REGULATION AND INFORMATION DISCLOSURE: PARALLEL UNIVERSES AND BEYOND

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I. INTRODUCTION

The "social costs" of economic production are those costs, like pollution, that are not borne directly by product purchasers and therefore cannot be reduced to an optimum level by individual consumer choice. Although controlling social costs has long been a basic government function, direct government commands currently stand in low regard as a means of controlling them. In response, Congress has begun to enact, and agencies have begun to establish, programs that require regulated industries to disclose information about the social costs they create. Such "social cost disclosure" programs differ significantly from more traditional product labeling efforts, whose primary goal is to assist individual choice among products by informing purchasers about the hidden risks that a given product might impose on *them*. Rather, such programs require the disclosure of information that will urge non-federal governments to consider regulation to reduce the social cost being addressed, and will pressure the creators of that cost to consider voluntary action to reduce it.[1] Proponents of social cost disclosure programs claim they empower communities and citizen groups to address the problems disclosure reveals without the inefficiencies and the overriding of local preferences that inevitably attend national regulation.[2]

This Article argues that the growth of social cost disclosure programs could lead to far-reaching changes in the status and function of federal regulatory agencies—but only if the agencies seize that opportunity themselves. The agencies must take affirmative responsibility for the

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[1] The late Albert Hirschman identified two methods of reforming an institution. "Exit" occurs when the organization loses adherents—or when a firm loses customers—and creates an incentive for reform to stem the loss. When the organization's adherents stay in place and press for change directly, they seek reform through "voice." *See* ALBERT O. HIRSCHMAN, EXIT, VOICE AND LOYALTY 4, 21–44 (1970). Social cost disclosure programs appeal to voice, calling on those affected to stay where they are (sometimes because they have no choice) and reform the offending conduct, while product labeling programs appeal to exit by disclosing to the reader possible reasons not to buy the offending product.

For another description of the two types of disclosure programs and the differences between them, see Cass R. Sunstein, *Informational Regulation and Informational Standing: Akins and Beyond*, 147 U. PA. L. REV. 613, 619 (1999).

[2] *See, e.g.*, *infra* notes 51 and 60.

accuracy, both in content and presentation, of the public message such programs convey. Without such an effort, social cost disclosure may duplicate most of the defects of our existing system of command-and-control regulation. Conversely, an agency that makes the effort will discover that social cost disclosure programs both require, and can help accomplish, a closer engagement of the agency in the dialogue that shapes goals for social cost control. That closer engagement could, in turn, encourage significant revisions to the command-and-control system itself.

Part II begins by discussing the Environmental Protection Agency's ("EPA") "toxics release inventory" ("TRI") program—the oldest, most established, and best publicized federal social cost disclosure program. TRI requires selected factories and other establishments over a certain size to annually report their environmental releases of certain toxic chemicals. TRI in its present form does not and cannot achieve its ostensible goal of accurately informing the public about toxic releases. It omits many environmentally significant chemicals and focuses on sources that account for a small fraction of releases. It largely fails to note distinctions between more and less risky pollutants or modes of release. Finally, EPA has administered TRI in isolation, without coordination with other programs that might correct its defects. As a result, TRI fails to portray accurately the extent and the possible impacts of the chemical releases it purports to cover or to provide a basis for comparing those impacts with other uncovered risks.

Part III argues that the disclosure program duplicates in a parallel universe most of the defects of the command-and-control system from which it ostensibly departs. TRI has led to rapid and major release reductions by functioning like regulation rather than by broadening public understanding. It presents information in a manner designed more to advertise the need for emission reductions than to portray objectively health or environmental dangers.

EPA has been reluctant to take any action to correct these defects. That reluctance conforms to widely accepted views of agencies as lacking the political capacity to address effectively issues in the absence of an express political mandate. If Congress has failed to define meaningful goals for an agency, the agency itself is powerless to fill that gap. EPA may consider itself too weak compared to outside interests to supplement TRI data or to offer its own evaluation of it at acceptable political cost.

Part III argues further that EPA's passivity is both reflected in, and caused by, the absence of well-established goals to guide either TRI or traditional command-and-control efforts. An agency that possessed goals strong enough to guide a program's direction and choice of methods effectively would be better able to implement and, where necessary, change the means of pursuing them. Conversely, a weak agency that receives its direction from interest group pressure will be unlikely to possess such goals and will therefore have little power to set its own agenda.

