

**EXPORTING PRECAUTION:
HOW EUROPE'S RISK-FREE REGULATORY AGENDA
THREATENS AMERICAN FREE ENTERPRISE**

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Institute for Trade, Standards and Sustainable Development, Inc.

Commentary by

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FOREWORD

By
The Honorable James C. Greenwood
Biotechnology Industry Organization

The idea of precaution is integral to responsible business practices and serves as a foundation for most contemporary health and environmental regulation. The activities of risk assessment and risk management are inherently precautionary in nature and in situations where science cannot yet provide a full or appropriate response to concerns about significant or irreversible impacts of a certain activity or technology, precautionary action is still appropriate. However, the misapplication or misinterpretation of precaution can adversely impact society by imposing opportunity costs and unnecessarily depriving whole populations of potential improvements in human health, environmental quality, and quality of life.

The concept behind the precautionary principle was introduced in Europe in the early 1970's as a "precautionary approach." The precautionary approach was intended to provide environmental risk managers with a tool for decision-making with regard to extraordinary environmental threats. It has since been insinuated into a variety of environmental regulatory schemes and is now embedded in the regulations of the EU, the legislation of Canada, and several international environmental agreements.

In fact, there is a distinct difference between the use of precaution in risk analysis and the "precautionary principle" as it is lately being deployed in international fora. Over the past two years, the EU has obscured or ignored this distinction and adopted the principle as a focal point in their food safety policy and in related international negotiations, including those at the Codex Committee on General Principles (CCGP).

The Honorable James C. Greenwood is President and CEO of the Biotechnology Industry Organization, which represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations in all 50 U.S. states and 31 other nations. Mr. Greenwood represented Pennsylvania's Eighth District in the U.S. House of Representatives from January 1993 through January 2005. From 2001 to 2004, Mr. Greenwood served as Chairman of the Energy and Commerce Committee Subcommittee on Oversight and Investigation with oversight authority over issues in the full Committee's vast jurisdiction.

The EU has pointed to both the Sanitary and Phytosanitary (SPS) Agreement of the WTO and the Rio Declaration on Development and the Environment (Rio Declaration) as the basis for its insertion of the precautionary principle into food safety regulation. The SPS Agreement does provide for the use of precaution, specifying that where scientific evidence is “insufficient” to establish safety, members may adopt provisional measures. Likewise, the Rio Declaration states that “lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. However, in its February 2000 Communication on the Precautionary Principle, the EU melded the mention of precaution in risk analysis in the SPS Agreement and the international environmental approach to precaution in the Rio Declaration inappropriately to expand the concept of “lack of full scientific certainty” to food safety policy.

But the application of the precautionary principle to environmental risk assessment is not necessarily analogous to the use of precaution in the safety assessment of food and food ingredients. The principle has been used historically as a standard for managing environmental risks. Unlike many environmental risks, the risks associated with food products and food ingredients are well known, usually minimal in nature and scope, and not persistent in duration. The focus of food safety assessment should be on the occurrence of severe and quantifiable adverse conditions and effects, and such decisions should be made on the basis of proper scientific evaluation, rather than political concerns motivated by unsubstantiated fears or political biases.

Such standards, guidelines, and recommendations should be consistent with, and not take precedence over, proper scientific risk assessment, recognizing that science by its very nature cannot ensure certainty. To insist on such outcomes, by establishing a redundant and insupportable global principle espoused by one region, especially when member countries already have at their disposal the right and the capacity to employ precaution in their regulatory processes, could do irreparable harm to the integrity of the SPS Agreement, not to mention the continued effectiveness of the WTO, upon which all nations depend as the guarantor of the principles of free trade in the global economy of the twenty-first century.

All countries actively engaged in international trade should support the use of sound science as the basis for cost-effective, risk-based precautionary measures that are protective of health and environmental standards. In addition, countries should support cooperative international efforts involving both the public and private sectors to develop and share scientific data that would improve the accuracy and relevance of risk

assessments and harmonize methodology and quality assurance. If international standards-setting bodies embark on a path toward adoption of “principles” instead of insisting that scientific standards be applied with appropriate diligence, consumer safety will not have been improved at the conclusion of the process. What will happen is that consumers throughout the world will be denied the means of access to technological innovations that carry with them the potential to feed, heal and clothe an ever-growing global community.

This important analysis by Lawrence Kogan outlines in vivid detail the nature and scope of the risk we face from undocumented and undefined “principles,” while providing a path forward for all of the concerned stakeholders – government, industry and consumers. In that regard, it is an invaluable contribution to the growing debate about an issue that affects, in the long run, all of our daily lives.

INTRODUCTION

By

Professor William H. Lash, III
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Two years ago in Zambia, newspapers reported how an anguished mother sold two of her children so that she could provide food for her remaining children. This occurred while a ship, laden with free corn from the United States was docked in the harbor. The same year, Indian farmers were denied access to seeds by government regulators; seeds that would increase their productivity of their farms and help them to feed an ever growing population. The following year in India, soldiers destroyed cases of soft drinks on military bases and university campuses; beverages that are enjoyed globally. Today, breakfast cereals consumed by millions of Americans daily cannot be sold in the same form in Canada, our neighbor and largest trading partner.

These outrages and tragedies and many more like them globally occur in the name of the most dangerous export in international trade: The misapplication of the precautionary principle by officials of the European Union.

The precautionary principle is part of customary international law. However, the unwillingness to use sound science and risk analysis sets this doctrine on its head, threatening economic growth, exports and most importantly human lives. In this Washington Legal Foundation Monograph, Lawrence Kogan explores and details the spread of the European Unions application of precaution in a quest for a risk free world.

As a scholar and former policy maker, I share Mr. Kogan's views of the danger of the interpretation of precaution by Brussels bureaucrats. Fueled by Green Party activists and embraced by DG Environment, this interpretation of precaution intimidates large and small firms, hamstringing

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other members of the European Commission and attacks innovation in rich and poor countries alike.

For example the REACH initiative, Brussels' attempt to further regulate chemicals, threatens \$200 billion of U.S. exports to Europe. European industry estimates potential job losses in the millions, all due to an approach largely devoid of risk analysis. In 2002 at a meeting with European Union Commissioner for Enterprise Erikki Liikanen and Commissioner for Trade Pascal Lamy, I learned that DG Environment had created REACH without senior consultations regarding the economic and trade impacts of the proposal. Similar directives covering everything from energy drinks to wood pallets would impose costs on consumers with no appreciable gain in safety. The World Trade Organization is host to cases regarding exports of American genetically enhanced foods.

Mr. Kogan recognizes the perils of further exports of this dangerous misinterpretation of the precautionary principle are far more lethal than any of the products attempted to be regulated.

In a world dominated by fear of manufactured goods and foods alike, consumers pay higher prices, and workers and innovators are denied creative new expressions. Newer accession states in the European Union, states with first rate scientific communities, lose investment opportunities as multinationals select friendlier locations for new operations.

But the greatest tragedy is the coercive and confusing nature of the European approach. Developing states are forced to choose between biotechnology which would increase their ability to feed their population and the risk of the denial of access to one of the worlds most lucrative markets. Additionally, policy makers in the developing world, lacking the financial resources and scientific capacity of their wealthier brethren, rely on the unsound science of Brussels.

This comprehensive Monograph does a fine job of addressing the problems. We do not live in a risk free world. Precaution, under the prevailing European Union approach would have denied us the internal combustion engine, electricity and the ability to feed our own people. I hope that policy makers in Brussels and in the capitals of member states have the courage to read it and make require sound science and risk based analysis in their decision making.

PREFACE

By
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European Policy Forum

This Washington Legal Foundation Monograph by Lawrence Kogan comes at a timely moment. Around the world, people are beginning to re-think systems of regulatory intervention that have grown apace. Regulation profoundly affects the way in which commerce takes place; it impacts product markets and insurance markets, while increasing the production and compliance costs of all major corporations.

Mr. Kogan illustrates very clearly the dangers of regulatory approaches based on such phrases as “a high level of social protection” – to use a particular European nostrum – but created without making a proper quantification of risk and without implementing realistic cost-benefit analysis.

The European Union and its institutions have in the past certainly provided many examples of this skewed regulatory approach. In the early days of the development of the European institutions, a powerful European Commission seemed determined to apply distinctively European values to regulated markets; a good way to show the distinctiveness of this approach was to consciously seek to prioritise so-called social values and protections. Frequently these measures would be promoted with reference to U.S. models – “we don’t want to have an American free-for-all over here”.

And in those early years, the European Parliament tended to be a gathering of enthusiasts, whose determination to build European systems sometimes outstripped any close interaction with the economic needs of the member states from which parliamentarians came. It is clear, therefore, how Europe became synonymous with overregulation. During

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my service in the European Parliament a structured means to quantify the costs and benefits of regulatory initiatives hardly existed. Bidding wars tended to develop in which parliamentarians would vie with one another to amend Commission proposals to secure ever higher levels of “social protection.”

I have put these comments in the past tense because in the last couple of years there has been a dawning realisation that this approach is deeply flawed. It led to regulatory measures whose levels of social protection go far beyond the reasonable, imposing high compliance costs on companies, damaging European competitiveness, and often failing to achieve cost-effective protection of individuals.

Laws designed, for example, to protect those flying on helicopters to oilrigs by limiting flying hours led to more flights being required with the risk of accidents increasing, rather than decreasing.

The gradual realisation that all was not well in these areas has led to a burst of activity directed towards Better Regulation. The European Policy Forum has been one of those private sector think tanks in the vanguard of this re-think, developing ideas for the wider use of regulatory impact assessments and other forms of cost-benefit analysis as well as means of streamlining legislative initiatives and reducing regulatory burdens, while improving the quality of legislation and regulation.

As a result the European Commission announced earlier this year a far reaching package of Better Regulation initiatives including the extensive use of regulatory impact assessments, the simplification or removal of redundant existing legislation, and the review of measures in the legislative or regulatory pipeline which have not been subjected to proper cost-benefit analysis. Some in the Council of Ministers and the European Parliament have strongly supported these ideas. All the signs are that the new Commission which took office in 2004 contains prominent figures including Vice President Gunter Verheugen and Commissioner Charlie McCreevy who fully understand that Europe’s regulatory approach had become seriously distorted and in many respects damagingly counter productive.

This Monograph highlights another element of concern to regulatory theorists – the way in which unelected bodies whether at European or international levels in for example the United Nations systems or the Organisation for Economic Co-operation and Development can build a series of self-referential policy developments which borrow from

apparently highly developed regulatory systems and seek to spread them globally. These developments often take place far away from any detailed legislative scrutiny by elected parliamentarians. Because they often take the form of soft law and are couched in the form of recommendations they may seem innocuous in practice, however, they are often treated by governments as binding international obligations. In such cases, and especially if they seem to have a security dimension, they are often fast tracked and avoid the newly stepped up impact assessment systems which are beginning to appear. The result can be a damaging vicious circle of defective policy making.

Mr. Kogan clearly sets out documented evidence and case studies of damaging initiatives whilst linking these to legal and economic theory. It does an excellent job in causing us all to pause for thought. Its sober analysis calls us to redouble our efforts to improve understanding of the most appropriate ways to protect customers and citizens and the need to quantify regulatory options. We need to build in to our systems steps that start by contemplating avoiding regulatory intervention, trigger searches for alternative forms of protection, and to find new ways of learning from past policy mistakes.

We need to re-design our legislative and regulatory systems to improve the quality of their outputs by quantifying much more precisely the likely effects, assessing possible unintended consequences, and then using post-legislative review and audit to check outcomes against aspirations. Lawrence Kogan's work is a powerful support in this direction.

OBSERVATIONS

By
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The precautionary principle resembles, at least in some respects, a malignant cancer. A malignant cancer cell has two dangerous properties. First, having shed the normal control mechanisms that maintain stability, a cancer cell quickly grows out of control and eventually consumes and destroys the structure in which it arose. Second, and even more perniciously, a malignant cancer cell has the property of being able to spread quickly to other regions, thereby spreading its harm and destruction. The precautionary principle shares both of these attributes of a malignant cancer cell.

The precautionary principle sounds innocuous and even appealing on its surface. It is premised on the common sense notion that it is better to be safe than sorry, and at its core requires the manufacturer to ensure its product is safe before introducing it into commerce. Beyond its superficial appeal, however, the precautionary principle suffers from several fatal flaws. First, while Europe and other jurisdictions purport to adopt “the” precautionary principle, they generally fail to specify which of the dozens of different versions of the precautionary principle they intend to adopt. There is no standard version of the precautionary principle, and the many different versions differ on critical issues such as whether and how costs should be considered, whether the principle applies to all risks or only serious and irreversible risks, and what actions the precautionary principle requires when it does apply.

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A second problem is that every version of the precautionary principle is ambiguous or silent on fundamental questions what level of risk is acceptable, and what a regulated enterprise must do to satisfy the precautionary principle. Proving the absence of risk is physically impossible, and in any event every product and human activity has the potential to impose some risks in some contexts. Because it fails to identify a limiting criteria, the precautionary principle could potentially be applied to prohibit any and all products and activities. Given that the principle will obviously not be used to ban everything, the choice of what is prohibited tends to be inherently arbitrary. Thus, Norway banned corn flake cereal fortified with vitamins because the added vitamins could possibly harm an unusually susceptible individual; Denmark banned cranberry fruit drinks because the added vitamin C could potentially harm someone; and France banned caffeinated energy drinks because the caffeine could harm pregnant women. Perhaps most tragically, the President of Zambia invoked the precautionary principle to ban U.S. food aid to the nation's starving population because the imported grain might include genetically modified corn, which millions of Americans have consumed without harm.

Perhaps the most fundamental problem with the precautionary principle is that it fails to recognize that too much precaution can be just as dangerous as too little precaution. While some precaution is prudent and indeed necessary to any health, safety and environmental regulatory program, too much precaution can unduly delay or block beneficial new technologies and products, many of which may present lower risks than the older products they would replace. As many commentators have wryly noted, if we are to apply the precautionary principle diligently, the first target for prohibition as too dangerous should be the precautionary principle itself.

The precautionary principle was born, nurtured and achieved maturity in Europe. It was initially identified and applied by nations such as Germany and Sweden several decades ago, gradually spread across the European continent in various regional agreements and the like, and now has been officially incorporated into the laws of the European Union. Several hundred regulatory decisions and judicial opinions in the EU have now applied the precautionary principle. Most recently, France has ensconced the precautionary principle into its national constitution.

One might be tempted to conclude that Europe's fixation with the precautionary principle is its problem, and it alone will have to bear the

consequences of its own foolhardiness. Such complacency is forcefully refuted in this Washington Legal Foundation Monograph. In a well-documented and encyclopedic tour-de-force, Lawrence Kogan demonstrates that Europe's application of the precautionary principle is already harming U.S. businesses and consumers. Perhaps more alarmingly, Europe's evangelical efforts to export the precautionary principle worldwide, including to the United States, represent a serious threat to our future economic security and political system.

Mr. Kogan begins by describing the precautionary principle, placing it within the larger social, cultural and political context of anti-scientific trends occurring in European society. He then describes how the EU's current application of the precautionary principle already harms American businesses and consumers, such as by increasing costs passed on to downstream companies supplied by large European manufacturers and blocking U.S. exports of food items to Europe that have been banned despite the absence of any evidence of significant risk. In the most disturbing part of the Monograph, Mr. Kogan documents how Europe is actively seeking to export the precautionary principle globally through international standard-setting bodies and like-minded sympathizers in the United States.

This Monograph clearly establishes that the precautionary principle is a malignancy that destroys economies and innovation while also proliferating to new regions to infect. Mr. Kogan has provided a much-needed call to action on the need to stop the precautionary principle now before it spreads further and causes more devastation.

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I.

**INTRODUCTION:
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U.S.-based businesses of all sizes, but especially small and medium sized businesses will, over time, likely be subject to more stringent environment, health and safety (‘EHS’) regulations and related technical product standards. Whether they know it or not, many of these rules will have originated within the European Union (‘EU’) without their constructive input or consent – ‘regulation *without* representation’. According to a 2002 *Wall Street Journal* article,

Americans may not realize it, but rules governing the food they eat, the software they use and the cars they drive increasingly are set in Brussels, the unofficial capital of the EU and the home of its executive body, the European Commission. Because of differing histories and attitudes toward government, the EU...with the world’s second-largest economy, regulates more frequently and more rigorously than the U.S., especially when it comes to consumer protection. So, even though the American market is bigger the EU, as the jurisdiction with tougher rules, tends to call the shots for the world’s farmers and manufacturers... EU rules often cause particular friction in high-tech fields, such as software, electronic commerce and biotechnology...The EU requires any product that contains even 1% of a genetically altered ingredient to say so on its label...pending European recycling rules, which are tougher than U.S. standards...would require

electrical equipment makers to eschew certain hard-to-recycle plastics and chemicals, such as brominated flame retardants...the EU is considering requiring companies to test 30,000 chemicals already on the market to see whether they are hazardous, as well as thousands of products that use some of the chemicals in question...another EU initiative targets auto makers...”¹

Indeed, as reflected in official EU policy documents, the products covered by these regulations, directives² and standards “represent a large proportion of [all] products that are placed on the market. It is estimated that, as of 2003, the trade of products covered only by the major [agricultural and industrial] sectors regulated...largely exceeds the volume of 1500 billion euro (1.5 trillion euro) [(or approximately \$2.25 billion)³] per year.”⁴

Given the breadth and reach of these regulations and standards, the U.S. business community should be alarmed, no matter the sector in which they operate and no matter where they design and manufacture their products. These rules will affect small and medium-sized companies operating within specialized market niches that serve as catalysts for research and development in areas of new technology or processing techniques such as information technology, nanotechnology, biotechnology, pharmaceuticals, processed foods, and vitamins. They also will affect small and medium-sized businesses providing valuable inputs for larger manufactures, such as parts and component suppliers, industrial chemical manufacturers, electrical and electronic and equipment manufacturers.

Furthermore, they will affect small and medium-sized U.S. businesses operating within more ‘downstream’ product sectors that incorporate or use substances or products developed by much larger companies within their own manufacturing processes or final products such as cosmetics, paints, textiles, plastics, automotive, and agriculture.⁵ These downstream companies are likely to comprise the largest group of businesses that will be adversely impacted by overly stringent European EHS regulations. Downstream service sector companies will also be potentially affected by such rules to the extent they utilize banned or severely restricted substances in rendering their services to third parties (e.g., dry cleaners, auto garages, lodging, catering services, transport services, printing, farming, etc.). And, services companies operating within the construction and real estate development industries will also likely encounter these rules, both here and abroad, to the extent their land use activities are deemed to threaten the environment.

A growing number of EHS regulations and product standards are based on an evolving international legal norm known as the 'precautionary principle'. The precautionary principle is essentially a non-scientific, 'better safe than sorry' philosophy of regulation. It has already assumed the status of regional law within Europe, and European regulators and environmental groups are eager to establish it as an international and U.S. legal standard.

The aim of this Monograph is to highlight how European environmental, health and safety regulators have imposed hundreds of precautionary controls on business conduct, the nature of these regulations, and how they affect U.S. enterprises doing business internationally. It also discusses how such hazard-based, rather than science/risk-based, regulatory controls are becoming increasingly popular in the U.S., and how our economic competitors would benefit from the widespread export of the precautionary principle to America. The Monograph begins by explaining what the precautionary principle is and how it has assumed a central role in Europe's grand global strategy of achieving 'sustainable development'.

It then explains what American companies can expect if precautionary principle-based regulations are adopted within the United States. It does so by pointing out the high business and legal costs borne by European companies in comparable industry sectors, as well as the chilling effect these regulations have had on European research and development, capital investment and technological innovation. This Monograph also discusses how precautionary principle-based regulatory changes would profoundly impact several areas of U.S. law beyond environmental, health and safety, namely tort, insurance, corporate, and securities law.

Furthermore, the Monograph discusses how the EU, with assistance from European and American environmental non-governmental organizations ('ENGOS'), has already begun to inject similar rules into U.S. law. Thus far, they have been limited mostly to state and local initiatives, though a number of state attorneys general have filed suit against the U.S. Environmental Protection Agency over the issue of global climate change. There are also various efforts underway to review federal environmental, food, drug and chemical regulations that precautionary principle advocates believe fail to ensure a high enough level of public safety. These reviews will likely be critical of current rules and procedures and be brought into the public spotlight for purposes of inducing consumer fears and concerns. This way, enough public pressure can be generated to force regulators and the U.S.

Congress to replace the benchmark federal standards of sound science and economic cost-benefit analysis with the precautionary principle.

The Monograph additionally identifies how U.S. companies have increasingly fallen subject to the relatively new but growing ENGO discipline of ‘supply-chain management’, which is an outgrowth of the global corporate social responsibility (‘CSR’) movement. With guidance and assistance from the EU and the United Nations Global Compact Office, Environment Program, and Commission on Sustainable Development, European-based ENGOs and social groups have developed and imposed on U.S. multinational companies and their small and medium-sized suppliers the duty/obligation to comply with Euro-style CSR standards. These standards generally demand that companies act in a socially and environmentally responsible manner consistent with the precautionary principle, in excess of legal requirements, no matter where they conduct their business. These standards also require that multinational companies and their suppliers submit to audits and verification by private third parties – ‘global stakeholders’ (ENGOs and social groups, not stockholders or debt-holders) – and that they publicly report their CSR activities annually.

Last, this Monograph urges U.S. industry and government to draw an unwavering ‘line in the sand’ beyond which no extraterritorial EU environmental, health and safety rules may pass, unless scientifically, technically and economically justified. In other words, U.S. industry and government must quickly join ranks to protect the American free enterprise system, its current comparative advantage in international trade and technological innovation, and its longer-term national economic prospects. The U.S. must accomplish this without falling down the slippery slope of trade protectionism. All of these interests are now under threat from a European Union with grand ambitions — one that is endeavoring to shape the 21st century global agenda through its involvement in the United Nations as it aspires to become a global political and economic power in its own right. In essence, U.S. industry and government must not permit the new global regulators and their civil society allies to unilaterally impose on America EU cultural preferences and legislative mandates by employing the precautionary principle under the guise of EU notions of enlightened altruism, i.e., sustainable development.

II.

WHAT IS THE PRECAUTIONARY PRINCIPLE?

A. Evaluates Hazards Rather than Risks

The European Commission has increasingly employed the precautionary principle to identify and manage uncertain future risks to the environment and human health and safety posed by modern agricultural and industrial activities and technological innovations. It favors banning or severely restricting particular substances, products and activities if it is merely *possible* that they or the processes used for their manufacture, formulation or assembly *might* cause health or environmental harm.

Pursuant to the precautionary principle, government regulators need *not* prove objectively, through empirical scientific risk assessment, actual exposure data, and probabilistic computations (extrapolated safety factors), that a particular substance or product is likely to cause actual harm within a foreseeable period of time to a specifically identified population or ecosystem. Rather than focus on the probable occurrence of actual risks under real life circumstances (i.e., with reference to use and exposure), the EU Commission and European environmentalists have promoted a new framework that effectively shifts the subject of evaluation from actual risks to hypothetical hazards. Pursuant to this new paradigm, which arguably shortcuts the scientific process, regulators need simply to identify a product's or substances' inherently dangerous characteristics or intrinsically harmful qualities and to rely upon an administratively-created presumption of possible harm. That presumption is itself based on abstract categorizations of broad classes of products or substances with similar hazard profiles.

B. Dispenses with Economic Cost-Benefit Analysis

In addition, EU regulators who employ the precautionary principle and their environmental and political allies have dismissed the need to undertake an economic cost/benefit analysis that is required by U.S. law for many types of regulations. Cost-benefit analysis is utilized as a safeguard to ensure an equitable balancing of important societal interests, including those of industry. In fact, the legal adviser to the EU

Commission has spoken out strongly against the use of economic cost-benefit analysis, alleging that “[c]ost benefit analysis and other influences can lead to undue delays in precautionary action and further losses.”⁶ Perhaps this is due to the fact that there is no provision currently within European Community law requiring regulators to evaluate the economic impact or costs of assessing and managing public risks in a systematic manner.⁷

C. Generates Fear and False Perceptions that Lead to Risk Aversion

A review of Commission and Parliament activities reveals that European regulators are indeed focusing less on objective scientific evidence when evaluating public risks and more on subjective nonscientific criteria based on abstract notions of ‘morality’, ‘social justice’ and ‘quality of life’ rooted in unfounded perceptions of risk. These perceptions are generated by politically active and ideologically motivated environmental and consumer groups and like-minded politicians, who demand that regulators eliminate from society all health and environmental risks. The ideological ‘concerns’ of these influential non-governmental organizations (‘NGOs’) are raised to the level of ‘public’ consciousness via misinformation and fear campaigns that so exaggerate the presence of hypothetical hazards that perceived risks have become more important than *actual* risks in the public’s mind.⁸ Indeed, some leading activists have referred to the precautionary principle in the media as “the most radical idea for rethinking humanity’s relationship to the natural world since the 18th-century European Enlightenment”, and as presaging a “great shift from a risk-taking age to a risk-prevention era.”⁹

While Europe’s resort to the precautionary principle to prevent emerging public hazards may sound appealing and provide surface level comfort, especially to older risk-averse citizens,¹⁰ it is simply not possible, in the real world, to eliminate all risks, no matter what these groups claim. But, risk aversion is precisely the foundation underlying the precautionary principle, which “asks how much harm can be avoided rather than how much is acceptable.”¹¹ In essence, the precautionary principle effectively states that industry must demonstrate to governments’ satisfaction that a product, substance or activity deemed inherently hazardous is ‘safe’ or ‘harmless’ before it can be authorized for sale, distribution or marketing. This is equivalent to imposing upon industry a negative burden of proof or a zero-risk threshold that will

severely curtail economic growth, technological innovation and societal well being and quality of life.

III.

HOW DID THIS OCCUR? – IT BEGINS WITH HEALTH AND THE ENVIRONMENT AND ENDS WITH TRADE

A. The Crafting and Packaging of a Regional EHS Policy Message

Europe's regulatory and standards juggernaut can be traced, in part, to a philosophical skepticism towards the limits of contemporary empirical (evidentiary) science and technology and to a *political* need to calm public fears, whether justified or not, about a growing number of uncertain but perceived risks associated with modern life. These fears have been largely induced by European non-governmental organizations (ENGOS) which, time and again, have launched particularly damaging media campaigns against European companies. Because of the significant political influence wielded by these "civil society" groups within Brussels and European capitals, EU regulators have had to respond to their concerns. In fact, some EU regulators have enlisted the assistance of these groups for the purpose of developing a regional public policy premised on notions of morality that calls for higher regional and global EHS protections.

The Brussels-based EU institutions have funded and delegated quasi-legislative authority to such groups in order for them to disseminate and justify this policy to the European public (including industry). That policy essentially rejects U.S. scientific and technical innovations, economic efficiencies and free markets in the name of establishing a regional and global democracy 'of and for the people'. It emphasizes that *the desired high level of European public protection cannot be attained if scientific risk assessment is used as a legal benchmark*. It argues that risk assessment is a primitive discipline that is unable to identify a great number of uncertain modern risks that can trigger catastrophic human and social losses. It also rejects the U.S. legal benchmark of economic cost-benefit analysis, which it claims has become a politically charged, illegitimate process that has been adeptly

manipulated by American industry to prevent the adoption of necessary U.S. EHS regulation.

Over time, European civil society also enlisted the aid of politically-minded European scientists in search of research grants who successfully helped them to translate this policy message into a series of regional legislative frameworks premised on the new legal and scientific benchmark of ‘hazard’-based analysis.¹² Hazard-based analysis looks to the inherent characteristics and intrinsic qualities of substances and products to determine whether they may pose possible future harm to health and the environment. Hazard-based analysis does not require that regulators undertake an economic cost-benefit analysis, or the painstaking process of risk assessment that requires empirical proof of harm based on actual exposure. Hazard-based analysis has a less technical and scientific name – it is otherwise known in European political circles as the ‘precautionary principle’. And, it has been established as a norm of EC Treaty law.

B. Incorporating Regional EHS Policy into the International Trade System

In order to exploit this regional policy for purposes of international trade, European regulators have developed an ever-closer link between regional EHS regulation (government policymaking) and ‘top-down’ (rather than industry-driven) regional product, process and service standardization. The process of standardization serves an important role within Europe – it helps to translate essential environment, health and safety regulatory and policy requirements into understandable technical guidelines which businesses may then use to design, manufacture, formulate, assemble and dispose of their products. In light of this important link, the EU Commission has emphasized the need to involve ‘all relevant stakeholders’, including European civil society, in the EU standards process to ensure that European EHS policy considerations are fully taken into account.¹³ This practice has been self-reinforcing, insofar as, it has resulted in more and more environmental, health and safety requirements being promulgated and incorporated into EU regional regulations and standards.

To broaden and strengthen the impact of European regional regulation and standardization globally, the EU Commission has promoted the use of cooperative agreements¹⁴ between the European political and technical communities and the relevant international bodies referenced in the World Trade Organization (‘WTO’) Agreements.¹⁵

These bodies are held responsible for developing globally harmonized, science-based, and economically-efficient international standards. They are also entrusted with ensuring that while divergent national and regional regulations and standards may incorporate an appropriate level of EHS protection consistent with national and/or regional policy objectives, those protections are not used as disguised barriers to international trade. To this end, the EU has argued that the appropriate level of protection is that which reflects the use of the precautionary principle to adequately safeguard important European public EHS interests and cultural values.

Until recently, American policymakers and international standards developers remained unaware of the Commission's use of these agreements to 'bootstrap' EU regional standards and preferences to international standards. They also did not realize how this fluid mechanism effectively enhanced the EU's ability to incorporate their precautionary principle within international standards and the international standards-making process. In the words of former EC Enterprise Commissioner Erkki Liikanen, standards have "offered [the EU] a systematic framework to take over international standards and/or to contribute to the international standards-making process" (emphasis added).¹⁶

C. Establishing the Political and Moral Legitimacy of European EHS Policy

Given the technical and arcane nature of international standardization, the EU Commission and European civil society have also largely focused on the political dimensions of international regulation. This has allowed them to play an increasingly influential role in the policymaking activities of well-known inter-governmental bodies. A number of these bodies are related to the United Nations and the Organization for Economic Cooperation and Development ('OECD').¹⁷ In effect, the EU Commission and European civil society have endeavored to use these bodies as vehicles to establish the international political and moral legitimacy of their precautionary principle.

In an effort to link the political and moral dimensions of international trade policy with the real economic dimensions of international trade, the EU Commission has sought to update WTO rules. European civil society believes they must undertake such changes because the institution of the WTO is no longer legitimate. In their view, its rules no longer reflect the evolving needs and expectations of a global civil

society that transcends national borders and that seeks to protect the global environment which all humankind shares. As previously noted, however, these rules also prohibit the use of technical regulations and standards as disguised trade barriers, and arguably prevent the incorporation of cultural values – the precautionary principle – into regional and national EHS regulations and standards if they result in arbitrary or discriminatory trade restrictions.

Hence, the EU has endeavored to convince other WTO members of the political expediency of incorporating their own societal and environmental values/preferences within national and regional regulations and standards even if they may have the effect of restricting international trade. Thus far, this has permitted the EU to justify its imposition of precaution-based regulations and standards upon EU trading partners. In doing so, it has relied on the position articulated last year by former EU Trade Commissioner Pascal Lamy. He argued that mutual respect for national cultural preferences falls within the notion of ‘mutually balanced concessions’ that underlies the *quid pro quo* achieved long ago under the General Agreement on Tariffs and Trade (‘GATT’).¹⁸

D. Using EHS Policy as a Disguised Trade Barrier

It has become increasingly clear, however, that Europe’s strict EHS policies based on the precautionary principle have an added *economic* dimension. Ailing, lagging or underdeveloped European industries, overwhelmed by significantly higher regional regulatory, standardization, labor and energy costs and starved from a steady reduction in regional research and development investment, are no longer globally competitive. Because some European industries have been unable to prevent the proposal and adoption of precaution-based regulations, it has chosen instead to appease and collaborate with their regulatory-minded national and regional governments and risk-averse European civil society. To this end, they have agreed also to assist these protagonists in establishing the precautionary principle, which implicitly rejects U.S. scientific and technical innovations, economic efficiencies and free markets, as an absolute global legal standard by exporting it around the world,¹⁹ especially to the United States. Coincidentally, this effort has also served to ‘protect’ European industry’s global economic interests by generating high business and legal costs, which all industry supply chains throughout the world must bear.

IV.

EXAMPLES OF EUROPEAN PRECAUTION-BASED EHS REGULATIONS

There are numerous examples of European precaution-based regulations that use an administrative presumption of hazard to ban or severely restrict the manufacture and use of certain products, substances and activities. As previously noted, this presumption arises even without scientific evidence showing actual harm or an ascertainable risk of harm posed by a specific product, substance or activity.

A. Biotech Products

The recently lifted EU seven-year moratorium against genetically modified ('GM') food, feed and seed (which has blocked approximately \$300 million per year of U.S. agricultural exports since 1998²⁰) is one such law. Also included are the GM pre-market authorization directive and the farm-to-table traceability and labeling regulations recently enacted to replace it.²¹ These rules, in part, implement the political treaty obligations assumed by EU Member States under the Biosafety Protocol, a multilateral environmental agreement ('MEA') governing the transfer, handling and use of certain GM products. The EU interprets that treaty as requiring the application of the precautionary principle.²² These rules effectively discriminate between otherwise identical products solely on the basis of their process or production methods ('PPMs'), even though *how* they were made has not been shown to have any negative impact on the safety or performance of the final product or on the condition of the environment.²³ In fact, the EU has even admitted that, "GM foods do not cause any harm to consumers. There is no evidence that this food is any more unsafe than conventional foods."²⁴

B. Toxic and High Volume Chemicals

Another good example is the proposed EU regulation on high volume chemicals known as the Registration, Evaluation and Authorization of Chemicals ('REACH'). REACH is a complex, three-level, volume-based system that mandates the registration of over 30,000 existing chemicals presumed to be hazardous. Also requiring evaluation of substances which 'give rise to a particular concern' and authorization for substances deemed to be 'of high concern', REACH does not

consider, via a scientific risk assessment, the potential for actual human or environmental exposure (risk of harm) until *after* all *industry* testing has been completed.²⁵ REACH would impose on U.S. exporters a broad legal duty of care, satisfaction of which requires compliance with an extensive, rigorous, costly and largely unnecessary pre-market authorization and information sharing process that requires disclosure of proprietary company data without adequate protection of intellectual property.²⁶ Although REACH was drafted as a regional regime, the EU has all but admitted that it is intended to serve as a *global* template for the management of chemicals, and to impact virtually all product sectors at all levels of the global products supply chains.²⁷

C. Cosmetics

REACH dovetails with other related EU regulations like the Amended EU Cosmetics Directive. This directive bans the use of phthalates (known to be carcinogenic to mice) in cosmetic products even though scientific tests (risk assessments) have thus far found “no evidence to suggest that consumer exposure to phthalates in cosmetics and personal care products poses a *human* health risk.”²⁸ In addition, it bans animal testing on most cosmetics prior to consumer use, even though failure to conduct such tests may expose humans to greater health risks.²⁹ If strictly applied, the ban would not only run counter to U.S. food and drug law mandating the animal testing of cosmetic products classified as ‘over-the-counter drugs’, but also would effectively require the reformulation by industry of all current cosmetics products.³⁰ This directive, furthermore, mandates full ingredient identification, which effectively requires disclosure of proprietary company data without adequate intellectual property protections. And it requires the labeling of all cosmetic substances which, as European industry has already found, is a very costly and unworkable requirement considering that fragrance compositions used in cosmetics typically contain numerous ingredients that can themselves be comprised of hundreds of individual substances.³¹

D. Biocides

The REACH regulation is complimented by the EU Biocidal Products Directive and accompanying regulations, which apply a similar presumption of hazard to broad classes of chemicals and/or biological agents (e.g., disinfectants, chemical preservatives, non-agricultural pesticides, etc.) with similar intrinsic properties. The EU biocides regime covers twenty-three different product types overall.³² These rules require companies to obtain formal authorization of all existing ‘active’

substances³³ and preparations in which they are contained *before* they can market them. To obtain formal authorization, biocide producers and formulators must first prepare and submit very detailed active substance dossiers indicating that they have assessed the risk of their products in advance. Such costly and onerous burdens are imposed upon industry *before* any government scientific risk assessment identifying a particular risk of exposure or harm has been performed, and even though the authorization process itself could eventually take up to ten years to complete.³⁴ And, once companies have complied, they are not even assured that the risk assessment data they provide will be honored by regulators who are more concerned with hypothetical hazards than with probable risk exposure scenarios. What is most disturbing, however, is that EU regulators have gone so far as to dictate how industry should formulate its products, even where it has positively satisfied the relevant regulatory safety requirements.³⁵ American companies should be very concerned about these rules considering how unworkable European companies have found them to be.³⁶

E. Product Stewardship, Life Cycle Management and Waste Disposal

Furthermore, the EU has adopted precautionary principle-based regulations mandating that companies employ ‘design for the environment’ or ‘life cycle management’ principles when conceptualizing, manufacturing, formulating, assembling and ultimately disposing of products. These rules incorporate a very burdensome requirement known as corporate ‘take-back’ – namely, industry’s obligation to reclaim and dispose of all *new* products put onto the market upon their obsolescence, mostly *at individual company expense*.³⁷ These obligations are based on preliminary conclusions drawn within the EU Green Paper on Integrated Product Policy (‘IPP’)³⁸ that were formally adopted by the EU Commission during June 2003.³⁹ It reflects an official EU environmental regulatory policy blueprint created largely with the assistance of European environmentalists, which would unilaterally impose on the world’s manufacturers, importers, marketer-distributors and business ‘users’ an expanded obligation of producer responsibility and product stewardship.

It is quite revealing that some legislation *presumes* and effectively treats the waste from these categories of products, as well as the products themselves, as being potentially ‘hazardous’ to human health and the environment. However, the EU has failed to substantiate its administrative presumption via an objective science-based risk

assessment. In other words, it has not demonstrated that the substances utilized in the manufacture of these products or the methods currently employed to dispose of them (which these rules seek to change) have generated ascertainable risks of harm or have resulted in actual identifiable incidences of exposure. In adopting and enforcing these rules, the EU Commission apparently believes that a scientific risk assessment and economic cost-benefit analysis are unnecessary, or perhaps even detrimental to their *political* objectives. It also apparently believes that it has helped EU Member States satisfy their political obligations under the Basel Convention,⁴⁰ an international environmental treaty negotiated largely with the assistance of several large ideological ENGOs such as Greenpeace, Friends of the Earth and the Basel Action Network.

F. Climate Change

The EU has also recently adopted a combination of directives, regulations and decisions designed to reduce what Europeans perceive as the threat of progressive warming of the climate poses to human health and the global environment. While many environmentalists and scientists believe that some sort of global climate change is underway, there is *no global scientific consensus* regarding the pattern, magnitude or timing of such a change, or concerning the degree to which that change is being caused⁴¹ by man-made, rather than natural activities and processes. And, despite even the most recent of reports alleging that the warming of ocean currents off southern California reflects global warming attributable to human activities,⁴² these remain only ‘soft’ hypothetical assessments of possible climate change *hazards* rather than any ‘hard’ scientific assessment of probable health or environmental exposure *risks*. Indeed, it has been shown, thus far, that policy-motivated computer ‘modeling inputs’ championed both by the EU Commission and politically influential environmentalist groups⁴³ have been devoid of a rigorous scientific foundation.⁴⁴ Perhaps, as some have suggested, “Kyoto activism and the global warming campaign have less to do with saving the world and more to do with new forms of European protectionism.”⁴⁵

The continued state of scientific uncertainty surrounding global climate change was honestly discussed in the 2002 Economic Report of the President:

We are uncertain about the effect of natural fluctuations on global warming. We do not know how much the climate could or will change in the future. We do not know how fast

climate change will occur, or even how some of our actions could affect it. Finally, it is difficult to say with any certainty what constitutes a dangerous level of warming that must be avoided.⁴⁶

Despite these uncertainties, however, the Bush Administration proposed a gradual and flexible approach that identifies realistically achievable goals at reasonable economic cost to address the perceived problem of climate change:

[C]urrent uncertainty surrounding climate change implies that a realistic policy should involve a gradual, measured response, not a risky, precipitous one...concepts such as a worldwide tax on greenhouse gas emissions or a worldwide tradable permit system, sometimes advertised as solutions, are at best useful theoretical benchmarks against which to measure alternative, practical approaches. At worst, they can be a distraction from meaningful, realistic steps forward. Why are such proposals impractical? Because they fail to recognize the enormous institutional and logistical obstacles to implementing any sweeping international program. Institutionally, it is important to learn to walk before trying to run...The uncertainty surrounding the science of climate change suggests that some modesty is in order. We need to recognize that it makes sense to discuss slowing emission growth before trying to stop and eventually reverse it... (emphasis added).⁴⁷

Since at least 1997, many within the American scientific, economic and political communities have recognized that the U.S. would incur prohibitively high economic and social costs if it imposed regulatory limits on U.S. industrial, agricultural, commercial and household greenhouse gas ('GHG') emissions consistent with those required by the Kyoto Protocol.⁴⁸ Although members of the European business and intellectual communities have continued to cite the detrimental impact that the high costs of European compliance with the Kyoto Protocol would have upon European industrial competitiveness, employment and consumer prices,⁴⁹ these concerns have been largely 'drowned out' by the powerful European environmentalist lobby. At the same time, there has been a growing economic and scientific realization, even in Europe, that the absorption of those costs by industry and consumers would yield only slight global environmental benefits, even if all nations, including the U.S., enforced GHG emission caps at Kyoto Protocol 2008-2012 prescribed levels:

Despite the uncertainty over how much Kyoto would cost...*one thing is sure: Kyoto will cost and the environment will not benefit from it...The economic cost of Kyoto is very high and its environmental benefits are dubious to say the least...*Dr. Hans Labohm explained that *'The net cooling effect will be infinitesimal.* According to the proponents of Kyoto' Labohm added, 'the cooling effect of the whole Kyoto, comprising all developed countries as initially planned, was not more than 0.02 degrees Celsius in 2050. A European mini-Kyoto will produce a net cooling that is proportionally less (emphasis added).'⁵⁰

The Bush Administration, in contrast to the EU Commission, has stressed that it sees technology, rather than stringent regulation, as the long-term solution to any climate change problem, and that it is spending \$4 billion a year on incentives for research and development to this end. Even environmental groups have conceded that the Kyoto Protocol will have *no* impact on preventing what they believe to be an impending global warming catastrophe. "The groups themselves concede that the Protocol will only have 'symbolic' effect on climate because they believe it is too weak."⁵¹

Notwithstanding these sobering assessments, however, the EU climate change rules, better known as the EU Greenhouse Gas Emissions Trading Scheme ('EU ETS'), proceeded to go into effect on January 1, 2005. The scheme incorporates each EU Member State's annual GHG emission 'cap' (limit), as established by the Kyoto Protocol, and requires that such limit be enforced at the national level with respect to emissions generated by specific industrial activities undertaken by plants burning fossil fuels such as petroleum and coal.

The EU ETS currently covers energy producers (oil and petroleum refineries and power utilities); ferrous metal (iron, steel and metal ore) producers and processors; mineral processors (cement, lime, glass and ceramic producers); and 'other' industrial producers (mainly pulp and paper producers).⁵² Pursuant to this scheme, GHG emitting plant operators must purchase from their governments GHG emissions permits covering their 'installations' that grant them the right ('allowances') to emit a limited amount of GHGs (one ton of carbon dioxide equivalent) within a specific period.⁵³ It is believed that emissions trading will provide companies within these industries with the ability either to earn revenues from selling their 'below-the-allowance' GHG emissions (GHG 'credits') to other companies or to offset the regulatory 'costs'⁵⁴ associated with their 'above-the-allowance' GHG emissions (GHG 'excesses') by purchasing other companies' credits. It has been reported

that there are now emissions trading permits covering 12,000 installations in the 25 EU Member countries.⁵⁵

The EU ETS also subjects these EU industry sectors to GHG monitoring and reporting/registration requirements.⁵⁶ Further complicating the legal landscape, a number of EU Member States have created their own national trading schemes which go further than the regional program and include additional greenhouse gases (the EU covers only carbon dioxide) and sources of emissions. And, the EU is now contemplating GHG emissions reduction and energy efficiency proposals and related environmental fiscal incentives deemed necessary to satisfy the Kyoto Protocol's 'post-2012' period. They focus on the transportation (automobiles, vessels and aircraft), agriculture, small business, housing (e.g., builders *and* personal households) and waste disposal sectors.⁵⁷ Notwithstanding the recent nuanced appeals of European politicians for the U.S. to join with Europe in addressing what is *perceived* as a threat to international peace and security, it is certain that these laws *will* adversely affect the cost of living and quality of life for all Europeans and Americans.

V.

THE HIGH COSTS OF PRECAUTIONARY PRINCIPLE-BASED REGULATION

A. Compliance, Intellectual Property and Misrepresentation Costs

As is clearly evident, precautionary principle-based regulations, directives and related product standards engender significant compliance costs. They require companies to develop and submit detailed information dossiers about the composition and processing of products in which sensitive technical information and formulae and intended product uses are disclosed. In addition, they require the sharing of such confidential information among all producers, intermediaries, and distributors present along a product's vertical supply chain. In each case, there is little regulators have afforded in the way of intellectual property right protection for valuable intangible company assets.

Furthermore, these regimes require that technical information be contained on detailed product labeling, consistent with national and

regional ‘consumer right-to-know’ laws, whether or not consumer safety issues are involved, and irrespective of whether the environmental performance claims made on those labels can be scientifically/technically achieved. Supporters of such labeling rules argue that they will help European consumers choose the ‘correct’ products by better understanding the health and environmental hazards accompanying that product’s processing or chemical composition. However, it is more likely that the added information will lead to absurdly long, cryptic and misleading labeling that confuses consumers and creates opportunities for consumer fraud and misrepresentation.

B. Social and Eco-Labeling and the Costs of Brand Reputation

What seems obvious, in any event, is that the EU is fostering artificial product and process distinctions and creating consumer expectations in the marketplace that will negatively affect the competitive conditions of non-EU products. In other words, Brussels is acting as a market ‘maker’⁵⁸ rather than as a market ‘facilitator’ of European consumer preferences in the absence of a general market demand for environmentally friendly products and services:

In its simplest form, [product and process] branding can involve both product differentiation and firm reputation. Brands have special utility for signaling intangible societal attributes, such as animal welfare and non-genetically engineered products. In such cases the consumer has difficulty assessing quality based on consumption and determining whether the product complied with its stated claim...Branding does not mean that the differences are well defined only that differences exist...[T]he brand allows a separation (differentiation) in the marketplace by quality in the form of intangible societal attributes...*Customers may not be able to measure the quality of a product, say the environmental impact of the Bt event in corn, [b]ut...[they can measure whether]...due diligence and prudent safety measures have been employed* (emphasis added).⁵⁹

One need only survey the EU Commission’s many eco-labeling initiatives to realize the extent of European governments’ indirect involvement in the commercial markets.

The EU’s labeling rules concerning GMOs, electronics and electrical equipment, toxic chemicals, cosmetics and biocides provide such an example.⁶⁰ The recent EU furniture eco-label program arguably provides

another example of a governmental attempt at product branding. A preliminary report prepared for the Commission on the feasibility of a new EU furniture eco-label recommends that sustainable forest management (SFM) certification be included as an indispensable criterion for award of the label. The report however recognizes that, because “*puchasers...have shown themselves to be profoundly uninterested in Eco-labels, [as] we know [of] no real demand for an EU Eco-label on furniture*” (emphasis in original),⁶¹ it is likely that private demand needs to be created at the EU level. “[I]f [private] demand does not exist, it can be created through awareness activities or through procurement requirements in the case of public procurements.”⁶²

According to the report, this would be possible by harnessing the ‘fashion’ dimension of the furniture market through creation of premium-branded products that would appeal to consumers because they reflect “*fitness for use linked to ethical values*” (emphasis in original).⁶³

In fact, the report’s authors believe that such a premium brand eco-label could effectively “compete with all existing brand names of big retailers or manufacturers”:

Only about 20% of all furniture in the EU is sold under a brand name, the rest are no-name products. Brand names have a high attractiveness in the market and generate higher revenues. Thus the new EU label will compete with all existing brand names of big retailers or manufacturers...*‘An eco-label can be a success if associated with a brand or a high developed environmental policy and communication (EMAS, ISO 14000...)*’....The Eco-label as a *premium*...[can be] display[ed] [by] firms...on a product or product line [to] thereby indicate their responsibility and contribution in the environmental field. This strategy may be useful when attracting new, or retaining and reassuring existing, ‘green’ consumers (emphasis added).⁶⁴

Through this approach, EU companies would be able to differentiate their wood and furniture products from, and thereby effectively compete against, lower priced foreign exports. “Price competition from outside the EU can be offset by strategies that closely couple product and image value of furniture, ‘[such as differentiating] *from non-EU imports, particularly those from low wage rate economies.*’” (emphasis in original).⁶⁵ However, there would be no requirement to scientifically prove the environmental claims made on such a label.

