed forward.

[48] See SEC Releases #48960, "Commission Guidance Regarding MD&A of Financial Conditions and Results of Operations" (2003), and #6835 "MD&A of Financial Condition and Results of Operations: Certain Investment Company Disclosures" (1989).

ED_002330_00132799-00025

APPENDIX - Toxicity Risks

Excerpts from PFCs: A Family of Chemicals that Contaminate the Planet: Part 4. Full document available online at Environmental Working Group website http://www.ewg.org/reports/pfcworld/part4.php

In a rat reproduction study sponsored by 3M in 2002, study scientists exposed rats to PFOA in utero through early adulthood, and found damage to organs in animals exposed to the lowest doses tested. Offspring were smaller at birth, and adult female rats exposed in utero decreased *[2]*.

At the lowest dose tested, with levels of PFOA in the maternal blood of approximately 40 parts per billion (ppb), the offspring were smaller at birth and the adult female rats exposed in utero (F1 generation females) decreased body weight gain at certain times in young adulthood *[2]* At three of four doses tested, beginning with maternal blood at approximately 120 ppb, the adult F1 generation female rats had decreased growth of the pituitary gland *[2]*

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When the adult F1 female rats gave birth to their own babies (called the F2 generation), a greater number of the F2 pups were "found dead or presumed cannibalized" *[2]* This suggests that maternal care could have been altered, perhaps by damage to the pituitary gland. Alternatively, the F1 mothers may have ignored or cannibalized pups because the F2 offspring were not healthy.

At higher doses in the rat reproduction study, corresponding to 1 part per million (ppm) PFOA in maternal blood, seven of 60 male and six of 60 female offspring died .

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EPA classifies PFOA as carcinogenic in animals, causing testicular, pancreatic, mammary and liver tumors in rats *[3]*.

Workers exposed to PFOA have elevated risks of dying from or seeking treatment for cancers of the pancreas and male reproductive tract, including those of the testis and prostate. Testicular, breast, and liver cancer have been increasing in the US during the past 10 to 25 years. Liver cancer alone has increased an estimated average 4.7% a year between 1992 and 1999 *[4]*.

Five studies have shown that PFOA alters reproductive hormones in the male [rats], causing increased levels of estrogen and abnormal testosterone regulation *[5-9]* Increased levels of estrogen have been found in exposed workers *[10, 11]*.

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Eleven studies show that PFOA or chemicals that break down into PFOA damage the thyroid gland. In 2002, monkeys exposed to PFOA for one month developed an underactive thyroid, a condition called hypothyroidism.

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Four organs or tissues in the immune system and at least nine types of cells that regulate immune function are targets of PFOA *[34-37]*. Thus far, scientists have failed to find a dose of PFOA that does *not* damage the immune system.

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Cancer.

The federal government considers PFOA to be carcinogenic — causing liver, pancreatic, testicular, and mammary gland tumors in rats *[3]* [p. 6]. Three of these four cancers have been increasing in the US population in recent years. Breast cancer strikes one in eight women. The incidence of testicular cancer has risen in certain parts of the world during the last several decades and is now the most common type of cancer in men aged 15 to 35 *[12]*.

In two-year cancer studies sponsored by 3M and DuPont, none of the 80 rats in the "control group" developed testicular or pancreatic tumors; in contrast, these tumors were found in eight of 76 (11%) exposed to PFOA *[3, 9 pg. 75]*. In a two-year cancer study conducted by 3M, PFOA doubled the incidence of mammary tumors in exposed laboratory animals *[13]*.

3M has seen problems with these kinds of cancers among their workers as well. In various studies of their workers' health, 3M reported increased rates of dying or seeking care for prostate cancer, testicular cancer, and pancreatic cancer or disease *[14-16]*. These worker studies typically involve so few people that the increases are often considered to be statistically weak. Nevertheless, the consistency of cancers among workers and in laboratory studies is striking. While a cause and effect link between human cancers and PFOA exposures has not been established, the increases in these cancers, combined with ubiquitous PFOA contamination in human blood is cause for concern.

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Worker studies show increased rates of developing and dying of certain cancers.

3M workers exposed to high levels of fluorochemicals like PFOA appear to be at higher risks for cancers of the male reproductive system *[14, 15]*. Mortality studies of 3M workers at the Cottage Grove, MN plant found that Chemical Division workers with ten or more years of employment were 3.3 times more likely to die of prostate cancer compared to workers who did not work in PFOA production *[14]*. In two other studies, one conducted in Cottage Grove, MN and the other at a 3M plant in Decatur, Alabama, 3M found that exposed workers had elevated risk for dying of prostate cancer or visiting the doctor for reasons associated with having prostate cancer *[15, 16]*. While prostate cancer is fairly common among older men — one in 5 or 6 will develop the disease — only about one in 30 will die from prostate cancer and 50% of men with prostate cancer will die after the age of 79 *[4]*. 3M chose not to study cancer incidence among workers, but instead studied cause of death. The average age of death in men working in the chemical division of 3M was 54.2 years *[14]*.

