

1996

"Brownfields of Dreams?": Challenges and Limits of Voluntary Cleanup Programs and Incentives

Joel B. Eisen

University of Richmond, jeisen@richmond.edu

Follow this and additional works at: <http://scholarship.richmond.edu/law-faculty-publications>



Part of the [Environmental Law Commons](#)

Recommended Citation

Joel B. Eisen, "*Brownfields of Dreams?*": *Challenges and Limits of Voluntary Cleanup Programs and Incentives*, 1996 U. Ill. L. Rev. 883.

This Article is brought to you for free and open access by the School of Law at UR Scholarship Repository. It has been accepted for inclusion in Law Faculty Publications by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.

“BROWNFIELDS OF DREAMS”?: CHALLENGES AND LIMITS OF VOLUNTARY CLEANUP PROGRAMS AND INCENTIVES

Joel B. Eisen*

As one of the most important current topics in environmental law, the redevelopment of abandoned or underutilized urban properties, better known as brownfields, continues to generate much discussion and debate. Because most agree that abandoned sites located in aging areas and the accompanying exodus of industry to the suburbs are undesirable, the federal government and many state governments have created programs to encourage the redevelopment of these industrial properties. But often overlooked by the advocates of such programs are the difficult political, scientific, and moral questions associated with redevelopment.

In this insightful article, Professor Eisen provides the most comprehensive discussion to date of brownfield programs that often exchange increased health risks to the surrounding community for additional jobs and higher tax revenue. He then draws an analogy between brownfield redevelopment programs and negotiated compensation statutes, which were created to facilitate the siting of hazardous and solid waste disposal facilities but have experienced only limited success. Finally, after exposing the shortcomings of the current brownfield programs through this analogy, Professor Eisen concludes that adequate community input and a revision of CERCLA are but two of the many

* Assistant Professor of Law and Director, Robert R. Merhige, Jr. Center of Environmental Law, University of Richmond School of Law. B.S. 1981, Massachusetts Institute of Technology; J.D. 1985, Stanford Law School.

I would like to thank Professor Jim Krier of the University of Michigan Law School; Hon. Don Ritter, Greg Planicka, and Joe Schilling of the National Environmental Policy Institute; and my colleagues, Michael Allan Wolf, W. Wade Berryhill, and Greg Sergienko for their invaluable assistance and comments on earlier drafts of this article. I would also like to acknowledge the Law School for its generous financial support of my research and thank student research assistants Kristine Dalaker, Raelenne Jensen, and Bethany Lukitsch for their help, and students Karen Bleatler, Stacie Craddock, Brennen Keene, Camille Sabbakhan, and Andrea Wortzel for providing useful information. Last, but certainly not least, I would like to thank my editor for life, Tamar Schwartz Eisen.

Information on state voluntary cleanup programs in this article is based on interviews by the author with state voluntary cleanup program administrators and on results of a survey sent to program administrators; program information is believed to be current as of July 1, 1996.

changes that must be made in order to increase the public legitimacy of brownfield redevelopment programs.

TABLE OF CONTENTS

I.	Introduction	886
II.	The Brownfields Problem	890
	A. The Challenge of Brownfield Redevelopment	890
	B. The Fear of Environmental Liability	898
	1. Uncertainty for Developers	901
	a. Liability for Past Contamination	901
	b. Uncertain Cleanup Standards and Costs	906
	c. Other Uncertainties	910
	2. Uncertainty for Lending Institutions	911
	C. The Call for Reform	913
III.	State Voluntary Cleanup Statutes and Federal Incentives	914
	A. State Voluntary Cleanup Statutes	915
	1. The Statutes and Their Common Features	915
	Table 1: Participant Eligibility	926
	Table 2: Site Eligibility	927
	2. Distinguishing Environmental Audit Statutes ...	927
	B. Features of Voluntary Cleanup Statutes	929
	1. Site Investigation	929
	2. Streamlining Cleanup Procedures and Costs	933
	a. The Remedial Action Plan	933
	b. Risk-Based Cleanup Standards	936
	Table 3: Modifications to Cleanup Standards	938
	i. Generic Statewide Standards	939
	ii. Site-Specific Standards	942
	iii. Background Standards	945
	c. Tiered System of Cleanup Standards	946
	d. Presumptive Remedies	948
	3. Limiting Future Liability	950
	a. Forms of Liability Protection	950
	Table 4: Forms of Liability Assurances	951
	i. No Action Letter	952
	ii. Covenants Not to Sue	955
	iii. Certificates of Completion	956
	iv. Release from State CERCLA Liability	957
	b. Protection for Other Parties	958
	i. Lenders	958
	ii. Transferees, Successors, and Assigns	959
	c. Qualifications and Limitations	961

i.	Situations Voiding the Limit on Liability	961
ii.	Limited Utility of Liability Assurances	964
4.	State Oversight and Responsibility	965
a.	Varying Levels of Involvement	965
b.	Time Limits	970
c.	Administrative Appeal and Dispute Resolution Procedures	971
5.	Public Participation	972
	Table 5: Public Participation Requirements ...	976
6.	Technical and Financial Incentives	977
C.	Federal Initiatives	979
1.	The EPA's Brownfields Action Agenda	979
a.	Deletion of CERCLIS Sites	980
b.	Pilot Projects	980
c.	Prospective Purchaser Agreements	982
2.	Superfund Reform Legislation (The "Reform of Superfund Act")	984
a.	Title III: Promoting State Cleanups	986
i.	No Liability for Sites Remediated in Approved State Programs	986
ii.	Clarification of the Innocent Landowner Defense	987
b.	Title I: Revising Cleanup Standards	988
3.	Other Federal Initiatives	988
IV.	Comparing Voluntary Cleanup Statutes and Negotiated Compensation Statutes	989
A.	A Brief Introduction to Negotiated Compensation Statutes	991
1.	The Waste Disposal and "NIMBY" Problems ..	991
2.	The Principle of Negotiated Compensation	992
3.	Features of Negotiated Compensation Statutes	993
B.	Learning from the Successes and Failures of Negotiated Compensation	997
1.	Promoting Effective Public Participation	998
a.	The Role of the Affected Community	1000
b.	Public Participation Ex Ante	1004
i.	Decisions About Project Siting and Proposed Land Uses	1005
ii.	Issues Precluded from Community Scrutiny	1008
c.	Public Participation Ex Post	1009

- i. Threshold Conditions on Participation and Designation of Community Representatives..... 1010
 - ii. Time Limits and the Perils of Turning to ADR 1012
 - d. Addressing Disparities in Technical and Financial Resources..... 1014
- 2. Proposals for Adequate Community Input..... 1015
 - a. The Community Impact Statement 1015
 - b. Creating Nonprofit Organizations 1016
 - c. The Community Working Group Concept .. 1017
- 3. Problems Related to State Decision Making.... 1020
 - a. Capture of State Regulators 1020
 - b. The Lack of Meaningful State Oversight ... 1021
- 4. Moral Hazards 1023
 - a. Promoting Effective Risk Communication .. 1023
 - b. Some Developers Are Not “Good Actors” 1024
- 5. The Failure to Address Central Issues 1025
 - a. The Shortcomings of Site-Specific Urban Development 1025
 - b. The Need for Effective Federal Involvement 1026

V. Conclusion 1030

Appendix: Authorities for State Voluntary Cleanup Programs 1033

I. INTRODUCTION

The optimism and good intentions of proponents of redeveloping “brownfields”—the abandoned, contaminated sites in aging industrial cities—mask political, scientific, and moral questions that state voluntary cleanup programs and federal incentives fail to address. The goal of brownfield redevelopment programs is laudable, for few would contend that it is desirable to let a brownfield site remain abandoned.¹ State and federal programs offer a variety of incentives for developers to make productive use of brownfield sites. The most prominent approaches are those of state voluntary cleanup statutes that attempt to alleviate developers’ fears of liability under environmental laws if they undertake cleanup and redevelopment activities. States offer relaxed cleanup standards, streamlined administrative procedures, and re-

1. Johnine J. Brown, *Brownfield Reform: Steering the Boat Without Any Oars*, ILL. LEGAL TIMES, Nov. 1995, at 14, puts it rather pungently: “[L]etting a brownfield sit around looking ugly and dangerous is about as desirable as finding yet another day-time talk show listed in TV Guide.”

leases from future liability to spur developers to clean up and reuse brownfield sites.

The rise of state voluntary cleanup statutes is consistent with the trend of devolving responsibility for environmental protection to the states² and has the EPA's tentative endorsement.³ Thus, the statutes are here to stay, and proponents already claim a track record of success.⁴ But the statutes are too new for their overall effectiveness to be measured accurately, and they face many obstacles in fulfilling their proponents' expectations over the long run. There has been little critical analysis of these first steps in promoting remediation and reuse of brownfield sites. This article attempts to fill that gap by focusing attention on the complex issues raised by the voluntary cleanup statutes and federal programs.

The statutes envision voluntary cleanups that trade increased health risks to the affected community for the prospect of new jobs and higher tax revenues. This raises issues about the democratic nature of the process, particularly with respect to participation by the affected community.⁵ Relaxing the rigorous cleanup standards of current laws also shifts risks to the affected community.⁶ Some states link cleanup standards to anticipated future uses of brownfield sites, which may add to cumulative risks borne by urban communities.⁷ This renders a brownfield redevelopment project morally troublesome unless the affected community voluntarily approves of it. However, the statutes give communities little ability to do this,⁸ putting brownfield developers on a collision course with the environmental justice movement.⁹

The states' involvement raises troubling political issues. There is genuine room for concern about the states' ability to oversee voluntary cleanups. When they implement voluntary cleanup programs,

2. See *infra* notes 640-59 and accompanying text.

3. See, e.g., *Superfund Reauthorization (Part 2): Hearings Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Commerce, 104th Cong., 1st Sess. 219-20 (June 15, 1995)* (testimony of Timothy Fields, Jr., Deputy Assistant Administrator, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency) [hereinafter *Fields Testimony*]; NATIONAL ACADEMY OF PUB. ADMIN., *SETTING PRIORITIES, GETTING RESULTS: A NEW DIRECTION FOR ENVIRONMENTAL PROTECTION AGENCY 86 (1995)* [hereinafter *NAPA REPORT*] (stating that the trend toward state management of brownfield sites is "encouraged in part by EPA").

4. See *infra* notes 477-78 and accompanying text.

5. See *infra* notes 513-639 and accompanying text.

6. See *infra* notes 529-34 and accompanying text.

7. See *infra* note 533 and accompanying text.

8. The statutes are largely bereft of provisions for effective public participation in determining the fate of an individual brownfield site. See *infra* notes 382-94 and accompanying text.

9. The communities where brownfields are located are typically lower-income and minority communities. As a result, the brownfield programs raise fundamental questions about the distributional consequences of a development project that might place an industrial facility in a lower-income or minority neighborhood. These issues are largely unaddressed in current programs. See *infra* notes 513-639 and accompanying text.

states often substitute standardized statewide solutions (developed with industry input) for local, site-specific decisions; this gives developers the potential to influence state regulators and reject community input in critical decisions.¹⁰ In many cases, when developers undertake voluntary cleanups, they will act with little or no state oversight; the state will often confine its role to confirming the soundness of what a developer has already done.¹¹ If this leads to inadequate or ineffective cleanups, the public will continue to be at risk.

The image of cooperation in cleanups raises an added dimension of moral hazard. Voluntary cleanup statutes promise to reward developers that evince an intent to cooperate with regulators and communities. If a developer is not required to provide full disclosure about project risks and benefits, however, it may engage in dishonest behavior; for example, it may withhold important information that might damage a project's chances for success. Moreover, not all developers are "good actors"; some cannot—and should not—be trusted, due to their shoddy environmental records.¹²

Assuming these obstacles can be overcome, the eventual impact of the statutes is unclear. The statutes are being oversold as a panacea for urban redevelopment. States are relaxing the requirements of the environmental laws, with little empirical analysis of the statutes' potential for spurring job creation and revitalization.¹³ Other factors, such as high crime rates, may hamper redevelopment activities. The statutes alter the market dynamics at an individual site, which assumes that piecemeal, site-specific urban development is appropriate. This may turn out to be inaccurate.¹⁴ Moreover, the states cannot fully reduce or eliminate the fear of environmental liability associated with brownfield cleanups. Because federal liability is a main concern of developers, only the Congress or the EPA can address this issue, by amending CERCLA or expanding administrative programs to release developers from CERCLA liability.¹⁵ Legislation pending in Congress would exempt a developer from federal liability if it cleans up a brownfield site in an "approved" voluntary cleanup program.¹⁶ Therefore, the EPA's ability to approve or reject a state's program, if

10. For example, some states plan to establish statewide health standards for site cleanups. Developers can sway cleanup decisions for years to come by influencing the development of these standards. See *infra* note 581 and accompanying text.

11. Even with the lack of state resources to devote to oversight, the states will often—and intend to—find themselves rubber-stamping developers' decisions. See *infra* notes 654-59 and accompanying text.

12. See *infra* notes 668-76 and accompanying text.

13. Even with voluntary cleanup programs in place, redevelopment may not happen for a variety of reasons. See *infra* notes 677-94 and accompanying text.

14. Without regionwide economic development planning, developers may continue to flee to greenfield locations, regardless of the incentives in a voluntary cleanup program. See *infra* notes 679-81 and accompanying text.

15. See *infra* notes 683-94 and accompanying text.

16. See *infra* notes 459-61 and accompanying text.

that program would allow cleanups that fail to protect the public's health and the environment, is crucial to the acceptability of voluntary cleanups.¹⁷

These questions are all critical to the design of a successful brownfield program, but have received little attention. None is susceptible to an easy answer, and each requires a more rigorous, thoughtful, and comprehensive analysis. To begin this analysis, this article invokes a comparison between the incentives for voluntary cleanups and the implementation of state "negotiated compensation" statutes to facilitate the siting of solid and hazardous waste disposal facilities. These statutes, perceived at the time of their enactment as a major innovation in environmental policy, have had a rather poor record of success in addressing difficult issues of the siting process, despite strong theoretical arguments that they might have succeeded.¹⁸

Part I of this article reviews the challenges inherent in brownfield redevelopment. Part II provides an analysis of state voluntary cleanup statutes and federal programs. Part III compares voluntary cleanup programs with the "negotiated compensation" statutes. Based on recent assessments of the negotiated compensation statutes' shortcomings, part III concludes that the voluntary cleanup statutes must be amended in a number of significant respects. This part concludes that states must allow for effective public participation by making affected communities partners throughout the decision-making process and bolstering each community's ability to evaluate project risks and compare them to project benefits.¹⁹ States must ensure that project risks are communicated properly to communities and provide communities with the necessary technical and financial resources to evaluate projects. They must provide for additional public representation in the state decision-making process and expand their oversight responsibilities. To ward off participation in their programs by developers who are not "good actors," they must bar developers with poor environmental records.

Part III concludes that changes are necessary on the federal level as well, particularly to Title III of the "Reform of Superfund Act," which would exempt from CERCLA liability sites that have been cleaned up in an approved state program. At present, this provision amounts to a license to evade CERCLA's protective cleanup stan-

17. In particular, Congress should apply a presumption that the relaxed cleanup standards that states are applying to brownfield sites are not protective enough, and direct the EPA to reject state programs unless states and developers can demonstrate the adequacy of cleanup standards. See *infra* notes 714-15 and accompanying text.

18. See *infra* notes 487-514 and accompanying text.

19. The states should, for example, provide the affected community with the necessary technical and financial resources to facilitate decision making. See *infra* notes 609-13 and accompanying text.

dards and should be amended to provide the EPA with the latitude to evaluate and approve or reject state programs on substantive grounds.

This article then concludes that with these and other changes, the voluntary cleanup programs will have increased public legitimacy.

II. THE BROWNFIELDS PROBLEM

A. *The Challenge of Brownfield Redevelopment*

A "brownfield" is best defined as "abandoned or underutilized urban land and/or infrastructure where expansion or redevelopment is complicated, in part, because of known or potential environmental contamination."²⁰ Brownfield sites include abandoned industrial fa-

20. The exact definition of a brownfield is a matter of some disagreement. See NATIONAL ENVTL. POLICY INST., HOW CLEAN IS CLEAN?: WHITE PAPER ON BROWNFIELDS 38 (1995) [hereinafter NEPI WHITE PAPER] (stating that "[t]here is no commonly accepted definition of brownfields"); OFFICE OF TECHNOLOGY ASSESSMENT, STATE OF THE STATES ON BROWNFIELDS: PROGRAMS FOR CLEANUP AND REUSE OF CONTAMINATED SITES 3 (1995) [hereinafter OTA STATE OF THE STATES] (noting that "[b]rownfields have nearly as many definitions as there are interested parties"). The definition used here, and in the remainder of this article, is that invoked by the Congressional Office of Technology Assessment in its recent report on brownfield cleanup programs, and in OTA's congressional testimony. This definition is based on an EPA official's presentation at an Environmental Law Institute workshop. OTA STATE OF THE STATES, *supra*, at 1 (citing Timothy Fields, Jr., Federal Agency Brownfields Initiatives, presented at the Environmental Law Institute, Mar. 28, 1995); *Superfund Reauthorization (Part 2): Hearings Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Commerce*, 104th Cong., 1st Sess. 301 (June 15, 1995) (testimony of Jan Linsenmeyer and Robert Atkinson, Energy, Transportation and Infrastructure Program, Office of Technology Assessment) [hereinafter *OTA Testimony*]. Because this definition includes properties that are both actually and potentially contaminated, it reflects the widespread fear of lenders, owners, and developers that redevelopment is hampered at sites even if contamination has not been documented there. Douglas A. McWilliams, *Environmental Justice and Industrial Redevelopment: Economics and Equality in Urban Revitalization*, 21 *ECOLOGY L.Q.* 705, 707 n.3 (1994); see *infra* notes 86-94 and accompanying text. It is also consistent with the definition adopted in a recent article on state and federal brownfield programs and a recent "White Paper." See NEPI WHITE PAPER, *supra*, at 38; R. Michael Sweeney, *Brownfields Restoration and Voluntary Cleanup Legislation*, 2 *ENVTL. LAW.* 105, 106 (1995); see also NATIONAL ENVTL. POLICY INST., BEYOND BROWNFIELDS: IDLE LAND, SUBURBAN SPRAWL, AND THE LAW, PROCEEDINGS OF THE REINVENTING URBAN ENVIRONMENTALISM: BROWNFIELDS POLICY FORUM (1995) (manuscript at 6, on file with author) [hereinafter NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS].

Another definition of brownfield is a "previously productive industrial property now unused due to uncertainty over who bears responsibility for undertaking an environmental clean-up, the extent of contamination, and the cost of clean-up." Terry J. Tondro, *Reclaiming Brownfields to Save Greenfields: Shifting the Environmental Risks of Acquiring and Reusing Contaminated Land*, 27 *CONN. L. REV.* 789, 790 n.2 (1995) (citing Remarks at the Third Thomas F. Gallivan, Jr. Conference on Real Property Law 123 (Oct. 14, 1994)). Still another commentator defines a brownfield site as an "abandoned urban property, intentionally ignored for reuse, due to potential contamination and resulting liability." Daniel Michel, *The CERCLA Paradox and Ohio's Response to the Brownfield Problem*, 26 *U. TOLEDO L. REV.* 435, 435 (1995); cf. McWilliams, *supra*, at 707 n.3 (a brownfield is "urban property that has been contaminated by prior industrial or commercial activities, as compared with 'greenfields,' which are untainted by such contamination").

Each of these definitions assumes too much. The first two definitions imply that environmental contamination is the only factor hampering brownfield redevelopment, which is not accurate. See *infra* notes 143-49 and accompanying text. McWilliams's definition reflects the

cilities, warehouses, and other commercial properties such as former gas stations and dry cleaning establishments.²¹ Although brownfields exist in many areas,²² they are concentrated in aging, predominantly minority and lower-income²³ neighborhoods of “Rust Belt” cities such as Newark and Chicago.²⁴ For decades, manufacturers have been fleeing these cities and moving to “greenfields”²⁵ locations in the sub-

widespread (and mistaken, *see infra* note 25 and accompanying text) perception that brownfields are contaminated, while greenfields are not.

Brownfield sites have also been dubbed “TOADS,” short for “Temporarily Obsolete Abandoned Derelict Sites.” *See* McWilliams, *supra*, at 715 n.25 (citing Michael R. Greenberg et al., *The TOADS: A New American Urban Epidemic*, 25 URB. AFF. Q. 435 (1990)); Tondro, *supra*, at 790 n.2 (citing Michael R. Greenberg, *Finding Treasure in TOADS*, PLANNING, Apr. 1994, at 24).

21. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 6.

22. *Urban Land Reclamation: Hearing Before the Subcomm. on Technology, Environment, and Aviation, of the House Comm. on Science, Space, and Technology*, 103d Cong., 2d Sess. 25 (June 9, 1994) (testimony of Charles Bartsch, Senior Policy Analyst, Northeast-Midwest Institute) [hereinafter *Bartsch Testimony*] (noting that “[t]he issue of brownfields has surfaced in nearly every state across the country, and in numerous small towns as well as most large cities”).

23. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 13; Robert S. Berger et al., *Recycling Industrial Sites in Erie County: Meeting the Challenge of Brownfield Redevelopment*, 3 BUFF. ENVTL. L.J. 69, 72-73 (1995); Julia A. Solo, Comment, *Urban Decay and the Role of Superfund: Legal Barriers to Redevelopment and Prospects for Change*, 43 BUFF. L. REV. 285, 302 (1995).

24. *See* CHARLES BARTSCH & ELIZABETH COLLATON, *COMING CLEAN FOR ECONOMIC DEVELOPMENT 1* (1995) [hereinafter *COMING CLEAN*] (stating that “[v]irtually every city in the nation’s older industrial regions . . . grapples with the challenge of unused manufacturing facilities”); GREGG EASTERBROOK, *A MOMENT ON THE EARTH: THE COMING AGE OF ENVIRONMENTAL OPTIMISM* 617 (1995) (stating that “[i]n cities such as Newark, New Jersey, [environmental liability has] had the effect of insuring that old industrial properties could not be converted into new uses”); NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 15-16 (quoting statements by Freeman Bosley, the mayor of St. Louis, Missouri, about the brownfield situation in his city); OTA STATE OF THE STATES, *supra* note 20, at 4; Berger et al., *supra* note 23, at 73 (noting that the brownfield problem is “a significant environmental and economic problem” in the Buffalo, New York area); Clement Dinsmore, *Recycling Brownfields: The Legislative Climate*, J. URB. TECH., Spring 1995, at 9 (stating that “[b]rownfield sites are most highly concentrated in older industrial areas of large cities in the northeast and midwest United States”); Michel, *supra* note 20, at 436 (stating that brownfield sites are “prevalent in the Great Lakes region” due to the concentration of manufacturing activities); James T. O’Reilly, *Environmental Racism, Site Cleanup and Inner City Jobs: Indiana’s Urban In-fill Incentives*, 11 YALE J. ON REG. 43, 55-56 (1994) [hereinafter O’Reilly, *Indiana’s Incentives*] (noting that “[t]he old plants, visible from the elevated subways of Boston, Chicago, New York, and from the elevated highways of dozens of other inner cities, are wraiths of inner-city industry that no longer resemble the nostalgic photographs”).

25. A greenfield site is usually described as one located in the suburbs, on land that is untainted by contamination because it has never been used for manufacturing or commercial activities. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 6; THE GREENFIELDS GROUP, *PROTECTING GREENFIELDS: THE STATE VOLUNTARY CLEANUP PROGRAM ALTERNATIVE 1* (1995) (copy on file with author); Dinsmore, *supra* note 24, at 9 (observing that “[g]reenfields’ refers to suburban or exurban land that has not yet been developed for non-agricultural uses”); McWilliams, *supra* note 20, at 707 n.3; Tondro, *supra* note 20, at 791 (stating that a greenfield site is “land that has never been used for manufacturing or commercial activities and which carries with it none of the potential for environmental liability of a Brownfield”); Solo, *supra* note 23, at 287.

It is not always true, however, that greenfield sites are pristine. The risk of contamination is generally less at a greenfield site than at a brownfield site. *See, e.g.*, Solo, *supra* note 23, at 287 (“Greenfields[] are less likely to have been previously used for industrial purposes and, therefore, have a lower probability of containing hazardous waste.”). But a number of sites in the suburbs and rural areas have been the locations of past commercial activities that created con-

urbs.²⁶ The abandonment of inner-city sites²⁷ has left a "witch's brew of contamination" at abandoned brownfield sites.²⁸

tamination. Professor Tondro cites *Diamond v. Marcinek*, 629 A.2d 350 (Conn. 1993), where, "unbeknownst to its purchaser," underground gasoline storage tanks remained from a prior use of a farm as a filling station. Tondro, *supra* note 21, at 791-92. For the purposes of this article, then, a greenfield site is defined as a site located in the suburbs or exurbs, regardless of its level of contamination.

26. See *Fields Testimony*, *supra* note 3, at 223 (testifying that "migration from 'brownfields' to 'greenfields' is particularly problematic to certain urban and industrial areas, where the loss of investment capital and jobs further exacerbates existing economic and social conditions"); COMING CLEAN, *supra* note 24, at 2; ANTHONY DOWNS, NEW VISIONS FOR METROPOLITAN AMERICA 60-61 (1994) (noting that the movement of jobs out from central cities is "aggravating central city problems"); EASTERBROOK, *supra* note 24, at 617 (stating that "companies planning expansions were buying up pristine land in rural areas where there was no chance of liability for existing contamination"); RESOURCES FOR THE FUTURE, THE IMPACT OF UNCERTAIN ENVIRONMENTAL LIABILITY ON INDUSTRIAL REAL ESTATE DEVELOPMENT: DEVELOPING A FRAMEWORK FOR ANALYSIS 4-5 (1994); RICHMOND, VA. OFFICE OF ECONOMIC DEV., BROWNFIELDS PILOT PROJECT, PROGRAM NARRATIVE STATEMENT 1 (1994) [hereinafter RICHMOND BROWNFIELDS PILOT PROJECT STATEMENT] (stating that "[t]he City's experience has been that private businesses tend to avoid [brownfield locations] . . . [and] tend to prefer 'Greenfield' sites in the surrounding suburbs for their plant expansion sites or new facility developments"); Fran Ansley, *Standing Rusty and Rolling Empty: Law, Poverty, and America's Eroding Industrial Base*, 81 GEO. L.J. 1757, 1839 (1993) (stating that "[o]bservers note that many domestic factory relocations involve moves from urban to suburban and from 'brownfield' to 'greenfield' sites"); Berger et al., *supra* note 23, at 73; William W. Buzbee, *Remembering Repose: Voluntary Contamination Cleanup Approvals, Incentives, and the Costs of Interminable Liability*, 80 MINN. L. REV. 35, 39-40 (1995); Jane F. Clokey, *Wisconsin's Land Recycling Act: From Brownfield to Greenfield*, 2 WIS. ENVTL. L.J. 35, 37 (1995); Dinsmore, *supra* note 24, at 9; McWilliams, *supra* note 20, at 717 (observing that "[w]hen companies leave their urban sites, whether to flee the contamination they have produced or simply to expand or upgrade, they often build new facilities on greenfield sites"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 55; John Pendergrass, *Abandoned Cleanups or Abandoned Sites?*, ENVTL. F., Sept./Oct. 1995, at 6 (claiming that developers "prefer greenfields . . . regardless of whether available industrial sites are actually contaminated or could be cleaned up"); John B. Casserly, Comment, *Minnesota's Land Recycling Act: Solving Problems by Evolving Superfund*, 2 WIS. ENVTL. L.J. 261, 266 (1995) (noting the increase in development on greenfields in Minnesota, and corresponding increase in the number of brownfields); Solo, *supra* note 23, at 287.

In Professor Ansley's view, there are many reasons for the out-migration of factory jobs, including "more favorable taxation, cheaper rent, or lower rates of unionization." Ansley, *supra*, at 1839-40. To this list, one should add lower perceived environmental costs and other advantages. See *infra* notes 70-77 and accompanying text.

27. McWilliams, *supra* note 20, at 714 and n.21 (citing CHARLES BARTSCH ET AL., NEW LIFE FOR OLD BUILDINGS: CONFRONTING ENVIRONMENTAL AND ECONOMIC ISSUES TO INDUSTRIAL REUSE 1 (1991)) (stating that "[d]ecades of heavy industry in an era with limited environmental awareness have left a legacy of contaminated, often abandoned, industrial structures located on millions of acres of polluted land throughout the United States"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 43 (stating that "manufacturers have moved away from the inner city, taking valuable job opportunities and leaving behind environmentally hazardous sites").

28. William J. Angelo, *EPA and Cities See Green in Cleanup of "Brownfield" Sites*, ENGINEERING NEWS-REC., Nov. 6, 1995, at 31, 34 (stating that "[m]any of the sites contain obsolete, empty buildings with asbestos, polychlorinated biphenyls or oil").

The number of brownfield sites,²⁹ and the magnitude of contamination at them, is not known.³⁰ Despite this uncertainty, brownfield sites have significant potential for redevelopment.³¹ Developers³²

29. The Congressional Office of Technology Assessment recently estimated that there may be "tens of thousands to 450,000" brownfield sites nationwide. OTA STATE OF THE STATES, *supra* note 20, at 2; *see also* COMING CLEAN, *supra* note 24, at 1 (noting that "[s]ome experts have suggested that more than 500,000 sites nationwide show evidence of at least some contamination which could trigger Superfund rules"); NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 6 (stating that "[n]o reliable data exists on the number of brownfield sites"); Anne Slaughter Andrew, *Brownfield Redevelopment: A State-Led Reform of Superfund Liability*, NAT. RESOURCES & ENV'T, Winter 1996, at 27 (stating that the General Accounting Office estimates the number of brownfield sites at between 150,000 and 500,000); Buzbee, *supra* note 26, at 39 n.11; McWilliams, *supra* note 20, at 715 (stating that the EPA "does not know if 10% or 90% of the potentially hazardous waste sites have been identified").

States and localities do not have accurate information about the number of brownfield sites. Professor Tondro describes the problem in Connecticut:

The Connecticut Department of Environmental Protection (DEP) does not know the total number of affected acres of land. In 1993, the DEP estimated that more than 100 Brownfield sites existed in Connecticut's urban areas. These were identified as part of the then newly enacted Urban Sites program. . . . At the conference, Parker estimated that there were probably a "couple of thousand" sites in Connecticut.

Tondro, *supra* note 20, at 789 n.1. Some cities and counties have identified the number of brownfield sites in their jurisdictions, but the accounting is "far from exact." OTA STATE OF THE STATES, *supra* note 20, at 4 (noting that Chicago, Cuyahoga County (which includes Cleveland), and Portland have estimated numbers of brownfield sites); *see also* NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 11 (stating that "[f]or brownfields reform to be successful, it will be necessary to accurately grasp the number of these sites and their breakdown by location"); Paul MacClennan, *Caution in Order on City "Brownfields" Opportunity*, BUFFALO NEWS, Oct. 15, 1995, at G8 (stating that the first task of Buffalo's brownfields group is to develop a "city index on sites and problems"). The Rhode Island legislature has determined that "Rhode Island's urban corridor contains nearly two hundred (200) sites that have been found by federal or state programs to be contaminated [and] many potential sites . . . which may have been contaminated by historical industrial activities." R.I. GEN. LAWS § 23-19.14-1(e)-(f) (Supp. 1995).

A recent survey released by the U.S. Conference of Mayors identified more than 20,000 brownfield sites in 39 cities. *Brownfields: Clinton Backs U.S. Mayors in Cleanup Efforts*, Greenwire, Jan. 29, 1996, available in WESTLAW, 1/29/96 APN-GR 4 [hereinafter *Clinton Backs U.S. Mayors*].