Part IV argues that social cost disclosure programs, such as TRI, can help cure agency passivity. Any disclosure program will lead those affected to demand correction of errors and misleading impressions. Although new substantive regulations also lead to requests for relief, such demands are inherently harder to resist in the field of information disclosure than if relief from a regulation were sought.

As an agency responds to these natural pressures, its disclosure activities will move increasingly toward presenting information in a balanced manner and responding to legitimate criticism with corrections, rather than deploying a partial account of a problem for immediate rhetorical effect.[3] The sources of social cost themselves often report much of the initial data for a social cost disclosure program. However, as commenters on that data, or the data itself, raise more complex questions, relying on sources to answer them may become too expensive, or simply unacceptable, if the source has self-interested reasons to slant its answer. In such cases, only some other actor, often the agency itself, can provide an acceptably balanced clarification or response. As these questions multiply, the agency will need to determine exactly where and in what manner to invest its resources and its credibility in addressing them. Such determinations in themselves will require an agency with an active concept of its own mission.

Addressing these questions will also require a more active agency approach to gathering and managing data. Everything an agency does requires it to collect, evaluate, and disclose information. The information developed for one purpose will often be relevant to other issues, and gathering new data for each purpose will quickly become unacceptably expensive and inefficient. As a result, the question of how an agency should invest in gathering or repackaging information for a single social cost disclosure program cannot be separated from the questions of how it should gather, manage, and present *all* of its information.

Part IV suggests that an agency could organize such decisions by arranging its disclosure needs along a "disclosure spectrum." Information needed to define a new social goal—for example, to adopt a program to combat global warming—would fall at the top. Such information could be quite generic. Very specific information needed to implement a narrow and clearly established requirement—for example, regulation enforcement—would fall at the bottom. Intermediate steps, such as the adoption of regulations to implement a statute, would require information of intermediate specificity.

Only by determining the proper goals for each disclosure activity can an agency make sure that it occupies an appropriate place on the disclosure spectrum. However, since these disclosure activities mirror the

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[3] That in itself would mark a significant change in the way in which TRI information is at least implicitly presented. *See infra* text accompanying note 76.

full range of activities which the agency might undertake, or for which it might seek a new mandate through public dialogue, any assignment of disclosure activities to particular spectrum points must rest on a conception of the agency's present and future goals and the priorities among them. In this manner, the operation of a social cost disclosure program should lead an agency to better define the goals it believes it is entitled to pursue.

Part V argues, from a different perspective, for an active agency role in shaping the message of social cost disclosure programs. It shows that traditional burden of proof analysis justifies such a role. An active role also gives the agency a market-like incentive to improve the performance of its functions, just as the TRI reporting obligation has spurred reporting sources to improve their environmental performance.

An agency that clarified its goals and increased its public credibility by administering social cost disclosure in the dialogic manner described above would lay the foundation for reform of its regulatory and legislative mandates as well. Information and debate about its meaning are the raw materials from which such mandates are derived. Command-and-control rules administered by passive agencies have led to inefficient regulation, in part due to the lack of general goals around which a coherent regulatory system could be organized.[4] However, social cost disclosure programs by nature extend an invitation to consider such general goals and are likely to extend it more compellingly as they present more information in a nuanced manner as a result of the evolutionary process described above.

Part VI argues that such an evolution would encourage specific substantive changes in the regulatory system itself. These reforms might move towards a system of fewer, more general federal commands combined with greater deference to state and local decision-making and greater willingness to experiment with different approaches to a problem.

The more widespread and sophisticated use of social cost disclosure programs would have benefits running beyond increasingly capable federal agencies and reformed systems of substantive regulation. Dialogue and public debate can create public goals that are more than the sum of the private interests of those affected. This Article seeks to spell out the concrete implications for agency conduct and management of a "civic republican" effort to strengthen our national ability to create shared goals by public dialogue.[5] It argues that social cost disclosure programs pro-

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[4] *See generally* William F. Pedersen, *"Protecting the Environment"—What Does That Mean?*, 27 LOY. L.A. L. REV. 969 (1994).