C. Tort Liability Costs

If the precautionary principle became a formal U.S. legal standard, companies would be obliged to satisfy a broad, affirmative, forward-looking legal ‘duty of care’ as a precondition to securing market authorization and market access for their products. This “duty of positive obligation...requires...industry actors to be fully informed about the possible consequences of environmental change;”⁶⁶ i.e., companies are put on advance notice that they must not engage in activities that may potentially trigger unascertainable but serious risks of harm in the future. The precautionary principle applies to commercial participants at all levels of the global product supply chains, each of which must show that they have followed ‘best practice’ in designing new products from conception even if ‘best practice’ is never really known because it is still in the process of evolving. This has been interpreted to mean that an economic actor would be deemed not to have satisfied its duty of care “even if best practice and appropriate regulatory rules [were] followed.”⁶⁷ Companies must endeavor to ensure that the manufacturing methods they employ and the potential uses to which their products or substances are ultimately placed, even if presently unknown, will have as minimal a health and environmental impact as possible (without regard to ‘reasonableness’), irrespective of the costs to industry.⁶⁸

Within the transformed U.S. tort system precautionary principle advocates envision, legal liability would be triggered merely as the result of a *prima facie* breach of a broader obligation/responsibility imposed by *civil* law, and the failure to satisfy a greater evidentiary burden of proof normally imposed under the *criminal* law. Thus, liability for violation of precautionary principle-based regulations would be premised on, but would go beyond the U.S. common and statutory law of negligence, strict liability, ‘products liability’ and public nuisance.

A case in point is Articles 5 (‘Preventive Action’) and 8 (‘Prevention and Remediation Costs’) of the recently enacted Commission Directive on Environmental Liability,⁶⁹ which implements the EU ‘polluters pay’ principle. Article 5 provides that, “Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures.” Article 8 provides that, “The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive.” Judging from its other provisions, strict liability would be favored over fault-based liability (negligence)⁷⁰ to prevent ‘environmental damage’ from “certain high-risk activities [such as] manufacturing, transport and storage of dangerous substances, waste management, discharges of

substances into ground or surface water, etc.”⁷¹ “Businesses primarily affected are those involved in traditionally polluting activities, such as plants releasing heavy metals into water or into the air, installations producing dangerous chemicals, landfill sites and incineration plants.”⁷²

The White Paper emphasizes how the strict liability regime envisioned would “mak[e] people realise that...[in addition to being responsible]...for the possible negative effects of their operations...on other people’s health or property...they are also responsible for possible consequences of their acts with regard to nature. This expected change of attitude should result in an increased level of *prevention and precaution*” (emphasis added).⁷³ Moreover, it would encourage public interest (environmental and consumer) groups to commence actions directly against defendants “as if [they] were taking over the role of the public authority for the specific case...where the public authority is thought to be in default.”⁷⁴

If the precautionary principle became U.S. law, it would shift the legal burden of proof from government to industry by requiring that industry produce a sufficient quantity of testing evidence that *also* qualitatively persuades government regulators of a product or substance’s ‘safety’ or ‘harmlessness.’⁷⁵ In essence, industry must overcome a higher threshold of persuasion than that currently called for in civil litigation within the U.S. (i.e., ‘proof beyond a reasonable doubt’, as found in U.S. *criminal* litigation, rather than ‘proof by preponderance (or balance) of the evidence’). “Precaution means, in effect...that one is guilty until proven innocent when tampering with the environment in...[potentially]... risky ways.”⁷⁶ This would, in effect, create a rebuttable presumption (an inference) of negligence in favor of the plaintiff with merely the presentation of circumstantial evidence of the defendant’s failure to act reasonably, consistent with the disputed legal doctrine of *res ipsa loquitur*.⁷⁷

One need only look to the proposals contained within the EU Commission’s Green Paper on Products Liability — (which reviewed how an earlier EU Directive on Products Liability had been implemented in the Member States) — to see how the precautionary principle would likely impact producer liability in U.S. tort litigation:

One of the proposals says that if the plaintiff proves that he has been hurt and that the product is defective, causation should be inferred. The burden should be on the defendant to show that his product *didn’t* cause the harm. There has not been anything exactly like this in the United States. There is a

doctrine called *res ipsa loquitur* which allows circumstantial evidence to be used to infer defectiveness of a product, and sometimes logical contortions have been made to jump over causation issues, but that proposal has never really taken root.[A] young professor from England who was championing this proposal...said, "We need this change because we do not have adequate provision for discovery from defendants. We do not have the system that you have in the United States where, in a personal injury case, a victim can obtain relevant documents from the defendant. So in light of that, let the defendant prove that his product didn't cause harm" (emphasis in original).⁷⁸

Moreover, American technology developers, product manufacturers and designers and substance formulators would be prevented from claiming that they had exercised reasonable care by following then-prevalent 'customary industry practices',⁷⁹ or 'state-of-the-art' technical/scientific standards when responding to a products liability or toxic tort action based on negligence or strict liability.⁸⁰ The so-called 'state-of-the-art' defense provides that, "There is no liability for the producer if the state of scientific or technical knowledge at the time the product was marketed made the defect in the product undiscoverable."⁸¹

As the EU White Paper on Environmental Liability (2000) indicates, however, although the 'development risk' defense (or, at least, one part of it) was previously provided for in Article 7(e) of the EC Products Liability Directive, political pressure later mounted to abolish it, consistent with the precautionary principle.⁸² The prior 1999 Green Paper on Products Liability had also "proposed abolishing the *development risk defence*..."⁸³ Apparently,

Back when [that] code was established, there had been "a very strong feeling that manufacturers of products should be liable even if they neither knew nor could have discovered a risk, particularly with respect to pharmaceuticals and chemicals. On the other hand, people from those industries and others said it was unfair to impose liability on a producer that neither knew nor could have discovered a particular risk. It would deter innovation and willingness to put new products on the market, particularly in the pharmaceutical area. In Europe they sort of split the baby. They put a development risk in the code, but said if a certain country didn't like it they didn't have to take it. Most of the countries adopted the development risk defense, and it continues to be under attack with the same fundamental policy issues."⁸⁴

Following removal of this defense, producers would again be held liable “for defects in their product that could not be discovered at the time the product was marketed.”⁸⁵ Since this defense incorporates economic cost-benefit analysis, its loss would systematically predispose the legal and economic outcome of tort cases in favor of plaintiffs, and thereby stifle innovation.⁸⁶

The duty to exercise ‘precaution’ during the course of one’s activities to the extent they involve a *foreseeable risk to foreseeable parties* seems already firmly entrenched within the U.S. case law on negligence. In addition, courts have imposed on parties a duty to exercise precaution to prevent the negligent acts of third persons from causing *foreseeable* harm to others, especially if serious risks of harm are likely to occur. The adoption of the precautionary principle by U.S. federal and state regulators, however, would arguably serve to overrule U.S. case law. It would extend the duty to exercise precaution to new activities and parties for purposes of preventing suspect substances, products and technologies from causing *unforeseeable* harms to the public at large.

The prospect of greater economic and social costs resulting from more prolific regulation and more frequent litigation and damage awards induced by these changes should not be underestimated:

[I]n Europe, little thought is given to the possibility that adding more regulation and liability might not be in consumers’ interests. Obviously, in the case of regulation, *when you increase regulation, roughly speaking, you increase costs and decrease choices, which might not be what the consumers would particularly prefer. Similarly, in the case of liability, Europe has gone through the same trends that the United States has—i.e., a shift towards strict liability over the last fifty years. However, it is not clear that strict liability advances consumers’ interests, and it is not clear that it lives up to its advance billing of cost internalization.* For example, strict liability does not deter any better than fault liability, because you cannot deter what you cannot know or foresee. *Strict liability does of course decrease activity levels, providing less of the products or services that consumers may want. Similarly, strict liability is not particularly good at risk spreading, one of its other principal justifications.* It is basically a very inefficient one-size-fits-all insurance policy.” (emphasis added).⁸⁷

One need only recall the “massive liabilities [previously] imposed on Dow Chemical because of silicon breast implants to see how the changes

in U.S. law called for by precautionary principle advocates will impact the tort liability of American companies. [In that case,] *liability was imposed despite the almost complete lack of evidence meeting traditional scientific standards* that the implants in fact caused the chronic fatigue syndrome and other ailments they were accused of causing” (emphasis added).⁸⁸

One may also refer to the \$253 million⁸⁹ awarded by an Angleton, Texas jury in the recent Vioxx case successfully brought against Merck, *Ernst v. Merck*. The plaintiff prevailed, even though she had arguably failed to meet the negligence standard set by Texas law to prove *causation* – that Vioxx *caused* Mr. Ernst's death,⁹⁰ and although the defendant had complied with statutory and FDA regulatory requirements for testing and labeling and voluntarily withdrew the drug from the market.⁹¹ Rather, this result obtained, according to some media reports, because of the public *perception* that Merck aggressively advertised its product notwithstanding its knowledge of the risks associated with taking it⁹² which, in turn, prompted emotional jurors “to send Merck and the drug industry a message: ‘Stop doing the minimum to put your drug on the market.’”⁹³

According to a *Financial Times* article appearing before the verdict, the Vioxx case should be viewed more broadly as reflecting how drug manufacturers’ failure to reassess the public’s *perception* of risk will likely trump scientific evidence.⁹⁴ Taking this analysis a step further, at least one commentator has noted that, to the extent that medical advances produce more drugs that promote health (i.e., a higher quality of life) rather than extend life (i.e., remove a clearly life-threatening condition), questions about risks and benefits, will be increasingly addressed by politicians rather than scientists, and will, because of their focus on public perceptions, likely result in fewer available medicines.⁹⁵ In effect, this would take away from individuals the very personal decision of choosing to assume the risks for themselves, no matter the costs.⁹⁶

Even without regard to the precautionary principle’s challenges, U.S. manufacturing, refining, extracting, energy and waste-related services companies and their downstream suppliers are already reeling from the current tort litigation ‘lottery’ created by ambitious American trial lawyers. If, then, the Bush Administration is to take the pragmatic approach to tort reform it has advertised, it must also prevent a formal precautionary principle from hijacking American risk regulation and tort law.

Given Europe's aversion to risk, it is not surprising that the EU White Paper on Environmental Liability concluded that the overall economic impact that precautionary principle-based environmental regulation has had on the international competitiveness of European industry, especially small and medium-sized businesses, has been minimal. The Commission has never professed to be knowledgeable about how businesses operate, let alone how difficult it would be for businesses to recover high regulatory, administrative and liability costs in the pricing of their products. What this reaffirms, however, is the enduring political influence of ideological environmental and consumer groups in the European policy-making process. Indeed, a review of other EU Commission documents and the anecdotal evidence provided by European industry tells a decidedly different story.

D. Insurance Costs Related to Development Risk

Insurance law experts also have noted the potentially adverse impact that the precautionary principle would have on the current U.S. insurance system. That system is based on the late nineteenth century social paradigm of 'solidarity-based governance', which has prevailed in the U.S. since the New Deal era. The solidarity approach arose in place of what was then the 'providence' or 'act of God' paradigm.⁹⁷ It sought to address the problem of industrial work accidents by providing truly innocent victims with compensation without regard to assessment of fault. It also promoted the "sharing of risks across society in the name of reducing the overall suffering of the population[,]...recognized accidents as ordinary features [risks] of modern life to be actuarially predicted[,]...and ameliorate[d] systematic losses through technology and [balanced⁹⁸] regulation."⁹⁹ In other words, the solidarity approach "placed great emphasis on scientific knowledge to predict the extent of losses and craft regulatory approaches toward ameliorating them."¹⁰⁰

Precautionary principle advocates seek to replace that system with a new 'safety' paradigm of prevention. The safety paradigm focuses on new types of catastrophic environmental threats that loss spreading and balanced regulation would arguably be unable to address. These include global warming and the potential impact of hazardous chemicals and biotech foods:

In place of the repetitive accidents, e.g., industrial injuries and automobile accidents, the developed world is increasingly politically focused on what Ewald calls ‘the return of disasters’. These new threats, ... advanced technology disasters and medical errors... do not lend themselves to the dominant strategy of solidarity, i.e., compensating victims regardless of fault... [T]he safety paradigm is informed by awareness of the uncertainty of scientific knowledge and the inability to predict certain kinds of catastrophic events. This lends itself to what has been called in environmental policy the ‘*precautionary principle*’ i.e., the notion that when catastrophic losses are possible and scientific knowledge is uncertain the most appropriate risk policy is not to take the risk at all (emphasis added).¹⁰¹

Proponents of this new paradigm dismiss probabilistic risk theory as unreliable to predict and control catastrophic harms in advance. They argue that the actuarial bases underlying risk prevention and control do not apply to certain catastrophic hazards, which, because of their irreversible and/or irreparable nature are fundamentally different than industrial and auto accidents. Such bases require clear, relatively certain and available information upon which risk management decisions can be made, and the legal and social deterrent effect of after-the-fact liability for harm.¹⁰² Consequently, in their view, risk theory cannot provide the “efficient” level of prevention or advanced prediction of future costs of harm necessary to address the financial and social dimensions of uncertain future catastrophic events.

According to at least one insurance law expert, such thinking “threatens a U.S. insurance system that is based on the idea that insurance” involves fixed premiums paid in advance for guaranteed benefits in the event of loss.”¹⁰³ In his opinion, this would precipitate a fundamental systemic change that would entail the incorporation by insurers of ‘post-loss assessments’ into their insurance contracts:

Early insurance arrangements addressed the problem of uncertainty by incorporating post-loss assessments, so that the premiums paid by members of the insurance pool were adjusted to reflect recent losses. The precautionary principle counsels us to return to this old-fashioned approach. Assessment insurance is tailor-made for the uncertainties upon which the precautionary principle rests.¹⁰⁴

This means, in effect, that the cost of insuring against possible future catastrophic losses would no longer be based solely on fixed premiums. Rather, they would also depend on the levy of an additional charge

following the occurrence of an inevitable and non-preventable catastrophic event that is determined based on a final assessment of the resulting damages. And, these costs could conceivably multiply in the absence of a reliable post-loss assessment mechanism, if those who are forced to suffer the losses on their own (i.e., the uninsured) demand that industry be subject to increased liability and/or that government clamp down on entrepreneurial activity via increased regulation.

Considering that government's competence in post-loss assessment is relatively untested, this insurance law expert believes that "the result of clamping down will be a series of expensive Maginot lines against risk, each of which...protect[s] society against a known risk, while doing nothing to protect society from the unknown."¹⁰⁵ It is quite possible, therefore, that "the efforts taken in the name of the precautionary principle may even increase our vulnerability to the unknown."¹⁰⁶

According to this expert, drugs and other health technologies present two cases where the current insurance system's failure to adequately address 'development risk' will ultimately result in greater regulatory and insurance costs. "Development risk [is] the risk that a product will produce a kind of harm that is not foreseeable at the time of design but for which the manufacturer is liable under the principle of strict liability."¹⁰⁷ In his opinion, liability insurers are likely to design insurance contracts covering such activities in a manner that avoids development risk (i.e., through exemptions or limitations in coverage). As a result, the pool of insurance monies available to cover catastrophic losses suffered by society will be correspondingly reduced. If, the partially insured businesses operating within these sectors are then forced into bankruptcy because the catastrophic liability claims they face exceed their policy coverage amounts, there will be even fewer funds available to compensate society's victims for losses suffered as the result of such events.

The real concern, however, is that the public and media hysteria created by successful environmental NGO fear campaigns will exacerbate the losses already suffered, and cause the "uncompensated victims to clamor for criminalization of environmental law and to call for [more] extreme [regulatory] efforts to prevent loss in the future."¹⁰⁸ In the words of French insurance expert Francois Ewald: "The appearance of the precautionary principle is registered in the context of victims who are no longer satisfied with compensation, no matter how large, but who are only satisfied when those responsible are held criminally liable."¹⁰⁹

Other legal academics have proposed an alternative mechanism to facilitate the shift from public risk bearing to private risk bearing (internationalization of potential environmental externalities) called for by the precautionary principle — the requirement of costly assurance bonds.

In application, a bond is a declaration of ex-ante liability rather than the current practice of the burden placed on harmed parties to raise claims ex-post. The bond would be held to compensate those affected by the (ex-ante) immeasurable harm or until the uncertainty of risk had been reduced to commercially viable levels.¹¹⁰

In effect, companies would be obliged to post a bond in advance in an amount equal to the ‘worst case scenario’ losses, in order to later engage in an economic activity deemed by regulators and/or civil society to pose uncertain environmental or health risks. Over time, the bonding level would decline if the presumed losses failed to materialize or the uncertainty factor was reduced. But, in the end, the burden will be placed on all companies “to provide evidence that the expectation of harm has declined and that their capital should be returned.”¹¹¹

According to these experts, bonding serves several purposes:

First and most importantly it pushes incentives ahead in time. Funds are posted ex-ante. Second, bonding is [an] incentive...[different from the threat of litigation and large fines]...compatible [with] making the producer of the risk bear the risk. Third, bonds are insurable creating a market for the risk and reducing the cost on the firm. Fourth, bonding rates are dynamic. As information is revealed, through additional research or post-market surveillance, over time and risks are reduced, bonding levels would be ratcheted down reducing the burden on the firm. Finally the firm adapts its capital plan because of the explicit and ex-ante identification of the risk. Theoretically, the design is to reduce cavalier behavior by the firm without destroying the incentives for innovation.¹¹²

Although multinational corporations could arguably absorb the expense of posting an assurance bond, small and medium sized companies would likely be devastated if compelled to do so. The cost of bonding would likely be disproportionate to the size of most small and medium-sized businesses in terms of employment, sales revenues generated and the contract value of activities engaged in. And, it would also likely consume hard-to-come-by working capital funds that are

indispensable to maintaining essential business operations and employment and a positive community reputation. Once again, one need only look at the evidence to discern how the EU will soon incorporate the requirement of purchasing financial security instruments such as assurance bonds into its ‘polluters pay’ liability directive.¹¹³

E. Insurance Costs Related to Climate Change

Apart from product development risk, the inability of the current insurance system to address many of the uncertain possible future economic and social losses arising from global warming-induced climate change presents another such example. The consulting arms of international reinsurance companies such as Munich Re, Swiss Re and Marsh McLennan are busily advising multinational companies of the need to mitigate their potential exposures to environmental liabilities and financial costs surrounding climate change risks. At least one American academic has estimated that “\$2.7 trillion of the \$10 trillion U.S. economy is susceptible to weather-related loss of revenue, meaning that an enormous number of companies have ‘off-balance sheet’ risks [unaccounted for in a financial accounting sense] related to climate. This could wound corporate America in a lot of ways, particularly as insurance companies discover this new area of risk.”¹¹⁴

A closer look at European reinsurance company activities reveals what they are after. They are seeking to avoid or mitigate their own liability for possible future direct and indirect reinsurance losses to which they are subject under their current insurance and reinsurance contracts, just as they are seeking to do with respect to development risk. Initially, this can be accomplished by spreading the potential insurance and financial risks and higher related costs to their American competitors, and ultimately to their American clients. European reinsurers can also hope to influence human settlement patterns and catastrophe risk management practices through risk-adequate insurance rates.¹¹⁵ “Risk-adequate insurance rates and conditions may serve as an incentive to encourage loss prevention and guarantees the financial compensation for catastrophe losses.”¹¹⁶

For example, European reinsurance companies have sought to reduce their primary insurance and reinsurance property and casualty coverage of new policies that secure existing or newly planned commercial and residential real property assets located along densely populated, storm-prone European and U.S. coastlines. These limited and reduced coverage policies are likely to negatively impact property development, reduce the pool of available insurance funds, and drive up national and

regional insurance rates beyond the reach of many European and U.S. property owners. As a result, remaining owners will then be forced to bear catastrophic losses from natural disasters on their own (with limited or no insurance), and, arguably this will lead them to demand immediate government action to cover their losses. That action will likely entail holding greenhouse gas polluting' industries responsible for their past GHG emissions pursuant to a precautionary principle-based strict liability regime, and governmental enactment of stringent hazard-based regulations to restrict GHG emissions in the future. Consider:

Most policies covering natural disasters are renewable on a yearly basis. When risks become too expensive, insurers can simply walk away...If climate change starts inflicting losses, insurers will again head for the exits. Just such insurer flight has already caused problems in North Carolina's Outer Banks and in parts of New York's fabled Hamptons, [let alone along the Florida coastline] where coastal storms are eating up homes and businesses. When insurance companies quit these high-risk places, the burden shifts to banks. But they don't have the same freedom simply to cancel mortgages and loans. What will happen to the markets if banks start demanding insurance for weather-related events that is either prohibitively expensive or completely unavailable?¹¹⁷

As noted above, the projected increases in insurance costs derive from both direct and indirect risk sources. Direct risks include climate-related physical impacts, interruptions in production, changes in market demand and changes in market supply and/or production costs. Indirect risks include GHG regulatory costs, negative impacts on company reputation and the risk of litigation.¹¹⁸ The German reinsurance industry has estimated the potential market value of both types of risks to be between \$ 210-915 billion globally, and for this reason, has recommended that climate-related risks be included in company debt ratings.¹¹⁹

However, because "it is difficult to quantify the actual and future [long-term] impacts of climate change on catastrophe losses", European reinsurers have focused their attention instead on the more expensive shorter-term indirect risks. Even before the EU GHG emissions trading regime entered into force in January 2005, *regulatory risks* had been identified as the most significant:

Given the magnitude of the EU scheme and the potential pace of introduction – one might note an implementation time of less than 5 years in the EU – in combination with a lifetime of

over 40 years of technical equipment in several sectors, GHG emissions should be assessed as risks in other nations as well...The allocation of allowances to installations covered by the emissions trading scheme equals the setting of emission targets and is thus one of the most crucial aspects of the design of the EU-ETS. *Installations emitting more than they can 'pay' with allowances face substantial financial penalties: 40 euro per excess ton of CO2 from 2005-2007, and 100 euro per excess ton of CO2 equivalent in the period 2008 – 2012...Monetary impacts on companies may occur in the short-term due to price fluctuations for CO2 allowances and/or mitigation credits (emphasis added).*¹²⁰

And, predictably, European reinsurers have discovered additional indirect insurance risks necessitating new insurance products that will ultimately be subject to coverage limitations. For example, they have alerted corporate directors and officers of the growing risk that they may be subject to liability from shareholder derivative suits for failing to effectively manage their company's carbon emissions consistent with GHG emission regulations.

Indeed, Swiss Re was reported to have “announced in 2002 that it would withdraw liability coverage from executives at companies that fail[ed] to adopt adequate climate change policies.”¹²¹

Furthermore, these companies have endeavored to generate new demand for renewable energy and less carbon-intensive energy sources and promote new insurance and investment vehicles (or hybrid products) which their affiliates can underwrite, invest in, and/or finance in support of sustainable development.¹²²

These companies have sought to render consulting services to multinational companies that focus on carbon risk mitigation and consumer ‘carbon branding’. Such services have been advertised as providing companies with the means to develop an internal governance system to reduce and offset their GHG emissions regulatory requirements.

F. D&O Liability and the Business Judgment Rule

It would appear that, through their words and deeds, international reinsurance companies are putting their multinational clients on notice about the potential D&O liability they may incur under U.S. common law because of their directors’ and officers’ actions *or* inaction. Such ‘covered’ liability could be triggered, for instance, as the result of a

board's gross negligence in rendering a business decision. Alternatively, it could attach as the result of a board's failure to remain adequately informed of and attentive to available and relevant information which could help it to decide how to mitigate company environmental litigation and regulatory risks, such as those that may be related to global climate change.

These reinsurers may also be admonishing companies that their D&O policies may, in the future, no longer cover director liability for breaches of the fiduciary 'duty of care'. For example, they may decide to raise premiums or to limit or exclude coverage whether or not a company director or officer directly and personally participated in the commission of a tortious or illegal act in the course of fulfilling company responsibilities (e.g., a violation of an environmental statute). However, reinsurers will recognize that legal liability for such violations will not usually attach as the result of poor or negligent business judgment (and D&O coverage triggered), unless there is direct officer or director involvement in the suspect act and a failure of board oversight.¹²³ One need only review and analyze the current U.S. case law surrounding the Comprehensive Environmental Response, Compensation, and Liability Act ('CERCLA'¹²⁴) to see through these warnings about the broadening scope of director, and hence, corporate liability. However, as with other areas of U.S. law, the current case law in this area is in the process of evolving and should be closely monitored.¹²⁵

What these reinsurers may also be saying is that the corpus of available and relevant information for which directors and officers of public companies should be held responsible in the future will include knowledge of the myriad activities conducted by their many small and medium-sized suppliers/contractors/agents. Companies have already been held responsible for their failure to systematically monitor U.S. federal environmental statutory violations committed by their subsidiaries about which they should have been aware.¹²⁶ Thus, according to these reinsurers, it would not be illogical to extend this information-gathering requirement so that it encompasses a review of *all* company supply chain activities. In their view, this would motivate companies to develop and implement internal governance systems that can track and promote more environment-friendly supply-chain management practices consistent with sustainable development. In other words, it would force multinational companies to dictate how their small and medium-sized suppliers should conduct their daily business operations.

Pursuant to such a requirement, directors and officers would also need to remain attentive to and ‘enlightened’ about emerging foreign regulatory trends and product standards, policies, and proposals, and to keep current regarding the status of ongoing intergovernmental regulatory and standards processes. D&O liability could thus arise in the absence of such knowledge, where it is shown that the board’s inattentiveness or indecision prevented it from taking measures to reduce company climate change risk which, in turn, results in regulatory violations and a significant economic loss to the company. This would include failures to consider foreign environmental regulations such as the recently implemented EU GHG emissions trading and polluter’s pay liability regimes, as well as, any U.S. state and regionally (e.g., Northeast State) imposed *or* proposed GHG emissions cap legislation.

Furthermore, precautionary principle advocates and environmental investors seeking more corporate accountability would like to extend such a broad knowledge mandate to other company activities deemed intrinsically hazardous to human health or the environment – even in the absence of scientific proof of possible harm. By putting companies on notice about the potential hazards posed by their continued production and/or use of chemicals deemed hazardous and the products containing or processed with them, or by pharmaceuticals, cosmetics or genetically-modified organisms (‘GMOs’), a board would be hard pressed not to establish an extensive internal process of information-gathering. Under penalty of potential liability, they would have to engage in a regular pattern of decision-making that would raise issues related to product design, manufacturing, servicing, reclamation, recycling and/or disposal (i.e., product stewardship in the auto, appliances, electronic and electrical equipment and computer industries).

In each case, if director ignorance, inattentiveness or indecision results in a failure to consider and/or act against potential future regulatory liability and related economic loss, corporations, directors and officers could not rely on the ‘business judgment rule’ (‘BJR’) as a legal defense. This would appear to be precisely the message that private ‘sustainability’ indexed and mutual funds,¹²⁷ and socially and environmentally focused state pension and investment funds have been endeavoring to convey¹²⁸ through their filing of shareholder resolutions.¹²⁹

Decisions of this type, even if they result in liability, however, have traditionally fallen within the province of the business judgment rule. Pursuant to this common law doctrine, courts have typically deferred to the business judgment of directors, as long as they *acted* in good faith,

with loyalty to the corporation and on an informed basis (with care).¹³⁰ “Although the [BJR] comes into play with respect to all three, it is most intimately associated with the duty of care.”¹³¹ If applicable, the BJR can serve as a defense to reduce director liability for mismanagement and breach of their duty of care. Implicit within this defense is the recognition that not all director decisions will benefit the corporation or appear to be prudent. Courts will not second-guess business decisions by directors *provided the directors follow appropriate procedures in making the decision*.

The Delaware Chancery Court, in a recent decision, declined to spell out the minimum level of deliberation a board would need to undertake to demonstrate fiduciary ‘good faith’, but it did state the following:

As long as the Board engaged in action that can lead the Court to conclude it did not act in *knowing and deliberate indifference* to its fiduciary duties, the inquiry of this nature ends. The Court does not look at the reasonableness of a Board’s actions in this context, as long as the Board exercised *some* business judgment (emphasis added).¹³²

This ruling is likely to disappoint social and environmental activists and investors who seek not only to require that appropriate corporate governance mechanisms ensure that directors consider the issue of climate change, but also to require the method those directors use to assess and address that risk.¹³³ However, it will not likely stop them from trying to influence corporate decisions. In fact, one group has gone so far as to allege that a board’s failure to agree with and act upon the IPPC’s ‘objective’ assessment of the science on climate change, amounts to a failure in corporate governance.¹³⁴ Another group has argued that a board’s failure to view climate change risk through the prism of a fiduciary investor, i.e., with environmental performance in mind, impairs shareholder value, and thereby violates directors’ fiduciary duty of care to shareholders.¹³⁵

According to a recent *Boston Globe* article,

‘Green’ mutual funds, pension-fund managers, and religious investors are successfully pressuring energy companies to disclose emissions of greenhouse gas, set reduction targets, and predict how tighter regulations could affect the bottom line...In the latest development, Ford Motor Co. is expected to disclose...that it will be issuing a comprehensive report this year examining the business implications of reducing

greenhouse gas emissions in exchange for withdrawal of a shareholder resolution...Meanwhile, activists have obtained agreements from ChevronTexaco Corp. and American Electric Power Co. to name some of the largest, and they have set their sights on the upcoming annual meetings of ExxonMobil Corp. and General Motors Corp....‘This is not about progressive politics or conservative politics. It’s not an activist campaign as much as it’s a fiduciary duty to assess financial risk,’ said Mindy Lubber, executive director of CERES...These tactics lie at the opposite end of the environmental protest spectrum from strategies like camping atop giant redwoods and unfurling Greenpeace banners on skyscrapers. Investor activists use shareholder resolutions at the annual meetings of big corporations in a bid to leverage change...The resolutions on global warming are part of a significant increase overall in shareholder actions aimed at pressuring big corporations, a trend fueled in large part by post-Enron demands for greater boardroom accountability.¹³⁶

What is not spoken of is that investors are free to invest in any company whose financial and operating performance will yield them superior financial or non-financial returns. If investors don’t like a company’s environmental, health and safety performance or management style they can refuse to invest in it and choose another company. But, to say, as Ms. Lubber and the other investor-activists do, that this is not about environmental activism but rather fiduciary responsibility, is at most an appeal for continued economic extortion of brand/reputation. Fortunately, with a little investigation, it is not hard to see through the disguised social and environmental agendas of these global governance-minded groups. Simply stated, they are not merely interested in investing in specific companies. Rather, much like the EU regulators they wish to impose their cultural preferences on *all* U.S. public companies, shareholders, customers and suppliers throughout the global supply chains.

G. The Encroaching Sarbanes-Oxley and SEC Disclosure Rules

As previously discussed, the business judgment rule focuses mostly on ensuring that the necessary information gathering processes and internal governance systems upon which boards may rely to make informed business decisions in the best interest of corporations and their shareholders are put into place. It does not address the kinds of information that the board should deem relevant for consideration or the substance of board decisions based on that information. It also does not

address whether the board need disclose such information to shareholders.

The Sarbanes-Oxley Act, a federal statute, instead looks to the kinds of information that boards must consider (e.g., corporate ‘risks’), and requires companies, as a matter of corporate governance, to publicly disclose the impact of such risk information in their periodic company financial statements. As two legal experts have noted, it requires the board, as part of its internal governance function, to:

[F]orm a risk management committee of independent directors to supervise *disclosure of risks* in all SEC-filed documents. *These risks should include any identified or unidentified environmental liabilities that the company’s business entails...*[And, it] requires the CEO and CFO to certify every periodic report that includes financial statements...impos[ing] criminal fines...and prison sentences...for knowing violations ...In response companies have set up internal controls to guarantee that CEOs and CFOs will learn of all environmental matters that require disclosure.¹³⁷

This is precisely how reinsurers like Swiss Re perceive climate change, namely, as a risk management (and a business reputation) issue that boards must address as a matter of corporate governance. This view is not too dissimilar from the view taken by corporate social responsibility and environmental advocacy groups such as the Rose Foundation.

According to the NGO Corporate Sunshine Working Group, “While the Sarbanes-Oxley Act did not create any specific new environmental or social disclosure obligations, the increased care and attention now given to SEC reporting may increase the quality of reporting generally, and thus indirectly promote better environmental and social disclosure.”¹³⁸ However, social and environmental groups that support the precautionary principle are not yet satisfied that Sarbanes-Oxley and current SEC disclosure rules go far enough to ensure a ‘true and accurate’ financial accounting and disclosure of existing *and potential* corporate environmental liabilities.

In fact, these groups are largely behind the corporate accountability movement, which seeks to make SEC financial disclosure rules more stringent and transparent. Their goal is to discern which companies and supply chains are taking appropriate measures to address climate change risk for purposes of targeting future disparagement campaigns and shareholder resolutions against them.¹³⁹

VI.

EUROPEAN INDUSTRY'S EXPERIENCE WITH HIGH COST PRECAUTIONARY PRINCIPLE-BASED REGULATIONS

A. Overall

One need only consider European industries' experience with the broad legal obligation 'to do no harm' in order to better understand what is really at stake for American companies should the precautionary principle become an international legal standard and even U.S. law. As previously discussed, European companies had been able, for a long time, to persuade regulators in many Community Member States to allow a "strategy of 'best available techniques not entailing excessive costs' (BATNEEC)... [However, over time, this] cost justification element [was] steadily restricted. [Currently,] if the technology is available, or can be developed in a reasonable time, [the currently prevailing view is that] it should be deployed" *whatever the cost*.

The administrative, financial and legal burdens imposed by EU precaution-based environmental regulations are cumulatively equivalent to a hidden business tax that, as of 1999, constituted as much as 15% of the new capital invested by certain European industry sectors. These costs are likely to comprise a much higher percentage of such funds in 2005. Unfortunately, as European businesses eventually discovered, they could not assume that the increased costs of design, retooling, production and waste disposal they incurred as the result of precaution-based regulations could be passed along the supply chain unnoticed to their business customers and to their ultimate consumers. In other words, they found that they had to be internalized (i.e., self-absorbed), especially during lean economic times. Consequently, the profitability, competitiveness and viability of European small and medium-sized enterprises ('SMEs') have been severely threatened.

The Financial Times recently described the negative impact that generally higher European labor and precaution-based environmental regulatory costs have had upon German corporate research and development investment:

About half of all German companies which invest in research and development abroad [e.g., central and eastern Europe, Asia

and North America] have been reducing their research capacities at home...The shift of highly qualified R&D jobs is strongest among companies that have moved production capacities to low-cost labor markets and leads to an 'off-shoring' spiral...Nearly one in five German companies said they would move R&D jobs abroad during the next three years...66 percent of companies with more than 1,000 employees said the investments were intended to support their production capacities abroad...While the increased availability of cheap qualified labor was clearly a factor in off-shoring...*industry-averse legislation, both at the EU and the national level, continued to drive entire value chains away from Germany. Business leaders have been particularly critical of a German bill that sets some of the strictest limitations in Europe on the growing of genetically-modified crops, and of plans by the European Commission to raise safety standards for the chemicals industry* (emphasis added).¹⁴⁰

B. Forest-Based Industries

Indeed, the EU Commission has determined, for example, that, far from enhancing the competitiveness of Europe's forest-based industries, the relatively higher cost of precautionary regulation, when coupled with higher related energy and labor costs, actually made these companies *less* competitive globally. This was revealed in a report issued by the Commission during 1999:

...Environmental, fiscal, energy, or labour related measures, both at EU and national levels, affect the actual cost level of the input factors as well as the technology based investments...legal measures, in particular, in the environmental field, often form a major challenge for the sector. *Environmental obligations are still seen more as a cost increasing factor than as a factor to enhance competitiveness...It should be noted that today as much as 15% of the new investment in the FB-IND [forest-based industries] is directed to meet environmental targets. The corresponding figure in competing regions is lower*" (emphasis added).¹⁴¹

...The effects of globalization have been seen in the increased worldwide procurement of raw materials such as wood and pulp and in the intensification of world-wide trade in forest-based products...[I]t increases pressure within the EU through low cost imports, which affect, in particular, the products with a low value-added, e.g., sawn wood, certain wood-based panels and pulp industries...[T]he EU FB-IND faces competition from countries where social and environmental

standards, concern for sustainable forest management, health and consumer protection...and hence production costs are at a lower and, in some cases, far lower level. The Community industry is increasingly challenged by the new low cost competitors from Asia...[and]...Latin America...This has caused the EU FB-IND to lose market shares, both within and outside the EU...¹⁴²

Consequently, many European businesses have chosen to relocate their operations abroad to less costly and burdensome jurisdictions, especially developing countries.

C. Pharmaceuticals and Life Sciences

Similarly, in the case of the high-tech European life sciences sector, greater EU research and development, clinical testing and regulatory authorization costs have primarily contributed to higher pharmaceutical production costs and lower pharmaceutical industry profitability. And, when combined with European national laws constraining pharmaceutical prices and profit margins,¹⁴³ these costs have posed a serious obstacle to maintaining the competitiveness of European pharmaceutical and biotech products.

As a direct result of these higher costs and profitability constraints, European pharmaceutical companies have found it increasingly difficult to attract the investment capital necessary to fund their research and development activities, and consequently, have had to curtail such spending. As a result, this sector has been placed at a further competitive disadvantage vis-à-vis US companies.

*In 1960-65, European companies invented 65% of new chemical entities (NCEs) placed on the world market, but by the end of the 90's, this share had fallen to about 35%. The latest data available (period 1999-2003) show the predominance of the United States which has now become the leading inventor of new molecules in the world (emphasis added).*¹⁴⁴

In the absence of public (fiscal or tax) incentives to support pharmaceutical R&D and strong intellectual property right protections, European companies, during the past decade, began shifting their intellectual property-based research and development departments/operations to more business-friendly and relatively lower cost jurisdictions, particularly the U.S.¹⁴⁵

This, in turn, has had a dangerous ‘chilling effect’ on European industrial and technological innovation and it has cost European pharmaceutical companies their competitive position.

[T]he *sales* of major innovative products by the US multinationals have increased more significantly than those of the European multinationals in the 1990s. Moreover, big European corporations seem to *lag* somewhat behind in their ability to produce and above all sell, new, innovative, best selling drugs...The US advantage and the emergence of a process of deteriorating competitiveness in Europe have been emphasised and deepened by the advent of the molecular biology revolution. The competitiveness of the US system seems to be largely related to the extensive exploration of new technological opportunities... Particularly, Europe has not really given rise to a full fledged industry of innovation specialist companies and technology suppliers like in the US. (emphasis added).¹⁴⁶

D. Chemicals and Downstream Industries

The European chemicals sector, appears to be at a comparative disadvantage relative to the U.S. chemicals industry, due to both higher regional energy costs (triggered, in part, to the anticipation surrounding Kyoto Protocol emissions caps) and the likely adoption of costly European precaution-based chemical regulations (‘REACH’).¹⁴⁷

Indeed, in December 2002, the Federation of German Industries – Bundesverband der Deutschen Industrie e.V. (‘BDI’) representing all manufacturing industries in Germany – published an economic impact study analyzing how the proposed REACH regulation would affect the German economy. Its assessment concluded that considerable production and job losses in all of German industry – not just in the chemicals sectors – would result.¹⁴⁸ The original study forecasted a worst case scenario: production losses of 20.2% and job losses of 2.3 million. This estimate was accompanied by an economic impact assessment performed by the French chemicals industry. It reflected that the cost of compliance would be between 29 and 54 billion euros over a ten-year period. The estimate, furthermore, projected a 1.7-3.6% decrease in French GDP over such period, along with a 2% rise in unemployment.¹⁴⁹

These studies were subsequently revised (slightly downward) as the REACH provisions were reworked following receipt of industry comments. BDI, for example, released its first supplemental report during September 2003. By any reasonable measure, the economic

impact of the REACH regulation on German industry, even in its reworked form, remained significant. The revised study reflected the following:

[T]he EU Chemicals policy would cost the German economy 4.7% gross value added, if the text presented by [former] Enterprise Commissioner Erkki Liikanen and [former] Environment Commissioner Margot Wallstrom in May [2003] would become law. This effect would translate into a loss of 1,735,000 jobs. *The main reasons for this effect are the costs imposed on industry by bureaucratic procedures, loss of innovation and competitiveness* (emphasis added).¹⁵⁰

A second supplemental report was released during April 2004.¹⁵¹ It analyzed the impact of REACH on several EU member state (French, Italian and German) economies as well as on the EU regional economy. It cited an April 2004 French study, which concluded:

[T]he industry in France will potentially experience a decrease of 1.6% of Gross Domestic Product...after a time period of 10 years. This decrease correlates with the loss of 360,000 working places (1.5%) in France over the same time period...The study forecasts a decrease of value-added over the next ten years [of] 6.8% for the chemical industry and 8.3% for [the] plastics and rubber industr[ies] – both values refer to France...[T]hose segments serving the end consumer (formulators as well as producers of cosmetics, soaps and detergents) will suffer most...The high risks for production losses are based in significant losses in competitiveness mainly driven by loss in innovative power. *Both sub-segments of formulators and producers of cosmetics, soaps and detergents are significantly dominated by SMEs* (emphasis added).¹⁵²

It also cited a February 2004 Italian study:

The Italian study estimates the influence of the new legislation on the different Italian industry sectors by defining the vulnerability index. This index is developed on the basis of three issues: pressure on EBITDA, competitiveness vs. extra EU 15 countries, and the elasticity factor cost/price. [The] higher the index, [the] more the industry sector considered will suffer: Leather and leather products - 100%; rubber and plastic products – 78.8%; textile and textile products – 69.8%; paper, publishing and printing – 60.9%; transport equipment – 47.9%; wood and furnishing – 45.1%; basic metals and fabricated metal products – 36.3%...The study concludes four

sectors being very vulnerable: leather and leather products, rubber and plastic products, textile and textile products and paper, publishing and printing...[As concerns the impact on the Italian chemical industry sectors,] [t]he analysis indicates as high risk segments those areas being in the fine and specialty segment or nearby the end consumer: organic fine chemicals, dyes and pigments, other fine chemicals, paints and varnishes.¹⁵³

With respect to the German economy, the report predicted an overall gross added-value loss between 2.7% and 3.3%, which translates into projected job losses of between 1 million and 1.23 million.¹⁵⁴

And, concerning the overall impact of REACH on the regional EU-15 economy, it found the following:

[T]he potential decrease of gross added value of the [downstream] manufacturing industr[ies] is 12.6%. This decrease is higher than that estimated for Germany with 10.6% [because]...in comparison to Germany, the industry sectors of chemical industry, paper, publishing and printing as well as the textiles and leather sector have a significantly higher contribution to the overall gross value added...[As] regards the Chemical industry...the potential production losses for [the] base and fine & specialty chemicals...segment [is] 25%[:] end consumer chemicals industry, excl. pharmaceuticals [is] 50.7%[:] [and] rubber industry 44.6%. All three sectors are heavily burdened by the new legislation by high production volume in Europe being at risk.¹⁵⁵

As a result, the EU chemicals sector is unable to maintain sufficient research and development spending within the European region and has increasingly relocated plant, equipment and R&D to less costly developing countries such as China.¹⁵⁶

Arguably, all of this has likely contributed to what U.S. government experts now refer to as an ‘innovation paradox’ and a ‘brain drain’ within Europe that has likely exposed European society to potentially greater public risks and economic hardships than those originally perceived.¹⁵⁷

Lastly, European industry is currently suffering the costs of meeting stringent EU greenhouse gas emissions trading regulations that will increase their already exorbitant regional energy costs. These regulations recently went into effect to implement EU regional and member state Kyoto Protocol obligations. Experts have calculated that “the EU’s

emissions trading plans *will increase electricity costs by up to 40%, hurting businesses and consumers alike*” (emphasis added).¹⁵⁸

VII.

PRECAUTIONARY PRINCIPLE-BASED REGULATIONS PROPOSED AND ADOPTED IN THE U.S.

A. General

During July 2004, *The New York Times* reported about the growing collaborations taking place between the American and European environmental and social responsibility movements. It noted how American groups are devoting substantial financial and human resources to European-based fear campaigns that intimidate Brussels Commissioners and Parliamentarians, sway European public opinion, threaten the reputations of non-environmentally or socially conscious businesses to ensure the enactment of legislation based on the precautionary principle. Ironically, European governments and the EU Commission have funded many of the campaigns that have challenged their credibility.¹⁵⁹ According to the *Times* article, these non-governmental organizations (NGOs) are now using the stricter precaution-based European regulations as a lever/platform to promote similar regulatory change in the U.S.¹⁶⁰

The existence of such a movement was further described within a September 2004 editorial appearing in the activist periodical, *The Multinational Monitor*. In fact, it effectively called upon environmental and consumer advocates to counter American business’ resistance to these overtures and to take direct action in order to enshrine the precautionary principle within U.S. and international law.¹⁶¹

Apparently, this movement, assisted by activist American think-tanks and politicians, had been active but undetected in the U.S. throughout the 1990s. However, since then, it seems to have gathered significant momentum. As the following discussion demonstrates, precautionary principle advocates are aggressively taking direct action by introducing legislation and initiating legal challenges at the local, state and federal levels.

B. Sector-Based State and Local Legislative Initiatives

1. Hazardous Substances and Waste Product Disposal

A number of state legislatures have enacted or otherwise reviewed precautionary principle-based proposals seeking to ban or severely restrict the use and disposal of hazardous waste substances consisting primarily of electronic waste ('e-waste' – scrap metal and plastics), batteries and brominated flame retardants used in fire extinguishers, and in the manufacture of clothing and furniture. However, in both cases, precautionary principle advocates have, like their European patrons, failed to provide specific scientific evidence of public risk exposure or to offer any viable commercial alternatives to replace such products.¹⁶²

In the case of e-waste, for example, they have even failed to inform the American public how most such waste is not currently placed in American landfills, but instead, actually exported from the U.S. by waste disposal industry intermediaries to a number of eager Middle Eastern, Asian and Southeast Asian developing countries. Those countries view e-waste as financial currency, and they require high volumes of such waste in order to develop the economically and environmentally efficient technologies necessary to safely process it within their borders. They also depend upon such imports and the expansion of their waste disposal and related industries to build and sustain their national economies and societies – i.e., to enhance their citizens' quality of life and well-being, and to gain for themselves a comparative advantage in international trade.¹⁶³ This raises an important question: Are these advocates ultimately intending to follow the European path toward erecting new foreign trade barriers that seek to deny developing countries the ability to develop their own waste processing technologies by retaining the waste for safer processing within the U.S.?

•2003 Legislative Proposals and Enactments: E-Waste

The State of California, for example, has adopted two precaution-based pieces of legislation that are modeled after similar EU regulations. During August 2003, California enacted AB 302, which banned two of the three poly-brominated diphenyl ether (PBDE) flame retardants that are used in plastics and foams.¹⁶⁴ The European Union imposed a similar ban during 2003, to take effect during August 2004.¹⁶⁵ According to the

National Electrical Manufacturers Association ('NEMA'), "[t]his is the first instance of a legislature in the U.S. passing a provision from the European Union waste directives that were enacted last year."¹⁶⁶ On September 21, 2004, the California legislature accelerated the phase-out date called for by this bill from January 1, 2008 to January 1, 2006.¹⁶⁷

During September 2003, California also adopted the Electronic Waste Recycling Act of 2003 ('SB 20'). Modeled after the EU RoHS and WEEE Directives, the California law aims to reduce the amount of hazardous substances used in certain electronic products sold in California and to collect an electronic waste recycling fee at the point of sale of certain products. The law also establishes environmentally preferred purchasing criteria for state agency purchases of certain electronic equipment.¹⁶⁸ The law expressly covers cathode ray tubes ('CRTs') and flat panel displays ('FPs') measuring greater than 4" diagonal. It perhaps also applies to CRTs and FPs contained in cars, medical devices, heavy industrial commercial equipment, PDAs, Gameboys, microwaves, after-market in-dash GPS monitors, and printers.¹⁶⁹

This bill's introduction was likely inspired by the prior success achieved by environmentalists within the State of Massachusetts. "On April 1, 2000, Massachusetts became the first state to ban the dumping of electronic equipment into landfills and incinerators."¹⁷⁰ Apparently, Massachusetts believed that many people were going to replace their old TVs and computer monitors (which featured lead containing cathode ray tubes used to reduce electromagnetic radiation) with the more popular flat paneled high-definition televisions and flat panel computers.¹⁷¹

During 2003-2004, more than half of U.S. state legislatures considered Euro-style proposals to mandate some kind of 'e-waste recycling'. In at least ten states, legislative proposals sought to impose a state-wide 'advance recovery fee' on consumer purchases of cathode ray tubes to finance state collection and recycling of such items. In a half dozen states, legislation was introduced requiring retailers and/or manufacturers to establish collection points for discarded electronics. And, in at least four states, legislative proposals sought to mandate 'take-back' and recycling of 'e-waste.'¹⁷²

Arguably, Maine's 121st legislature (2003-2004) was the first in the nation to enact a law mandating e-waste 'take-back' and recycling for businesses modeled after European law.¹⁷³ While this law provides that "municipalities, consolidation facilities, manufacturers and the State share responsibility for the disposal of covered electronic devices", it

nevertheless requires manufacturers to “develop a plan for the collection and recycling or reuse of computer monitors and televisions” and holds “manufacturer[s]...responsible for all costs associated with the development and implementation of the plan. If the costs are passed on to consumers, the costs must be imposed at the time of purchase and not with a fee imposed at the end of life of the computer monitor or television at manufacturer expense.”¹⁷⁴

•*2004 Enactments and Executive Orders: E-Waste*

On September 29, 2004, California became the first state to enact a cell phone collection law. California State assembly member Fran Pavley, the bill’s author, was also the author of 2002 California regulations requiring the development and adoption of the nation’s first greenhouse gas emission reduction standards for automobiles. The new law requires every cell phone retailer to have a system in place to collect used phones by July 1, 2006.¹⁷⁵

•*2004 Enactments and Executive Orders: Polybrominated Diphenyl Ethers (PDBEs)*

During April 2004, Maine adopted proposed bill LD1790, which “prohibits the sale and distribution of new products containing two [PDBEs] [(pentaBDE or octaBDE)] as of January 1, 2006.”¹⁷⁶

During August 2004, New York State enacted AB 10050 and S.7621 (as new Article 37, Title I of the Environmental Conservation Law of New York State¹⁷⁷), effective January 1, 2006. New Article 37 Title I “prohibits the manufacture, process, or distribution of brominated flame retardants, specifically penta- and octa-PBDE,”¹⁷⁸ and authorizes “[t]he Commissioner of Environmental Conservation [to]...create regulations on the maintenance of records [e.g., lists of substances presently *or potentially hazardous to the environment*].”¹⁷⁹

During June 2004, Hawaii enacted HB 2013. The new law, Chapter 332D of Hawaii Revised Statutes, “[p]rohibits the manufacturing, processing, or distribution of a product or flame-retarded part of a product containing more than 0.1% by mass of pentaBDE, octaBDE, or any other chemical formulation that is part of these classifications, on or after January 1, 2006.”¹⁸⁰

Back during 1998, the State of Washington had adopted an administrative policy to phase-out ‘persistent, bioaccumulative and toxic (PBT) chemicals.’¹⁸¹ On January 28, 2004, Washington State Governor Gary Locke signed and “issued an executive order directing the Dep[artment] of Ecology to move forward on phasing out the use of PBDE’s [deemed to consist of PBTs]. And, during March 2004, the legislature approved funding for the Dep[artment]. of Ecology to phase out all three types of PBDE’s (penta-,octa- and deca-).”