30. *See Bartsch Testimony, supra* note 22, at 26; OTA STATE OF THE STATES, *supra* note 20, at 2 (stating that conditions at brownfield sites "may vary from zero, low, or moderate contamination to extremely hazardous conditions, while many sites have still not been evaluated"); Berger et al., *supra* note 23, at 72 (observing that "the degree of contamination [at brownfield sites] varies greatly"); McWilliams, *supra* note 20, at 715 (stating that "[t]he actual scope of this problem is not known").

There are several reasons for the uncertainty about the extent of contamination at brownfield sites. Brownfield sites were often the locations of industrial and commercial facilities that handled hazardous wastes. OTA STATE OF THE STATES, *supra* note 20, at 4. Storage and disposal of these wastes generally took place before the advent of modern environmental laws and was largely unregulated. *See, e.g.,* Dinsmore, *supra* note 24, at 9 (stating that brownfield sites are "normally assumed to have varying degrees of contamination attributable to waste generation, handling, and disposal practices that prevailed before these practices were regulated in recent decades"). Governments at all levels have little information on the extent of past problems. McWilliams, *supra* note 20, at 715; *see also* OTA Testimony, *supra* note 20, at 300 (stating that "information about the extent of the problem and the level of contamination at many of these sites is limited"). States' records are of "limited usefulness" because they document assessments made at the time of property transfers; properties may not have been transferred, and therefore not evaluated. McWilliams, *supra* note 20, at 715.

31. Charles Bartsch and Elizabeth Collaton, for example, describe a number of successful redevelopment activities at brownfield sites. COMING CLEAN, *supra* note 24, at 117-37 (describ-

propose projects that range from industrial uses³³ to retail uses,³⁴ technology and office centers,³⁵ airports,³⁶ and even sports stadiums.³⁷

Although the costs of continued inactivity at brownfield sites are potentially immense, they are not well quantified. The types of costs, however, are well understood. Inner-city neighborhoods fail to benefit from jobs that redevelopment might provide.³⁸ Cities receive lower

ing brownfield reuses in Akron, OH; Chicago, IL; Minneapolis, MN; Fort Collins, CO; Mesa, AZ; and Meadville, PA).

32. This article uses the term "developer" to refer to any entity that proposes to take advantage of the incentives contained in a state voluntary cleanup program, whether or not that entity currently owns the brownfield site in question. Many states' statutes do not restrict the type of entity that can qualify as a brownfield redeveloper and take advantage of statutory protections. As one commentator has noted, "individuals, companies, associations, partnerships and municipal governmental entities are all potential beneficiaries." Clokey, *supra* note 26, at 41-42; *see, e.g.*, WIS. STAT. ANN. § 144.765 (West Supp. 1995). Moreover, a majority of states empower any person or entity to undertake a voluntary cleanup. The statutes often do not distinguish between present owners and prospective purchasers; both may participate in voluntary cleanup programs if they did not cause the contamination at the site. *See infra* note 188-90 and accompanying text.

33. *See* COMING CLEAN, *supra* note 24, at 127-29 (discussing automobile scrapyard in Minneapolis cleaned up and used for an electronics company's production facility); PENNSYLVANIA DEP'T OF ENVTL. PROTECTION, PENNSYLVANIA'S LAND RECYCLING PROGRAM, SIX-MONTH PROGRESS REPORT 2 (1996) [hereinafter PENNSYLVANIA SIX-MONTH PROGRESS REPORT] (describing the redevelopment of the "Industrial Center of McKeesport" on the site of the former U.S. Steel National Tube Works in McKeesport, PA); Berger et al., *supra* note 23, at 71 (describing the thwarted efforts of three proposals to reuse brownfield sites in Cleveland, Chicago, and Detroit for industrial purposes).

34. *See, e.g.*, NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 18 (describing the failed proposal to redevelop a site in East St. Louis, IL, for use as a shopping center); MacClennan, *supra* note 29 (describing Buffalo's plans to build the Delaware Consumer Square retail plaza on a site, part of which is "an old Hartwell street toxic dump used by Atlas Steel and recently delisted by the state but not necessarily lacking in hazardous substances").

35. Pittsburgh, for example, has developed the "Pittsburgh Technology Center" on the site of the abandoned Jones & Laughlin steel mill, with plans to host the University of Pittsburgh's Center for Biotechnology and Bioengineering, the Carnegie Mellon Research Institute, and the engineering and research facility of the Union Switch and Signal Corporation. *See Urban Land Reclamation: Hearing Before the Subcomm. on Technology, Environment, and Aviation of the House Comm. on Science, Space, and Technology*, 103d Cong., 2d Sess. 16 (June 9, 1994) (testimony of Margaret McCormick Barron, Assistant to Tom Murphy, Mayor, City of Pittsburgh); Gaines Gwathmey III & William J. O'Brien, *States Stimulate "Brownfield" Development*, N.Y. L.J., Nov. 14, 1994, at S1 (describing the Pittsburgh experience); *see also* COMING CLEAN, *supra* note 24, at 119-20 (describing the conversion of a brownfield site in Akron, OH, to the "AES Business Campus"); Angelo, *supra* note 28, at 32, 34 (describing the construction of the "125-acre Twin Lakes Corporate Center" on a former brownfield site in Roseville, MN).

36. Angelo, *supra* note 28, at 32 (describing Cleveland's attempt to build a new airport on a brownfield site).

37. Sue Ellen Christian & John Kass, *Gary Plan a Far Cry from Soldier Field; Glitzy Proposal Is Detailed, But Financing Isn't*, CHI. TRIB., Nov. 16, 1995, at 1 (describing efforts to attract the Chicago Bears football team to a brownfield site in Gary, IN).

38. *Bartsch Testimony*, *supra* note 22, at 25; *OTA Testimony*, *supra* note 20, at 301; NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 21 (quoting Mary Gade, Director, Illinois Environmental Protection Agency); Berger et al., *supra* note 23, at 73 (stating that "[b]ecause of the difficulty in redeveloping urban industrial sites, rejuvenation of economies in these areas through job creation is also significantly hampered"); McWilliams, *supra* note 20, at 717; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 56; Solo, *supra* note 23, at 286-87.

property tax revenues from brownfield sites,³⁹ which weakens their ability to provide basic services such as education.⁴⁰ Brownfields are unsightly and threaten to contaminate drinking water and cause neighborhood health problems.⁴¹ Vacant properties contribute to high crime rates⁴² and deterioration of urban neighborhoods.⁴³ They encourage further environmental abuse, such as “midnight dumping.”⁴⁴ Finally, brownfields are conspicuous symbols of the decline of lower-income and minority neighborhoods in which they are overwhelmingly located. They discourage urban investment and contribute to a pervasive sense of poverty and hopelessness.⁴⁵

Moreover, there are substantial environmental costs to locating new commercial or industrial activities at a greenfield site instead of a brownfield site.⁴⁶ Greenfield development often devours previously

39. Owners of brownfield sites typically pay reduced amounts of taxes, due to the sites' marginal market value, or abandon the sites and pay no taxes at all. *OTA Testimony, supra* note 20, at 301; *COMING CLEAN, supra* note 24, at 2; Berger et al., *supra* note 23, at 72; Dinsmore, *supra* note 24, at 9-10; McWilliams, *supra* note 20, at 715; O'Reilly, *Indiana's Incentives, supra* note 24, at 48; Tondro, *supra* note 20, at 789-90; Solo, *supra* note 23, at 286-87. The recent study released by the U.S. Conference of Mayors estimates that brownfield sites account for between \$121 million and \$386 million of lost tax revenue annually. *Clinton Backs U.S. Mayors, supra* note 29. The shrinking tax base also has a pronounced impact on remaining businesses in inner cities, which face increased tax burdens to make up for the lost revenue. O'Reilly, *Indiana's Incentives, supra* note 24, at 48.

40. McWilliams, *supra* note 20, at 717 (stating that “abandoned and otherwise inactive properties generate less, if any, tax revenue for schools and city services”); O'Reilly, *Indiana's Incentives, supra* note 24, at 48 (stating that “[m]unicipal and urban school budgets lost revenues from manufacturing facility taxes as plants moved”).

41. *COMING CLEAN, supra* note 24, at 2; *NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, supra* note 20, at 6 (stating that “empty structures openly invite illegal dumping of household and hazardous waste, attract both criminal activity and curious children, and pose health and fire hazards to the surrounding community”); McWilliams, *supra* note 20, at 715 (stating that “[w]ithholding brownfield property from the market contributes to urban decay by . . . allowing contaminated sites to go undetected, thereby threatening the environment, unsuspecting users, and local residents”); Solo, *supra* note 23, at 302.

At the National Environmental Policy Institute's Brownfields Policy Forum, one participant stated that “[t]he kind of things you can get from these abandoned sites is not just the insecurity and danger of the building itself, but also the continued illegal dumping of hazardous waste drums.” *NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, supra* note 20, at 28 (quoting Henry Henderson, Commissioner, Department of the Environment, Chicago, IL). Commissioner Henderson added that health hazards other than toxic dumping exist, describing a site in Chicago: “A former bus barn, across from a meat packing company, had been taken over by a squatter who decided to build an indoor garbage dump. You don't want a rat farm next door to your meat packing company.” *Id.*

42. See *RESOURCES FOR THE FUTURE, supra* note 26, at 5; J. Thomas Black, *Recycling Inactive Urban Industrial Sites, URB. LAND*, June 1995, 47, 47-48; Tondro, *supra* note 20, at 790; Solo, *supra* note 23, at 287.

43. *COMING CLEAN, supra* note 24, at 2; Berger et al., *supra* note 23, at 74; Black, *supra* note 42, at 47; McWilliams, *supra* note 20, at 715; O'Reilly, *Indiana's Incentives, supra* note 24, at 47 (describing the “social isolation” caused in inner-city neighborhoods by the declining job base).

44. *Bartsch Testimony, supra* note 22, at 26; *COMING CLEAN, supra* note 24, at 2; Buzbee, *supra* note 26, at 39.

45. *NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, supra* note 20, at 6; McWilliams, *supra* note 20, at 715; Solo, *supra* note 23, at 286-87.

46. Tondro, *supra* note 20, at 792.

unspoiled land.⁴⁷ Development in suburbs and exurbs exacerbates their growing pollution problems.⁴⁸ These developments will have adverse impacts for many years to come, even long after their useful lives have ended.⁴⁹ Stormwater,⁵⁰ groundwater,⁵¹ and air pollution from additional traffic⁵² will increase.⁵³ Suburban and exurban jurisdictions will have to build⁵⁴ or expand⁵⁵ existing infrastructures such as highways and public water and sewer systems to serve new development. Officials in these jurisdictions are concerned about the financial

47. Berger et al., *supra* note 23, at 73 (stating that “[m]ore rural land is being used for industrial purposes than would be necessary if industries were encouraged to ‘recycle’ urban industrial properties. The direct effect is that more total land is ‘industrialized’, even though numerous former industrial sites sit idle and waste away”); Clokey, *supra* note 26, at 37; O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 56; Tondro, *supra* note 20, at 792 n.12; Solo, *supra* note 23, at 304.

48. COMING CLEAN, *supra* note 24, at 2; RESOURCES FOR THE FUTURE, *supra* note 26, at 2; McWilliams, *supra* note 20, at 717-18 (stating that “if industrial owners are allowed to use and abandon property at will, current greenfield development will spread the legacy of contamination to outlying areas”). For a description of existing environmental problems of suburban “Edge Cities,” see Joel B. Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Stormwater Runoff*, 48 WASH. U. J. URB. & CONTEMP. L. 1, 33-35 (1995).

49. McWilliams, *supra* note 20, at 717-18; Tondro, *supra* note 20, at 792.

50. The stormwater problem, caused in large part by runoff from parking lots and other impervious surfaces, is already a substantial environmental problem in the suburbs and exurbs. See generally Eisen, *supra* note 48. It will only be worsened by further industrial and commercial development. See McWilliams, *supra* note 20, at 718.

51. See McWilliams, *supra* note 20, at 718.

52. Suburbs depend on the automobile. See generally ROBERT CERVERO, AMERICA’S SUBURBAN CENTERS (1989) [hereinafter CERVERO, AMERICA’S SUBURBAN CENTERS] (analyzing patterns of traffic and congestion in suburbs and exurbs); ROBERT CERVERO, SUBURBAN GRIDLOCK (1986) [hereinafter CERVERO, SUBURBAN GRIDLOCK] (describing the inadequate road and highway infrastructure in the suburbs). As a result, workers must increasingly use automobiles instead of mass transit to reach suburban workplaces. O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 47-48. This worsens traffic and congestion, and adds to air pollution. Berger et al., *supra* note 23, at 73 (claiming that “industrialization of outlying rural and suburban lands creates a greater need for people to drive to outlying areas to work [with] the negative environmental effect of promoting greater air pollution”); Clokey, *supra* note 26, at 37; McWilliams, *supra* note 20, at 721 (stating that “by siting new facilities in dispersed outlying areas instead of in concentrated inner cities, greenfield development encourages a car-dependent work force because mass transit cannot economically serve these low density areas of development”); O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 47-48; Tondro, *supra* note 20, at 792; Solo, *supra* note 23, at 304.

53. McWilliams makes the intriguing suggestion that developers should be required to post bonds to cover the future costs of environmental liability at greenfield sites:

Any facility where hazardous substances are used and that poses a threat to the environment, should be required to post an environmental bond, or otherwise prove financial responsibility sufficient to cover the potential costs of cleaning up the site, before it can bring hazardous materials onto the property. If the law required the owner of a facility to return the property to the market in as good or better condition than when she acquired the property, the costs of the business would reflect the true costs of contaminating activities.

McWilliams, *supra* note 20, at 719-20.

54. Berger et al., *supra* note 23, at 73; McWilliams, *supra* note 20, at 720; Tondro, *supra* note 20, at 792.

55. The road system in the suburbs and exurbs, for example, was not built to meet the demands of intensified industrial and commercial activity, and must be expanded to serve it. Tondro, *supra* note 20, at 792. See generally CERVERO, AMERICA’S SUBURBAN CENTERS, *supra* note 52; CERVERO, SUBURBAN GRIDLOCK, *supra* note 52.

burden this imposes on them,⁵⁶ a burden that is often alleviated to some extent by wasteful subsidies (in the form of grants and other funding) from the federal and state governments.⁵⁷

By contrast, brownfield redevelopment can take advantage of existing urban infrastructures.⁵⁸ A brownfield site often features excellent water and sewer systems, and rail and highway access to the metropolitan area, the region, and outlying areas.⁵⁹ Densely concentrated urban areas offer better accessibility to workers⁶⁰ and other advantages.⁶¹ Other potential benefits include aesthetic qualities such as waterfront access and views,⁶² proximity to downtown business districts,⁶³ public tax and financing initiatives to support development,⁶⁴

56. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 6; Berger et al., *supra* note 23, at 73 (stating that “[t]he cost of providing the necessary infrastructure to support these new developments is strapping the municipalities and counties in which they are located”); Tondro, *supra* note 20, at 792 (stating that “[f]rom the viewpoint of the public purse, the expenditure necessary to make [a greenfield] site properly accessible, including public utilities, is enormous”); Solo, *supra* note 23, at 304.

57. See, e.g., McWilliams, *supra* note 20, at 720:

Local governments, using federal grants and state funds to pay for new utility infrastructure (e.g., sewers, water, and electric) and secondary roads in outlying areas, are in effect duplicating infrastructures that already exist in urban centers. Thus, federal, state, and local taxpayers subsidize the environmentally suspect spread of industrial development to greenfield sites.

58. *Bartsch Testimony*, *supra* note 22, at 25; COMING CLEAN, *supra* note 24, at 2; McWilliams, *supra* note 20, at 720; Solo, *supra* note 23, at 301 (observing that brownfield sites would “normally have been considered prime real estate and [are] connected to existing infrastructure”); Black, *supra* note 42, at 48.

59. COMING CLEAN, *supra* note 24, at 2; NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 6; Black, *supra* note 42, at 47; O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 47 (stating that “[h]ighway access, well developed infrastructure, power and water lines, easy access to rail tracks and to other modes of transport are all desirable features of existing city sites”); Tondro, *supra* note 20, at 790. This is not always the case. See *infra* notes 147-49 and accompanying text.

60. COMING CLEAN, *supra* note 24, at 2; Black, *supra* note 42, at 48; McWilliams, *supra* note 20, at 723; O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 47-48; Tondro, *supra* note 20, at 792. A brownfield redeveloper that creates jobs may hire workers from the area surrounding the site and provide a tremendous economic boost for affected communities. See, e.g., *Bartsch Testimony*, *supra* note 22, at 25; COMING CLEAN, *supra* note 24, at 2; O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 47-48. Douglas McWilliams cautions that brownfield redevelopment may not create jobs for residents of the affected communities unless training programs are implemented for unskilled workers. McWilliams, *supra* note 20, at 723-24.

61. See, e.g., McWilliams, *supra* note 20, at 722 (stating that “concentrated urban job locations may facilitate efficient job training programs because resources are concentrated in a single facility that is accessible to the targeted urban workforce and to the job placement locations”).

62. COMING CLEAN, *supra* note 24, at 2; Black, *supra* note 42, at 48.

63. COMING CLEAN, *supra* note 24, at 2; Black, *supra* note 42, at 48.

64. COMING CLEAN, *supra* note 24, at 61-64; Black, *supra* note 42, at 48. Existing incentives include “tax increment financing” (TIF), which involves borrowing against future expected tax revenues to finance investments. COMING CLEAN, *supra* note 24, at 61-62; CHARLES M. HAAR & MICHAEL ALLAN WOLF, *LAND USE PLANNING: A CASEBOOK ON THE USE, MISUSE, AND REUSE OF URBAN LAND* 968, 997 (1989); McWilliams, *supra* note 20, at 753-54. TIF revenues, as Haar and Wolf note, can be used to fund improvements required to spur an increase in economic activity. HAAR & WOLF, *supra*, at 968. Charles Bartsch and Elizabeth Collaton describe a number of other financing options for brownfield redevelopment, including tax abatements, community development block grants, special service areas, use of general obligation bonds, and other forms of targeted assistance. COMING CLEAN, *supra* note 24, at 62-64.

access to major universities and medical centers,⁶⁵ and ancillary benefits of spending by rejuvenated industries and their workers on local goods and services.⁶⁶

B. *The Fear of Environmental Liability*

Despite these potential advantages, brownfields remain abandoned or underutilized. In the eyes of many, this is due to widespread fears of brownfield developers that they will face liability under the environmental laws⁶⁷ and that the cost of cleaning brownfield sites to meet government standards is both so uncertain and so high that it might outweigh the sites' market value.⁶⁸ The literature is replete with anecdotes about developers who shunned brownfield sites "due to" the fear of environmental liability.⁶⁹ Developers, it is said, de-

65. Black, *supra* note 42, at 48.

66. *Superfund Reauthorization: Hearings Before the Subcomm. on Water Resources and Environment of the House Comm. on Transportation and Infrastructure*, 104th Cong., 1st Sess. 601 (June 21, 1995) (testimony of Patricia Randolph Williams, Legislative Representative, National Wildlife Federation) [hereinafter *NWF Testimony*] (claiming that brownfields redevelopment will "stimulate economic growth of the surrounding areas"); COMING CLEAN, *supra* note 24, at 2; McWilliams, *supra* note 20, at 724. Douglas McWilliams cautions that secondary economic benefits may be "diluted" if, for example, "companies provide in-house food service and shops." *Id.*

67. Most notable among these are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, popularly known as the Superfund law) and its state counterparts. 42 U.S.C. §§ 9601-9675 (1994); see *infra* notes 71-73 and accompanying text. These "fears" have been invoked as the primary, and perhaps exclusive reason why brownfield sites continue to remain abandoned. See, e.g., *Bartsch Testimony*, *supra* note 22, at 28 (noting that "environmental contamination—or the perceived threat of it—[is often] the principal deterrent to industrial site reuse"); *NWF Testimony*, *supra* note 66, at 601 (testifying that "[Superfund] has inadvertently produced a chilling affect [sic] which has stymied prospective purchasers and lenders from investing in the renewal of abandoned contaminated waste sites"); COMING CLEAN, *supra* note 24, at 6; NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 7; RESOURCES FOR THE FUTURE, *supra* note 26, at 25 n.46 (quoting a press release by four Pennsylvania state senators that stated "[c]ompanies in Pittsburgh, Johnstown, and other communities have deliberately let industrial property stand idle indefinitely rather than even look to see what contamination might exist because they were afraid to deal with state environmental agencies"); Buzbee, *supra* note 26, at 39; McWilliams, *supra* note 20, at 715-16; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 54 (stating that "[d]evelopment of the sites and their potential to create jobs for local residents were hampered by doubt that past environmental effects could be overcome, [as] a direct result of ineffective federal remediation procedures").

68. See *infra* notes 106-19 and accompanying text.

69. For example, one article describes three projects purportedly stymied by fear of environmental liability:

The owner of a newspaper in Cleveland looked at several downtown properties for a new production plant. The company chose an abandoned rail yard on the shores of Lake Erie. Calling the site "perfect" for its needs, the company spent \$60,000 on an environmental assessment. Only to learn that the cost of cleanup would be prohibitive. The "perfect" site was abandoned and the new plant, along with its 400 jobs, will open soon, in the suburbs. A Chicago metal-stamping firm wanted to expand in the city, but could not find a large enough urban site without possible environmental problems. It, too, moved to the suburbs and forty urban jobs were lost.

An electrical contractor in Detroit wanted to expand his existing building onto a neighboring parking lot. He was not, nor had he ever been, the owner of the parking lot, but his bank refused to make the necessary expansion loan. Traces of oil, antifreeze and fuel had dripped onto the lot over the years and the bank was afraid that it could be held liable for the cleanup of hazardous waste if it held a security interest in the property. Instead of

mand the lower and more predictable cost of building new facilities in greenfield locations.⁷⁰ From a developer's perspective, the list of obstacles to brownfield redevelopment starts with the threat of liability under CERCLA.⁷¹ This is widely perceived as the most serious barrier to redevelopment,⁷² outweighing all benefits.⁷³ A developer must also be concerned about the uncertainties caused by state hazardous

expanding in the city, the contractor moved his entire business to an undeveloped rural area, taking ten jobs away from urban workers.

Berger et al., *supra* note 23, at 71; *see also* Solo, *supra* note 23, at 297 (citing these three stories and stating that these "anecdotes merely skim the surface of instances in which urban workers have lost jobs due to legitimate fears by business owners of becoming liable for contamination on urban land").

At the National Environmental Policy Institute's Brownfields Policy Forum, Mayor Gordon Bush of East St. Louis, IL, described the failure of a proposed shopping center project in his city: "The people were ready, the bankers were there. The Department of Commerce and Community Affairs from the State of Illinois was there with their share. All incentives were in place, but guess what, it had to be cleaned up first." The city worked with the investors to remediate the property, but the process "was so bad and so protracted that when they went in, they estimated that they needed \$200,000 to clean it up. They ended up spending over \$1 million, and it still wasn't clean." As the process dragged on and the costs continued to mount, the bankers and financial supporters backed out, and the project failed.

NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 18 (quoting Gordon Bush, Mayor, East St. Louis, IL).

70. *See Bartsch Testimony*, *supra* note 22, at 27 (comparing a developer's perspective on building on greenfield and brownfield sites); *COMING CLEAN*, *supra* note 24, at 2 (quoting a developer's statement that "[t]he numbers just make sense [in favor of greenfield sites]").

71. A recent White Paper on brownfields suggests that the requirements of the Resource Conservation and Recovery Act's "corrective action" process could pose more potential problems at older industrial sites than CERCLA. *See* 42 U.S.C. § 6928(h) (1994) (authority for corrective action orders); NEPI WHITE PAPER, *supra* note 20, at 41-42 (stating that "if an older industrial facility wishes to develop its brownfields, it may have a multi-year [RCRA] liability issue"); *Brownfields: RCRA Liability Could Pose Obstacle to Cleanup Greater than Superfund*, *Haz. Waste News*, July 24, 1995, available in WESTLAW, 1995 WL 2407345. Professor Buzbee, noting the overlap between RCRA and CERCLA, claims that the EPA could use its authority to identify brownfield sites as RCRA treatment, storage, and disposal (TSD) facilities, in which case the RCRA corrective action provisions would govern. Buzbee, *supra* note 26, at 66-68; *see also* *COMING CLEAN*, *supra* note 24, at 11-14. Developers' fears of CERCLA liability appear, however, to be more widespread, because CERCLA is the principal federal statute governing hazardous waste cleanups, whereas RCRA's corrective action scheme generally is limited to remediation of traditional TSD facilities. Buzbee, *supra* note 26, at 57.

72. *See* *COMING CLEAN*, *supra* note 24, at 6-11; *OTA STATE OF THE STATES*, *supra* note 20, at 7 (stating that "[t]he law most often associated with liability at brownfield sites is CERCLA"); *RESOURCES FOR THE FUTURE*, *supra* note 26, at 30 ("There is a widespread belief that environmental liabilities arising under CERCLA and related law distort the real estate market."); McWilliams, *supra* note 20, at 725 (claiming that "[t]he magnitude and uncertainty of environmental liability costs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) pose significant obstacles to urban industrial redevelopment"); Michel, *supra* note 20, at 435 (stating that "[t]he measures employed by Congress, primarily through CERCLA . . . , have been called 'draconian' and have had a chilling effect on lenders, 'would be' developers and purchasers"); Tondro, *supra* note 20, at 790-91; Casserly, *supra* note 26, at 266 (stating that Minnesota's cities "found that the Superfund laws were intimidating prospective purchasers, while rarely effecting a cleanup in Minnesota's urban centers"); Solo, *supra* note 23, at 285 (observing that "[f]ear of liability under federal Superfund law may be discouraging use of former hazardous waste sites even after they have been cleaned up and thus encouraging industrial development to sprawl onto unpolluted land").

73. The Urban Land Institute's brownfields analyst, Tom Black, has stated that "Superfund requirements overshadow the many advantages that sites in older industrial areas offer." Black, *supra* note 42, at 48.

waste cleanup programs,⁷⁴ because it cannot predict at the outset whether it will be subjected to state or federal regulation.⁷⁵ The states have primary responsibility for sites that do not rise to the threshold for federal action⁷⁶ and for sites that states have decided to regulate in the absence of federal requirements.⁷⁷

74. Approximately 45 states have hazardous waste cleanup statutes with requirements comparable to those of the federal program under CERCLA. OTA STATE OF THE STATES, *supra* note 20, at 11; BRADFORD F. WHITMAN, SUPERFUND LAW AND PRACTICE § 1.01, at 2 (1991). These statutes include, for example, Minnesota's Environmental Response and Liability Act, MINN. STAT. §§ 115B.01-.37 (West 1987 & Supp. 1996), and Wisconsin's Hazardous Substance Discharge Law, popularly known as the "Spill Statute," WIS. STAT. ANN. § 144.76 (West 1989 & Supp. 1995). See also RESOURCES FOR THE FUTURE, *supra* note 26, at 7-8 (noting that states have independent authority to force brownfield developers to clean up sites). These statutes (which, for the purposes of this article, are referred to as "state CERCLA laws") are perceived as having a detrimental impact on brownfield development comparable to that of CERCLA. See *Superfund Reauthorization: Hearings Before the Subcomm. on Water Resources and Environment of the House Comm. on Transportation and Infrastructure*, 104th Cong., 1st Sess. 260 (June 20, 1995) (testimony of Dale Kaplan, President and Owner, Kaplan Cleaners, on behalf of the Pennsylvania Chamber of Business and Industry) [hereinafter *Pennsylvania Chamber Testimony*] (stating that "[t]he state, just like EPA, can require a business to pay for the entire costs of a cleanup, regardless of whether or not the business acted legally"); Tondro, *supra* note 20, at 790-91 (stating that state "little CERCLA" statutes have a "chilling effect" on lenders at brownfield sites). Commenting on the New York law, one report states that although it "differs in significant respects from CERCLA," it is similar enough that it has had a dampening effect on brownfield development. Berger et al., *supra* note 23, at 91 (adding that "[t]he New York State Superfund program, like the federal program, includes exacting liability provisions and rigorous cleanup standards [and] has had the unanticipated effect of leaving many brownfield sites abandoned and has caused companies to develop greenfields instead").

Professor Buzbee notes that while common-law schemes may create an additional source of legal uncertainty and potential liability, statutory liability is more significant because "statute-based cleanup costs dwarf provable common law damages from contamination in most instances." Buzbee, *supra* note 26, at 39 n.10.

75. See NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 12 (noting that "[m]any panelists observed that a high level of uncertainty exacerbates the brownfields problem"); OTA STATE OF THE STATES, *supra* note 20, at 2-3 (stating that "[t]he complicated and often overlapping nature of [state and federal] laws creates an unclear picture of the real risk of liability, which serves as a disincentive for involvement at a site"); McWilliams, *supra* note 20, at 733 (observing that "the determination of whether a site will be subject to federal or state oversight is made well into the site assessment process, making it difficult to anticipate the regulatory requirements before substantial funds are spent on a redevelopment project").

As Douglas McWilliams notes, there is another area of uncertainty: a site can contain both "contaminants that are regulated exclusively under state law and contaminants subject to regulation under both state and federal law." McWilliams, *supra* note 20, at 732; see *infra* note 77 and accompanying text.

76. States may set more stringent cleanup requirements than those found in CERCLA. CERCLA provides that a state may impose "any additional liability or [cleanup] requirements with respect to the release of hazardous substances" in the state. CERCLA § 114(a), 42 U.S.C. § 9614(a); McWilliams, *supra* note 20, at 732. For example, states are free to regulate materials such as petroleum that are specifically excluded from CERCLA's definition of a "hazardous substance." See CERCLA § 101(14), 42 U.S.C. § 9601(14); WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW § 8.6, at 757 (2d ed. 1994).

77. Developers may face liability under state laws even if they are not liable under federal law. CERCLA § 114(a), 42 U.S.C. § 9614(a); McWilliams, *supra* note 20, at 732. Pursuant to this authority to regulate the disposal of hazardous wastes, states have identified many more contaminated sites than are on the National Priorities List (NPL), some of which may be brownfield sites. *Superfund Reauthorization: Hearings Before the Subcomm. on Water Resources and Environment of the House Transportation and Infrastructure Comm.*, 104th Cong., 1st Sess. 876 (June 27, 1995) (testimony of Carol M. Browner, Administrator, U.S. Environmental Protection

1. *Uncertainty for Developers*

The uncertain nature of developers' responsibilities under CERCLA and its state analogues has a wide-ranging impact on brownfield developers.⁷⁸ First, developers may be held liable for past contamination at sites, even if they did not cause it. Second, the uncertainty about liability gives rise to concerns about predicting the amount of cleanup costs, particularly the required standard of cleanup and its cost. Finally, there is the cost of delays necessitated by a lengthy cleanup process and the additional cost associated with potential future responsibility after undertaking a cleanup.

a. Liability for Past Contamination

Although dangerous contaminants such as lead and PCBs are present at some brownfield sites,⁷⁹ most sites are not seriously contaminated.⁸⁰ The majority are not listed on the federal National Priorities List (NPL, the list of properties to be cleaned up under the EPA's supervision to meet CERCLA's standards),⁸¹ the "CERCLIS" database of sites that the EPA is considering for further Superfund action,⁸² or comparable state lists of hazardous waste sites.⁸³ Never-

Agency) [hereinafter *Browner Testimony*] (testifying that "[s]tates have already identified over 100,000 non-NPL sites in their state cleanup inventories"); THE GREENFIELDS GROUP, *supra* note 25, at 1; *see also* RESOURCES FOR THE FUTURE, *supra* note 26, at 8 n.19 (stating that "[a]s of 1990, Massachusetts had 15 (federal) NPL sites but 383 on its state priority list, with an additional 1486 on a hazardous site registry"); *EPA Sets Goals for Brownfields Clean Up, Redevelopment as Part of CERCLA Reform*, Daily Envtl. Rep. News, Oct. 17, 1995, available in WESTLAW, 1995 DEN 200 d9 [hereinafter *EPA Goals*] (quoting the statement of Mary Gade, director of the Illinois Environmental Protection Agency, that Illinois has 37 NPL sites and 148 state superfund sites). The sites identified by the states require cleanup under the state analogues to CERCLA.