[5] Mark Seidenfeld writes,

> The civic republican model rejects the pluralistic assertion that government can, at best, implement deals that divide political spoils according to the pre-political preferences of interest groups. Instead, government's primary responsibility is to

vide a stepping stone by which our current agencies can move toward that ideal.

II. THE TRI

This Part sets out the legal structure and regulatory history of the TRI program. It then examines four aspects of TRI's performance and structure, namely:

- TRI's success in bringing about voluntary emissions reductions from the facilities it covers;
- TRI's failure to account for most releases of TRI chemicals, since it does not address most sources of these releases;
- TRI's failure to include releases of other chemicals as hazardous or more hazardous than chemicals already listed; and
- EPA's failure to explain the risks posed by TRI releases or equip the public to assess those risks itself.

A. The Congressional Framework

1. The Statute

When Congress in 1986 amended the nation's basic hazardous waste cleanup statute,[6] it also enacted a set of emergency planning and disclosure requirements collectively known as the Emergency Planning and Community Right-to-Know Act ("EPCRA").[7] Section 313 of EPCRA established TRI. Congress confined TRI programs to industrial facilities, particularly excluding small businesses, governments, and farmers.[8] It required each facility over a threshold size in twenty of ninety-seven defined Standard Industrial Classification ("SIC") categories[9] to report to

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enable the citizenry to deliberate about altering preferences and to reach consensus on the common good.

Mark Seidenfeld, *A Civic Republican Justification for the Bureaucratic State*, 105 HARV. L. REV. 1511, 1514 (1992).

[6] Superfund Amendments and Reauthorization Act of 1986 ("SARA"), Pub. L. No. 99-499, 100 Stat. 1613.

[7] 42 U.S.C. §§ 11001–11050 (1994). EPCRA was Title III of SARA.

[8] *See infra* notes 33–36.

[9] More specifically, the program applied initially to facilities in SIC Codes 20 through 39, as in effect on July 1, 1985. *See* EPCRA § 313(b)(1), 42 U.S.C. § 11023(b)(1) (1994). The SIC Codes are used by the Census Bureau to classify all economic establishments in the country. SIC Codes 20–39, which are listed in OFFICE OF MANAGEMENT AND BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT, STANDARD INDUSTRIAL CLASSIFICATION MANUAL (1987), cover a wide range of manufacturing activities.

EPA added federal government activities to TRI in 1993, *see infra* note 55, and added seven new SIC Codes to TRI in 1997, *see infra* note 56. Even as extended, however, TRI omits all establishments engaged in agriculture, forestry, and fishing (SIC Codes 1 through

EPA every year on a standard form[10] ("Form R") its environmental "release[s]"[11] of any one of about three hundred identified chemicals.[12] The requirement only applied to plants that (1) "manufactured, processed, or otherwise used" between 5 and 12.5 tons of the chemical each year and (2) had ten or more employees.[13] These facilities also had to report the maximum quantity of each chemical on-site during the reporting year.[14] In 1991, Congress expanded the reporting obligation to cover amounts recycled on and off site.[15] In addition, the TRI reporting form required that facilities report the uses of covered chemicals as well as the exact point and manner of the environmental release.[16] This form was designed to allow the public to focus on the releases at issue and the activities that gave rise to them.

Facilities may base such reports on existing data. Congress specifically prohibited the imposition of any new monitoring requirements to implement TRI.[17] Failing to report and misreporting, however, are subject to civil penalties.[18]

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9), oil and gas extraction (13), mining and quarrying of nonmetallic minerals (14), construction of any type (15 through 17), any form of transportation or communication (40 through 48), any form of electric, gas, or sanitary services, except for generating electricity by burning coal or oil, or handling materials expressly defined by EPA regulation as hazardous wastes (compare SIC Code 49 with 40 C.F.R. § 372.22 (b) (1998)), any form of wholesale or retail trade, including gas stations and building and garden material supply stores (50 through 59), any service activity, including running a hospital, any form of dry-cleaning operation, a photographic plant, a pest control service, or an auto repair shop (70 through 89), and any state or local government activity (91 through 97).

[10] *See* EPCRA § 313(a), (g), 42 U.S.C. § 11023(a), (g) (1994).