•2005 Proposals & Enactments: E-Waste

During 2005, e-waste and cell phone recycling bills were introduced within a number of state legislatures, including those of Illinois,¹⁸² Mississippi, New Jersey,¹⁸³ New York, Vermont and Virginia. “Another New Jersey bill encourages cell phone retailers, distributors and manufacturers to establish voluntary recycling programs.”¹⁸⁴

•2005 Proposals, Enactments & Resolution: PDBEs

On January 3, 2005, Michigan enacted HB 4406 (from the 2003 legislative session), which prohibits the “manufacture, process, or distribute a product or material that contains more than 1/10 of 1% of penta-BDE or octa-BDE...and SB 1458, [which authorizes] [t]he state [to] establish a PBDE advisory committee.”¹⁸⁵

On February 8, 2005, California State Assemblyman Chan introduced AB 263,¹⁸⁶ which would grant rulemaking authority to the California “Department of Toxic Substances Control to administer and enforce [the] ban on PBDE’s” imposed under AB302 discussed above.¹⁸⁷ The new bill specifically authorizes that agency to assess civil penalties of up to \$5,000 against violators of the current California law pursuant to a notification and hearing process. “The bill provides “that each violation of those provisions’ chapter is a separate violation and each day of the violation is a separate violation.” This bill was referred to the Assembly Committee on Environment, Safety and Toxic Materials on February 15, 2005.¹⁸⁸

On January 24, 2005, two new bills addressing PDBEs were proposed in the Hawaii State Legislature (HB 234 and SB 471), which would amend the previously enacted HB 2013 (Chapter 332D of Hawaii Revised Statutes).¹⁸⁹ In particular, the new bills seek to “[g]rant[] rulemaking authority to the department of health for the regulation of

polybrominated diphenyl ethers [PDBEs] for purposes of enforcing chapter 332D.”¹⁹⁰

Also during January 2005, the Washington State Legislature followed up on Governor Locke’s 2004 executive order. It introduced companion bills H.B. 1488 and S.B. 5515, which would prohibit the sale of products that contain PDBEs.¹⁹¹ The bills also provide that “the department of general administration and the department of health shall conduct a stakeholder process to develop *a proposal for a ban* on the use of decabromodiphenylether *in transportation vehicles*, and *a proposal for the ban or management of used and recycled products containing polybrominated diphenyl ethers*” (emphasis added).¹⁹² And, they instruct these agencies to consider “a timeline for a *requirement to label brominated flame retardants sold in Washington...[and]...[to] [g]ive priority and preference to the [State’s] purchase of equipment, supplies, and other products that do not contain polybrominated diphenyl ethers...*” (emphasis added).¹⁹³ During February 2005, a similar bill (S.B. 962)¹⁹⁴ was introduced in the Oregon State Senate.

During February 2005, two similar bills (S.B. 424 and H.B. 2572), entitled, ‘The Brominated Flame Retardant Prevention Act’, were introduced within the Illinois State Legislature.¹⁹⁵ Each would ban the manufacture, processing and distribution in commerce of PDBEs in products or as components in brominated flame retardants, effective January 1, 2006.¹⁹⁶ However, the House bill goes further than the Senate bill which simply calls for the ban to be implemented effective January 1, 2008.¹⁹⁷ In particular, the House bill provides for specific transactional and use exemptions, and expressly states that it would *not* restrict “a manufacturer, importer, or distributor from transporting products containing PBDEs through th[e] State or [from] storing PBDEs in th[e] State for further distribution.”¹⁹⁸ In addition, the bill would impose civil monetary penalties for violation.

On January 13, 2005, a new bill (HB 83¹⁹⁹) was introduced within the Environmental Matters Committee of the Maryland Assembly. It would ban, beginning October 1, 2008, the manufacture, processing, sale, or distribution within the State of any product or flame-retardant containing PDBEs, and would require the Maryland Department of Environment “to report back to certain committees of the General Assembly regarding decaBDE.” The full House adopted the bill with amendments on 2/24/05, and forwarded it to the Senate Environmental Affairs Committee. By April 4, 2005, both the House and Senate had approved the bill.²⁰⁰

On February 24, 2005, a similar bill (HF 1299) seeking to ban the manufacture, processing, sale, or distribution of flame retardants containing PDBEs was introduced within the Minnesota House Commerce and Financial Institutions Committee.²⁰¹

During January 2005, Connecticut State Senator Duff presented a bill (S.B. 785) seeking to ban PDBEs in state commerce by January 1, 2008. The bill was introduced within the Connecticut General Assembly and then referred to the Senate Committee on Environment.²⁰²

Finally, during February 2005, the Montana House and Senate issued a joint resolution “supporting the phasing out of those [PDBEs] that are harmful to humans; support[ing] the testing of the people and the environment of Montana for PDBEs; encouraging the development of alternatives to PDBEs; [and] encouraging the availability of products containing alternatives to PDBEs...”²⁰³

2. *Toxic and High Volume Chemicals*

During 2003, a “group of scientists, public health advocates, labor unions and environmental advocates” introduced a bill in Massachusetts to reduce the use of toxic substances. Based largely on the EU proposed REACH regulation, the bill “would require substitution of 10 priority chemicals where safer alternatives exist.”²⁰⁴ This broad coalition supporting the legislation – the “Alliance for Healthy Tomorrow” – was formed to develop precautionary policies to address toxic substances and other perceived ‘evils’ such as global climate change and genetically modified (GM) food.²⁰⁵

As recently as January 2004, “the California legislature requested that the University of California, [Berkeley] investigate chemicals policy options [including the EU REACH regulation premised on the precautionary principle] for California and recommend a model for adoption” for improving the management and regulation of chemicals within the state.²⁰⁶

Apparently, like-minded environmental advocates from Massachusetts²⁰⁷ have joined efforts with California environmentalists in lobbying their legislators to ‘import’ EU precautionary principle-based chemicals management standards into the United States.

3. *Biotech Foods – State Initiatives*

During the past several years, activists have worked at the state level to oppose the genetic enhancement of the food supply. Proposed legislation has been based on varying rationales, some consumer choice-focused (e.g., notification & labeling), some food safety-focused (e.g., concerning pharma and biopesticide-resistant crops and fish), some environmental focused, and still others economics-focused (e.g., concerning lost organic export trade to Japan and Europe in the absence of GM-free certification). Additional legislative proposals have sought to impose liability on farmers and/or GM seed companies for GM crop contamination. And, more recent initiatives advanced by anti-biotech advocates and organic farmers, which employ a ‘divide and conquer’ strategy, have successfully persuaded some farmers to promote ‘farmer protection’ proposals that effectively place ALL legal responsibility for crop contamination with the seed and drug companies.

•*2003 and Earlier*

Numerous efforts were also made at the state level during 2003 to model new anti-biotech laws and proposals after EU anti-biotech rules. Had a large percentage of these bills been passed, they would have severely restricted the sale, planting or distribution of GM seed and food.²⁰⁸ In Kansas, Montana, North Dakota, South Dakota and Vermont, for example, legislation was proposed that would require certification or registration to sell or grow GM varieties of crops. The bills introduced in Montana, North Dakota and South Dakota, for example, “were all concerned specifically with genetically modified wheat.”²⁰⁹

Additional biotech-related bills were introduced during 2003 within the states of Arkansas, Montana and West Virginia. They sought to require the establishment of a biological-agents registry.

Legislation proposed in the States of Hawaii, New York, Maine, Texas and Vermont sought to ban outright the planting of GM seeds and sale of GM products.²¹⁰ In Massachusetts, legislation was proposed that would prohibit the open air planting of pharma-crops (i.e., crops modified to produce pharmaceuticals). California actually adopted a bill that “makes it illegal to spawn, cultivate, or incubate any transgenic fish in the waters of the Pacific Ocean over which the state has jurisdiction.”²¹¹

Furthermore, several bills were introduced during 2003 that would impose requirements for GM-free labeling and for the labeling of foods

with GM ingredients. In New York, for example, proposed legislation set forth guidelines for GMO-free labels. The New York bill also “would require foods with GM ingredients to be labeled as such.” Similarly, in Michigan, Oregon, Rhode Island and Vermont, legislation was proposed that would require natural or processed foods with GM ingredients to be labeled as GM foods. And, Maine actually passed legislation that “imposes a civil violation for any manufacturer, distributor, processor, wholesaler or retailer who falsely labels any product such as commercial feed as made without genetic engineering or bioengineering.”²¹²

•2004 and 2005

During February 2005, new GM liability bills were introduced in several states that pitted farmers against seed and pharma companies. For example, a bill was recently introduced in the Vermont Senate (S.18) that would “hold seed companies *strictly liable* for the *accidental* spread of genetically-enhanced crops” (emphasis).²¹³ “The liability protections conferred are based entirely on how a crop was developed, not on the actual properties of the crop or food itself.”²¹⁴ Similar bills were also recently introduced in both Montana (S.218)²¹⁵ and North Dakota (S.2235).²¹⁶

During May 2005, “the Vermont House Agriculture Committee voted unanimously against bringing to the full [Vermont] House a bill dealing with liability from genetically modified crops”.²¹⁷ However, considering the close divisions within the committee on this issue, both opponents and proponents of the legislation were uncertain of its ultimate disposition. One of the bill’s major sticking points apparently is its strict liability provision, which, as previously noted, would hold seed manufacturers liable even for *unintended* consequences arising from the use of GM seeds.

Coincidentally, a similar bill entitled, The ‘Food Integrity and Farmer Protection Act’ (AB 984), was proposed in California with support from both organic grower organizations *and* anti-biotech advocates. Like the Vermont bill, it “would give producers, grain and seed cleaners, handlers and processors [of conventional or organic crops] the right to sue biotechnology corporations if they are injured by the unintentional release, and subsequent contamination, of a genetically modified organism.”²¹⁸

If one were to view these initiatives as purely domestic in focus and within the context of health and environmental protection as bill

proponents would like, one would surely miss the point. Actually, foreign economic motivations significantly underlie organic farmers' general support for anti-biotech measures. Apparently, in 2004, "a *Japanese* retailer association said it would refuse any rice from California if it allowed the cultivation of a genetically modified crop."²¹⁹ The *Japanese* association's admonition effectively negated the voluntary protocol previously worked out between the California rice industry and the Sacramento-based [company] Ventria Bioscience to grow a pharmaceutical rice crop in Southern California.²²⁰ As a result, Ventria was forced to announce that it would "grow its commercial pharmaceutical rice crop in Missouri."²²¹ But the story does not end here.

Ventria experienced similar domestic and *foreign 'market' pressures* in Arkansas. During February 2005, the Arkansas Rice Growers Association, concerned that Ventria was planning to "grow rice 'engineered with human genes'" in neighboring Missouri, lobbied an Arkansas legislator, State Sen. Jerry Taylor, to prepare a bill that would "regulate the cultivation of pharmaceutical-producing plants...According to Taylor... 'We're either going to try to have a ban on it in Arkansas or at least have a controlled-environment requirement:'"²²²

Next, although it had already 'obtained preliminary approval from the Agriculture Department to plant some 200 acres in southeast Missouri with rice that is genetically engineered to produce human proteins for use in drugs,' Ventria later encountered significant resistance in Missouri from an alliance of 'rice growers, major food companies and environmental groups that tried to prevent companies like [it] from getting permission to convert croplands into factories for drugs.'²²³

As can be plainly seen from these examples, the impact of indirect foreign government-driven foreign export market pressures should not be underestimated. And, if the Europe Union or its individual member states are permitted to continue their imposition of non-science-based precautionary regulatory pressures having U.S. domestic market consequences, Japan and other countries will be quick to follow.

•*Biotech Initiatives – Local Level*

Since 2002, towns, cities and counties across the US have passed resolutions seeking to control the use of genetically

modified organisms (GMOs) within their jurisdiction. Close to 100 New England towns have passed resolutions opposing the unregulated use of GMOs; nearly a quarter of these have called for local moratoria on the planting of GMO seeds. In 2004, three California counties, Mendocino, Trinity and Marin, passed ordinances banning the raising of genetically engineered (GE) crops and livestock.²²⁴

During early March 2005, the Associated Press reported that Sonoma County, California would “allow voters to decide whether to become the fourth California county to ban genetically modified organisms.”²²⁵ Like its predecessors, the Sonoma measure would “prohibit the cultivation of genetically altered plants and animals for 10 years.”²²⁶ This measure is due to be voted on sometime during November 2005.²²⁷

Much to the chagrin of anti-biotech activists, however, *family farmers* successfully defeated, during November 2004, anti-biotech initiatives proposed in two other California counties (Butte and San Luis Obispo Counties) that were designed to ban the use of agricultural biotechnology. It was reported also that “[a] third measure in Humboldt County was deemed so ill-worded it was abandoned even by its authors before voters went to the polls, and also failed.”²²⁸

In response, and perhaps, as an anticipatory counter-measure to such ordinances, state legislators and industry representatives have closely worked together to introduce ‘preemptive seed laws’ that essentially ensure uniform regulation of biotech seeds and agriculture throughout a state. Judging from a recent bill passed by the Iowa House (HF 642),²²⁹ such laws would prevent “a local governmental entity...from adopting or enforcing legislation which relates to the production, use, advertising, sale, distribution, storage, transportation, formulation, packaging, labeling, certification, or registration of agricultural seed.”²³⁰ As of May 11, 2005, the following states have secured passage of such laws.²³¹ They include Georgia, Pennsylvania, Iowa, Idaho, North Dakota, South Dakota, Kansas, Indiana, Arizona, Oklahoma, and West Virginia.

4. *Climate Change*

During the past decade, a number of states have passed legislation establishing greenhouse gas (‘GHG’) registries and carbon reporting requirements.²³² Several other states meanwhile have enacted laws that regulate carbon dioxide (‘CO₂’) as an air ‘pollutant’²³³ along with other GHGs deemed to contribute to global warming.²³⁴ Although California may appear to be the most forward-looking jurisdiction regarding

‘climate change’ legislation, it is actually the northeastern states, led by New York and Massachusetts that have aggressively pursued an innovative but highly questionable regional approach to addressing GHG emissions. In fact, six New England governors have already entered into a Kyoto-like “compact with five Eastern Canadian Premiers to reduce regional GHG emissions to 1990 levels by 2010 and 20 percent below 1990 levels by 2020.”

•New York and the Northeast Region – RGGI Background

During June 2002, New York State Governor Pataki included in the state’s energy plan a greenhouse gas reduction target of 5% below 1990 levels by 2010, and 10 percent below 1990 levels by 2020. During May 2003, the governor invited other northeastern states to join New York in a regional market for greenhouse gas reductions.”²³⁵ And then two months later, on July 24, 2003, he “announced a *regional* program to curb emissions of carbon dioxide *from power plants*, otherwise known as the Regional Greenhouse Gas Initiative (‘RGGI’).

Governor Pataki’s invitation and the announcement that followed had been preceded by the introduction of a bill within the New York State Assembly during 2002 that sought to cap carbon dioxide emissions.²³⁶ Although, that bill was never acted upon, it was reintroduced within the New York State Assembly this past January 2005.²³⁷ As of this writing, it is not certain whether this new bill will ever make it out of committee.

In addition to imposing a mandatory cap on the carbon dioxide emissions of locally-based power plants, RGGI would also entail the establishment of a GHG registry and an emissions trading scheme.²³⁸ Besides New York, the following states have agreed to work towards developing a regional model framework agreement – RGGI (CT, VT, NH, DE, ME, NJ, MA, and RI); Maryland and Pennsylvania remain observers.²³⁹ In addition, the agreement is likely to include the five Canadian provinces already working with the New England States, as the following two references clearly show:

The states *and provinces* participating in the Regional Greenhouse Gas Initiative (RGGI) are *committed to developing* a regional greenhouse gas cap-and-trade program... (emphasis added).²⁴⁰

States showing leadership in developing regulations and setting GHG reduction targets...- *Northeast U.S. & Canada Initiative* RGGI & RGGR [Regional Greenhouse Gas Registry]...Other markets in development - e.g., *RGGI and Canada Offsets Initiative* (emphasis added).²⁴¹

It will also include an unknown number of EU Member States, as discussed below. The RGGI was to have been executed by the end of April 2005, but unresolved issues have required that it be signed sometime during late summer or early fall 2005.

Once the participating group of states executes the RGGI, it must then be implemented at the state level by each. According to RGGI government stakeholders, state implementation could occur either pursuant to a legislative or an executive administrative rule-making process. The legislative route is usually more open, transparent, and of interest to the public than an administrative hearing, which tends to be more technical, and thus, less well attended and observed by the broader public. A number of RGGI government stakeholders have concluded that, while implementation by legislation is *not* legally necessary to implement RGGI,²⁴² they may nevertheless seek legislative approval for political reasons.

Apparently, the seeds of the RGGI had been sown long before the first Bush Administration entered the White House. According to the Center for Strategic and International Studies (CSIS), a Washington DC think-tank, “The Clinton Administration [had previously] encouraged the states to act unilaterally in the area of climate change both as a way to achieve substantive change as well as to put pressure on Congress.” And, CSIS seems to be recommending to the EU how best to engage the U.S. on climate change policy. In this regard, CSIS has advised the EU to practically bypass the White House in favor of the states:²⁴³

[T]he EU must for its part recognize that the federal government is not the only locus of authority in the United States. A constructive US-EU dialogue on climate change policy *must include* state governments. *Brussels would acknowledge the leadership of states* if the Commission proposed a new transatlantic forum dealing with climate change which included state officials (emphasis added).²⁴⁴

And judging from recent reports, it would appear that these and other efforts have finally prompted the Bush Administration to the negotiating table.²⁴⁵

•*Objectionable Features of RGGI*

Despite the evolving transatlantic climate change détente, a precautionary principle-based RGGI remains inimical to U.S. economic interests for a number of reasons. First, it is clear that such a regional initiative, by itself, will have no measurable scientific and environmental impact on global warming. Even Greenpeace and Friends of the Earth have publicly admitted that the more burdensome emissions limitations called for by the Kyoto Protocol would have only a negligible environmental effect on planetary global warming. And, according to one group of international economists, “Europe’s Emissions Trading Scheme (ETS) [as well] is unlikely to lead to a reduction in carbon dioxide emissions.”²⁴⁶

Second, the RGGI, as structured, *will* interfere with interstate commerce, to the extent energy imported by power plants into the RGGI region from non-RGGI states is indirectly regulated and subject to a process-based energy/GHG tax. The RGGI will likely impose such a tax to prevent GHG emissions ‘leakage’ (i.e., obtaining lower priced but higher GHG-emitting energy from outside of the RGGI region), by equalizing the cost of ‘RGGI’ and ‘non-RGGI’ energy.

Recently disclosed RGGI government stakeholder prognostications reveal that higher rather than lower consumer energy prices will follow for at least a ten year period – i.e., 2015.²⁴⁷ These higher (mostly natural gas) prices will derive from a host of different factors, including increased infrastructure and construction costs, the retirement of coal and oil-based power generating plants, the decommissioning of certain nuclear plants failing re-licensure, and the inability of remaining online capacity (mostly natural gas) to satisfy the growing regional energy demand.²⁴⁸ Consumers in this regard include homeowners as well as energy-consuming businesses (product manufacturers as well as service providers). And, these price increases are likely to be compounded by the higher product and service prices that manufacturing businesses will inevitably pass downstream to consumers. As a result, companies operating at a local, state and regional level will be placed at a competitive disadvantage vis-à-vis their non-RGGI competitors (domestic as well as international). Even if some kind of transparent consumer rebate were provided to mitigate the impact of energy cost increases, energy producers would likely be handed the bill for that rebate and be compelled to devise a less transparent means of passing that cost downstream to consumers.

Due to their concern about the public perception and acceptance of potential energy price increases and only de minimis environmental benefits, RGGI government stakeholders have incorporated overly optimistic assumptions within their economic and energy efficiency modeling that do not reflect actual market conditions. In addition to the costs noted above, their modeling also substantially understates the economic and social costs to industry, local and regional employment, and technological research and capital investment. This is especially true as they relate to the retirement of coal and oil-based plants and to the moratorium placed on the construction of new plants that could employ ‘clean coal technology’, which happen to reflect an *other than* energy-neutral stance in favor of ‘fuel-switching. Their modeling also overstates projected health and environmental benefits, and fails to reflect a satisfactory state-by-state emissions cap and allowance allocation formula. These modeling flaws may, in part, be attributable to the inclusion of data from eleven, and perhaps, even thirteen states, rather than only from the nine participating states.²⁴⁹ These modeling flaws may also, in part, be attributable to the failure of RGGI government stakeholders to take into account how actual energy prices within the EU have risen since the Kyoto Protocol went into effect and how they will continue to rise by double digit percentages, notwithstanding ‘ironclad’ EU Commission modeling assumptions to the contrary.²⁵⁰ Furthermore, these flaws may be attributable to the failure of RGGI government stakeholders to take into account the actual poor performance and inherent flaws of the EU ETS allocation system.²⁵¹

Third, the U.S. Congress has not yet adopted federal legislation regulating carbon dioxide or other GHG emissions, and the Bush Administration has affirmatively renounced America’s prior signature to the Kyoto Protocol. Yet, since 2003, the Northeastern Governors, negotiating mostly behind closed doors, have endeavored to efficiently structure such an exchange and to finance the allocation of emissions caps and allowances among the states. Also, northeastern state attorneys general have quietly litigated and employed alternative legal theories in different federal courts in an attempt to establish clearer statutory and constitutional authority to regulate carbon dioxide emitted into the ambient air space of multiple states.²⁵² And, the Canadians and Europeans are closely following these developments and, as noted above, are being invited to influence them.²⁵³ For example,

RGGI’s launch has sparked great interest in Europe, where an even larger experiment with GHG trading began on January 1, 2005. There have already been informal contacts between state officials and officials of the European Commission and

European member states to share information on how the new European Emissions Trading System (EU ETS) is developing. These informal contacts may provide opportunities to explore linking issues that will be useful for any future greenhouse gas program seeking to trade with the EU ETS. (emphasis added).²⁵⁴

When questioned, Governor Pataki's aides and other RGGI government stakeholders simply respond that RGGI is not yet a 'done deal', that the litigation has nothing to do with RGGI,²⁵⁵ and that, in any event, the RGGI is merely a regionally focused state-level matter that is of no concern to federal authorities.²⁵⁶ However, the facts appear to speak louder than their words.

Fourth, the RGGI *was designed* to be held out as a model to the nation²⁵⁷ – i.e., to be quickly expanded to other U.S. states and regions and to cover other U.S. carbon dioxide emissions sources.²⁵⁸ Indeed, RGGI documents and environmental press reports indicate that RGGI is likely to be 'dove-tailed' with California's efforts to establish its own regional GHG emissions trading scheme with other Western states.²⁵⁹ California has already established a contentious state-wide GHG cap on auto carbon dioxide emissions that is likely to result in a \$1,000 or more increase in automobile prices there. These rules are now being legally challenged by major automakers.

Fifth, no matter what RGGI government stakeholders publicly claim, the RGGI *will be international* in scope.²⁶⁰ In order to generate the volume threshold of emissions trades necessary to reduce the price of 'within the cap' GHG emissions credits purchased and sold by power plants, the size of the emissions trading market would need to be expanded far *beyond the RGGI region*. Also, a successful plan would require that RGGI states establish indirectly more than informal linkages with other state and regional trading regimes within the U.S. that already have international linkages,²⁶¹ as well as, direct linkages with the national or regional emission trading schemes of foreign countries (e.g., those existing within the European Union). In addition to performing market oversight functions, a successful RGGI would also entail some degree of *formal international regulatory coordination, such as through a Mutual Recognition Agreement, executed between foreign countries and the RGGI regional authority implementing the 'Model Rule' that each RGGI participant has signed, or with individual participating RGGI states.*²⁶² This would be necessary to ensure that U.S. companies can purchase the foreign GHG credits they require from Europe. There is also a genuine need to ensure accessibility to *international* 'outside the cap' GHG

emissions ‘offsets’ (i.e., from Kyoto Protocol developing country clean development mechanism projects – outside the RGGI region) to significantly reduce the costs of achieving emissions reductions within the RGGI region.²⁶³

Kenneth Colburn, Executive Director for the Northeast States for Coordinated Air Use Management (‘NESCAUM’), has publicly acknowledged that RGGI has always been internationally focused. “[RGGI] ‘*may even include linking up with the Europeans in a backdoor trading scheme on emissions...*’ ‘I don’t see why our own individual power plants couldn’t register and purchase allowances in the *European system,*’ Colburn said” (emphasis added).²⁶⁴ These sentiments were also expressed by Christopher James, Director of the Connecticut Department of Environmental Protection:²⁶⁵

In terms of other schemes *such as RGGI linking with the EU ETS*, as we understand the currency issue, as long as the states or regions have in place an enforceable cap which has certainty in terms of expectations, there is a measurement verification protocol, real reductions are occurring, and offsets are allowed under some sort of defined process, *there is no reason why RGGI could not link up with other trading schemes - be they part of Kyoto or sub-regional schemes that may come out through Canada, or Australia for example. This is something that we are focused on at the moment* (emphasis added).²⁶⁶

The European Union appears to have had the same understanding. Even before the Kyoto Protocol went into effect this past February 2005, it had seriously considered expanding its ETS to the RGGI states, notwithstanding the contentious legal issues that might arise.²⁶⁷

These revelations lead to a number of tentative conclusions. First, the RGGI will contravene U.S. federal climate change policy. Second, it may also likely violate the U.S. constitutional law doctrine of federal preemption²⁶⁸ and the interstate commerce clause.²⁶⁹ Third, the RGGI may substantially impair the plenary authority of the President and the Congress over foreign affairs,²⁷⁰ including foreign commerce.²⁷¹ Fourth, the RGGI will likely directly influence U.S. relations with foreign countries, and indirectly undermine current U.S. strategic positions advanced at international fora such as the United Nations and the current Doha Round of World Trade Organization negotiations. Indeed, as the jurisprudence surrounding the interstate commerce clause reveals, several of the provisions of the WTO SPS and TBT Agreement

provisions that circumscribe the ability of governments to regulate international trade (e.g., nondiscrimination and no unnecessary obstacles to trade/least trade restrictive alternative available), are analogous to similar U.S. constitutional law benchmarks. Finally, the RGGI could help to establish the use of the precautionary principle as an exercise of ‘state (regional and ultimately national) practice’, as a matter of binding customary international law, although the U.S. has affirmatively decided *not* to remain a party to the Kyoto Protocol.

•*Motor Vehicle GHG Emissions*

On May 19, 2005, the New York State Department of Environmental Conservation issued a notice of proposed rulemaking to amend Parts 200 and 218 of Title 6 NYCRR relating to “emission standards for motor vehicles and motor vehicle engines....The purpose of the amendment is to revise the existing low emission vehicle (‘LEV’) program to incorporate modifications California has made to its vehicle emission control program to reduce greenhouse gas (‘GHG’) emissions.”²⁷² These rules are more extensively discussed below.

•*New England States*

During April 2001, Massachusetts became the first state to formally regulate the CO₂ emissions of coal and oil fired power plants. The regulations impose “specified reduction levels for several pollutants, including a 10% reduction from 1997-1999 CO₂ levels.”²⁷³ Although the regulations do not require the use of a particular method to achieve reductions, natural gas conversion is clearly preferred. Plants using pollution control equipment must comply by 2006, whereas plants undergoing a ‘fuel shift’ conversion have until 2008 to comply. Plants unable to achieve reductions themselves are encouraged to undertake other measures such as securing sequestration credits or purchasing emissions trading credits.²⁷⁴ During May 2004, the Massachusetts Climate Action Plan was released. It “calls for the reduction of greenhouse gas emissions to 1990 levels by 2010 and an additional 10% by 2020.”²⁷⁵

During 1999, “New Hampshire became the first state to pass legislation authorizing the creation of a greenhouse gas registry.” On July 1, 2002, New Hampshire’s Clean Power Act (SB 284) took effect, setting “annual...caps on emissions of CO₂, SO₂, and No_x.”²⁷⁶ It requires CO₂ emissions “to be reduced to 1990 levels by the end of 2006”, imposes monetary penalties in the event of noncompliance, and

establishes a ‘cap-and-trade’ system pursuant to which entities may purchase emission credits through a national, regional, or other trading program.²⁷⁷

In 1990, Connecticut became the first state to pass a broad global warming law that required specific actions for reducing CO₂. The Act²⁷⁸ “establish[ed] a broad range of energy conservation measures, including revisions to the building code to maximize energy efficiency and requirements that the state purchase energy efficient appliances and vehicles. The Act also established goals for improving public transportation and requires the Connecticut Public Transportation Commission (‘CPTC’) to monitor progress in achieving them.”²⁷⁹ During March 2004, Connecticut released “a GHG reduction plan designed to meet the agreement signed by the New England Governors/Eastern Canadian Premiers organization.”²⁸⁰

During 2004, Connecticut adopted legislation and developed regulations “to establish a clean car program in Connecticut consistent with...and on the same implementation schedule as... the recently enacted California low emission vehicle II (LEV II) program.”²⁸¹ That program requires vehicle manufacturers to “provide new cars, light trucks and sports utilities that meet stricter emissions standards starting with model year 2008. Connecticut will be working to establish greenhouse gas emissions standards for vehicles by the end of 2005. Under these standards, new motor vehicles beginning with model year 2009 will be required to emit 30% fewer greenhouse gases than would have been emitted without this program.”²⁸² On January 6, 2005, the Connecticut Governor’s Steering Committee on Climate Change announced that it had “submitted a draft of the [State] Climate Change Action Plan 2005 to the General Assembly for their review and comment...[T]he recommendations [call for] greenhouse gas emissions...[reductions] to 1990 levels by 2010 and to 10% below 1990 levels by 2020...”²⁸³

New Jersey first addressed the issue of climate change during March 1998 through issuance of a governor-supported Administrative Order (1998-09) which established the goal of reducing the state’s total GHG releases to 3.5 percent below 1990 levels by 2005.²⁸⁴ The state sought to achieve the statewide 3.5 percent reduction by enlisting the voluntary assistance of public and private parties. For example, the state entered into separate voluntary ‘covenants’ with the state’s largest utility,²⁸⁵ its colleges and universities and its public schools, pursuant to which each party pledged to reduce their GHG emissions. During April 2000, New Jersey adopted an Open Market Emissions Trading Rule to promote the

generation and banking of greenhouse gas credits.²⁸⁶ Thereafter, New Jersey “experiment[ed] [with] a multi-tier system for permitting that incorporate[d] greenhouse gases into traditional permitting, despite the fact that they were *not* regulated substances [(e.g., CO₂)].²⁸⁷

During January 2003, however, the State adopted binding regulations requiring large stationary sources to report emissions of the greenhouse gases carbon dioxide and methane. These regulations revised the definition of distillates of air...to remove CO₂ from the chemical species listed as [inert] distillates of air, effectively classifying CO₂ as an air contaminant” in the absence of a formal rule change. During October 2004, New Jersey issued a notice of proposed rulemaking amending the relevant statutes to make the reclassification of CO₂ legally valid.²⁸⁸ “While the proposed amendments would not regulate emissions of CO₂, they would enable [the State] to do so at a later date.”²⁸⁹

•*California and the Western States – RGGI II*

During September 2003, “the Governors of California, Oregon, and Washington launched the West Coast Governors’ Global Warming Initiative [WCCGWI]...”²⁹⁰ Pursuant to this initiative, the three states were to develop joint policy recommendations focusing on ways in which they could reduce GHG emissions. These recommendations were finalized in a November 2004 report and endorsed by the WCCGWI Executive Committee.²⁹¹ In addition to endorsing the report’s recommendations, the Committee advised the states to utilize their stakeholder processes to gather additional recommendations that could lead to adoption of overall state *and regional* level GHG emissions reduction goals, vehicle GHG reduction standards, a regional market-based carbon allowance program and a renewable energy/alternative fuels program²⁹²

California had previously adopted legislation creating a nonprofit entity to administer a statewide voluntary greenhouse emissions registry back in September 2000. California entities were to use the registry to “record and register voluntary GHG emissions reductions made...after 1990” and to establish an emissions baseline that would apply against “any future federal greenhouse gas emission reduction requirements.”²⁹³ During July 2002, California’s governor signed into law (the Pavley law) regulations requiring the development and adoption of the nation’s first greenhouse gas emission reduction standards for automobiles (passenger cars and light duty trucks) to be applied to model years 2009 and thereafter.²⁹⁴ “The law requires the California Air Resources Board (‘CARB’) to regulate greenhouse gases as part of the California Motor

Vehicle Program.”²⁹⁵ As discussed later in this Monograph, this law subsequently came into conflict with the August 2003 EPA decision not to regulate GHGs from motor vehicles under the federal Clean Air Act. That decision then led to legal challenges by Northeastern state attorneys general.

In a June 2004 report, the CARB estimated that those standards would likely add around \$1000 to the cost of a new car in 2014, and \$1064 more by 2016 (Industry experts dispute this low amount; they estimated “that the regulation [which requires a 30 percent GHG reduction in new cars] [would] add about \$3,000 to the upfront cost of the average car or truck”).²⁹⁶ The CARB recommended that the standards be adopted by January 1, 2005 and put into effect no earlier than January 1, 2006.²⁹⁷ During September 2004, CARB adopted the rules necessary for the Pavley law go into effect – rules subject to further legislative approval. On December 7, 2004, the Alliance of Automobile Manufacturers, Association of International Automobile Manufacturers and California auto dealers challenged the Pavley law in federal court (U.S. District Court in Fresno, California).²⁹⁸ The plaintiffs made the following argument:

[T]hat as greenhouse gas emissions from cars are largely a byproduct of their fuel economy, regulating emissions like carbon dioxide would indirectly require automakers to improve fuel efficiency significantly. And, since the federal government has sole authority to regulate fuel economy, Toyota, G.M. and several other automakers contend in their lawsuit that California is encroaching on Washington's jurisdiction.²⁹⁹

Notwithstanding this suit, which remains in progress as of this writing, the Pavley law continues to adversely affect the auto industry. In fact, during April 2005, Canada's threat to adopt California's GHG reduction rules on Canadian-bound auto exports prompted automakers to reach a GHG reduction agreement with Canada.³⁰⁰

On June 1, 2005, California Governor Arnold Schwarzenegger signed Executive Order S-3-05 establishing statewide GHG emissions reduction targets. These targets, which “call for a reduction of GHG emissions to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80% below 1990 levels by 2050,”³⁰¹ are merely symbolic and *political* in nature³⁰² – they do little, if anything in the immediate future to address *global* climate change. The order vests the Secretary of the California EPA with the

authority to “coordinate oversight of the efforts made to meet the targets with: the Secretary of the Business, Transportation and Housing Agency, Secretary of the Department of Food and Agriculture, Secretary of the Resources Agency, Chairperson of the Air Resources Board, Chairperson of the Energy Commission, and the President of the Public Utilities Commission.”³⁰³ It would seem, based on this language that, the obligation/duty to reduce GHG emissions would be imposed upon every business sector operating within the State of California, while the criteria and procedures for determining and actually allocating emissions caps and allowances among business sectors and between emitters within each sector would be left to the discretion of California regulators.³⁰⁴

Since 1997, Oregon has required that new utility emissions be “17 % less than the most energy efficient plant available.” CO₂ emissions have been “capped at 0.7 pounds of CO₂ per kilowatt-hour for base-load natural gas-fired power plants.”³⁰⁵ While this cap was lowered to 0.675 pounds per kilowatt-hour in 1999, facilities have been entitled to satisfy that requirement either by implementing projects directly or by purchasing CO₂ offsets from a Climate Trust at a cost of \$0.57 per ton.³⁰⁶ The Oregon law is similar to a prior Washington State law that made “gaining permits for building new power plants and upgrading older facilities conditional on mitigating any greenhouse gas emissions.”³⁰⁷ “In 2001, Oregon enacted HB 2200,³⁰⁸ to create a forestry carbon offset accounting system to increase carbon sequestration in state forests. It requires a CO₂ registry and inventory.”³⁰⁹

During 2002, Washington State enacted HB 2326,³¹⁰ a non-regulatory statute “establishing the Washington Climate and Rural Energy Development Center within the Washington State University energy program. [The Center’s purpose was] to gather[] greenhouse gas emissions information and voluntary reduction information...[and to] function as “a clearinghouse of scientifically-based information on addressing climate change and clean energy.”³¹¹

Besides carbon dioxide emissions limitations, a number of states have adopted other measures to reduce global warming. For example, 19 western states have entered into

[A]n alliance to boost energy efficiency and the use of renewables in the power grid...Some states are seeking technological innovations to solve the problem. For example, the Ohio Coal Development Office funds projects that capture and sequester carbon dioxide emissions from coal combustion, while the South Carolina Hydrogen Coalition is promoting

economic development by building expertise in hydrogen technology. Others are taking even stronger steps: for example, 16 states have mandated that electric utilities – which account for nearly one-third of greenhouse gases – generate a certain amount of power from renewable sources. During mid-November 2004,] the governors of California, Oregon and Washington...announced 36 recommendations to fight global warming, including tightening emissions and energy efficiency targets, investing in fleets of hybrid gas-electric vehicles, and boosting retail energy sales from renewables at least one percent a year through 2015.³¹²

•*Local Initiatives*

On February 22, 2005, Seattle Mayor Greg Nichols announced his intention to “lead a campaign to get U.S. cities to adopt [the terms of the] Kyoto Protocol.” Seattle had previously adopted the Kyoto Protocol in 2001. Nichols also noted that he would work to pass a ‘clean-car’ bill similar to the law adopted in California that imposes more stringent emissions standards for cars sold in Washington.³¹³

C. State and Local Law Initiatives to Adopt the Precautionary Principle

During the past several years, some states, besides Massachusetts in 2001,³¹⁴ have considered adopting the Precautionary Principle formally as state law. They include New Hampshire in 2000,³¹⁵ Hawaii in 2004,³¹⁶ and most recently New York³¹⁷ and New Mexico³¹⁸ in 2005. Former Governor Christine Todd Whitman of New Jersey had considered employing the precautionary principle in 2000.³¹⁹ During June 2003, the City of San Francisco became the first city within the United States to actually adopt the Precautionary Principle as municipal law. Known as the Precautionary Principle Ordinance, it is intended as a “guiding principle of environmental policy in that city.”³²⁰ During September 2004, Portland became the second U.S. municipality to do so.³²¹

U.S. advocates of the precautionary principle have recently begun to apply this nonscientific touchstone in the hope of revising municipal³²² land use laws, which they argue currently promote social and ethical injustice. “Now an enlightened organization of local government officials has recognized the profound harms caused by unethical land use decisions, and has begun to advocate for the precautionary principle as a way of doing better. In September 2003, the National Association of

County and City Health Officials (NACCHO) passed resolution 03-02”, which incorporates the precautionary principle into land use planning and practice.

VIII.

INDIRECT EFFORTS TO REFORM U.S. FEDERAL LAW

A. State Attorneys General Lawsuits

State Attorneys General have filed several lawsuits in the past few years hoping to move climate change policy from the elected branches to the courts. They commenced these actions precisely because neither the Congress nor the Administration have chosen to address climate change issues in the manner advocated by European leaders and transatlantic environmental groups – i.e., by ratification of the Kyoto Protocol.

On August 28, 2003, the U.S. Environmental Protection Agency published a Notice of Denial that rejected a previous 1999 petition³²³ filed by several ENGOs, including Greenpeace. That petition called for the EPA to regulate motor vehicle GHG emissions as ‘air pollutants’ under the Clean Air Act (CAA). The Notice of Denial reflected the EPA’s determination that it “lack[ed] the authority under the CAA to regulate for the purposes of addressing global climate change.” It reasoned that the CAA did not expressly provide the EPA with authority to regulate GHGs, and that Congress had not implicitly delegated to it such authority either.³²⁴ It also reasoned that, “even if GHGs were ‘air pollutants’ subject to CAA regulation, EPA [was] prohibited from regulating motor vehicle GHG emissions for other reasons”. In other words, it argued that the authority to regulate improved fuel economy, which is ‘the only practical way to reduce tailpipe emissions of CO₂,’ resides with the U.S. Department of Transportation.³²⁵

As a result of this Notice of Denial, the Connecticut, Massachusetts and Maine attorneys general withdrew the June 4, 2003 lawsuit they had previously filed against EPA. In it, they had demanded that the EPA regulate carbon dioxide emissions consistent with its duty to implement the CAA. According to at least one legal expert, that suit constituted a back-door attempt “to force federal regulation of carbon dioxide...by

piggybacking such controls onto overdue revisions of pollution-control requirements for industrial facilities.”³²⁶ Subsequently, during early September 2003, the attorneys general filed a petition for review challenging that EPA Notice of Denial in the U.S. Court of Appeals for the District of Columbia Circuit.

On October 23, 2003, eight additional U.S. states,³²⁷ the District of Columbia, and the island government of American Samoa, brought an action in the D.C. Circuit in support of and to join the petition previously filed by the three original attorneys general. This action was accompanied by separate petitions filed by the State of California, the cities of Baltimore and New York, as well as, by petitions filed by a virtual who’s who of the American environmental movement.³²⁸ According to one legal expert, if these suits were successful, “this would have dramatic [legal and economic] implications, as the EPA would be empowered – and in some cases required – to adopt far-reaching restrictions on activities that result in greenhouse gas emissions.”³²⁹

It would also impose significant economic costs on states such as Michigan, Texas, Idaho, North Dakota, Utah, South Dakota, Alaska, Kansas, Nebraska, Ohio and Indiana, which rely on coal for energy production or primarily use natural gas or other fuels. During September 2004, ten of these states intervened on behalf of the EPA (with Indiana filing an *amicus* brief to both oppose the lawsuit brought by the climate change states as a matter of law and to prevent potential damage to their economies.³³⁰

If the Midwest states lose, Michigan utilities will have to switch from coal, which meets 66 percent of this state’s energy needs, to natural gas, an increasingly scarce and expensive fuel. This will make it more difficult for Michigan to offer competitive energy prices to businesses. Union and other studies show that this would cause Michigan to lose nearly 100,000 jobs right off the bat. Also [Michigan Attorney General Mike] Cox fears, forcing the EPA to classify carbon dioxide as a pollutant would ultimately result in even higher fuel economy standards for the automobile industry, raising the price of vehicles and costing more jobs.³³¹

Oral arguments for this politically charged case took place on April 8, 2005, and the court rendered its decision on July 15, 2005.³³² Although the resulting split-decision went as far as to employ a combined and comprehensive standing *and* merits analysis to conclude that the EPA had acted completely within its administrative discretion to reject the petition, media spin by such activist groups as the Natural

Resources Defense Council strongly suggest that it will likely be “appealed by the states or environmentalists either to the entire circuit or even up to the Supreme Court.”³³³

Procedurally speaking, the majority opinion written by Judge Randolph positively resolved the questions of subject matter and personal jurisdiction – i.e., the court’s ability to ‘hear’ the case brought before it and the petitioners’ ‘standing’ to bring the case in the first place.³³⁴ The majority then proceeded to address the substance of the case, after having “assume[d] *arguendo* that EPA ha[d] the statutory authority to regulate greenhouse gases from new motor vehicles” (italics in original).³³⁵ The majority then reviewed whether and ultimately held that “the EPA Administrator properly exercised his discretion [under the CAA] in denying the petition for rulemaking.”³³⁶

Substantively speaking, the majority based its finding on the following facts:

In addition to the scientific uncertainty about the causal effects of greenhouse gases on the future climate of the earth, the Administrator [also] relied upon many ‘policy’ considerations that, in his judgment, warranted regulatory forbearance at this time.³³⁷

And, the majority based its holding on the following law:

A ‘determination of endangerment to public health’...is necessarily a question of policy that is to be based on an assessment of risks and that should not be bound by either the procedural or the substantive rigor proper for questions of fact...And as we have held, a reviewing court will uphold agency conclusions based on policy judgments when an agency must resolve issues ‘on the frontiers of scientific knowledge.’³³⁸

Judge Sentelle’s opinion, unlike that of the majority, concluded that the petitioners had failed in the first instance to meet all of the required conditions needed to establish ‘standing’ to bring their legal challenge. Yet he concurred with the majority’s ruling that, assuming petitioners had such standing, they nevertheless failed to prove that the EPA had not properly exercised its administrative discretion.³³⁹

Notwithstanding the court’s ruling, environmentalists have embraced Judge Tatel’s loquacious 38-page dissenting opinion, which found that

the “EPA...failed to offer a lawful explanation for its decision” as required by the Clean Air Act, and call[ed] for remanding “the matter back to EPA either to make an ‘endangerment’ finding or to come up with a reasoned basis for refusing to do so” consistent with the standards set forth within *that* statute.³⁴⁰ Not surprisingly, Judge Tatel’s opinion stretched to emphasize the “*precautionary*” (emphasis added) nature of the statutory standard, which he interpreted to require regulation *before* scientific certainty is established, to require the EPA to prove that auto emissions do *not* contribute global warming (i.e., to satisfy a negative burden of proof), and to deny the EPA the administrative discretion to decide otherwise.³⁴¹ Judge Tatel then concluded that since the EPA failed to satisfy (and the Court’s majority failed to apply) this standard, petitioner’s case should have gone forward (i.e., Judge Tatel sets forth the basis of petitioner’s new appeal – reversible error).³⁴²

As if the stakes were not yet high enough, on July 21, 2004, eight state attorneys general and the City of New York³⁴³ filed a lawsuit against five of the largest U.S. public utility companies³⁴⁴ in an attempt to curb their greenhouse gas emissions. These suits allege that the large utilities’ carbon dioxide emitting activities contribute to a ‘public nuisance’ as defined under federal common law. The remedy they seek is not monetary in nature – rather, they have petitioned for the utilities to abate the nuisance they have created by reducing their greenhouse gas emissions.

In effect, the attorneys general have argued that the carbon dioxide emissions generated by these utilities seriously threatens public health, the economy and the environment.³⁴⁵ In fact, U.S. District Court Judge Loretta Preska, who presides over the case, expressed serious skepticism: “Why should I do something that Congress and the president decided not to do as a matter of federal policy?...It doesn’t sound like anything I do here or Congress does will make any difference.” And this skepticism subsequently resulted on September 15, 2005 in an adverse ruling – the dismissal of the case – on non-justiciability/ political question grounds.³⁴⁶ According to Judge Preska,

[W]hen cases present political questions, ‘judicial review would be inconsistent with the Framers’ insistence that our system be one of checks and balances.’ [citing *Nixon v. United States*, 506 U.S. 224 (1993), at 234-235]...[C]ases presenting political questions are consigned to the political branches that are accountable to the People, not to the Judiciary, and the Judiciary is without power to resolve them. This is one of

those cases...[A] a non-justiciable political question exists when a court confronts ‘the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion’...In this case...balancing ‘between interests seeking strict schemes to reduce pollution rapidly to eliminate its social costs and interests advancing the economic concern that strict schemes [will] retard industrial development with attendant social costs’...is impossible without an ‘initial policy determination’ first having been made by the elected branches to which our system commits such policy decisions, viz. Congress and the President. decision, at pp. 2, 14.

...The scope and magnitude of the relief Plaintiffs seek reveals the transcendently legislative nature of this litigation. Plaintiffs ask this court to cap carbon dioxide emissions and mandate annual reductions of an as-yet-unspecified percentage...Such relief would, at a minimum, require this court to: (1) determine the appropriate level at which to cap the carbon dioxide emissions of these Defendants; (2) determine the appropriate percentage reduction to impose on Defendants; (3) create a schedule to implement those reductions; (4) determine and balance the implications of such relief on the United States’ ongoing negotiations with other nations concerning global climate change; (5) assess and measure available alternative energy resources; and (6) determine and balance the implications of such relief on the United States’ energy sufficiency and thus its national security – all without an ‘initial policy determination’ having been made by the elected branches...Looking at the past and current actions (and deliberate inactions) of Congress and the Executive within the United States and globally in response to the issue of climate change merely reinforces my opinion that the questions raised by Plaintiffs’ complaints are non-justiciable political questions...The explicit statements of Congress and the Executive on the issue of global climate change in general and their specific refusal to impose the limits on carbon dioxide emissions Plaintiffs now seek to impose by judicial fiat confirm that making the ‘initial policy determination[s]’ addressing global climate change is an undertaking for the political branches.

Because resolution of the issues presented here requires identification and balancing of economic, environmental, foreign policy, and national security interests, ‘an initial policy determination’ of a kind clearly for non-judicial discretion is required...Indeed, the questions presented here ‘uniquely demand [a] single-voiced statement of the Government’s views.’ [citing *Baker v. Carr*, 369 U.S. 186, at 211 (1962).]