78. *See* McWilliams, *supra* note 20, at 725-26; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 52-53.

79. *See* PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 7 (noting that the former Johnson Bronze site, one of the 13 sites where the state has granted final approval to date, was contaminated by lead and PCBs).

80. *Bartsch Testimony*, *supra* note 22, at 26 (observing that "it is essential to distinguish between Superfund high priority sites—the worst of the bad with little prospect for economically viable reuse—and those sites characterized by low and medium levels of environmental contamination—typically, most industrial facilities that were in operation before CERCLA's 1980 enactment"); *OTA Testimony*, *supra* note 20, at 302; *OTA STATE OF THE STATES*, *supra* note 20, at 2 (stating that "most sites considered brownfields are not associated with extreme levels of contamination"); Berger et al., *supra* note 23, at 72; Buzbee, *supra* note 26, at 45 n.27; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 53; Solo, *supra* note 23, at 297-98.

81. *OTA STATE OF THE STATES*, *supra* note 20, at 2. The NPL is the list of sites that receive the highest priority from the EPA in CERCLA cleanup efforts. 40 C.F.R. § 300.5 (1995); RODGERS, *supra* note 76, § 8.4, at 720. Sites on the NPL are the only sites eligible for long-term remedial actions financed by the Superfund. *See* 40 C.F.R. § 300.425(b)(1) (1995); RESOURCES FOR THE FUTURE, *supra* note 26, at 6; RODGERS, *supra* note 76, § 8.4, at 722 n.89. The National Contingency Plan governs studies of the contamination and selection and implementation of remedies at these sites. *See* 40 C.F.R. §§ 300.430-435 (1995). There are 1,231 sites on the NPL. 40 C.F.R. pt. 300, app. B (1995) (listing of NPL sites). Most brownfield sites are not included on this list. *OTA Testimony*, *supra* note 20, at 302; Solo, *supra* note 23, at 298 n.65.

82. *OTA Testimony*, *supra* note 20, at 302. CERCLIS is the "Comprehensive Environmental Response, Compensation and Liability Information System," a computer database of sites

theless, cautious developers and lenders assume involvement at any site will subject them to potential liability,⁸⁴ because the site may later be discovered to be seriously contaminated,⁸⁵ and regulators may decide to target it for a cleanup.

Prospective purchasers and developers fear that if they take ownership of a brownfield site, they will assume liability for past contamination.⁸⁶ Under CERCLA, the threshold event for liability is the "release" or threat of a release⁸⁷ of a "hazardous substance"⁸⁸ at a "facility."⁸⁹ This is a broad definition that encompasses contamina-

that the EPA is investigating to determine whether they must be cleaned up under CERCLA. See *RESOURCES FOR THE FUTURE*, *supra* note 26, at 6; *RODGERS*, *supra* note 76, § 8.4, at 711-13; *Buzbee*, *supra* note 26, at 39 n.11. Although a listing in the CERCLIS is no guarantee that a site is contaminated enough to warrant a cleanup under CERCLA, lenders regularly check the CERCLIS database as part of their environmental assessments. See *RODGERS*, *supra* note 76, § 8.4, at 712 ("the real estate and lending enterprises are especially attentive to what listings [in CERCLIS] foretell about real estate values and cleanup costs"). Even though the EPA added the notation "No Further Response Action Planned" to the listing, lenders continued to shun these sites. *Dinsmore*, *supra* note 24, at 10.

There are about 13,000 sites on the CERCLIS, compared to almost 38,000 sites listed in early 1995. As part of its "Brownfields Action Agenda," the EPA deleted approximately 25,000 sites from the CERCLIS to remove the stigma associated with a listing in the database and announced its intent to delete sites when it decided that no further response action should be undertaken. Amendment to the National Oil and Hazardous Substances National Contingency Plan (NCP); CERCLIS Definition Change, 60 Fed. Reg. 16,053, 16,054-55 (1995) (to be codified at 40 C.F.R. § 300.5); *Buzbee*, *supra* note 26, at 79 n.144; see *infra* notes 411-16 and accompanying text.

83. See *OTA STATE OF THE STATES*, *supra* note 20, at 4 (noting that Chicago "has identified over 2,000 brownfield sites in its metropolitan region"); *EPA Goals*, *supra* note 77 (quoting the statement of Mary Gade that although Illinois has 148 state superfund sites, it has "an estimated 5,000 brownfield sites—2,000 in Chicago alone").

84. *OTA Testimony*, *supra* note 20, at 302 (noting that "any association with a hazardous waste site implies some level of uncertain liability"); *Berger et al.*, *supra* note 23, at 75; *Solo*, *supra* note 23, at 286, 298.

85. Not all sites that are seriously contaminated have been the subject of regulatory scrutiny. *RESOURCES FOR THE FUTURE*, *supra* note 26, at 25; see also *RODGERS*, *supra* note 76, § 8.4, at 712 (noting that "CERCLIS remains an incomplete inventory [that] is missing some sites that are sufficiently serious to be nominated for inclusion on the National Priorities List").

86. *RESOURCES FOR THE FUTURE*, *supra* note 26, at 8; *Berger et al.*, *supra* note 23, at 72; *McWilliams*, *supra* note 20, at 725; *Solo*, *supra* note 23, at 287.

87. "Release" is defined in CERCLA § 101(22), 42 U.S.C. § 9601 (1994), to include a broad range of activities, including "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." Cases have read this definition broadly to include not only these, but also such activities as drifting of fibers in the wind, drippings from tanks, and transport of waste by a third party. See *RODGERS*, *supra* note 76, § 8.6, at 751-52 and cases cited therein.

88. A "hazardous substance," as defined in CERCLA § 101(14), 42 U.S.C. § 9601(14), includes substances designated as hazardous in four other environmental laws, the Federal Water Pollution Control Act (Clean Water Act), the Solid Waste Disposal Act (Resource Conservation and Recovery Act), the Clean Air Act, and the Toxic Substances Control Act, and those that the EPA has designated as hazardous under the authority of CERCLA § 102, 42 U.S.C. § 9602. See also *RODGERS*, *supra* note 76, § 8.6, at 756; *Berger et al.*, *supra* note 23, at 79 n.10; *Solo*, *supra* note 23, at 291-92.

89. *Berger et al.*, *supra* note 23, at 79; *Buzbee*, *supra* note 26, at 43; *Solo*, *supra* note 23, at 291-92. A hazardous waste "facility" is defined as "any building, structure, installation, equipment . . . well, pit, pond, lagoon, impoundment ditch, landfill, storage container . . . [or] any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located." CERCLA § 101(9), 42 U.S.C. § 9601(9). Courts have interpreted this

tion at a wide variety of sites,⁹⁰ including those where contamination occurred solely in the past.⁹¹ If a developer spends the money to test a site and finds some contamination there, it may be required to report the contamination to the EPA,⁹² which might add the site to the NPL.⁹³ CERCLA liability would then attach to the present owner, even if it did not cause the contamination at the site.⁹⁴

Once a site is designated for cleanup under CERCLA, its owner faces the power of the sweeping authority given to the EPA under CERCLA and judicial interpretations.⁹⁵ The EPA may proceed with

definition of facility broadly to include "virtually any place at which hazardous wastes have been dumped, or otherwise disposed of," including manufacturing buildings, stables, roadsides, drag strips, gas stations, private homes, real estate subdivisions, and even dry cleaning establishments. RODGERS, *supra* note 76, § 8.6, at 758-61 and cases cited therein; Berger et al., *supra* note 23, at 79-80; Solo, *supra* note 23, at 292.

90. For example, CERCLA's definition of hazardous substance subjects a party to liability for disposal of any of over 700 substances. RODGERS, *supra* note 76, § 8.6, at 754 ("The term 'hazardous substance' under CERCLA, like that of 'release,' is known best for its breadth and inclusiveness."); Berger et al., *supra* note 23, at 79 (citing *B.F. Goodrich v. Murtha*, 958 F.2d 1192 (2d Cir. 1992)); Solo, *supra* note 23, at 291-92.

91. *OTA Testimony*, *supra* note 20, at 302; RODGERS, *supra* note 76, § 8.7, at 769.

92. Under CERCLA, an owner or operator is required to notify EPA "as soon as he has knowledge of any release . . . of a hazardous substance." CERCLA § 103(a), 42 U.S.C. § 9603(a); see also *RESOURCES FOR THE FUTURE*, *supra* note 26, at 25; RODGERS, *supra* note 76, § 8.5, at 71; WHITMAN, *supra* note 74, § 2.02(a)-(c); McWilliams, *supra* note 20, at 715. If the site is an industrial site with a permit under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992k (1994), the permit holder has a continuing obligation to notify federal officials when it discovers hazardous substances at the site. 42 U.S.C. § 6922(a)(6); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 52.

93. There are three ways in which a site may be added to the NPL. See RODGERS, *supra* note 76, § 8.4, at 722. The principal way is that the EPA evaluates the danger at a site, using a system known as the "Hazard Ranking System" (HRS), to decide whether a site should be placed on the NPL. See *RESOURCES FOR THE FUTURE*, *supra* note 26, at 6 n.12; RODGERS, *supra* note 76, § 8.4, at 714-17 (describing the operation of the HRS); WHITMAN, *supra* note 74, § 2.02(a)-(c); Buzbee, *supra* note 26, at 45 n.27; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 52; see also CERCLA § 105(c), 42 U.S.C. § 9605(c) (subsection added in 1986 requiring amendments to the HRS to "assure, to the maximum extent feasible, that the hazard ranking system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review"). The site is first proposed to be added to the NPL. After evaluating the public comments, the agency determines whether the site should be scored at greater than 28.5 on the HRS, and if so, the site is listed. Kit R. Krickenberger & Pamela Rekar, *Superfund Settlements: Breaking the Logjam*, 19 *Env't Rep.* (BNA) 2,384 (1989); see also *RESOURCES FOR THE FUTURE*, *supra* note 26, at 6 n.12; RODGERS, *supra* note 76, § 8.4, at 716. The NPL is "dynamic," with sites added and (less frequently) deleted quite often. See *id.* § 8.6, at 754. Thus, there is no guarantee that a brownfield site will not become an NPL site.

94. *Bartsch Testimony*, *supra* note 22, at 27; RODGERS, *supra* note 76, § 8.7, at 769 n.12 and cases cited therein; WHITMAN, *supra* note 74, § 5.01, at 134; Berger et al., *supra* note 23, at 75; Solo, *supra* note 23, at 293. For a typical small business owner's perspective on this aspect of the CERCLA liability scheme, see *Pennsylvania Chamber Testimony*, *supra* note 74, at 258 (testifying that "liability, regardless of responsibility for contamination, . . . results in unjust and severely detrimental financial hardship to innocent parties").

95. For discussions of the EPA's comprehensive enforcement powers under CERCLA, see Beth I.Z. Boland, *Consent Decrees Under the Superfund Amendments and Reauthorization Act*, 1987 U. CHI. LEGAL F. 451; John C. Butler III et al., *Allocating Superfund Costs: Cleaning Up the Controversy*, 23 *Env'tl. L. Rep.* (Env'tl. L. Inst.) 10,133 (1993); Buzbee, *supra* note 26, at 61-66; Kyle E. McSlarrow et al., *A Decade of Superfund Litigation: CERCLA Case Law from 1981-1991*, 21 *Env'tl. L. Rep.* (Env'tl. L. Inst.) 10,367 (1991); Lawrence E. Starfield, *The 1990 National Contingency Plan—More Detail and More Structure, But Still a Balancing Act*, 20 *Env'tl. L. Rep.*

the cleanup itself,⁹⁶ or, acting pursuant to Section 106 of CERCLA,⁹⁷ order responsible parties to clean up the site.⁹⁸ In either case, the responsible parties are strictly⁹⁹ and jointly and severally liable for reimbursement of all costs of removal or remedial actions that are consistent with the National Contingency Plan,¹⁰⁰ unless one or more can sustain the very heavy burden of establishing the divisibility of its contribution at the liability stage.¹⁰¹ The defenses to CERCLA are nar-

(Env'tl. L. Inst.) 10,222 (1990); Kurt A. Strasser & Denise Rodosevich, *Seeing the Forest for the Trees in CERCLA Liability*, 10 YALE J. ON REG. 493 (1993); William W. Balcke, Note, *Superfund Settlements: The Failed Promise of the 1986 Amendments*, 74 VA. L. REV. 123 (1988).

96. The EPA is authorized to pursue a short-term removal or long-term remedial action consistent with the NCP. CERCLA § 104(a)(1), 42 U.S.C. § 9604(a)(1); see RESOURCES FOR THE FUTURE, *supra* note 26, at 7; RODGERS, *supra* note 76, § 8.1, at 687. This authority is usually invoked only when no responsible party will undertake the cleanup. *Id.*

97. 42 U.S.C. § 9606.

98. The EPA's orders, known as "unilateral administrative orders" (UAO), may be issued whenever necessary "to protect public health and welfare and the environment." 42 U.S.C. § 9606(a); RODGERS, *supra* note 76, § 4.9, at 379 n.31; see also HAROLD C. BARNETT, TOXIC DEBTS AND THE SUPERFUND DILEMMA 261 (1994) (describing the increase in the number of unilateral orders issued). CERCLA attempts to give the responsible parties an incentive to comply with these orders, by allowing parties who have complied with a UAO to file petitions with the EPA requesting that the Superfund reimburse the "reasonable costs" of compliance with such an order. 42 U.S.C. § 9606(b). But the EPA need only grant such petitions if the petitioner can show "it is not liable for response cost under section 9607(a)" or that "the response action ordered was arbitrary or capricious or was otherwise not in accordance with law." This is an extremely heavy burden to meet.

On its face, § 106 is a broadly worded provision that would not limit the EPA's ability to use its unilateral order authority against a brownfield developer. See *Pollution Control Indus. v. Reilly*, 715 F. Supp. 219, 220 (N.D. Ill. 1989) (noting that § 106 is a broadly written provision that "enables the EPA Administrator to issue orders as may be necessary to protect public health and welfare and the environment"); *United States v. Reilly Tar & Chem. Corp.*, 546 F. Supp. 1100, 1113 (D. Minn. 1982) ("section 106(a) . . . contains no limitations on the classes of persons within its reach").

99. NEPI WHITE PAPER, *supra* note 20, at 2; RESOURCES FOR THE FUTURE, *supra* note 26, at 7; Berger et al., *supra* note 23, at 75; Buzbee, *supra* note 26, at 43; Solo, *supra* note 23, at 293. Courts have consistently held that the standard of liability imposed by § 107 of CERCLA, 42 U.S.C. § 9607, is strict. See, e.g., RODGERS, *supra* note 76, § 8.8, at 783 (stating that "[a]lthough Congress explicitly deleted references to strict liability before the enactment of CERCLA in 1980, the cost recovery cases never have entertained seriously the possibility that liability under Section 107 requires a showing of negligence or fault"); see also *United States v. Monsanto Co.*, 858 F.2d 160, 171-73 (4th Cir. 1988), *cert. denied*, 490 U.S. 1106 (1989); *Tanglewood East Homeowners v. Charles Thomas, Inc.*, 849 F.2d 1568 (5th Cir. 1988); *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1042 (2d Cir. 1985) (declaring that Congress intended responsible parties to be strictly liable under CERCLA); *United States v. Hooker Chems. & Plastics Corp.*, 680 F. Supp. 546 (W.D.N.Y. 1988). For an excellent discussion of "strict liability" cases litigated under CERCLA, see McSlarrow et al., *supra* note 95, at 10,367.

The applicability of strict liability under CERCLA has been the subject of intense debate in Congress's consideration of Superfund reform measures. See, e.g., Lois J. Schiffer, *Keep Superfund Liability Intact*, ENVTL. F., Sept./Oct. 1995, at 25 (Assistant Attorney General for Environment and Natural Resources arguing against legislative repeal of strict liability); Bob Smith, *Repeal Retroactive Liability, Amend Joint and Several*, ENVTL. F., Sept./Oct. 1995, at 30 (chairman of the House of Representatives Subcommittee on Superfund, Waste Control, and Risk Assessment arguing in favor of a "proportionate" liability system).

100. CERCLA § 107(a)(4)(A), 42 U.S.C. § 9607(a)(4)(A).

101. RESOURCES FOR THE FUTURE, *supra* note 26, at 7; RODGERS, *supra* note 76, § 8.6, at 764; Berger et al., *supra* note 23, at 75; Buzbee, *supra* note 26, at 43; Solo, *supra* note 23, at 293; see also *United States v. Alcan Aluminum Corp.*, 964 F.2d 252, 268-69 (3d Cir. 1992) (stating

rowly tailored and rarely available, particularly for lenders and "innocent" investors.¹⁰² The EPA's broad information-gathering power under Section 104 of CERCLA may force developers to turn

that CERCLA defendants may escape joint and several liability only by demonstrating that harm is subject to reasonable apportionment under the divisibility rule recognized in *RESTATEMENT (SECOND) OF TORTS* § 433A (1965); *United States v. Stringfellow*, 661 F. Supp. 1053, 1060 (C.D. Cal. 1987) (asserting that imposition of joint and several liability promotes CERCLA's legislative intent); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio 1983) (stating that CERCLA defendants bear the burden of proving divisibility). Like CERCLA's imposition of strict liability, the joint and several liability interpretation has been debated in the Congress. See, e.g., Schiffer, *supra* note 99, at 25 (arguing against repeal of joint and several liability); Smith, *supra* note 99, at 30 (arguing in favor of amending CERCLA to implement a proportionate liability system).

102. The only statutory defenses to liability under CERCLA are that the release was "caused solely" by an act of God, an act of war, or "an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship." CERCLA § 107(b), 42 U.S.C. § 9607(b). These defenses are rarely available in CERCLA cases. See, e.g., RODGERS, *supra* note 76, § 8.8, at 795-99 and cases cited therein.

CERCLA's "innocent landowner defense," a subset of the third defense outlined above, has been construed very narrowly and "has not been effectively utilized." Solo, *supra* note 23, at 294 n.38; see also *COMING CLEAN*, *supra* note 24, at 7; *RESOURCES FOR THE FUTURE*, *supra* note 26, at 12 (noting that CERCLA's innocent landowner defense does not "remove uncertainties associated with ownership"); Berger et al., *supra* note 23, at 84-85. Defining the innocent landowner defense and analyzing its ineffectiveness requires an excursion through several provisions of CERCLA. First is the basic liability section, § 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1), which imposes CERCLA liability on, among others, the "owner or operator" of a "facility." An owner of contaminated property may therefore be liable for response costs under CERCLA. It may, however, establish a defense to CERCLA liability by proving that it meets the test of § 3107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

The landowner must prove other elements of the defense enumerated in § 107(b)(3) and cannot use the defense if the release occurred "in connection with a contractual relationship." Section 101(35)(A) of CERCLA, 42 U.S.C. § 9601(35)(A) specifically defines "contractual relationship" to include "land contracts, deeds, or other instruments transferring title or possession," such as leases unless the property was acquired after the disposal or placement of the hazardous substance which is the subject of the release or threat of release and the landowner establishes by a preponderance of the evidence that at the time he acquired the property, he had no knowledge or reason to know of the disposal of the hazardous substances at the facility. The innocent landowner defense will then exempt a current owner from liability under CERCLA if the owner did not contribute to the contamination and undertook "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice." 42 U.S.C. § 9601(35)(B); RODGERS, *supra* note 76, § 8.8, at 798-99; see *COMING CLEAN*, *supra* note 24, at 7; *McWilliams*, *supra* note 20, at 727; *Michel*, *supra* note 20, at 455 n.179.

To avail itself of the innocent landowner defense, then, a lender or prospective purchaser must not have been aware of the contamination at the site. This is becoming more unlikely, because an audit of existing conditions at the site is a feature of many commercial real estate transactions:

As a practical matter, such information is almost always known at the time of sale. Many states (but not including New York) require that any finding of contamination on a site must be listed on the deed so that a sale cannot occur without the purchaser knowing about such contamination. Most lenders also require that an environmental audit be conducted on the property prior to agreeing to a purchase, partially because of their own fear of future liability. It is, therefore, almost impossible to purchase urban industrial land without first having been notified of any chemical contaminants on the property. Once the buyer has been notified of contamination, the innocent landowner defense is no longer available.

Berger et al., *supra* note 23, at 84-85; see also *Bartsch Testimony*, *supra* note 22, at 26 (claiming that better detection methods show more sites to be contaminated and leave fewer buyers able to use the innocent landowner defense); *COMING CLEAN*, *supra* note 24, at 7; *RESOURCES FOR THE FUTURE*, *supra* note 26, at 26 (assessments typically required in property transactions);

over detailed information about their financial situations.¹⁰³ Although CERCLA contains incentives for the EPA to settle its claims against responsible parties,¹⁰⁴ the EPA's settlement policies offer little hope to developers of escaping the crushing burden of joint and several liability.¹⁰⁵

b. Uncertain Cleanup Standards and Costs

Developers fear that potential exposure to liability under CERCLA prevents them from making reliable estimates of site cleanup

RODGERS, *supra* note 76, § 8.8, at 798-99 n.111 and cases cited therein; Buzbee, *supra* note 26, at 48; Solo, *supra* note 23, at 295-96.

103. Section 104(e)(2) of CERCLA, 42 U.S.C. § 9604(e)(2), allows EPA to seek three broad categories of information:

Any officer, employee, or representative described in paragraph (1) may require any person who has or may have information relevant to any of the following to furnish, upon reasonable notice, information or documents relating to such matter: (A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility. (B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility. (C) Information relating to the ability of a person to pay for or to perform a cleanup.

If the party refuses to turn over information, it may be ordered to do so. *Id.* § 9604(e)(5). A letter from the EPA requesting information under § 104 would probably be a brownfield developer's first exposure to the remedial process at a Superfund site. At this point, the party typically knows little more than that it is involved in an environmental law problem. See Lynnette Boomgaarden & Charles Breer, *Surveying the Superfund Settlement Dilemma*, 27 LAND & WATER L. REV. 83, 84 (1992).

104. Section 122, added to CERCLA by the Superfund Amendments and Reauthorization Act (SARA) in 1986, expressly authorizes EPA to enter into agreements which "are in the public interest . . . in order to expedite effective remedial actions and minimize litigation." 42 U.S.C. § 9622. Section 122 authorizes the EPA to provide certain substantive elements in a settlement agreement. For example, the EPA is authorized to enter into "mixed funding" or partial agreements with Potentially Responsible Parties (PRPs) under which certain costs of the prospective cleanup will be financed by the government from the Superfund. The EPA also has authority to grant releases from liability by issuing covenants not to sue. See Buzbee, *supra* note 26, at 64.

105. Despite the policy of CERCLA § 122 favoring voluntary settlement of Superfund disputes, there are many barriers to settlements, and commentators have been heavily critical of § 122 and its limited effectiveness. See Frederick W. Addison, III, *Reopener Liability Under Section 122 of CERCLA: "From Here to Eternity,"* 45 SW. L.J. 1081 (1991); Buzbee, *supra* note 26, at 61-66; Frank B. Cross, *Settlement Under the 1986 Superfund Amendments*, 66 OR. L. REV. 517 (1987); James M. Strock, *Settlement Policy Under the Superfund Amendments and Reauthorization Act of 1986*, 58 U. COLO. L. REV. 599 (1988); Balcke, *supra* note 95; Peter F. Sexton, Comment, *Superfund Settlements: The EPA's Role*, 20 CONN. L. REV. 923 (1988). For example, within 60 days of receiving a "Special Notice Letter" from the EPA that they are involved with a Superfund site, see 42 U.S.C. § 9622(e)(1), PRPs must organize and decide whether to submit a good faith proposal to undertake or finance the cleanup operation. *Id.* § 9622(e)(2)(B). At this point there are typically a large number of PRPs with little information with which to assess how to allocate liabilities and responsibilities among themselves. Professor Buzbee also cites the statutory requirement to require "reopeners" in Superfund settlements as a disincentive to finality. Buzbee, *supra* note 26, at 63-64; see 42 U.S.C. § 9622(f)(6)(A).

costs.¹⁰⁶ They perceive, in particular, that cleanup costs threaten to exceed the market values of these properties.¹⁰⁷

This uncertainty is attributable in part to the considerable vagueness and uncertainty associated with applicable cleanup standards.¹⁰⁸ For example, it is nearly impossible to determine in advance the required level or cost of a cleanup under CERCLA.¹⁰⁹ The cleanup

106. *OTA Testimony*, *supra* note 20, at 302; *Pennsylvania Chamber Testimony*, *supra* note 74, at 260 (stating that “[t]he unlimited and undefined costs of a cleanup are a constant impediment to a small firm’s survival”); Berger et al., *supra* note 23, at 75; Buzbee, *supra* note 26, at 50 (using a hypothetical case to conclude that buyers and sellers of brownfield sites “can only estimate prospective value and prospective cost; even the best lawyers and consultants cannot tell them what cleanup plans would legally suffice”); McWilliams, *supra* note 20, at 726 (observing that “the threat of spiraling environmental assessment and remediation costs creates financial uncertainty and makes predicting future development costs difficult”); O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 53; Solo, *supra* note 23, at 287-88.

107. *COMING CLEAN*, *supra* note 24, at 3; Buzbee, *supra* note 26, at 47 n.33 (noting that “[w]ith cleanup costs regularly running in the multi-million dollar range, many contaminated parcels standing alone have a negative value”); Clokey, *supra* note 26, at 36-37 (stating that “[b]ecause the risks are both difficult to quantify and potentially enormous, contaminated industrial property frequently becomes unmarketable”); McWilliams, *supra* note 20, at 715; Tondro, *supra* note 20, at 789; Solo, *supra* note 23, at 298 & n.71 (“In many cases, the cost of liability is found to ‘far exceed the value of the property in an environmentally clean condition.’”) (quoting Bonnie H. Keen, *Tax Assessment of Contaminated Property: Tax Breaks for Polluters?*, 19 B.C. ENVTL. AFF. L. REV. 885, 885 (1992)). The Urban Land Institute’s Tom Black calculates that industrial sites typically range in price from \$1 to \$6 per square foot; at that rate, assuming a postdevelopment increase of \$2 per square foot in the value of the property, a five-acre site supports about \$370,000 in cleanup costs. Black, *supra* note 42, at 51. For most contaminated sites of this size, says Black, this amount must cover the costs of site assessment, cleanup, and future liability costs. *Id.*

Cleanups can cost far more than that. *Bartsch Testimony*, *supra* note 22, at 28 (stating that “the developer of an inner-city Cleveland parcel . . . spent nearly \$225,000 per acre for site testing, remediation, and preparation,” over five times the cost of a comparable project in the suburbs); *COMING CLEAN*, *supra* note 24, at 5 (putting remediation costs for a hypothetical brownfield site at between \$100,000 and \$5,000,000); Berger et al., *supra* note 23, at 94 (observing that “[t]he price of even a small cleanup can run into the millions”); *see infra* note 115 and accompanying text. Even the costs to assess existing conditions at the site can be significant. It has been estimated to take as much as \$100,000 to assess the condition of a 20-acre site. *See Michel*, *supra* note 20, at 439 n.30 (quoting *Urban Land Reclamation: Hearing Before the Subcomm. on Technology, Environment, and Aviation of the House Comm. on Science, Space, and Technology*, 103d Cong., 2d Sess. 55 (June 9, 1994) (testimony of Dr. A.E. Moffitt, Jr., Vice President, Safety, Health and Environment, Bethlehem Steel Corporation)).

Fear of environmental liability also increases the cost of borrowing from lenders, due to higher transaction costs. *See Bartsch Testimony*, *supra* note 22, at 28 (lending costs have increased “more than three-fold since 1980, according to some practitioners”); *COMING CLEAN*, *supra* note 24, at 14.

108. *Bartsch Testimony*, *supra* note 22, at 27-28; *OTA Testimony*, *supra* note 20, at 302; *COMING CLEAN*, *supra* note 24, at 10; *RESOURCES FOR THE FUTURE*, *supra* note 26, at 10; Buzbee, *supra* note 26, at 47 (noting that “CERCLA cleanup standards in application are highly variable and subject to discretionary judgments, and thus yield unpredictable results”); O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 52; Solo, *supra* note 23, at 288.

109. *NEPI WHITE PAPER*, *supra* note 20, at 6; *RESOURCES FOR THE FUTURE*, *supra* note 26, at 7 n.13; Robert H. Abrams, *Using Experience to Improve Superfund Remedy Selection*, 29 U. RICH. L. REV. 581, 584 (1995); Mark D. Anderson, *The State Voluntary Cleanup Program Alternative*, NAT. RESOURCES & ENV’T, Winter 1996, at 22, 23 (stating that the cleanup standards of CERCLA § 121 “remain difficult to determine”); Buzbee, *supra* note 26, at 59; *see also* RODGERS, *supra* note 76, § 8.5, at 724-26 (describing the vagueness of the remedy selection phase).

standard embodied in Section 121 of CERCLA¹¹⁰ forces a detailed inquiry to be undertaken at each site.¹¹¹ Establishing the appropriate level of cleanup requires a wealth of information about the remedies that might work at each site.¹¹² This information is generated in a lengthy,¹¹³ multistep process¹¹⁴ that is expensive¹¹⁵ and has been called a "slow-motion Kabuki."¹¹⁶ Cleanups also must comply with the standards of other federal and state laws that are "applicable or relevant and appropriate"¹¹⁷ which introduces a maddening complex-

110. 42 U.S.C. § 9621 (1994).

111. Excellent descriptions of the Superfund remedial process can be found in RODGERS, *supra* note 76, § 8.5, at 724-48; Abrams, *supra* note 109, at 584-88; and Starfield, *supra* note 95. The screening of potential remedies illustrates the complexity of the process. Proposed remedies are screened using nine remedy selection criteria: "(1) health protectiveness, (2) compliance with relevant laws and standards, (3) long-term effectiveness and permanence, (4) reduction of toxicity, mobility, or volume through treatment, (5) short-term effectiveness, (6) implementability, (7) cost, (8) state acceptance, and (9) community acceptance." Abrams, *supra* note 109, at 587; *see also* 42 U.S.C. § 9621; RODGERS, *supra* note 76, § 8.5, at 727. As Professor Abrams notes, this analysis is further constrained

by treating the first two factors as "threshold" criteria that must be met, the next five as "balancing" criteria that weigh trade-offs among remedies, and the final two as "modifying" criteria that allow for adjustments in the selection process to accommodate the political realities in selecting among otherwise viable alternatives.

Abrams, *supra* note 109, at 587.

112. BARNETT, *supra* note 98, at 98 (observing that Superfund cleanups require "extensive technical information on the cost, efficacy, availability, and applicability of alternative remedies to site specific contamination problems"); RODGERS, *supra* note 76, § 8.5, at 725; Abrams, *supra* note 109, at 586-87; Buzbee, *supra* note 26, at 60 (noting that "[e]ven an amended CERCLA would require some degree of site-specific analysis, taking into account a site's geology, population patterns, future use, type and extent of contamination, and the costs of alternative cleanup techniques and levels").