[11] The statute defines "release" as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles)." EPCRA § 329(8), 42 U.S.C. § 11049(8) (1994). It defines "environment" in turn to include "water, air, and land and the interrelationship which exists among and between water, air and land and all living things." EPCRA § 329(2), 42 U.S.C. § 11049(2) (1994).

[12] Congress devised a list particularly for this purpose. *See* EPCRA § 313(c), 42 U.S.C. § 11023(c) (1994).

[13] EPCRA § 313(a), (b), 42 U.S.C. § 11023(a), (b) (1994). In 1988, EPA estimated that the ten employee requirement "exempts 48 percent of all manufacturing facilities in SIC codes 20 through 39" from TRI reporting. Toxic Chemical Release Reporting; Community Right-to-know, 53 Fed. Reg. 4500, 4523 (Feb. 16, 1988) (to be codified at 40 C.F.R. pt. 372).

[14] *See* EPCRA § 313(g)(1)(C)(ii), 42 U.S.C. § 11023(g)(1)(C)(ii) (1994).

[15] *See* Pollution Prevention Act of 1990 ("PPA") § 6607(b)(2), 42 U.S.C. § 13106(b)(2) (1994).

[16] *See* OFFICE OF POLLUTION PREVENTION AND TOXICS, EPA, TOXIC CHEMICAL RELEASE INVENTORY REPORTING FORM R AND INSTRUCTIONS, Form R, Part II, §§ 3, 5 (rev. 1995).

[17] "Nothing in this section requires the monitoring or measurement of the quantities, concentration, or frequency of any toxic chemical released into the environment beyond that monitoring and measurement required under other provisions of law or regulation." EPCRA § 313(g)(2), 42 U.S.C. § 11023(g)(2) (1994).

[18] *See* EPCRA § 325(c), 42 U.S.C. § 11045(c) (1994) (authorizing the federal assessment of civil penalties up to $25,000 per day of violation for failure to comply with TRI requirements). EPA can seek civil penalties either administratively or by bringing an action

Congress also gave EPA authority to lower the chemical use threshold at which reporting would be required,[19] define the types of chemical "use" that trigger reporting,[20] impose reporting requirements on individual facilities outside the mandatory categories,[21] expand or contract both the mandatory categories[22] and the list of chemicals for which reporting is required,[23] and adjust the frequency of reporting.[24] EPA may take these

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in federal district court. *See* EPCRA § 325(c)(4), 42 U.S.C. § 11045(c)(4) (1994). *See, e.g.*, Steeltech, Ltd. v. EPA, 105 F. Supp. 2d 760 (W.D. Mich. 2000). EPCRA § 326, 42 U.S.C. § 11046 (1994), authorizes suits for injunctive relief by states and private citizens in cases where the federal government has not acted. It also authorizes the award of attorneys' fees to successful litigants, but requires sixty days notice before the complaint is filed. *See, e.g.*, Atl. States Legal Found. Inc. v. United Musical Instruments, U.S.A., Inc., 61 F.3d 473 (6th Cir. 1995); Atl. States Legal Found., Inc. v. Whiting Roll-Up Door Mfg. Corp., 772 F. Supp. 745 (W.D. N.Y. 1991); Del. Valley Toxics Coalition v. Kurz-Hastings, Inc., 813 F. Supp. 1132 (E.D. Pa. 1993). In 1998, the Supreme Court held that citizens did not have constitutional standing to bring suits for violations that were wholly past at the time the complaint was filed since those citizens would not qualify for any statutory relief. Steel Co. v. Citizens for a Better Env't, 523 U.S. 83 (1998). This decision severely curtails the power of citizen suits to serve as a practical enforcement mechanism for TRI since almost every source should be able to cure its violation within the sixty day notice period. That in turn would defeat the ability of a potential plaintiff to recover attorneys' fees and deter the filing of suits.

[19] *See* EPCRA § 313(f)(2), 42 U.S.C. § 11023(f)(2) (1994). The statute expressly allows such adjustments for "classes of chemicals or categories of facilities." *Id.* The only condition it places on the exercise of this authority is that it should "obtain reporting on a substantial majority of total releases of the chemical at all facilities subject to the requirements of this section." *Id.* Since this appears to restrain undue relaxation of reporting thresholds, only the general purposes of the section constrain the establishment of tighter reporting thresholds.