Thus these actions present non-justiciable political questions that are consigned to the political branches, not the Judiciary.³⁴⁷

Unfortunately, given the considerable political ‘energy’ behind EU, UN and environmentalist efforts to incorporate precautionary principle-based climate change provisions within U.S. law, this decision is likely to be challenged; it will also not deter them from seeking alternative fora to advance their agenda.³⁴⁸

In this regard, businesses should closely review the U.S. Court of Appeal for the Sixth Circuit’s decision in *People of State of Ill. v. City of Milwaukee*,³⁴⁹ which addressed “resort by a state...to state law nuisance remedies to deal with pollution of its portion of an interstate body of water [Lake Michigan], resulting from the discharge of pollutants in another state...[The court in that case]...held that in [the] area of interstate water pollution, [the] Federal Water Pollution Control Act precludes application of one state’s common or statutory law to determine liability and afford a remedy for discharges within another state.”³⁵⁰

B. Efforts to Enact Federal Legislation on Climate Change

During the last week of January 2005, Senator Olympia Snowe “predicted a fast-approaching ‘point of no return’ for climate change – possibly in as few as 10 years – after which the crisis and its symptoms will be irreversible.”³⁵¹ According to her press secretary, “You can expect to see her introduce several bills this year related to climate change that reflect the task force recommendations...[She wants to] get them out there and get them talked about, which will grow the broad support for action’...[even though]...[s]he doesn’t necessarily expect these initiatives to pass.”

On February 10, 2005, Senators Joseph Lieberman and John McCain reintroduced their Climate Stewardship Act of 2005. This bill was nearly identical to the proposal that they had introduced at the beginning of the 108th Congress, known as the Climate Stewardship Act of 2003 (‘CSA – S.139’),³⁵² within the Senate Committee on Commerce, Science and Transportation. Concerned that this bill would suffer the same fate as did the last one, environmental groups such as the Environmental Defense Fund, together with the environmental press, employed flowery rhetoric to cast it as a ‘moderate bipartisan bill’, and as “a credible *first step* to addressing the dangers of global warming...” (emphasis added).³⁵³ The

use of these words more than suggested, however, that this bill would have done almost nothing to address the perceived hazard (not risk) of global warming in the foreseeable future, which is certainly less than what even the prior bill had envisioned. That bill, which had been previously advertised as a bipartisan effort to address climate change during 2003, was subsequently referred to the Senate Committee on Environment and Public Works and brought to a full Senate vote on October 30, 2003. It then failed by a margin of twelve votes (43 to 55).

On June 22, 2005, this reworked bill suffered the same fate as its predecessor – it was soundly rejected (pursuant to a vote of 60 to 38) by the U.S. Senate, despite British Prime Minister Tony Blair’s personal appeal to individual senators to more proactively address global warming.³⁵⁴ However, this bill’s defeat was followed by the adoption of a narrowly approved (54-43) *non-binding* Senate resolution expressing the “Sense of the Senate on Climate Change”, which had, only hours earlier, failed as tabled Amendment No. 866 to the comprehensive energy bill (The Energy Policy Act of 2005 - H.R. 6).³⁵⁵ H.R. 6 was passed by the Senate 85-12 one week later (on June 29, 2005).³⁵⁶

The resolution, a highly charged and self-contradicting statement in its own right, was introduced by Senator Jeff Bingaman and signed by Senators from both political parties, including “Pete Domenici of New Mexico, chairman of the Senate Energy Committee.”³⁵⁷ It “finds that there is a growing scientific consensus that human activity is a substantial cause of greenhouse gas accumulation in the atmosphere”, and calls for

Congress [to] enact a comprehensive and effective national program of mandatory, market-based limits and incentives on emissions of greenhouse gases that slow, stop, and reverse the growth of such emissions *at a rate and in a manner that (1) will not significantly harm the United States economy; and (2) will encourage comparable action* by other nations that are major trading partners and key contributors to global emissions (emphasis added).³⁵⁸

However, anyone familiar with the underlying bases for the Senate’s prior 1997 ‘Sense of the Senate on Climate Change’ resolution that rejected the Kyoto Protocol and the complexity and long-term nature of the systemic changes needed to reform this country’s energy mix, knows full well that this goal is not achievable in the short-term without significant cost and sacrifice. Indeed, ‘comparable actions’ taken by other nations, contrary to the best government and scientific prognostications, are having a *negative* impact on national economies

and producing *negligible* environmental benefits. What this resolution actually reflects, then, is that the *political* spirit of the CSA remains alive and well in the minds of many within Washington, facts be damned.³⁵⁹

The goal of the CSA was to impose *mandatory and economy-wide emissions reduction requirements* to ensure that U.S. national GHG emissions are reduced to their 2000 levels by 2010 and to 1990 levels by 2016. By contrast, the Kyoto Protocol requires that the U.S. national GHG emissions be reduced to 7 percent below its 1990 emissions by the end of the period spanning 2008-2012. The CSA would have accomplished this by establishing a GHG emissions-trading program similar to the one currently used to control releases of pollutants that cause acid rain. Companies would receive emission allowances capping their releases of GHGs. Those that reduce their emissions below that level could sell their extra allowances to firms that exceed their emissions ceilings.

The CSA instructed the EPA to adopt and implement regulations to limit the GHG emissions from several economic sectors – electric utilities, industrial plants, transportation, and commercial facilities, as defined by the EPA’s *Inventory of U.S. Greenhouse Gas Emissions and Sinks* database (similar to the EU emissions trading regulation). The EPA continues to submit this information annually to the United Nations as part of the U.S. commitment under the United Nations Framework Convention on Climate Change (UNFCCC). According to the EPA, these sectors accounted for approximately 85 % of the overall U.S. emissions in the year 2000. The bill’s emission limits, however, would not have applied to the agricultural and the residential sectors at this time. And, certain areas within the affected sectors would have been exempt if the EPA determined that it was not feasible to measure emissions from that area.

The trading of emissions allowances and reductions would have been made possible by enactment of a National Greenhouse Gas Database containing an inventory of emissions and registry of reductions. “This approach is similar to the European Union’s Emissions Trading System (EU ETS) that launched in January and to the RGGI/RGGR program being developed in the Northeast United States.”³⁶⁰ The outlines of such an emissions registry system had previously been approved and passed by the Senate as amended S.517, following an 88-11 vote during 2002. They were contained within the Climate Change Strategy and Technology Innovation Act of 2002, which had become part of the larger Senate Energy Policy Act of 2002. The Senate bill was later incorporated within the House bill, H.R. 4, “Securing America’s Future

Energy (SAFE) Act of 2001. H.R. 4 was never acted upon in conference where it was ultimately left unresolved by the 107th Congress.³⁶¹

On February 15, 2005, Senator Hagel,³⁶² along with three co-sponsors, Lamar Alexander, Larry Craig and Elizabeth Dole, introduced the Climate Change Comprehensive Legislative Reform Act of 2005.³⁶³ It is comprised of three separate bills, S. 386, S. 387, and S.388,³⁶⁴ which address respectively international policy, tax policy and domestic policy.

Many of these bills' provisions were retained in a subsequent amendment proposed by Senator Hagel and others and later passed and incorporated within H.R. 6 on June 21, 2005.³⁶⁵

HR 6's climate change provisions survived the House and Senate conference committee largely in-tact, and an otherwise revised energy bill was passed by both houses of Congress on July 29, 2005. HR 6 was then signed into law by President Bush on August 8, 2005. Since the bill's voluntary climate change provisions survived without much modification, it is arguable that they represent Congress' federal preemption of the issue of climate change regulation within the United States. In other words, Congress has expressed its intent for voluntary GHG emissions reductions, supplemented by federal law (investment and research and development incentives and tax credits), to "occupy the field exclusively." Thus, states, individually or regionally, would find it extremely difficult to make any constitutional claim that could justify their regulation of greenhouse gas emissions generated by autos and power plants operating within their jurisdictions.

The Climate Change Technology Deployment in Developing Countries Act (S.386) in particular, promotes the exportation by U.S. companies of U.S. greenhouse gas intensity reducing technologies and practices to, and their adoption by, developing countries. The Secretary of State is to coordinate developing country funding assistance, and fellowship and exchange programs are to facilitate technical assistance and knowledge transfer. To promote the diffusion of such technologies (e.g., 'clean coal technology') in developing countries without risk of trade reprisals, the U.S. Trade Representative ('USTR') would negotiate the removal of trade-related barriers within those countries. Such barriers may be erected simply to protect a developing country's less GHG-efficient indigenous energy technologies from all foreign competition. Alternatively, in the event a developing country is an EU trading partner, such barriers might be erected without scientific and economic foundation (i.e., pursuant to the precautionary principle) against such U.S. technology exports in order to favor what is perceived

to be more environment-friendly EU climate change mitigation technology exports.

In both cases, USTR involvement would likely pave the way for U.S. companies to gain access to developing country projects that remain open also to non-Kyoto Parties under the Protocol's 'Clean Development Mechanism'.³⁶⁶ However, this implies that U.S. companies would expect to use any project-related GHG 'offsets' under the EU ETS or any future U.S. federal or regional (e.g., RGGI) climate change regime. Presumably, this is, in part, why the Senator and his colleagues have crafted a related domestic climate change bill (S.388).

However, there are problems with such an indirect approach, even if such a plan is to be merely 'voluntary' in nature. It is arguable, for instance, that any GHG registry, even if voluntary, might trigger a domino effect that could generate the type of arbitrary and artificial discrimination between and artificial distinctions among U.S. companies and their products and services which the U.S. has objected to, as a matter of international trade law at the WTO. While the proposed GHG emissions registry may be intended to promote only *voluntary* company reporting of GHG emissions and credits for purposes of future use *in the event* a mandatory emissions trading cap were ever imposed, it is likely to have the same practical effect. Indeed, the mere threat that a mandatory cap could be imposed, despite Senator Hagel's express rejection of one,³⁶⁷ could, sooner rather than later, prompt 'first mover' U.S. companies to register and secure GHG credits now, rather than wait until they become more expensive later.

C. Efforts to Change SEC Environmental Accounting and Disclosure Rules (Non-SOX)

1. SEC Disclosure Rules – S-K Regulations

In a paper released during 2001, an EPA official accused U.S. public companies of not adequately complying with their obligations under U.S. federal securities laws to disclose environmental performance information demanded by equity investors such as social investment funds and environmental groups.³⁶⁸ The types of environmental performance information included information about: 1) Environmental legal proceedings and violations of environmental law; 2) Environmental liabilities; and 3) The impact of impending environmental issues on capital expenditures and future earnings.³⁶⁹ The paper contended that such noncompliance translated into an "information asymmetry market

failure,” and that as a result, “[i]nvestors and fund managers that want to take advantage of the link between environmental and financial performance to use corporate environmental performance as a criteria for selecting or screening stocks are at a disadvantage...”³⁷⁰

Those financial disclosure requirements are contained within three different sections of SEC Regulation S-K. Generally speaking, S-K Item 101 requires companies to disclose the ‘material’ effects of compliance’ with federal, state and local environmental provisions (laws that have been enacted or adopted) on their capital expenditures, earnings and competitive position. S-K Item 103 generally requires companies to describe certain administrative or judicial legal proceedings arising from federal, state, or local environmental provisions, and any ‘material’ pending legal proceedings, other than routine litigation, incidental to the business to which the registrant or any of its subsidiaries is a party. *For this purpose, the rules provide that* environmental litigation is not ordinary or routine. Item 103 also requires disclosure of any *enforcement proceedings* that reasonably may be expected to result in sanctions of \$100,000 or more, regardless of whether the company considers it material.

The third applicable S-K regulation section is S-K 303, which generally addresses the costs of *future* environmental risks.³⁷¹ It requires companies to discuss their liquidity, capital resources and results of operations. It also requires the company to identify *any known trends*, demands, commitments, events, or *uncertainties* that may result (or be ‘reasonably likely to’ result) in a ‘material’³⁷² change (favorable or unfavorable) in the company’s net sales, revenues or income from continuing operations that may not otherwise be reflected in the financials. This part of the filing is known as ‘*Management’s Discussion and Analysis of Financial Condition and Results of Operation*’ (‘*MD&A*’).³⁷³ It is within this non-financial section that the SEC would also expect to see management’s evaluation of the potential material effects of known trends (evolving foreign regulatory trends) and uncertainties (environmental contingencies) on company financial operations or capital resources, using both financial and non-financial information available to it.³⁷⁴ Yet, “[c]ompanies must determine, based on their own particular facts and circumstances, whether disclosure of a particular matter is required in MD&A.”³⁷⁵ According to the SEC,

[A] good introduction or overview would...provide insight into material opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company executives are most focused for both the

short and long term, as well as the actions they are taking to address these opportunities, challenges and risks.³⁷⁶

For example, a company would need to assess the *likely future consequence* of impending environmental regulations or liabilities. And, disclosure would be required, *unless* management is able to conclude otherwise. It would have to conclude either that 1) the trend, uncertainty or event is not reasonably likely to occur or come to fruition or 2) such trend, uncertainty or event is not reasonably likely to have a ‘material’ effect on the company’s liquidity, capital resources or results of operations.³⁷⁷

In addition to the above, companies are ‘encouraged’ to include in their filings *forward-looking information*,³⁷⁸ which entails a) anticipating a future trend or event or b) anticipating a less predictable impact of a *known* event, trend or uncertainty. Pursuant to a 1989 SEC interpretive release/guidance document, companies are obligated to disclose *future risks* where a trend, demand, commitment, event or uncertainty is BOTH: a) presently known to management; *and* b) ‘reasonably likely’ to have ‘material’ effects on the registrant’s financial condition or results of operation.³⁷⁹

Beyond the S-K Regulation disclosure requirements, the SEC relies on the professional standards and guidance documents issued by the Financial Accounting Standards Board (‘FASB’) and the Public Company Accounting Oversight Board (‘PCAOB’). Those standards help to ensure that companies are properly accounting for and reporting on their financial operations, including any environmental losses resulting from liabilities from permanent reductions in the value of company assets. SEC presumes that financial statements not prepared in accordance with generally accepted accounting principles (‘GAAP’) promulgated by the FASB are misleading and inaccurate.

Pursuant to GAAP, companies must report *liabilities*, including environmental *liabilities*, in their financial statements *if* the liabilities’ occurrence is ‘probable’ *and* their amounts are ‘reasonably estimable.’³⁸⁰ A liability is ‘reasonably estimable’ if company management can develop a point estimate or determine that the amount falls within a particular dollar range. According to GAAP, companies should always accrue and disclose their best estimate for liability in their financial statements, given the range of possible costs. If no single estimate is better than the others, GAAP specifies that companies should accrue the lowest estimate in the range, although they must still disclose the potential for additional liability in the footnotes to the statements. If the

'best estimate' in a range is accrued, then the potential for additional liability need not be disclosed. If the liability does not meet one or both of the criteria for accrual in the financial statements, it must nonetheless be disclosed in the footnotes if it is 'reasonably possible.'³⁸¹ 'Reasonably possible' represents a range of possible outcomes that have 'a greater than remote chance' of occurring.

2. *Congressional, State and UN Activities Concerning SEC Disclosure Rules*

On October 10, 2002, Senators Jeffords, Lieberman and Corzine requested a U.S. Congress General Accountability Office ('GAO') report on Securities and Exchange Commission ('SEC') corporate environmental disclosure regulations, their implementation by the SEC, and companies' compliance with such rules. In particular, the members requested that the GAO address seven topics, including an analysis of the 'gap' that exists between what companies report to shareholders and what markets, analysts and insurers believe is the potential real liability of environmental costs and risks. They also asked the GAO to identify changes in regulations or laws that would encourage greater environmental disclosure to shareholders.³⁸²

During April 2003, the United Nations Commission for Environmental Cooperation of North America and the United Nations Environment Program Finance Initiative ('UNEPFI') issued a report evaluating why the mainstream U.S. financial community had not been demanding environmental information from public companies. It focused on the nondisclosure of environmental issues by companies in the mining, manufacturing, chemical, building, petroleum, pulp and paper, and insurance sectors.

The UNEPFI report made the following findings: 1) "[Since] environmental issues ha[d] not been prominent among all the securities regulatory issues that the responsible agencies [were] faced with...the SEC ha[d] not historically enforced its disclosure requirements with respect to potential environmental liabilities,"³⁸³ 2) "[A] lack of a clear definition of what ought to be reported [has allowed]...companies to justify, under existing enforcement scenarios, not reporting on the potential impacts of environmental issues like climate change,"³⁸⁴ 3) "If a given standard for disclosure is not actively enforced, mainstream banks and analysts will not consider this information to be important. As well, they are not likely to incorporate such information into their financial analysis if it is not clear that such information can affect a company's bottom line,"³⁸⁵ 4) There must be greater involvement of the financial

and accounting sectors in the creation of improved reporting standards, to ensure that environmental considerations become part of the investment analyses of financial houses and the individual and institutional investors they serve; and 5) The U.S. Government should be called upon to enforce existing regulations and the application of GAAP accounting standards.³⁸⁶

On July 10, 2003, Senator Jon Corzine (D-NJ) convened a congressional symposium to consider the current state of public company disclosure of environmental and social risks in Securities and Exchange Commission (SEC) filings. The group was moderated by Michelle Chan-Fishel, chair of the Corporate Sunshine Working Group. Ms. Chan-Fishel is also coordinator of the Friends of the Earth green investments program.³⁸⁷

On November 21, 2003, the Treasurers from the States of California, Connecticut, Maine, New Mexico, Oregon and Vermont, and the Comptrollers of the State and City of New York, and two leading Labor Pension Funds submitted a '10 point call for action' to the SEC. It called upon the SEC "to enforce corporate disclosure requirements under regulation S-K on material risks such as climate change and to strengthen current disclosure requirements — as requested by investors and others in recent petition to the SEC."³⁸⁸ As with other such efforts, the goal was to cause companies to disclose climate change risk:

Investors need information on the financial risks posed by climate change and faced by companies in which they invest. This information is not currently readily available. Investors are seeking analysis and disclosure of the potential of this financial risk... Climate risk has become embedded, to a greater or lesser extent, in every business and investment portfolio in the United States. In order for investors to exercise appropriate judgment and for fiduciaries to act responsibly, disclosure of the potential economic risks posed by climate change is essential.³⁸⁹

On July 14, 2004, the GAO issued its report, in response to the prior request submitted by Senators Jeffords, Corzine and Lieberman.³⁹⁰ In general, it found that current disclosure of environmental information was not inadequate. In addition, it determined that, without more compelling evidence the disclosure of environmental information is inadequate, and the need for changes to existing disclosure requirements and guidance or increased monitoring or recommended enforcement by SEC is unclear.³⁹¹ Furthermore, the GAO recommends that the SEC should ensure that it has the information it needs to allocate its oversight

resources and determine where additional guidance might be warranted, before it seeks to act.³⁹² GAO made specific recommendations to the SEC in this regard,³⁹³ and suggested that the SEC be given the opportunity to implement them.³⁹⁴

Undeterred by the GAO report's findings, the Rose Foundation for Communities and the Environment released a report during July 2004. The group argued that emerging scientific concerns about potential health and environmental hazards that are reflected in peer reviewed scientific journals are subject to disclosure under SEC rules, whether or not they may 'materially' affect a company's operations or finances:

In our technology-rich economy, a surprising number of products enter the market without full understanding of the risks posed to health or environment. Only after-the-fact do scientists come to understand the full implications. Examples of the concerns are numerous – in everything from biotechnology, to emerging nanotechnologies, to greenhouse gas emissions, to toxic substances in cosmetics, toys and medical devices (emphasis added).³⁹⁵

Scientific developments indicating risks of a company's products or activities are disclosable developments under SEC rules when they are reasonably likely to pose a material impact on the company either by leading to liability suits, by creating market risks as against competitors whose products do not pose the emerging scientific concerns, or by creating costly pressures on a company to reconfigure production to avoid the newly recognized risks.³⁹⁶

[T]he SEC still needs to issue general guidance on disclosures related to emerging science³⁹⁷...The SEC should issue a staff guidance stating that when *emerging peer reviewed literature or other credible scientific reports* indicate the potential for significant new health risks related to a company's products or activities, the company should make this information available to shareholders...Also *disclosure should be required without regard to whether the company anticipates material impacts in the near term*. Such guidance should also state that when emerging science or risk issues are giving impetus to emerging market or consumer trends or public policies encouraging consumption of alternatives to a company's products, the company should specifically report on such trends, and may, in its discretion, report as to whether it is engaged in research and development to market its own alternatives. In the event that the company expresses its own scientific opinions in opposition to the findings of the emerging scientific studies,

the company should be required to state the basis for its scientific opinions (emphasis added).³⁹⁸

Consequently, if this group had its way, companies would be required to peruse monthly scientific journals for evidence of grave new hazards (rather than risks) that threaten sustainable development, as defined and identified by environmentally enlightened, risk-averse civil society advocates of the precautionary principle. And absent any requirement that such information must first be vetted, there will be no practical way to ensure that the quality of the published information meets the standards of the scientific community prior to its being publicly disclosed in companies' financial and non-financial filings.³⁹⁹ This way, global stakeholders can further increase their involvement in the direct management of public companies, even those they have no interest in investing in, and thereby organize and define the parameters of supply chain management for all public company SME suppliers at each level of the global supply chains.

D. Federal Food, Drug and Chemical Regulations

1. Agricultural Biotech/USDA/FDA/EPA

Given the fanfare in Europe over the supposed failure of the U.S. regulatory system to ensure that U.S. exports do not pose hidden health or environmental hazards, certain constituencies are agitating for federal regulatory regimes to prevent potential public hazards from emerging. The use of the term 'hazards' rather than 'risks' is significant in that it mirrors the use of that term by precautionary principle advocates in Europe.

In years past (until at least 1984), the U.S. arguably had taken a 'precautionary approach' to regulating uncertain hazards that was narrower in scope than Europe's current precautionary principle. It was premised on the so-called 'Delaney Clause' of the U.S. Food, Drug & Cosmetic Act:

The clause banned the use of any food additive if tests revealed that it caused cancer in either laboratory animals or humans. As a result, air quality standards, pesticide restrictions, drug safety tests, and groundwater contamination rules all focused on the 'potential' rather than the 'probable' findings of hazards...[Pursuant to that approach,]...*regulatory decisions emphasized precaution and minimal risk to consumers and the environment. Consistent use of scientific*

risk assessment was not a hallmark of U.S. food regulation, and regulation of biotechnology followed a similar path in its early development (emphasis added).⁴⁰⁰

However, during the mid-1980s, the U.S. government loosened the regulatory reins. Interested in facilitating the burgeoning science of biotechnology, the FDA decided to take a different regulatory approach that was more conducive to investment and not unduly burdensome in a regulatory sense. In other words, the U.S. adopted the current biotechnology framework, which addresses potential ‘risks’ as opposed to hazards.⁴⁰¹ This framework recognizes biotech products as ‘substantially’ equivalent to conventionally produced food products that are ‘generally recognized as safe’. It also dispenses with the need for the special testing and labeling of such biotech products.⁴⁰² Since “there [was] no scientific basis for specific legislation for the implementation of rDNA technology and applications”,⁴⁰³ “[t]he requirements for establishing substantial equivalence [have] not [been] so onerous that they [have] kept GM foods off the market.”⁴⁰⁴ The framework has creatively used a mosaic of existing federal laws⁴⁰⁵ and relied on an interagency process, pursuant to which jurisdiction over *specific* biotechnology *products* (as opposed to ‘classes of products’) is determined by their use, just like traditional products.⁴⁰⁶

However, as a result of the industry’s rapid expansion beyond basic biotech products,⁴⁰⁷ the concerns of a growing U.S. organic food industry and the intense political pressures generated by such ENGOs as Greenpeace and Friends of the Earth and from the EU Commission, this framework is once again under review. According to *The Washington Post*, some groups want Congress to pass a new biotech law⁴⁰⁸ that would adequately review the health and environmental impacts of the newest generation of biotech products:

Opinion in Washington is sharply divided on whether the 18-year-old biotech regulatory system can be fixed with administrative tweaking or whether Congress needs to pass new laws, said the report by the Pew Initiative on Food and Biotechnology, a think tank. But either way, the report cites numerous examples to make the case that action by the federal government is needed to ensure credible oversight of an industry that is tinkering with the very foundations of life. ‘The regulatory system isn’t broken, but it is showing signs of wear and tear’, said Michael Rodemeyer, executive director of the Pew Initiative...⁴⁰⁹

The *Post* article went on to note how “Europeans have been more

aware — and more skeptical” of biotech crops and how “European politicians [have] repeatedly cite[d] the perception that the U.S. regulatory system is [too] weak to [manage] the technology in their countries.”⁴¹⁰ It then cited how the Bush Administration had failed to act on “one proposal for tighter regulation of biotech crops...that [had] near[ed] approval as the Clinton administration was leaving office...[That proposal had been]...endorsed...by virtually every group with a stake in the issue: the biotech industry, the food industry, environmentalists and consumer groups...”⁴¹¹ And, it noted how the FDA was reluctant to expand its authority to create new rules, and how it was preoccupied with “carefully weighing the public health, scientific and legal ramifications of [the] technology.”⁴¹²

2. *FDA/Medical Biotech*

There is concern that biotech regulatory reform may also be precipitated by the current controversy over certain pharmaceutical drugs (e.g., Vioxx, Celebrex, Bextra) which were approved by regulators as safe but later alleged to be harmful to some patients. This has led to the introduction of bipartisan federal legislation (the Fair Access to Clinical Trials or FACT Act of 2005) by Senators Dodd and Grassley “that would require drug makers to register clinical trials about prescription medicines. Grassley said that, ‘by making the clinical trial information publicly available we make the system for ensuring drug safety more transparent and more accountable. That ultimately leads to an even safer system and greater consumer confidence.’”⁴¹³

In addition, “Health and Human Services Secretary Michael Levitt announced the creation of a Drug Safety Oversight Board as part of the Food and Drug Administration’s new ‘culture of openness’...As part of the agency’s new ‘transparency’, the FDA will launch a Drug Watch Web page to convey new information about safety risks.”⁴¹⁴

Creation of the board comes at a time when FDA is under intense pressure from Congress and the public to improve monitoring of drugs after approval...[According to] Acting FDA Commissioner Lester M. Crawford Jr...‘Our goal is to prepare the agency for these new demands by improving the way we monitor and respond to *possible adverse health consequences that may arise* regarding drugs approved for sale to U.S. consumers’ (emphasis added).⁴¹⁵

Mr. Crawford’s choice of words — ‘possible adverse health consequences’ [i.e., uncertainties] — did not escape the attention of the

pharmaceutical industry trade association (PhRMA). They quickly commented that, “*It is important that regulatory decisions and communications be based on sound science and reflect carefully considered judgment regarding benefit and risk*” (emphasis added).⁴¹⁶ This group’s response raises other questions. Will the current clamor for more safety-oriented reform at the FDA⁴¹⁷ cause regulators to buckle under the pressure⁴¹⁸ and reintroduce a precaution/hazard-based evaluation approach? And, will this spread to the biotech sector?

3. *FDA/Antimicrobial Animal Drugs*

Since 1997, the EU has banned a class of five ‘growth-promoting antibiotics’ administered in animal feed on the basis of the precautionary principle due to concerns that microbial-resistant bacteria will possibly travel from the food products of slaughtered animals to the humans who consume them.⁴¹⁹ The EU Commission, which did not perform a full quantitative risk assessment or an economic cost-benefit analysis, nonetheless required therapeutic administration of antibiotics to individual heads of cattle to treat specific infections.⁴²⁰ The EU bans have “had adverse consequences for animal health and welfare and economic consequences [from reduced animal production] for farmers. Recent studies have shown that the bans may even pose a greater risk to human health than the harm they were intended to prevent.”⁴²¹

In response to growing political pressure from European and American ‘consumer’ groups, the FDA announced on October 23, 2003, a new review procedure intended to address the risk of anti-microbial resistance. Industry Guidance Document #152 set forth non-binding recommendations “for assessing the safety of antimicrobial new animal drugs with regard to their microbiological effects on bacteria of human health concern.”⁴²² According to then-deputy FDA Commissioner Lester Crawford, “U.S. law forces [the agency] to look at products individually. We think it is far better to look at the real risk...instead of just disallowing a category of uses.”⁴²³

Notwithstanding Mr. Crawford’s remarks about the distinction between bans of individual products and *categories* of products, however, some believe that this document reflects hazard/precaution-‘creep’, given its focus on hazard characteristics, its minimization of *quantitative* risk assessment and its disregard for economic cost-benefit analysis. The document was intended to evaluate, on a *pre-market* basis,

[T]he potential impact on human health *of all uses of all classes* of antimicrobial new animal drugs intended for use in

food-producing animals...*This document focuses on the concern that the use of antimicrobial new animal drugs in food-producing animals will result in the emergence and selection of antimicrobial resistant food-borne bacteria which impact human health adversely.* The FDA believes that human exposure through the ingestion of antimicrobial resistant bacteria from animal-derived foods represents the most significant pathway for human exposure to bacteria that have emerged or been selected as a consequence of antimicrobial drug use in animals (emphasis added).⁴²⁴

The recommended risk analysis process, comprised of hazard⁴²⁵ characterization⁴²⁶ and qualitative risk assessment,⁴²⁷ appears to favor *qualitative* risk assessment over quantitative risk assessment despite its attestation to the contrary.⁴²⁸ “FDA’s current thinking on a *qualitative* approach for risk assessment, *especially where there may be a lack of substantial data*, is described in this guidance. *FDA does not intend to exclude quantitative risk assessment in favor of a qualitative process*” (emphasis added).⁴²⁹ Yet, for all practical purposes, FDA may decide that risk assessment is not necessary.⁴³⁰

The ‘lack of substantial data’ terminology alludes to the ‘in the absence of scientific certainty’ language that EU regulators typically rely on to justify application of the precautionary principle. If the FDA were confident that this document would not be so perceived, why then would the agency need to reassure industry that it would *not exclude quantitative risk assessment* from the risk analysis process? Answer:

Th[e] [hazard characterization] will enable the sponsor and the FDA to determine the information that should be included in the risk assessment. In addition, *based on the hazard characterization, it may be determined in certain cases that completion of a risk assessment is not recommended* (emphasis added).⁴³¹

And, the following language suggests that the steps of hazard characterization and qualitative risk assessment may not be as distinct as they are represented to be – i.e., they consider the same factors and may actually overlap. This raises the specter of duplication, compounding or contradiction:

CVM envisions hazard characterization as distinct and separate from the qualitative risk assessment⁴³² and it is recommended that the hazard characterization be submitted to the FDA as a stand alone document⁴³³ ... A number of relevant factors are suggested for consideration in completing the

release assessment. *These factors include items that are also considered as part of the hazard characterization step...FDA recommends that sponsors address the hazard characterization step of the risk assessment (emphasis added).*⁴³⁴

In addition, the FDA assumes that if an animal is stricken with bacteria at the slaughterhouse, it will transfer such bacteria to humans through food consumption, notwithstanding any number of possible intervening events, such as proper hygiene and adequate preparation/cooking:

FDA recognizes that there are many factors that may affect the bacteria of interest between the time animals are presented for slaughter (or the animal-derived food is collected) and the time the final food product is consumed. For the purposes of this qualitative risk assessment, *FDA assumes that the probability that bacteria in or on the animal at slaughter may be used as an estimate of the probability of human exposure to that bacterial species in the food commodity derived from that animal.*⁴³⁵

In essence, the flaws inherent within the hazard-based approach underlying FDA Guidance 152 can be explained as follows. The FDA-recommended qualitative risk assessment is said to be comprised of a release assessment, an exposure assessment and a consequence assessment. Each of these elements is rated through the use of a semi-quantitative descriptor and a reference table. The FDA then assigns an aggregate semi-quantitative descriptor for the overall risk estimation.

While the release assessment estimates the probability that resistant bacteria are present in a target animal as the result of drug use, it is arguable that its focus on the mere presence or absence of resistant bacteria, without regard to any threshold level, is misplaced. Rather, the emphasis should be placed on the presence of bacteria *above a given threshold level* which logically would vary from species to species. Arguably, the probability that bacteria are present but only at a very low level would be statistically insignificant and not pose more than a slight risk to humans. Similarly, the exposure assessment, which estimates the probability that humans might ingest a given bacteria from a particular food commodity, focuses wrongly on the ingestion of even a single bacterium, without regard to any threshold level. Rather, the issue, as noted above, should be whether bacteria have been ingested *above a given threshold level* that logically would vary from species to species. Once again, the existence of a high probability of ingesting low levels of bacteria would be statistically insignificant and not usually pose more

than a slight a risk to humans.

Considering that this document does not identify a particular threshold level, it must be assumed that the threshold level is zero. In that event, it would seem clear that FDA Guidance 152, notwithstanding the contrary claims of FDA officials, actually reflects application of the precautionary principle.

4. *Toxic Chemicals/EPA*

On April 21, 1998, the U.S. Environmental Protection Agency expanded its chemical ‘right-to-know’ program which was based on the Toxics Release Inventory (1990 Inventory Update Rule under the Toxic Substances Control Act – ‘TSCA’). During prior years, communities and industry had used that program in an effort to reduce environmental pollution from ‘high volume’ toxic chemicals – those manufactured and or imported in quantities exceeding one million pounds per year.⁴³⁶ When the EU had originally proposed the EU REACH regime in the form of a chemical white paper during 2001, it found the EPA’s voluntary High Production Volume (‘HPV’) Challenge Program inadequate and unequal to the task of publicly identifying the *potentially hazardous properties and uses* of more than 30,000 existing chemicals being commercially traded. Indeed, the initial aim of the U.S. HPV program was relatively modest – by 2004, only 2,800 high production volume chemicals were to have been tested.

Since that time, however, ideological environmental groups such as Greenpeace and World Wildlife Fund have launched significant public pressure campaigns, and the EU’s proposed REACH regime has itself undergone at least two revisions. As a result, the U.S. EPA HPV program seems to have taken on new life. For example, EPA’s Office of Pollution Prevention and Toxics (‘OPPT’) is expected to begin formally evaluating 1,400 such chemicals by the end of 2005, having already reviewed those substances for *hazard* information.⁴³⁷ In a recent report, the EPA highlights how “Public access to *hazard data* is integral to the HPV Challenge Program” (emphasis added).⁴³⁸ In fact, the report notes how ideological environmental and animal welfare groups have already been granted a growing and influential role in this program:

Environmental Defense has submitted comments on 89% of all posted test plans. Two animal welfare groups – People for the Ethical Treatment of Animals (PETA) and Physicians Committee for Responsible Medicine (PCRM) – submitted comments on 62% of all test plans, and private individuals and

other groups submitted comments on fewer than 3% of all test plans.⁴³⁹

In addition, the EPA's National Pollution Prevention and Toxics Advisory Committee ('NPPTAC') has asked its HPV Challenge Program Work Group "to develop and propose a *hazard-based screening process* to organize the chemicals in the submissions received...[to] guide their further review by OPPT" (emphasis added).⁴⁴⁰ Remarkably, this seems to negate the very public policy position taken by the U.S. government and by the U.S. chemical industry against the extraterritorial impact of the proposed EU REACH regime. U.S. government and industry have both criticized REACH's focus on hazard-centric product *categories and substance characterizations* and its failure to account for chemicals individually based on exposure risks.⁴⁴¹ Perhaps, the Administration is either unaware of what is transpiring at EPA or has been courted by U.S. industry, which understandably favors the HPV Challenge Program over the possibility of legislative amendments to the TSCA statute (i.e., the imposition of a pre-market authorization requirement) or more rigorous EPA implementation thereof. This might cause it to allow EPA regulators to take what are apparently inconsistent positions – i.e., extolling the virtues of the HPV Challenge Program domestically (i.e., to avoid federal regulation) while arguing internationally against analogous features contained within the EU REACH proposal:

One of the most significant results of the HPV Challenge Program has been the use of the *category approach* to address the SIDS endpoints.⁴⁴² In fact, 81% of all chemicals addressed in test plans have been included in a *category*. *Categories* require a supporting hypothesis of how the chemicals relate to each other, as well as a description of how data for one chemical can be used to predict the toxicological responses of similar chemicals in the category. EPA and *other stakeholders* then comment on the reasonableness of the hypothesis, the adequacy of supporting data and any proposed testing. Once the sponsor submits its final *category* analysis, EPA will either agree that the *category* 'held', or will notify the sponsor that the sponsor may need to consider additional testing or restructure the *category* (emphasis).⁴⁴³

Interestingly, as in the case of the EU REACH regime, companies are required to undertake a risk assessment of specific chemicals only *after* a chemical has already been characterized, categorized and ultimately stigmatized as *hazardous* and subject to disclosure in an electronic public database.⁴⁴⁴ "The [EPA] guidance document offers advice on how companies could group chemicals with similar

characteristics into categories, and then evaluate existing data and conduct testing to characterize the category – *all without having to perform every test on every individual chemical*” (emphasis added).⁴⁴⁵ “...Because exposure information was not required under the HPV Challenge Program, the amount of exposure information in the HPV submissions is limited...An exposure evaluation, if needed, occurs subsequent to the...hazard assessment.”⁴⁴⁶

Considering how the role of quantitative risk assessment based on exposure has been minimized, one is led to wonder how much objective science is actually being employed even if industry-favored SIDS endpoints were being utilized. And what would the result be if non-SIDS endpoints were incorporated into such a screen? While there may be complexities and technical differences that separate the EPA’s HPV Challenge Program from the EU’s REACH, they are not as stark as they once were. Apparently, industry members of the EPA, National Pollution Prevention and Toxics Advisory Committee HPV Work Group were concerned enough about possible problems to make the following comments during a May 2004 meeting:

Will the scheme make use of qualitative exposure information?...[H]ow to handle the incorporation of non-SIDS endpoints (e.g., avian studies, carcinogenicity, etc.) into the scheme?...There is the potential that too many chemicals will be captured by Tier I, thereby exceeding the EPA’s ability to process these chemicals...As chemicals move through the tier system, there is the potential for stigmatization. [While an]...external appeals process that not only allows chemicals to go from Tier 0 to Tier I [and] the other direction as well...[may provide a safeguard]...the existence of an appeals process introduces a litigious option into the process which could interfere with incentives to present credible data...[T]here needs to be detailed guidance on how to address some of the nuances of the HPV data.”⁴⁴⁷

To the extent U.S. industry support for the EPA’s HPV program results in a domestic U.S. government policy position that is inconsistent with its international policy position against the EU REACH, it will only work against the U.S. chemical and downstream industries in the longer term. As the scientific benchmark standard for evaluation and disclosure of public risks (exposure-based quantitative risk assessment) is progressively minimized and ‘watered down’ by subjective non-science-based hazard characteristics and EU-like reinterpretations of OECD endpoint criteria,⁴⁴⁸ it will become increasingly difficult to prevent the return of Delaney Clause-era pre-market regulatory authorization and

legislation. Indeed, these difficulties may have already commenced considering that ENGOs such as the Environmental Defense Fund and the Natural Resources Defense Council, which sit on the NPPTAC, inquired last year about the possibility of recommending TSCA reform in light of European regulatory developments.⁴⁴⁹ Similarly, several congressional representatives have led indirect efforts to reform TSCA (and even FIFRA) incident to last fall's international environmental treaty implementation hearings convened by the House Commerce and Energy Committee.⁴⁵⁰

And, these efforts have recently come to fruition. On July 13, 2005, GAO released what is certain to become a politically-charged report that is entitled, "Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program".⁴⁵¹ It was prepared in response to inquiries previously made by three prominent Senate proponents of the precautionary principle – Senators James M. Jeffords,⁴⁵² Frank R. Lautenberg, and Patrick Leahy. The report claims to have evaluated EPA's ability "to (1) control the risks of new chemicals not yet in commerce, (2) [to] assess existing chemicals used in commerce, and (3) [to obtain more] publicly disclose[able] information [from] chemical companies under TSCA.

Predictably, the report concludes that the EPA lacks the ability under current federal statutes (e.g., TSCA and FIFRA) to assure that health and environmental risks are identified before the chemicals enter the stream of commerce. It then sets forth a list of recommendations that focus on ways to revise those statutes to provide the EPA with such ability. For this purpose, the report contains multiple references to the precautionary principle and hazard-based EU REACH regulation which imposes a zero-risk threshold and eschews economic cost-benefit analysis.⁴⁵³ If enacted, these recommendations would essentially end the statutory case-by-case testing approach now employed under federal law, and establish an across-the-board pre-market precautionary principle-based testing regime as the *de facto* regulatory framework standard for evaluating chemicals (and perhaps other substances and products) within the United States.

For example, the report recommends that Congress reallocate the burden of developing pre-market testing and other data from government to industry.⁴⁵⁴ It would also weaken industry intellectual property protections by reducing the confidentiality presently afforded sensitive and proprietary business and technical information that industry provides to regulators.⁴⁵⁵ Furthermore, it would link foreign and domestic industry regulatory filings, thereby requiring companies to provide the

same types and amounts of pre-market information to the EPA that they are currently or in the future required to submit to the EU Commission under the more stringent EU REACH regulation.⁴⁵⁶ Moreover, the report recommends that the EPA develop new testing models which effectively rely more heavily on *qualitative* pre-risk assessment *hazard-based screening* tools that focus on broad categories of substances than on specific *quantitative* empirical risk assessments of individual substances.⁴⁵⁷ Lastly, the report recommends reallocating *both* the regulatory *and* judicial burden of proof (burden of production and persuasion) from government (the EPA) to industry.⁴⁵⁸ This would mean that industry would need to establish proof of harmlessness (zero risk) instead of government being required to show proof of harm. Based on this report's findings, it is obvious that various U.S. and EU political forces wish to incorporate the precautionary principle into U.S. federal law.

IX.

IMPOSING PRECAUTIONARY PRINCIPLE-BASED SUPPLY CHAIN MANAGEMENT⁴⁵⁹ STANDARDS – THE GROWTH OF ‘SOFT’ LAW⁴⁶⁰

A. General

U.S. small and medium-sized businesses (exporters and importers) are also likely to be affected by ostensibly voluntary global supply chain management programs.⁴⁶¹ These programs, which incorporate the precautionary principle, are being advanced by the EU Commission, the United Nations and prominent international environmental and corporate social responsibility (‘CSR’) groups.

These largely European-based initiatives are supported, facilitated and financed by the EU's Brussels institutions through use of one or more alternative EU governance instruments, such as co-regulation⁴⁶² and self-regulation.⁴⁶³ As a result, such environmental and corporate accountability campaigns are usually consistent with and effectively implement EU regional policy frameworks.⁴⁶⁴ And, EU-style precaution-based regulations and product standards have made their way into the international standards development process at the International Organization for Standardization (‘ISO’).

B. The EU and the United Nations as Protagonists

The UN Global Compact Office ('GCO') and the UN Environment Program ('UNEP') (which presides over all international environmental treaties) have convened several high profile public-private partnership meetings and global business dialogues⁴⁶⁵ that have focused on the issue of global supply chain management. An overarching theme of these meetings has been the promotion of *global* CSR standards that require companies, wherever they operate, to adopt a 'precautionary approach' (effectively, the 'wingspread' version of the precautionary principle)⁴⁶⁶ to environmental challenges in all product and service sectors. This, in effect, involves employing an EU-style life cycle ('cradle-to-grave' or 'design-to-disposal') approach that evaluates all of the potential social and environmental impacts of their design, manufacturing processes, technologies, products and activities. In other words, companies are discouraged from investing in process and production methods deemed 'unsustainable', and they are encouraged to utilize expensive but unproven technologies in the name of precaution to avoid uncertain future EHS hazards.

The GCO's corporate social responsibility work and UNEP's environmental work coincide with the activities of the U.N. Commission on Sustainable Development ('CSD'), which organized the 2002 World Summit on Sustainable Development (WSSD).⁴⁶⁷ The CSD reports to the U.N. Economic and Social Council ('ECOSOC'), which functions under the authority of the General Assembly. Not surprisingly, most funding to support these agencies/organizations is derived from the European Union and EU member states.

1. Threatening Company Brand Reputation and Shareholder Value by 'Naming and Shaming'

Of greatest concern to U.S. multinationals and their key suppliers, however, is the growing use by civil society groups of public disparagement ('naming and shaming') campaigns intended to turn consumer opinion against them. While environmental and CSR-focused NGOs are at the forefront of these public pressure campaigns, the EU and the United Nations are the catharsis behind them. Indeed, they continue to encourage NGOs to employ these pressure tactics against public-image sensitive U.S. multinational corporations in order to reach their small and medium-sized suppliers. A recent paper prepared by the Chief of the UN Treaty Section clearly reflects this agenda:

In particular, *European Community directives and legislation in individual countries* have played a major role in influencing the attitudes of private sector corporations. In some instances, corporations have responded to public pressure even in the absence of legislative rules. Increasingly, such legislation is being enforced, sometimes through action undertaken by civil society. *Non-compliance with environmental legislation could lead to costly litigation and adverse publicity which corporations would very much like to avoid.* Compliance with environmental standards also makes them less susceptible to public criticism... Not only would these assist in avoiding conflict with legal requirements in the target markets, *it would help to avoid damaging protests by vigilant civil society groups...*

The message that civil society groups and academics have been preaching for some time, that non-compliance with global environmental standards carries financially negative consequences, may be getting through finally. In fact, non-compliance with global environmental standards may actually result in the loss of profits and bonuses and this has been a powerful element in focusing the minds of those making critical corporate decisions...

*The continuing pressure exerted by civil society lobby groups has had a significant impact. Groups such as Greenpeace, WWF, Rainforest Action Network (RAN) and Sierra have continued to highlight corporate shortcomings and attract public attention to these. **The naming and shaming approach adopted by such pressure groups** has had a critical impact in some cases. It could be assumed that the negative publicity would harm not only the image of a company, but also its earnings.* Television images of prominent individuals cutting up their credit cards issued by *Citibank* at the instigation of RAN may have had an impact on this bank's decision to enter into a 'common understanding of key global sustainable development issues'. *Home Depot* changed its wood sourcing policies following a campaign carried out by environmental groups including RAN (emphasis added).⁴⁶⁸

2. *Manufacturing and Service Sectors Affected*

Obviously, CSR, environmental and labor activists are being advised to target U.S.-based multinationals commanding significant market share with the goal of altering their production habits.⁴⁶⁹ As in Europe, these standards are then passed downstream to their many small and medium-sized suppliers.⁴⁷⁰ In each case, large companies have formed 'retail

buying groups' which agree to purchase only those products that are certified environment-friendly or otherwise bear an environment-friendly eco-label attesting that the product was manufactured consistent with all relevant international environment or labor standards. As a precondition to doing business, or as a condition to remaining on a retailer's vendor matrix, these retailers then typically require that *their suppliers and their suppliers' suppliers* employ a life-cycle approach to product development that reflects these values. A number of U.S. manufacturing-related sectors have fallen victim to these efforts, including large supermarket chains, clothing and footwear retailers, and home-improvement stores.⁴⁷¹

Furthermore, NGOs have also imposed precautionary principle-based supply chain management obligations upon U.S.-based companies operating within the financial services sector. For example, such groups have compelled two large American commercial banks and one U.S. investment bank to enter into an environmental pledge agreement.⁴⁷² The ostensibly 'voluntary' agreement was based on the 'Equator Principles', which were embraced originally by the World Bank's International Finance Corporation ('IFC') and later adopted by mostly European banks. Private U.S. banks have been targeted because "[t]he Equator Principles only apply to direct lending for project finance [, generally the province of development banks]. [They do not apply to] [m]any sensitive transactions, such as mining and forestry activities, [which] are more likely to be funded through lines of credit or corporate loans [extended by private banks]..."⁴⁷³

These agreements oblige such financial institutions to scrutinize and consider refusal of all lending and/or underwriting projects that potentially have an impact on sensitive biodiversity areas, referred to as 'critical natural habitats' (e.g., tropical rain forests). The term 'critical natural habitats' is synonymous with the term 'high conservation value' tropical rainforests, as defined by the Forest Stewardship Council, an activist environmental group that has sought to establish the precautionary principle as an international legal requirement in the area of sustainable forest management.⁴⁷⁴ The agreement also subjects the activities of these institutions to oversight by environmental and social group third-party verifiers, which has provided a steady source of employment for the NGOs.⁴⁷⁵

Hence, to the extent other US financial services companies (banks, insurance, reinsurance, capital leasing, investment brokerages, etc.), finance or otherwise, underwrite the producers or users of products, substances or activities (e.g., capital equipment and/or extraction,

excavation, manufacturing or construction) that might *potentially* threaten sensitive forest areas in developing countries, even by emitting carbon dioxide, they and their suppliers are also likely to fall subject to such harassment. And, as RAN's executive director has warned, RAN will next target these institutions' large manufacturing clients, the American automakers.⁴⁷⁶

3. *Accounting Broadly for Company and Brand Reputation*

Since its inception, the U.N. GCO has been working with UNEP to convince U.S. companies of the moral, social and environmental virtues of developing broader and more transparent internal governance systems, in line with evolving 'international' (mostly European) CSR standards that support sustainable development.⁴⁷⁷ It has also endeavored to link CSR performance with financial performance by showing how the regular flagging of environmental health and safety ('EHS') issues by corporate directors and executives and the public reporting and disclosure of both financial *and* non-financial EHS-related items can result in qualitatively better corporate governance, improved brand reputation and enhanced shareholder value.⁴⁷⁸ As noted above, better corporate governance really means fewer shareholder resolutions and activist public disparagement campaigns that reduce shareholder value. In other words, unless companies go along with these 'ethical' initiatives, civil society and green and social investors⁴⁷⁹ will continue to monitor and harass them – in the boardroom, in the courtroom, in the news and before government regulators.⁴⁸⁰

As two recent public accounting firm reports have theorized, between “50 to 90% of a firm's market value can be attributed to *intangibles like EHS*” (emphasis added),⁴⁸¹ and “intangible assets and goodwill [together] constituted 74 percent of the average *purchase price* of *acquired* companies in 2003 (with, respectively, intangible assets representing 22 percent and *residual goodwill 52 percent*)” (emphasis added).⁴⁸² These reports apparently recognize how, in the evolving U.S. 'knowledge-based economy, “[i]ntangibles such as R&D, proprietary intellectual property and workforce skills, world-class supply networks and **brands** are now the key drivers of wealth production *while physical and financial assets are increasingly regarded as commodities*” (emphasis added).⁴⁸³ Interestingly, these reports seem to acknowledge the recently revised financial accounting treatment of intangibles.⁴⁸⁴

Arguably, a company's EHS performance, in the absence of superior financial performance, will at least indirectly influence how that company is perceived in the public eye. But, even this acknowledgement does not go far enough for most social investors and civil society activists. They prefer the broader European stakeholder notion that business fundamentals should go beyond audited financials, because company intangibles describe "the human, intellectual, social and structural capital of an organization...they include people, relationships, skills and ideas that add value *but are not traditionally accounted for on the balance sheet* (emphasis added)."⁴⁸⁵ Such a positivist or utopian view, in part, emphasizes the social and philosophical role that accounting information *should* serve in an increasingly shared and interconnected global community.⁴⁸⁶ It also, in part, reflects the longstanding cultural and political movement within Europe that desires either to eliminate or significantly modify modern capitalist accounting and the free enterprise system which it supports. This movement is grounded in the belief that the current capitalist system "does not and cannot reflect [egalitarian] environmentalist values" such as the precautionary principle.⁴⁸⁷ No matter the underlying basis for such beliefs, however, they most certainly will have a dramatic impact on future U.S. company behavior if not taken seriously.