While these two studies did not report statistically elevated risk like Gilliland et al. did, the findings are consistent across the worker studies and also with animal studies showing that the prostate is a target organ of PFOA *[2]*. Workers in the two 3M plants are also more likely to die or seek treatment for pancreatic cancer or disease and any type of male reproductive tract cancer, which includes testicular and prostate cancer *[15, 16]*. Neither pancreatic or testicular cancers are as common in men as prostate cancer, and the likelihood of dying from these diseases is not high: the lifetime risk for dying of pancreatic cancer is about one in 87, and for testicular cancer about 1 in 5000 *[4]*. Again, 3M studied cause of death and not disease incidence. Because dying from these types of cancer is not common, it is all the more troubling that increased risks were noted for these diseases. If PFOA is causing these effects in workers, a much larger study than the studies conducted by 3M would be needed to find statistically significant effects. Nevertheless, the patterns of disease are remarkably consistent with animal studies.

All of the worker studies conducted by 3M and DuPont have significant flaws that prevent conclusive interpretation of study results. The flaws in the worker studies would tend to obscure the ability of scientists to discern exposure-driven health effects, making the many findings of health harms in various worker studies particularly compelling. For example, in some studies 3M classified workers into exposed or unexposed categories based on job occupation to see if there were differences in diseases between these

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workers *[14-16, 19]*. Yet, in 1996, authors of a study partially sponsored by 3M concluded that PFOA contamination among all workers was so ubiquitous that job history could not be used as a measure for exposure:

> *We expected the group of workers who were selected for the unexposed group based on job history to have total serum fluorine levels similar to the general population. However, we found that this group of workers was not unexposed, having levels 20-50 times higher than levels reported for the general population. We concluded that job history was not an accurate metric for exposure.*

Hypothyroidism.

In eleven studies conducted between 1978 and 2002, scientists have documented damage to the thyroid gland following exposure to PFOA and chemicals that break down into PFOA, in monkeys and other animals *[13, 20-26]*. The damage includes cellular effects on the thyroid and hypothyroidism, a condition characterized by low levels of thyroid hormones that control growth and metabolism and that are critical for proper brain development.

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In a 1998 study at the Cottage Grove, MN plant, 3M found evidence of altered thyroid hormone regulation in workers. Medical staff measured significant increases in thyroid stimulating hormone (TSH) in workers with higher PFOA blood levels *[10, 11]*

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Industry scientists found a trend towards decreased thyroid hormone levels in every group of PFOA-exposed animals in a 2002 monkey study, *[20]* and increased cellular damage in the thyroids of rats exposed to chemicals that break down into PFOA *[20-26]*.

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Three new studies show that compounds that break down into PFOA in the body also target the thyroid. Although detailed study information is claimed as CBI (Confidential Business Information) and redacted from the public record *[23]* , presentations made by DuPont to the EPA indicate that the thyroid was a target for all of the fluorinated telomers tested, including those known to break down into PFOA *[25]* . DuPont interpreted these effects as "non-adverse physiological responses," but under their claim of "CBI" privilege provided no information on the specific types of effects seen *[23]*.

***

Immune system problems.

In laboratory studies PFOA causes toxicity to four organs or tissues in the immune system and at least nine types of cells that regulate immune function *[2, 33, 37]*. PFOA has long been known to damage the immune system, but in the most recent study scientists learned that exposures to PFOA early in life are more harmful than in adulthood. In this study scientists failed to find a dose that did not damage the immune system. The spleen and thymus, both critical to immune function, were atrophied among animals exposed in the womb and through early adulthood; spleen atrophy occurred at the lowest dose tested.

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Reproductive problems, birth defects.

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PFOA is more toxic to fetuses and infants than to adult animals. For example, PFOA causes death in young rats at doses that do not affect survival in the parents.

Much of the EPA's concern for PFOA stems from the results of a 2002 rat reproduction study paid for by 3M *[2]*. In this study, adult rats were dosed with PFOA prior to mating, during mating and pregnancy, and throughout lactation until their offspring are weaned at about 3 weeks of life. The offspring were further dosed with PFOA and allowed to breed. In this way, the EPA can see whether PFOA decreases fertility, as well as decide if PFOA exposure early in life causes developmental toxicity.