[20] The statute imposes reporting obligations on any facility that "manufactures, processes, or otherwise uses" more than threshold amounts of chemicals. EPCRA § 313(b)(2), 42 U.S.C. § 11023(b)(2) (1994). Since the law does not define the term "otherwise use," EPA can give it any meaning consistent with its extremely broad natural meaning. *See* Chevron U.S.A. Inc. v. NRDC, 467 U.S. 837, 842–43 (1984) (stating that reasonable agency statutory interpretations must prevail unless Congress has directly addressed the question at issue).

[21] Individual facilities not otherwise subject to TRI can be required to report

> if the Administrator determines that such action is warranted on the basis of toxicity of the toxic chemical, proximity to other facilities that release the toxic chemical or to population centers, the history of releases of such chemical at such facility, or such other factors as the Administrator deems appropriate.

EPCRA § 313(b)(2), 42 U.S.C. § 11023(b)(2) (1994).

[22] EPA may add new SIC codes to the reporting list, "but only to the extent necessary to provide that each [SIC] Code to which this section applies is relevant to the purposes of this section." EPCRA § 313(b)(1)(B), 42 U.S.C. § 11023(b)(1)(B) (1994). Since the purposes of this section are about as broad as possible, *see infra* note 25, this condition should not impose any restraint on the listing of any SIC category whose members release appreciable amounts of listed toxics.

[23] *See* EPCRA § 313(d), (e), 42 U.S.C. § 11023(d), (e) (1994).

[24] *See* EPCRA § 313(i), 42 U.S.C. § 11023(i) (1994). However, because the statute contains no express authority to reduce the ten employee reporting threshold, EPA believes it lacks authority to do this. *See* Persistent Bioaccumulative Toxic (PBT) Chemicals; Lowering of Reporting Thresholds for Certain PBT Chemicals; Addition of Certain PBT Chemicals; Community Right-to-Know Chemical Reporting, 64 Fed. Reg. 58,666, 58,673

steps to advance the purposes of the statute. Because Congress defined these purposes comprehensively,[25] EPA enjoys very broad discretionary authority from a strictly legal perspective to reshape the coverage of the program.[26]

EPA also enjoys broad power to determine the information disclosed under TRI. Congress did not specify the contents of individual facility reports or the use that EPA should make of them. The original 1986 legislation simply required an estimate of "[t]he annual quantity of the toxic chemical entering each environmental medium."[27] Upon receiving the reports, EPA must use them to create a "computer data base" and make them publicly available.[28] Legislation in 1990 added requirements to report the amounts recycled and to distinguish between continuing releases and releases from singular events.[29] The law, however, neither requires nor forbids EPA to characterize for the public the risks of TRI chemicals or the percent of total chemical releases that TRI covers.[30]

2. The Legislative History

The legislative history shows that Congress enacted TRI without considering the policy issues it raises. In 1985, a sudden chemical release at a Union Carbide plant in Bhopal, India, killed more than 3000 people. A much smaller release at another Union Carbide plant in West Virginia demonstrated that chemicals in this country could pose the same dangers.[31] Congress responded by adding provisions to the first environ-

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(Oct. 29, 1999) (to be codified at 40 C.F.R. pt. 372).

[25] Those purposes are:

> to provide information to the Federal, State and local governments and the public, including citizens of communities surrounding covered facilities . . . to inform persons about releases of toxic chemicals to the environment, to assist governmental agencies, researchers, and other persons in the conduct of research and data gathering, to aid in the development of appropriate regulations, guidelines, and standards, and for other similar purposes.

EPCRA § 313(h), 42 U.S.C. § 11023(h) (1994).

[26] As EPA has said of the provision allowing changes in reporting levels:

> This provision provides EPA with broad, but not unlimited, authority to establish thresholds for particular chemicals, classes of chemicals, or categories of facilities, and commits to EPA's discretion the determination that a different threshold is warranted [and] . . . the determination of the levels at which to establish any alternate thresholds.

Persistent Bioaccumulative Toxic (PBT) Chemicals, 64 Fed. Reg. at 58,667.

[27] EPCRA § 313(g)(1)(iv), 42 U.S.C. § 11023(g)(1)(iv) (1982 & Supp. IV 1986).

[28] EPCRA § 313(j), 42 U.S.C. § 11023(j) (1994).