X.

THE BROADER INTERNATIONAL LEGAL, POLITICAL AND ECONOMIC IMPLICATIONS

Profound legal, political and economic differences exist between Europe and America. And, while they are not easily reconcilable, they do, to some extent, explain how and why the precautionary principle has been exported to the U.S. to change the regulatory, judicial and economic landscape.

A. The Legal Rights of Individuals vs. the Collective Legal Rights of Society

Some American and European academics have concluded that the different approaches employed by Europe and the U.S. to address food safety (and arguably environmental) risks (a *hazard* assessment ex-ante

regulatory approach vs. a *risk* assessment ex-post market *legal* approach) are attributable to fundamental underlying constitutional differences between these two regions. These constitutional differences, in turn, reflect different notions concerning the rights of individuals versus those of society, of the role of government in balancing between those rights and of the relative functions served by the different institutions of government:

The U.S. system is rooted in the Bill of Rights and the sanctity of the individual. ‘The Constitution of the United States...places great symbolic weight on human rights. It elevates the basic rights of man to supreme constitutional status. Judges then are the protectors of those rights and thus have a role superior to that of the other branches of government.’ England on the other hand, has no such anchor. *English law observes rights as residual and set in the dynamic process of Parliament rule...* ‘In theory, in practice and in constitutional structure and procedure, the British courts have always been firmly placed under...Parliament. The Parliament is the ultimate and unchallengeable maker of the law they apply’ (emphasis added).⁴⁸⁸

These observations are extremely significant, especially considering that England’s societal perspective towards risk is not dissimilar to that of the European continent:

[W]here[as] the US system focuses on the individual...the English system focuses on the polity. In application of the rights of the individual are unchangeable while the needs of the polity change...A society where individual rights are pre-eminent worries when rights are trampled, thus each individual and firm has standing before the court of law...In the British system, because of the role of the Parliament the unit of analysis is the polity, which balances the rights of individuals against the needs of society. Letting go the guilty is far worse because society as a whole is made worse off. In this way it can be said th[at] *liberty trumps democracy (society) in the US, while democracy (society) trumps liberty in the UK* (emphasis added).⁴⁸⁹

For the most part, this explains why food safety and environmental protection are basically legal issues in the United States and regulatory issues in Europe. However, there is another reason – the tort law and product liability statutes throughout Europe are relatively undeveloped as compared to those within the U.S. “In the UK, for example, there are no contingent-fee contracts but instead a loser-pays rule that minimizes the

quantity of frivolous lawsuits and may stand in the way of an individual's right to justice."⁴⁹⁰

An ideal example of these distinctions lies within the European Aarhus Convention.⁴⁹¹ This treaty essentially mandates that all economic activities planned by private industry within the territories of treaty parties, that *may* (be perceived to) currently or in the future have a significant effect on the environment, are subject to public disclosure, review and accountability before they can be undertaken.⁴⁹² This obligation serves to guarantee the disclosure of even confidential, proprietary business and third-party information, as well as intellectual property, whether or not protected by law, if the public interest would be thereby served.⁴⁹³ Whether or not such activities would comply with the law is irrelevant. And the disclosure requirement so imposed goes beyond the typical obligation to provide relevant information pursuant to national rules on environmental impact assessments.⁴⁹⁴ It also serves to empower and provide a legitimate platform for environmental non-governmental organizations to disagree with and shape public opinion against planned company activities.⁴⁹⁵ It is this type of disclosure and accountability obligation that the EU is endeavoring to export throughout the world as an international legal standard, particularly through the United Nations.⁴⁹⁶

B. EU Cultural Values Are Critical of U.S. Free Markets – The Role of Social Welfare Theory

Reading between the lines, it is obvious that Europe's goal of establishing the precautionary principle first as a regional regulatory framework and then as an absolute global legal standard, actually represents a much broader political and social agenda. "...European regulation is...not really economic in focus. Rather, the EU is a *political* undertaking. There may be economic effects from European regulation, but the objectives are *political*" (emphasis added).⁴⁹⁷ In effect, it is to impose on the U.S. and all other nations *its* regional value system vis-à-vis a disguised global social wealth redistribution scheme. That scheme is cast in politically attractive and altruistic terms of health and environmental protection, developing country aid, technology transfer, capacity building and collective global security. However it is actually harmful to developing country societies and inhibits real developing country economic growth,⁴⁹⁸ as it is premised on idealistic notions of charity, social morality and quality of life that define the low or slow economic growth model embraced by Europe – i.e., the enhanced welfare state. The EU's scheme is critical of and aspires to compete with

free market capitalism.⁴⁹⁹ It also calls upon global industry to exercise corporate social responsibility⁵⁰⁰ in its dealings with peoples of different societies, in a manner set forth by officials in the U.N. Global Compact⁵⁰¹ Office, who happen to be Europeans and American Europhiles. Unremarkably, the brand of CSR that Europe is selling to the world is merely reflective of the unique relationship (i.e., the social contract) that exists between *European* businesses and *European* governments. This relationship goes beyond the letter of the law to ensure what *European* civil society expects as a “just economic order”.⁵⁰²

These *regional* values are clearly embodied within the social welfare doctrine of ‘sustainable development’ that the European Commission and European civil society groups have tirelessly promoted as a new *global* ‘development’ paradigm at the United Nations since, at least, 1992.⁵⁰³ Sustainable development, as so defined, reflects the fears of Thomas Malthus⁵⁰⁴ and remains a vague and ‘tired’ concept that essentially means ‘development that is consistent with future as well as present needs.’ While Europe has advertised sustainable development as entailing three primary concerns – environment, social and economic – the EU and other like-minded nations have proceeded to define this term in a negative fashion (i.e., as a necessary remedy to the failures of free market capitalism, unbridled economic growth and technological innovation). The implication is that these pursuits are inherently inconsistent with sustainable development, which must instead focus primarily on ensuring health and environmental protection on a global level. Hence, there is always an urgent need for more and more regulation and for technical and social standards and third-party audit and verification schemes (accountability mechanisms) to implement them.

The EU has arguably utilized this concept as a reason for calling on World Trade Organization member governments to support changes to the international legal benchmarks they currently rely on to evaluate the safety or harmfulness of everyday products, processes and activities. Europeans believe that such changes are possible so long as they can establish the precautionary principle as an absolute international and U.S. legal standard. If they are successful, the role of science and economics in assessing and managing global public risks would be severely undermined; this, in turn, would effectively slow down U.S. technological innovation and economic progress and thereby threaten American industries’ entrepreneurial spirit and global competitiveness.

Europeans have indeed taken great pride in their evolved version of the welfare state, which relies on government regulation to protect the

fear-induced European public from perceived health and environmental risks and social inequities posed by the activities of free markets:

...Europeans remain deeply committed to the idea of the welfare state, nor have they repudiated the notion of the public sector. Rather European governments are looking for new and innovative ways of dealing with the problems, just as they are seeking to reinterpret the welfare state's traditional values... Yet, despite the troubles besetting it, *the welfare state is seen by Europeans as one of the continent's greatest achievements, an essential element of a civilized society and the foundation of social consensus* (emphasis added).⁵⁰⁵

According to two European environmental law experts, this predisposition towards a socialist-oriented regulatory model is manifested in the EU's proposed REACH regulation:

The scope and intrusiveness of the draft REACH regime suggest a move to exploit the public's unfounded fears. But in the name of health and environmental protection, REACH proponents may be after something bigger. Although the proposed system would differ from past examples of centralized state planning economies, it may produce some of the same results, given the broad discretion granted to government agencies, who will have the power to decide for all of us which chemicals (and thus which products) we should want and which chemicals we should avoid.⁵⁰⁶

And, it has also manifested itself in the area of food safety. American and European academics, for example, have evaluated the feasibility of a proposed regulatory model that endeavors to establish a *principal-agent* relationship between government and private food companies. Pursuant to this model, the risk-neutral government would delegate to risk-averse private companies the costly burden of pursuing food safety (a public good) on behalf of society. Such a delegation would be effectively secured by providing industry with the right incentives (via use of penalties or compensation schemes). These incentives would be provided mostly to the larger food companies, which are assumed to be the only ones capable of achieving the market efficiencies and rates of compliance necessary to significantly reduce the costs of ensuring food safety. In the end, government would expect such companies to function as risk-neutral government agents (i.e., as government's eyes and ears) for purposes of managing/controlling the food safety (HAACP) process in which the many smaller food companies positioned up and down the food supply chains participate.⁵⁰⁷ However, to accomplish this in the U.S., where fundamental individual rights are protected at the

constitutional level by the courts, would require extra-regulatory incentives such as insurance bonds, product and process branding or more aggressive use of the legal system against companies.⁵⁰⁸

Unfortunately, according to two globally renowned economists, “the essence of this belief [faith in the role of government in the markets] is unlikely to change soon”, since it is well entrenched in Europeans’ daily political and economic lives:

Europe’s first convergence after World War II – long before Maastricht – was on the mixedeconomy [characterized by strong, direct governmental involvement in the economy]...The mixed economy, it was felt, would deliver full employment and growth. A significant part of that growth would, in turn, be *redistributed through social spending that would ensure security and social peace*...The model lasted for four decades...[Although what] was confront[ed] in Western Europe...in the mid-1990’s...[was] ‘the end of the welfare state in its classical form,’ observed Karl-Otto Pohl, ‘it cannot be reversed completely. You can’t undo developments of the last hundred years (emphasis added).⁵⁰⁹

C. Exporting Social Welfare Statism to Constrain U.S. Industry – Securing a Competitive Economic Advantage

At the global level, Europe’s vision of a utopian society also has a pragmatic dark side – Europe’s need to maintain its global economic competitiveness by avoiding what some academics have referred to as a ‘prisoner’s dilemma’.⁵¹⁰ Europe’s penchant for *over*-regulation and its embrace of ‘enhanced welfare state’ economics have arguably rendered it unable to close its economic growth gap with North America and Asia, and likely explains why Europe has fallen behind in its public quest to surpass U.S. economic competitiveness by 2010.⁵¹¹ Tragically, it has also contributed to the German unemployment rate, which was recently reported to have risen “above the politically sensitive 5m [million] mark for the first time since the end of World War II.”⁵¹² Europe, therefore, has no choice but to export its high cost precaution-based regulatory framework abroad in order to shift a portion of the economic burden (hence the familiar term ‘burden sharing’) to other countries, especially the United States. It is believed that this will serve to slow down American technological and economic progress enough, at least, for European industry to regain its international competitiveness.

Hence, contrary to the assertions of former EU Trade Commissioner Pascal Lamy, Europe's exportation of the precautionary principle is not motivated solely by its desire to preserve a European cultural preference for natural foods, a healthy body, a clean environment and the avoidance of risk.⁵¹³ There is a growing global awareness that the EU has intentionally employed the precautionary principle for international economic gain in the sphere of international trade under the guise of pursuing sustainable development. It has systematically targeted the precautionary principle against the competing high tech and more economically efficient industrially processed exports of the U.S. and the low-cost commodity-driven agricultural and natural resource-related exports of developing countries. In other words, Europe has employed precaution as a protectionist device to 'level the economic playing field' for its ailing, lagging or underdeveloped industries that suffer from a 'comparative economic disadvantage.'

According to business professor and renowned management expert Peter Drucker, Europe's efforts to rewrite international trade rules to secure a competitive advantage for its industries is partially reflective of the evolving pluralistic global economy. Drucker argues that such an economy actually consists of four distinct economies rather than one: "a world economy of information; of money; of multinationals (one no longer dominated by American enterprises); and a mercantilist world economy of goods, services and trade. These world economies overlap and interact with one another. But each is distinct with different members, a different scope, different values and different institutions..."⁵¹⁴

Professor Drucker also observes that Europe's exportation of protectionism under the guise of strict health and environmental regulation is a hallmark of the trading bloc mentality that characterizes the new economy of mercantilism:

...[M]ercantilism is increasingly becoming the policy of 'blocs' rather than of individual nation- states. These blocs— with the European Union the most structured one, and the U.S.-dominated NAFTA trying to embrace the entire Western Hemisphere (or at least North and Central America)—are becoming the integrating units of the new world economy. Each bloc is trying to establish free trade internally and to abolish within the bloc all hurdles, restrictions and impediments, first to the movement of goods and money and ultimately to the movement of people...*At the same time, each Bloc is becoming more protectionist against the outside...[A]...'home market'—small enough to be protected*

*and big enough to be competitive —is what the “blocs” provide. Thus, the European Union is already in the process of creating the institutions for its bloc to be effective in this world economy: a European Parliament, a European Central Bank, a European Cartel Office and so on (emphasis added).*⁵¹⁵

The World Bank referred to this practice within one of its recent reports. Its findings reflect that European industry has worked alongside the EU Commission and European environmental groups to adopt a region-wide precaution-based import ban against American, Canadian and Argentine GM food, feed, and seed exports. Apparently, the smaller European farmers, less efficient European food producers and relatively undeveloped European biotech companies were seriously concerned that the lower GM export prices generated by the high volume GM production of these large exporters would drag down *both GM and non-GM* food prices in Europe.⁵¹⁶ This is not, however, the only World Bank report that has addressed the extra-territorial burdens imposed by European precaution-based *food* regulations and product standards; in fact, there are a number of others.⁵¹⁷ Together they reveal a troubling pattern – namely, that protectionist motivations also underlie many other EU *nonfood*-related regulations and technical standards.

Unfortunately for American industry, European companies have become particularly adept at persuading the EU Commission and European national governments, as a matter of ‘fairness’, to impose upon foreign products and processes the same stringent and high cost regulations and standards to which similar European products and processes have been subject. And EU regulators have become equally adept at crafting and implementing EHS-driven public policy goals that can provide European companies with the political ‘cover’ necessary to constrain foreign competition, and thereby regain their competitive edge.⁵¹⁸ In fact, the EU Commission believes that, by integrating regional precaution-based environmental protection requirements also within multilateral environmental treaties and the European and international standardization processes,⁵¹⁹ it can change WTO law so as to allow for environmentally-friendly products and processes (i.e., ‘environmental technologies’).⁵²⁰ This will enable Europe to secure new global markets and a competitive economic advantage for its growing environmental goods and services industries, to the extent it is able to develop objectively measurable environmental *performance* standards.⁵²¹ Until that occurs, however, the benefit gained by EU industry essentially amounts to a ‘negative competitive advantage’ roughly equivalent to the added costs incurred by foreign companies of going beyond average

international production and processing costs to satisfy the more rigorous EU market standards.

As precautionary principle advocates have explained, this *economic* rationale is, in fact, historically based. Indeed, it first took on importance in connection with European air pollution control efforts during the 1980s:

Initially precaution was [used] by German authorities in the early 1980s to justify unilateral application of technology based standards to reduce acid rain. But once in place, *the Germans pressed the EU to adopt similar standards across the rest of Europe, to prevent its own industries being placed at a competitive disadvantage.* This was not enlightened environmentalism at work but the dictates of a competitive market of member states...‘The policy debate was more dominated by competitive considerations rather than environmental concerns...’...‘The *precautionary principle* therefore helped to lay the conceptual and legal basis for a proactive environmental policy, which once spread into Europe, was also directed at ensuring ‘burden sharing’ in order that German industry did not lose its competitive edge, but rather gain new markets for its environment-friendly technology and products’ (emphasis added).⁵²²

And today, long after the EU’s formation,⁵²³ the practice of exporting abroad the high costs of EU precaution for economic reasons is apparently alive and well. These concerns were revealed once again within a 2000 EU Commission report which discussed various alternatives for mitigating the adverse effects of precaution-based sustainable forest management (SFM) standards on the competitiveness of Europe’s forest-based industries,⁵²⁴ and at a related EU Commission strategy session convened earlier that year. Ultimately, it was decided that EU SFM standards should be exported *globally* via the commercial markets to enhance EU competitiveness:

...EU forests are for their most part well managed, engendering higher costs to forest owners and to wood buyers, but no market advantage is accrued over competitors, many of whom do not always bear the full costs of SFM [sustainable forest management]. *Thus a key recommendation of the study [of the competitiveness of the European Union woodworking industries was to ‘export EU environmental (and social standards), in other words, to promote the raising of forest management standards world-wide – which is good for forests*

– and thereby enhance competitiveness – which is good for [EU] forest-based industries (emphasis added).⁵²⁵

European industries have not only been willing, but also eager to export the legal and economic burdens they will incur regionally as the result of an enacted REACH chemicals regulation. Comments made by two prominent EU industry trade associations clearly reflect this. According to Eurochambres (the Association of European Chambers of Commerce and Industry),

There must be a '*level playing field*' for chemicals (particularly *imported* chemicals) as constituents of finished products (e.g., toys, textiles). Substances with potential impact on human health or environment imported to the EU as constituents of products must not be exempt from notification. Controls must be in place to ensure that finished products imported to the EU do not contain untested and unregistered substances. This should ensure that EU manufacturers remain competitive with finished products from outside the EU (emphasis added).⁵²⁶

Similarly, CEFIC (the European Chemical Industry Council) has argued that,

The chemical industry is truly global. The EU industry needs a *level playing field* with the rest of the world in order to compete. There is not support for amending legislation in the USA or Asia, who are our main competitors, to take a parallel approach to REACH. There, REACH imposes a cost for chemicals testing and registration which our non-EU competitors will not have to bear. WTO rules and administrative practicalities prevent EU legislation from banning the import of finished articles containing non-registered substances...It is essential that a solution compatible with WTO rules be found to create a *level playing field* between EU producers of both substances and finished articles, and non-EU manufacturers of the same finished articles who are excluded from the requirements of the REACH system (emphasis added).⁵²⁷

This was also made clear within the 'Conclusions and Recommendations' section of the April 2004 business assessment report prepared by the Federation of German Industries (BDI):

The review of existing studies and the estimate on a European level shows that burdens by the new legislation on chemicals

in Europe will potentially affect the Chemical Industry in a dramatic manner...Costs will burden mainly price-sensitive products. Changes in time to market, duty of authorization and duty for disclosure are issues which touch the innovative power of the European chemical industry...Industry does not expect an immediate innovative push. For this to happen, *global implementation of the EU substances policy would be a fundamental prerequisite. In such a situation, all products would be manufactured under comparable conditions and every producer would be confronted with the effects of the new substances policy. Through this equal pressure on all competitors*, the producer with the most innovative product would have a competitive advantage and so there would be an incentive for innovation. *However, as long as the global environment is not comparable and producers can manufacture their products outside Europe under easier conditions, then this hoped-for positive effect of an innovative push will tend to be transformed instead into the negative effect of a production loss...*The fundamental aim of European legislation must be to achieve practical reform of the EU substances policy *and so minimize the negative consequences for German industry* (emphasis added).⁵²⁸

In response to these pleas, which seek the preservation of EU global competitiveness in the chemicals and downstream sectors,⁵²⁹ the EU Commission has embarked on an extensive campaign that has expressly promoted the proposed REACH regime as a *global* standard. In this regard, it has stated the following:

As far as exports are concerned, there will be a potential risk of some loss of market share if prices of domestically produced chemicals are forced up due to REACH. This namely holds for cases where competitors exist on third markets that totally neglect the important European market. Indeed, it would be only these companies that would completely escape the REACH legislation and its testing and registration requirements and costs associated to this...In the longer run, the balance of impacts on competitiveness on these third markets as well as on the European market *will also depend on the extent to which the REACH regime is successful in establishing itself as a new international standard. This would give the EU chemicals industry a substantial boost in terms of international competitiveness* (emphasis added).⁵³⁰

Europe's exportation of its industries' higher regulatory cost structure and legal obligations to other countries, particularly the U.S., and its channeling of environmentalist agendas and consumer fears

through the precaution-based prism of the Kyoto Protocol is intended to ensure the future global competitiveness of European industries. As pointed out by Australian and European scholars, the Protocol, as well, should be viewed for what it really is – a guise for European trade protectionism:

...Kyoto activism is in reality not about saving the world. It is about exploiting Green sympathies and justified environmental concerns to convince the world that it should accept a new form of *European protectionism*...“If one looks at the world from Brussels, the Ruhr or Berlin, the motivation for pushing centrally planned Kyoto controls becomes understandable. *Political and industry leaders, as well as the people, observe the growing political costs of proliferating interventionism, fuel levies, high taxes, and collective welfare for a rapidly aging population.* Europe’s increasingly corporatist-collectivist policy design confronts them with the loss of manufacturing prowess and, more recently, deflation. However, they are loath to surrender the dream of a regulated, featherbedded social democratic society to competitive world markets and young, energetic competitors outside.

...[I]t is easier to cope with a rationing system such as the Kyoto controls if one has little or no economic growth, as is the case in Europe. *Fast-expanding economies with growing populations, such as Australia or America, easily overshoot fixed targets.* Moreover, the baseline for the Kyoto calculations contains, in the case of Germany, not only West German emission levels, but also the massive emission of East German industry, which was quickly wound down after the fall of the Berlin Wall as it was uncompetitive. It is therefore easy for the Europeans to hold themselves up as paragons of Kyoto compliance. Europe’s remaining industry core is based on metal products and high skills. European industry and tax collection are directly affected when potential disasters in Gladstone – or skilled people in Vancouver or Ohio with access to cheap energy, metal ore, technology and skills – set out to conquer world markets with new metal products. *It is only natural for Europeans to try and handicap the new competition by seeking supposedly virtuous pretexts, such as saving the world from global warming...Seen in this light, the European Union’s Kyoto drive only replicates EU tactics of fuelling global GM hysteria to protect the interests of EU agriculture...* (emphasis added).⁵³¹

Alternatively, the Kyoto Protocol may be viewed as an export-promotion and subsidization vehicle that is intended to provide European

industries and governments with a ‘first mover’ advantage in deploying climate change mitigation technologies globally in pursuit of EU sustainable development goals. The EU hopes to market and provide those technologies to economic growth-oriented developing and transition country treaty parties through the Protocol’s ‘joint implementation’ program and ‘clean development mechanism’:

Investment in environmental technologies has the potential not only to increase employment and economic growth within the EU, but also to promote sustainable development at the global level, particularly in developing countries...Environmental technologies can thus play an important role in achieving internationally agreed development goals. The implementation at the national level of multilateral environmental agreements and the World Summit on Sustainable Development commitments is also generating an increasing demand for environmental technologies in developing countries...The CDM and JI under the Kyoto Protocol offer great potential for fostering technology development in developing countries.⁵³²

The EU has especially targeted its technology sales efforts toward the not-as-yet defined climate strategies for the post-2012 Kyoto period.⁵³³ One need only consider two of the initiatives launched by the EU at the 2002 World Summit on Sustainable Development in Johannesburg (e.g., the energy initiative⁵³⁴ and the renewable energy coalition⁵³⁵) to see how the EU is poised to benefit from the public fears it has fanned about climate change. Actually, it may be argued that each of the precautionary principle-based multilateral environmental agreements currently in force,⁵³⁶ which must be implemented at the national level to achieve the European notion of sustainable development, were crafted to ultimately benefit Europe economically:

At [the] multilateral level, *all major international environmental agreements* include provisions concerning technology transfer and capacity building...[The] initiatives launched by the EU in Johannesburg will also be important in promoting the diffusion of environmental technologies...*The overall aim is therefore clear: to exploit the potential of environmental technologies* for meeting the environmental challenges faced by mankind *while contributing to competitiveness and growth* (emphasis added).⁵³⁷

Furthermore, Europe’s action plan for stimulating technologies for sustainable development also focuses on those environmental technologies that may be deployed to address potential chemical hazards.

In addition to proposing the REACH regulation on a regional level for this purpose⁵³⁸, the EU has also operated behind the scenes to promote the United Nation Environment Program's Strategic Approach to International Chemicals Management Initiative (SAICM).⁵³⁹ Through the U.N., it is shaping SAICM into the global version of REACH. Predictably, SAICM meetings have already devolved into a forum for the dissemination of overly restrictive, hazard-based regulatory principles identical to those contained within the EU REACH. As a result, it may be only a matter of time before SAICM will apply the precautionary principle to all of the world's chemicals industries, as well as to all of the world's downstream and upstream industries. Like other UNEP treaties, the goal of this initiative is to develop a *global framework for regulation*⁵⁴⁰ – this time, for the use and production of chemicals – so as to prevent or minimize what Europeans perceive as mounting but uncertain health and environmental hazards that may arise sometime in the distant future. But as in all other cases, European industry is poised to exploit such an opportunity to advance its economic interests at the expense of other countries' industries, including those based within the U.S.

D. Using European Cultural Values to Change International Law

Despite its apparent political appeal, Europe's practice of erecting disguised technical trade barriers cast in the form of stringent precautionary principle-based EHS regulations and product standards, however, runs counter to both the letter and the spirit of at least three World Trade Organization Agreements.⁵⁴¹ Such a practice has often resulted in unfair discrimination between otherwise identical or similar products based on political preferences for particular production processes. In other cases, it has resulted in the creation of unnecessary obstacles to international trade flows that could have been avoided had other available, less trade-restrictive, alternatives been utilized.⁵⁴²

The only WTO legal provision that has been interpreted as providing WTO Members with the right to apply the precautionary principle is Article 5.7 of the SPS Agreement, which covers technical regulations and product standards addressing *food safety* issues.⁵⁴³ It generally permits WTO Members to take precautionary measures only when they do not possess sufficient evidence after having conducted an objective science-based risk assessment. Even if a WTO Member is able to satisfy this requirement, it must be remembered that this right is, in any event, only a limited and provisional one that is subject to timely and repeated

review taking into account updated science and changed factual circumstances.⁵⁴⁴

Well aware of the difficulty of satisfying these tests, the EU Commission and precautionary principle advocates have devised a clever three-dimensional legal strategy to change WTO rules that entails exporting the precautionary principle around the world through various fora. In particular, the EU has endeavored to inject the precautionary principle within the WTO system through creative interpretation of the SPS and TBT Agreements and through skilled participation in the international standards development process.⁵⁴⁵ It has also sought to incorporate the precautionary principle within multilateral environmental treaties that require ratifying parties to adopt and implement it through enactment of national legislation.⁵⁴⁶ Furthermore, the EU has already begun to incorporate the precautionary principle into its bilateral and regional free trade, aid and ‘capacity-building’/technical assistance agreements with developing countries in the form of technical product standards and regulatory infrastructure development.

This strategy accomplishes two goals. First, it ensures that the high costs and administrative burdens imposed by precautionary regulation are shared more or less equally among the commercial actors operating in the global markets. Second, it helps to establish the precautionary principle as a norm of customary international law to guarantee “its adoption, implementation and diffusion” in other countries. At least one precautionary principle advocate has clearly stated Europe’s intentions concerning the second of these objectives: “The EU hopes that by integrating the precautionary principle into international treaties and multilateral agreements, *it will become the unchallenged standard by which governments oversee and regulate science and technology*” (emphasis added).⁵⁴⁷

In other words, by exporting the precautionary principle throughout the world in this manner, the EU can help to formulate new customary international law that many scholars argue would need to be considered during the course of a WTO dispute involving precaution-based health and environmental regulations and standards. However, whether a form of the precautionary principle that is broader than the limited scope of Article 5.7 of the SPS Agreement can be incorporated into the WTO Agreements during the course of a WTO dispute without institution of a formal WTO amendment process is not entirely clear.⁵⁴⁸

Customary international law generally consists of the regular practices and rules within and among different countries (‘States’) that

those States follow. These practices and rules have traditionally been deemed to become rules of international law only after they satisfy two conditions. First, States must show that the domestic practice in which they engage within their national borders and the international practice they engage in with other States are consistent, as indicated by court decisions, legislation, international treaties in which they participate and diplomatic practice. Second, States must show that such practice is based on more than morality, habit or convenience – it must reflect governmental recognition of a legal obligation to act accordingly.⁵⁴⁹ Traditionally, the development of custom has been deemed to be a messy process that takes place over a relatively extended period of time (e.g., 30-40 years).⁵⁵⁰

A growing number of legal scholars and human rights and environment advocates have argued, however, that this traditional notion of customary international law is no longer workable. Instead, they argue that in today's fast-paced and globally-connected Internet and media age, custom can be formed 'instantly' through the making of widely approved international declarations evidencing what States 'say', such as U.N. resolutions (i.e., 'soft law'), and through government 'acts' of signing *and* ratifying multilateral and bilateral treaties.⁵⁵¹ While the theory of 'instant custom' is appealing, it lacks serious credibility, especially since individual countries often act in a manner that is contrary to what they say. Similarly, the different parties to a treaty could initially ratify a treaty and then subsequently implement it differently amongst themselves (i.e., engage in two contrary acts). Yet, it is entirely conceivable that binding customary international law can be created within a shorter period of time (e.g., 5-10 years). And this can occur as the result of consistent treaty party practice undertaken subsequent to the ratification of an international treaty⁵⁵² by powerful, influential and like-minded Nation-States,⁵⁵³ if not persistently counteracted (objected to) by other treaty parties. But, the degree to which such CIL can bind non-consenting nations is also subject to debate.⁵⁵⁴

As international law Professor John O. McGinnis has observed, the establishment of evolving legal norms such as the precautionary principle as CIL is no longer solely within the control or discretion of Nation States. Unlike the situation surrounding international treaties, approval of and compliance with which is subject to democratic checks and balances, elitist, left-leaning, anti-market orientated law professors are increasingly assisting global civil society activist efforts to develop a less transparent form of international law, namely CIL – and, the precautionary principle is only the most recent example:

[In contrast to treaties]...bureaucrats and judges, rather than officials accountable to voters, determine the content of customary international law...[And,] those responsible for determining the content of customary international law are in fact radically unrepresentative. Law professors – the modern publicists responsible for the development of customary international law – are predominantly from the developed rather than developing world...[E]ven within their own nations, law professors, like intellectuals generally, have distinctly unrepresentative views – very often to the left of the society as a whole. In the United States, for instance, Democratic-leaning law professors outnumber Republican-leaning law professors by about five to one. The combination of these two biases can be quite powerful. *Because academics come from countries that are already wealthy, they profit less than from growth than the average global citizen, who may be more willing to take some risks to benefit his relatively low standard of living. Because academics lean to the left side of the political spectrum they are also less sympathetic to entrepreneurial ideas. Thus, modern customary international law rules are likely to have built-in biases against free markets and other classical liberal ideas. For instance, many scholars have tried to argue that customary international law contains something called the precautionary principle—a rule that prohibits the introduction of new technology unless all risks from the technology can be ruled out.* This principle obviously would have more appeal to those who are already well off than to those for whom new technology may be life saving (emphasis added).⁵⁵⁵

If the EU is able to establish the precautionary principle as a norm of customary international law, it raises the prospect that U.S. federal court jurisdiction may ultimately be invoked successfully under the provisions of the Alien Torts Claim Act ('ATCA')⁵⁵⁶ to hear claims brought by foreign nationals injured in their country. Such lawsuits would likely allege that a U.S. multinational company breached its duty of care – to be 'better safe than sorry' – when it failed to employ in advance adequate measures to prevent operations or products in a foreign country from causing uncertain but potentially significant future environmental or health-related harm.⁵⁵⁷ In light of the U.S. Supreme Court's recent ruling in *Sosa v. Alvarez-Machain*,⁵⁵⁸ this should no longer be considered a remote possibility.⁵⁵⁹

The ability of the EU to establish the precautionary principle as customary international law so that it binds U.S. regulators and American industry, even though the U.S. has chosen not to ratify precaution-based environmental treaties, should be of serious concern to every American

business, large or small. According to many legal scholars, the U.S. Constitution already views treaty law as equivalent in importance to a federal statute; thus, U.S. ratification of an environmental treaty and adoption of implementing federal legislation would act to supercede a prior inconsistent federal statute. More troublesome, however, is the prospect that customary international law could be construed by the U.S. Supreme Court, and thus by lower federal courts, as equivalent to federal common law, as an increasing number of legal scholars believe it should be.⁵⁶⁰

CONCLUSION

It is critical that U.S. businesses of all sizes, especially small and medium-sized businesses, speak out against EU and activist efforts to export their precautionary principle-based regulatory and product standards model to the U.S. and other countries (e.g., China) where U.S. companies do business. Small U.S. exporters, as ‘downstream’ users of primary substances or products manufactured by multinational companies, will be directly impacted if those substances or products are themselves banned or severely restricted within the EU where they are sold or within China where they are produced. Although U.S. small business importers and manufacturers that do not export will not be directly affected by such rules, they are likely to be held indirectly responsible for satisfying them *as suppliers* to large U.S. retailers or U.S. domiciled, foreign-based multinationals with distribution channels extending outside the United States. Similarly, U.S.-based services companies operating in the personal services, financial services, construction and real estate development, and waste disposal industries are likely to be impacted by the precautionary principle if it is adopted and incorporated by American state legislatures and municipalities into state and local laws.

Unfortunately, given the increasingly global and interconnected communications environment in which *all* companies now operate, the business activities of large multinationals and their suppliers are exposed more than ever before,⁵⁶¹ and often subject to continuous negative environmental NGO public relations campaigns. Since prolonged public disparagement campaigns can damage a business’s reputation, consumer and wholesale brand recognition, and perhaps even shareholder value, many multinationals have been reluctant to resist environmental NGO campaigns, though they may yet challenge EU Commission precautionary principle-based regulations through government back-channels. Consequently, the interests of their small and medium-sized

U.S. suppliers often remain at risk. While many U.S. small and medium-sized enterprises serve as critical links along the global product supply chains, they individually lack the financial, technical and human resources to satisfy or otherwise address such precaution-based measures.

Notwithstanding these limitations, U.S. small and medium-sized businesses, after all, form the backbone of the U.S. economy, and therefore, *can* and *ought* to make a difference. They can and should directly help to prevent the precautionary principle from evolving into U.S. law by working alongside U.S. multinationals to counter Euro-style initiatives introduced by environmental NGOs at the state and local levels. In addition, they can individually and collectively lobby their state and federal representatives and the federal government to counter and reject any federal or regional level precaution-based proposals (e.g., RGGI) that could potentially snowball, especially if they may indirectly involve foreign governments or industries.

Furthermore, U.S. SMEs can and should work collaboratively with multinationals and the federal government to prevent the precautionary principle from becoming an international legal standard and a norm of customary international law. This will likely entail the initiation of multiple dispute settlement proceedings at the WTO to challenge a growing number of illegal EU precautionary principle-based regulations and directives. In addition, it will require greater coordination with and support of the government to counter EU precaution-based regulatory proposals made at the various U.N. agencies focusing on sustainable development issues, as well as, at the several intergovernmental technical bodies at which WTO-relevant standards are developed. And, it will necessitate more extensive and coordinated industry participation in the international standards development process at the ISO. All of these activities will serve to defend the objective benchmarks of current international trade law, namely, the requirements of scientific, technical and economic justification, transparency and global relevance, which the U.S. government and American industry have spent the past fifty or more years developing.

Moreover, U.S. SMEs *and* multinationals can and should seek out free-market, pro-industry, free trade and science-based universities, think-tanks, and educational/advocacy groups that can help to effectively ‘push-back’ against ENGO legal challenges, soft law initiatives and public campaigns that support the precautionary principle. This can be done at public international and intergovernmental fora, and within the courts. Unfortunately, businesses have often failed to consider the long-term

legal and economic implications. While this may entitle companies to temporarily escape the public scrutiny of Euro-style activists and possibly even avoid their filing of hostile shareholder resolutions at the next annual meeting, it is not likely to preserve longer term strategic corporate economic and financial interests, which include the preservation and defense of objective and transparent regulatory and legal standards. Indeed, it is likely to cause them even more legal and cost-related problems in the future.

In sum, the U.S. business community as a whole should explore *all* conceivable and available options, opportunities and vehicles that could help it to extinguish the complex threat posed by the precautionary principle. At this juncture, the stakes are very high. America's very enterprise system, individual freedoms and international interests – its core political and economic values – may be hanging in the balance.

ENDNOTES

¹Brandon Mitchener, “Rules, Regulations of Global Economy Are Increasingly Being Set in Brussels,” *WALL ST. J.*, Apr. 23, 2003.

²The reference to the term ‘regulation’ also includes what is referred to in Europe as a ‘directive’. Technically speaking, however, there is a difference between a regulation and a directive. Regulations are issued and implemented directly by the European Commission. Directives are issued by the Commission and directly implemented by EU Member States.

³This reflects an estimated U.S. Dollar/Euro exchange rate of \$1.50 to 1 Euro.

⁴*See* “Enhancing the Implementation of the New Approach Directives, Communication from the Commission to the Council and the European Parliament”, COM (2003) 240 final, May 7, 2003, at 3, at http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0240en01.pdf.

⁵For example, the chemicals industry supplies a number of downstream manufacturing sectors, including textiles and clothing; leathers; agricultural pesticides, biocides, herbicides and fertilizers; metals; mechanical and electrical goods; office machines; industrial machinery; metal products; construction; automotive; paper; paints, varnishes and enamels.

⁶*See* Lawrence A. Kogan, “The Precautionary Principle and WTO Law: Divergent Views Toward the Role of Science in Assessing and Managing Risk”, *SETON HALL JOURNAL OF DIPLOMACY AND INTERNATIONAL RELATIONS* (Winter/Spring 2004), at 88 and fn 79, at: <http://diplomacy.shu.edu/journal/new/pdf/VolVNo1/6%20-%20Kogan.pdf>.

See also, Theofanis Christoforou, “The Precautionary Principle in European Community Law and Science”, Chap. 16, Joel A. Tickner, ed., in *Precaution: Environmental Science and Preventive Public Policy*, at 249.

⁷*Id.* at 249, cited in “The Precautionary Principle and WTO Law, *supra* note 6, at 88, fn 81.

⁸*See* Lawrence A. Kogan, “Exporting Europe’s Protectionism”, *THE NATIONAL INTEREST*, at 91-99.

⁹*See* Jeremy Rifkin, “A Precautionary Tale”, *THE GUARDIAN* (May 12, 2004), at: <http://www.guardian.co.uk/analysis/story/0,3604,1214638,00.html>; *Cf.* Peter L. Bernstein, “Against the Gods – The Remarkable Story of Risk”, John Wiley & Sons Pub. (1996, 1998 ©).

¹⁰*See* Rachel Thompson, “Transatlantic Business in an Era of Crisis and Change”, APCO (2003), cited in “Exporting Europe’s Protectionism”, *THE NATIONAL INTEREST*, at 94. Ms. Thompson argues that Europe’s resort to the precautionary principle reflects a deeper aversion to risk that is likely attributable to ‘sharp demographic differences’ with the United States. “European electorates are aging much faster than America’s making Europeans more risk averse”.

¹¹“The Precautionary Principle and WTO Law, *supra* note 6, at 89.

¹²*See* “Exporting Europe’s Protectionism”, *supra* note 8; Robert Nilsson, *Misguided Precaution – Chemicals Control and the Precautionary Principle in Sweden* (2000). Dr. Nilsson’s comments were discussed by this author in prior works. *See, also* Bjorn Lomborg, *The Skeptical Environmentalist*, Cambridge University Press (© 2001), at: <http://www.lomborg.com/books.htm>.

¹³See Lawrence A. Kogan, “Unscientific ‘Precaution’: Europe’s Campaign to Erect New Foreign Trade Barriers”, Washington Legal Foundation WORKING PAPER Series No. 118 (Sept. 2003), at 19-26, at: (<http://www.wlf.org/upload/kogan.pdf>); Lawrence A. Kogan, “EU Regulation, Standardization and the Precautionary Principle: The Art of Crafting a Three Dimensional Trade Strategy that Ignores Sound Science”, National Foreign Trade Council (Aug. 2003), at: (<http://www.nftc.org/default/white%20paper/WLFFinaldocumentIII.pdf>).

¹⁴“Unscientific ‘Precaution,” *supra*, at 37, fn 107.

¹⁵These include the Sanitary and Phytosanitary (‘SPS’) Agreement, and the Technical Barriers to Trade (‘TBT’) Agreement. These agreements expressly reference as relevant international standards bodies, the Codex Alimentarius Commission (Codex – food safety – administers IPPC), the International Office of Epizootics (OIE - animal health and diseases communicable from animals to humans), the Secretariat of the International Plant Protection Convention (IPPC – plants and plant products), the International Organization for Standardization (ISO – technical and social products and services); the International Electrotechnical Commission (IEC – electrical and electronic equipment). The American National Standards Institute (ANSI) is “the dues paying member and sole U.S. representative of the two major non-treaty international standards organizations, the...(ISO) and the...IEC), via the U.S. National Committee (USNC)...The institute provides the means for the U.S. to influence global standardization activities and the development of international standards.” See “ANSI – An Historical Overview”, at: (http://www.ansi.org/about_ansi/introduction/history.aspx?menuid=1).

¹⁶“Unscientific ‘Precaution” *supra* note 13, at 37-38

¹⁷They include the U.N. Food and Agriculture Organization (FAO – food safety (the World Health Organization (WHO – health and environment), United Nations Environment Program (UNEP – secretariat for multinational environmental treaties and home of the Commission on Sustainable Development), International Labor Organization (ILO – worker health and international labor rights treaties).

¹⁸“Exporting Europe’s Protectionism,” *supra* note 8, at 96-97.

¹⁹“Unscientific ‘Precaution” *supra* note 13.

²⁰The EU began the process of technically lifting the moratorium on May 19, 2004, when it allowed onto the EU market a single modified strain of sweet corn grown mainly in the U.S. See “The Precautionary Principle and WTO Law”, *supra* note 6 at 98, fn 171; See: Lawrence A. Kogan, “Looking Behind the Curtain”: The Growth of Trade Barriers That Ignore Sound Science”, National Foreign Trade Council (May 2003), at 19-22 and 32-33 at: (<http://www.nftc.org/default/white%20paper/TR2%20final.pdf>).

²¹See “Looking Behind the Curtain”, *supra* at 25-31 and 35-42.

²²The Cartagena Protocol on Biosafety, which covers the broader category of ‘living modified organisms’ (‘LMOs’), recently entered into force during September 2003. While the U.S. is not a party to the Protocol, it is a party to the United Nations Convention on Biological Diversity, which the Protocol is intended to implement. For a discussion about the EU’s interpretation of the

Protocol and its potentially negative impact on U.S. trade, *see* “Looking Behind the Curtain,” *supra* note 20, at 44-51.

²³There have, however, been several mishaps within the U.S. involving the *handling* of GM seeds and plants (e.g., the Monsanto, Starlink-Aventis and Prodigene cases). However, they have had nothing to do with the *application of the technology* itself. *See* “Looking Behind the Curtain”, *supra* note 20 at 34-35, fn 146.

²⁴*See* “The Precautionary Principle and WTO Law,” *supra* note 6 at 99.

²⁵“Unscientific ‘Precaution’” *supra* note 13, at 14-16; “Exporting Europe’s Protectionism,” *supra* note 8 at 95.

²⁶*See* “Looking Behind the Curtain”, *supra* note 20, at 82-104.

²⁷*See* Lawrence Kogan, “Claims of Improper U.S. Lobbying Quite a REACH”, 18 EU REPORTER, Plenary Edition 03-07 (May 2004), at: (<http://www.eureporter.co.uk>). In other words, it is widely believed that the EU seeks to incorporate the principle underlying the REACH regime (i.e., the precautionary principle) within a new international chemical management treaty.

²⁸*See* “Looking Behind the Curtain,” *supra* note 20 at 109-110, fn. 495. Indeed, at least one scientific organization argues that high dosage rodent testing (animal studies) is (are) useful to identify the risks posed to human by potential chemical carcinogens, but cannot be relied upon to fully inform public decision-makers and the public about potential cancer risks. “The flaw lies not with the studies...[but rather with]...how the study results are interpreted and used...Problems with the use of these studies cast doubt on the scientific credibility of risk assessments and help to distort perceptions among the public as to which risks matter most.” *See* Preface, *America’s War on ‘Carcinogens’: Reassessing the Use of Animal Tests to Predict Human Cancer Risk*, American Council on Science and Health © 2005.

²⁹According to UK trade and industry secretary Patricia Hewitt, “the single biggest threat to [the British] position as number two in the world on biotechnology is the threat of *animal rights extremists, animal rights terrorists*”(emphasis added).

³⁰*See* “Looking Behind the Curtain”, *supra* note 20, at 107-108.

³¹*Id.*, at 110-111.

³²*Id.*, at 114. This directive defines the hazardous category of ‘biocides’ as that which includes an “active substance or a preparation containing at least one active substance, intended to destroy, deter, render harmless, prevent the action of or to exert some controlling effect on harmful or unwanted organisms by chemical or biological means.” *See* Directive 98/8/EC, Article 1(d).

³³*Id.* It defines ‘active substance’ as “a substance of micro-organism including viruses or a fungus having general or specific action on or against harmful organisms”. Directive 98/8/EC, Article 2 (1)(a). 98/8/EC.

³⁴*Id.*, at 115-116.

³⁵Mike Freemantle and Bryan Backhouse, “Global Implications of the European Biocidal Products Directive” (2001), at 4, at: (<http://ecb.jrc.it/biocides>).

³⁶*See* “Looking Behind the Curtain”, *supra* note 20, at 116-117.

³⁷The WEEE Directive, for example, requires ‘producers’ to bear the costs of collection, treatment, recovery and disposal of waste from *all new* electrical and

electronic equipment (i.e., products sold *after* September 1, 2005) from the designated collection point onwards.

³⁸See “Green Paper on Integrated Product Policy, COM (2001) 68, final (2/7/01) (‘Green Paper’), discussed in “Looking Behind the Curtain”, *supra* note 20, at 79-82.

³⁹See “Integrated Product Policy, Building on Environmental Life-Cycle Thinking, Communication from the Commission to the Council and the European Parliament”, COM (2003) 302, final (6/18/03), at: (http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0302en01.pdf).

⁴⁰The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (‘The Basel Convention’) was signed in 1989 under the auspices of the United Nations Environment Program (‘UNEP’) and went into force in 1992. It was arguably the first broad-based multilateral environmental agreement (‘MEA’) to impose global environmental standards for trade. For a discussion of how EU waste and disposal regulations implementing the Basel Convention adversely impact developing countries, See Lawrence A. Kogan, “‘Enlightened’ Environmentalism or Disguised Protectionism? Assessing the Impact of EU Precaution-Based Standards on Developing Countries”, National Foreign Trade Council (Apr. 2004), at 40-64, at: ([http://www.nftc.org/default/white%20paper/riskreg3study404\(2\)Final.doc](http://www.nftc.org/default/white%20paper/riskreg3study404(2)Final.doc)).

⁴¹“Showing specific causation in the climate change context could be particularly difficult. First, climate change’s effects involve shifts in climatic activity...Second...the natural phenomena affected by climate change are subject to natural fluctuations in frequency and severity. The chaotic system underlying climatic effects makes it quite difficult to differentiate a particular pattern change in temperature or sea level caused by anthropogenic climate change from one caused by natural variability.” See David A. Grossman, “Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation”, 28 COL. J. ENV. L. 1 (2003), at 24.

⁴²“In a new study conducted with colleagues at Lawrence Livermore National Laboratory’s Program for Climate Model Diagnosis and Intercomparison (MCMDI), Tim Barnett and David Pierce of Scripps Institution used a combination of computer models and real-world ‘observed’ data to capture signals of the penetration of greenhouse gas-influenced warming in the oceans. The authors make the case that their results clearly indicate that the warming is produced anthropogenically, or by human activities.” See “Scripps Researchers Find Clear Evidence of Human-Produced Warming in World’s Oceans – Climate Warming Likely to Impact Water Resources in Regions Around the World”, Scripps Institution of Oceanography, the University of California, San Diego, February 17, 2005, at: (http://scrippsnews.ucsd.edu/article_detail.cfm?article_num=666).

⁴³According to Stuart Eisenstat, who previously served as Chief Domestic Policy Adviser to former President Carter and in several high profile positions under former President Clinton, *NGOs exerted an undue and destructive influence during the negotiations leading to the signing of the Kyoto Protocol*. “While these [NGO] groups did not sit at the negotiating table, there is no question that through their lobbying efforts and their constant demands for steeper emissions

cuts in carbon dioxide (CO₂), they were able to exert a substantial impact on the course of the negotiations. As environmental advocates, they pressed for unrealistically large reductions in greenhouse gas emissions without consideration of the economic costs. They also helped stiffen the position of developing nations against taking any obligations to reduce even the rate of growth of their emissions, notwithstanding the fact that these same nations will be the biggest emitters of CO₂ by the mid-twenty-first century. This stance ultimately undermined support in the United States for eventually ratifying the Kyoto Protocol (emphasis added).” Stuart E. Eisenstat, “Non-governmental Organizations as the Fifth Estate”, SETON HALL JOURNAL OF DIPLOMACY AND INTERNATIONAL RELATIONS, (Summer/Fall 2004), at 17.