The rat reproduction study showed was that PFOA is more toxic to young animals *[2]*. Rats exposed to PFOA in the womb often died at weaning in the highest dose group even though mortality was not affected in adult rats at any dose level. Also, a greater number of organs were affected by PFOA in adult male rats exposed in utero at the lowest PFOA dose compared with adult male rats not exposed during fetal life.

***

DuPont tested for and found PFOA in the blood of female plant workers in the Washington Works facility. The company followed and documented pregnancy outcomes in exposed workers. Two of seven children born to female plant workers between 1979 and 1981 had birth defects, one an "unconfirmed" eye and tear duct defect, and one a nostril and eye defect. In 1981 fifty women were reassigned in the plant.

In addition to causing testicular tumors, PFOA causes many other effects on the male reproductive system, including increased size of the testes, epididymides and seminal vesicles*[2]*, and decreased prostate in rats *[2, 6]*. In the female, PFOA causes mammary tumors and cellular effects on the ovary *[13]*.

Beginning in 1992, DuPont scientists began to publish papers addressing how PFOA causes testicular tumors and other harmful effects on the male reproductive tract (they have not studied mammary gland and ovarian effects). First, they found that PFOA increases blood levels of estradiol (the major form of estrogen in humans and rodents) in male rats. They also found that PFOA affects testosterone regulation, tending to decrease blood levels of testosterone and alter the production of testosterone in testicular cells*[5]*, effects that are likely due to a "lesion at the level of the testes" *[10]*.

A follow-up study published by DuPont scientists in 1995 showed that PFOA increases levels of estrogen by increasing activity of liver aromatase, an enzyme that converts testosterone to estradiol *[5]*. Biegel et al. also found that PFOA increased testicular levels of a protein produced in high levels by cancer cells called transforming growth factor-alpha (TGFa) *[5]*. While DuPont scientists have not studied female rats as often as male rats, other studies have shown that estradiol stimulates excess release of TFG-a in mammary cells.

Because high levels of estrogen are a risk factor for the type of testicular tumor caused by PFOA, EPA suggested that the induction of Leydig cell tumors, a type of testicular tumor, by PFOA may be endocrine mediated, possibly by sustained elevation of estrogen *[6]*.

Increased estradiol and decreased testosterone have been found in highly exposed 3M workers at a plant that produced PFOA in Cottage Grove, MN. *[10, 11]*. Three studies in two 3M plants have confirmed that exposed workers appear more likely to die or seek treatment for cancers of the male reproductive tract *[14-16]*.

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5/22/84

cc. R. E. PUTNAM

PERSONAL & CONFIDENTIAL

TO: T. M. KEMP
T. L. SCHRENK

FROM: J. A. SCHMID

C-8 MEETING SUMMARY
5/22/84 - WILMINGTON

THE REVIEW WAS HELD WITH BESPERKA, BENNETT, RIDDICK, GLEASON, HEGENBARTH, SERENBETZ, RAINES, KENNEDY, VON SCHRILTZ, AND INGALLS IN ATTENDENCE. COPIES OF THE CHARTS USED ARE ATTACHED.

THERE WAS A CONSENSUS THAT C-8, BASED ON ALL THE INFORMATION AVAILABLE FROM WITHIN THE COMPANY AND FROM 3M, DOES NOT POSE A HERLTH HAZARD AT LOW LEVEL CHRONIC EXPOSURE.

THERE WAS AGREEMENT THAT A DEPARTMENTAL POSITION NEEDED TO BE DEVELOPED CONCERNING THE CONTINUATION OF WORK DIRECTED AT ELIMINATION OF C-8 EXPOSURES OFF PLANT AS WELL AS TO OUR CUSTOMERS AND THE COMMUNITIES IN WHICH THEY OPERATE.

THERE WAS CONSENSUS REACHED THAT THE ISSUE WHICH WILL DECIDE FUTURE ACTION IS ONE OF CORPORATE IMAGE, AND CORPORATE LIABILITY. LIABILITY WAS FURTHER DEFINED AS THE INCREMENTAL LIABILITY FROM THIS POINT ON IF WE DO NOTHING AS WE ARE ALREADY LIABLE FOR THE PAST 30 YEARS OF OPERATION. CORPORATE IMAGE DISCUSSION CENTERED AROUND THE PERCEIVED DILIGENCE VERSUS OUR POLICIES IF WE ELECTED TO STOP WORK.

CURRENTLY, NONE OF THE OPTIONS DEVELOPED ARE, FROM A FINE POWDER BUSSINESS STANDPOINT, ECONOMICALY ATTRACTIVE AND WOULD ESSENTIALLY PUT THE LONG TERM VIABILITY OF THIS BUSSINESS SEGMENT ON THE LINE. FROM A BROADER CORPORATE VIEWPOINT THE COSTS ARE SMALL.