[29] *See* PPA § 6607(b), 42 U.S.C. § 13106(b) (1994).

[30] See *infra* note 75 for a discussion of the broad scope of agencies' inherent power to disclose information.

[31] TRI was "enacted in response to an environmental crisis. Heightened fears of toxic

mental legislation available that required all companies that held more than specified amounts of acutely hazardous chemicals on-site to inform both their local emergency planning agencies and the public of their presence.[32] Congress added TRI to the same law as a supplemental disclosure provision.

TRI, however, does not address Bhopal-type dangers from chemical accidents. Instead, it targets the risk of illness posed by routine releases. While Bhopal-type disasters involve large spills of indisputably acute toxics, materials that cause lesser or longer-term effects are much harder to characterize medically and are released in a much wider variety of ways from a much wider set of sources. Providing a full picture of such releases poses formidable problems of data gathering and management. Explaining their absolute and comparative significance poses equally formidable problems of risk assessment and public communication.

The first of these challenges surfaced immediately during the House debate on an amendment to require reporting and disclosure from "any person" releasing chemicals that are "known to cause or . . . . suspected of causing cancer, birth defects, heritable genetic mutations, or other chronic health effects in humans."[33] The House first adopted the amendment after heated debate[34] and then dropped it after arguments that it would impose a duty to report any release of thousands of unspecified chemicals on farmers, gas stations, printers, dry cleaners, hospitals, and beauty parlors.[35] In response, the conferees adopted the elaborately structured program specifications summarized earlier and gave EPA broad power to vary them. The sponsor of the rejected House disclosure provision asserted that Congress, despite these restrictions, had intended the establishment of a comprehensive inventory of *all* toxic releases, and that EPA should use its discretion to expand TRI obligations to the extent necessary to achieve that purpose.[36] In all other respects, however, the policy issues inherent in the TRI approach went unaddressed.

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chemicals occasioned by the Bhopal disaster and a similar but less serious domestic incident led Congress to require industrial polluters to report toxic emissions." William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1823 n.462 (1999) (*citing* Rebecca S. Weeks, *The Bumpy Road to Community Preparedness: The Emergency Planning and Community Right-to-Know Act*, 4 ENVTL. L. 827, 831–34 (1998)).

[32] These amendments became EPCRA §§ 311–312, 42 U.S.C. §§ 11021–11022 (1994).

[33] 131 CONG. REC. 34,758 (1985).

[34] *See* 131 CONG. REC. 34,759–66 (1985).

[35] *See* 131 CONG. REC. 35,657 (1985). TRI currently covers none of these source categories.

[36] *See* 132 CONG. REC. 29,747 (1986) (statement of Rep. Edgar).

B. TRI and Release Reduction

Legislatures have long required the labeling of individual products with information for the guidance of the purchaser.[37] The TRI program rests on a different and less individualistic philosophy.[38] The facility-by-facility reports on toxic releases that it requires are of more interest to the media and the public-at-large than to those who purchase or use the facility's product. A social cost disclosure program like TRI thus addresses the public in a calculated effort to provoke either collective action to address the topics of disclosure or a considered decision against such action.[39] Detailed disclosure of pollution releases will facilitate state and

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[37] The federal government has long required health warnings on cigarettes, 15 U.S.C. § 1333(a), (b) (1994), nutritional labeling on food, 21 U.S.C. §§ 341–350b (1994), and use instructions on drugs, 21 U.S.C. § 352 (1994), and pesticides, 7 U.S.C. 136a(c)(9) (1994). In more recent years Congress has required warning labels on alcoholic beverages, 27 U.S.C. § 215(a), (b) (1994), disclosure of real interest rates on consumer loans, 15 U.S.C. §§ 1601(a), 1610, 1632, 1637, 1646 (1994), disclosure of the condition of land purchased in an interstate sale, 15 U.S.C. § 1703(a) (1994), and energy efficiency labels on appliances, 16 C.F.R. § 305 (2000), as well as gas mileage information on automobiles, 49 U.S.C. § 32908(b) (1994), and posting of octane ratings on gasoline pumps, *see* 16 C.F.R. § 306.10 (2000). The requirement imposed under the Occupational Safety and Health Act that employers disclose to their employees the levels of toxic chemicals in the workplace, 29 C.F.R. § 1910.1200 (1999), is of the same nature—it is in effect a label on the job, which is the "product" for which the worker is the "customer." Similarly, the requirements of the Securities Exchange Act for full affirmative disclosure of the market condition of companies offering securities, 15 U.S.C. § 78(l)(b)(1) (1994), is effectively a label on the security being offered. The FTC has also promulgated binding rules requiring the labeling of fiberglass materials, quick-freeze aerosol sprays, and clothing tags. *See* Jamie A. Grodsky, *Certified Green: The Law and Future of Environmental Labeling*, 10 YALE J. ON REG. 147, 171 (1993).