113. Despite increasing experience with Superfund cleanups, the process can still take a number of years to complete. RESOURCES FOR THE FUTURE, *supra* note 26, at 7 n.13 (stating that "[t]he total cleanup process can take up to ten years"); RODGERS, *supra* note 76, § 8.5, at 725-26; Abrams, *supra* note 109, at 581 (stating that it typically takes about eight years after a Superfund site is discovered to select a remedy at the site).

114. There are a number of principal stages in the Superfund remedial process, including the remedial investigation and feasibility study (RI/FS), which identifies possible cleanup remedies. The chosen remedy is embodied in a "Record of Decision" (ROD). Thereafter, the remedy is implemented through the remedial design-remedial action (RD/RA) phase, in which the specifics of how the chosen remedy will be implemented are designed in detail (RD) and performed (RA). RODGERS, *supra* note 76, § 8.5, at 724-48; Abrams, *supra* note 109, at 584-88.

115. The cost of cleaning up an average Superfund site is enormous. Each step in the remedial process at an NPL site can cost millions of dollars, and cleanup costs at an average site have been estimated at over \$25 million. RESOURCES FOR THE FUTURE, *supra* note 26, at 7 n.13; RODGERS, *supra* note 76, § 8.5, at 725 (stating that an RI/FS can cost up to \$10 million); WHITMAN, *supra* note 74, at 5-6 (estimated response costs at a typical NPL site include an average of \$1.3 million for a complete RI/FS, \$1.5 million for remedial design, \$25 million for remedial action, and nearly \$4 million for 30-year operation and maintenance of the site). Moreover, as Whitman indicates, "[t]hese costs have risen quickly as EPA has applied 'stricter' cleanup standards pursuant to SARA . . ." *Id.* at 6; *see also* O'Reilly, *Indiana's Incentives*, *supra* note 24, at 51 n.42 (citing *O'Neil v. Picillo*, 883 F.2d 176 (1st Cir. 1989) (discussing a \$5,800,000 reimbursement settlement to clean up a pig farm formerly used as waste disposal site). Although most brownfield sites probably would not cost this much to remediate, a developer would not know this in advance.

116. EASTERBROOK, *supra* note 24, at 608.

117. This requirement, known as the "ARAR" requirement, is set forth in 42 U.S.C. § 9621(d). ARARs include the following:

ity to the process.¹¹⁸ Furthermore, there is no ability to learn from past experiences and develop predictability: under the statute, each site must be analyzed individually.¹¹⁹

Proponents advance several justifications for promoting certainty in cleanup standards. First, they argue that predetermining (i.e., standardizing) the level of cleanup required can help make project decisions more efficient. Standardizing cleanup standards allows project developers to internalize project costs and, therefore, helps to ensure that only those projects that are efficient will be built.¹²⁰ Owners and prospective investors presumably will be more motivated to invest in brownfield redevelopment if they can determine in advance whether they will recoup their expenditures on cleanups.¹²¹ Lenders, once wary of any involvement at brownfield sites, will open the money tap and provide the indispensable funding for brownfields. Insurers can even underwrite the cost of remediation, so that there will be a "cap" on financial responsibility.¹²² Finally, the pace of cleanups can be more rapid with pre-set standards.

Brownfield redevelopment advocates also say Superfund's cleanup standards are too strict.¹²³ They believe that cleanup stan-

1) Cleanup standards and standards of control of other federal environmental laws (for example, those of the Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j (1988)) or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site; and

2) Promulgated standards that, while not directly applicable to the substance, location, or action, addresses problems or situations sufficiently similar to those encountered at a CERCLA site.

See RODGERS, *supra* note 76, § 8.5, at 742-43. The use of ARARs "is unique to CERCLA and has generated controversy and confusion." Starfield, *supra* note 95, at 10,230; see also Buzbee, *supra* note 26, at 59 n.65; Michel, *supra* note 20, at 439 (terming the ARAR requirement a "prescription for litigation").

118. RODGERS, *supra* note 76, § 8.5, at 744 and cases cited therein (stating that "[c]ase law shows some of the difficulties that arise in identifying ARARs and in adjudging compliance"). To take one example, the cleanup might be required to meet the stringent requirements of the RCRA "corrective action" standard. *Id.* § 8.5, at 742; Michel, *supra* note 20, at 452 (stating that "[b]y imposing RCRA standards in CERCLA cleanup actions, huge costs are imposed, whereas human health and the environment can be adequately protected for significantly less by taking into account the intended future use of the site"); O'Reilly, *Indiana's Initiatives*, *supra* note 24, at 54.

119. RESOURCES FOR THE FUTURE, *supra* note 26, at 10; Abrams, *supra* note 109, at 584-87. A number of proposals have been advanced to streamline the Superfund remedy selection process. Professor Abrams discusses the potential for reducing cleanup costs by standardizing certain features of the remedy selection process, and, in particular, by developing an archive of solutions that have proven to work at NPL sites. *Id.* at 588-93.

120. McWilliams, *supra* note 20, at 737.

121. Black, *supra* note 42, at 48.

122. *Id.* at 50.

123. Many commentators have asserted that Superfund cleanup standards have failed to resolve fundamental issues of "how clean is clean," and, in particular, force cleanups to risk levels far more stringent than necessary to protect health and the environment. See *Superfund Reauthorization (Part 2): Hearings Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Commerce*, 104th Cong., 1st Sess. 236 (June 15, 1995) (testimony of Becky Norton Dunlop) [hereinafter *Dunlop Testimony*] (stating that "[t]he Superfund law has a misplaced emphasis because it employs a standard of hypothetical future risks for sites,

dards are based on inaccurate and unrealistic assumptions about the risks posed by hazardous waste¹²⁴ that overestimate the true risks posed by Superfund sites and produce overly stringent cleanups, particularly because cleanups are required to meet residential standards at all sites.¹²⁵ If this view is correct, standards could be relaxed without increasing the actual threat to human health and the environment. This is particularly true in the brownfield context, many say, given the intended use of most property for industrial or commercial purposes.¹²⁶

c. Other Uncertainties

Developers and lenders also fear the lack of finality, especially the inability to obtain releases from liability for contamination existing on the property.¹²⁷ If contamination is discovered in the future, nothing prevents an enforcement action against the developer.¹²⁸ Developers who settle state claims may face subsequent enforcement proceedings from the EPA.¹²⁹ Finally, developers fear delays that

without regard for actual or likely risks"); BARNETT, *supra* note 98, at 274-75 (discussing this debate); EASTERBROOK, *supra* note 24, at 611 (likening Superfund cleanups to searches for "hypothetical perfection"); NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 11 (quoting a panelist's view that "it is reasonable to expect mitigation for identified risks, [but] it is not reasonable to require remediation for all hypothetical risks"); Joan Glickman, *A Superfund Retrospective: Past, Present and . . .*, PUB. MGMT., Feb. 1994, at 4 (describing criticisms of the EPA's risk assessment process); Michel, *supra* note 20, at 452 (citing Supreme Court Justice Stephen Breyer's book, *Breaking the Vicious Cycle* (1993), for the proposition that "remediators must spend millions of dollars more than what is pragmatic to achieve pristine standards"); Solo, *supra* note 23, at 308. *But see* Glickman, *supra*, at 5-6 (stating that "[o]n the other side of the debate, some residents near Superfund sites argue that risk assessments do not adequately account for the synergistic effects of commingling contaminants and actually underestimate the effects of these toxics on human health"); Samara F. Swanston, *An Environmental Justice Perspective on Superfund Reauthorization*, 9 ST. JOHN'S J. LEGAL COMMENT. 565, 568 (1994).

124. The National Academy of Public Administration's recent report on the EPA's operations contains a severe critique of the EPA's risk assessment methodologies. NAPA REPORT, *supra* note 3, at 34-49.

125. See McWilliams, *supra* note 20, at 738.

126. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 10 (citing a recommendation to "[s]et reasonable cleanup standard for identified risks and connect them to the intended use of the property"); McWilliams, *supra* note 20, at 740 (stating that "[r]edevlopment advocates have taken the reform of risk assessment one step further by lobbying for pre-set tiered standards that reflect current and reasonable future land uses").

127. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 14 (stating the common recommendation that "[p]roperty owners who complete required cleanups should be released from further liability"); *id.* at 27 (citing the statement of Charles Bartsch, Senior Policy Analyst, Northeast-Midwest Institute, that "other barriers facing redevelopment include[] a disheartening lack of certainty and finality in the legal process"); *id.* at 31 (quoting the statement of Curtis "Hank" Barnette, Chairman and CEO, Bethlehem Steel Corp., that "in exchange for cleanup to [redefined] standards, a complete release from further environmental liability must be provided to the owner of the property and others in the chain of ownership").

128. See, e.g., Bartsch Testimony, *supra* note 22, at 27 (stating that a brownfield developer will "spend the rest of his natural life worrying if some as-yet-undetected contamination will surface, undermining the value of the property and possibly bringing with it potentially costly liability claims").

129. See, e.g., NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 39-40 (quoting the statement of Tim Vanderver, Senior Partner, Patton Boggs, that "[t]he private law-

jeopardize the viability of their projects.¹³⁰ A CERCLA cleanup can take many years to complete, and, in that time, a project that was initially viable can become inefficient.¹³¹

2. Uncertainty for Lending Institutions

Perhaps even more important than the disincentives for developers is the perception of lenders that they face risks for lending on contaminated property.¹³² As "the traditional sources of capital for factory rehabilitation and renovation for start-up companies,"¹³³ their participation at brownfield sites is crucial to the success of most projects. However, lenders often practice "greenlining," routinely refusing to extend loans to brownfield redevelopers.¹³⁴

Lenders fear they will become a target for liability under CERCLA if they lend money on brownfield redevelopment projects.¹³⁵ This fear is widespread¹³⁶ and justified. Recent cases interpreting CERCLA have held lenders liable for cleanup costs at Superfund sites

yer's worst fear is, after he signs the administrative order on behalf of his client with the state, is [sic] to have the EPA come in and say 'do it again'").

130. COMING CLEAN, *supra* note 24, at 2; Berger et al., *supra* note 23, at 76; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 51-52 (stating that "[d]elay is so widely recognized as a flaw of [CERCLA] that advocates of inner-city rehabilitation are likely to be skeptical when told that waiting for cleanup under government mandates will suffice"); Solo, *supra* note 23, at 294 n.41 (describing the "great delays" in Superfund cleanups).

131. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 55 (stating that "[t]he pragmatic developer fears that by the time an environmental agency can become satisfied that no further RCRA and CERCLA remediation duties exist for an industrial location, the manufacturer will no longer sustain interest in that manufacturing site").

132. *Id.* at 45, 52 (claiming that "[f]ear of liability encourages banks to withhold loans and opportunities for business development in inner cities"); Solo, *supra* note 23, at 299.

133. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 52.

134. See, e.g., *Bartsch Testimony*, *supra* note 22, at 29; *Pennsylvania Chamber Testimony*, *supra* note 74, at 260; COMING CLEAN, *supra* note 24, at 15; Buzbee, *supra* note 26, at 39 (noting that lenders' caution may make property "unmarketable"); McWilliams, *supra* note 20, at 730-31 n.107 (citing Charles Bartsch et al., *Restoring Contaminated Sites*, ISSUES SCI. & TECH., Mar. 22, 1994, at 74); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 54. The obvious analogy here is to the practice of "redlining," the systematic refusal of banks to extend loans to prospective home purchasers in certain neighborhoods. See, e.g., COMING CLEAN, *supra* note 24, at 15 (terming this practice "brownlining"); McWilliams, *supra* note 20, at 731.

135. *Bartsch Testimony*, *supra* note 22, at 27; COMING CLEAN, *supra* note 24, at 15; Solo, *supra* note 23, at 299; see also Eric S. Tresh, *The Return of Lender Liability Under CERCLA: What Should Lenders Do?*, 3 S.C. ENVTL L.J. 131, 133 (1994) (noting that lenders fear CERCLA liability by virtue of their involvement).

136. See COMING CLEAN, *supra* note 24, at 15 (citing a poll by the American Bankers Association that indicated that "43 percent of small financial institutions . . . had stopped making loans to companies associated with environmental contamination"); RESOURCES FOR THE FUTURE, *supra* note 26, at 1-2 (citing a survey of its members by the Independent Bankers Association of America found that "seven out of ten indicated that there are some classes of loans their institution will not write due to environmental liability concerns"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 53-54 (citing a study in New Jersey of lenders' fears); John Holusha, *EPA Helping Cities to Revive Industrial Sites*, N.Y. TIMES, Dec. 4, 1995, at 1 (citing the ABA survey). Lenders' fears of liability for cleanup costs under CERCLA were the subject of discussion at a recent conference on brownfield redevelopment. *Uncertainty Greatest Concern of Lenders in Redeveloping Brownfields, Panel Says*, 65 Banking Rep. (BNA) 654 (Oct. 23, 1995) [hereinafter *Uncertainty Greatest Concern*].

as the "owner or operator" of the sites if they are sufficiently involved in activities at the sites.¹³⁷ The scope of "lender liability" is still a matter of intense debate.¹³⁸

137. *COMING CLEAN*, *supra* note 24, at 7-9; *RODGERS*, *supra* note 76, § 8.7, at 770; Michel, *supra* note 20, at 443-46; Solo, *supra* note 23, at 299.

CERCLA § 101(20)(A), 42 U.S.C. § 9601(20)(A) (1994), excludes certain lenders from the definition of "owner or operator," exempting "a person who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility." See also *RESOURCES FOR THE FUTURE*, *supra* note 26, at 7; *RODGERS*, *supra* note 76, § 8.7, at 770. A number of recent cases, most notably *United States v. Fleet Factors Corp.*, 901 F.2d 1550 (11th Cir. 1990), *cert. denied*, 498 U.S. 1046 (1991), and *Kelley v. EPA*, 15 F.3d 1100 (D.C. Cir.), *reh'g denied*, 25 F.3d 1088 (D.C. Cir. 1994), *cert. denied sub nom. American Bankers Ass'n v. Kelley*, 115 S. Ct. 900 (1995), have created considerable uncertainty in the lending community over the scope of this exemption. In *Fleet Factors*, the Eleventh Circuit held that the lender was liable as the "operator" of the facility because "its involvement with the management of the facility is sufficiently broad to support the inference that it could affect hazardous waste disposal if it so chose." *Fleet Factors*, 901 F.2d at 1558; see *RESOURCES FOR THE FUTURE*, *supra* note 26, at 26 n.48; *RODGERS*, *supra* note 76, § 8.7, at 770; Alfred R. Light, *Deja Vu All Over Again?: A Memoir of Superfund Past*, NAT. RESOURCES & ENV'T, Fall 1995, at 29, 32; Michel, *supra* note 20, at 445-46; Tresh, *supra* note 135, at 138. *Fleet Factors* "sent shock waves through the financial community," subjecting virtually every lender to CERCLA liability, as lenders usually have the requisite level of control over borrowers. See, e.g., *COMING CLEAN*, *supra* note 24, at 8-9; Tresh, *supra* note 135, at 138. Recognizing this, lenders began shunning contaminated property and asking Congress for relief. Light, *supra*, at 32; Michel, *supra* note 20, at 446; Tresh, *supra* note 135, at 139-40.

Not all courts of appeals followed the rationale of *Fleet Factors*. The Ninth Circuit held that a lender must actually participate in the management of the facility before it could be considered to be an "owner or operator." *In re Bergsoe Metals Corp.*, 910 F.2d 668 (9th Cir. 1990); see also *COMING CLEAN*, *supra* note 24, at 8 (discussing *Bergsoe Metals*). *Bergsoe Metals* was of small comfort to lenders, who believed they would still face liability under the relatively vague test of "actually participating" in management. Tresh, *supra* note 135, at 140-41. Moreover, the split in the circuits' rulings prompted widespread uncertainty. In response, the EPA adopted a rule in 1992 that specifically defined the scope of activities which a lender could undertake without "participating in management" of a facility and clarified the protections available to a foreclosing lender. 57 Fed. Reg. 18,344 (1992); see also Michel, *supra* note 20, at 446-47. For example, the rule subjected the lender to liability only if it had "undertaken responsibility for the borrower's waste disposal or hazardous substance handling practices," or "exercised control at a management level . . . comparable to that of a manager of the borrower's enterprise, such that [it] ha[s] assumed or manifested responsibility for the management of the enterprise." 57 Fed. Reg. 18,344, 18,377 (1992); see also Michel, *supra* note 20, at 446-47; Tresh, *supra* note 135, at 144. Two years later, the Court of Appeals for the D.C. Circuit invalidated the lender liability rule in *Kelley* on the grounds that the EPA was attempting to change CERCLA by regulation and did not have the authority to promulgate the rule. *Kelley v. EPA*, 15 F.3d at 1108; see also Light, *supra*, at 32; Michel, *supra* note 20, at 448-49; Tresh, *supra* note 135, at 145-50. Therefore, the uncertainty over lender liability persists, and Congress will have to act if lender liability under CERCLA is to be limited. See Berger et al., *supra* note 23, at 78; Light, *supra*, at 32; Michel, *supra* note 20, at 449; Tresh, *supra* note 135, at 149-51 (noting that the *Kelley* court stated that even though its decision would cause continued uncertainty, it was necessary, given the invalidity of the EPA's rule); Solo, *supra* note 23, at 299-300.

138. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 53; Solo, *supra* note 23, at 299. Evan Henry, Bank of America's Vice President and Manager for Environmental Services, stated at a recent conference that "[t]he environmental liability precedent set by CERCLA is still alive and well," and "lenders can get tagged for environmental cleanup cost associated with the property that are above and beyond" the amount of their loans. *Uncertainty Greatest Concern*, *supra* note 136, at 654. For recent discussions of lender liability's continued vitality after *Kelley v. EPA*, and the call from the financial community for reform, see Sara A. Goldberg, *Lender Liability Under CERCLA: Shaping a New Legal Rule*, 4 N.Y.U. ENVTL. L.J. 61 (1995); Light, *supra* note 137, at 32 (stating that *Kelley* invalidated the EPA's rule intended to "fix" the lender liability problem); Tresh, *supra* note 135, at 136. On the subject of lender liability generally, see William R. Mitch-

There are other considerations besides liability. Lenders fear that the discovery of contamination at the site will decrease the market value of their collateral¹³⁹ or compel borrowers to spend large sums on cleanups, forcing them to default on loans.¹⁴⁰

C. *The Call for Reform*

We should be cautious about making generalizations about the impact of developers' fears of environmental laws and, for that matter, any other assertion that environmental laws prevent activity that would otherwise take place.¹⁴¹ The flight of businesses to greenfield sites began long before CERCLA's enactment in 1980.¹⁴² Researchers have yet to establish a causal link between businesses' location decisions and perceived environmental costs.¹⁴³ Moreover, fear of environmental liability is not the only problem with brownfield sites.¹⁴⁴ A recent study by the nonprofit group Resources for the Future concluded that there are many other reasons besides fear of environmental liability why brownfield sites remain undeveloped.¹⁴⁵ High urban

ell, *CERCLA: The Problem of Lender Liability*, 7 J. LAND USE & ENVTL. L. 101 (1991); Philip J. Schworer & Catherine M. White, *Environmental Problems and Their Effect on Lending Institutions*, 18 N. KY. L. REV. 175 (1991).

139. *Bartsch Testimony*, *supra* note 22, at 29; Berger et al., *supra* note 23, at 78; McWilliams, *supra* note 20, at 726; Tresh, *supra* note 135, at 133; Solo, *supra* note 23, at 299.

140. *Bartsch Testimony*, *supra* note 22, at 29; RESOURCES FOR THE FUTURE, *supra* note 26, at 26 n.48; Berger et al., *supra* note 23, at 77-78; Patrice Courtney, *Urban Alchemy: Turning Brown to Green*, VIRGINIA'S ENV'T, Feb. 1996, at 14 (quoting Stephen Driver, Manager of Construction and Environmental Services, Chase Manhattan Bank, Bridgeport, CT) ("A bank wants to know that the borrower is not going to go bankrupt."); McWilliams, *supra* note 20, at 726; Tresh, *supra* note 135, at 133; Solo, *supra* note 23, at 299.

141. The perception that environmental laws have a chilling effect on business location decisions may simply be inaccurate. See RESOURCES FOR THE FUTURE, *supra* note 26, at 6 (concluding that "among the conclusions in the literature, the empirical evidence of the effect of environmental regulation on land use is ambiguous"); Buzbee, *supra* note 26, at 40 n.12 (stating that "while uncertainty may play a contributing role in the continuing underutilization of old industrial properties, ascribing a causal relationship between the two is unwarranted").

In another context, my colleague, Michael Allan Wolf, has questioned the credibility of "horror stories" cited by advocates of "reforming" the Endangered Species Act. Michael Allan Wolf, *Overtaking the Fifth Amendment: The Legislative Backlash Against Environmentalism*, 6 FORDHAM ENVTL. L.J. 637 (1995).

142. RESOURCES FOR THE FUTURE, *supra* note 26, at 4.

143. *Id.* (stating that "[r]esearchers in general have yet to find a systematic relationship between environmental regulation and corporate location decisions"); Buzbee, *supra* note 26, at 114 n.282.

144. *OTA Testimony*, *supra* note 20, at 303 (testifying that "[m]any brownfield stakeholders are quick to point out that concern about environmental contamination is only part of the problem"); Berger et al., *supra* note 23, at 72; Dinsmore, *supra* note 24, at 9-10. Clement Dinsmore lists a number of obstacles to brownfield redevelopment besides fear of liability under state and federal environmental laws. *Id.*

145. See RESOURCES FOR THE FUTURE, *THE IMPACT OF ENVIRONMENTAL LIABILITY ON INDUSTRIAL AND GREENFIELDS DEVELOPMENT* (1994). In the view of at least one commentator, however, this study may be flawed in that it was prepared under contract to the EPA. Interview with Clement Dinsmore, Clean Sites, Inc., in Alexandria, Va. (July 27, 1995).

crime rates,¹⁴⁶ obsolescence of existing infrastructures¹⁴⁷ and manufacturing facilities at brownfield sites,¹⁴⁸ and access from greenfield sites to amenities and recreation¹⁴⁹ are frequently cited as reasons for developers' flight to greenfield sites.

Nevertheless, it is a widespread—and perhaps even universal—assumption that fear of environmental liability is the dominant concern of brownfield developers.¹⁵⁰ As a result, prospective purchasers of contaminated brownfield properties often shun sites rather than buy them and face environmental liability.¹⁵¹ The costs of brownfield redevelopment are perceived to exceed the benefits, and therefore worthy development does not take place. Thus, industries and cities claim that without the incentives provided by voluntary cleanup statutes, the projects will not be undertaken.¹⁵²

III. STATE VOLUNTARY CLEANUP STATUTES AND FEDERAL INCENTIVES

The EPA and the Congress have been active in brownfield policy making, but the states have taken the lead in promoting voluntary

146. *OTA Testimony*, *supra* note 20, at 303; Dinsmore, *supra* note 24, at 10; Tondro, *supra* note 20, at 790 n.3.

147. Although some brownfield sites have excellent existing infrastructures, see *supra* note 59 and accompanying text, others are located near infrastructures too deteriorated to support development activities. See *OTA Testimony*, *supra* note 20, at 307-08 (testifying that “[t]here are a number of other factors that hinder brownfield redevelopment,” including “poor location” and “old and obsolete infrastructure”). The fact that businesses are lured to greenfield sites with promises to construct new infrastructures indicates that this is an important factor in business location decisions. See, e.g., McWilliams, *supra* note 20, at 720 n.52 (citing a study of 2000 firms conducted by the Bureau of Census that found that “the availability of public works facilities” is characterized as a ‘critical’ or ‘significant’ factor in location decisions”).

148. For example, Dinsmore states that:

economic or technological obsolescence of the buildings still standing on many of these lands also affects the economics of recycling the properties. Typically, these are multi-storied buildings that will not permit the large-scale, high-volume assembly and materials handling that industries now use. Demolishing the buildings and transporting and landfilling the debris adds significant costs to the preparation of sites for alternative uses.

Dinsmore, *supra* note 24, at 10; see also Tondro, *supra* note 20, at 790 n.3 (“Frequently . . . [brownfield sites] have obsolete buildings that would be costly to renovate or demolish in order to make way for modern manufacturing structures.”).

149. See, e.g., *OTA Testimony*, *supra* note 20, at 303 (stating that “other factors such as . . . low-quality amenities ultimately prevent redevelopment of brownfield sites”). JOEL GARREAU, *EDGE CITY: LIFE ON THE NEW FRONTIER* (1991), contains a number of case studies of the role of suburban amenities in the growth of suburban and exurban concentrations of activity, popularly known as “Edge Cities.”

150. See, e.g., *OTA STATE OF THE STATES*, *supra* note 20, at 2 (stating that “[u]ncertain liability associated with federal and state environmental laws is perhaps the most critical” challenge at brownfield sites).

151. See, e.g., McWilliams, *supra* note 20, at 716 (noting that “[a]s a result, the owner is encouraged to remove the property from the market, thereby losing the resale value of the property but escaping the risk of paying for the entire cleanup”).

152. Buzbee, *supra* note 26, at 48 (noting the substantial support for voluntary cleanup programs).

cleanups at brownfield sites.¹⁵³ The most common approaches are reforms of property transfer laws¹⁵⁴ and enactment of voluntary cleanup statutes that create new programs and reform state CERCLA laws. The voluntary cleanup statutes are the most widespread and receive the most attention.¹⁵⁵

A. State Voluntary Cleanup Statutes

1. The Statutes and Their Common Features

Twenty-nine states have statutes and regulations that establish programs to provide incentives for voluntary cleanups of contaminated sites,¹⁵⁶ and this number is growing rapidly.¹⁵⁷ Several states,

153. See, e.g., NEPI WHITE PAPER, *supra* note 20, at 43; Courtney, *supra* note 140, at 14 (stating that “[t]he most dramatic changes are taking place in the states, not in Washington”); Sweeney, *supra* note 20, at 103; Bernard A. Weintraub, *New Jersey’s Approach to the Voluntary Remediation of Brownfield Sites*, N.J. L.J., June 5, 1995, at 16 (noting that “while the federal government is part of this movement . . . , most of the attempts to facilitate the remediation and redevelopment of brownfield sites are occurring on the state level”). For a description of federal brownfield activities, see *infra* notes 407-76 and accompanying text.

154. Property transfer laws condition the transfer of real property (or its ownership or control) on the discovery, identification, investigation, cleanup, or filing of disclosure forms about contamination at the site. OTA STATE OF THE STATES, *supra* note 20, at 12-13; Tondro, *supra* note 20, at 793. In 1994, 18 states, including New Jersey and Connecticut, had property transfer laws. OTA STATE OF THE STATES, *supra* note 20, at 12; see, e.g., Tondro, *supra* note 20, at 792 (citing the Connecticut Transfer of Hazardous Waste Establishment Act, CONN. GEN. STAT. ANN. § 22a-134 (West 1995)). These statutes were intended to facilitate the reuse of property by providing a statutory mechanism for cleanups. COMING CLEAN, *supra* note 24, at 11. However, they often had the opposite effect: chilling cleanups due to the complex process involved in property transfers. Thus, reforms to these laws may hold promise for brownfield site reuse. *Id.* at 807-10.

New Jersey and Connecticut are the two states which have enacted the most comprehensive statutes to change the disincentives to property reuse in existing property transfer laws. In 1993, New Jersey enacted the “Industrial Site Recovery Act” (ISRA), N.J. STAT. ANN. §§ 13:1K-6 to -14 (West Supp. 1996), which was intended to streamline the cumbersome property transfer process of the state’s “Environmental Cleanup and Responsibility Act” and provide incentives for site reuse. See OTA STATE OF THE STATES, *supra* note 20, at 12-13; Buzbee, *supra* note 26, at 107 n.254; McWilliams, *supra* note 20, at 740 (describing the amended cleanup standards of ISRA). New Jersey’s voluntary cleanup program applies to low priority sites under the requirements of the ISRA. See N.J. ADMIN. CODE tit. 7, § 26C (WESTLAW through July 15, 1996) (outlining scope and procedures for remedial activities under Memoranda of Agreement); COMING CLEAN, *supra* note 24, at 82. Connecticut’s Urban Sites Remedial Action Program (USRAP), created by CONN. GEN. STAT. ANN. § 22a-133m (West 1995), operates in conjunction with the state’s Transfer Act. In 1995, Connecticut enacted two laws expanding its voluntary cleanup program. *Id.* § 22a-134a (a)-(e), (m) (modifying the requirements of the transfer act); *id.* §§ 22a-452d, -452e, -432, -133k, -134e, -133o, -133p, -134d; 1995 Conn. Pub. Acts 190 §§ 1-6, 14 (providing for voluntary cleanups and defining the role of licensed professionals); see also Reed D. Rubinstein, *Waiting for the Happy Ending*, CONN. L. TRIB., Nov. 13, 1995, at S4.

155. OTA STATE OF THE STATES, *supra* note 20, at 13-14.

156. States’ voluntary cleanup programs operate under a combination of authorities, including statutes specifically intended to promote voluntary cleanups, existing statutory authorities (typically state CERCLA laws), regulations promulgated under the authority of new statutes, existing regulations, and informal policy and guidance documents. In Oregon, for example, the Volunteer Cleanup Program has operated since 1991 under the state CERCLA law, OR. REV. STAT. §§ 465.200-455 (1992 & Supp. 1996), and the regulations promulgated under it, OR. ADMIN. R. 340-122-010 to -140 (WESTLAW through Oct. 31, 1995). In addition, guidance docu-

including New Hampshire and New York, have programs in place without direct statutory authority or have pilot projects.¹⁵⁸ These

ments have been issued that amplify specific issues such as numerical soil cleanup standards as found in OR. ADMIN. R. 340-122-045 (WESTLAW through Oct. 31, 1995). In 1995, the Oregon Legislature acted to amend the state CERCLA law to promote voluntary cleanups. See 1995 Or. Laws 662. However, certain features of the program described in this article such as the public participation requirements as found in OR. REV. STAT. § 465.320 (1992) and OR. ADMIN. R. 340-122-100 (WESTLAW through Oct. 31, 1995), were unaffected by the 1995 act and continue to be based on existing authority. The list in the appendix contains the authorities upon which each state bases its program. See *infra* app.

For general descriptions of state programs, see NEPI WHITE PAPER, *supra* note 20, at 43-47 (comparing the approaches in Pennsylvania, New Jersey, Connecticut, and California); OTA STATE OF THE STATES, *supra* note 20, at 9-24; Dinsmore, *supra* note 24, at 9, 10-12; Stephen C. Jones, *Unless Congress Authorizes the EPA to Grant Developers Releases from Liability, New Inner-City Cleanup Programs May Be of Limited Value*, NAT'L L.J., May 15, 1995, at B6. Specific descriptions of individual statutes are found in COMING CLEAN, *supra* note 24, at 71-115 (describing existing programs according to the EPA Region in which the states are located); Brian L. Buniva & James R. Kibler, Jr., *Virginia Joins National Trend in Protecting Environmental Audits and Encouraging Voluntary Remediation of Contaminated Sites*, VA. BAR ASS'N J., Summer 1995, at 8 (describing the Virginia statute); Buzbee, *supra* note 26, at 118-22 app. 1 (listing 19 statutory and several informal voluntary cleanup programs in place by 1995); Casserly, *supra* note 26, at 265-74 (describing the Minnesota and Wisconsin statutes); Clokey, *supra* note 26 (describing the Wisconsin statute); Thomas J. Helfrich, *Missouri Hazardous Substance Environmental Remediation Program: One Year Later*, 5 Mo. Env'tl. Compliance Update (M. Lee Smith), No. 3, at 1 (Sept. 1995) (describing the Missouri program); Michel, *supra* note 20, at 454-64 (describing the Ohio statute); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 56-67 (describing the Indiana statute); Sweeney, *supra* note 20, at 121-56 (describing the California, Colorado, Indiana, Minnesota, Ohio, Pennsylvania, Tennessee, Texas, and Virginia statutes, and the Illinois program); Rubinstein, *supra* note 154 (describing the Connecticut statutes); Thomas A. Wackerman, *Take Advantage of "New" Relief for Polluted Property*, MICH. LAW. WKLY., June 26, 1995, at 6 (describing the Michigan statute); Weintraub, *supra* note 153 (describing the New Jersey statute).