THE BASIS FOR A DECISION AT THIS POINT IS SUBJECTIVE AND IS MADE MORE DIFFICULT BY OUR CURRENT UNDERSTANDING OF TECHNOLOGY AND COST, AND THE IMPACT ON THE FINE POWDER BUSSINESS. IT'S NOT AN EASY AND OBVIOUS DICISION AS FOR EXAMPLE TSSA WAS.

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LOOKING AHEAD, LEGAL AND MEDICAL WILL MOST LIKELY TAKE A POSITION OF TOTAL ELIMINATION. THEY HAVE NO INCENTIVE TO TAKE ANY OTHER POSITION. THE PRODUCT GROUP WILL TAKE A POSITION THAT THE BUSSINESS CANNOT AFFORD IT. THE END RESULT, IN MY OPPINON, WILL BE THAT WE ELIMINATE ALL C-8 EMMISIONS AT OUR MANUFACTURING SITES IN A WAY YET TO BE DEVELOPED WHICH DOES NOT ECONOMICALLY PENALIZE THE BUSSINESS, AND ADDRESSES THE C-8 EMISSION AND EXPOSURES OF OUR DISPERSION CUSTOMERS.

SOME INFORMATION WHICH WE JUST DEVELOPED 5/21/84 IS THAT DETECTIBLE LEVELS OF C-8 ARE IN BOTH THE LUBECK, W.V. AND THE LITTLE HOCKING, OHIO WATER SYSTEMS. WE SHOULD HAVE QUANTITATIVE NUMBERS IN THE NEXT TWO WEEKS. ALSO WITH THE DEVELOPMENT OF OUR CURRENT FINE POWDER EXPANSION PLAN, WHICH TAKES CAPACITY UP TO 8.2 MMAP, THROUGH A COMBINATION OF EQUIPMENT AND RECIPE CHANGES. C-8 AIR EMMISIONS WILL RISE FROM FROM THE CURRENT 12,000 LBS./YR. TO 25,200 LBS./YR.. THE INCREASE FOR THE COMBINED DIVISIONS WILL INCREASE FROM A CURRENT 16,000 TO 25,200 LBS./YR. OR A NET 9,200 LBS. DUE TO A 4,000 LB. OFFSET WITH THE IMPLEMENTATION OF THE TBSA PROGRAM. THIS WILL INCREASE FURTHER WITH THE INSTALLATION OF THE THIRD DRYER (10MMAP FINE POWDER) TO ABOUT 37,000 LBS./YR..

C-8 WILL NOW BECOME A MAJOR ISSUE ON ALL FURTHER PROJECT WORK IN THE FINE POWDER AREA, STARTING WITH THE WILMINGTON SCOPE REVIEW 6/29/84. IN PREPERATION FOR THAT REVIEW I HAVE REQUESTED THE ESD GROUND LEVEL CONCENTRATION STUDY BE REDONE USING THE NEW PRODUCTION VOLUMES AND RECIPE (45% SOLIDS). ALSO WE HAVE INCLUDED IN THE DRAFT SCOPE OF WORK A NEW SMALL EXHAUST SYSTEM IN THE FRONT END OF THE DRYER BED TO TRY TO CATCH MOST OF THE C-8 IN A MUCH LOWER VOLUME AIR STREAM. THE PROJECT WILL PUT THIS STREAM TO THE EXHAUST STACK. THE INTENT IS TO FIRST REDUCE IN PLANT EXPOSURE, AND SECOND LEAVE A FUTURE CAPABILITY FOR TREATMENT OF THIS RELATIVELY CONCENTRATED STREAM.

I BELIEVE WE NEED TO SIT BACK DOWN WITH THE NEW INFORMATION WE NOW HAVE, AND THE FEEDBACK WE HAVE GOTTEN FROM THESE MEETINGS AND JOINTLY WITH PUTNAM REVIEW OUR PLANT POSITION. RAINES AT ONE POINT HAD REJECTED REDUCTION AS AN OPTION. THIS NEEDS TO BE INCLUDED IN OUR THINKING AGAIN.