[38] Of course, even a labeling program may also have social cost disclosure consequences. "A statute that requires companies to place 'eco-labels' on their products may produce little in the way of consumer response, but shareholders and participants in the democratic process may attempt to punish those whose labels reveal environmentally destructive behavior." Sunstein, *supra* note 1, at 619.

[39] TRI is not the only social cost disclosure program. The National Environmental Policy Act's requirement for an environmental impact statement before undertaking a "major federal action" that might significantly affect the environment was designed in part to inform the public and to allow them to bring pressure before such actions were taken. *See* Sunstein, *supra* note 1, at 621–22.

EPA has begun to experiment with other non-TRI social cost disclosure programs. *See infra* text accompanying notes 175–182. In addition, a few non-EPA federal programs share these characteristics. "[T]he Home Mortgage Disclosure Act, requiring disclosure of the geographic sources of a bank's deposits and geographic distribution of its loans, is designed to discourage banks from refusing to lend to particular neighborhoods or communities." STEPHEN G. BREYER, REGULATION AND ITS REFORM 161–62 (1982). According to one respected banking consultant, this program has been highly effective both in modifying bank conduct and in leading to a detailed dialogue with local communities. A bank that is forced to disclose a mortgage rejection rate for minorities higher than its rejection rate for applicants in general will feel pressed either to change its conduct if it economically can, or, if it cannot, to undertake the difficult task of explaining to the relevant community why the numbers do not mean what they appear to say, or why they reflect objective economic factors and not discrimination. *See* Interview with Karen Shaw Petrou, Executive Vice President, Institute for Strategy Development, in Washington, D.C. (Aug. 9,

local regulation of a source and promote voluntary release reduction by a source that sees the increased risk and wants to forestall it.[40] If disclosure shifts public preferences, both local regulation and voluntary control become even more likely. These reductions can be achieved without the costs and delays of a federal rulemaking, and perhaps without any rulemaking at all.[41]

Social cost disclosure itself articulates no substantive legal requirements. In fact, the conduct disclosed will be generally completely legal.[42] A social cost disclosure program only justifies its costs to the extent that it reveals information with a realistic chance of triggering new regulations. To pass that test, a social cost disclosure program must: (1) address topics that existing regulatory programs can readily address, and (2) specifically identify the potential targets of regulatory action. Meeting these conditions maximizes the chances that disclosure will lead to regulation or that sources will act preemptively to forestall regulation.

A social cost disclosure program that does not lead to regulation or self-regulation can still be legitimately counted as successful if it increases public understanding of the issues and leads to a more informed decision not to disturb the status quo.[43] However, promoting such public

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1997). Similarly, the Animal Welfare Act requires the filing of reports by laboratories on their treatment of animals. *See* 7 U.S.C. §§ 2131–2159 (1994).

California's Safe Drinking Water and Toxic Enforcement Act of 1986, CAL. HEALTH & SAFETY CODE § 25249.5–.13 (1999), adopted by referendum in 1986 ("Proposition 65"), embodies an approach somewhere between release disclosure and product labeling. It requires every product or workplace in certain specified categories that contains a product "known to the state to cause" cancer, birth defects, or reproductive harm to be labeled to that effect, *id.* § 25249.5, unless "the person responsible" for an exposure can show that the risk of that exposure falls below "no significant risk" levels established by the state. *Id.* § 25249.10. *See generally* Michael Barsa, *California's Proposition 65 and the Limits of Information Economics*, 49 STAN. L. REV. 1223 (1997). California also requires the filing of a pesticide use report after each use of a restricted pesticide. *See* CAL. FOOD & AGRIC. CODE §§ 12979, 14011.5 (1999). Based on these reports, "Californians for Pesticide Reform was able to assemble a comprehensive analytical report . . . and a series of internet-accessible maps showing total use for different regions of the state." J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263, 338 (2000).