Ohio and Pennsylvania maintain comprehensive sites on the Internet's World Wide Web to assist persons interested in voluntary cleanups. See *About the Ohio Voluntary Action Program* (last modified Aug. 22, 1996) <<http://www.epa.ohio.gov/derf/volunt.html>> [hereinafter *Ohio Voluntary Action Program*]; *Pennsylvania's Land Recycling Program*, (last modified July 23, 1996) <<http://www.dep.state.pa.us/dep/deputate/airwaste/wm/landrecy/default.htm>>. Other states with program information available on the Internet include Maine and Massachusetts. Bureau of Hazardous Materials & Solid Waste Control, Maine Dep't of Env'tl. Protection, *The Voluntary Cleanup Program* (last modified July 1994) <<http://www.state.me.us/dep/ip-vrap.htm>>; Massachusetts Dep't of Env'tl. Protection, *Bureau of Waste Site Cleanup Home Page* (last modified July 10, 1996) <<http://www.state.ma.us/dep/bwsc/bwscHOME.htm>>.

157. OTA STATE OF THE STATES, *supra* note 20, at 3 (stating that voluntary cleanup programs "are being developed at a rapid pace" with 17 programs adopted since 1991); see also Courtney, *supra* note 140, at 14 (stating that "[a]lready 25 states have some sort of voluntary cleanup program, and the trend is expected to accelerate"). In 1995, for example, states enacting or substantially modifying their voluntary cleanup statutes included Arkansas, Connecticut (which expanded its voluntary cleanup statute and enacted substantial amendments to its property transfer act), Delaware, Illinois, Louisiana, Montana, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, and Virginia. See *infra* app.

158. See COMING CLEAN, *supra* note 24, at 77-78, 84-85 (describing the New Hampshire and New York programs); Berger et al., *supra* note 23, at 92-93 (describing efforts to enact a voluntary cleanup statute in New York). The New York Department of Environmental Conservation implemented a voluntary cleanup program in 1994, based on a policy memorandum. See COMING CLEAN, *supra* note 24, at 84-85; Buzbee, *supra* note 26, at 119 app. 1; Steven G. Brooks, *Cities Look to Brownfields for Greenbacks*, NATION'S CITIES WKLY., Sept. 4, 1995, at 5. Proposals have been introduced in the New York General Assembly and State Senate in recent years to create a statutory voluntary cleanup program. See N.Y. S.B. 3848, 218th General Assembly, 1st Reg. Sess. (1995); N.Y. S.B. 341, 218th General Assembly, 1st Reg. Sess. (1995). None of these

states and others are considering proposals to adopt voluntary cleanup statutes.¹⁵⁹ Some states such as Illinois, Massachusetts, Minnesota, and Ohio, have extensive programs tailored to redevelopment of brownfield sites, whereas others such as North Carolina, Tennessee, and Virginia, have more limited voluntary cleanup statutes.¹⁶⁰ The most developed programs are those in the northeastern and midwest-

proposals has been enacted into law, although Senate Bill No. 3848 did pass one house of the legislature in 1995. The New York Voluntary Cleanup Program has many of the same features as statutory programs. For example, a participant in the program may receive a "no further action" letter from the state regarding the state's intent to avoid pursuing enforcement actions at the site. See *COMING CLEAN*, *supra* note 24, at 84-85. However, because the New York program is based on the state's administrative discretion, a participant in it does not have the same guarantees as participants in other states' programs. See Beth Fitting, *Environmentalists, Developers, and the Regulators Finally Seem to Be Pulling in the Same Direction*, *CENTRAL N.Y. BUS. J.*, July 10, 1995, at 10 (quoting the statement of Neil Gingold, an attorney with the Syracuse, NY law firm of Hancock & Estabrook, that "[t]here is no legislation in this state to guarantee freedom from future liability").

California has both a statutory cleanup program, a pilot project created in the California Expedited Remedial Action Reform Act of 1994, *CAL. HEALTH & SAFETY CODE* §§ 25396-25399.2 (West Supp. 1996), and an informal Voluntary Cleanup Program. See *COMING CLEAN*, *supra* note 24, at 109; Buzbee, *supra* note 26, at 118 app. 1 (listing the California programs). The notation "California ERAP" in the charts in this part refers to the statutory pilot project; the notation "California VCP" refers to the Voluntary Cleanup Program.

As the voluntary cleanup programs in Iowa and Kansas are pilot projects, they are not counted among the states' programs or considered in this part. See *id.*; Program Surveys Received from State Voluntary Clean Program Administrators (1996) [hereinafter Survey Results] (surveys compiled by and on file with author; program information is believed to be current as of July 1, 1996) (regarding the Iowa program). The Utah statute is included; however, no developer to date has entered into an agreement to perform a voluntary cleanup in the Utah program. See ILLINOIS ENVTL. PROTECTION AGENCY, *VCP/BROWNFIELD RESOURCE GUIDE 31* (1995) [hereinafter ILLINOIS EPA GUIDE]. The state of Utah cautions that its statute is not, strictly speaking, "written to serve as a voluntary cleanup program," and, as such, "does not contain the usual elements" of other states' statutes. Survey Results, *supra*.

159. The Maryland and Oklahoma legislatures are currently considering proposals to create voluntary cleanup statutes. See 1996 Md. H.B. 5 (bill introduced Jan. 10, 1996, to establish a voluntary cleanup program in the Maryland Department of the Environment); 1996 Okla. H.B. 2972 (bill introduced Jan. 12, 1996, to create a voluntary remediation program in Oklahoma); see also Judith Evans, *Cleaning Up the Nation's 'Brownfields': Critics Want Some Assurances Industrial Sites Aren't Re-Polluted*, *WASH. POST*, Nov. 25, 1995, at E1 (describing the development of the Maryland proposal); *Maryland: Businesses Push for Brownfields Cleanup Bill*, *Greenwire*, Dec. 4, 1995, available in WESTLAW, 12/4/95 APN-GR 17 [hereinafter *Maryland Proposal*].

160. By March 1996, no site had progressed through the Arkansas or Tennessee program to a final cleanup, and Vermont had only one site in its program; by contrast, Illinois, Massachusetts, and Minnesota had each had hundreds of sites enter their programs, and Indiana had 77 sites in the program, with another four to six entering each month. Telephone Interviews with State Voluntary Cleanup Program Administrators (1996) [hereinafter Telephone Interviews] (program information is believed to be current as of July 1, 1996); see also Buzbee, *supra* note 26, at 118-19 app. 1 (noting that states have handled as few as one site (California ERAP) and as many as 3600 sites (New Jersey)); Jones, *supra* note 156; cf. *OTA STATE OF THE STATES*, *supra* note 20, at 19 (noting that as of May 1995, over 100 sites had been cleaned up in the Minnesota program and limits on liability had been issued for 300 sites); Douglas E. Congdon, *Virginia's Voluntary Cleanup Act: Where's the Beef?*, *VIRGINIA'S ENV'T.*, Feb. 1996, at 6 (noting that the Virginia program is currently handling fewer than a dozen sites); Courtney, *supra* note 140, at 15 (noting incorrectly that site owners at over 800 sites have received certificates of completion in Massachusetts since October 1993; this number refers to the number of sites in the program); Rubinstein, *supra* note 154 (noting that Illinois regulators were handling 300 sites in the state's voluntary cleanup program by 1993).

ern states¹⁶¹ of Connecticut,¹⁶² Illinois,¹⁶³ Indiana,¹⁶⁴ Massachusetts,¹⁶⁵ Michigan,¹⁶⁶ Minnesota,¹⁶⁷ New Jersey,¹⁶⁸ Ohio,¹⁶⁹ Pennsylvania,¹⁷⁰ and Wisconsin.¹⁷¹

The statutes vary widely in their structure and provisions. Some consist of amendments to state CERCLA laws or revamped state CERCLA schemes that encourage voluntary cleanups.¹⁷² Others are free-standing acts applying to sites and developers meeting statutory criteria for participation.¹⁷³ Some spell out in detail such critical is-

161. Jones, *supra* note 156.

162. Cf. NEPI WHITE PAPER, *supra* note 20, at 45 (describing Connecticut's cleanup funding mechanisms); Rubinstein, *supra* note 154 (criticizing the new Connecticut statute).

163. See OTA STATE OF THE STATES, *supra* note 20, at 24; Rubinstein, *supra* note 154.

164. See O'Reilly, *Indiana's Incentives*, *supra* note 24, at 56-57.

165. See COMING CLEAN, *supra* note 24, at 75-77 (noting that eight to ten covenants already have been granted).

166. See OTA STATE OF THE STATES, *supra* note 20, at 23 (stating that the Michigan statute, together with those of Pennsylvania and Illinois, "characterizes many of the issues at the heart of the debate on brownfields"); Rubinstein, *supra* note 154 (stating that "Michigan lawmakers . . . acted decisively . . . [and] a few months later, their efforts are already paying off").

167. In 1988, Minnesota started what is generally recognized as the first voluntary cleanup program, working by administrative discretion within the state's mini-CERCLA program. The program's codification in 1992 spurred further growth and development, and Minnesota's program is viewed widely as a "pioneer" and model program. See THE GREENFIELDS GROUP, *supra* note 25, at 3; OTA STATE OF THE STATES, *supra* note 20, at 19-20 (terming the Minnesota program the first voluntary cleanup program, and describing its features); Casserly, *supra* note 26, at 262; Pendergrass, *supra* note 26, at 6; Solo, *supra* note 23, at 318 n.177 (terming Minnesota's program a "model" voluntary cleanup program). A number of state officials contacted for this article cited the Minnesota statute as an influential model; the Louisiana statute closely resembles it. Telephone Interviews, *supra* note 160.

168. New Jersey's Industrial Site Recovery Act was not the first brownfield statute. However, the state is generally recognized as one of the first to create incentives for brownfield cleanups through the use of administrative discretion. See Courtney, *supra* note 140, at 14 (crediting New Jersey as the first state to provide incentives for brownfield cleanups); Pendergrass, *supra* note 26, at 6 (stating that "New Jersey was the first state to deal with the key problem, that developers and financiers shy away from contaminated sites"); Weintraub, *supra* note 153, at 16.

169. See Michel, *supra* note 20; Sweeney, *supra* note 20, at 124 (stating that "[t]he Ohio Voluntary Action Program is perhaps the most comprehensive voluntary cleanup legislation enacted into law").

170. See Courtney, *supra* note 140, at 15 (stating that the impact of the new Pennsylvania law may be "far-reaching"); Sweeney, *supra* note 20, at 152-53 (terming the Pennsylvania program "progressive," and "[a]rguably as comprehensive as the Ohio [program]"); Cliff Tuttle, *The New Hot Properties: Old Industrial Sites: New 'Brownfield' Laws Should Entice Developers, Lenders*, PA. L. WKLY., Oct. 30, 1995, at 13.

171. See Clokey, *supra* note 26, at 35 (stating that "[t]he new [Wisconsin] Act alters existing law in several significant respects and has had an immediate impact upon many real estate and financial transactions involving contaminated property within the state").

172. Delaware, Massachusetts, Michigan, and Washington, among others, are states that have adopted this approach. See 70 Del. Laws ch. 218, *amending* DEL. CODE ANN. tit. 7, §§ 9101-9116 (1995), and Delaware Regulations Governing Hazardous Substance Cleanup §§ 1-15 (1996) [hereinafter Delaware Regulations]; MASS. GEN. LAWS ANN. ch. 21E, § 3A (West Supp. 1996) and MASS. REGS. CODE tit. 310, §§ 40.0001-.0996 (WESTLAW through Register No. 794); MICH. COMP. LAWS ANN. §§ 324.20101-.20142 (West Supp. 1996); WASH. REV. CODE ANN. §§ 70.105D.010-.921 (West 1992 & Supp. 1996); and WASH. ADMIN. CODE §§ 173-340-100 to -890 (WESTLAW through July 24, 1996).

173. Illinois's "Site Investigation and Remedial Activities Program," for example, applies separate requirements to sites meeting statutory criteria, with other sites remaining subject to

sues as applicable cleanup standards,¹⁷⁴ while others leave these details to rule-making proceedings¹⁷⁵ and administrative discretion.¹⁷⁶ Statutory provisions have evolved rapidly as states learn from one an-

the state's CERCLA law. 415 ILL. COMP. STAT. ANN. 5/58 to 58.12 (West Supp. 1996); cf. IND. CODE ANN. §§ 13-25-5-1 to -23 (WESTLAW through end of 1996 2d Reg. Sess.).

174. See, e.g., PA. STAT. ANN. tit. 35, §§ 6026.301 to -.304 (West Supp. 1996) (establishing procedures for determining cleanup standards).

175. A number of states have supplemented their voluntary cleanup statutes with official regulations promulgated specifically under the new statutes' authority. See MO. CODE REGS. tit. 10, § 25-15.010 (WESTLAW through ENFLEX Aug. 1996 Release); OHIO ADMIN. CODE §§ 3745-300-01, 3745-300-03 to -05, 3745-300-12 to -14, 3745-300-99 (WESTLAW through Aug. 31, 1996); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting new rules, 30 TEX. ADMIN. CODE §§ 333.1-.11). Others rely upon rules developed to implement a state CERCLA law. See, e.g., MASS. REGS. CODE tit. 310, §§ 40.0001-.0996 (WESTLAW through Register No. 794); TENN. COMP. R. & REGS. §§ 1200-1-13-.01 to -.13 (WESTLAW through ENFLEX Aug. 1996 Release); WASH. ADMIN. CODE §§ 173-340-100 to -890 (WESTLAW through July 24, 1996); WIS. ADMIN. CODE chs. NR 716, 724, 726 (WESTLAW through ENFLEX Aug. 1996 Release); Clokey, *supra* note 26, at 39-44 (referring to provisions of Wisconsin's administrative rules); Casserly, *supra* note 26, at 273 (describing the Wisconsin approach); Telephone Interviews, *supra* note 160. Some states provide authority and/or mandates to develop program rules. See, e.g., DEL. CODE ANN. tit. 7, § 9104(b)(2) (WESTLAW through 1st Special Sess. of 138th General Assembly, 1995); 415 ILL. COMP. STAT. ANN. 5/58.11(c) (West Supp. 1996) (requiring rules to be promulgated within nine months after the effective date of the act); IND. CODE ANN. § 13-25-5-23 (WESTLAW through end of 1996 2d Reg. Sess.) (providing rule-making authority); LA. REV. STAT. ANN. § 30:2290(B) (West Supp. 1996); MO. ANN. STAT. § 260.571 (West Supp. 1996); OR. REV. STAT. § 465.315(2) (Supp. 1996); PA. STAT. ANN. tit. 35, § 6026.104(a) (West Supp. 1996); R.I. GEN. LAWS § 23-19.14-18 (Supp. 1996); TEX. HEALTH & SAFETY CODE ANN. § 361.612 (West Supp. 1996) (providing that public participation may be provided for by rule; notice requirement added to rules effective in 1996).

Pennsylvania's Bureau of Land Recycling and Waste Management, together with the Bureau of Regulatory Counsel, is developing rules to implement the Pennsylvania statute. PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 12. The Virginia program will rely on administrative rules to be promulgated by July 1, 1997, to clarify statutory provisions. VA. CODE ANN. §§ 10.1-1429.1(A), -1429.1(B) (Michie Supp. 1996). Until then, the program will be administered on a case-by-case basis. *Id.* § 10.1-1429.1(B); see also Buniva & Kibler, *supra* note 156, at 10. Rules are also under development in Illinois, North Carolina (which currently relies on a guidance document for most aspects of its program), Oregon, and Rhode Island. DIVISION OF SITE REMEDIATION, RHODE ISLAND DEPT' OF ENVTL. MANAGEMENT, INDUSTRIAL PROPERTY REMEDIATION AND REUSE PROGRAM: A USER'S GUIDE 2 (1996) [hereinafter RHODE ISLAND USER'S GUIDE] (stating that Rhode Island is developing soil cleanup standards); Telephone Interviews, *supra* note 160.

Ohio's Voluntary Action Program is operating on an interim basis under the 1994 statute and a first set of program rules; until final rules are developed, the program is limited to 200 cleanups at sites not involving groundwater contamination. See OHIO REV. CODE ANN. §§ 3746.04, 3746.07 (Anderson 1995) (calling for adoption of rules to implement program requirements, and applying interim standards prior to adoption of generic cleanup standards); OHIO ADMIN. CODE §§ 3745-300-01, -300-03 to -05, -300-12 to -14, -300-99 (WESTLAW through Aug. 31, 1996); Department of Emergency & Remedial Response, Ohio Env'tl. Protection Agency, *Real Estate Cleanup and Reuse Program* (last modified Dec. 19, 1996) <<http://www.epa.ohio.gov/derr/volunt.html>>.

176. Many states rely on detailed "guidance documents" that supplement the statutes. See generally Sweeney, *supra* note 20, at 134-36 (describing the Minnesota approach); Casserly, *supra* note 26 (referring to guidance documents used in Minnesota). Although these do not have the force of law, they can often be important elements in voluntary cleanup programs. This article cites to guidance documents where possible; the reader should be aware, however, that specific details of a state's implementation of its statute may be amplified upon in a guidance document not described in this section.

other.¹⁷⁷ The recent Ohio and Pennsylvania statutes arguably represent the most comprehensive and enthusiastic state efforts to promote voluntary cleanups.¹⁷⁸

Despite widespread variations, there are some common features in each of the states' programs. All of the programs are voluntary; no developer is forced to enter into them.¹⁷⁹ The principal mechanism of each program is a streamlined cleanup process, in which developers conduct cleanups in a fast-tracked process¹⁸⁰ to meet redefined cleanup standards. The cleanup process begins with an investigation to characterize existing conditions at the site.¹⁸¹ The developer then prepares a cleanup plan and carries it out, cleaning up the site to meet specific statewide standards, site-specific standards based on higher levels of risk than those allowed in the Superfund program, or standards based on background levels of contamination in the area.¹⁸²

177. Courtney, *supra* note 140, at 14. Many state officials contacted for this article indicated that they had examined one or more existing programs in developing their own programs. Some relied on programs of adjoining or nearby states, but others (Illinois, for example) had surveyed a larger number of existing programs. ILLINOIS EPA GUIDE, *supra* note 158; Telephone Interviews, *supra* note 160.

178. See PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 9-11 (reprinting an article entitled *New State Approach Aids Developers in Recycling Old Industrial Sites*, first published in the *Harrisburg Patriot* on Nov. 24, 1995); Andrew, *supra* note 29, at 28 (terming Ohio a "leader in this field"); Sweeney, *supra* note 20, at 124, 152. The responses to the Ohio and Pennsylvania programs are by no means universally positive. The programs have been criticized as "going too far" to promote voluntary cleanups. See, e.g., Pendergrass, *supra* note 26, at 6:

Sometimes, unfortunately, in their zeal to do something about brownfields, lawmakers go too far. In May [1995], for example, Pennsylvania enacted a law that essentially treats any site as if it is a brownfield worthy of special incentives and cleanup standards, regardless of where it is located or its history.

But see Michel, *supra* note 20, at 464 (claiming that the Ohio statute "falls short in providing incentives to volunteer remediators").

179. See, e.g., COLO. REV. STAT. ANN. § 25-16-303(3)(a) (West Supp. 1996); OHIO REV. CODE ANN. § 3746.10(A) (Anderson 1995) (providing that except at sites where voluntary cleanups are prohibited, "any person may undertake a voluntary action . . . to identify and address potential sources of contamination by hazardous substances or petroleum of soil, sediments, surface water, or ground water on or underlying property and to establish that the property meets applicable standards"); TEX. HEALTH & SAFETY CODE ANN. § 361.602 (West Supp. 1996) (providing that the program is "restricted to voluntary actions"); INDIANA DEP'T OF ENVTL. MANAGEMENT, VOLUNTARY REMEDIATION PROGRAM 1 (1996) [hereinafter INDIANA VRP FACT SHEET]; see also OTA STATE OF THE STATES, *supra* note 20, at 13 (noting that the major difference between voluntary cleanup programs and other state programs is that "owners or developers of a site approach the state voluntarily to cooperatively work out a process by which the site can be readied for development"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 58 (stating that participation in Indiana's program is voluntary).

180. See OTA STATE OF THE STATES, *supra* note 20, at 13 (observing that "[v]oluntary programs are particularly popular because they allow private parties to . . . avoid some of the cost and delays associated with state Superfund or other enforcement driven programs"). The remediation process is streamlined in a number of ways. Many statutes impose time limits on critical steps in the decision-making process about cleanup of an individual site. See *infra* notes 374-78 and accompanying text. A developer's ability to choose a predetermined cleanup standard, see *infra* notes 242-52 and accompanying text, also shortens the process.

181. See *infra* notes 204-23 and accompanying text.

182. See *infra* notes 231-88 and accompanying text.

Cleanups are conducted with varying degrees of state oversight, with a trend toward less state involvement.¹⁸³ A developer whose cleanup is approved by the state receives some form of protection against future state enforcement actions,¹⁸⁴ and this limit on liability is often transferrable to the developer's successors and assigns.¹⁸⁵ Several states aim to spur redevelopment of brownfield sites further by providing financial incentives designed to reduce the costs of cleanups.¹⁸⁶ Some states also provide for public participation in the decision-making process.¹⁸⁷

The definition of persons eligible for participation in some states is anyone willing to clean up a site.¹⁸⁸ Other states restrict participa-

183. Sweeney, *supra* note 20, at 121; *see infra* notes 352-73 and accompanying text.

184. OTA STATE OF THE STATES, *supra* note 20, at 18-19; Sweeney, *supra* note 20, at 121-22; *see infra* notes 289-351 and accompanying text.

185. *See infra* notes 327-32 and accompanying text.

186. OTA STATE OF THE STATES, *supra* note 20, at 18-20; Sweeney, *supra* note 20, at 122. Financial assistance can consist of low-interest loans, grants, or tax incentives for developers. *See infra* notes 395-406 and accompanying text.

187. *See infra* notes 382-94 and accompanying text.

188. The states allowing anyone to participate include: *Arizona* (ARIZ. REV. STAT. ANN. § 49-285(B) (West Supp. 1996)); *California* (COMING CLEAN, *supra* note 24, at 109 (California VCP has no formal restriction on parties eligible to participate; program includes prospective purchasers, owners, and responsible parties)); *Delaware* (DEL. CODE ANN. tit. 7, § 9107(a) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (allowing participation by "any person who has knowledge of a release of a hazardous substance at a facility and agrees to perform a remedy"; state retains discretion to disqualify applicants)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.2 (West Supp. 1996) (allowing participation by "remediation applicant," defined as "any person seeking to perform or performing investigative or remedial activities under this Title, including the owner or operator of the site")); *Indiana* (INDIANA VRP FACT SHEET, *supra* note 179, at 1); *Minnesota* (MINN. STAT. ANN. § 115B.175(1)(a) (West Supp. 1995)); *Missouri* (MO. ANN. STAT. § 260.567(1) (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(1) (WESTLAW through ENFLEX Aug. 1996 Release)); *Montana* (MONT. CODE ANN. § 75-10-733(1) (1995)); *Nebraska* (NEB. REV. STAT. § 81-15,184 (WESTLAW through end of 1995 Reg. Sess.)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 77 (regarding New Hampshire)); *New Jersey* (COMING CLEAN, *supra* note 24, at 82 (New Jersey has no restriction on eligibility)); *North Carolina* (N.C. GEN. STAT. § 130A-310.9(b) (1995)); *Ohio* (OHIO REV. CODE ANN. § 3746.10(A) (Anderson 1995)); *Oregon* (OR. REV. STAT. § 465.325(1) (Supp. 1996); 1995 Or. Laws 662 § 4(1)(a) (allowing participation by any person, and establishing separate criteria for prospective purchasers who may receive releases from liability)); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.301(a) (West Supp. 1996) (allowing participation by any "person who proposes or is required to respond to the release of a regulated substance at a site and who wants to be eligible for the [available] cleanup liability protection")); *Rhode Island* (R.I. GEN. LAWS § 23-19.14-7, -3(b), -10 (Supp. 1995) (provides for a liability exemption for a "bona fide prospective purchaser," defined as "a purchaser of a site who intends to purchase a contaminated property, who had documented their intent to purchase the property in writing, and who has offered to pay fair market value for the property in the contaminated state," who also settles with the state); RHODE ISLAND USER'S GUIDE, *supra* note 175, at 3 (participants may include responsible parties, volunteers, and bona fide prospective purchasers; actions of participants are governed by the DEM's Site Remediation Regulations)); *Tennessee* (TENN. CODE ANN. § 68-212-224(a) (Supp. 1995) (allowing participation by any party who is "willing and able to conduct an investigation and cleanup of an inactive hazardous substance site"; state has instituted an application procedure to determine if the party is in good standing)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A) (Michie Supp. 1996) (allowing participation by owners and persons who "own, operate, have a security interest in or enter into a contract for the purchase of contaminated property to voluntarily remediate releases of hazardous substances, hazardous wastes, solid wastes or petroleum")); *Washington* (Telephone Interviews, *supra* note

tion to a site's prospective purchaser¹⁸⁹ or current owner.¹⁹⁰ A developer responsible for existing contamination at the site—usually as a “responsible person” under a state CERCLA law or as an owner or operator of a site requiring remediation under the Resource Conservation and Recovery Act—is sometimes disqualified from taking part in the program.¹⁹¹ The states also focus on sites believed to be of

160 (Washington imposes no eligibility restriction on participants conducting “independent remedial actions” under WASH. ADMIN. CODE § 173-340-550(7) (WESTLAW through July 24, 1996); potentially liable parties also may negotiate voluntary agreements, including consent decrees and “agreed orders,” under the procedure set forth in *id.* § 173-340-510(2)). See also Sweeney, *supra* note 20, at 151 n.296 (describing the Virginia provision); Survey Results, *supra* note 158 (regarding the New Jersey, Rhode Island, and Tennessee provisions); Telephone Interviews, *supra* note 160 (regarding the California, Delaware, Indiana, and Washington programs).

As indicated in notes 192 and 193 and the accompanying text, *infra*, states may disqualify persons otherwise eligible because the sites in question are ineligible to participate in the program. See, e.g., Survey Results, *supra* note 158 (regarding the Maine program, which disqualifies certain sites subject to RCRA, and the Texas program, which disqualifies certain sites subject to state enforcement actions).

189. ARK. CODE ANN. §§ 8-7-503(16), -523(a)(3) (Michie Supp. 1995) (defining a “prospective purchaser” as “a person who expresses a willingness to acquire an abandoned industrial site and is not responsible for any preexisting pollution at or contamination on the site” and requiring that the prospective purchaser “reuse or redevelop the property for industrial activities to create employment expansion”); MASSACHUSETTS DEP’T OF ENVTL. PROTECTION, CLEAN SITES INITIATIVE 2 (1995) [hereinafter MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET] (restricting eligibility to prospective purchasers or prospective tenants); VT. STAT. ANN. tit. 10, §§ 6602, 6615a(b), 6615a(f)(1)(B) (1993 & Supp. 1996) (allowing participation by an “eligible person”); restricts participation to prospective purchasers); WIS. STAT. ANN. § 144.765(1)(c), (2)(a) (West Supp. 1995) (exempts a “purchaser” from liability, and defines purchaser as “a person who acquires property in an arm’s-length, good-faith transaction . . . [who] did not participate in the management of, and was not the owner of, a business or entity that caused the release of a hazardous substance on the property[;] . . . did not own the property at the time of a hazardous substance was released[; and] . . . did not otherwise cause the release of a hazardous substance on the property”); see also Survey Results, *supra* note 158 (regarding the Vermont provision); Telephone Interviews, *supra* note 160 (regarding the Vermont provision).

190. COLO. REV. STAT. ANN. § 25-16-303(3)(a) (West Supp. 1996); Survey Results, *supra* note 158.

191. ARK. CODE ANN. § 8-7-523(a)(2) (Michie Supp. 1995); LA. REV. STAT. ANN. § 30:2285.1(A) (West Supp. 1996) (barring a “responsible person” as defined in *id.* §§ 30:2271 - :2279); MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET, *supra* note 189, at 2; COMING CLEAN, *supra* note 24, at 84 (New York excludes responsible parties at state Superfund sites); TEX. HEALTH & SAFETY CODE ANN. § 361.610(a) (West Supp. 1996) (excluding a developer that is a “responsible party” at the time of application); VT. STAT. ANN. tit. 10, § 6615a(c) (Supp. 1996) (excluding a person otherwise liable under the state’s hazardous waste cleanup statute); WIS. STAT. ANN. § 144.765(1)(c) (West Supp. 1996); see also Sweeney, *supra* note 20, at 123 (citing to the Colorado and Minnesota provisions). In Wisconsin, a responsible person may not remediate the property, or receive a release from liability, but may perform site investigation activities.

But see MINN. STAT. ANN. § 115B.175(6a) (West Supp. 1995) (providing that responsible persons who undertake voluntary response actions may obtain a limitation on liability); Sweeney, *supra* note 20, at 133. Other states allowing participation by responsible persons include California ERAP (applying the pilot project to responsible persons who agree to be bound by program requirements, see CAL. HEALTH & SAFETY CODE § 25396.6(c)(3) (West Supp. 1996)), Delaware, Illinois, Indiana, Maine, Missouri, Montana, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, and Tennessee. See SUPERFUND SECTION, N.C. DEP’T OF ENV’T, HEALTH & NATURAL RESOURCES, INACTIVE HAZARDOUS SITES PROGRAM: GUIDELINES FOR RESPONSIBLE PARTY VOLUNTARY SITE REMEDIAL ACTION 1-1 (1996) [hereinafter N.C. GUIDELINES]; RHODE ISLAND USER’S GUIDE, *supra* note 175, at 3; Telephone Interviews, *supra* note 160; *supra* note 189 and accompanying text. Although Oregon allows

lesser regulatory concern. Many prohibit voluntary cleanups of sites listed on the NPL¹⁹² or a comparable state list, or exclude sites subject to certain types of state or federal enforcement action (e.g., state CERCLA cleanups, RCRA corrective action cleanups, and underground storage tank (UST) cleanups).¹⁹³ However, some states such

responsible persons to participate in its Volunteer Cleanup Program in order to obtain a "no further action" letter, it does not allow them to obtain a release from liability under its new "Prospective Purchaser Agreement." 1995 Or. Laws 662 § 4(1)(a); Telephone Interviews, *supra* note 160. Similarly, responsible parties in Rhode Island may receive a "letter of compliance," but not a covenant not to sue. RHODE ISLAND USER'S GUIDE, *supra* note 175, at 3-4; Telephone Interviews, *supra* note 160.