⁴⁴At least one scholar has noted the fallibility of computer models prognosticating the extent of future climate change arising from projected increases in GHG emissions. These models have been prepared by the Intergovernmental Panel on Climate Change (‘IPCC’), the body appointed by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) to assess the ‘scientific’ basis of human-induced climate change. According to this scholar, these models, which are heavily relied upon by the EU heavily for its ‘science climate change policy, are seriously flawed. See Alan Oxley and Steven MacMillan, “The Kyoto Protocol and the APEC Economies”, A report prepared for the Australian APEC Study Centre, Monash University, Melbourne, Australia (Nov. 2004), at 5, fn 1.

⁴⁵See Denis Dutton and Wolfgang Kasper, “Green Protectionism”, POLICY, The Centre for Independent Studies, at 23-25 (Summer 2002-2003).

⁴⁶“Building Institutions for a Better Environment”, Economic Report of the President – 2002, Chapter 6, at 245, at: (http://www.gpoaccess.gov/usbudget/fy03/pdf/2002_erp.pdf).

⁴⁷*Id.*, at 245-247.

⁴⁸“A recent study by the ALEC [American Legislative Exchange Council] on proposals to cap greenhouse gas emissions in the [N]ortheastern [S]tates estimates a rise in electricity prices of 23-39%, and gas prices 44-62% by 2020. Job losses would be substantial: under different scenarios the northeastern states could lose anywhere from 98,000-218,000 jobs by 2020. Another study by the Heartland Institute estimated that state-level programs would be 10 times as expensive as a federal program and cost each state an average of \$10,000 per household” (emphasis added). See Sons of Kyoto: Greenhouse Gas Legislation in the States Updated: Sept. 27, 2004”, at: (<http://www.alec.org/viewpage.cfm?pgname=5.1046>).

⁴⁹“The costs of Kyoto to Europe are still not clear. They might range from 1.8 percent GDP in the UK to 4.8 percent GDP in Spain yearly by 2025. *That means that European people would be much poorer 20 years from now because of the emission cuts.* That also means that hundred[s] [of] thousands [of] jobs would be lost yearly in Europe as a consequence of [the] EU ’s stubbornness in pursuing a policy whose only ‘merit’, if you want to call it that,...is to give the Old Continent [a] high profile in international politics” (emphasis added). Carlo Stagnaro, “Kyoto: A High Price to Pay”, Edition 11-22 (Oct. 2004), at 7, at: (http://www.eureporter.co.uk/images/LR_EUR_11Oct04.pdf).

⁵⁰*Id.*

⁵¹Marc Morano, “Greens Concede Kyoto Will Not Impact ‘Global Warming’”, CNS News, Dec. 17, 2004 at: (<http://www.cnsnews.com/ViewSpecialReports.asp?Page=/SpecialReports/archive/200412/SPE20041217a.html>). “[The Protocol] is important in the *political* message and the inspiration it is giving people around the world. People can say ‘yeah, our politicians do care – they are not just interested in power and their own greed and in their own money. They do care about the future of the planet’” (emphasis added). *Id.*, quoting Peter Roderick of Friends of the Earth.

⁵²See Directive 2003/87/EC, OJ L 275/32 (10/13/03), “Of the European Parliament and Of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC”, Annex I.

⁵³2003/87/EC, Articles 3-6.

⁵⁴Article 16 provides EU Member States with the ability to determine and impose penalties for exceeding emissions allowances.

⁵⁵See “Emission trading – The Price of Carbon Emissions”, FINANCIAL TIMES Editorial Comment, (Dec. 27, 2004).

⁵⁶See COM(2004) 500 final (7/7/04), “Commission Decision of 1/29/04, establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council”; Commission Regulation of 12/21/04, for a standardized and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

⁵⁷See “Emission Pact Goes Forward, But Tougher Work of Cutting Greenhouse Gases Under Kyoto Protocol Remains”, CHRISTIAN SCIENCE MONITOR, Oct. 7, 2004, at: (<http://www.csmonitor.com/2004/1007/p11s01-wogi.html>).

⁵⁸By controlling the market authorization process and by directly influencing consumer choice and expectations, and hence, the dynamics underlying a product’s *market penetration*, the EU Commission and environmentalist groups are essentially ‘making’ the market rather than permitting market forces to take shape on their own.

⁵⁹See Peter Goldsmith, Hamish Gow and Nesve Turan, “Is it Safe? Post-Market Surveillance versus Ex-ante Signalling”, Paper presented at the 13th Annual World Food and Agribusiness Symposium (2003), at 8-10, at: (<http://www.ifama.org/Conferences/2003/Conference/papers/Goldsmith.pdf>).

These authors believe that indirect government branding is necessary because “individual [US] firms would and can skirt the full power of the law...on constitutional grounds.” However, they also believe that branding alone is unable “to effectively insure against large and unforeseen damages, especially non-trivial harm revealed in the future.”

⁶⁰See “Looking Behind the Curtain”, *supra* note 20, at 39-41, 75, 77, 80-81, 92-93, 107-109, 117.

⁶¹“Such statements are supported by the very small market shares of labeled furniture in the EU...Quite a few actors claim that the market share of labeled furniture will be extremely small. Average estimates range from about 5% to 16% in the respective market segments. The feeling of shrinking public and

private awareness on ecological issues is widespread, even among some of the pioneering firms.” Jurgen Barsch, E. Deliege and P.W.J. Luiten, “The Feasibility of an EU Eco-Label for Furniture,” at 33 and 35.

⁶²*Id.*, at 34-35.

⁶³*Id.*, at 36. According to the report’s findings, “Consumption patterns are closely connected with incomes. In some markets more ‘intangible’ benefits like ecological values become more dominant in phases of growing prosperity. *‘With the end of the economic crisis and the return to higher employment, we can expect a change in consumers’ attitudes when they purchase goods, e.g., fitness for use linked to ethical values’* (emphasis in original). *Id.*

⁶⁴*Id.*, at 34-35.

⁶⁵*Id.*, at 36.

⁶⁶Timothy Riordan, “The Precaution Principle in Environmental Management”, *Industrial Metabolism: Restructuring for Sustainable Development*, Appendix Part 3: ‘Further Implications,’” Editors Robert U. Ayres and Udo E. Simonis, United Nations University Press© The United Nations University (1994), at 8, (<http://www.unu.edu/unupress/unupbooks/80841e/80841E0o.htm#12.%20The%20precaution%20principle>).

⁶⁷*Id.*

⁶⁸“The Precautionary Principle and WTO Law” *supra* note 6, at 89.

⁶⁹See Directive 2004/35/CE (April 21, 2004), of the European Parliament and of the Council On Environmental Liability With Regard to the Prevention and Remedying of Environmental Damage”, O.J. L143/56, Apr. 30, 2004, at: (http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_143/l_14320040430en00560075.pdf). Fault-based liability (negligence) would be limited to what is referred to as ‘non-dangerous activities’.

⁷⁰See “EU Commission White Paper on Environmental Liability COM (2000) 66 final Feb. 9, 2000, at: (http://europa.eu.int/eur-lex/en/com/wpr/2000/com2000_0066en01.pdf), at 5.

⁷¹“Tort Law Application – Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage”, at 2

⁷²The directive’s purpose is “to establish a framework of environmental liability based on the ‘polluter pays’ principle to prevent and remedy environmental damage.” Pursuant to the directive, ‘environmental damage’ “will include damage to species and natural habitats...and land contamination which causes significant risk of harming human health...” See “Polluter Pays Directive Finally Agreed”, Environment Zone, Feb. 2, 2004), at: (<http://lawzone.thelawyer.com/cgi-in/item.cgi?id=109329&d=204&h=243&f=209>). “A controversial aspect of the [directive], at least as far as industry is concerned, is the wide definition of ‘environmental damage’ [contained in Article 2]. Not only does it cover land and water pollution but also damage to the biodiversity of any protected species or habit.” *Id.* Another questionable aspect of this directive is Article 4.5. It provides that “This Directive shall only apply to environmental damage or to an imminent threat of such damage caused by pollution of a diffuse character,

where it is possible to establish a causal link between the damage and the activities of individual operators” (emphasis added). However, one must stop to consider *the low evidentiary threshold for establishing causation* that will likely be employed here, in light of the precautionary principle.

⁷³*Id.* “The purpose of this White Paper is to explore how the polluter pays principle can best serve these aims of Community environmental policy...‘Community policy on the environment shall be (...) based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.’” *Id.*, at 9, citing Article 174(2) of the EC Treaty.

⁷⁴See “United Kingdom Response to European Commission White Paper on Environmental Liability”, Department for Environment, Food and Rural Affairs (DEFRA), at par. 30, at: <http://www.defra.gov.uk/environment/consult/liability/response/>.

⁷⁵“[T]he burden to produce evidence (burden of production) is assigned to a Party who must generate information or proof [whereas,] the burden of persuasion is an assignment of responsibility to a Party to provide sufficient proof or to remove uncertainty to the satisfaction of a fact-finding body. A common reason for assigning both burdens to a Party is that such Party is in the best position to have information to resolve the factual and legal issues in question.” See Carl F. Cranor, “Some Legal Implications of the Precautionary Principle: Improving Information-Generation and Legal Protections”, at 37 at: <http://www.collegiumramazzini.org/links/CRANOR.pdf>.

⁷⁶*Id.*, at 37.

⁷⁷“The Latin phrase...means nothing more than ‘the thing speaks for itself’...The statement of this doctrine most often quoted is that of Chief Justice Erle in...[*Scott v. London & St. Katherine Docks Co.*, 1865, 3 H. & C. 596, 159 Eng. Rep. 665]...: ‘There must be reasonable evidence of negligence; but where the thing is shown to be under the management of the defendant or his servants, and the accident is such as in the ordinary course of things does not happen if those who have the management use proper care, it affords reasonable evidence, in the absence of explanation by the defendants, that the accident arose from want of care.’ See Willam L. Prosser, *Handbook of The Law of Torts*, 4th ed., at 213-217.

⁷⁸See Comments of Victor Schwartz, “Part Three: Content and Future of the Green Paper: An American Perspective, Green Paper and the Future of Product Liability Litigation in Europe”, Green Paper and the Future of Product Liability Litigation in Europe”, Global Liability Issues, at 10.

⁷⁹“[Since] [t]he application of th[e] standard of reasonable conduct...is a community standard, evidence of the usual and customary conduct of others under similar circumstances is normally relevant and admissible, as an indication of what the community regards as proper, and a composite judgment as to the risks of the situation and the precautions required to meet them...Custom also bears upon what others will expect the actor to do, and what, therefore, reasonable care may require him to do; upon the feasibility of taking precautions, the difficulty of change, and the actor’s opportunity to learn

the risks and what is called for to meet them.” See Willam L. Prosser, *Handbook of The Law of Torts*, Fourth Edition, at 166.

⁸⁰This result would likely obtain, because the precautionary principle, which calls for the exercise of *more than* reasonable (*extraordinary*) care, would already be reflected in community customary practice and underlie state-of-the-art product design.

⁸¹Previously, “Most Member States adopted this defense, but the Council and the European Commission reviewed this particular provision very closely to see how it was affecting the implementation of strict liability among the Member States.” See Comments of Leah Lorber, “Part One: Product Liability in Europe and the Role of the European Commission”, Green Paper and the Future of Product Liability Litigation in Europe”, at 1-2.

⁸²“Commonly accepted defences should be allowed, such as Act of God (force majeure), contribution to the damage or consent by the plaintiff, and intervention by a third party (an example of the latter defence is the case that an operator caused damage by an activity that he conducted following a compulsory order given by a public authority). Several interested parties, in particular economic operators, have expressed the view that *a defence* in relation to damage caused by releases authorised through EC regulations, *for state of the art and/or for development risk should also be allowed*. For economic reasons they need predictability regarding their liabilities to third parties, but the occurrence and extent of these liabilities are subject to ongoing developments in any event (e.g. changes in legislation and case law, medical progress, etc.). *Defences like the ones mentioned here are normally not allowed by existing national environmental liability regimes of EU Member States*” (emphasis added). See “EU Commission White Paper on Environmental Liability COM (2000) 66 final (2/9/2000), at par. 4.3, at 17.

⁸³See Comments of Leah Lorber, *supra* note 81, at 2-3.

⁸⁴See Comments of Victor Schwartz, *supra* note 78, at 12.

⁸⁵See Comments of Leah Lorber, *supra* note 81, at 2-3.

⁸⁶“The development risk defense is one of the most controversial parts of the Directive...It is an important symbolic concession since it encourages innovation. There is a great fear that if the Directive is changed, through the reversal of the burden of proof and by removing the development risk defense, there will suddenly be a very dramatic change in the balance of the law to favor plaintiffs.” Comments of Chris Hodges, “Part Two: Content and Future of the Green Paper: A European Perspective”, Green Paper and the Future of Product Liability Litigation in Europe”, Global Liability Issues, at 4.

⁸⁷Comments of Rod Hunter, “Part Four: Litigators React, Green Paper and the Future of Product Liability Litigation in Europe”, at 15.

⁸⁸Tom Baker, “Liability Insurance After September 11th: *Embracing Risk* Meets the Precautionary Principle”, Univ. of Connecticut School of Law Working Paper Series, Paper 4, at 11 (2002), at: (<http://lsr.nellco.org/uconn/ucwps/papers/4>).

⁸⁹The award consisted of \$24.5 million in compensatory damages was awarded for mental anguish and economic losses, and \$229 million in punitive damages. It is likely that the punitive damage award will be significantly reduced, as

Texas law H.R. 4 caps punitive damages to twice economic damages and to \$750,000 above non-economic awards.

⁹⁰“Merck’s own studies suggested there may have been a *correlation* between an increased risk of heart disease and use of Vioxx. *Not all studies demonstrated this same correlation... Correlation is not causation.* Merck voluntarily recalled the drug – even though the FDA subsequently cleared Vioxx for use on the market – because it found a correlation. Scientists do not yet know whether the heart disease noted in the studies were *caused* by Vioxx *or were merely a correlation with some other factor*” (emphasis added). Jonathan B. Wilson, Trial Lawyers Try to Open Up Michigan for Vioxx Suits – II”, Point of Law.com Forum (June 24, 2005), Center for Legal Policy at the Manhattan Institute, at: (<http://www.pointoflaw.com/archives/001246.php>).

⁹¹*Id.*

⁹²See Alex Berenson, “\$253 Million Awarded as Merck Loses First Vioxx Suit”, N.Y. TIMES (Aug. 20, 2005), reported in the INT’L HERALD TRIBUNE, at: (<http://www.ihl.com/articles/2005/08/19/business/vioxx.php>).

⁹³See Alex Berenson, “For Merck, Vioxx Paper Trail Won’t Go Away”, N.Y. TIMES (Aug. 21, 2005), at:

(<http://www.nytimes.com/2005/08/21/business/21vioxx.html?ex=1282276800&en=0b6c89e18dc7f154&ei=5088&partner=rssnyt&emc=rss>); See also Aaron Smith, “Jury: Merck Negligent”, CNN/Money (Aug. 19, 2005), at: (<http://money.cnn.com/2005/08/19/news/fortune500/vioxx>).

⁹⁴See Christopher Bowe, “Risk Assessment: Changing Attitudes to Safety Challenge the Drugs Industry,” Comment and Analysis, FINANCIAL TIMES (Aug. 1, 2005), at 9.

⁹⁵See Anders Sandberg, “Half the Modern Drugs Could Be Thrown Out the Window,” Eudoxa (Oct. 24, 2004), at: (http://www.eudoxa.se/content/archives/2004/10/half_the_modern_1.html).

⁹⁶“At a US regulatory panel convened on the safety of Vioxx and similar medicines in February [2005], Dimitra Poulos, a rheumatoid arthritis sufferer, pleaded for more of the withdrawn painkiller. ‘Vioxx gave me my life back’, Ms. Poulos told the Food and Drug Administration’s expert panel. ‘As I speak, I have 40 Vioxx left. I have 40 days before my life and my abilities will be severely altered.’” See “Vioxx Highlights Two Perspectives on Danger,” FINANCIAL TIMES (Aug. 1, 2005), at 9.

⁹⁷Jonathan Simon, “Weschler’s Century and Ours: Reforming Criminal Law in a Time of Shifting Rationalities of Government”, 7 Buffalo Criminal Law Review 247-274, at 269 (2003), at: (<http://wings.buffalo.edu/law/bclc/bclrarticles/7/1/simon.pdf>). The providence paradigm “treated accidents as aberrational...as acts of God, or the results of individual fault.” *Id.*

⁹⁸In other words, “a socially advantageous balance of risks.” *Id.*, at 268.

⁹⁹According to Jonathan Simon, the risks that were shared included the risk of worker accidents as well as the risk of crime. *Id.*, at 268.

¹⁰⁰*Id.*, at 269-270.

¹⁰¹*Id.*, citing Francois Ewald, *The Return of Descartes’s Malicious Demon: An Outline of a Philosophy of Precaution*, Chap. 11, in *Embracing Risk: The*

Changing Culture of Insurance and Responsibility, (Tom Baker and Jonathan Simon eds., Univ. of Chicago Press (2002).

¹⁰²Tom Baker, “Liability Insurance After September 11th: *Embracing Risk Meets the Precautionary Principle*”, at 11.

¹⁰³*Id.*

¹⁰⁴*Id.*, at 12.

¹⁰⁵*Id.*

¹⁰⁶*Id.*

¹⁰⁷*Id.*

¹⁰⁸*Id.*, at 13.

¹⁰⁹*Id.*, at 11 (2002), citing Francois Ewald, *The Return of Descarte’s Malicious Demon: An Outline of a Philosophy of Precaution*, Chap. 11, in *Embracing Risk: The Changing Culture of Insurance and Responsibility*, (Tom Baker and Jonathan Simon eds.), Univ. of Chicago Press (2002).

¹¹⁰See Peter Goldsmith, Hamish Gow and Nesve Turan, “Is it Safe? Post-Market Surveillance versus Ex-ante Signalling”, Department of Agricultural and Consumer Economics, University of Illinois at Urbana Champaign (2002), at 11, at: (<http://www.ifama.org/conferences/2003Conference/papers/goldsmith.pdf>).

¹¹¹*Id.*

¹¹²*Id.*, at 10-11.

¹¹³“Member States shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, *with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive...*The Commission, before 30 April 2010 shall present a report on the effectiveness of the Directive in terms of actual remediation of environmental damages, on the availability at reasonable costs and on conditions of insurance and *other types of financial security for the activities covered by Annex III...*The Commission takes note of article 14(2). In accordance with this [A]rticle, the Commission will present a report, six years after the entry into force of the Directive, covering, inter alia , *the availability at reasonable costs and conditions of insurance and other types of financial security*. The report will in particular take into account *the development by the market forces of appropriate financial security products* in relation to the aspects referred to.” (emphasis added). See Directive 2004/35/CE, Art. 14, and Commission Declaration on Article 14(2) – Environmental Liability Directive.

¹¹⁴This estimate was rendered by John Dutton, Dean Emeritus of the Penn State University College of Earth and Mineral Sciences. See Eugene Linden, “Who’s Going to Pay for Climate Change? – The Threat of Lawsuits – and an Exodus of Insurance Companies – May Finally Force Corporations to Think Green”, Viewpoint, TIME (Feb. 7, 2003), at: (<http://www.time.com/time/columnist/printout/0,8816,420539,00.html>).

¹¹⁵See Christopher Walker and Mark Way, “The Heat is On”, Global Reinsurance Magazine, Swiss Re Corporation (July/Aug. 2004), at: (<http://www.swissre.com/INTERNET/pwswpspr.nsf/vwAllbyIDKeyLu/abod-63tabb?OpenDocument>).

¹¹⁶*Id.*

¹¹⁷Linden, *supra* note 114.

¹¹⁸Sonja Butzengeiger, "Climate Change Related Risks and Company Ratings", Germanwatch Discussion Paper (Jan. 2004), at 3.

¹¹⁹*Id.*

¹²⁰*Id.*, at 4.

¹²¹See "Insurance and Climate Change", ClimateBiz, at: (<http://www.climatebiz.com>).

¹²²*Id.*, at 20-21.

¹²³Standard D&O policies have not traditionally excluded from coverage liability imposed for conduct that amounts to a failure to act, failure to investigate and/or failure to conduct due diligence, unless those failures constituted willful illegal acts. See "Update Disney: The Case that Means Worries Aplenty for the Kings and Princes of the Magic Kingdom", EXECUTIVE RISKS NEWSLETTER ALERT, Willis, North America (Dec. 2004), at: (<http://www.willis.com>). See, also C. Gregory Rogers, "Uninsured and Undisclosed Environmental Liabilities Pose Risks for Directors", National Association of Corporate Directors (May 2003), at 11-13. Mr. Rogers, however, warns that "Most directors and officers (D&O) policies contain a 'pollution exclusion,' denying coverage for any claim against a director or officer that has as its underlying cause the release or threatened release of pollutants. This includes securities claims arising from environmental matters."

¹²⁴"Congress enacted...CERCLA in the early 1980s to allow governments or private parties to recover environmental cleanup costs from those responsible for the spills or releases of hazardous substances." "Pursuant to the statute, however, the officers and directors of such corporations cannot be held directly liable. Despite this statutory protection, when corporations violate CERCLA, shareholders may be able to use a derivative suit to hold officers and directors liable based on the corporate actors' fiduciary duty of care." Primo Fontana, "CERCLA Derivative Suits", 27 B.C. ENVIRONMENTAL AFFAIRS L.R. 741 (2000), at 741, at: (http://www.bc.edu/schools/law/lawreviews/meta-elements/journals/bcealr/27_4/04_FMS.htm).

¹²⁵See, e.g. *Joslyn Corp. v. T.L. James & Co., Inc.*, 696 F. Supp. 222, 224-225 (W.D. La. 1988) (wherein "a Louisiana district court refused to allow CERCLA liability to be imposed upon individual corporate officers. The district court reasoned that the corporate form 'is a doctrine firmly entrenched in American jurisprudence,' and that as such, it 'may not be disregarded absent a specific congressional directive.' Since, according to the court, there was nothing in the clear language or the legislative history of CERCLA that provided liability for individual corporate officers, such liability could not be imposed." *Id.*, at 759-760.

¹²⁶In *United States v. Bestfoods*, 118 S. Ct. 1876 (1998), the Supreme Court held that when state law allowed, a parent corporation could be liable for the CERCLA violations of its subsidiary.

¹²⁷For example, the Dow Jones Sustainability Indices were established to benchmark the performance of investments in sustainability companies and funds. The indices are provided by Dow Jones in association with SAM Sustainable Asset Management and STOXX Limited. There is also the

FTSE4Good family of eight indices. Four provide benchmark indices and four tradable indices. The FTSE4Good bases entry on its Selection Criteria which cover three areas: working towards environmental sustainability; developing positive relationships with stakeholders; upholding and supporting universal human rights.

¹²⁸As of May 2003, twenty-four institutional investors, representing USD \$4 million were signatories to the Carbon Disclosure Project. See Martin Whittaker, “Truth & Trust: The Basis of the Carbon Disclosure Project – GHG Registries: The Building Blocks of Climate Policy” Innovest Strategic Value Advisors (May 2003), at: (<http://www.innovestgroup.com>).

¹²⁹“On May 31, 2002, 35 institutional investors representing assets in excess of US\$4.5 trillion wrote to the Chairmen of the FT500 Global Index companies. They asked the companies for investment relevant information relating to greenhouse gas mitigation.” See Martin Whittaker, “Carbon Finance and Global Equity Markets”, Innovest Strategic Value Advisors, for the Carbon Disclosure Project (Feb. 2003). According to Swiss Re, during 2003 there were more than 25 shareholder resolutions filed. 32% were filed at Chevron, 22% at Exxon, 27% at AEP [an electric utility], etc. and some of these garnered about one third of votes in support.

¹³⁰*Cede & Co. v. Technicolor, Inc.*, 634 A.2d 345, 361 (Del. 1993).

¹³¹“Under Delaware law, corporate directors owe the corporation what the Delaware supreme court has taken to calling a ‘triad’ of fiduciary duties: care, good faith, and loyalty.” See Stephen M. Bainbridge, “Business Judgment Rule as Abstention Doctrine”, University of California, Los Angeles, School of Law, Law & Economics Research Paper Series, Research Paper 03-18, (July 2003) at 6, at: (<http://ssrn.com/abstract=429260>).

¹³²*Integrated Health Services, Inc.*, 2004 WL 1949290, at 13.

¹³³See e.g., Mark Mansley, “Sleeping Tiger, Hidden Liabilities”, Claros Consulting. This paper argued that ExxonMobil’s board essentially abdicated its responsibility for reviewing the management of climate change risk. It reasoned that the company had not adequately disclosed to shareholders how it was addressing “the existing and future risks and opportunities from climate change and how the company is preparing to protect long-term shareholder value from the risks [i.e., policy risks, competition/market risks, other risks].”

¹³⁴*Id.* at 10.

¹³⁵See “Susannah Blake, Jonas Kron, and Tim Little, “The Environmental Fiduciary – The Case for Incorporating Environmental Factors into Investment Management Policies”, The Rose Foundation for Communities & the Environment (2002).

¹³⁶See Christopher Rowland, “Greening of the Boardroom – Socially Conscious Investors Get Results on Global Warming”, BOSTON GLOBE (Mar. 31, 2005).

¹³⁷Andrew Davis and Stephen Humes, “Sarbanes-Oxley (Implicitly) Demands Environmental Disclosure”, Browne Digest (Sept. 2004) at 2, abstracted from “Environmental Disclosures After Sarbanes-Oxley”, Practical Lawyer, Vol. 50, No. 3, at 19-26.

¹³⁸“SEC and Social/Environmental Accounting - Corporate Sunshine Working Group Bulletin” (Mar. 2003). “The Corporate Sunshine Working Group is an

alliance of investors and public interest organizations that advocates for broader and deeper corporate environmental and social disclosure requirements at the Securities and Exchange Commission, and monitors the SEC's enforcement of existing laws. The CSWG bulleting is published quarterly. Contact Michelle Chan-Fishel of *Friends of the Earth – US*. To subscribe, send a blank email to sunshinewg-subscribe@topica.com” (emphasis added).

¹³⁹See Michel Chan-Fishel, “Second Survey of Climate Change Disclosure in SEC Filings of Automobile, Insurance, Oil & Gas, Petrochemical and Utility Companies”, *Friends of the Earth – U.S.* (Nov. 2003).

¹⁴⁰See Bertrand Benoit, “German R&D Continues to Shift Abroad”, *FINANCIAL TIMES*, Feb. 1, 2005.

¹⁴¹*Id.*, at 8.

¹⁴²*Id.*, at 9.

¹⁴³*The Pharmaceutical Industry in Figures – 2004 Edition*, “Pharmaceutical Research and Development” The European Federation of Pharmaceutical Industries and Associations (EFPIA) (2004), at 19, at: (http://www.efpia.org/6_publications/figure2004d.pdf). “Distribution margins...are generally fixed by government and VAT rates...” *Id.*

¹⁴⁴*Id.*, at 23.

¹⁴⁵“It is widely agreed in Europe today that basic research plays an important role in fostering sustainable economic development, competitiveness as well as employment...The resulting lack of competition between the best researchers is one of the reasons that Europe is at a *comparative disadvantage* with regard to the prominent position of the United States in terms of funding and outcome in the field of basic research...between 1980 and 2003, 68 of the Nobel Prize winners in physiology and medicine, physics and chemistry came from Europe, compared with 154 from the United States” (emphasis added). See Martin Schmid, “The Seventh Framework Program – Europe’s Next Step Toward the Lisbon Goals”, *Bridges* Vol. 3 (10/5/04), Office of Science and Technology U.S. Embassy of Austria, at: (http://www.ostina.org/html/bridges_archive/article.htm?article=1161).

¹⁴⁶A.. Gambardella, L. Orsenigo and F. Pammolli, “Global Competitiveness in Pharmaceuticals – A European Perspective”, Report prepared for the Directorate General Enterprise of the European Commission (Nov. 2000), at 83, at: (http://europa.eu.int/comm/enterprise/library/enterprise_papers/pdf/enterprise_paper_01_2001.pdf).

¹⁴⁷“Horizon 2015: Is the European Chemical Industry Losing its Global Leadership?” *Cefic* (June 2004), at 3, at: (http://www.cefic.be/Files/Publications/Cefic_Dipliant_2015.pdf).

¹⁴⁸See Arthur D. Little GmbH, “Economic Effects of the EU Substances Policy – Report on the BDI Research Project”, summarized in Lawrence A. Kogan, “Unscientific ‘Precaution’: Europe’s Campaign to Erect New Foreign Trade Barriers”, Washington Legal Foundation WORKING PAPER Series No. 118 (Sept. 2003), at 2, fn 2, at: (<http://www.wlf.org/upload/kogan.pdf>). It was released during December 2002.

¹⁴⁹*Id.*

¹⁵⁰The 2002 study was updated during August 2003. See “Arthur D. Little, “Economic Effects of the EU Substances Policy – Supplement to the Report on the BDI Research Project, 18th December 2002” (Aug. 31, 2003); “EU Chemicals Policy Would Cost German Industry 1.7 Million Jobs – BDI-Director General von Wartenberg: ‘We Ask for a NEW REACH’”, BDI Press Release (Sept. 16, 2003).

¹⁵¹See Arthur D. Little, “New Proposals for Chemicals Policy: Effects on the Competitiveness of the Chemical Industry - (Project EP/IV/A/2003/07/03-2) – Study for the Directorate General for Research”, (Apr, 2004), at: (http://www.env-health.org/IMG/doc/adlittlestudy_Chempolicy_19apr04.doc).

¹⁵²*Id.*, at 16-17, citing “Future European Chemicals Policy Impact Study” (Apr. 9, 2004), a study conducted by Mercer Management Consultants, and sponsored by Union Industry Chimique (UIC).

¹⁵³*Id.*, at 18-20, citing “New Chemicals Policy (R.E.A.C.H.) – Evaluation of the Business Impact on the Chemical Industry and on the Textile Sector of Italy” (Feb. 11, 2004), a study conducted by Centro per L’innovazione e la Ricerca Chimica (CIRC).

¹⁵⁴*Id.*, at 22.

¹⁵⁵*Id.*, at 26-27.

¹⁵⁶European chemical companies such as Shell Petrochemical, Bayer, BASF, British Petroleum, for example, have made significant capital investments in Chinese plant and equipment during the past several years.

¹⁵⁷For a detailed survey of European industry’s battle with European regulators over the growing use of the precautionary principle in risk regulation, see Lawrence A. Kogan, “Looking Behind the Curtain”: The Growth of Trade Barriers That Ignore Sound Science”, National Foreign Trade Council (May 2003), at 66-87, 107-118 at: (<http://www.nftc.org/default/white%20paper/TR2%20final.pdf>).

¹⁵⁸See Alasdair Murray, “Counting the Cost of Climate Change”, E!Sharp (Sept. 2004).

¹⁵⁹Nearly ten percent of the EU budget now goes to the funding of [advocacy]...groups...[the] network of national advocacy groups in Brussels receives about half its funding from direct EU grants.” See Dennis Dutton and Wolfgang Kasper, “Green Protectionism”, at 24, citing A. Voss, “Betteln und Spenden”, de Gruyter, (Berlin 1992); J. Rabkin, “Euroglobalism? How Environmental Accords Promote EU Priorities into ‘Global Governance’ – and Global Hazards”, Centre for the New Europe (Brussels 1999).

¹⁶⁰See Otto Pohl, “European Environmental Rules Propel Change in U.S.” *New York Times* (July 6, 2004), cited at: (<http://www.ewg.org/news/story.php?id=2767>); (<http://www.noharm.org/details.cfm?type=news&ID=67>).

¹⁶¹“Precaution and Power”, Editorial, *Multinational Monitor*, Vol. 25, No.9 (Sept.2004), at: (<http://multinationalmonitor.org/mmm2004/09012004/september04editorial.html>).

¹⁶²See “Looking Behind the Curtain”, *supra* note 157, at 68-72.

¹⁶³See Lawrence A. Kogan, “Enlightened Environmentalism or Disguised Protectionism: Assessing the Impact of EU Precaution-Based Standards on

Developing Countries”, National Foreign Trade Council (Apr. 2004), at 40-64, at: ([http://www.nftc.org/default/white%20paper/riskreg3study404\(2\)Final.doc](http://www.nftc.org/default/white%20paper/riskreg3study404(2)Final.doc)).

¹⁶⁴“The law states ‘on and after January 1, 2008, a person may not manufacture, process, or distribute in commerce a product, or a flame-retarded part of a product, containing more than one-tenth of 1 percent of pentaBDE or octaBDE, by mass.’” “Precautionary Chemicals Policy Initiatives in the United States,” Lowell Center for Sustainable Production (Oct. 10, 2003), at 2, at: (http://www.chemicalspolicy.com/downloads/Chemicals_Policy_Precapution.do). The law can be found at: (http://info.sen.ca.gov/pub/bill/asm/ab_0301-0350/ab_302_bill_20030724_enrolled.html).

¹⁶⁵See “Keeping-Up with Additives”, Plastic Technologies Online (Dec. 2003), at: (<http://www.plasticstechnology.com/articles/kuw/add/ADD264.html>).

¹⁶⁶“California Bans Use of Some Brominated Flame Retardants”, NEMA EHS Briefs Aug. 26, 2003, at: (http://www.nema.org/ehs/briefs/EHSBrief_August_26_2003_printer_version.html).

¹⁶⁷See “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators.

¹⁶⁸See “Electronic Waste Recycling Act of 2003 (SB 20)”, California Integrated Waste Management Board, at: (<http://www.ciwmb.ca.gov/Electronics/Act2003>).

¹⁶⁹Jenifer Guhl, “Impacts and Implications of New European Environmental Law on the U.S. High-Tech Industry”, at 43, 48.

¹⁷⁰Angie Morris, “Hazardous E-Waste”, Food for Life (Summer 2000), at: (<http://www.yesmagazine.com/14foodforlife/indicators.htm>).

¹⁷¹*Id.*

¹⁷²See Dana Joel Gattuso, “Mandated Recycling of Electronics: A Lose-Lose Proposition”, for the Competitive Enterprise Institute (Feb. 1, 2005) at 18.

¹⁷³See Public Laws of Maine, Second Special Session of the 121st, Chapter 661, H.P. 1402 – LD 1892, “An Act To Protect Public Health and the Environment by Providing for a System of Shared Responsibility for the Safe Collection and Recycling of Electronic Waste”, enacted as Sec. 1. Title 38 MRSA §1310-B. 1, 1609, 1610, at: (http://www.mainelegislature.org/legis/bills_121st/LD.asp?LD=1892); (http://www.mainelegislature.org/legis/bills_121st/billdocs/LD189201.doc).

¹⁷⁴Title 38, Chap. 16, Sec. 1610.5 and .6A(5).

¹⁷⁵See Saskia Mooney, “Don’t Expect E-Waste and Cell Phone Recycling Proposals to Just Go Away”, Chemicals, Safety and Environmental Update (Spring 2005), Wiley, Rein & Fielding, LLP, at: (http://www.wrf.com/publication.cfm?pf=1&publication_id=12012).

¹⁷⁶“Sec. 1. 38 MRSA §1609 was enacted on April 21, 2004 and had an effective date of July 30, 2004.

¹⁷⁷“Article 37 – Substances Hazardous or Acutely Hazardous to Public Health, Safety or the Environment, Title I – Substances Hazardous to the Environment”, at: (<http://public.leginfo.state.ny.us/menuetf.cgi?COMMONQUERY=LAWS>).

¹⁷⁸See § 37-0111 (1)(a) of Art. 37, Title I. *Id.*

¹⁷⁹See “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators; § 37-0103 (1)(a) and § 37-0111 (1)(a) of Art. 37, Title I. *Id.*

¹⁸⁰*Id.*; (http://www.capitol.hawaii.gov/hrscurrent/vol06_ch0321-0344/hrs0332d/hrs_0332d-0002.htm); (<http://www.capitol.hawaii.gov/site1/docs/searchhrs.asp?press1=docs&qu=brominated+flame+retardants>).

¹⁸¹“In 1998, the Washington Department of Ecology announced a state-wide phase out policy on persistent, bioaccumulative and toxic (PBT) chemicals, with the goal of eliminating PBT pollution. The program has designated nine PBTs, and included 13 more in the “PBT Working List” of chemicals on which to focus in future action plans.” “Precautionary Chemicals Policy Initiatives in the United States,” Lowell Center for Sustainable Production, at 2.

¹⁸²HB 540, allowing “an income tax credit in the amount of fees paid to a recycler for the acceptance of electronic equipment turned in by the taxpayer. See Denise Griffin, “Environment, Energy and Transportation Program – Electronic Waste”, National Conference of State Legislatures (Feb. 2005), at: (<http://www.ncsl.org/programs/environ/cleanup/elecwaste.htm>).

¹⁸³HB 1861, creating “an Electronic Waste Producer Responsibility Act...which holds the manufacturer responsible for the handling/recycling of discarded computers.” *Id.*

¹⁸⁴“Don’t Expect E-Waste and Cell Phone Recycling Proposals to Just Go Away”, *supra* note 175.

¹⁸⁵See “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators; “Michigan Legislature - House Bill 4406 (2003), Public Act 562 of 2004 (Effective 1/3/2005), at: (<http://www.legislature.mi.gov/mileg.asp?page=getObject&objName=2003-HB-4406>); (<http://www.legislature.mi.gov/documents/2003-2004/publicact/htm/2004-PA-0526.htm>).

¹⁸⁶See “Legislative Counsel’s Digest”, at: (http://www.leginfo.ca.gov/pub/bill/asm/ab_0251-0300/ab_263_bill_20050208_introduced.html).

¹⁸⁷*Id.*; “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators.

¹⁸⁸“Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators.

¹⁸⁹See “House of Representatives, 23rd Legislature 2005, State of Hawaii – H.B. 234 – A Bill For An Act”, at: (<http://www.capitol.hawaii.gov/sessioncurrent/bills/hb234.htm>); “The Senate, Legislature 2005, State of Hawaii – S.B. 471, A Bill For An Act”, at: (<http://www.capitol.hawaii.gov/sessioncurrent/bills/sb471.htm>).

¹⁹⁰*Id.* HB 234 was introduced on 1/24/2005, while SB471 was introduced on 1/30/2005, each in the respective Health & Judiciary Committees. See: “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators.

¹⁹¹H.B. 1488, which is entitled, “AN ACT Relating to brominated flame retardants; adding a new chapter to Title 70 RCW; and prescribing penalties”,

was “Referred to [the House] Committee on Natural Resources, Ecology & Parks” on 1/25/05. See: (<http://www.leg.wa.gov/pub/billinfo/2005-06/Htm/Bills/House%20Bills/1488.htm>). S.B. 5515, bearing the same title, was “Referred to [the Senate] Committee on Water, Energy & Environment” on 1/26/05. See (<http://www.leg.wa.gov/pub/billinfo/2005-06/Htm/Bills/Senate%20Bills/5515.htm>).

¹⁹²“New Section 3(1), *id.*

¹⁹³*Id.*; New Section 4(1)(a).

¹⁹⁴S.B. 962 is entitled, “A Bill For An Act - Relating to brominated flame retardants; creating new provisions; and amending ORS 453.005, 453.085 and 453.995”. See (<http://www.leg.state.or.us/05reg/measures/sb0900.dir/sb0962.intro.html>).

¹⁹⁵*Id.* S.B. 424 was introduced in referred to the Senate Rules Committee on 2/16/05, while HB 2572 was reassigned to the House Health Committee on 2/24/05.

¹⁹⁶See “Illinois General Assembly, Full Text of S.B. 0424”, at: (<http://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=50&GA=94&DocTypeId=SB&DocNum=0424&GAID=8&LegID=17203&SpecSess=&Session=>); “Illinois General Assembly, Full Text of H.B. 2572”, at: (<http://www.ilga.gov/legislation/fulltext.asp?DocName=&SessionId=50&GA=94&DocTypeId=HB&DocNum=2572&GAID=8&LegID=18516&SpecSess=&Session=>).

¹⁹⁷See “Illinois General Assembly, Full Text of S.B. 0424”.

¹⁹⁸See “Illinois General Assembly, Full Text of H.B. 2572”, Sections 15(b) and 35.

¹⁹⁹See “HB 83 - Environment - Brominated Flame Retardants - Pentabrominated and Octabrominated Diphenyl Ether - Prohibition”, at: (<http://mlis.state.md.us/2005rs/billfile/hb0083.htm>); “Unofficial Copy of HB 83”, at: (<http://mlis.state.md.us/2005rs/bills/hb/hb0083t.pdf>); “Legislative Issues, Bill Positions – HB 83”, at: (http://www.mdchamber.org/leg_issues/HB83.htm).

²⁰⁰See “HB 83 – History by Legislative Date”, at: (<http://mlis.state.md.us/2005rs/billfile/hb0083.htm>).

²⁰¹See “Minnesota State Legislature - HF 1299 Status in House for Legislative Session 84”, at: (http://www.revisor.leg.state.mn.us/revisor/pages/search_status/status_detail.php?b=House&f=HF1299&ssn=0&y=2005).

²⁰²See “Enacted and Introduced PDBE Legislation – 2005) as of 3/1/05”, National Caucus of Environmental Legislators; “An Act Concerning the Ban of Polybrominated Diphenyl Ethers”, at: (<http://www.cga.ct.gov/2005/tob/s/2005SB-00785-R00-SB.htm>).

²⁰³See “2005 Montana Legislature – Senate Joint Resolution No. 15”, at: (<http://data.opi.state.mt.us/bills/2005/billhtml/SJ0015.htm>).

²⁰⁴Lowell Center for Sustainable Production, at 3; “Senate No. 1268, The Commonwealth of Massachusetts, An Act For a Healthy Massachusetts: Safer Alternatives To Toxic Chemicals”, at: (<http://www.state.ma.us/legis/bills/st01268.htm>); “S-1268 & H-2275 An Act for

[a Healthy Massachusetts: Safer Alternatives to Toxic Chemicals](#)". During April 2004, the Healthy Alliance lobbied the Massachusetts House of Representatives to adopt a bill that would fund the Toxic Use Reduction Institute (TURI) to conduct an analysis of safer alternatives to ten of the worst toxic chemicals. See "Clean Water Action Massachusetts", at: (<http://www.cleanwateraction.org/ma/aht/action.html>).

²⁰⁵The Healthy Alliance is promoted by Clean Water Action, an environmental advocacy group itself comprised of a network of state level nongovernmental organizations.

²⁰⁶See Michael P. Wilson, Abstract #92060, "Toward a Comprehensive Approach to Chemicals Policy: Developments in California", prepared by the Center for Occupational and Environmental Health, University of California, Berkeley, for presentation at the recent 132nd Annual Meeting of American Public Health Association, scheduled during Nov. 6-10, 2004, at: (http://apha.confex.com/apha/132am/techprogram/paper_92060.htm).

²⁰⁷See Joel Tickner, Abstract #91110, "Reform of Toxic Chemicals Regulation: The Current State of Affairs", prepared by the Lowell Center for Sustainable Production, University of Massachusetts, for presentation at the recent 132nd Annual Meeting of American Public Health Association, scheduled during Nov. 6-10, 2004, at: (http://apha.confex.com/apha/132am/techprogram/paper_91110.htm).

²⁰⁸See "Pew Initiative on Food and Biotechnology Factsheet – Legislative Tracker 2003", at: (<http://pewagbiotech.org/resources/factsheets/legislation/index.php?Year=2003&TopicID=2>).

²⁰⁹*Id.*

²¹⁰See "Pew Initiative on Food and Biotechnology Factsheet – Legislative Tracker 2003", at: (<http://pewagbiotech.org/resources/factsheets/legislation/index.php?Year=2003&TopicID=7>).

²¹¹*Id.*

²¹²*Id.*

²¹³See Vermont S. 18. In addition to "its guilty-until-proven-innocent assumptions", there's even talk about a statewide ban on biotech crops...Much of the impetus for this legislation comes from Vermont's organic growers whose numbers have more than tripled in the last five years. Some of them say they're worried about pollen from biotech crops drifting into their fields and mixing with their non-biotech plants – and thereby jeopardizing their status as certified organic farmers...According to the USDA [however,] no organic farmer anywhere in the U.S. has ever lost his or her USDA organic certification because of biotechnology." See: Terry Wanzek, "Shining the Light in Vermont", Truth About Trade (Feb. 25, 2005) at: (<http://www.truthabouttrade.org/article.asp?id=3405>).

²¹⁴See Alex Avery, "Codifying Corn Pollution in the Twilight Zone", Center for Global Food Issues, Hudson Institute (Feb. 8, 2005), at: (http://www.cgfi.org/materials/articles/2005/feb_08_05.htm). "The USDA rules clearly state that organic 'does not mean GM-, GMO-, or GE-free'. On the

USDA website, the NOP states that as of mid-January 2005, not a single organic crop or farmer has ever lost organic status due to the presence of biotech-derived materials. *Id.* See, also <http://www.ams.usda.gov/nop/Q&A.html>.

²¹⁵In Montana, wheat growers have strongly supported Senate Bill 218, intended to protect farmers from the liabilities associated with GM wheat contamination. See “[Farmers in Three U.S. States Seek Legal Protection from Pollution from GE Crops](#)” Organic Consumers Association.

²¹⁶“Farmers in North Dakota are equally concerned about the affects on grain elevators. ‘Losses to a country elevator for a 400,000 bushel train load of wheat to a west coast port could equal a half-million dollar loss of milling grade, transportation costs, and railroad charges for a train load of wheat sitting idle at the port,” said Todd Leake, a wheat farmer from Grand Forks County, N.D., and member of the Dakota Resource Council. ‘These losses would bankrupt these country elevators.’” *Id.*

²¹⁷“Vermont Panel Rejects GMO Bill”, (VERMONT) TIMES ARGUS-LEADER, May 5, 2005, at: <http://pewagbiotech.org/newsroom/summaries/display.php3?NewsID=881>).

²¹⁸See “CA GM Bill on Hold”, Truth About Trade and Technology, May 6, 2005, in Pew Initiative on Food and Biotechnology, at: <http://pewagbiotech.org/newsroom/summaries/display.php3?NewsID=882>).

²¹⁹*Id.*

²²⁰See Arty Mangan, “Tears, Biopharm Rice & a Free California”, Organic Consumers Association (Mar. 17, 2005), at: <http://www.organicconsumers.org/ge/freeca031705.cfm>), discussing “AB2622 (also known as the California Rice Certification Act),” and the role of the Advisory Board formed by the regulation in granting Ventria the approvals to grow pharmaceutical rice.

²²¹*Id.*

²²²See “Growers Leery of Modified Rice”, ARKANSAS DEMOCRAT GAZETTE, Feb. 1, 2005, at: Pew Initiative on Food and Biotechnology.

²²³See Bill Lambrecht, “Biotech Firm Puts Off Rice Crop in Missouri”, ST. LOUIS POST-DISPATCH (Apr. 28, 2005), cited in Organic Consumers Association, at: <http://www.organicconsumers.org/ge/missouririce050305.cfm>).

²²⁴See “Agribusiness Targets State Legislators to Pre-empt Local Laws on Seeds”, Natural Newswire (Apr. 2004), at: http://www.naturalnewswire.com/2005/04/agribusiness_ta.html).

²²⁵See “Sonoma Country to Put Biotech Vote to Voters”, Associated Press (Mar. 2, 2005), cited in Pew Initiative on Food and Biotechnology, at: <http://pewagbiotech.org/newsroom/summaries/display.php3?NewsID=842>).

²²⁶*Id.*

²²⁷*Id.*

²²⁸See Kate Campbell, “Anti-biotech Measures Defeated by Voters”, California Farm Bureau Federation (Nov. 10, 2004), at: <http://www.cfbf.com/agalert/AgAlertStory.cfm?ID=163&ck=0777D5C17D4066B82AB86DFF8A46AF6F>).

²²⁹HF 642 passed the House by a vote of 70-27, and the Senate by a vote of 33-16, on 4/6/05. See “2005 Seed and Plant Law Preemption Tracker, Updated as

of 5/11/05”, Environmental Commons website, at: (<http://www.environmentalcommons.org/gmo-tracker.html>).

²³⁰See “US States Passing Laws to Block Local GMO-Free Ordinances”, Organic Consumers Association (Apr. 2005), at: (<http://www.organicconsumers.org/biod/gmofreepreempt32905.cfm>).

²³¹*Id.*

²³²The following states have imposed CO₂ reporting requirements: California, Illinois, Maine, Maryland, New Hampshire, New Jersey, Vermont, and Wisconsin. See Joseph L. Bast, James M. Taylor and Jay Lehr, “State Greenhouse Gas Programs: An Economic and Scientific Analysis”, Heartland Policy Study #101, The Heartland Institute (Feb. 2003).

²³³States have endeavored to regulate CO₂ in the same manner they have regulated genuine ‘air pollutants’ such as sulfur dioxide and nitrous oxide. “*However, it is important to remember that CO₂ emissions are different in very fundamental ways from air pollutants such as SO₂ and NO_x.* (emphasis added). See Northeast Regional Greenhouse Gas Coalition, “Comments on RGGI Draft Discussion Piece on Offsets”, presented to the RGGI Staff Working Group (May 18, 2004), at 2-3, at: (http://www.rggi.org/docs/rggi_offsets.pdf).

²³⁴The following states have imposed some kind of GHG emissions cap: Massachusetts, New Hampshire, New Jersey, and Oregon. *Id.*

²³⁵See Environmental Defense Fund, “States and Climate Change” June 25, 2003), at: (<http://www.environmentaldefense.org/article.cfm?contentid=2863>).