[40] By reducing the transaction costs of regulation by a community, release disclosure makes it easier for such communities to take actions that reflect their true preferences. This strengthens the case for allowing communities to make the decision to regulate or not to regulate on their own, rather than being preempted by overriding federal regulation. *See* Paul R. Kleindorfer & Eric W. Orts, *Informational Regulation of Environmental Risks*, 18 RISK ANALYSIS 155 (1998).

[41] In theory, the process costs of many local rulemakings might exceed the process costs of a single federal rulemaking. However, when public disclosure precedes regulation, the pressure for release reduction created by the disclosure program may make the industry in question reluctant to oppose the regulation too vigorously.

[42] If it were not, social cost disclosure would lose much of its purpose since society would already have decided, at least initially, how to address these releases. Information that is more precise and technically valid than the information a social cost disclosure program provides would probably be needed to enforce the regulations that embodied that decision.

[43] Information disclosure can also be used to spur regulatory actions other than release controls. As noted earlier, Proposition 65 exempts from mandatory disclosure activities

understanding may not be as rewarding to advocates or program managers as actual changes in conduct. For that reason, supporters and managers of a social cost disclosure program may stand in institutional danger of exaggerating the magnitude of the costs it describes.[44] By the same token, TRI may be in institutional danger of exaggerating the need to reduce releases.[45]

TRI meets both of the conditions described above for a successful social cost disclosure program. States and local governments have long-established systems for regulating pollution from factories, and the TRI reports identify the regulatory targets.

TRI's history dramatically confirms the power of a social cost disclosure approach in these circumstances. The first round of TRI reports uncovered chemical release levels from big factories far higher than most people, including the management of the firms owning the factories, had suspected.[46] This was front-page news. This disclosure in turn led to "voluntary" efforts that reduced release levels from these sources far more quickly and efficiently than any mandatory regulation,[47] and with-

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that result in a risk from exposure to covered chemicals below a de minimis level established by the State of California. *See supra* note 39. That gives those responsible for the exposure an incentive to cooperate in the state's efforts to establish such de minimis levels for them. Accordingly,

> to date nearly 300 [such] standards have been set without a single legal challenge. This experience prompted a review panel appointed by California Governor Pete Wilson to declare that "by federal standards, Proposition 65 has resulted in 100 years of progress in the areas of hazard identification, risk assessment and exposure assessment."

Barsa, *supra* note 39, at 1240. For suggestions for extending this approach, see *infra* text accompanying notes 146–149.

[44] The very act of disclosure may tend toward exaggeration due to "'alarmist bias,' as frightening information is more salient and potent than comforting information, regardless of what is true." Sunstein, *supra* note 1, at 627. This bias may be more potent when political action, rather than changes in individual conduct, is the natural response, since "[p]eople often believe themselves to be immune from risks that they acknowledge are significant and real with respect to others." *Id.* at 628.

[45] Products subject to Proposition 65 generally bear a label reading "WARNING: this product contains a chemical known to the State of California to cause [the harm in question]." Barsa, *supra* note 39, at 1227–28. Critics have argued that such disclosure requirements exaggerate the risks presented by the chemical at issue through use of the word "WARNING" and by failing to give any indication of the magnitude of the risk. *See id.* at 1228–31. Critics also claim that Proposition 65's proponents deliberately designed it this way because they were more interested in generating pressure on users of toxic chemicals to reduce their releases than in informing the public accurately about toxic risks. *See id.* at 1238–39.

[46] "[The first TRI data] shocked a lot of the industry folks, the magnitude of these releases. It really hit home. People from boardrooms all the way down to plants recognized they had to get aggressive to try to find ways to reduce these emissions." Dan Borne, Louisiana Chemical Association, TIMES-PICAYUNE, Feb. 17, 1991, *quoted in* ENVIRONMENTAL DEFENSE FUND, TOXIC IGNORANCE 39 (1997).

[47] "Facilities currently covered by the TRI have reduced their reported releases of toxic chemicals by 44 percent, or 1.6 billion pounds, since 1988." Addition of Reporting Ele-