192. States specifically excluding NPL sites include: *California* (CAL. HEALTH & SAFETY CODE § 25396.6(c)(1) (West Supp. 1996) (California ERAP); Telephone Interviews, *supra* note 160 (California VCP)); *Colorado* (COLO. REV. STAT. ANN. § 25-16-303(3)(b)(I) (West Supp. 1996)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.1(a)(2)(i) (West Supp. 1996)); *Missouri* (MO. CODE REGS. tit. 10, § 25-15.010(3)(D) (WESTLAW through ENFLEX Aug. 1996 Release) (excludes sites that warrant enforcement action under CERCLA or are being considered for the NPL based on a completed site investigation that indicates that NPL listing is appropriate)); *Montana* (MONT. CODE ANN. § 75-10-732(1)(a) (1995) (excludes sites listed or proposed for listing on NPL)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 77); *New Jersey* (N.J. ADMIN. CODE tit. 7, § 26C-5.3 (WESTLAW through July 15, 1996) (the state, in its discretion, may "allow a regulatory or enforcement mechanism already in effect at the site to control the remediation at the site")); *New York* (COMING CLEAN, *supra* note 24, at 84); *North Carolina* (Survey Results, *supra* note 158); *Ohio* (OHIO REV. CODE ANN. §§ 3746.02(A)(1)(d) (Anderson 1995)); *Oregon* (COMING CLEAN, *supra* note 24, at 111); *Pennsylvania* (COMING CLEAN, *supra* note 24, at 88); *Rhode Island* (COMING CLEAN, *supra* note 24, at 79); *Tennessee* (Survey Results, *supra* note 158 (allowing only prospective NPL sites which have not undergone formal HRS scoring to join the program)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A) (Michie Supp. 1996)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(f)(2)(A) (Supp. 1996) (providing that an NPL site is ineligible unless negotiations are ongoing for a Prospective Purchaser Agreement prior to April 20, 1995)); *Wisconsin* (Telephone Interviews, *supra* note 160). See also COMING CLEAN, *supra* note 24, at 82, 109 (regarding the California VCP and New Jersey programs); Michel, *supra* note 20, at 454 n.173 (describing the Ohio provision); Sweeney, *supra* note 20, at 137 (describing the Colorado provision); Survey Results, *supra* note 158 (regarding the Missouri, New Jersey, North Carolina, and Vermont programs); Telephone Interviews, *supra* note 160 (regarding the Montana, North Carolina, Oregon, Pennsylvania, Rhode Island, and Tennessee programs).

A number of states have entered into agreements with the EPA that allow voluntary cleanups at NPL sites in certain instances. For example, Delaware maintains an agreement with EPA Region III that allows potential NPL sites to enter the program if the cleanup party is competent to handle the cleanup. COMING CLEAN, *supra* note 24, at 86. Washington has a similar agreement with the EPA's Region X. *Id.* at 113; Telephone Interviews, *supra* note 160.

193. States excluding sites with pending state or federal enforcement actions include: *Arkansas* (Telephone Interviews, *supra* note 160 (Arkansas does not at present include UST sites from participation, but RCRA corrective action sites are handled by the state's RCRA program)); *California* (CAL. HEALTH & SAFETY CODE § 25396.6(c)(4) (West Supp. 1996) (excluding a site from the California ERAP with a "known condition of interim endangerment existing at the site")); Telephone Interviews, *supra* note 160 (UST sites not handled under the California VCP)); *Colorado* (COLO. REV. STAT. ANN. § 25-16-303(3)(b)(II)-(IV) (West Supp. 1996) (excluding RCRA corrective action sites, UST sites, and state enforcement sites, in addition to NPL sites)); *Delaware* (COMING CLEAN, *supra* note 24, at 86 (Delaware excludes UST sites, RCRA corrective action sites, and others; DEL. CODE ANN. tit. 30, § 2010 defines sites eligible for tax relief to include brownfield sites and exclude enforcement sites)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.1(a)(2)(ii)-(iv) (West Supp. 1996) (excluding permitted facilities, RCRA closures, and UST sites)); *Maine* (Survey Results, *supra* note 158 (Maine disqualifies any RCRA corrective action, TSDFs or RCRA generator sites subject to closure)); *Minnesota* (COMING CLEAN, *supra* note 24, at 98 (Minnesota disqualifies sites under the jurisdiction of other state remediation programs, UST sites, RCRA corrective action sites, and sites involving the removal of asbestos, radon, radioactive wastes, or agricultural chemicals)); *Missouri* (MO. CODE REGS. tit. 10, § 25-

15.010(3)(D) (WESTLAW through ENFLEX Aug. 1996 Release) (disqualifies sites that are facilities with RCRA permits or interim status, sites subject to state or federal enforcement actions; also disqualifies sites where conditions constitute an imminent and substantial threat to public health or the environment)); *Montana* (MONT. CODE ANN. §§ 75-10-732(1)(b)-(e), (2) (1995) (disqualifies facilities subject to certain state enforcement actions; providing, however, that notwithstanding the provisions of § 75-10-732(1)(b)-(e), "the department may agree to accept and may approve an application" for an otherwise ineligible site)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 77 (New Hampshire excludes UST sites)); *New Jersey* (N.J. ADMIN. CODE tit. 7, §§ 26C-3.1(b), -5.3 (WESTLAW through July 15, 1996) (excludes enforcement sites, such as UST sites and landfills)); *New York* (COMING CLEAN, *supra* note 24, at 84 (New York excludes RCRA sites)); *North Carolina* (N.C. GEN. STAT. §§ 130A-310(2)-(3) (1995) (excludes RCRA permitted facilities, UST sites, and sites where the Division of Environmental Management or the Department of Agriculture has assumed jurisdiction; state regulates only hazardous substances as defined in CERCLA)); *Ohio* (OHIO REV. CODE ANN. § 3746.02(A)(1)-(5) (Anderson 1995) (disqualifies sites where closure or remediation is mandated by Ohio or federal law)); *Oregon* (OR. ADMIN. R. 340-122-030(3) (WESTLAW through Oct. 31, 1995) (excludes RCRA corrective action sites and UST sites from state CERCLA program; however, cleanup of the latter may be authorized under OR. ADMIN. R. 340-122-215(2)); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.904(b)-(c) (West Supp. 1996) (applying cleanup standards developed under the Land Recycling Act to state Hazardous Sites Cleanup Priority List sites and UST sites, but providing for cleanups to take place under the administrative requirements of those programs)); *Rhode Island* (COMING CLEAN, *supra* note 24, at 79 (Rhode Island excludes UST sites at present, but expecting new regulations to include them; any participant, including responsible parties, may volunteer up until the time that the Department orders cleanup)); *Tennessee* (TENNESSEE DIV. OF SUPERFUND, VOAP: A CLEANUP PROGRAM FOR THOSE WILLING AND ABLE 2 (1996) [hereinafter TENNESSEE VOAP FACT SHEET] (UST sites excluded)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.603(a) (West Supp. 1996); *id.* § 361.605(a)(1); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting a new rule, 30 TEX. ADMIN. CODE § 333.2 (1996), that disqualifies the portion of site that is subject to a commission permit or order and providing that the state may reject application if an administrative, state, or federal enforcement action is pending that concerns the remediation of the hazardous substance or contaminant described in the application; state indicates, based on its definition of "pending enforcement action" in § 333.2 that several sites which have had some level of enforcement action, up to the issuance of an order, have been redirected into its program)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(f)(2)(B)-(C) (Supp. 1996) (excluding RCRA corrective action sites and underground storage tanks subject to regulation; UST sites are regulated separately with cleanup funds and liability limits under Vermont's Petroleum Cleanup Fund; both sites subject to enforcement actions and voluntary cleanups under other programs are excluded)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A) (Michie Supp. 1996) (providing that rules will apply where remediation has not "clearly been mandated" under CERCLA, RCRA, state law, or common law; excludes sites with existing or pending permits, closure plans, administrative orders, court orders, or consent orders)). See also COMING CLEAN, *supra* note 24, at 82, 109, 111 (describing the California VCP, New Jersey, and Oregon programs); OTA STATE OF THE STATES, *supra* note 20, at 13 (stating that "[s]ites that typically enter a voluntary program . . . are not currently listed or being considered for the federal NPL or similar state superfund lists"); Buniva & Kibler, *supra* note 156, at 6 (describing the Virginia provision); Michel, *supra* note 20, at 454 (describing the Ohio provisions); Sweeney, *supra* note 20, at 123 & n.126 (citing the Ohio, Colorado, and Pennsylvania provisions); Casserly, *supra* note 26, at 265-66 (stating that "[t]he [Minnesota] program cannot typically be utilized for cleanup of a property that already falls under the authority of one of the other state or federal pollution programs"); Survey Results, *supra* note 158 (regarding the Colorado, Delaware, Missouri, New Jersey, Pennsylvania, Rhode Island, Texas, Vermont, and Virginia provisions); Telephone Interviews, *supra* note 160 (regarding the California VCP, Delaware, North Carolina, Oregon, Pennsylvania, Rhode Island, Tennessee, and Washington programs). Indiana has discretion to reject an application if a "state or federal enforcement action that concerns the remediation of the hazardous substance or petroleum described in the application is pending." IND. CODE ANN. § 13-25-5-5 (WESTLAW through end of 1996 2d Reg. Sess.); INDIANA VRP FACT SHEET, *supra* note 179, at 1. One commentator has criticized the Pennsylvania statute for its application of certain features to virtually any site, whether or not it is a legitimate brownfield site. Pendergrass, *supra* note 26, at 6; see also Tuttle, *supra* note 170

as Michigan allow voluntary cleanups to take place at virtually any site,¹⁹⁴ and others provide administrative discretion to allow participation at sites that would otherwise be disqualified.¹⁹⁵

The following tables summarize the sites and persons eligible for each of the state programs.

(stating that “most provisions of the [Pennsylvania] statute are applicable to any property in need of environmental remediation”).

194. In Michigan, virtually any contaminated site is eligible. MICH. COMP. LAWS ANN. § 324.20101(1)(l) (West Supp. 1996) (provisions apply to a “facility,” defined as “any area, place, or property where a hazardous substance in excess of the concentrations which satisfy the requirements of section 20120a(1)(a) or (17) has been released, deposited, disposed of, or otherwise comes to be located”). However, sites containing underground storage tanks are usually addressed under the state’s UST program. *Id.* §§ 324.21301a-.21330. Washington provides that the state may clean UST, RCRA, and NPL sites under its program whereas Wisconsin’s program currently allows all sites to obtain a certificate of completion; however, RCRA corrective action sites and NPL sites may still be the subject of federal actions under CERCLA and RCA; UST sites are eligible. COMING CLEAN, *supra* note 24, at 113 (regarding the Washington program); Survey Results, *supra* note 158 (regarding the Wisconsin program); Telephone Interviews, *supra* note 160 (regarding the Washington and Wisconsin programs).

In Connecticut, the state evaluates sites for participation in the Urban Sites Remedial Action Program, based on factors that include the site’s economic development potential, as defined by the state. CONN. GEN. STAT. ANN. § 22a-133m(b) (West 1995). Eligible sites may be NPL, RCRA corrective action, or UST sites. COMING CLEAN, *supra* note 24, at 72. The state subdivides sites according to whether the applicant will remediate the property (Type I sites), the state will draft the cleanup plan and implement it at a site in a “distressed municipality” (Type II sites), or whether the state will acquire the site and remediate it (Type III sites). CONN. GEN. STAT. ANN. § 22a-133m (West 1995); CONN. AGENCIES REGS. §§ 22a-133m-1 to -3 (WESTLAW through Sept. 24, 1996) (governing Type III site cleanup process); COMING CLEAN, *supra* note 24, at 72-73. Similarly, the Massachusetts program applies to sites in an “Economic Target Area,” as defined by the state, or sites that present economic development opportunities. MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET, *supra* note 189, at 2.

195. See OTA STATE OF THE STATES, *supra* note 20, at 14. Indiana does not expressly disqualify sites targeted for state or federal action, but allows the state to declare such sites ineligible. IND. CODE ANN. § 13-25-5-5 (WESTLAW through end of 1996 Reg. Sess.); see also O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 59-60 (describing the Indiana provision). Likewise, Maine’s statute does not disqualify any sites; the state, however, requires that developers seeking to remediate certain types of sites (e.g., sites with USTs) receive a determination of eligibility from the state prior to submission of a voluntary response action plan. Maine Dep’t of Env’t Protection, *The Voluntary Clean-up Program* (visited Mar. 6, 1996) <<http://www.state.me.us/dep/ip-vrap.htm>> [hereinafter *Maine VCP Fact Sheet*]. Some statutes bar participation at certain sites but empower the state to allow participation under certain conditions. See, e.g., MONT. CODE ANN. § 75-10-732(2) (1995) (providing that the state “may agree to accept and may approve an application for a voluntary cleanup plan” for disqualified sites); VT. STAT. ANN. tit. 10, § 6615a(f)(2)(A) (Supp. 1995) (providing that the state may allow participation by a developer at an NPL site if negotiations are underway to culminate in a prospective purchaser agreement).

TABLE 1
PARTICIPANT ELIGIBILITY

Persons Eligible	State	Comments
Any person (<i>except those involved with disqualified sites</i>)	Arizona, California VCP, Delaware, Illinois, Indiana, Maine, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Virginia, Washington	<i>Oregon, Rhode Island:</i> responsible parties are eligible, but only prospective purchasers will receive release from liability
Prospective purchaser	Arkansas, Massachusetts, Vermont, Wisconsin	
Owner only	Colorado	<i>Colorado:</i> participant may also be the owner's designated representative
Responsible parties excluded	Arkansas, Louisiana, Massachusetts, New York, Vermont, Wisconsin	<i>Wisconsin:</i> statutory definition of "purchaser" limits participation to innocent parties
Other	Connecticut, ¹⁹⁶ California ERAP, ¹⁹⁷ Michigan ¹⁹⁸	

196. In Connecticut, no site is eligible for the USRAP unless "the state owns the site or otherwise has or obtains the power to approve the type of development which first occurs on the site after remediation," which necessarily limits the type of persons who may participate. CONN. GEN. STAT. ANN. § 22a-133m(b) (West 1995). Prospective purchasers may participate at "Type III" sites, whereby the state purchases property and cleans it up. CONN. GEN. STAT. ANN. § 22a-133m(e) (West 1995); *see also* COMING CLEAN, *supra* note 24, at 73. Responsible persons may participate at Type I sites if they are willing to clean up the sites. *Id.* at 72. The protection of the new voluntary cleanup program extends to owners and lessors. 1995 Conn. Pub. Acts 190, § 3.

197. The California ERAP applies to sites designated by the Site Designation Committee that have one or more responsible persons. *See* CAL. HEALTH & SAFETY CODE § 25396.6(c) (West Supp. 1996). As a result, the participants will all be responsible persons.

198. Michigan provides a liability exemption for a prospective purchaser or transferee that conducts a "baseline environmental assessment" and submits the result to the state, together with a plan for any necessary remedial action. MICH. COMP. LAWS ANN. § 324.20129a (West Supp. 1996). Because the statute also exempts owners and operators who have not caused contamination at the site, the new law offers them protection as well, unless they exacerbate the contamination. *Id.* §§ 324.20107, 324.20126.

TABLE 2
SITE ELIGIBILITY

Sites Eligible	State	Comments
Any site is potentially eligible	Indiana, Louisiana, Michigan, Washington, Wisconsin	<i>Indiana</i> : state has discretion to reject participation at sites with pending enforcement actions
NPL sites excluded	California ERAP, California VCP, Colorado, Illinois, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Virginia, Vermont	<i>Delaware</i> : NPL sites may enter under certain circumstances
Sites subject to other state and federal enforcement actions (e.g., RCRA corrective action, UST sites) excluded	Arkansas, California ERAP, California VCP, Colorado, Delaware, Illinois, Maine, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, Virginia	<i>California ERAP</i> : sites that qualify for program are state CERCLA sites (with pending enforcement actions) <i>Maine, Oregon</i> : UST sites may be included <i>Montana</i> : state has discretion to approve cleanup plan for otherwise ineligible site <i>Texas</i> : basis for rejecting application; discretionary with state
Eligibility defined by economic development potential	Connecticut, Massachusetts	

2. Distinguishing Environmental Audit Statutes

At the outset, a distinction must be made between the voluntary cleanup statutes and the growing number of state "environmental audit" statutes¹⁹⁹ designed to promote voluntary compliance with the

199. The first state to enact an environmental audit privilege law was Oregon in 1993. OR. REV. STAT. § 468.963 (Supp. 1996). See generally James T. O'Reilly, *Environmental Audit Privileges: The Need for Legislative Recognition*, 19 SETON HALL LEGIS. J. 119 (1994) [hereinafter O'Reilly, *Environmental Audit Privileges*] (terming the Oregon statute a model for subsequent state efforts). Other states have enacted or propose to enact similar statutes. See 1996 Alaska

environmental laws. The audit statutes offer incentives to the owner or operator of a facility, including an evidentiary privilege,²⁰⁰ if it evaluates its operations, discovers contamination, and reports violations, together with a plan for corrective action, to the state.²⁰¹ Environmental audit statutes are similar to voluntary cleanup statutes in their goals and features.²⁰² For example, both often preclude a state from taking certain enforcement actions against the owner or operator with respect to contamination described in a site report and cleaned up in a timely fashion.²⁰³ The principal difference between the two is that environmental audit statutes are designed to enable a polluter to admit its mistakes and correct them. A brownfield developer participating in a voluntary cleanup program, by contrast, typically has not had any involvement with the site, let alone caused any contamination there. Therefore, the voluntary cleanup statutes are likely to be more helpful to brownfield developers.

S.B. 199 (bill introduced to establish an environmental audit program in Alaska); ARK. CODE ANN. § 8-1-303 (Michie Supp. 1995); COLO. REV. STAT. ANN. § 13-25-126.5 (West Supp. 1996); IDAHO CODE §§ 9-801 to -811, 9-340 (Supp. 1996); 415 ILL. COMP. STAT. ANN. 5/52.2 (West Supp. 1996); IND. CODE ANN. § 13-28-4-1 to -10 (WESTLAW through end of 1996 2d Reg. Sess.); 1994 N.J. S.B. 1797 and 1994 N.J. A.B. 2521 (unsuccessful proposals to establish an environmental audit privilege in New Jersey); 1996 Kan. Sess. Laws 204 (establishing an environmental audit program in Kansas); KY. REV. STAT. ANN. §§ 224.01-.040 (Baldwin 1995); 1995 Minn. Sess. Law Serv. 168, §§ 8-19 (West) (creating an "environmental improvement pilot program" in Minnesota); MISS. CODE ANN. § 49-2-71 (Supp. 1996); UTAH CODE ANN. §§ 19-7-101 to -109 (1995 & Supp. 1996); VA. CODE ANN. §§ 10.1-1198 to -1199 (Michie Supp. 1996); WYO. STAT. ANN. §§ 35-11-1105 to -1106 (Michie Supp. 1996). For descriptions of these statutes and their features, see Terrell E. Hunt & Timothy A. Wilkins, *Environmental Audits and Enforcement Policy*, 16 HARV. ENVTL. L. REV. 365, 365-66 (1992); Buniva & Kibler, *supra* note 156, at 8-10 (describing the Virginia statute); O'Reilly, *Environmental Audit Privileges, supra*.

In December 1995, the EPA issued its policy on "self-policing" (Incentives for Self-Policing: Discovery, Disclosure, Correction, and Prevention of Violations Notice) offering incentives for companies to report violations of the environmental laws. 60 Fed. Reg. 66,705 (1995). The EPA's policy differs from the state statutes in that it offers no privilege or immunity to an environmental audit; the Agency opposes granting a privilege on a number of grounds, including its contention that granting a privilege would "invite defendants to claim as 'audit' material almost any evidence the government needed to establish a violation or determine who was responsible." *Id.* at 66,710. Thus, the EPA's policy seems destined to produce a lukewarm response. *See, e.g.*, Margaret A. Hill & Andreas H. Leskovsek, *EPA's Self-Policing Final Policy*, VIRGINIA'S ENV'T, Mar. 1996, at 6 (stating that the EPA's policy "does not . . . retreat from EPA's position that information obtained from environmental audits or compliance programs is not privileged information").

200. *See, e.g.*, 1995 Minn. Sess. Law Serv. 168, § 13 (West) (environmental audit privilege in Minnesota); OR. REV. STAT. § 468.963 (Supp. 1996).

201. Buniva & Kibler, *supra* note 156, at 8; O'Reilly, *Environmental Audit Privileges, supra* note 199, at 119-20 (noting that the "environmental audit" is defined as "a systematic examination of a facility, product line, or corporation as a whole . . . [that] functions by measuring compliance with environmental norms and then reporting the results, complete with a set of corrective actions that are necessary for the facility, product line, or corporation to achieve compliance").

202. *See Dunlop Testimony, supra* note 123, at 237 (terming the environmental audit privilege a "companion" to voluntary cleanup statutes); Congdon, *supra* note 160, at 7 (describing the relationship between the two types of statutes).

203. *See, e.g.*, 1995 Minn. Sess. Law Serv. 168, § 13 (West) (deferred or waived enforcement in Minnesota).

B. Features of Voluntary Cleanup Statutes

1. Site Investigation

The first step in assessing whether and to what extent a brown-field site must be remediated is usually a "site assessment" or similar investigation. This involves an evaluation of existing environmental conditions to evaluate the site's condition, determine the existing level of contamination, and generate information that may be used in cleanup plans.²⁰⁴ Although the states differ in their approaches,²⁰⁵ most require all developers to conduct on-site investigations designed to identify contamination at the site and the risk it poses.²⁰⁶ To spur

204. OTA STATE OF THE STATES, *supra* note 20, at 14-15.

205. *Id.* at 14 (noting that states "tailor [site assessments] to address their own specific technical concerns"). Vermont, for example, requires that the site investigation meet these objectives:

- (A) to define the nature, source, degree and extent of the contamination;
- (B) to define all possible pathways for contaminant migration;
- (C) to present data that quantify the amounts of contaminants migrating along each pathway;
- (D) to define all relevant sensitive receptors, including but not limited to public or private water supplies, surface waters, wetlands, sensitive ecological areas, outdoor and indoor air, and enclosed spaces such as basements, sewers and utility corridors;
- (E) to determine the risk of contamination to human health and the environment;
- (F) to gather sufficient information to identify appropriate abatement, removal, remediation and monitoring activities; and
- (G) to gather sufficient information to provide a preliminary recommendation, with justification, for abatement, removal, remediation and monitoring activities.

Vt. STAT. ANN. tit. 10, § 6615a(g)(1) (Supp. 1996); *cf.* Clokey, *supra* note 26, at 39 (detailing the minimum requirements of the "site investigation" in Wisconsin, under WIS. ADMIN. CODE ch. NR 716 (WESTLAW through ENFLEX Aug. 1996 Release)). States often retain flexibility to determine the scope of the site investigation. *See, e.g.,* OR. ADMIN. R. 340-122-050(2) (WESTLAW through Oct. 31, 1995).

206. These include: *Arkansas* (ARK. CODE ANN. § 8-7-503(17) (Michie Supp. 1995) (requiring a "site assessment," to "identify the location and extent of contamination, the quantity or level of contamination, the type of contamination, the probable source of contamination and the risk or threat associated with the contamination"; state is considering redefining this to include a "site assessment" (similar to Phase I investigation) and "facility investigation" (similar to Phase II investigation)); *California* (CAL. HEALTH & SAFETY CODE § 25319.5 (West 1992) (requiring a "preliminary endangerment assessment" (PEA) to determine whether response action is necessary; applies to sites in California VCP); *id.* § 25396.6(b) (West Supp. 1996) (requiring a PEA for sites in the California ERAP)); *Colorado* (COLO. REV. STAT. ANN. §§ 25-16-304(2)(a), -308(2) (West Supp. 1996) (requiring an "environmental assessment")); *Connecticut* (CONN. GEN. STAT. ANN. § 22a-133m(g) (West 1995) (requiring the state to assess Type II and Type III sites for cleanups); 1995 Conn. Pub. Acts 190, § 2(a) (specifying that licensed environmental professionals may conduct Phase II environmental site assessments and Phase III investigations for voluntary site remediations)); *Delaware* (DEL. CODE ANN. tit. 7, § 9107(e)(1) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (providing for a remedial action plan to be "based on any investigation or study conducted by or for the Secretary, the potentially responsible party, or others"; state accepts forms of investigations that conform to department guidelines)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.6(b)(1) (West Supp. 1996) (requiring that remedial applicants conduct on-site investigations in order to identify contamination at the site and the risk it poses)); *Indiana* (IND. CODE ANN. §§ 13-25-5-2, -3, -7(b)(1) (WESTLAW through end of 1996 2d Reg. Sess.) (requiring an "environmental assessment," defined as similar to a Phase I assessment, to be submitted with an application; developer must also perform a Phase II assessment)); *Louisiana* (LA. REV. STAT. ANN. § 30:2286.1(B) (West Supp. 1996) (requiring an "investigative report")); *Massachusetts* (MASS. REGS. CODE tit. 310,

§§ 40.0404(1), 40.0480-.0483, 40.0830 (WESTLAW through Register No. 794) (requiring an initial investigation, Phase I and Phase II site assessments; requirements may be waived, under the "technical justification" standard of MASS. REGS. CODE tit. 310, § 40.0193, by a Licensed Site Professional (LSP)); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(4) (West Supp. 1995) (requiring an "investigation report prepared by an appropriate professional that identifies and describes the nature and extent of the discharges, releases and threatened releases at the identified area of real property, methods of investigation, the analytical results and the professional's evaluation of this information"); *Michigan* (MICH. COMP. LAWS ANN. § 324.20126(1)(c) (West Supp. 1996) (providing that an owner or operator is liable under the state mini-CERCLA law unless it conducts a timely "baseline environmental assessment"); *id.* § 324.20129a (requiring an environmental assessment before a developer may petition for an exemption from liability)); *Minnesota* (MINN. STAT. ANN. § 115B.175(3)(b) (West Supp. 1995) (providing that the voluntary response action plan must include an "investigation report that describes the methods and results of an investigation of the releases and threatened releases at the identified area of real property"); *Missouri* (MO. ANN. STAT. § 260.567(3) (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(4)(C) (WESTLAW through ENFLEX Aug. 1996 Release) (requiring a Phase I assessment at a minimum to be provided with the application; state's practice is to require at least a minimal Phase II assessment once the site is accepted into the program)); *Montana* (MONT. CODE ANN. §§ 75-10-733(2)(a) (1995) (requiring an "environmental assessment"); *Nebraska* (NEB. REV. STAT. § 81-15,184(3) (WESTLAW through end of 1995 Reg. Sess.) (requiring applicant to provide "appropriate engineering, scientific, and financial feasibility data"); *New Hampshire* (COMING CLEAN, *supra* note 24, at 77 (New Hampshire requires a site investigation and, where necessary, an RI/FS)); *New Jersey* (N.J. ADMIN. CODE tit. 7, § 26C-3.2(c) (WESTLAW through July 15, 1996) (state may require preliminary assessment and site investigation under a Memorandum of Agreement)); *New York* (COMING CLEAN, *supra* note 24, at 84 (New York requires a site investigation)); *North Carolina* (N.C. GEN. STAT. §§ 130A-310.1, -310.3 (1995); N.C. GUIDELINES, *supra* note 191, at 2-1 to 2-5 (describing the requirements for remedial investigation phases as site-dependent)); *Ohio* (OHIO REV. CODE ANN. §§ 3746.04(B)(3)-(4), 3746.07(B)-(C), 3746.10(A) (Anderson 1995) (mandating that forthcoming rules will determine minimum standards for Phase I and Phase II property assessments, setting forth interim standards, providing that voluntary actions may include Phase I and Phase II property assessments in order to "identify and address potential sources of contamination," and stating that a certified professional may base the issuance of a no further action letter on property assessments)); *Oregon* (OR. ADMIN. R. 340-122-050 to -080 (WESTLAW through Oct. 31, 1995) (providing that the state will determine the amount of investigation necessary on a case-by-case basis; simple sites may require only a Preliminary Assessment or comparable information to be developed, and complex sites will require an RI and/or FS)); *Pennsylvania* (PA. STAT. ANN. tit. 35, §§ 6026.302(b)(2), .303(e)(2), .304(f) (West Supp. 1996) (requiring a site investigation for persons choosing to meet any of the three types of available cleanup standards)); *Rhode Island* (R.I. GEN. LAWS § 23-19.14-8(b) (Supp. 1996) (requiring "voluntary investigations," consisting of a "site characterization" at all sites, as defined in § 7 of the Site Remediation Regulations, with an RI/FS if necessary; forthcoming rules expected to streamline the site assessment process at some sites)); *Tennessee* (TENN. COMP. R. & REGS. § 1200-1-13-.09 (WESTLAW through ENFLEX Aug. 1996 Release) (requiring an initial investigation and site characterization equivalent to ASTM Phase I Environmental Site Assessment)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.606(c) (West Supp. 1996) (describes investigation actions to be taken by developer); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.7(a) (1996) that requires an investigation of the "full nature and extent of contamination in all media" unless the developer demonstrates that a focused investigation is warranted, using an "exposure assessment model"); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(e)(1)(C) (Supp. 1996) (requiring a preliminary environmental assessment to be submitted with the program application); *id.* § 6615a(g)(1) (requiring a site investigation)); *Washington* (WASH. ADMIN. CODE § 173-340-350 (WESTLAW through July 24, 1996) (RI/FS; complexity varies)); *Wisconsin* (WIS. STAT. ANN. § 144.765(2)(a)(1) (West Supp. 1995) (requiring the property seller or developer in Wisconsin to conduct a thorough environmental investigation of the property, as defined in Wis. ADMIN. CODE § NR 750.03(10) (WESTLAW through ENFLEX Aug. 1996 Release), and have that investigation approved by the state)). See also COMING CLEAN, *supra* note 24, at 83, 86 (regarding the Delaware and New Jersey programs); INDIANA VRP FACT SHEET, *supra* note 179, at 2; OTA STATE OF THE STATES, *supra* note 20, at 14-15; Clokey, *supra* note 26, at 39 (describing the Wisconsin provision and administrative rules); Michel, *supra* note 20, at 454-56 (describing the

investigations, states often provide that developers do not face state "mini-CERCLA" liability by virtue of performing site assessments.²⁰⁷ Some statutes and regulations specify the use of a two-part site investigation process based on standards implemented by the American Society for Testing and Materials (ASTM) for "Phase I" and "Phase II" environmental review in real estate transactions.²⁰⁸ If the limited Phase I review indicates that there is contamination at the site, the more detailed Phase II review is required.²⁰⁹

Ohio's scheme of Phase I and Phase II assessments is typical of the level of effort required.²¹⁰ Forthcoming rules for Phase I assessments will require, at a minimum, a review of documents affecting the site's history such as documents in the chain of title,²¹¹ previous envi-

Ohio provision); Sweeney, *supra* note 20, at 135, 137 n.214, 142 n.238 (describing the Colorado, Indiana, and Minnesota provisions); Casserly, *supra* note 26, at 267 (describing the Phase I and Phase II investigation in Minnesota's program); Survey Results, *supra* note 158 (regarding the Missouri, New Jersey, North Carolina, Tennessee, and Texas provisions); Telephone Interviews, *supra* note 160 (regarding the Arkansas, California, Delaware, Indiana, Missouri, Rhode Island, and Wisconsin provisions).

207. See, e.g., MICH. COMP. LAWS ANN. § 324.20126(c)(i) (West Supp. 1996) (providing that "accessing property to conduct a baseline environmental assessment" is not "occupancy" that potentially subjects an owner or operator to liability); PA. STAT. ANN. tit. 35, § 6026.501(b) (West Supp. 1996) (providing that the developer is not considered a responsible person for conducting an environmental assessment, unless it fails to exercise due diligence).