²³⁶Actually the earlier bill, Assembly Bill 5577, had “provide[d] for the regulation of emissions of Nitrogen Oxide, Sulfur Dioxide and Carbon Dioxide (CO₂) from electric generators of 15 MW capacity or larger. See “USEPA Global Warming States Actions List”, at: (<http://yosemite.epa.gov/OAR/globalwarming.nsf/content/ActionsStateLegislativeInitiatives.html>).

²³⁷A01570, “An Act to Amend the Environmental Conservation Law in Relation to Regulating Emissions of Nitrogen Oxide, Sulfur Oxide, Carbon Dioxide and Mercury”. “*Covering the same power plants, the bill calls for the adoption of regulations that would require the reduction of carbon dioxide emissions (i.e., via imposition of a CO₂ emissions cap) to an amount that is 7% less than a plant’s total 1990 CO₂ emissions, by January 1, 2007.*” See “New York State Assembly Bill Summary – A01570”, at: (<http://assembly.state.ny.us/leg/?bn=A01570>).

²³⁸See “About RGGI; Goals and Guiding Principles”, at: (<http://www.rggi.org/about.htm>); (<http://www.rggi.org/goals.htm>).

²³⁹See Sons of Kyoto: Greenhouse Gas Legislation in the States, Updated: September 27, 2004, at: (<http://www.alec.org/viewpage.cfm?pgname=5.1046>). See, also “States Take Independent Action On Clean Air Plans,” Greenwire (July 8, 2004).

²⁴⁰See Raab Associates, Ltd., “Regional Greenhouse Gas Initiative Stakeholder Group Process Ground Rules for 4/2/04 Meeting – Purpose and Objectives” (3/25/04).

²⁴¹See Jim McConnach, Janet Ranganathan, Scott Rouse, Thomas Baumann and Namat Elkouche, “Plans and Programs For GHG Reductions, Removals and

Trading”, PowerGen International (Dec. 1, 2004), at 4 and 8, at: ([http://www.energy-efficiency.com/atWork.nsf/793a1cdc81c31efb85256d18000dcf4e/b70e9d33e91d14ea85256f8600011ae5/\\$FILE/ghgReduction.pdf](http://www.energy-efficiency.com/atWork.nsf/793a1cdc81c31efb85256d18000dcf4e/b70e9d33e91d14ea85256f8600011ae5/$FILE/ghgReduction.pdf)).

²⁴²According to Kenneth Colburn, Executive Director for the Northeast States for Coordinated Air Use Management (NESCAUM) and as reported by the Associated Press, “In some states the plan won’t even need legislative approval, but could be enacted via executive regulations, he said. See “Some States Flirt With Europe on Carbon Controls”, Associated Press, Dec. 16, 2004, reported in USA Today at: http://www.usatoday.com/weather/resources/climate/2004-12-16-states-climate_x.htm).

²⁴³“Given the extent and intensity of state-level activity aimed at reducing carbon dioxide emissions, the EU should organize two conferences on greenhouse emissions. These conferences should be targeted specifically at state officials, both elected leaders, (governors and attorneys general) and professional state level civil servants...*The purpose of such conferences would be to acquaint state officials with the EU’s programs in the area of climate change policy and for EU officials to become more knowledgeable about state initiatives. Subsequent to those two conferences, the EU should propose that a US-EU Climate Change Forum be established. Such a Forum should include participants who have not been included in the New Transatlantic Agenda dialogue in any significant fashion...While the federal government should participate in the Forum, it is critical that the states and the professional associations of state officials involved in the climate change policy arena be very strongly represented.* The focus should not be on the Kyoto Protocol but rather on the outcomes associated with Kyoto—i.e. the reduction of greenhouse gases, carbon dioxide emissions in particular. [In] [c]onclusion[,] [t]o set up a transatlantic Climate Change Forum along the lines discussed here, the Commission would need to acknowledge that the US is truly a federal system in which state governments play important roles in environmental protection. The US federal government would need to acknowledge the key role of the states as well” (emphasis added). See Alberta M. Sbragia, “US-EU Relations and Climate Change: The Need for Institutionalization”, prepared for the CSIS Think Tank Summit, titled “The Future of US-EU-NATO Relations: After the Cold War and Beyond the War in Iraq”, at 4-5, at: (http://www.csis.org/zbc/tts_papers.htm); (<http://www.csis.org/zbc/sbragia.pdf>).

²⁴⁴“[T]he EU has to recognize that political power in the US is not found exclusively in Washington. The US is in fact a federal system in which state governments are able to exercise considerable latitude in legislation as well as implementation. *In the field of climate change policy, the states have in reality been leading the way.* For those with a historical memory, the role of the states now on climate change recalls the role of the states in social policy in the 1920s and early 1930s. Essentially, states are experimenting with policies which are custom tailored to both individual state needs and governance structures” (emphasis added). *Id.*, at 2-3.

²⁴⁵“Two days of meetings between the EU Troika and key decision-makers on Capitol Hill have provided a new opening for EU-US co-operation on climate

change. The EU troika, represented by Mr Lux, Minister of the Environment of Luxembourg, Lord Whitty, representing the future British presidency and Commissioner Dimas held extensive talks *with Paula Dobriansky*, chief US negotiator on climate change and a number of key US policy-makers including *James Connaughton*, chair of the White House Council on Environment Quality. Both sides agreed that climate change presented a major challenge for policy makers now and in the future” (emphasis added). See “Commissioner Dimas Hopeful About New Phase in EU-US Relations on Climate Change”, Europa Press Release IP/05/463 (4/20/05), at: (<http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/463&format=HTML&aged=0&language=EN&guiLanguage=en>). See, also “EU-US Climate Change Talks Make Headway”, Sustainable Development, Euractiv, at: (<http://www.euractiv.com/Article?tcmuri=tcm:29-138406-16&type=News>).

²⁴⁶See EU ETS ‘Unlikely’ to Reduce CO2 Emissions, Says Report”, Platts Emissions Daily (Feb. 15, 2005), at: (<http://www.platts.com/Electric%20Power/Resources/News%20Features/emissionsmarket/#8>).

²⁴⁷This economic information was revealed with hesitance by RGGI government stakeholders at the recent May 18, 2005 RGGI public stakeholder meeting that took place in Boston, Massachusetts. This author and his co-director actively participated at such meeting in the name of the Institute for Trade Standards and Sustainable Development (ITSSD).

²⁴⁸See, e.g., “Correspondence dated November 17, 2004, from John G. Holsapple, Director Environmental Energy Alliance of New York to Karl Michael, Senior Project Manager, New York State Energy Research & Development Authority, at: (<http://www.rggi.org>).

²⁴⁹See Northeast Regional Greenhouse Gas Coalition, “Comments on RGGI Modeling”, presented to Karl Michael, NYSERDA (Mar. 12, 2004).

²⁵⁰See “European Emissions Trading Scheme to Push Long-Term Electricity Prices Up 30%; UBS Warburg”, Platts Emissions Daily (Feb. 16, 2005), at: (<http://www.platts.com/Electric%20Power/Resources/News%20Features/emissionsmarket/#8>).

²⁵¹“It will be ‘ambitious, if not impossible’ to make legally binding changes to the European Union’s emissions trading scheme before the second phase starts on Jan 1, 2008, European Commission environment department director of air and chemicals, Jos Delbeke, said ... *‘The national allocation plan process has to be rethought to ensure a level playing field both environmentally and economically,’* said Delbeke. ‘We might need to take some tough decisions for 2012, but I doubt if we can do much for the next round (2008-12).’ He said the key elements in the NAPs debate included the state of the internal EU energy market, business as usual forecasts, consistency with Kyoto targets and state aid. *Delbeke’s main concern was that the NAPs were not harmonized across the 25 EU members. ‘I’m frightened by the degree of complexity creeping in with each NAP we receive,’ he said. He recognized that member state governments were under pressure from national lobbyists, but there was a danger of making the NAPs so complicated that the ETS would not work well*” (emphasis added). See “Flawed Allocation Process Can’t Be Fixed by 2008: EC”, Platts Emissions

Daily (Feb. 18, 2005), at: (<http://www.platts.com/Electric%20Power/Resources/News%20Features/emissionsmarket/#8>).

²⁵²See discussion, *infra*, “Indirect Efforts to Reform U.S. Federal Law - *State Attorneys General Lawsuits*”.

²⁵³For example, the Europeans are advising RGGI government stakeholders on the issues of GHG allowances, allocations and offset mechanisms. See “Allocation Under the European Union Emissions Trading System”, RGGI Stakeholder Workshop (Boston, Oct. 14, 2004), by Olivia Hartridge, of the European Commission, DG Environment, at: (http://www.rggi.org/docs/hartridge_pres_10_14_04.pdf).

²⁵⁴See Joseph Kruger and William A. Pizer, “Regional Greenhouse Gas Initiative: Prelude to a National Program? – Exploring International Linkages”, *Goings On*, Resources For the Future (Winter 2005, Issue #156) at 5, at: (http://www.rff.org/rff/Documents/RFF_Resources_156_goings.pdf); (http://www.rff.org/rff/Documents/RFF_Resources_156.pdf).

²⁵⁵They apparently are not being fully candid. “The initiative so far has been limited to the 11 original states because their governments have a history of working together, *including in litigation against the federal government and Midwestern states on air quality issues*”, Crotty said” (emphasis added). See “Northeast U.S. Emissions Trading Scheme Could Serve as Model for National System, BNA Environment Reporter” (Mar. 29, 2004), at: (<http://subscript.bna.com/SAMPLES/ecb.nsf/0/bfde82e9101da86485256e63000431bf?OpenDocument>).

²⁵⁶According to the Associated Press, “Colburn questioned the need for federal authorization, saying *any trans-Atlantic trades would be pure commercial transactions, not government-to-government*” (emphasis added). See “Some States Flirt With Europe on Carbon Controls”, Associated Press, Dec. 16, 2004.

²⁵⁷“...Erin Crotty, [former] commissioner of the New York State Department of Environmental Conservation, said March 9 [the] emissions trading market being developed by 11 northeastern states *could serve as the model for a national system in the United States...*” (emphasis added). See Northeast U.S. “Emissions Trading Scheme Could Serve as Model for National System”, BNA Environment Reporter (Mar. 29, 2004).

²⁵⁸“...After the cap-and-trade program for power plants is implemented, the states may consider expanding the program to other kinds of sources...The program will be expandable and flexible, permitting other states to seamlessly join in the initiative when they deem it appropriate.” See “About RGGI; Goals and Guiding Principles”.

²⁵⁹“...[T]he Northeast region also has *a close working relationship with California, which is undertaking efforts with Western states on a greenhouse gas emissions trading market...*” (emphasis added). “Northeast U.S. Emissions Trading Scheme Could Serve as Model for National System”, BNA Environment Reporter (Mar. 29, 2004), the list of trading states may grow. Washington, Oregon and California, jointly developing plans to control carbon dioxide, are studying the possibility of carbon trading.” See “Some States Flirt With Europe on Carbon Controls”, Associated Press, Dec. 16, 2004.

²⁶⁰“The action plan clearly states the goal for RGGI and also establishes guiding principles for the program design, including: emphasizing uniformity across the participating states; building on existing successful cap-and-trade programs; *ensuring that the program is expandable and flexible, allowing other states or jurisdictions to join in the initiative...*” (emphasis added). See Erin M. Crotty and Franz T. Litz, “The Regional Greenhouse Gas Initiative: Northeast States Cooperate to Cap Carbon Dioxide Emissions From Power Plants”, *Sustainable Development, Ecosystems and Climate Change Committee Newsletter*, American Bar Association (Vol. 7., No. 3 June 2004), at 7 and 9, at: (<http://www.abanet.org/enviro/committees/climatechange/newsletter/jun04/sustainable0604.pdf>); “Once the program is fully operational...*there is no reason why it could not be extended to other states or other emissions trading markets that are developing in Canada and the European Union...*” (emphasis added). See “Northeast U.S. Emissions Trading Scheme Could Serve as Model for National System”, quoting former NYS Department of Environment Conservation Commissioner, Erin Crotty, BNA Environment Reporter (Mar. 29, 2004).

²⁶¹The New England Governors/Eastern Canadian Province Initiative had previously called for the “[c]reation of a *regional emissions registry...*[for the purpose of ensuring]...a uniform, coordinated basis for emissions banking and trading...[and]...to gain experience in certifying credits and trading within the geographic region.” See Brian M. Jones “Emerging State and Regional GHG Emission Trading Drivers” M.J. Bradley & Associates, Inc., (EUEC 2002), at: (<http://www.mjbradley.com/documents/EUEC1.pdf>).

²⁶²“RGGI will use agreed rules combined with mutual recognition through bilaterals.” See Jonathan Pershing, “Linking Trading Schemes: Dealing with Non-Parties”, IEA-IETA-EPRI 4th Annual Workshop on GHG Trading - Paris, World Resources Institute (Oct. 4, 2004), at 18, at: (<http://www.iea.org/textbase/work/2004/ghg/presentations/pershing.pdf>).

²⁶³An offset represents an emission reduction obtained outside of a well-defined cap-and trade program that can then be used to “offset” increased emissions under the cap. Offsets offer vast potential to reduce the costs and expand the incentives associated with an emissions trading system. Relatively cheap reductions outside the cap can be substituted for more expensive reductions under the cap, saving money while maintaining a given level of overall (capped and uncapped) emissions. See “Summary of RGGI Stakeholder Workshop on GHG Offsets”, at: (http://www.rggi.org/docs/offsets_workshopsummary.pdf).

²⁶⁴See “Some States Flirt With Europe on Carbon Controls”, Associated Press, Dec. 16, 2004.

²⁶⁵Mr. James has also publicly referred to the RGGI states as independent sovereign entities in just the same way that EU Member States refer to their relationship with the EU Commission. “[E]ach state is much like a member state in the EU - a sovereign state, subject to its own processes and regulations. So the same sort or dynamics are in play here where you will have, just by the nature of the beast, individual uniqueness that will not fit into the overall regional piece.” See The Climate Group Viewpoint Interview Series – “The Opportunities and Challenges Associated with Emissions Trading”, quoting Christopher James,

Director, Connecticut Department of Environmental Protection, at: (<http://www.theclimategroup.org/index.php?pid=568>).

²⁶⁶*Id.*

²⁶⁷See Anthony Hobley, Peter Hawkes, and Richard Saines, “Implementing the EU ETS: Climate Change Heats Up”, *Sustainable Development, Ecosystems and Climate Change Committee Newsletter*, American Bar Association (Vol. 7, No. 3 June 2004), at 2 and 7.

²⁶⁸The broad doctrine of federal preemption was succinctly discussed by the federal California Appellate Court for the 2nd District, in *Taiheiyō Cement Corp. v. Superior Court*, 129 Cal. Rptr. 2d 451 (Cal. App. 2 Dist., 2003) (Jan. 15, 2003).

²⁶⁹Laurence H. Tribe, Chap. 6, “Federalism-Based Limits on State and Local Power: Regulation and Taxation of Commerce, Federal Supremacy, and Problems of Interstate Discrimination, Sec. 6-12 - A Doctrinal Underview: Economic vs. Other Concerns, Local Needs and Less Restrictive Alternatives,” *American Constitutional Law* (Foundation Press 1978), at 340-342. Laurence Tribe has comprehensively discussed the limited scope of state regulation of interstate commerce.

²⁷⁰*Id.*

²⁷¹See Tribe at 369-70.

²⁷²See “Rulemaking Activities”, NY Register (May 18, 2005), at 18-25, at: (<http://www.dos.state.ny.us/info/register/2005/may18/pdfs/Rules.pdf>);

“Proposed Amendments - Part 218 – Emissions Standards for Motor Vehicles and Motor Vehicle Engines”, Proposed, Emergency and Recently Adopted Regulations Pertaining to Air Pollution – New York State Department of Environmental Conservation, at: (http://www.dec.state.ny.us/website/dar/air_regs.html).

²⁷³“Reduction of CO₂ Emissions from Power Plants - State and Local Net Greenhouse Gas Emissions Reduction Programs”, Pew Center on Global Climate Change, at: (<http://www.pewclimate.org/states.cfm?ID=40>).

²⁷⁴*Id.*

²⁷⁵See “Sons of Kyoto: Greenhouse Gas Legislation in the States - Updated: Sept. 27, 2004”, at: (<http://www.alec.org/viewpage.cfm?pgname=5.1046>).

²⁷⁶See “Multiple Pollutant Reduction Program”, Pew Center on Global Climate Change, at: (<http://www.pewclimate.org/states.cfm?ID=53>).

²⁷⁷*Id.*

²⁷⁸See Public Act 90-219, CT House Bill 5696 (1990). See, also “Environmental Defense Fund, States and Climate Change”, June 25, 2003, at: (<http://www.environmentaldefense.org/article.cfm?contentid=2863>).

²⁷⁹See “USEPA Global Warming States Actions List”, at: (<http://yosemite.epa.gov/globalwarming/ghg.nsf/StatePolicyOptionsSearch?OpenForm>); (<http://yosemite.epa.gov/OAR/globalwarming.nsf/content/ActionsStateLegislativeInitiatives.html>).

²⁸⁰“...Connecticut is one of the states that agreed, under the auspices of the New England Governors and Eastern Canadian Premiers (NEG/ECP), to a voluntary

short-term goal of reducing regional greenhouse gas emissions to 1990 levels by 2010 and by 10 percent below 1990 levels by 2020. The NEG/ECP long-term goal is to reduce emissions to a level that eliminates any dangerous threats to the climate – a goal scientists suggest will require reductions 75 to 85 percent below current levels. These goals were announced in August 2001.” “States and Climate Change”, *supra* note 278.

²⁸¹See “Connecticut Climate Change Action Plan Submitted to Legislative Committees Press Release, State of Connecticut, Department of Environmental Protection,” Jan. 6, 2005, at: (<http://www.ctclimatechange.com/documents/pressrelease010605FINAL.pdf>).

²⁸²*Id.*

²⁸³*Id.*

²⁸⁴“Greenhouse Gas Reduction Target”, Pew Center on Global Climate Change, at: (<http://www.pewclimate.org/states.cfm?ID=42>).

²⁸⁵The Public Service Enterprise Group (PSEG) first “signed the covenant in 2000, and further committed in a 2002 agreement to reduce total CO₂ emissions from all of its coal, natural gas, and oil power plants by 15 percent from 1990 levels by 2005”. It also agreed to be subject to monetary penalties if those reductions were not achieved. *Id.*

²⁸⁶See “USEPA, Global Warming States Actions List”, at: (<http://www.epa.gov/epahome/exitepa.htm>).

²⁸⁷See “Greenhouse Gas Reduction Target”, Pew Center on Global Climate Change, at: (<http://www.pewclimate.org/states.cfm?ID=42>).

²⁸⁸“This clarification of the status of CO₂ is a regulatory prelude to anticipated future regulatory adoption of a Model Rule proposed through the Regional Greenhouse Gas Initiative (RGGI)... New Jersey is participating through RGGI, along with eight other states in the Northeast and Mid-Atlantic (Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont), in the development of a regional CO₂ cap-and-trade program. Prior to regulating CO₂ as an air pollutant, the Department would need to make a formal determination and advise the public that regulating CO₂ is in the “best interest of human health, welfare, and the environment.” *Id.*

²⁸⁹*Id.*, at 23.

²⁹⁰The initiative committed the states to acting “individually and regionally to reduce greenhouse gas emissions” through strategies that “provide long-term sustainability for the environment, protect public health, consider social equity, and expand public awareness.” See “Statement of the Governors of California, Oregon and Washington On Regional Action to Address Global Warming”, Offices of the Governors (Sept. 23, 2003), at: (http://www.ef.org/westcoastclimate/Governors_Statement.pdf).

²⁹¹*Id.*

²⁹²“West Coast Governors’ Global Warming Initiative – Staff Recommendations to the Governors”, (Nov. 2004), Executive Summary, at 3.

²⁹³See California SB 1771. “USEPA Global Warming States Actions List”, *supra* note 286.

²⁹⁴“Under the legislation...[AB 1493 otherwise known as the Pavley bill]...the California Air Resources Board (CARB)...must adopt standards that will

achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from motor vehicles, taking into account environmental, social, technological and economic factors. ‘Cost-effective’ is defined by the legislation to mean greenhouse gas reductions that are economical to the owner of the vehicle, taking into account the full life-cycle costs of the vehicle. *See* “Pew Center on Global Climate Change - State and Local Net Greenhouse Gas Emissions Reduction Programs”, at: (<http://www.pewclimate.org/states.cfm?ID=51>). *See, also* California Air Resources Board, Climate Change, (Sept. 24, 2004) at: (<http://www.arb.ca.gov/regact/grnhsagas/grnhsagas.htm>).

²⁹⁵*See* PBS “Now”, Apr. 15, 2005, at: (<http://www.pbs.org/now/science/caautoemissions2.html>).

²⁹⁶*Id.* “CARB estimated that the initial phase of the regulations will increase the average price of new vehicles by as much as \$367.” *Id.*

²⁹⁷The CARB proposed “a 2-5 percent reduction in emissions in 2009, depending on vehicle type, rising incrementally to reach approximately 30 percent below projected 2009 levels in 2014.” It expected that the cost of the regulations would be “offset by decreased operating costs over the life of the vehicle.” *Id.*

²⁹⁸*See* “Automakers Challenge CA CO2 Regulation in Court” (Dec. 7, 2004), Green Car Congress, at: (http://www.greencarcongress.com/2004/12/automakers_chal.html).

²⁹⁹*See* PBS “Now”, *supra* note 295.

³⁰⁰*Id.*

³⁰¹*See* “Governor Schwarzenegger Establishes Green House Gas Emission Reduction Targets”, Press Release GAAS:215:05, June 1, 2005, at: (<http://www.climatechange.ca.gov>).

³⁰²That the governor decided to sign the executive order and then announce it at the United Nations World Environment Day in San Francisco should not be overlooked.

³⁰³*See* “Executive Order S-3-05 By the Governor of the State of California”, June 1, 2005. *Id.*

³⁰⁴*See* “California’s Global Warming Reduction Targets – FACT SHEET”, Union of Concerned Scientists (June 2005), at: (<http://www.climatechoices.org/CA%20Carbon%20Targets.pdf>).

³⁰⁵*See* “USEPA Global Warming States Actions List”, *supra* note 275.

³⁰⁶*Id.*

³⁰⁷*See* “Sons of Kyoto: Greenhouse Gas Legislation in the States, Updated” (Sept. 27, 2004), at: (<http://www.alec.org/viewpage.cfm?pgname=5.1046>).

³⁰⁸*See* HB 2200, “Relating to forestry carbon offsets, 71st Oregon Legislative Assembly, 2001 Regular Session, at: (<http://www.leg.state.or.us/01reg/measures/hb2200.dir/hb2200.en.html>).

³⁰⁹*See* “Innovative State Legislation – Issue: Greenhouse Gas Reporting and Reduction Strategies”, State Environmental Resource Center (June 15, 2004), at: (<http://www.serconline.org/ghg/stateactivity.html>).

³¹⁰*See* HB 2326, “Engrossed Substitute House Bill - An Act Relating to the Washington climate and rural energy development center...”, “State of

Washington, 57th Legislature, 2002 Regular Session, at: (http://www.leg.wa.gov/pub/billinfo/2001-02/House/2325-2349/2326-s_sl.pdf).

³¹¹*Id.*

³¹²“Flawed Allocation Process Can’t Be Fixed by 2008: EC”, Platts Emissions Daily (Feb. 18, 2005), at: (<http://www.platts.com/Electric%20Power/Resources/News%20Features/emissionsmarket/#8>).

³¹³See Tomas Alex Tizon, “Mayor is on a Mission to Warm U.S. Cities to the Kyoto Protocol”, Los Angeles.com (Feb. 22, 2005).

³¹⁴In 2001, the Massachusetts state legislature had considered adopting a bill, SB-1115, which sought a Commission to “study the potential effects of the environment and social conditions on children's health...bas[ed] on the precautionary principle.” The Grocery Manufacturers of America, a leading food industry trade group submitted a letter of protest against the adoption of that bill. See “GMA Letter in Opposition to Massachusetts ‘Precautionary Principle’ Legislation” (May 10, 2001), at: (<http://www.gmabrands.com/news/docs/Testimony.cfm?DocID=753&>).

³¹⁵In 2000, New Hampshire “State Representative Derek Owen of Hopkinton introduced a bill that would [have] ma[d]e it state policy to use the so-called “precautionary principle” when determining the safety of using products and technologies. Although aimed specifically at the land application of bio-solids (treated sewage sludge), the proposal [would] have significantly broader ramifications for environmental laws, if adopted.” See Gregory H. Smith, “Beware The ‘Precautionary Principle’” (Dec. 18, 2000), at: (<http://www.mclane.com/news/publications/environmental/030.html>).

³¹⁶As recently as April 2004, the Hawaii State legislature was considering “House Concurrent Resolution 49. This resolution...urges the state departments and agencies to implement the “precautionary principle” policy framework on environmental protection in conducting the state’s affairs.” See “GMA Letter in Opposition to Hawaii Precautionary Principle Resolution”, Apr. 5, 2004, at: (<http://www.gmabrands.com/publicpolicy/docs/correspondence.cfm?DocID=13>)

³¹⁷“In New York, two identical bills were introduced [during] April 2005 (S.4545 and A.7256) which incorporated the precautionary principle as follows: ‘It is hereby declared to be the policy of the state of New York that where threats of harm to human health or the environment exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for state or local government to postpone precautionary measures to protect public health or the environment’...In the latest effort to apply the precautionary principle to chemical regulation, New York State lawmakers recently considered two bills that could have severely restricted sales of pesticides and other chemicals. *Although neither the Assembly nor the Senate bill made it out of committee, the effort points to a growing trend toward incorporation of this European principle into everyday environmental and public health lawmaking in the United States*” (emphasis added). See “Precautionary Principle Pushed in the United States”, Pesticide.NET Insider eJournal, Vol. 2, No. 11 (June 7, 2005), at 1-2, at: (http://www.sehn.org/pdf/pesticide_net.pdf).

³¹⁸During 2005, two bills precautionary principle related bills were introduced in the New Mexico legislature, one within the State House by Antonio Lujan and the other within the State Senate by Bernadette Sanchez. They would have “require[d] the precautionary principle to be incorporated into environmental and public health decision-making.” They were apparently initiated by an NGO called “the New Mexico Environment and Health Coalition, which launched the Precautionary Principle Campaign in 2003 to further its goal of ‘increasing community influence over environmental and public health decisions-making in New Mexico to enhance community health.’” See “Precautionary Principle Pushed in the United States”, Pesticide.NET Insider eJournal, *supra* at 3.

³¹⁹“In an October [2000] speech at the National Academy of Sciences in Washington, D.C., New Jersey governor Christine Todd Whitman averred that ‘policymakers need to take a precautionary approach to environmental protection.... We must acknowledge that uncertainty is inherent in managing natural resources, recognize it is usually easier to prevent environmental damage than to repair it later, and shift the burden of proof away from those advocating protection toward those proposing an action that may be harmful.’” David Appell, “The New Uncertainty Principle”, Scientific American (Jan. 2001), at: (<http://www.biotech-info.net/uncertainty.html>).

³²⁰San Francisco Board of Supervisors adopted the precautionary principle as city and county policy June 17, 2003. “The San Francisco Department of Environment is integrating precautionary considerations into the city’s purchasing policies by choosing only the safest alternatives for specific product categories – such as cleaners, pesticides, etc.” “Precautionary Chemicals Policy Initiatives in the United States,” Lowell Center for Sustainable Production, at 2. See “San Francisco Adopts Precautionary Principle”, at: (http://www.newmediaexplorer.org/sepp/2003/06/29/san_francisco_adopts_precautionary_principle.htm). The San Francisco Precautionary Principal Ordinance can be found at: (http://www.ci.sf.ca.us/sfenvironment/aboutus/policy/legislation/precaution_principle.htm).

³²¹“On September 23, 2004...the Portland City Council and Multnomah County...jointly...pass[ed] the Precautionary Principle Resolution...directing development of a Toxics Reduction Strategy for Multnomah County and City of Portland government using the Precautionary Principle. The resolution will be used when developing new environmental policies: If a practice poses a threat to human health or the possibility of serious environmental damage, the Precautionary Principle approach will use the best available science to identify cost-effective alternatives that possess the least potential threat to human health and the city’s natural systems.” See “Precautionary Principle Resolution Passed”, Oregon Center for Environmental Health, at: (http://www.oregon-health.org/precaution_successes.html).

³²²“Some states in the U.S. have begun to toy with precautionary ideas, but it is *at the municipal level* where precaution has really flourished” (emphasis added). See Carolyn Raffensperger and Peter Montague, “Land Use and the Precautionary Principle”, Rachel’s Environment and Health News, No. 787, Mar. 18, 2004, at: (<http://www.organicconsumers.org/corp/landuse032304.cfm>);

See also, “Precautionary Mister Rogers – Part 3”, Environmental Research Foundation, Rachel’s Weekly (Nov. 11, 2004), at: (<http://www.ecomall.com/activism/rachel192.htm>); (<http://lists.igc.org/pipermail/duckdaotsu/Week-of-Mon-20041108/003178.html>).

³²³The petition, filed on October 20, 1999, requested that the EPA regulate carbon dioxide GHG emissions from motor vehicles pursuant to CAA Sec. 202(a).

³²⁴See EPA Determines that it Lacks Authority to Promulgate Climate Change Regulations”, VanNess Feldman Issue Alert (Sept. 8, 2003), at: (<http://www.vnf.com/content/articles/epealert090803.pdf>).

³²⁵*Id.*

³²⁶See Jonathan H. Adler, “States’ Hot Suits”, NATIONAL REVIEW, Apr. 30, 2003), at: (<http://www.nationalreview.com/adler/adler043003.asp>).

³²⁷Illinois, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont and Washington.

³²⁸“States, Cities, Environmental Groups Sue Bush Administration on Global Warming, Challenge EPA’s Refusal to Reduce Greenhouse Gas Pollution”, Office of New York State Attorney General Eliot Spitzer, Press Release, Oct. 23, 2003, at: (http://www.oag.state.ny.us/press/2003/cot/oct23a_03.html).

³²⁹See Jonathan H. Adler, “Life Chat: Legal and Economic Implications of State Attorneys General Lawsuit”, Sept. 9, 2004, at: (<http://www.globalwarming.org/article.php?uid=756>).

³³⁰See *Commonwealth of Massachusetts, et al vs. United States Environmental Protection Agency*, On Petition for Review of Final Action of the United States Environmental Protection Agency, Final Brief for the Intervenor States of Michigan, Texas, Idaho, North Dakota, Utah, South Dakota, Alaska, Kansas, Nebraska, and Ohio, and the *Amicus* State of Indiana in Support of Respondent United States Environmental Protection Agency”. The case was argued on April 8, 2005.

³³¹“Pollution Lawsuits Put Michigan’s Economy at Risk – Gas-burning States Target the Midwest to Force a Reduction in Carbon Dioxide Emissions”, Editorials & Opinions, THE DETROIT NEWS, Sept. 13, 2004, at: (<http://www.detnews.com/2004/editorial/0409/13/a08-271121.htm>).

³³²See No. 03-1361, *Commonwealth of Massachusetts, et al., v. Environmental Protection Agency, Alliance of Automobile Manufacturers et al.* at: (<http://www.nrdc.org/media/docs/050715.pdf>).

³³³See Darren Samuelsohn, *Split Court Upholds EPA Decision Not to Regulate Greenhouse Gases*, Greenwire, July 15, 2005, at: (<http://www.eenews.net/Greenwire.php>); *Climate Change: States, Enviro Consider Appeal of Global Warming Decision*, July 15, 2005), at: (<http://www.greenwire.com>); *Court Fails to Decide EPA Authority to Regulate Global Warming Pollution - Split decision Poses No Obstacle to California Vehicle Emissions Standards*, Natural Resources Defense Council Press Release, July 15, 2005, at: (<http://www.nrdc.org/media>).

³³⁴*Commonwealth of Massachusetts* at 5-10.

³³⁵*Id.*, at 10.

³³⁶*Id.*, at 15.

³³⁷*Id.*, at 14.

³³⁸*Id.*, at 15.

³³⁹Judge Sentelle’s opinion focused on the petitioners’ failure to establish all of the requirements set forth by the U.S. Supreme Court for demonstrating standing: 1) complainant; 2) suffers specific (‘particularized’) vs. general injury-in-fact; 3) fairly traceable to the challenged action or inaction (causation); AND 4) proof that the injury likely would be redressed by a favorable decision. *See* Sentelle Opinion at p. 1, citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992). The Sentelle Opinion, in particular, focused on the ‘injury’ requirement.

³⁴⁰*Id.*, at 1-2, 38.

³⁴¹Dissenting Opinion at 29. “The statutory standard, moreover is *precautionary*...[CAA] Section 202(a)(1) now requires regulation to precede certainty...It requires regulation where, in the Administrator’s judgment, ‘emissions contribute to air pollution *which may reasonably be anticipated to endanger* public health or welfare...As the House Report explained, ‘In order to emphasize the *precautionary or preventative purpose of the act* (and, therefore, the Administrator’s *duty* to assess risks rather than wait for proof of actual harm), the [House] committee not only retained the concept of endangerment to health; the committee also added the words ‘may reasonably be anticipated to’”. *Id.*, citing H.R. Rep. No. 95-294, at 51 (italicized emphasis in original) (boldfaced emphasis added). Furthermore, according to Judge Tatel, “[T]he statutory standard—‘cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare’...gives the Administrator *no* discretion to withhold regulation for such reasons” (emphasis added), *id.*, at 2.

³⁴²“I believe that EPA has both misinterpreted the scope of its statutory authority and failed to provide a statutorily based justification for refusing to make an endangerment finding. I would thus grant the petitions for review.” *Id.* at 38.

³⁴³California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont and Wisconsin.

³⁴⁴The five companies were: 1) American Electric Power, Inc. – Columbus, OH – operates 12 utility companies; 2) Southern Company – Atlanta, GA - owns five utility companies; 3) Tennessee Valley Authority; 4) Xcel Energy, Inc. – Minneapolis, MN – owns five utility companies; and 5) Cinergy Corp. – Cincinnati, OH – operates four utility companies. Pamela Najor, “Climate Change – Eight States to Announce Filing of Lawsuit Against Utilities to Reduce Carbon Dioxide”, Bureau of National Affairs, Inc. (July 21, 2004), at: (<http://www.bna.com/corp/index.html#V>).

³⁴⁵*State of Connecticut, State of New York, People of the State of California Ex Rel Attorney General Bill Lockyer, State of Iowa, State of New Jersey, State of Rhode Island, State of Vermont, City of New York vs. U.S. America Electric Power Co., Inc., American Electric Power Service Corp., The Southern Co., Tennessee Valley Authority, EXCEL Energy, Inc. Cinergy Corp.*, U.S. District Court, Southern District of New York (7/21/04), at pars. 108-111, 112-115, 118-120, 121-127, 128-131, 132-140, 141, 142, 143-145 and 146, at: (<http://www.cslib.org/attygenla/press/2004/enviss/Global%20Warming%20Law%20suit.pdf>).

³⁴⁶See *Connecticut v. American Electric Power Company, Inc. et al.*, (04 Civ. 5670) (SD NY 2005), at 19.

³⁴⁷*Id.*, at 15-16, and 18-19.

³⁴⁸For example, on August 23, 2005, a federal district court in San Francisco permitted a 2002 suit commenced by Friends of the Earth, Greenpeace and the Cities of Boulder Colorado, Oakland, Arcata and Santa Monica, California, (See: <http://www.greenpeace.org/raw/content/usa/press/reports/the-lawsuit-filed-in-the-u-s.pdf>), to proceed to trial, thereby denying Defendants' motion for summary judgment. (See: <http://www.climatelawsuit.org/documents/ruling82305.pdf>).

The complaint alleged that two federal agencies, the U.S. Export-Import Bank and the Overseas Private Investment Company (OPIC), wrongly funded \$32 billion in loan guarantees and insurance for fossil fuel (oil and natural gas) projects worldwide during the past decade that promote global warming without considering the statutory mandates contained within the National Environmental Policy Act (NEPA) – namely its requirement that federal agencies conduct an environmental assessment and, perhaps, even an environmental impact assessment, prior to implementing proposed agency actions that the agency determines may raise significant environmental issues and/or give rise to significant environmental impacts.

³⁴⁹731 F.2d 403 (C.A. Ill. 1984), “Appeal No. 77-2246 (the *Milwaukee case*) is here on remand from the Supreme Court of the United States. *Milwaukee v. Illinois*, 451 U.S. 304 (1981) (*Milwaukee II*). Appeal No. 81-2236 is an interlocutory appeal in cases to which we shall refer as the Hammond cases.” (emphasis in original)

³⁵⁰731 F.2d 403, 404.

³⁵¹See Amanda Griscom Little, “On the Right Track – New Republican Leaders Emerging in Battle Against Climate Change”, GRIST MAGAZINE (Feb. 4, 2005), at: (<http://www.grist.org>).

³⁵²See S. 342/H.R. 759. S.342 was later referred to the Senate on Environment and Public Works, while H.R. 759 was later referred to the Subcommittee on Environment, Technology and Standards. See “Bill Summary and Status for the 109th Congress, at: ([http://thomas.loc.gov/cgi-bin/bdquerytr/z?d109:SN00342:](http://thomas.loc.gov/cgi-bin/bdquerytr/z?d109:SN00342:;)); ([http://thomas.loc.gov/cgi-bin/bdquery/z?d109:HR00759:](http://thomas.loc.gov/cgi-bin/bdquery/z?d109:HR00759:;)); According to a February 2005 report released by the Natural Resources Defense Council, this most recent iteration of the CSA is less stringent in terms of emissions caps than its predecessors. “Starting in 2010, the CSA would cap emissions at the levels of 2000. (Earlier versions of the bill included a further phase-down to 1990 levels, but the current version does not include these reductions). See James Barrett, J. Andrew Hoerner and Jan Mutl, “Jobs and the Climate Stewardship Act; How Curbing Global Warming Can Increase Employment”, for the Natural Resources Defense Council (Feb. 2005), at 9, at: (<http://www.nrdc.org/globalWarming/csa/CSAjobs.pdf>).

³⁵³See, e.g., “Sens McCain and Lieberman Reintroduce the Climate Stewardship Act”, Environmental Defense Fund (2/10/05), at: (<http://www.environmentaldefense.org/article.cfm?contentid=4314>); “The World Supports the McCain-Lieberman Climate Bill – Time for the United

States to Start Addressing Climate Change”, Climate Ark, Mar. 19, 2005, at: (<http://www.climateark.org/action/alert.asp?id=climate>).

³⁵⁴See “U.S. Senate Rejects Mandatory Emissions Cuts”, Reuters, June 22, 2005. “Bush will attend a Group of Eight meeting in early July, hosted by British Prime Minister Tony Blair, who wants to focus on global warming. ‘Tony Blair has put unmitigated pressure on this president. He’s even lobbied us individually on it, suggesting we ought to get this president to change his mind,’ said Sen. Larry Craig, an Idaho Republican. ‘The Senate spoke yesterday.’” *Id.*

³⁵⁵See Amendment 866 to H.R. 6, “Sense of the Senate on Climate Change”, which failed by a vote of 53-44 on June 22, 2005, at: (http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=109&session=1&vote=00149); “Congressional Record-Senate at S7033-7037 (June 22, 2005, at: (http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=S7033&dbname=2005_record)).

³⁵⁶See H.R. 6, at: (<http://finance.senate.gov/sitepages/leg/leg062005.pdf>). The legislation has since moved into conference with the House.

³⁵⁷The “Sense of the Senate on Climate Change” resolution was offered by Senators Bingaman, Specter, Byrd, and Domenici. See “Senate Says: U.S. Must Enact Mandatory Limits On Global Warming Pollution, Time Has Come For Real Action”, PR Newswire, June 22, 2005, at: (<http://www.climateark.org/articles/reader.asp?linkid=43285>).

³⁵⁸See “SEC. 16__ SENSE OF THE SENATE ON CLIMATE CHANGE”, at: (<http://thomas.loc.gov/cgi-bin/query/F?r109:1:./temp/~r109GfDokO:e504232>).

³⁵⁹See “U.S. Senate Rejects Mandatory Emissions Cuts”, *supra*; “Senate Resolution Backs Mandatory Emissions Limits”, News of the Week, *Science*, Vol. 309 (July 1, 2005), at 32, at: (www.sciencemag.org).

³⁶⁰See “Two Different Approaches for Addressing Climate Change Proposed to U.S. Senate”, Climate Action News, California Climate Action Registry (Mar. 2005), at: (<http://www.climateregistry.org>).

³⁶¹“Lieberman/McCain Introduce Emissions Trading Bill”, Environmental Markets Update, Vol. 1, No. 1 (Jan. 20, 2003), at: (<http://www.emissions.org>); “Summary of Lieberman/McCain Draft Proposal on Climate Change”, Senator Lieberman Press Office (Jan. 8, 2003), at: (<http://lieberman.senate.gov/press/03/01/2003108655.html>); Cheryl Hogue, “Greenhouse Gas Emissions Curb – Senators Launch Legislative Effort for U.S. Cap and Trade System”, CHEMICAL & ENGINEERING NEWS (Jan. 13, 2003), at: (<http://pubs.acs.org/cen/topstory/8102/print/8102notwl.html>).

³⁶²Senator Hagel, along with Senator Byrd, had previously, in 1997, cosponsored Senate (Byrd-Hagel) resolution 98 that called on President Clinton to reject the Kyoto Protocol because it had failed to take into account developing countries and would have severely impacted U.S. economic growth. That resolution had passed by a vote of 95-0.

³⁶³Senator Byrd was the fourth co-sponsor of S. 386, but did not cosponsor the other bills. He supported the international bill most likely because of the ‘clean coal technologies that West Virginian companies could readily export to developing countries.

³⁶⁴S. 388, “Title: A bill to amend the Energy Policy Act of 1992 to direct the Secretary of Energy to carry out activities that promote the adoption of technologies that reduce greenhouse gas intensity and to provide credit-based financial assistance and investment protection for projects that employ advanced climate technologies or systems, to provide for the establishment of a national greenhouse gas registry, and for other purposes.” “Bill Summary & Status for the 109th Congress”, at: (<http://thomas.loc.gov>).

³⁶⁵See, e.g., Amendment No. 817, made to H.R.6, dated June 21, 2005, at: (<http://energy.senate.gov/public/ files/Hagelclimatechange.pdf>);

“S.AMDT.817: Text of Amendments - (Senate – June 21, 2005), S.6950-S.6957, at: (<http://thomas.loc.gov/cgi-bin/query/R?r109:FLD001:S06951>). See also, “U.S. Senate Roll Call Votes 109th Congress - 1st Session, On the Amendment (Hagel Amdt. No. 817), at: (http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=109&session=1&vote=00144).

³⁶⁶The Kyoto Protocol's Clean Development Mechanism is available to all exporters whether or not their governments are Kyoto parties, The goal of that treaty provision is to promote the use of cleaner technologies (technology transfer) in developing countries. It allows treaty and nontreaty partners to earn GHG credits for domestic or international use by working on projects in developing countries.

³⁶⁷See Amanda Griscom Little, “The Chuck Stops Here – An Interview With Sen. Chuck Hagel, Republican From Nebraska, On His New Climate Bills”.

³⁶⁸See Nicholas C. Franco, “Corporate Environmental Disclosure: Opportunities to Harness Market Forces to Improve Corporate Environmental Performance”, presented to the American Bar Association, Section on Environment, Energy, and Resources, (Mar. 8-11, 2001), at 7. In making this statement it relied on the results of several public company surveys and studies. They included a 1992 Price Waterhouse study concerning the accrual of *known environment-related exposures*, a 1996 study concerning environmental disclosure of *known CERCLA potentially responsible parties*, and a 1998 EPA study focusing on disclosure of *environmental legal proceedings*.

³⁶⁹*Id.*, at 8.

³⁷⁰*Id.*, at 7-8.

³⁷¹“Additionally disclosures [made]...pursuant to Regulation S-K Items 101 and 103...must be discussed in the MD&A section if they will have an unfavorable impact on the financial condition of the company.” “Corporate Environmental Disclosure”, *supra* note 368 at 12.

³⁷²According to SEC officials, in determining whether information is ‘material’, the agency relies on the [US] Supreme Court’s statement that, ‘an omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote.’ See *Basic, Inc. v. Levinson*, 485 U.S. 224, 231 (1988), citing *TSC Industries v. Northway, Inc.* 426 U.S. 438, 449 (1976). Guidance issued by the Financial Accounting Standards Board (FASB) states that the omission of an item in a financial report is material, if, in light of surrounding circumstances, the magnitude of the item is such that it is probable that the judgment of a reasonable person relying on the report would have

changed or been influenced by the inclusion or correction of the item.” “Environmental Disclosure – SEC Should Explore Ways to Improve Tracking and Transparency of Information”, United States Government Accountability Office, Report to Congressional Requesters GAO-04-808 (July 2004), at 10.

³⁷³“The Commission has long recognized the need for a narrative [non-financial] explanation of the financial statements, because numerical presentations and brief accompanying footnotes alone may be insufficient for an investor to judge the quality of earnings and the likelihood that past performance is indicative of future performance. *MD&A is intended to give the investor an opportunity to look at the company through the eyes of management by providing both a short and long-term analysis of the business of the company*” (emphasis added). See Securities Act Release Nos. 33-8056; 34-45321; FR-61 (Jan. 22, 2002), citing Securities Act Release No. 6711 (Apr. 17, 1987), Concept Release on Management’s Discussion and Analysis of Financial Condition and Results of Operations, 52 Fed. Reg. 13715.

³⁷⁴*Id.*, Sec. III.B.1. Focus on Materiality.

³⁷⁵*Id.*, Sec. III.B.1. Focus on Materiality.

³⁷⁶*Id.*, Sec. III.A. Presentation of MD&A.

³⁷⁷*Id.*, Sec. III.B.3 Focus on Material Trends and Uncertainties.

³⁷⁸Private Securities Litigation Reform Act of 1995 (securities class action lawsuits).

³⁷⁹See Securities Act Release No. 6835 (May 18, 1989), Management’s Discussion and Analysis of Financial Condition and Results of Operations, 54 Fed. Reg. 22427, 22438.

³⁸⁰Financial Accounting Standards Board No. 5.

³⁸¹AICPA guidance provides that companies must disclose the risks and uncertainties of their estimates when it is at least reasonably possible that the estimates will change in a way that is ‘material’ to the financial statements within the next year.

³⁸²Corporate Sunshine December 2002 Bulletin. See GAO Report, at 2.

³⁸³*Id.*, at vi.

³⁸⁴“Despite the fact that they may be expected to report on such issues on the basis of existing regulations, it is unlikely that a lawyer would advise a client company’s management that the company would face court action...because regulations pertaining to environmental liability disclosure have historically rarely been enforced.” *Id.*

³⁸⁵*Id.* In this regard, what are considered significant material environmental liabilities from an accounting perspective is narrowly defined by SEC Regulation. “What is considered minimum or adequate [disclosure] in the US is less than in the European Union. Nations including France and Denmark already have mandatory reporting of environmental issues in financial statements. The United Kingdom and the Netherlands are expected to follow suit shortly. Though this merging of financial and non-financial information into the same report is not yet mandatory in North America...it will be in time.”

³⁸⁶*Id.*

³⁸⁷See William Baue, “Members of Congress Consider Social and Environmental Disclosure in SEC Filings”, July 10, 2003, at: (<http://www.socialfunds.com/news/print.cgi?sfArticleId=1170>).

³⁸⁸*Id.*

³⁸⁹*Id.*

³⁹⁰See “Environmental Disclosure – SEC Should Explore Ways to Improve Tracking and Transparency of Information”, United States Government Accountability Office, Report to Congressional Requesters GAO-04-808 (July 2004).

³⁹¹*Id.*, at 36.

³⁹²“Environmental Disclosure – SEC Should Explore Ways to Improve Tracking and Transparency of Information”, at 36.

³⁹³*Id.*

³⁹⁴*Id.*

³⁹⁵*Id.*, at 28.

³⁹⁶*Id.*

³⁹⁷*Id.*, at 30.

³⁹⁸*Id.*, at 35.

³⁹⁹See “Revised Information Quality Bulletin for Peer Review”, Office of Management and Budget (Apr. 15, 2004).

⁴⁰⁰Tim Josling, Donna Roberts, and David Orden, *Food Regulation and Trade – Toward a Safe and Open Global System*, Institute for International Economics (©2004), at 162-63, fns. 12-13.

⁴⁰¹“Coordinated Framework for Regulation of Biotechnology”, Office of Science and Technology Policy, Executive Office of the President, Office of Science and Technology Policy, 51 Fed. Reg. 23302 (June 26, 1986).

⁴⁰²*Id.*

⁴⁰³*Id.*

⁴⁰⁴*Food Regulation and Trade*, *supra* note 400, at 162-163.

⁴⁰⁵These laws included the Food and Drug Act, Federal Plant Pest Act, The Plant Quarantine Act, The Toxic Substances Act (TSCA), and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). See “United States Regulatory Oversight in Biotechnology, Responsible Agencies – Overview”, at: (<http://www.aphis.usda.gov/bras/usregs.html>).

⁴⁰⁶*Id.*, at 6.

⁴⁰⁷Biotech products now include more advanced products such as, “gene-altered fish and insects, farm animals that produce human drugs in their milk and plants that make drugs (pharma-crops) or industrial compounds in their leaves and seeds.” *Id.*

⁴⁰⁸Two plans have been widely discussed in Washington. One would create a system of voluntary consultations between the FDA and the biotech industry...A stricter plan...would regulate the animals under a statute originally designed for new animal drugs, and would involve detailed, mandatory reviews of food safety.” Justin Gillis, “Biotech Regulation Falls Short, Says Pew Report”, W. POST, Apr. 1, 2004, at: (<http://www.washingtonpost.com/wp-dyn/articles/A40595-2004March31.htm>).