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~~PERSONAL & CONFIDENTIAL~~

~~C-8 BLOOD SAMPLING RESULTS~~

Births and Pregnancies

Current PPM C-8 in Blood (April 1981)	Status
0.45	Normal child - born June 1980. Transferred out of Fluorocarbons 4/79.
0.28	Normal child - born April 1981.
0.078	Normal child - born April 1981. Umbilical cord blood 0.055 ppm.
1.5	~~Five months pregnant~~. On pregnancy leave
0.013	~~Five months pregnant~~. Normal child - born August 1
2.5*	Child - 2 plus years. Unconfirmed eye and tear duct defect.
0.048	Child - 4 months. One nostril and eye defect. Babies blood 0.012ppm
2.007	Normal child - born July 1981

*Current blood level - in fluorocarbons area only one month before pregnancy.

Internal DuPont Documents on C8

John R Bowman
11/09/2000 05:04 PM

To: Thomas L Sager/AE/DuPont@DuPont, Martha L Rees/AE/DuPont@DuPont
cc: Bernard J Reilly/AE/DuPont@DuPont
Subject: Lubeck-Dawn Jackson note

In view of the interest the letter is getting I think we need to make more of an effort to get the business to look into what we can do to get the Lubeck community a clean source of water or filter the C-8 out of the water. I spent a good bit of time over the past two days talking to an in house lawyer from Exxon and Chris Gibson from Archer and Greiner about their experience in defending MTBE water contamination suits. They both told me that experience has told them it is less expensive and better to remediate or find clean drinking water for the plaintiffs than fight these suits. I think we are more vulnerable than the MTBE defendants because many states have adopted a drinking water guideline for MTBE and it is not biopersistent. My gut tells me the biopersistence issue will kill us because of an overwhelming public attitude that anything biopersistent is harmful.

We are going to spend millions to defend these lawsuits and have the additional threat of punitive damages hanging over our head. Getting out in front and acting responsibly can undercut and reduce the potential for punitives. Bernie and I have been unsuccessful in even engaging the clients in any meaningful discussion of the subject. Our story is not a good one, we continued to increase our emissions into the river in spite of internal commitments to reduce or eliminate the release of this chemical into the community and the environment because of our concern about the biopersistence of this chemical.

2pp **3M** News AR 226 - 0641

FOR IMMEDIATE RELEASE

3M Phasing Out Some of its Specialty Materials

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ST. PAUL, Minnesota – May 16, 2000 – 3M today announced it is phasing out of the perfluorooctanyl chemistry used to produce certain repellents and surfactant products.

The affected product lines represent about two percent of 3M's nearly $16 billion in annual sales. These include many Scotchgard products, such as soil, oil and water repellent products; coatings used for oil and grease resistance on paper packaging; fire-fighting foams; and specialty components for other products. 3M said it plans to substantially phase out production by the end of the year and will work with customers to accomplish a smooth transition. "Our decision anticipates increasing attention to the appropriate use and management of persistent materials," said Dr. Charles Reich, executive vice president, Specialty Material Markets. "While this chemistry has been used effectively for more than 40 years and our products are safe, our decision to phase out production is based on our principles of responsible environmental management."

"We're reallocating resources to accelerate innovation in more sustainable opportunities and technologies. This decision is not only in the public interest, it's in the best interests of all our constituencies … our employees, customers, communities and investors," Reich said.

Sophisticated testing capabilities – some developed in only the last few years – show that this persistent compound, like other materials in the environment, can be detected broadly at extremely low levels in the environment and in people. All existing scientific knowledge indicates that the presence of these materials at these very low levels does not pose a human health or environmental risk. 3M expects to meet consensus earnings estimates for the rest of 2000. This excludes a one-time charge on the order of $200 million, that will be taken sometime this year.

"Our growth engines are more powerful than ever and we're confident in our ability to continue delivering on expectations," said L.D. DeSimone, chairman and CEO. "Many of our new technology platforms directly address the fastest-growing segments of the new economy such as electronics, telecommunications and flat-panel displays." "We expect the positive momentum in our financial performance to continue into 2001 with earnings somewhat above current analyst estimates," DeSimone said.

3M is a leading manufacturer of innovative products for industrial, consumer, trans-portation, safety, health care and other markets, with operations in more than 60 countries worldwide. The company is well known for its "Pollution Prevention Pays" environmental initiative, and its emission reduction programs including water-based replacement of solvents in manufacturing and replacements for ozone-depleting chlorofluorocarbons (CFCs).

Forward-Looking Statements Certain portions of this news release that do not relate to historical financial information constitute forward-looking statements. These forward-looking statements are subject to certain risks and uncertainties. Actual future results and trends may differ materially from historical results or those expected depending on a variety of factors, including: (1) worldwide economic conditions; (2) foreign exchange rates and fluctuations in those rates; (3) the timing and acceptance of new product offerings; (4) raw materials, including shortages and increases in the costs of key raw materials; and (5) legal proceedings.

Scotchgard is a trademark of 3M company.

Contain NO CBI

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