208. OTA STATE OF THE STATES, *supra* note 20, at 15-16. The designation "Phase I" derives from the ASTM standard for these assessments, AMERICAN SOC'Y OF TESTING & MATERIALS, STANDARD PRACTICE FOR ENVIRONMENTAL SITE ASSESSMENTS: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROCESS, STANDARD E 1527-94 (1994). See also Sweeney, *supra* note 20, at 106. This standard has been adopted in whole or in part by many states. Ohio, for example, bases its interim standards for Phase I property assessments directly on the ASTM standard. OHIO REV. CODE ANN. § 3746.07(B) (Anderson 1995); see also Michel, *supra* note 20, at 454 n.178. The ASTM standard has been influential in other contexts. See H.R. 2500, 104th Cong., 1st Sess. § 303 (1995) (making CERCLA's innocent landowner defense available to a buyer who conducts a site assessment according to the ASTM standard or similar procedure adopted by the EPA); RICHMOND BROWNFIELDS PILOT PROJECT STATEMENT, *supra* note 26, at 3 (directing site evaluations in the Richmond pilot project to follow the ASTM standard).

209. OTA STATE OF THE STATES, *supra* note 20, at 15. But see CAL. HEALTH & SAFETY CODE § 25319.5 (West 1992) (requiring a "preliminary endangerment assessment," the equivalent of a "mini-Phase II assessment," for all sites); IND. CODE ANN. §§ 13-25-5-7 (WESTLAW through end of 1996 2d Reg. Sess.) (requiring a Phase II assessment for all cleanups); VT. STAT. ANN. tit. 10, § 6615a(g)(1) (Supp. 1996) (requiring site investigation and corrective action phases analogous to an RI/FS); WIS. STAT. ANN. § 144.765(2)(a)(1) (West Supp. 1995) (requiring a "thorough environmental investigation of the property," defined in Wis. ADMIN. CODE § NR 750.03(10) (WESTLAW through ENFLEX Aug. 1996 Release) as comparable to a Phase II assessment, in all cleanups); see also Survey Results, *supra* note 158 (regarding the Vermont provision); Telephone Interviews, *supra* note 160 (regarding the California, Indiana, Vermont, and Wisconsin provisions).

210. Michel, *supra* note 20, at 454-56, and Sweeney, *supra* note 20, at 126-27, describe Ohio's requirements for Phase I and Phase II site assessments. Compare COMING CLEAN, *supra* note 26, at 98 (describing the Phase I and Phase II investigation scheme in Minnesota) and Casserly, *supra* note 26, at 267 (describing the Phase I investigation in Minnesota's program) with Mo. CODE REGS. tit. 10, § 25-15.010(2)(A)(7)-(8) (WESTLAW through ENFLEX Aug. 1996 Release) (defining the Phase I and Phase II assessments in Missouri).

211. OHIO REV. CODE ANN. § 3746.04(B)(3)(a) (Anderson 1995).

ronmental studies of the surrounding area,²¹² and previous documents submitted to comply with environmental laws,²¹³ as well as an investigation to determine the nature and extent of contamination at the site.²¹⁴ The average cost of the Phase I assessment has been estimated to range from \$1,000 to \$5,000.²¹⁵ If this assessment demonstrates that the site is not contaminated, no cleanup is required and the developer can request a "no action" letter from the state, a limited form of liability protection.²¹⁶

At most sites, the Phase I assessment will demonstrate that there is existing contamination.²¹⁷ In that case, the developer will be required to engage in a Phase II assessment.²¹⁸ Under forthcoming rules, the Phase II assessment will be required to include an examination of the information collected in the Phase I assessment, an analysis of soil and groundwater samples collected from the site, and a determination of whether the site requires remediation or is suitable in its current condition.²¹⁹ Ohio attempts to control the quality of site assessments, specifying that the developer must use a certified laboratory²²⁰ to perform the analyses required in Phase II assessments.²²¹

212. The developer will be required to review previous environmental assessments, environmental studies and geological studies of the site and any land within two thousand feet of the site. *Id.* § 3746.04(B)(3)(b).

213. *Id.* § 3746.04(B)(3)(c).

214. This includes a review of aerial photographs that reveal prior uses of the property; interviews with managers of the site who have knowledge of the environmental conditions of the property; a walkover of the site; and interviews with people who have knowledge of the current and past uses of the site and adjacent properties. *Id.* § 3746.04(B)(3)(d)-(g); *see also* McWilliams, *supra* note 20, at 736.

215. OTA STATE OF THE STATES, *supra* note 20, at 18; *see also* COMING CLEAN, *supra* note 24, at 16 (estimating the cost of a "basic environmental assessment" at between \$500 and \$2,500); McWilliams, *supra* note 20, at 736 (estimating the cost at between \$2,000 and \$7,000).

216. A developer can conclude cleanup activities in Ohio when the Phase I assessment demonstrates that "there is no reason to believe that there has been a release of hazardous substances or petroleum at or upon the property." OHIO REV. CODE ANN. § 3746.10(A) (Anderson 1995); *see also* Michel, *supra* note 20, at 454 n.176; Sweeney, *supra* note 20, at 131; *cf.* COMING CLEAN, *supra* note 24, at 98 (stating that developers in Minnesota may receive liability assurances if a Phase I investigation shows limited contamination at the site that does not require remediation); RHODE ISLAND USER'S GUIDE, *supra* note 175, at 3-4; Casserly, *supra* note 26, at 268 (developers can receive "no action" letters in Minnesota if they demonstrate that no contamination exists); Telephone Interviews, *supra* note 160 (noting that a developer can receive a "letter of compliance" in Rhode Island if the site characterization demonstrates that no contamination exists). For a description of the "no action letter" and other forms of liability protection, *see infra* notes 289-317 and accompanying text.

217. One commentator states that "[i]n the case of an industrial site intended for reuse, a Phase I site assessment is virtually certain to generate sufficient evidence to warrant further assessment expense." McWilliams, *supra* note 20, at 736.

218. OHIO REV. CODE ANN. § 3746.10(A) (Anderson 1995); *see also* OTA STATE OF THE STATES, *supra* note 20, at 15.

219. OHIO REV. CODE ANN. § 3746.04(B)(4) (Anderson 1995).

220. OHIO ADMIN. CODE § 3745-300-04 (WESTLAW through Aug. 31, 1996) (specifying procedures for the certification of laboratories).

221. OHIO REV. CODE ANN. § 3746.10(B)(1)(a) (Anderson 1995).

Phase II assessments can be expensive,²²² and their cost alone may deter some marginally cost-effective projects from consideration.²²³

2. Streamlining Cleanup Procedures and Costs

Assuming a cleanup is required, the next step in the development process is the preparation of a cleanup plan using the findings from the site assessments and applying relevant cleanup standards.²²⁴

a. The Remedial Action Plan

Most states require a developer to submit a work plan for cleanup actions²²⁵ that is typically accompanied by the site investigation report and other supporting documents.²²⁶ This plan may be part of, or submitted pursuant to, an agreement with the state to remediate the site.²²⁷ Indiana, for example, requires a developer to enter into a

222. The cost of a Phase II assessment depends on a number of factors, including the size of the facility and the number of locations at the site where hazardous substances are found. The Office of Technology Assessment estimates the cost of a Phase II assessment at between \$50,000 and \$70,000. OTA STATE OF THE STATES, *supra* note 20, at 18. Others believe the costs may be even higher. See McWilliams, *supra* note 20, at 736 (stating that “[a] Phase II property assessment on a parcel with prior industrial activity is likely to cost \$25,000 to \$250,000”).

223. OTA *Testimony*, *supra* note 20, at 302 (noting that “[i]n some cases, site assessment costs alone will deter interest in a brownfield property”); COMING CLEAN, *supra* note 24, at 16; OTA STATE OF THE STATES, *supra* note 20, at 18 (stating that “initial costs to some volunteers can be prohibitive from the start”); McWilliams, *supra* note 20, at 736.

224. OTA STATE OF THE STATES, *supra* note 20, at 15.

225. This document, which may be designated a “work plan,” “remedial action plan,” “corrective action plan,” or similar term, becomes the blueprint for cleanup activities at the site. *Id.* at 16. The states that do not require submissions of work plans are those that enable the developer to proceed with the cleanup on its own, with, in some states, the assistance of a licensed environmental professional. See *infra* note 227 and accompanying text.

226. Indiana, for example, requires a comprehensive set of information to be submitted in the voluntary remediation work plan, including:

- (1) Detailed documentation of the investigation conducted by the applicant in preparing the proposed voluntary remediation work plan and a description of the work to be performed by the applicant to determine the nature and extent of the actual or threatened release.
- (2) A proposed statement of work to accomplish the remediation in accordance with guidelines established by the department.
- (3) Plans concerning the following:
 - (A) Quality assurance for the implementation of the proposed remediation project.
 - (B) Descriptions of sampling and analysis.
 - (C) Health and safety considerations.
 - (D) Community relations.
 - (E) Data management and record keeping.
 - (F) A proposed schedule concerning the implementation of all tasks set forth in the proposed statement of work.

IND. CODE ANN. § 13-25-5-7(b) (WESTLAW through end of 1996 Reg. Sess.); Survey Results, *supra* note 158. *But see, e.g.*, OHIO REV. CODE ANN. § 3746.10(A)-(B) (Anderson 1995) (developer has discretion to decide whether sampling plans and remediation plans are necessary; plans are reviewed by certified professionals, not the state).

227. States requiring the plan to be submitted pursuant to, or as part of an agreement are: California (CAL. HEALTH & SAFETY CODE §§ 25398.2(b)(1), (e) (West Supp. 1996) (enforceable agreement in California ERAP to perform cleanup and cleanup pursuant to a remedial action plan); Telephone Interviews, *supra* note 160 (a “voluntary cleanup agreement” in the California VCP defines the scope and schedule of proposed cleanup)); Colorado (COLO. REV. STAT. ANN.

§ 25-16-304 (West Supp. 1996) (voluntary cleanup plan)); *Connecticut* (CONN. GEN. STAT. ANN. § 22a-133m(g) (1995) (requiring the state to develop remedial action plans for Type II and Type III sites); 1995 Conn. Pub. Acts 190, § 2 (specifying that licensed environmental professional may prepare Phase III remedial action plans for voluntary site remediations)); *Delaware* (DEL. CODE ANN. tit. 7, § 9107(a), (e)(1) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (settlement agreement provides for a plan of remedial action)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.6(d) (West Supp. 1996) (remedial action plan required for a cleanup to levels below those existing at the site); *Indiana* (IND. CODE ANN. § 13-25-5-8 (WESTLAW through end of 1996 2d Reg. Sess.) (voluntary remediation agreement setting forth terms and conditions of evaluating and implementing a "voluntary remediation work plan" as defined in *id.* § 13-25-5-7)); *Louisiana* (LA. REV. STAT. ANN. § 30:2286.1 (West Supp. 1996) (voluntary remedial action plan)); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(5) (West Supp. 1995)); *Michigan* (MICH. COMP. LAWS ANN. §§ 324.20118, 324.20120a (West Supp. 1996) (remedial action plan, as defined in *id.* § 324.20101(1)(aa))); *Minnesota* (MINN. STAT. ANN. § 115B.175(3) (West Supp. 1995) (voluntary response action plan)); *Missouri* (MO. ANN. STAT. § 260.567(5) (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(5) (WESTLAW through ENFLEX Aug. 1996 Release) (remedial action plan)); *Montana* (MONT. CODE ANN. § 75-10-733 (1995) (voluntary cleanup plan)); *Nebraska* (NEB. REV. STAT. § 81-15,184 (WESTLAW through end of 1995 Reg. Sess.) (remedial action plan)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 77 (New Hampshire requires a remedial work plan)); *New Jersey* (N.J. ADMIN. CODE tit. 7, §§ 26C-2.2, -3.3, app. A (1996) (state may require a remedial action work plan under a Memorandum of Agreement that complies with the technical standards of N.J. ADMIN. CODE tit. 7, § 26E-6.2; state indicates that this is typically done where groundwater contamination is present or a longer cleanup effort is involved)); *New York* (COMING CLEAN, *supra* note 24, at 84 (New York requires an agreement or consent order outlining cleanup requirements)); *North Carolina* (N.C. GUIDELINES, *supra* note 191, at 1-1 to 1-2 (providing for two different types of cleanups, with one being a cleanup under an "Administrative Order on Consent," which incorporates a remedial work plan as outlined in N.C. GEN. STAT. § 130A-310.9(b) (1995)); *Oregon* (OR. REV. STAT. § 465.325(1) (Supp. 1996); 1995 Or. Laws 662, § 4(3) (providing for the state to enter into agreements for cleanups)); *Pennsylvania* (PA. STAT. ANN. tit. 35, §§ 6026.302(e)(1), -303(h)(1) (West Supp. 1996) (notice of intent to remediate under background or statewide health standard must contain description of proposed remediation measures); *id.* § 6026.304(l)(3), (j) (requiring a remediation plan if developer chooses to remediate under the site-specific standard)); *Rhode Island* (Telephone Interviews, *supra* note 160 (Rhode Island requires a remedial action work plan, as defined in § 9 of the Site Remediation Regulations)); *Tennessee* (TENN. COMP. R. & REGS. § 1200-1-13-.09 (WESTLAW through ENFLEX Aug. 1996 Release) (RI/FS report)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.606 (West Supp. 1996); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.7 regarding voluntary cleanup agreements and work plans)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(g), (h) (Supp. 1996) (site investigation work plan and corrective action plan)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(2) (Michie Supp. 1996) (calling for rules to establish procedures "to be followed by a person volunteering to remediate a release and by the Department in processing submissions and overseeing remediation")); *Wisconsin* (WIS. ADMIN. CODE ch. NR 722 (WESTLAW through ENFLEX Aug. 1996 Release) (remedial options report)). See also COMING CLEAN, *supra* note 24, at 82, 86, 111 (describing the Delaware, New Jersey, and Oregon agreements); OTA STATE OF THE STATES, *supra* note 20, at 16; Sweeney, *supra* note 20, at 137 & n.212, 143, 149 & n.286 (describing the Colorado, Indiana, and Texas provisions); Survey Results, *supra* note 158 (regarding the Delaware, New Jersey, North Carolina, and Virginia provisions); Telephone Interviews, *supra* note 160 (regarding the California, North Carolina, Oregon, and Rhode Island programs).

Massachusetts's scheme of work plans and oversight depends on the classification of the site according to the risk it poses. MASS. REGS. CODE tit. 310, §§ 40.0500-.0582 (WESTLAW through Register No. 794) establishes the tier classification scheme. Tier I sites are those posing the most risk (sites having scores above 350 on the HRS-like "Numerical Ranking System" of MASS. REGS. CODE tit. 310, §§ 40.1500-.1516). *Id.* § 40.0520(3). Tier II sites are those posing lesser risks. Tier I sites are subdivided into Tier IA sites (the most complicated and serious sites), Tier IB, and Tier IC sites. *Id.* (scored according to *id.* § 40.1500-.1516). At all but Tier IA sites, response actions may take place under the supervision of an LSP without direct oversight by the state. See MASSACHUSETTS DEP'T OF ENVTL. PROTECTION, THE 1993 MASSACHUSETTS CONTINGENCY PLAN: A NEW APPROACH TO CLEANING UP DISPOSAL SITES 4 (1993) [hereinaf-

“voluntary remediation agreement” that sets forth the terms and conditions of a “work plan” for the site.²²⁸ In some states, the plan may be part of a consent decree entered in judgment to memorialize the agreement between the state and a developer who is a responsible party at the site.²²⁹ Under some approaches, the plan may provide for

ter MASSACHUSETTS MCP FACT SHEET]. At Tier IA sites, comprehensive oversight includes the preparation of a remedial action plan. MASS. REGS. CODE tit. 310, §§ 40.0800-0896 (WESTLAW through Register No. 794). At other sites, the LSP submits any or all appropriate intermediate reports to the state, with the process culminating in the preparation of a final “Response Action Outcome Statement.” *Id.* § 40.1056 (WESTLAW through Register No. 794); *see also* Tondro, *supra* note 20, at 804. As Professor Tondro notes, this allows the LSP’s opinion to function as “a Department ‘sign-off’ for work completed.” *Id.*

Ohio’s scheme also depends extensively on review and oversight of remedial activities by certified professionals, with the state’s review limited to audits of no further action letters; thus, the state is not involved in reviewing remedial action plans except in cases where it reviews plans after cleanups have been completed. OHIO ADMIN. CODE §§ 3745-300-05, -13, -14 (WESTLAW through Aug. 31, 1996) (setting forth standards for certification of environmental professionals, empowering them to issue no further action letters, and setting forth audit procedures); OHIO REV. CODE ANN. §§ 3746.10(A)-(B), 3746.11, 3746.12 (Anderson 1995). At the developer’s discretion, it need not even submit the no further action letter to the state EPA and trigger the possibility of an audit, although it must do so if it intends to receive a covenant not to sue. OHIO ADMIN. CODE §§ 3745-300-13(F)-(G).

The Washington program is similar to the Massachusetts program in that it has alternative courses of action, depending on the administrative procedure selected by the developer. If the site is not under a state order or decree, the developer (whether or not it is a “potentially liable party”) may proceed by negotiating an “agreed order” or consent decree with the state, or proceeding with independent remedial action at its own risk; if the site is under an order or decree, only the first two actions are available. WASH. ADMIN. CODE § 173-340-510(2) (WESTLAW through July 24, 1996); *cf.* ARIZ. REV. STAT. ANN. § 49-285(B) (West Supp. 1996) (providing that the developer may request that the state approve the remedial action “at any time before, during or after the remedial action”). Most voluntary cleanups have been independent remedial actions, though some have taken place after negotiations with the state. Telephone Interviews, *supra* note 160. Like a cleanup in Ohio, an independent remedial action in Washington may take place with limited state involvement, and without a formally approved work plan; the developer need only submit a final independent remedial action report at the completion of the cleanup. WASH. ADMIN. CODE § 173-340-550(7) (WESTLAW through July 24, 1996); *see also* COMING CLEAN, *supra* note 24, at 113. Cleanups pursuant to agreed orders or consent decrees will involve the preparation of draft and final cleanup action plans under WASH. ADMIN. CODE § 173-340-360. Survey Results, *supra* note 158. Similarly, North Carolina allows developers to proceed with independent cleanups, that is, without entering into “Administrative Orders on Consent.” *Id.*

228. IND. CODE ANN. § 13-25-5-8 (WESTLAW through end of 1996 2d Reg. Sess.); *see also* O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 61; Sweeney, *supra* note 20, at 143. The “work plan” is “the heart of the [Indiana] program.” O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 61. The work plan must include details of how the site will be cleaned up, including proposed remediation steps, schedules, quality assurance, and community relations information. IND. CODE ANN. § 13-25-5-7; *see also* O’Reilly, *Indiana’s Incentives*, *supra* note 24, at 61; Sweeney, *supra* note 20, at 143; Survey Results, *supra* note 158.

229. The states in which the plan may be part of a consent decree include: Arkansas (ARK. CODE ANN. § 8-7-523(d) (Michie Supp. 1995) (remedial action plan becomes an amendment to the consent administrative order)); Delaware (DEL. CODE ANN. tit. 7, § 9107(b) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (settlement agreement may be a “consent decree, administrative order of consent, memorandum of agreement or any other form of agreement consistent with regulations”; however, state has indicated that sites are not handled in the program with consent decrees)); New York (COMING CLEAN, *supra* note 24, at 84 (in New York, the agreement may take the form of a consent order)); North Carolina (N.C. GEN. STAT. § 130A-310.9 (1995); N.C. GUIDELINES, *supra* note 191, at 1-1 to 1-2 (stating that the applicant seeking state involvement may enter into an Administrative Order on Consent with

a partial cleanup either of certain contaminants or of a portion of the site.²³⁰

b. Risk-Based Cleanup Standards

Although some state programs do not change existing cleanup standards,²³¹ many attempt to implement modified, risk-based standards as an incentive to developers.²³² The Office of Technology As-

the state)); *Oregon* (1995 Or. Laws 662, § 4(3) (providing that participants entering into a Prospective Purchaser Agreement may embody that agreement in an administrative consent order, "other administrative agreement," or consent decree)); *Rhode Island* (R.I. GEN. LAWS §§ 23-19.14-8, .14-10, .14-11 (Supp. 1995) (providing for bona fide prospective purchaser or otherwise performing party to enter into a settlement agreement to be entered as a commitment by the state and performing party; voluntary cleanup takes place under a remedial action plan)); *Tennessee* (TENN. CODE ANN. §§ 68-212-224(a) (Supp. 1995) (providing that a party may enter into a consent order with the department outlining the steps to be taken for "investigation, cleanup, monitoring, maintenance and oversight cost reimbursement")). See also Survey Results, *supra* note 158 (regarding the Arkansas, Delaware, Rhode Island, and Tennessee provisions); Telephone Interviews, *supra* note 160 (regarding the North Carolina, Oregon, Rhode Island, and Tennessee provisions).

230. See LA. REV. STAT. ANN. § 30:2286 (West Supp. 1996); ME. REV. STAT. ANN. tit. 38, § 343-E(2) (West Supp. 1995); MINN. STAT. ANN. § 115B.175(2) (West Supp. 1995); MONT. CODE ANN. § 75-10-733(4) (1995); TEX. HEALTH & SAFETY CODE ANN. § 361.608(d) (West Supp. 1996); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE tit. 30, § 333.7(b)); VT. STAT. ANN. tit. 10, § 6615a(h)(4) (Supp. 1996) (state may approve a partial plan if it finds "that the releases or threatened releases that are not abated, removed or remediated pursuant to the corrective action plan do not pose an unacceptable risk to human health and the environment").

231. OTA STATE OF THE STATES, *supra* note 20, at 15 (stating that "[m]any voluntary programs apply the same cleanup standards to voluntary sites that are used under their state superfund program"). Cleanup standards in this category of states are determined on a site-by-site basis and must follow the requirements of existing state and federal laws. For the purposes of this article, the term "existing" means that the state requires that all cleanups at brownfield sites follow the traditional site-specific risk assessment approach; this category does not include those states that have redefined standards applying to all cleanups under the state CERCLA law, including voluntary cleanups. See, e.g., MASS. REGS. CODE tit. 310, §§ 40.0900-.0996 (WESTLAW through Register No. 794) (applying a tiered approach to all cleanups governed by the Massachusetts Contingency Plan). Several states apply existing cleanup standards: *California* (CAL. HEALTH & SAFETY CODE § 25398.4 (West Supp. 1996) (providing that the cleanup must "when fully implemented, place the site for which the plan is prepared in a condition that allows it to be permanently used for its planned use without any significant risk to human health or any significant potential for future environmental damage")); *id.* § 25398.6(a)(4); Telephone Interviews, *supra* note 160 (indicating that under the California VCP, cleanup standards of existing state CERCLA law apply); *North Carolina* (N.C. GEN. STAT. § 130A-310.3(d) (1995) (requiring cleanup levels to be determined in the same manner as under CERCLA/SARA)); *Tennessee* (TENN. CODE ANN. § 68-212-224(e) (Supp. 1995) (providing for cleanups to follow existing site-specific criteria established pursuant to TENN. CODE ANN. § 68-212-206(d)); TENN. COMP. R. & REGS. § 1200-1-13-.08 (WESTLAW through ENFLEX Aug. 1996 Release)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(h) (Supp. 1996). See also TENNESSEE VOAP FACT SHEET, *supra* note 193, at 1 (noting that the criteria for cleanup actions in Tennessee are the same as for state Superfund sites); Sweeney, *supra* note 20, at 148 & n.279, 146-47 (describing the California and Tennessee provisions); Survey Results, *supra* note 158 (regarding the North Carolina provision); Telephone Interviews, *supra* note 160 (regarding the Tennessee plans to issue guidance modifying existing cleanup standards and the Vermont provision).

232. OTA STATE OF THE STATES, *supra* note 20, at 16; see also Andrew, *supra* note 29, at 28 (noting that Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin have implemented "state-approved standardized cleanup levels or methods by which such cleanup levels are derived").

assessment has termed modifications to cleanup standards “[p]erhaps the most significant feature in many voluntary programs.”²³³ Most states aim to spur redevelopment by redefining cleanup standards in terms of actual risks posed to human health and the environment.²³⁴ There is widespread variation in the states’ approaches to developing cleanup standards due to differing assumptions about the risk associated with contamination (e.g., toxicity, exposure pathways, and other factors), the importance of considering the proposed use of the site, and other considerations such as the effectiveness of engineering controls.²³⁵ The ASTM’s risk-based corrective action (RBCA, or “Rebecca”) approach, a “tiered” process for evaluating the appropriate level of cleanup at contaminated sites, has been influential in spurring states’ development of cleanup standards.²³⁶

States are developing two general types of cleanup standards: (1) standardized state-approved *generic statewide cleanup standards*, based on assumptions about exposure to contamination,²³⁷ and (2) *site-specific standards*, requiring a risk assessment to be performed at every site, but often incorporating consideration of the future use of the site (i.e., industrial, commercial, or residential) and allowing some cleanups that result in a public health risk higher than that currently allowed under CERCLA.²³⁸ In addition, some states continue to require or allow the developer to choose cleanups to meet strict stan-

233. OTA STATE OF THE STATES, *supra* note 20, at 16; see also NEPI WHITE PAPER, *supra* note 20, at 49 (stating that a model brownfield approach might include “[r]isk-based cleanup levels based upon land use”); Sweeney, *supra* note 20, at 158 (calling for “flexible, recognized cleanup standards and procedures” in voluntary cleanup programs).

234. OTA STATE OF THE STATES, *supra* note 20, at 15-16; Anderson, *supra* note 109, at 24; Sweeney, *supra* note 20, at 121; Gwathmey & O’Brien, *supra* note 35 (noting that “[a] number of states have implemented remedial standards based upon the risk to human health and the environment posed by contamination”).

235. OTA STATE OF THE STATES, *supra* note 20, at 15-16.

236. AMERICAN SOC’Y OF TESTING & MATERIALS, EMERGENCY STANDARD GUIDE FOR RISK-BASED CORRECTIVE ACTION AT PETROLEUM RELEASE SITES, STANDARD E 38-94 (1994) outlines the “Rebecca” approach. See Robert W. Wells, Jr., *Without “Rebecca,” Cost-Effective Environmental Cleanup Is an Oxymoron at Florida’s Petroleum Contamination Sites*, FLA. B.J., Feb. 1996, at 53. The RBCA approach was developed for use at petroleum contamination sites and has the EPA’s approval for this purpose. U.S. ENVTL. PROTECTION AGENCY, USE OF RISK-BASED DECISION-MAKING IN UST CORRECTIVE ACTION PROGRAMS (1995). The fundamental assumption of RBCA is that not every site must be cleaned up to meet traditional conservative cleanup standards. RBCA involves a three-tier approach with different cleanup levels; the highest tier is a site-specific risk assessment, the second and third tiers depend on more generic evaluations of the sites. The decision to choose any given tier for a cleanup involves a policy judgment that the standards of that tier are cost-effective and protective of health and the environment. See generally *Superfund Reassessment and Reauthorization: Hearings Before the Subcomm. on Superfund, Waste Control, and Risk Assessment of the Senate Comm. on Environment and Public Works*, 104th Cong., 1st Sess. 450 (Apr. 5, 1995) (testimony of Steven J. Milloy, Director, Science Policy Studies, National Envtl. Policy Inst.) (calling for increased use of “Rebecca” at Superfund sites); Wells, *supra*, at 53-54.

237. OTA STATE OF THE STATES, *supra* note 20, at 17; Sweeney, *supra* note 20, at 121.

238. OTA STATE OF THE STATES, *supra* note 20, at 17; Anderson, *supra* note 109, at 23-24 (describing the Massachusetts, Michigan, and Ohio approaches); Dinsmore, *supra* note 24, at 11; Sweeney, *supra* note 20, at 121; Tuttle, *supra* note 170 (describing the Pennsylvania approach).

dards based on levels of natural contamination in the surrounding area, or *background standards*.²³⁹ Increasingly, the states combine these approaches and allow developers to choose from tiered systems of cleanup standards. Ohio allows a developer to obtain a variance from applicable standards in certain instances.²⁴⁰

The following table illustrates the states' approaches.

TABLE 3
MODIFICATIONS TO CLEANUP STANDARDS

Type of Cleanup Standard	State	Comments
No change from existing standards	California ERAP California VCP, North Carolina, Tennessee, Vermont	<i>Tennessee</i> : forthcoming guidance may implement a modified risk-based system <i>North Carolina</i> : applies cleanup levels determined in same manner as under CERCLA in most cases
Modified risk-based site-specific standards	Arkansas, Connecticut, Delaware, Illinois, Indiana, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon (<i>forthcoming</i>), Pennsylvania, Rhode Island (<i>forthcoming</i>), Texas, Virginia, Washington, Wisconsin	<i>Arkansas</i> : statute calls for risk-based standards; tiered system contemplated <i>North Carolina</i> : applies only under certain site conditions <i>Oregon</i> : developing rules implementing a modified risk-based approach <i>Washington</i> : "Method C" cleanups generally not allowed
Option to select background standard	Indiana, Minnesota, Pennsylvania, Texas, Virginia	<i>Virginia</i> : rules to take account of background levels of contamination

239. OTA STATE OF THE STATES, *supra* note 20, at 15.

240. The variance allows the developer to use less expensive (and, perhaps, less protective) cleanup techniques. See Michel, *supra* note 20, at 457. OHIO REV. CODE ANN. § 3746.04(B)(11) (Anderson 1995) requires the state EPA director to develop rules to govern the application for and issuance of variances, and § 3746.09 provides guidelines under which variances may be granted. To qualify, the developer must (1) demonstrate that compliance is not technically feasible or (2) make a showing that the cost of compliance outweighs the benefits. *Id.* § 3746.09(A)(1); see also Michel, *supra* note 20, at 457.

Option to select generic statewide cleanup standard	Connecticut, Delaware, Illinois, Indiana, Maine, Massachusetts, Michigan, Missouri, New Jersey, Ohio, Oregon, Pennsylvania, Rhode Island (<i>forthcoming</i>), Texas, Washington, Wisconsin	<i>Maine</i> : limited approach based on experience at other sites <i>Oregon</i> : developing rules to redefine an existing generic statewide standard approach
Option or requirement to select from tiered system	Delaware, Illinois, Indiana, Massachusetts, Michigan, Missouri, Ohio (<i>forthcoming</i>), Pennsylvania, Rhode Island (<i>forthcoming</i>), Texas, Washington, Wisconsin	<i>Arkansas, North Carolina, Oregon</i> : considering a tiered system
Other	Colorado ²⁴¹	

i. Generic Statewide Standards

As an alternative to employing traditional site-specific cleanup standards, some states allow certain cleanups to meet generic numerical statewide standards.²⁴² Ohio²⁴³ and Pennsylvania,²⁴⁴ for example,

241. Colorado has no specific cleanup standards for soils and will approve cleanup levels based either on a site-specific risk assessment or the soil standards of the EPA or another state (e.g., New Jersey or Pennsylvania). *COMING CLEAN*, *supra* note 24, at 108; Telephone Interviews, *supra* note 160.