⁴⁰⁹*Id.*

⁴¹⁰*Id.*

⁴¹¹*Id.*

⁴¹²*Id.*

⁴¹³“Grassley Co-Sponsors Clinical Trial Registry Legislation”, U.S. Senate Committee on Finance, Press Release (Feb. 28, 2005).

⁴¹⁴“FDA Launches Drug Safety Board”, USA TODAY, Feb. 15, 2005, at: (http://www.usatoday.com/news/washington/2005-02-15-fda-board_x.htm).

⁴¹⁵David Hanson, “FDA Creates Panel on Drug Safety – New Safety Board is a Step Forward, But Critics Question its Independence”, CHEMICAL & ENGINEERING NEWS, Vol. 83, No. 8 (Feb. 21, 2005), at: (<http://pubs.acs.org/cen/news/83/i08/print/8308notw3.html>).

⁴¹⁶*Id.*

⁴¹⁷Ricardo Alonso-Zaldivar, “Senators Consider Safety Reform at FDA”, L.A. TIMES, Mar. 4, 2005, at: (http://www.latimes.com/newes/printedition/asection/la-na-fda4mar04_1_3040236.story?coll=la-news-a_section&ctrack=1&csset=true).

⁴¹⁸Emmas Marris, “FDA Critics Slam Plan For Safety Reform – Calls Grow for Independent Supervision of US Drug Regulation” (Feb. 17, 2005), at: (http://www.nature.com.com/news/2005/050214/pf/050214-11_pf.html).

⁴¹⁹They include, avoparcin, bacitracin, spiramycin, tylosin and virginiamycin. “Council and Parliament Prohibit Antibiotics as Growth Promoters: Commissioner Byrne Welcomes Adoption of Regulation on Feed Additives”, EU Institutions Press Releases, IP/03/1058 (July 22, 2003).

⁴²⁰Mark Casell, Christian Friis, Enric Marco, et al., “The European Ban on Growth-Promoting Antibiotics and Emerging Consequences for Human and Animal Health”, Journal of Antimicrobial Chemotherapy (July 2003) 52, at 159-61.

⁴²¹*Id.*, at 160-161.

⁴²²See “#152 - Guidance for Industry – Evaluating the Safety of Antimicrobial New Animal Drugs With Regard to Their Microbiologic Effects on Bacteria of Human Concern”, U.S. Department of Health and Human Services, Food and Drug Administration, Center for Veterinary Medicine (Oct. 23, 2003).

⁴²³Anna Wilde Matthews, “FDA Announces Policy Designed to Curb Animal-Antibiotics Use”, WALL ST. J. (Oct. 24, 2003), at A6.

⁴²⁴*Id.*, at 3.

⁴²⁵“The hazard has been defined as human illness, caused by an antimicrobial-resistant bacteria, attributable to an animal-derived food commodity, and treated with the human antimicrobial drug of interest.” *Id.* at 8.

⁴²⁶“FDA recommends that sponsors address the hazard characterization step of the risk assessment by submitting information regarding the chemical, biochemical, microbiological, and physical properties of the antimicrobial new animal drug that bear on characterizing the downstream effects of the drug. This information may include, but not be limited to: drug-specific information, bacterial resistance information, data gaps and emerging science.” *Id.*, at 9.

⁴²⁷*Id.*, at 6.

⁴²⁸The document states that its risk analysis process is based on the risk analysis methodology developed by the Office International des Epizooties (OIE) Ad

Hoc Group on Antimicrobial Resistance, a recognized international scientific body.

⁴²⁹*Id.*, at 5.

⁴³⁰*Id.*, at 8.

⁴³¹*Id.*, at 8.

⁴³²The [qualitative] risk assessment approach is comprised of a release assessment, an exposure assessment, a consequence assessment, and a risk estimation.” *Id.*, at 9.

⁴³³*Id.*, at 8.

⁴³⁴*Id.*, at 10.

⁴³⁵*Id.*

⁴³⁶“The High Production Volume (HPV) Challenge Program is a voluntary initiative aimed at developing and making publicly available screening-level health and environmental effects information on chemicals manufactured in or imported into the United States in quantities greater than one million pounds each year...U.S. producers and importers of HPV chemicals voluntarily sponsor chemicals. Sponsorship entails the identification and initial assessment of the adequacy of existing information, the conduct of new testing (if adequate data does not exist) and making the new and existing test results available to the public...Each completed submission contains data on 18 internationally agreed to ‘SIDS’ (Screening Information Data Set) endpoints that are used as screening-level indicators of potential hazardous effect (toxicity) for humans or the environment, as well as environmental fate.” “HPV Chemical Screening Process – DRAFT”, U.S. Environmental Protection Agency, National Pollution Prevention and Toxics Advisory Committee (NPPTAC), Office of Pollution Prevention and Toxics (OPPT) (Jan. 2005).

⁴³⁷*Id.*

⁴³⁸“Status and Future Directions of the High Production Volume Challenge Program”, Office of Pollution Prevention and Toxics, United States Environmental Protection Agency (2004), at 10.

⁴³⁹*Id.*, at 6.

⁴⁴⁰*Id.*

⁴⁴¹The EPA’s “guidance document[s] on development of chemical categories provide[] guidance on approaches and issues encountered in category formation and application under the HPV Challenge Program.

⁴⁴²SIDS (Screening Information Data Set) was developed by the Organization for Economic Cooperation and Development (OECD).

⁴⁴³“Status and Future Directions of the High Production Volume Challenge Program”, *supra* note 438, at 8-9.

⁴⁴⁴Lawrence A. Kogan, “Exporting Europe’s Protectionism”, NATIONAL INTEREST, at 95.

⁴⁴⁵“Status and Future Directions of the High Production Volume Challenge Program”, *supra* note 438, at 7-8.

⁴⁴⁶“HPV Chemical Screening Process – Draft Recommendation”, National Pollution Prevention and Toxics Advisory Committee (NPPTAC) (Jan. 2005) at 1-2.

⁴⁴⁷“May 13, 2004, Public Meeting Summary”, U.S. Environmental Protection Agency National Pollution Prevention and Toxics Advisory Committee (NPPTAC), at 3-4.

⁴⁴⁸See also “HPV Chemical Screening Process – Draft Recommendation”, National Pollution Prevention and Toxics Advisory Committee (NPPTAC), “Attachment A – Guidance for Sorting Chemicals for Further Review”, at 6.

⁴⁴⁹Environmentalists have made it no secret that they desire a reform of TSCA. See “The Promise and Limits of the United States Toxic Substances Control Act”, Lowell Center for Sustainable Production (Oct. 10, 2003), at: (http://www.chemicalspolicy.org/downloads/Chemicals_Policy_TSCA.doc); Peter Montague, “The Toxic Substances Control Act”, Rachel’s Environment and Health News (2004), at: (http://www.garynull.com/Documents/erf/toxic_substances_control_act.htm).

⁴⁵⁰Some legislators have called for revisions to TSCA and FIFRA that incorporate the precautionary principle and hazard-based (rather than risk-based) assessment. These calls were made during hearings held by the House Commerce and Energy Committee during July 2004. The hearings reviewed TSCA and FIFRA legislative amendments proposed by Congressman Gillmor to implement U.S. obligations that would be assumed upon U.S. ratification of several international treaties. Those treaties included the Stockholm Convention on Persistent Organic Pollutants and the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

⁴⁵¹See Report GAO-05-458 entitled, “Options Exist to Improve EPA’s Ability to Assess Health Risks and Manage Its Chemical Review Program”, July 13 2005, at: (<http://www.gao.gov/new.items/d05458.pdf>); Report Highlights at: (<http://www.gao.gov/highlights/d05458high.pdf>); Report Abstract at: (<http://www.gao.gov/docsearch/abstract.php?rptno=GAO-05-458>).

⁴⁵²Senator Jeffords is the Ranking Minority Member of the Senate Committee on Environment and Public Works. That committee held hearings last year concerning the proposed amendment of TSCA and FIFRA for purposes of implementing three precautionary principle-based international chemicals treaties the ratification of which the U.S. was then considering. They are the Stockholm Convention on Persistent Organic Pollutants (‘POPs’), the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution (‘LRTAP’), and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (‘PIC Procedure’). See Lawrence A. Kogan, “‘Enlightened Environmentalism or Disguised Protectionism: Assessing the Impact of EU Precaution-based Standards on Developing Countries, at 19-20, fns 50-52 and 77, fns 287, 289 and 290-291.

⁴⁵³See GAO-05-458, at 29-30, “Canada and the EU Are Moving Toward Greater Control of Existing Chemicals” and Appendix II, “Canadian and EU Chemical Legislation”, at 42-49.

⁴⁵⁴“EPA does not routinely assess the risks of all existing chemicals and EPA faces challenges in obtaining the information necessary to do so. TSCA’s authorities for collecting data on existing chemicals do not facilitate EPA’s

review process because they generally place the costly and time-consuming burden of obtaining data on EPA.” See Highlights at 2.

⁴⁵⁵“EPA has limited ability to publicly share the information it receives from chemical companies under TSCA. TSCA prohibits the disclosure of confidential business information, and chemical companies claim much of the data submitted as confidential. While EPA has the authority to evaluate the appropriateness of these confidentiality claims, EPA states that it does not have the resources to challenge large numbers of claims. State environmental agencies and others are interested in obtaining confidential business information for use in various activities...” Highlights at 2. “The Congress could revise its regulations to require that companies reassert claims of confidentiality submitted to EPA under TSCA within a certain time period after the information is initially claimed as confidential.” GAO-05-458 at 37.

⁴⁵⁶“The Congress could promulgate a rule under section 8 of TSCA requiring chemical companies to submit to EPA copies of any health and safety studies, as well as other information concerning the environmental and health effects of chemicals, that they submit to foreign governments on chemicals that the companies manufacture or process in, or import to, the United States. [*Id.* at 37]...We believe that having access to the information submitted to foreign governments would provide EPA with an important source of information that would be useful for assessing the risks of existing chemicals and improving the models that EPA uses to assess new chemicals.” *Id.*, at 38.

⁴⁵⁷The Congress could develop a strategy for improving and validating, for regulatory purposes, the models that EPA uses to assess and predict the risks of chemicals and to inform regulatory decisions on the production, use, and disposal of the chemicals.” *Id.*, at 37.

⁴⁵⁸“The Congress could amend TSCA to reduce the evidentiary burden that EPA must meet to take regulatory action under the act by (1) amending the unreasonable risk standard that EPA must meet to regulate existing chemicals under section 6 of TSCA, (2) amending the standard for judicial review that currently requires a court to hold a TSCA rule unlawful and set it aside unless it is supported by substantial evidence in the rulemaking record, or (3) amending the requirement that EPA must choose the least burdensome regulatory requirement...The Congress could authorize EPA to regulate existing chemicals when it identifies “significant,” rather than “unreasonable,” risks of injury to health or the environment ...The Congress could amend TSCA to require that EPA demonstrate that a chemical “may present” an unreasonable risk, rather than requiring a demonstration that a chemical “presents or will present” an unreasonable risk. The Congress could amend the... the substantial evidence standard...for judicial review to instead reflect a rational basis test to prevent arbitrary and capricious administrative decisions” (emphasis added). See Appendix III, “Additional Options for Strengthening EPA’s Ability to Assess and Regulate Chemicals under TSCA”, at 50-51. In addition, “The Congress could amend or repeal the [TSCA statutory] requirement, [as] articulated by the courts, that after an initial showing of product danger, EPA must consider each regulatory option, beginning with the least burdensome, and the costs and benefits of each option.” *Id.*, at 52.

⁴⁵⁹“Supply chain management is the integration of key business processes from end user through original suppliers, which provides products, services, and information that add value for customers and other stakeholders.” See D.M. Lambert, M.C. Cooper, and J.D. Pagh, “Supply Chain Management: Implementation Issues and Research Opportunities”, *The International Journal of Logistics Management*, Vol. 9, No. 2 (1998), at: (<http://www.ijlm.org>).

⁴⁶⁰International lawyers often distinguish between ‘hard’ and ‘soft’ law. See Mark W. Janis and John E. Noyes, *International Law – Cases and Commentary* (West Group © 2001), at 39.

⁴⁶¹See Abstract for Asian Green Electronics Conference (AGEC), at: (<http://www.ee.cityu.edu.hk/~agec/short.htm>).

⁴⁶²“Co-regulation is defined as a mechanism whereby a Community legislative act entrusts the attainment of the objectives defined by the legislative authority to parties which are recognized in the field (e.g., economic operators, the social partners, *non-governmental organizations* or European associations)” (emphasis added). See Provisional 2003/2131 (ACI), “Draft Report On the Conclusion of the Agreement Between the European Parliament, the Council and the Commission on Better Law-Making”, Committee on Constitutional Affairs (Aug. 14, 2003), at 13/17.

⁴⁶³“Self-regulation is defined as the possibility for economic operators, the social partners, *non-governmental organizations* or associations to adopt amongst themselves and for themselves common guidelines at the European level (codes of practice, sectoral agreements, etc.)” (emphasis added). *Id* at 14/17.

⁴⁶⁴*Id*; see COM (2001) 428 final, “European Governance – A White Paper” (July 25, 2001), at 18-20.

⁴⁶⁵A UN Global Compact Policy Dialogue entitled, “Supply Chain Management and Partnerships” took place in New York at the United Nations during June 12-13, 2003. Representatives from a number of global retailers/suppliers were listed as speakers at this forum, including Hudson Bay Company (Canada), Li & Fung USA (China parent), ALFESA (Paraguay), Wet Seal (USA), Disney Stores (USA), BMW Group (Germany) and Novartis (Switzerland).

⁴⁶⁶See (http://www.wfsgi.org/wfsgi/new_site/meetings/Meet_sum02/UN_Global_compact_progress/thenine.htm); (http://www.wfsgi.org/wfsgi/new_site/meetings/Meet_sum02/UN_Global_compact_progress/prin7.htm).

⁴⁶⁷See Lawrence Airing, Robert Riggs and Jack Plano, *The United Nations – International Organization and World Politics*, Third Edition, Harcourt College Publishers (© 2000), at 353-354.

⁴⁶⁸See Palitha T.B. Kohona, “Implementing Global Environmental Standards: The Emerging Role of the Non-State Sector”, *EIL Journal* (Nov. 2004).

⁴⁶⁹*The New York Times* recently reported on the ability of environmental groups to coerce large companies to alter their purchasing behavior. See Jim Carlton, “One Targeted by Protesters, Home Depot Plays Green Role”, *N.Y. TIMES*, Aug. 6, 2004, at A1.

⁴⁷⁰See Ulrich Hoffmann, *Environmental/Health Requirements, Market Access and Export Competitiveness –What is the Problem for Developing Countries*

and what can be the Answers?, Sub-Regional Workshop on Environmental requirements, Market access/entry and Export Competitiveness of Electrical and Electronic Products from China, Philippines and Thailand, *Project on Building Capacity for Improved Policy Making and Negotiation on Key Trade and Environment Issues*, (Feb. 18-24, 2004), at 4, at: (http://r0.unctad.org/trade_env/test1/meetings/manila/Paper%20on%20market%20access.pdf).

⁴⁷¹See Jim Carlton, “Once Targeted by Protesters, Home Depot Plays Green Role”, NY TIMES, *supra*, at A1; “New York Times Ad Exposes Victoria’s Secret for Destroying Endangered Forests”, ForestEthics Press Release, Jan. 21, 2005, at: (<http://www.forestethics.org/html/eng/1060.shtml>); Peter Foster, “CSR’s Dirty Secret”, NATIONAL POST, Jan. 26, 2005, at: (http://www.csrwatch.com/csrs_dirty_secret.htm); Amy Merrick, “Gap Offers Unusual Look at Factory Conditions – Fighting ‘Sweatshop’ Tag, Retailer Details Problems Among Thousands of Plants”, WALL ST. J., May 12, 2004, at A1; Thomas H. Clarke, Jr. and Peter Clarke, “Op-Ed: Will Nike v. Kasky Ignite Corporate Social Responsibility Trade Wars Between the U.S. and European Union?” (Mar. 3, 2003), at: (http://www.srimedia.com/artman/publish/printer_419.shtml).

⁴⁷²See “Environmentalists Get Citigroup Pledge”, N.Y. TIMES, Jan. 22, 2004 at: (<http://www.ran.org/news/newsitem.php?id=887&area=home>); “Bank of America Victory! Second Largest U.S. Bank Sets New Industry Standards on Environment”, Rainforest Action Network Global Finance Campaign (May 17, 2004), at: (http://www.ran.org/ran_campaigns/global_finance/bofa_victory); Jim Carlton, “J.P. Morgan Adopts ‘Green’ Lending Policies”, Wall Street Journal (June 2005); Steve Milloy, “JP Morgan Becomes Tool of Green Activists”, New York Sun (May 2, 2005).

⁴⁷³See “Welcoming the Act But Holding the Applause: The Equator Principles on Project Finance”, Friends of the Earth International, at: (<http://www.foei.org>).

⁴⁷⁴See Jim Carlton, “J.P. Morgan Adopts ‘Green’ Lending Policies”, *supra* note 472.

⁴⁷⁵See “Welcoming the Act But Holding the Applause”, *supra* note 473.

⁴⁷⁶*Id.*

⁴⁷⁷See, e.g., Klaus M. Leisinger, “Pharmaceutical Innovation and Social Responsibilities”, for the Novartis Foundation for Sustainable Development, presented to the International Intellectual Property Institute/ Georgetown University (Oct. 7, 2003).

⁴⁷⁸See “The Materiality of Social, Environmental and Corporate Governance Issues to Equity Pricing – 11 Sector Studies by Brokerage House Analysts at the Request of the UNEP Finance Initiative Asset Management Working Group [AMWG]”, UNEP Finance Initiative (June 2004), at 4-5.

⁴⁷⁹See Tom Burroughes, “Al Gore Starts Sustainable Growth Firm”, Reuters (Nov. 8, 2004).

⁴⁸⁰See “The Materiality of Social, Environmental and Corporate Governance Issues to Equity Pricing” *supra* note 478, at 5 and 11.

⁴⁸¹*Id.*

⁴⁸²See Tony Hadjiloucas and Richard Winter, “Reporting the Value of Acquired Intangible Assets”, at: (http://www.buildingipvalue.com/05_SF/364_368.htm).

⁴⁸³*Id.*, at 2, citing: Clark Eustace, “The Intangible Economy: Impact and Policy Issues”, Report of the High Level Expert Group on the Intangible Economy, Enterprise Directorate-General (Brussels Oct. 2000), at 6-7. See also, Juergen Daum, “The New FASB Rules for Reporting on Intangible Assets – The U.S. versus the European Way”, The New Economy Analyst Report (Nov. 10, 2001), at: (http://www.juergendaum.com/news/11_10_2001.htm).

⁴⁸⁴See “Summary of Statement No. 142 – Goodwill and Other Intangible Assets (Issued 6/01)” at: (<http://www.fasb.org/st/summary/stsum142.shtml>); “FAS 141: Business Combinations (Issued 6/01)”, at: (http://www.pwccomperio.com/CONTENTS/ENGLISH/EXTERNAL/US/FAS_B_OP/FAS141.HTM); see “IAFS Plus – Standards: IFRS 3 Business Combinations”, Deloitte (2004), at: (<http://www.iasplus.com/standard/ifrs03.htm>); Tony Hadjiloucas and Richard Winter, “Reporting the Value of Acquired Intangible Assets”, PriceWaterhouseCoopers, at: (http://www.buildingipvalue.com/05_SF/364_368.htm).

⁴⁸⁵See e.g. “Clear Advantage: Building Shareholder Value”, Global Environment Management Initiative GEMI (Feb. 2004); “Forging New Links: Enhancing Supply Chain Value Through Environmental Excellence” GEMI (June 2004); “New Paths to Business Value – Strategic Sourcing – Environment, Health and Safety”, GEMI (March 2001), at 8, at: (<http://www.gemi.org/newpath.pdf>).

⁴⁸⁶See Tony Tinker, *Paper Prophets – A Social Critique of Accounting* (Praeger Publ. © 1985) at xx; See also, Rob Gray and Jan Bebbington, “Environmental Accounting, Managerialism and Sustainability – Is the Planet Safe in the Hands of Business and Accounting?” *Advances in Environmental Accounting and Management* (1998), Abstract at: (<http://www.gla.ac.uk/departments/accounting/csear/studentresources/index.html>).

⁴⁸⁷See *Culture and Social Theory*, Chap. 4, “Accounting for the Environment”, edited by Sun-Ki Chai and Brendon Swedlow, collected writings by Aaron Wildavsky (New Brunswick, NJ: Transaction Publishers, 1998), at 85-88, 106-108; Richard L. Revesz, “Environmental Regulation, Cost-Benefit Analysis and the Discounting of Human Lives”, 99 CLMLR 941 (99 COLUM. L. REV. 941) (1999); Matthew D. Adler Against ‘Individual Risk’: A Sympathetic Critique of Risk Assessment”, *U of Penn. Inst for Law & Econ Research Paper 04-01*; and *U of Penn. Law School, Public Law Working Paper 49* (Jan. 2004), at: (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=487123); Matthew D. Adler, “Fear Assessment: Cost-Benefit Analysis and the Pricing of Fear and Anxiety”, *U of Penn., Inst for Law & Econ Research Paper 03-28*; *U Penn. Law School, Public Law Working Paper 44*; *AEI-Brookings Joint Ctr Working Paper No. 03-12* (Nov. 2003), at: (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=466720); Matthew D. Adler, “Risk, Death and Harm: The Normative Foundations of Risk Regulation”, *U of Penn, Inst for Law & Econ Research Paper 03-15*; and *U of*

Penn. Law School, Public Law Working Paper 29, 87 MINN. L.R.1293, (2003), at: (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=410881).

⁴⁸⁸See Peter Goldsmith, Hamish Gow and Nesve Turan, “Is it Safe? Post-Market Surveillance versus Ex-ante Signalling”, Department of Agricultural and Consumer Economics, University of Illinois at Urbana Champaign (2002), at 5-6, at: (<http://www.ifama.org/conferences/2003Conference/papers/goldsmith.pdf>).

⁴⁸⁹*Id.*, at 6-7.

⁴⁹⁰*Id.*, at 7.

⁴⁹¹See “Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters” (June 25, 1998). The objective of this regional convention is to provide and protect “the right of every person of present and future generations to live in an environment adequate to his or her health and well-being [by] guarantee[ing] [them] rights of access to information, public participation in decision-making, and access to justice in environmental matters...” See Art. 1. The convention affirms “the need to protect, preserve and improve the state of the environment and to ensure sustainable and environmentally sound development”. See Preamble, Affirmation Clause.

⁴⁹²*Id.*, at Art. 6.1 (a) and (b).

⁴⁹³See Art. 4.4 (d), (e) and (h). “The aforementioned grounds for refusal *shall be interpreted in a restrictive way, taking into account the public interest served by disclosure* and taking into account whether the information requested relates to emissions into the environment” (emphasis added). Art. 4.4(h).

⁴⁹⁴See Annex I, par. 20.

⁴⁹⁵For example, the Preamble states, “Recognizing further the importance of the respective roles of individual citizens, *non-governmental organizations...can play in environmental protection*” (emphasis added). Article 2.5 provides that, “‘The public concerned’ means the public affected or likely to be affected by, or having an interest in, the environmental decision-making; for purposes of this definition, *non-governmental organizations promoting environmental protection and meeting any requirements under national law* shall be deemed to have an interest” (emphasis added). Article 3 provides that “Each Party *shall provide for appropriate recognition of and support to associations, organizations or groups promoting environmental protection*, and ensure that its national legal system is consistent with this obligation” (emphasis added).

⁴⁹⁶The convention’s Preamble expressly refers to Principle 1 of the Stockholm Declaration on the Human Environment, Principle 10 of the Rio Declaration on Environment and Development, General Assembly Resolutions 37/7 (10/28/82) and 45/94 (12/14/90), and to the United Nations Economic Commission for Europe (UNECE).

⁴⁹⁷“Comments of Rod Hunter, Part Four: Litigators React, Green Paper and the Future of Product Liability Litigation in Europe”, at 14.

⁴⁹⁸See Lawrence A. Kogan, “Enlightened Environmentalism or Disguised Protectionism: Assessing the Impact of EU Precaution-Based Standards on Developing Countries”, National Foreign Trade Council (Apr. 2004) at: ([http://www.nftc.org/default/white%20paper/riskreg3study404\(2\)Final.doc](http://www.nftc.org/default/white%20paper/riskreg3study404(2)Final.doc)).

⁴⁹⁹“The U.S. and EU economic systems have been described as two different competing “types of capitalism: the Anglo-Saxon investor capitalism that exists in its most undiluted form in the United States; the social-market capitalism, epitomized by Germany, that prevails to some extent in most of the other large countries of continental Western Europe as well...” See Marina N. Whitman, “American Capitalism and Global Convergence: After the Bubble,” *supra*, at 2.

⁵⁰⁰CSR generally refers to business decision-making linked to ethical values, compliance with legal requirements and respect for people, communities and the environment. It is usually defined as operating a business in a manner that meets or exceeds the ethical, legal, commercial and public expectations that society has of business. “Introduction to Corporate Social Responsibility – White Paper”, Business for Social Responsibility, at 1, at: (<http://www.bsr.org/BSRResources/WhitePaperDetail.cfm?DocumentID=138>).

⁵⁰¹The Global Compact (‘GC’) was launched on June 26, 2000. In the broadest sense, the principles underlying the GC reveal an attempt by the UN to reestablish at the global level the once strong bonds that tied companies to communities, which have since frayed with the acceleration of globalization. In other words, the GC endeavors to encourage the formation of a new global ‘social compact’ incident to evolving global governance. According to Harvard University scholar John Ruggie, architect of the GC, “The backlash against globalization has grown in direct proportion to the divergence between global markets and national communities. The backlash against globalization is driven by three of its attributes. First, globalization’s benefits are distributed highly unequally within and among countries; large parts of the developing world have been left behind entirely. Second, it is triggered by an imbalance in global rulemaking. For example, while rules favoring global market expansion have been more robust and enforceable in the last decade or two, other rules intended to promote equally valid social objectives such as poverty eradication, labor standards, human rights or environmental quality, have lagged behind, and in some instances have actually become weaker. Third, a global identity crisis is emerging. It is questionable who is in control of the unpredictable forces that can bring on economic instability and social dislocation, sometimes at lightning speed.” See John Gerard Ruggie, “The Theory and Practice of Learning Networks: Corporate Social Responsibility and the Global Compact”, at: (<http://65.214.34.30/un/gc/unweb.nsf/content/Jruggie.htm>).

⁵⁰²The EU Commission and civil society criticize what they perceive as a significant ‘market failure’, namely, the lack of morality in free markets. They advocate that governmental regulatory action, especially in this new era of globalization, is necessary to create that moral ethos for markets to function more fairly, rather than merely, more efficiently. The opposing views in this debate have been well articulated in a new book. See Rebecca M. Blank and William McGurn, *Is the Market Moral? – A Dialogue on Religion, Economics and Justice*, The Brookings Institution and Georgetown University © 2004. The book features a collection of essays on this subject prepared by economist Rebecca Blank, dean of the Gerald R. Ford School of Public Policy at the University of Michigan, and William McGurn, former chief editorial writer and editorial board member of the *Wall Street Journal*.

⁵⁰³This notion of sustainable development was effectively ‘mainstreamed’ at the United Nations Conference on Environment and Development (UNCED) convened in Rio de Janeiro in June 1992 (‘the Earth Summit’). UNCED produced the Rio Declaration on Environment and Development, a non-binding set of broad principles and a non-binding agreement called Agenda 21, which is essentially a global action plan to achieve sustainable development by implementation of those principles. Principle 15 of the Rio Declaration consists of the Precautionary Principle. Indeed, the United Nations recently issued a report on collective global threats that cited the need to achieve sustainable development to ensure global collective security within the FIRST of the report’s many sections identifying and discussing collective global threats. As the report reveals, however, the attainment of sustainable development and economic growth are two distinct goals. See “A More Secure World - Our Shared Responsibility – Report of the High-level Panel on Threats, Challenges and Change”, *supra*, at paragraphs 52-59.

⁵⁰⁴The latest dire Malthusian prognostication was reported by the UK Guardian on March 30, 2005. “The human race is living beyond its means. A report backed by 1,360 scientists from 95 countries – some of them world leaders in their fields – today warns that almost two-thirds of the natural machinery that supports life on Earth is being degraded by human pressure. The study contains what its authors call ‘a stark warning’ for the entire world. The wetlands, forests, savannahs, estuaries, coastal fisheries, and other habitats that recycle air, water and nutrients for all living creatures are being irretrievably damaged. *In effect, one species is now a hazard to the other 10 million or so on the planet, and to itself.* ‘Human activity is putting such a strain on the natural functions of Earth that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted’, it says... ‘In many cases, it is literally a matter of living on borrowed time’” (emphasis added). See Tim Radford, “Two-Thirds of World’s Resources ‘Used Up’”, UK Guardian (Mar. 30, 2005).

⁵⁰⁵See Daniel Yergin and Joseph Stanislaw, *The Commanding Heights – The Battle for the World Economy*, Touchstone Publishers © 1998, 2002, at 334-335.

⁵⁰⁶L. Bergkamp and J.C. Hanekamp, “The Draft REACH Regime: Costs and Benefits of Precautionary Chemical Regulation” (2003), at fn 16.

⁵⁰⁷Peter Goldsmith, Nesve Turan and Hamis Gow, “Governments and Firms: Incentives to Supply of Safe Food”, *supra* note 488, at 19-21.

⁵⁰⁸*Id.*, at 21-22. These authors argue that within the U.S. constitutional setting, “the judicial branch is to guard these fundamental rights and courts are assigned a massive amount of power to regulate crucial societal matters...[This poses regulators with the] particular challenge [of] establishing cause, effect, responsibility, and punishment under the U.S. regulatory regime. As a result, firms may take advantage of the U.S. constitutional setting to constrain the agency relationship with the government as the principal by means of using the legal system to thwart the efforts of regulators.” *Id.*, at 21.

⁵⁰⁹*Id.*, at 333-334.

⁵¹⁰The EU is confident that it can manipulate global market behavior because of the large size of the EU internal market. The attractiveness of the EU market to non-EU industry exporters motivates them to design their products so as to

satisfy EU regulations and standards in order to gain access to that market. This, in turn, enhances the EU's ability to raise the level of regulatory stringency. According to Professor David Vogel, "Foreign producers in nations with weaker domestic standards...are forced...to design products that meet those standards, since otherwise they will be denied access to its markets. This, in turn, encourages those producers to make the investments required to produce these new products as efficiently as possible. Moreover, having made these initial investments, they now have a stake in encouraging their home markets to strengthen the standards in part because their exports are already meeting them." See David Vogel, "Environmental Regulation and Economic Integration", Prepared for a Workshop on Regulatory Competition and Economic Integration: Comparative Perspectives, Yale Center for Environmental Law and Policy (Oct. 1999), at 10-11.

⁵¹¹During a summit that took place in Lisbon, Portugal during 2000, EU leaders articulated a new vision that has come to be known as the 'Lisbon Agenda'. In fulfilling that agenda, Europe was "to become the most dynamic and competitive knowledge-based economy in the world". See, e.g., Gordon Brown, "Europe Must Meet the Challenge of Reform" Comment, FINANCIAL TIMES, Sept. 10, 2004, at 13.

⁵¹²See Bertrand Benoit, "German R&D Continues to Shift Demand", FINANCIAL TIMES, Feb. 1, 2005.

⁵¹³Lawrence A. Kogan, "Exporting Europe's Protectionism", THE NATIONAL INTEREST, at 97-98.

⁵¹⁴Peter F. Drucker, "Trading Places", THE NATIONAL INTEREST, Spring 2005, at 101.

⁵¹⁵*Id.* at 105-106.

⁵¹⁶See Lawrence A. Kogan, "Ducking the Truth About Europe's GMO Policy", INTERNATIONAL HERALD TRIBUNE (Nov. 26, 2004), at: (<http://www.ihf.com/articles/2004/11/26/opinion/edkogan.html>).

⁵¹⁷"'Enlightened' Environmentalism or Disguised Protectionism", *supra*, at fn 4-6, 7-8.

⁵¹⁸Andrew Jordan and Timothy Riordan, "The Precautionary Principle in Contemporary Environmental Policy and Politics", prepared for the Wingspread Conference on 'Implementing the Precautionary Principle', 23-25, Jan. 1998, Racine, Wisconsin, at 2-3, at: (<http://www.johnsonfdn.org/conferences/precautionary/jord.html>).

⁵¹⁹The Commission specifically proposed the promotion of the integration of environmental protection requirements in standardization activities in the Sixth Community Environment Action Program adopted by the Council and the European Parliament in 2002." See COM (2004) 130 final "Communication From the Commission to the Council, the European Parliament and the European Economic and Social Committee – Integration of Environmental Aspects into European Standardization." Feb. 25 2004, at 5. "The aim of this Communication is to promote awareness-raising activities and an exchange of expert knowledge and good practice, so that standards can contribute to a better environment and hence to sustainable development." *Id.*, at 10. "Standards are tools for the dissemination of technical knowledge. Today, there are already

many European standards that either directly deal with the environment or that take environmental aspects into account. Their use should be encouraged.” *Id.* at 8.

⁵²⁰ “[T]he multilateral trading system has a key role to play in the achievement of global sustainable development. The Doha Development Agenda will provide an opportunity to...eliminat[e]...tariff and non-tariff barriers to environmental goods and services” (emphasis added). See COM (2002) 122 final, Report from the Commission – Environmental Technology for Sustainable Development,” Mar. 13, 2003, at 20. “We already know that there are environmental technologies unable to penetrate the market because of a number of technical, economic, regulatory and social barriers. I want the experts in the development, production and use of environmental technologies to share with us their experience about how we can overcome these barriers...*Undoubtedly, environmental technologies represent a growing market at [the] EU and world level[s]...The purpose is not only protecting the environment, natural resources and quality of life. It is also a matter of economic competitiveness*” (emphasis added). See “Breaking Down Barriers to Technologies to Protect the Environment and Boost Competitiveness”, citing Environment Commissioner Margot Wallstrom, IP/03/430 (Mar. 25, 2003).

⁵²¹ During January 2005, the EU Commission determined that the Environmental Technologies Action Program (ETAP) needed to be stepped up so that “Europe can gain ‘first mover’ advantage.” In addition to calling for the establishment of ‘green’ investment funds to “promote the mobilization of risk finance” to aid the development of environmental technologies (i.e., “eco-innovation”) and for the drafting of national action plans for ‘green’ procurement, it also called for the establishment of environmental performance targets for key products, processes and services. “*Such performance targets should address major environmental challenges such as climate change, air and water pollution, efficient energy consumption and the reduction of waste. They should establish benchmarks for environmental performance of key product groups, processes and services complimenting the more traditional standards with ambitious targets for markets to respond*” (emphasis added). See COM (2005) 16 final, at 2, 4-5. Apparently, the EU is aware of and sensitive to the claims made by other WTO parties (e.g., the U.S.) that the TBT Agreement requires product and/or process standards to be *performance-related* whenever possible.

⁵²² *Id.*

⁵²³ “The Precautionary Principle and WTO Law”, *supra* note 8, at 91-93.

⁵²⁴ “Competitiveness of the European Union Woodworking Industries”, European Commission, Enterprise DG (Oct. 2000), IBN: 92 828 9769 9. “This study evaluates the competitiveness of EU woodworking industries and recommends ways to maintain and improve it. Co-financed by the Enterprise DG and the European Confederation of Woodworking Industries, it is one of a series covering the competitiveness of forest-based and related industries within the overall field of EU enterprise policy.” See Europa website, Publications, Theme: Competitiveness Policy, at: (<http://europea.eu.int/comm/enterprise/library/lib-competitiveness/lib-competitiveness.html>).

⁵²⁵Jeremy Wall, “European Commission Views on Mutual Recognition Opportunities – A DG Enterprise View of Mutual Recognition Between SFM Certification Schemes in the Forestry Sector”, at 4 (June 7-26, 2000), at: (<http://sfcw.org/mutualrecognition/doc-pdf/MRSeminar2-1-8.pdf>).

⁵²⁶Eurochambres, “European Business Position on the ‘White Paper on the Strategy for a Future Chemicals Policy’”, (Sept. 2001), at 6, cited in “Looking Behind the Curtain,” *supra* note 20, at 87, fn 396.

⁵²⁷“EU Chemicals Policy Review – The View of European Mid-Sized and SME Chemical Manufacturers”, CEFIC (the European Chemical Industry Council), at 4, cited in “Looking Behind the Curtain: The Growth of Trade Barriers that Ignore Sound Science” (National Foreign Trade Council), at 87, fn 397.

⁵²⁸See Arthur D. Little, “New Proposals for Chemicals Policy: Effects on the Competitiveness of the Chemical Industry - (Project EP/IV/A/2003/07/03-2) – Study for the Directorate General for Research”, (Apr. 2004), at: (http://www.env-health.org/TMG/doc/adlittlestudy_Chempolicy_19apr04.doc).

⁵²⁹“The EU market [for chemicals] accounts for 27.5 percent of the global market.” See: European Commission Staff Working Paper, “Regulation of the European Parliament and of the Council, Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Establishing a European Chemicals Agency and Amending Directive 1999/45/EC and Regulation (EC) on {Persistent Organic Pollutants}”, [Draft] Extended Impact Assessment {COM (2003) 644 final}, SEC (2003) 1171/3 (10/29/03), at 22, fn 28.

⁵³⁰SEC (2003) 1171/3 (10/29/03), at 22-23.

⁵³¹“Green Protectionism”, *supra* note 45, at 25.

⁵³²COM (2004) 38 final, at 23-24.

⁵³³“Technological developments in the energy sector, especially regarding energy efficiency and renewable energies, are also, but not only, steered by the EU Climate Change policy. The launch of the Emissions Trading System on January 1, 2005, should be instrumental in this respect. Technological developments are also crucial for the preparation of the next steps of the fight against climate change, after the deadlines fixed in Kyoto.” See COM (2005) 16 final, at 3.

⁵³⁴Its objective is to maximize energy efficiency by more efficiently using fossil fuels and traditional biomass and by “increasing the use of renewable energy.” COM (2004) 38 final, at 24.

⁵³⁵It is comprised of 82 countries that have established firm “targets and timeframes for increasing the share of renewable energies in their overall energy mix, thus going beyond the commitments in the Johannesburg Plan of Implementation. There will be a considerable need for environmental technologies in order to boost the share of renewable energies in participating developing countries.” *Id.*

⁵³⁶This would include the Montreal Protocol on Substances that Deplete the Zone Layer, to the Vienna Convention for the Protection of the Ozone (1989); the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1992); the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2003); the Rotterdam

Convention on Prior Informed Consent Procedure (2004); the Stockholm Convention on Persistent Organic Pollutants (2004); and the Kyoto Protocol to the Framework Convention on Climate Change (2005).

⁵³⁷COM (2004) 38 final at 6 and 24 “Work is also ongoing under the Convention on Biological Diversity (CBD). A program on technology transfer is currently being developed which proposes upgrading the Biodiversity Clearing House into a facilitator of technology transfer, for example, of remote sensing equipment or database software.” *Id.*

⁵³⁸*Id.*, at 6.

⁵³⁹“The SAICM initiative was endorsed by the World Summit on Sustainable Development (the Johannesburg Summit) in September 2002. It is a product of the UN Environment Program, which works in consultation and collaboration with Governments, participating organizations of the Inter-Organizational Program for the Sound Management of Chemicals (the IOMC includes UNEP, ILO, FAO, WHO, UNIDO, OECD and UNITAR), the Inter-governmental Forum on Chemical Safety (of the World Health Organization – WHO) and other stakeholders. *See* SAICM/PrepCom.2/4, “Report of the Second Session of the Preparatory Committee for the Development of a Strategic Approach to International Chemicals Management, Nov. 16, 2004, at 1.

⁵⁴⁰According to one self-professed EU advisor, “The EU is forging ahead on a wide regulatory front, changing the very conditions and terms by which new scientific and technological pursuits and products are introduced into the marketplace and the environment. Its bold initiatives put the EU far ahead of the rest of the world. Behind all of its newfound regulatory zeal is the looming question of how best to model global risks and create a sustainable and transparent approach to economic development...By championing a host of global environmental treaties and accords taking the precautionary approach to regulation, the EU has shown a willingness to act on its commitment to sustainable development and global environmental stewardship...Europe has established a new agenda for conducting science and technology that, if followed could begin to wean the world from the old ways [of science] and toward a second Enlightenment.” *See* Jeremy Rifkin, “The European Dream; Building Sustainable Development”, *E/The Environmental Magazine* (Mar./Apr. 2005), at: (<http://www.emagazine.com/view/?2308>).

⁵⁴¹These include the Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Agreement and the General Agreement on Tariffs and Trade (1994). “Looking Behind the Curtain”, *supra* note 20, at 1, 16-20, 72-73, 89-96; “The Precautionary Principle and WTO Law”, *supra* note 8, at 95-101.

⁵⁴²“Unscientific ‘Precaution”, *supra* note 13, at 7-16.

⁵⁴³Article 5.7 of the Sanitary and Phytosanitary (‘SPS’) Agreement.

⁵⁴⁴“Looking Behind the Curtain”, *supra* note 20, at 42-43; “The Precautionary Principle and WTO Law” *supra* note 8, at 96-97.

⁵⁴⁵Both the SPS and TBT Agreements emphasize the need of WTO member governments to base their national laws and regulations upon relevant international standards developed through consensus by recognized international standards bodies, or in their absence, upon substantially equivalent national standards of other WTO members. In the absence of such standards, WTO

members must demonstrate that they have based their regulatory actions on science-based and performance-oriented criteria – i.e., an objective risk assessment. SPS Arts. 3, 4.1, 5.1, 5.2 and 5.3; TBT Arts. 2.4 and 2.7.

⁵⁴⁶The EU has managed to incorporate the precautionary principle into at least six multi-lateral environmental agreements. See “The Precautionary Principle and WTO Law” *supra* note 8.

⁵⁴⁷“A Precautionary Tale”, *supra* note 9.

⁵⁴⁸There is currently a debate among scholars on this precise issue. See “Unscientific ‘Precaution’”, *supra* note 13, at 61-65.

⁵⁴⁹*Id.*, at 27-29.

⁵⁵⁰According to traditional German and French jurisprudence, it was believed that the emergence of an international custom required the passage of somewhere between thirty to four years. See G.I. Tunkin, “Remarks on the Juridical Nature of Customary Norms in International Law”, CAL. L. R. 49:419 (1961); N.M. Mateesco, “La Coutume dan les Cycles Juridique Internationaux” (Paris 1947).

⁵⁵¹See Anthony D’Amato, “Trashing Customary International Law”, 81 AJIL 101 (1987), at:

(<http://www.anthonnydamato.law.northwestern.edu/Adobefiles/a87a-trashing.pdf>); Peter Malanczuk, *Akehurst’s Modern Introduction to International Law*, Seventh Edition, Chaps. 3 and 9 (© 1997 Routledge); Phillippe Sands, “Treaty, Custom and the Cross-fertilization of International Law”, 1 YHRDL 85 (1998).

⁵⁵²See Anthea Roberts, “Traditional and Modern Approaches to Customary International Law: A Reconciliation”, 95 AJIL 757 (2001), at: (<http://www.asil.org/ajil/roberts.pdf>).

⁵⁵³See Michael Byers, *Custom, Power and the Power of Rules – International Relations and Customary International Law*, Cambridge University Press (© 1999, 2001).

⁵⁵⁴*International Law Anthology*, Anthony D’Amato, Editor, (© 1994 Anderson Publishing Co.), at 110-114.

⁵⁵⁵See John O. McGinnis, “Individualism and World Order”, THE NATIONAL INTEREST, Winter 2004/05, at 41, 46-48.

⁵⁵⁶Actually, it is an alien tort provision (Section 9) of the Judiciary Act of 1789. It grants federal jurisdiction over suits brought by aliens in U.S. courts for tortious acts committed in violation of “the law of nations” (customary international law) or treaties to which the United States is a party. 28 U.S.C. § 1350 (2002).

⁵⁵⁷U.S. federal courts previously upheld federal jurisdiction and a cause of action under the ATCA, and have allowed claims to proceed for direct or indirect violations of CIL. See *Filartaga v. Pena-Irala*, 630 F.2d 876 (2d Cir. 1980); *In re Estate of Marcos Human Rights Litigation*, 25 F.3rd 1467 (9th Cir. 1994); *Kadic v. Karadzic*, 70 F.3rd 232 (2nd Cir. 1995); *Wiwa v. Royal Dutch Petroleum Co.*, 226 F.3rd 88 (2d Cir. 2000); Cf. *Flores v. Southern Peru Copper Corp.*, 2002 WL 1587224 (S.D.N.Y. July 16, 2002), which concluded that some acts do not rise to the level of violations of CIL. What is needed to invoke the ATCA, according to these courts, is a violation of a widely signed international

convention(s) involving many nations that is directly on point or a clearly recognized norm of CIL reflecting same. “At present, it seems that the courts require the international law rules to be *'specific'*, *'universal'* and *'obligatory'*...[They must]...belong to “*those clear and unambiguous rules by which States universally abide, or to which they accede, out of a sense of legal obligation and mutual concern.*” In *Beanal v. Freeport-McMoran Inc.*, 97 F. 3d 161, (5th Cir. 1999)...[the appellate court] upheld the trial court’s finding that “the necessary universal consensus on the precise content and legal status of the...the polluter pays’...principle...*the precautionary principle* and the proximity principle [was] lack[ing]” (bold-face emphasis added). See Jan Wouters, Leen De Smet and Cedric Ryngaert, “Tort Claims Against Multinational Companies for Foreign Human Rights Violations Committed Abroad: Lessons from the Alien Torts Claim Act?”, Institute for International Law, Working Paper No. 46 (Nov. 2003), citing *Flores v. Southern Peru Copper Corp.*, *supra*, at 7-8, at: (<http://www.law.kuleuven.ac.be/iir/eng/wp/WP46e.pdf>).⁵⁵⁸ 124 S. Ct. 2739 (June 29, 2004).

⁵⁵⁹According to legal commentators, the Supreme Court’s decision in *Sosa* is extremely significant. “[T]he [ATCA] is not simply a grant of jurisdiction, but [it] also recognizes causes of actions for torts based on violations of customary international law and treaties...At the same time the Court has required that judges be extremely cautious in recognizing such claims [i.e.,]...where no such rights have been created by Congress...allowing only those based on well-established customary international law and self-executing treaties ratified by the United States or implemented by appropriate U.S. laws.” See Stephen L. Kass and Jean M. McCarroll, “After *Sosa*: Claims Under the Alien Tort Claims Act – Part I”, N.Y. LAW J. (Aug. 27, 2004), at: (<http://www.clm.com/pubs/pub-1259528.html>). As stated by Justice Souter, “*We think courts should require any claim based on the present day law of nations to rest on a norm of international character accepted by the civilized world and defined with specificity comparable to the features of the 18th – century paradigms we have recognized*” (emphasis added). 124 S. Ct. at 2761-62. Based on their reading of the case, these commentators believe that, at least two, and perhaps three, international environmental conventions, none of which the U.S. has ratified, may have already achieved the status of CIL for ATCA purposes – the United Nations Convention on the Law of the Sea (UNCLOS), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (1992), and the Convention on Long Range Transboundary Air Pollution (LRTAP – 1979). They opine that the Kyoto Protocol and the United Nations Convention on Biological Diversity “may also reach this status one day.” See “After *Sosa*: Claims Under the Alien Tort Claims Act – Part I”, *supra*.

⁵⁶⁰See Jordan J. Paust, “Customary International Law and Human Rights Treaties are Law of the United States”, 20 MICH. J. OF INT’L LAW 301 (Winter 1999); Harold Hongju Koh, “Is International Law Really State Law?”, 111 HARVARD L.R. 1824 (May 1998). Cf Curtis A. Bradley and Jack L. Goldsmith, “Customary International Law as Federal Common Law: A Critique of the Modern Position”, 110 HARVARD L.R. 815 (Feb. 1997).

⁵⁶¹U.S. companies should be especially skeptical of ‘leading American business thinkers’ and management consultants who promote the virtues of CSR. These self-proclaimed business gurus more often than not recommend public relations strategies that seek short-term ‘cover’ at the expense of long-term business planning options and established legal standards. One such strategy is an appeasement strategy – for companies to adopt CSR and accept the precautionary principle in order to avoid potentially damaging public harassment/disparagement campaigns launched by civil society extremists. *See, e.g.* Don Tapscott and David Ticoll, *The Naked Corporation – How the Age of Transparency Will Revolutionize Business* (Free Press © 2003). Unfortunately, one prominent economist and former World Bank official has found that CSR has delivered far less than the spectacular shareholder ‘returns’ that are promised. *See* David Henderson, *The Role of Business in the Modern World*, (The Institute of Economic Affairs, London © 2004). According to another prominent economist, “What CSR means, really, is redistribution of wealth,” quoting, Dr. Arthur Laffer, cited in: “Arthur Laffer: Corporate Social Responsibility Detrimental to Stockholders”, *The New York Sun* (Jan. 19, 2005), the World Business Council for Sustainable Development at: (<http://www.wbcds.ch/plugins/DocSearch/details.asp?MenuId=1&ClickMenu=&doOpen=1&type=DocDet&ObjectId=MTI4NDU>). *See also* Arthur Laffer, Andrew Coors and Wayne Winegarden, “Does Corporate Social Responsibility Enhance Business Profitability?” (Laffer Associates © 2004), at: (<http://www.csrwatch.com/CSRProfitabilityStudy.pdf>).