242. The states allowing certain cleanups to meet generic numerical statewide standards include: *Connecticut* (CONN. AGENCIES REGS. § 22a-133k-2 (WESTLAW through Sept. 24, 1996) (defining generic standards for soil cleanups)); *Delaware* (*COMING CLEAN*, *supra* note 24, at 87 (cleanups in Delaware may be to “trigger levels” for specific contaminants derived from the EPA Region III risk-based concentration tables)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.5(d)(1) (West Supp. 1996) (remediation applicant may propose a “Tier I” remediation objective that involves meeting a numeric standard)); *Indiana* (INDIANA VRP FACT SHEET, *supra* note 179, at 3 (providing that cleanups in Indiana may meet levels of generic risk-based standards)); *Massachusetts* (MASS. REGS. CODE tit. 310, §§ 40.0970-.0975 (WESTLAW through Register No. 794) (providing that “Method 1” cleanups may meet the levels of generic soil and groundwater standards)); *Michigan* (MICH. COMP. LAWS ANN. § 324.20120a(1)-(4) (West Supp. 1996) (providing that the state may establish generic cleanup criteria for categories of sites, including residential, commercial, recreational, industrial, other land use based categories, limited residential, limited commercial, limited recreational, limited industrial, and other limited categories, replacing the provisions of MICH. ADMIN. CODE r. 299.5709-.5715 (WESTLAW through ENFLEX Aug. 1996 Release) calling for “Type B” cleanups to levels of generic cleanup standards assuming residential land uses)); *Missouri* (DIVISION OF ENVTL. QUALITY, MISSOURI DEP’T OF NATURAL RESOURCES, HOW CLEAN IS CLEAN? UNIFORM CLEANUP STANDARDS FOR CONTAMINATED SITES IN MISSOURI (1996) [hereinafter MISSOURI CLEANUP STANDARDS] (describing Missouri’s Tier 1 approach to allow certain cleanups to meet “Uniform Cleanup Standards”)); *New Jersey* (*COMING CLEAN*, *supra* note 24, at 83 (New Jersey maintains and revises guidance on generic soil cleanup standards that can be used at individual sites)); *Ohio* (OHIO REV. CODE ANN. § 3746.04(B)(1) (Anderson 1995) (directing that rules be prepared to develop appropriate generic numerical cleanup standards)); *Oregon* (OR. REV. STAT. § 465.315(1)(f) (Supp. 1996) (directing the state to “identify generic remedies for common categories of facilities . . . [taking account of] demonstrated remedial actions and technologies and scientific and engineering evaluation of performance data”)); *Pennsylvania* (PA. STAT. ANN. tit.

are developing generic standards equivalent in scope, content, and coverage to applicable standards established by federal environmental laws and regulations. These standards will address issues such as the health risks posed by contamination at the site and protection of workers and nearby residents.²⁴⁵ However, generic standards offer two advantages to developers: certainty about the cleanup stan-

35, § 6026.303(a) (West Supp. 1996) (directing the Environmental Quality Board to promulgate standards)); *Rhode Island* (R.I. GEN. LAWS § 23-19.14-4 (Supp. 1995) (providing for numerical criteria to be developed by forthcoming rules)); *Texas* (30 TEX. ADMIN. CODE § 335.555 (WESTLAW through Jan. 1, 1996) (providing for cleanups to meet "Risk Reduction Standard Number 2" by meeting generic cleanup levels)); *Washington* (WASH. ADMIN. CODE § 173-340-700(3) (WESTLAW through July 24, 1996) (providing for cleanups to meet "Method A" by reference to tables and to meet "Method B" by reference to risk equations specified in WASH. ADMIN. CODE §§ 173-340-720 to -750)); *Wisconsin* (WIS. ADMIN. CODE chs. NR 140, 720 (WESTLAW through ENFLEX Aug. 1996 Release) (providing numeric tables and site-specific modeling for soils cleanups)). See also Michel, *supra* note 20, at 463 n.261 (describing the Indiana Volunteer Remediation Program's provisions); Sweeney, *supra* note 20, at 128, 153 & n.312 (describing the Ohio and Pennsylvania statutes' provisions); Tuttle, *supra* note 170 (describing the Pennsylvania statute's provision); Survey Results, *supra* note 158 (regarding the New Jersey provision); Telephone Interviews, *supra* note 160 (regarding the Delaware and Wisconsin provision). A number of states, including Oregon and Rhode Island, are developing rules to provide for or expand the coverage of existing generic statewide standards. Oregon has generic standards in place for simple soil cleanups. OR. ADMIN. R. 340-122-045 (WESTLAW through Oct. 31, 1995); Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160. Maine has a limited number of numerical cleanup levels, based on experience at similar sites. COMING CLEAN, *supra* note 24, at 74; Telephone Interviews, *supra* note 160.

243. OHIO REV. CODE ANN. § 3746.04(B)(1) (Anderson 1995); see also Department of Emergency & Remedial Response, Ohio Envtl. Protection Agency, *What's New with the Voluntary Action Program* (last updated Dec. 19, 1996) <<http://www.epa.ohio.gov/derr/volunt.html>> [hereinafter *Ohio VAP Update*] (stating that a second set of rules, including rules establishing generic cleanup standards, will be developed in 1996); Michel, *supra* note 20, at 463 n.261; Sweeney, *supra* note 20, at 128 (describing the Ohio statute's provision).

244. Pennsylvania's statute empowers two state boards to set generic statewide health standards. PA. STAT. ANN. tit. 35, § 6026.303(a) (West Supp. 1996) directs Pennsylvania's Environmental Quality Board (EQB) to promulgate statewide health standards for cleanups for residential and nonresidential land uses, for medium-specific concentrations other than for discharges into surface water, outside air, or groundwater. See also Sweeney, *supra* note 20, at 152-53 & n.312; Tuttle, *supra* note 170. The newly created Cleanup Standards Scientific Advisory Board (CSSAB) is a 13-member board established to provide scientific and technical advice to the EQB in developing the statewide standards. PA. STAT. ANN. tit. 35, §§ 6026.104-.105 (West Supp. 1996). The CSSAB's members are appointed by the DEP and the leadership of the Pennsylvania legislature, and are required to have relevant experience or education "that relates to problems and issues likely to be encountered in developing health-based cleanup standards." The statute requires board members to be drawn from local governments, the public, academics, professionals, and the regulated community, with no quota for membership from each of these categories. The board's actions are to be taken by majority vote. *Id.* § 6026.105(c). The 13 board members appointed to date include experts in relevant scientific areas such as chemistry and toxicology. PENNSYLVANIA'S SIX-MONTH PROGRESS REPORT, *supra* note 33, at 11-12. The CSSAB has also requested technical assistance from private sector consultants. *Id.* at 12; see also Survey Results, *supra* note 158.

245. OHIO REV. CODE ANN. § 3746.04(B)(1) (Anderson 1995); Sweeney, *supra* note 20, at 128, 153 & n.312 (describing the Ohio and Pennsylvania provisions). The generic standards are being developed using assumptions about exposure to contamination. Telephone Interviews, *supra* note 160. The Ohio statute, for example, specifies that the generic numerical cleanup standards "shall be the concentration of each contaminant that may be present on a property that shall ensure protection of public health and safety and the environment for the reasonable exposure for [each] category of land use." OHIO REV. CODE ANN. § 3746.04(B)(1) (Anderson 1995).

dards;²⁴⁶ and, in some states, less “conservative” estimates of risk that factor in considerations such as the intended use of the property.²⁴⁷ In the latter case, the states often specify that separate standards may be developed for residential and nonresidential uses of sites.²⁴⁸ The states will allow higher levels of contamination to remain at sites destined for industrial uses on the theory that there is less human exposure and health risk.²⁴⁹ Some states apply the generic standards only to specific media (particularly soil),²⁵⁰ retaining existing numerical

246. OTA STATE OF THE STATES, *supra* note 20, at 16 (stating that “in cases where generic standards . . . are applied, there tends to be more immediate agreement and certainty”). The EPA’s summary of the perceived advantages of generic standards includes: “an increase in consistency of remedies, and an increase in defensibility of remedy decisions. In addition, settlements may be achieved more quickly, voluntary cleanups may be promoted, and the standards may allow agencies to address a larger volume of sites due to streamlining.” MISSOURI CLEANUP STANDARDS, *supra* note 242, at 3 (quoting Executive Summary, EPA/State Soil Cleanup Levels Workshop, Oct. 13-14, 1993). A developer, for example, could undertake a more rapid cleanup by meeting a state-approved standard, without obtaining state approval of a site-specific cleanup standard. See Courtney, *supra* note 140, at 15 (describing the Texas approach). One potential disadvantage of generic standards is that because they apply on a statewide basis, they may be overprotective at an individual site. MISSOURI CLEANUP STANDARDS, *supra* note 242, at 3 (quoting Executive Summary, EPA/State Soil Cleanup Levels Workshop, Oct. 13-14, 1993).

247. The Ohio statute, for example, called for the development of separate standards “based upon the intended use of properties after the completion of voluntary actions, including industrial, commercial, and residential uses and such other categories of land use as the director considers to be appropriate.” OHIO REV. CODE ANN. § 3746.04(B)(1) (Anderson 1995); *cf.* MICH. COMP. LAWS ANN. § 324.20120a(1)-(4) (West Supp. 1996) (providing that the state may establish generic cleanup criteria for categories of sites, including residential, commercial, recreational, industrial, other land use based categories, limited residential, limited commercial, limited recreational, limited industrial, and other “limited” categories); R.I. GEN. LAWS § 23-19.14-4 (Supp. 1995) (rules establishing numerical criteria to protect human health and the environment “based on current and reasonably foreseeable future use of a property and surrounding natural resources”).

248. See, e.g., PA. STAT. ANN. tit. 35, § 6026.303(a) (West Supp. 1996). *But see* WASH. ADMIN. CODE § 173-340-740(1) (WESTLAW through July 24, 1996) (providing that although separate standards for “Method A” [table-based] cleanups of soil may be established for industrial uses and other uses, the presumption is that unless the site is a qualifying industrial site under WASH. ADMIN. CODE § 173-340-745, cleanups must meet residential standards).

249. See Bartsch Testimony, *supra* note 22, at 29 (stating that standards based on the proposed use of the site recognize “that old manufacturing properties will often continue to be used for industrial purposes once cleaned”); Dinsmore, *supra* note 24, at 11; Gwathmey & O’Brien, *supra* note 35 (noting that in New Jersey, “[d]ue to the assumption that there is less exposure and thus less health risk in a non-residential context, risk-based remedial standards [for soil] are less rigorous for non-residential property uses”).

250. Until cleanup standards are promulgated in regulations, Pennsylvania requires that cleanups of contamination in surface water, groundwater, or air meet all applicable existing standards, these include, for example, maximum contaminant levels (MCL) for drinking water. PA. STAT. ANN. tit. 35, § 6026.303(b)(1)-(3) (West Supp. 1996). Soil standards may be set separately for residential and nonresidential land uses. For standards governing direct contact with soil for residential land uses, concentrations may not exceed either the direct contact soil medium-specific concentration based on residential exposure factors within a depth of up to 15 feet from the existing ground surface or a soil-to-groundwater pathway numeric value throughout the soil column, the latter to be determined by either a value 100 times the medium-specific concentration for groundwater, a concentration not producing a leachate in excess of the medium-specific concentrations for groundwater in the aquifer when subjected to the EPA’s Synthetic Precipitation Leaching Procedures, or a generic value determined not to produce a concentration in groundwater in the aquifer in excess of medium-specific concentrations for groundwater based on valid, peer-reviewed scientific methods. *Id.* § 6026.303(b)(4); see also Sweeney, *supra* note 20, at 154

standards for other media (e.g., air, groundwater, and surface water).²⁵¹ Because soil is the medium most likely to be contaminated at a brownfield site,²⁵² this will often result in less strict cleanups.

ii. Site-Specific Standards

The site-specific approach of a number of states²⁵³ incorporates traditional risk assessment methodologies to determine cleanup stan-

n.313. For nonresidential land uses, the direct contact soil standard is to be determined based on concentrations not to exceed either concentrations based on nonresidential exposure, within a depth of up to 15 feet from the existing ground surface reflecting worker exposure, or the soil to groundwater pathway numeric value determined for residential exposures. PA. STAT. ANN. tit. 35, § 6026.303(b)(5)-(6) (West Supp. 1996). Medium-specific concentrations (other than these) set for carcinogens must be calculated using "reasonable exposure pathway assumptions" and may be no more strict than an excess upper bound lifetime cancer target risk of between 1 in 10,000 and 1 in 1,000,000, and the concentration to which humans could be exposed "without appreciable risk of deleterious effects" for systemic toxicants. *Id.* § 6026.303(c). If the resulting statewide health standard is numerically less than the applicable background standard, the background standard applies. *Id.* § 6026.303(d); *see also* Survey Results, *supra* note 158.

As with the background standard, developers who select statewide health standards must demonstrate attainment by collection and analysis of representative samples or statistical testing results. The developer's final report documenting attainment of the statewide health standard must include site investigation results, descriptions of cleanup procedures, and summaries of analyses that demonstrate attainment of the standards. Institutional controls may not be used to meet the statewide health standards, but may be used to maintain them after remediation occurs. *Id.* § 6026.303(a)-(e); *see also* Sweeney, *supra* note 20, at 154 n.313.

251. McWilliams, *supra* note 20, at 740 (stating that in New Jersey, soil "was targeted for reduced cleanup requirements," which, states McWilliams, "avoids relaxing standards for water and air, while focusing on the contamination least likely to migrate offsite"); Gwathmey & O'Brien, *supra* note 35 (describing the New Jersey approach); *see infra* notes 266-78 and accompanying text (regarding the approaches of states with "tiered" standards that retain existing standards for air, groundwater, and surface water).

252. *See* McWilliams, *supra* note 20, at 740.

253. States using a "site-specific" approach include: *Arkansas* (ARK. CODE ANN. § 8-7-523(j) (Michie Supp. 1995) (allowing risk assessment as one of the options to determine cleanup criteria; ecological risk is considered in all scenarios)); *Colorado* (COLO. REV. STAT. ANN. § 25-16-305 (West Supp. 1996) (providing for remediation to be based on "the actual risk to human health and the environment currently posed by contaminants on the real property," taking present or proposed uses of the site into account)); *Connecticut* (CONN. GEN. STAT. ANN. § 22a-133k (West 1995)); *Delaware* (DEL. CODE ANN. tit. 7, § 9104(b)(2)(g) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995); Delaware Regulations, *supra* note 172, § 9 (providing that the state may promulgate and revise rules to identify cleanup levels based on site-specific risks; state currently applies a risk-based process under Delaware Regulations § 9 that takes land use into account)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.5(d)(3) (West Supp. 1996) (providing that a cleanup may meet a "Tier III remediation objective," following a site-specific analysis)); *Indiana* (INDIANA VRP FACT SHEET, *supra* note 179, at 3); *Louisiana* (LA. REV. STAT. ANN. § 30:2272.1(A) (West Supp. 1996) (minimum cleanup standards for remediation activities to be modified by rule to take into consideration "the location, the surroundings, the intended use of the property, the potential exposure to the discharge, and the surrounding ambient conditions"); *id.* § 30:2286.1(C) (voluntary cleanups to meet these new standards when developed)); *Massachusetts* (MASS. REGS. CODE tit. 310, §§ 40.0980-.0988, .0990-.0996 (WESTLAW through Register No. 794) (Method 2 and Method 3 cleanups based on modeling (Method 2) or a site-specific risk assessment (Method 3))); *Michigan* (MICH. COMP. LAWS ANN. § 324.20120a(2) (West Supp. 1996) (calling for site-specific cleanup criteria to "utilize only reasonable and relevant exposure pathways")); *Minnesota* (MINN. STAT. ANN. § 115B.17(2) (West Supp. 1995) (providing for cleanups to be conducted under standards with consideration for planned uses of sites)); *Missouri* (MISSOURI CLEANUP STANDARDS, *supra* note 242, at 11-15 (describing Missouri's site-specific Tier 2 "Alternate Cleanup Standards")); *Montana* (MONT.

dards at an individual site. In Pennsylvania, for example, developers electing to clean the property to meet the site-specific standard will perform remedial investigations²⁵⁴ and risk assessments to determine

CODE ANN. § 75-10-721(2)(c) (1995) (requiring standards for cleanups to take account of "reasonably anticipated future uses," as defined in MONT. CODE ANN. § 75-10-701(13); state uses the "waiver" process of § 75-10-721(4) to modify existing risk-based standards)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 78 (in New Hampshire, the applicant may propose standards, reviewed on a case-by-case basis)); *New Jersey* (Dinsmore, *supra* note 24, at 11 (in New Jersey, cleanup criteria is based upon site-specific factors, and if the proposed standard will be protective of public health and the environment, state may approve site-specific cleanup standards)); *New York* (COMING CLEAN, *supra* note 24, at 85 (in New York, standards are applied on a case-by-case basis, with consideration for future land use)); *North Carolina* (N.C. GUIDELINES, *supra* note 191, at 3-4 to 3-5 (allowing certain cleanups to meet "alternate remediation goals" approved on a site-by-site basis)); *Ohio* (OHIO REV. CODE ANN. § 3746.04(B)(2)(a) (1995) (providing for the development of rules to establish procedures for basing cleanups on site-specific risk assessments)); *Oregon* (OR. REV. STAT. § 465.315(1)(b), (2) (Supp. 1996) (requiring the development of rules adopting a risk-based approach)); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.304 (West Supp. 1996)); *Texas* (30 TEX. ADMIN. CODE § 335.563 (WESTLAW through Jan. 1, 1996) (providing for cleanups to meet "Risk Reduction Standard Number 3" by meeting site-specific cleanup levels)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(1) (Michie Supp. 1996) (rules adopting methods to establish site-specific standards to be developed, considering "the future industrial, commercial, residential, or other use of property to be remediated and of surrounding properties" along with four other factors)); *Washington* (WASH. ADMIN. CODE § 173-340-700(3)(c) (WESTLAW through July 24, 1996) (providing for "Method C" cleanups based on site-specific risk assessments to levels for carcinogens based on an estimated lifetime cancer risk of 1 in 100,000; however, use of this "Method C" is generally not allowed)); *Wisconsin* (WIS. ADMIN. CODE ch. NR 720 (WESTLAW through ENFLEX Aug. 1996 Release)). See also COMING CLEAN, *supra* note 24, at 87 (regarding the Delaware program); NEPI WHITE PAPER, *supra* note 20, at 44 (describing the New Jersey approach); Anderson, *supra* note 109, at 24 (describing the Massachusetts and Michigan approaches); Andrew, *supra* note 29, at 28 (describing the Minnesota approach); Dinsmore, *supra* note 24, at 11 (describing the Ohio and Minnesota approaches); Michel, *supra* note 20, at 463 n.262; Sweeney, *supra* note 20, at 154-55 (describing the Pennsylvania approach); Tuttle, *supra* note 170 (describing the Pennsylvania approach); Survey Results, *supra* note 158 (regarding the Arkansas, Delaware, New Jersey, Virginia, and Washington approaches); Telephone Interviews, *supra* note 160 (regarding the Delaware and Montana programs). Maine's statute does not specify cleanup standards for voluntary cleanups; however, the state applies a site-specific approach that takes future land use into account. ME. REV. STAT. ANN. tit. 38, § 343-E(1) (West Supp. 1995) (providing that cleanups must "remove or remedy all known discharges, releases and threatened releases at an identified area of real property in accordance with a voluntary response action plan"); see also COMING CLEAN, *supra* note 24, at 74; Telephone Interviews, *supra* note 160. Rhode Island's forthcoming rules are expected to implement a site-specific approach as one method in a tiered system. DIVISION OF SITE REMEDIATION, RHODE ISLAND DEP'T OF ENVTL. MANAGEMENT, ISSUE SUMMARY, SOIL CLEANUP STANDARDS WORKSHOP I, at 2 (1995) [hereinafter RHODE ISLAND SOIL STANDARDS WORKSHOP]; Telephone Interviews, *supra* note 160.

254. Pennsylvania requires the submission of a remedial investigation report that includes the following:

- (i) Documentation and descriptions of procedures and conclusions from the site investigation to characterize the nature, extent, direction, rate of movement, volume and composition of regulated substances.
- (ii) The concentration of regulated substances in environmental media of concern, including summaries of sampling methodology and analytical results, and information obtained from attempts to comply with the background or Statewide health standards, if any.
- (iii) A description of the existing or potential public benefits of the use or reuse of the property for employment opportunities, housing, open space, recreation or other uses.
- (iv) A fate and transport analysis may be included in the report to demonstrate that no present or future exposure pathways exist.

PA. STAT. ANN. tit. 35, § 6026.304(I)(1)(i)-(iv) (West Supp. 1996); see also Sweeney, *supra* note 20, at 154 n.315; Tuttle, *supra* note 170.

how contaminants will affect surrounding properties.²⁵⁵ If preliminary analysis establishes that there are no pathways for the existing contamination to spread beyond the property boundaries, no risk assessment, cleanup plan, or remedy is required.²⁵⁶ On the other hand, when this analysis shows that exposure pathways exist, a risk assessment is required in order to develop a cleanup standard and plan.²⁵⁷

The site-specific approach holds considerable promise for developers.²⁵⁸ A number of states provide explicitly for standards allowing levels of health risk higher than those permitted under CERCLA.²⁵⁹ The allowable level of risk for carcinogens can be higher than a 1 in 1 million (1×10^{-6}) lifetime upper bound risk;²⁶⁰ as high as 1 in 10,000 (1×10^{-4}) in some instances.²⁶¹ Site-specific standards, like generic standards, also consider factors such as the intended use of the property. A number of states provide explicitly that the cleanup required at a site must be based on the public health risk that is expected in light of the site's proposed or reasonably anticipated future use.²⁶²

255. PA. STAT. ANN. tit. 35, § 6026.304(a) (West Supp. 1996); *see also* Sweeney, *supra* note 20, at 154-55; Tuttle, *supra* note 170; *cf.* ARK. CODE ANN. § 8-7-523(j)(1)(B) (Michie Supp. 1995); COLO. REV. STAT. ANN. § 25-16-305(1)(b) (Supp. 1996); 415 ILL. COMP. STAT. ANN. 5/58.5(d)(3) (West Supp. 1996) (providing that actual risk to nearby property is a factor to be considered in developing "Tier III" site-specific risk-based standards); MONT. CODE ANN. § 75-10-734(2) (1995) (allowing applicants who wish to meet site-specific standards to perform risk assessments to determine how contaminants will affect surrounding properties; "default" levels such as background or EPA soil screening numbers, are used in the alternative); OHIO REV. CODE ANN. § 3746.04(B)(2)(b) (Anderson 1995) (rules to take account of impacts on surrounding land in establishing site-specific risk assessment methodologies); OR. REV. STAT. § 465.315(1)(d)(D) (Supp. 1996); RHODE ISLAND SOIL STANDARDS WORKSHOP, *supra* note 253, at 1 (noting that Rhode Island is considering standards based on different land use categories); *see also* Survey Results, *supra* note 158 (regarding the Montana provision).

256. PA. STAT. ANN. tit. 35, § 6026.304(l)(1)(v) (1996); *see also* Sweeney, *supra* note 20, at 154 n.315; Tuttle, *supra* note 170.

257. PA. STAT. ANN. tit. 35, § 6026.304(l)(2) (West Supp. 1996); *see also* Sweeney, *supra* note 20, at 154 n.315 (describing the Pennsylvania provision); Tuttle, *supra* note 170 (describing the Pennsylvania provision).

258. *See* Courtney, *supra* note 140, at 14 (stating that the flexible site-specific cleanup standards "make it possible to turn a liability into an asset by utilizing a site-specific risk assessment for redevelopment activities.") (quoting Ronald G. Fender, Principal and Senior Program Director, Environmental Resources Management, Exton, PA); Tuttle, *supra* note 170 (stating that Pennsylvania's site-specific standard "offers the greatest opportunity to renew properties previously considered too expensive for voluntary remediation").

259. Dinsmore, *supra* note 24, at 11.

260. *See, e.g.*, 415 ILL. COMP. STAT. ANN. 5/58.5(d) (West Supp. 1996); PA. STAT. ANN. tit. 35, § 6026.304(b) (West Supp. 1996); *see also* Sweeney, *supra* note 20, at 154 n.315 (describing the Pennsylvania provision); Tuttle, *supra* note 170 (describing the Pennsylvania provision).

261. *See, e.g.*, 415 ILL. COMP. STAT. ANN. 5/58.5(d) (West Supp. 1996); OHIO REV. CODE ANN. § 3746.07(A)(2) (Anderson 1995) (providing that carcinogens must be cleaned to meet a risk level of between 1 in 10,000 and 1 in 1,000,000, depending on the intended use of the property); 30 TEX. ADMIN. CODE § 335.563(b) (WESTLAW through Jan. 1, 1996); *see also* Sweeney, *supra* note 20, at 126 n.147 (describing the Ohio approach).

262. ARK. CODE ANN. § 8-7-523(j)(2)(A) (Michie Supp. 1995); COLO. REV. STAT. ANN. § 25-16-305(1)(a) (West Supp. 1996); 415 ILL. COMP. STAT. ANN. 5/58.5(d)(3) (West Supp. 1996) (providing that this is a factor to be considered in developing "Tier III" site-specific risk-based standards); LA. REV. STAT. ANN. § 30:2272.1 (West Supp. 1996); MINN. STAT. ANN. § 115B.17(2a) (WESTLAW through 1995 Sp. Sess.) (providing that in determining the site-spe-

iii. Background Standards

In some states, certain cleanups will take place to background levels, either because the developer has the option to elect to do so or the state requires it in some instances.²⁶³ This standard requires the developer to return the property to the condition it would have been in if the contamination associated with the previous use of the site had not occurred.²⁶⁴ However, because it requires a cleanup to natural conditions at the site, most observers claim that the cost of meeting a background standard is excessive.²⁶⁵

cific cleanup standard for a brownfield site, "the commissioner shall consider the planned use of the property where the release or threatened release is located"); MONT. CODE ANN. § 75-10-721(2)(c) (1995) (accepting a variety of risk-based standards based on "reasonably anticipated future uses" as defined in § 75-10-701(13)); OR. REV. STAT. § 465.315(1)(b) (Supp. 1996) (providing, however, that cleanups must protect against both public health and environmental risks); PA. STAT. ANN. tit. 35, § 6026.304(l)(1) (West Supp. 1996); VA. CODE ANN. § 10.1-1429.1(A)(1) (Michie Supp. 1996) (rules establishing site-specific standards must consider "the future industrial, commercial, residential, or other use of property to be remediated and of surrounding properties"); see also Andrew, *supra* note 29, at 28 (describing the Minnesota provision); Dinsmore, *supra* note 24, at 11; Sweeney, *supra* note 20, at 152 (describing the Virginia provision); *id.* at 154 n.315 (describing the Pennsylvania provision); Tuttle, *supra* note 170 (describing the Pennsylvania provision); Survey Results, *supra* note 158 (regarding the Montana provision).

263. States allowing or requiring cleanups to "background" levels include: *Indiana* (INDIANA VRP FACT SHEET, *supra* note 179, at 3); *Minnesota* (COMING CLEAN, *supra* note 24, at 99 (cleanups in Minnesota may be to Department of Health standards, which "tend to reflect background contamination levels")); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.302 (West Supp. 1996)); *Texas* (30 TEX. ADMIN. CODE § 335.554 (WESTLAW through Jan. 1, 1996) (providing that cleanups may meet background levels to meet "Risk Reduction Standard Number 1")); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(1) (Michie Supp. 1996) (providing that rules are required to consider "natural background levels for hazardous constituents"). See also Sweeney, *supra* note 20, at 151 n.297, 153 n.312 (describing the Pennsylvania and Virginia provisions). In Pennsylvania, developers who select the background standard are required to meet that standard for each regulated substance in each medium, with attainment to be demonstrated by collection and analysis of representative samples or statistical testing results. The developer's final report documenting attainment of the background standard must include site investigation results, descriptions of cleanup procedures, and summaries of analyses that demonstrate attainment of the background standard. If the background standard was not met by removal or treatment methods, the report must also "demonstrate that remaining contaminants on the site will meet State-wide health standards." PA. STAT. ANN. tit. 35, § 6026.302 (West Supp. 1996); see also Sweeney, *supra* note 20, at 153 n.312.

264. Tuttle, *supra* note 170, at 13.

265. See NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 22 (citing the statement of Raymond Loehr, Chairman, Department of Civil Engineering, Univ. of Texas at Austin, that "[t]he cost of cleaning to background conditions can be enormous, and is often unnecessary"); Anderson, *supra* note 109, at 23 (stating that requiring cleanups to background levels "discourages voluntary site cleanups"); Berger et al., *supra* note 23, at 103 (noting that "Background Levels represent the more stringent standard"). State officials contacted for this article also indicated that requiring cleanups to background levels would hamper participation in voluntary cleanup programs. Telephone Interviews, *supra* note 160. Some states have acted to change an explicit requirement that sites be cleaned to meet background levels of contamination. In Oregon, for example, cleanups have been required to meet background levels unless the state determined that it was infeasible to do so or the generic soil standards applied; the state's voluntary cleanup statute requires revision of this requirement. OR. REV. STAT. § 465.315(1)-(2) (Supp. 1996); OR. ADMIN. R. 340-122-040, -045 (WESTLAW through Oct. 31, 1996); see also COMING CLEAN, *supra* note 24, at 112 (describing the Oregon approach prior to the 1995 statutory amendment).

c. Tiered System of Cleanup Standards

A tiered or similar system has been adopted in Delaware,²⁶⁶ Illinois,²⁶⁷ Indiana,²⁶⁸ Massachusetts,²⁶⁹ Michigan,²⁷⁰ Missouri,²⁷¹ Penn-

Some observers, however, believe that if the surrounding area is contaminated, as will be the case at many sites in industrial areas, a background standard might be the most lenient cleanup standard. *See, e.g.*, Evans, *supra* note 159 (describing the unsuccessful opposition of a coalition of environmentalists and community leaders to incorporating the background standard as an option in a proposed voluntary cleanup program in Maryland, for this reason).

266. Delaware's system, although not strictly "tiered," has flexibility for determining the cleanup standard at a given site. Section 9 of Delaware's CERCLA regulations, the "Delaware Regulations Governing Hazardous Substance Cleanup," governs the setting of cleanup standards. Delaware Regulations, *supra* note 172, § 9. It calls for the use of "a risk-based approach on a site specific basis," with cleanups allowed to be based "on current and potential future resource uses and reasonable maximum exposures expected to occur under both current and potential future use conditions of areas that could be impacted by a release or imminent threat of a release of hazardous substances." *Id.* § 9.1(1)-(2); Survey Results, *supra* note 158. However, the state has indicated that where contamination is limited, the use of "trigger levels" derived from the EPA Region III's Risk-Based Concentration Tables for specific contaminants will satisfy the requirements of the regulations. COMING CLEAN, *supra* note 24, at 87; Telephone Interviews, *supra* note 160.

267. A developer in Illinois has flexibility to propose "remediation objectives" to clean up the site to levels developed in accordance with state rules to be promulgated for risk-based cleanups. 415 ILL. COMP. STAT. ANN. 5/58.5 (West Supp. 1996). The forthcoming rules will establish a three-tier process for the establishment of remediation objectives. *Id.* § 5/58.5(d). "Tier I" objectives will be to meet numeric standards, and "Tier II" objectives will be to meet site-specific standards calculated on the basis of numerical modeling rules to be developed. *Id.* § 5/58.5(d)(1), (2). "Tier III" objectives will include methodologies that will be developed to allow for risk standards for soil or groundwater that account for site-specific characteristics, current and proposed land uses, effectiveness of engineering and institutional controls, and the actual and potential impact of contamination. *Id.* § 5/58.5(d)(3). Objectives will be site-specific standards, with residential land uses and nonresidential land uses to be evaluated separately, at exposures representing an excess upper-bound lifetime risk of between 1 in 10,000 and 1 in 1,000,000 (depending on the proposed use of the site, with an excess upper-bound risk for residential uses of 1 in 1,000,000) for carcinogens. *Id.* § 5/58.5(d). Cleanups may be to levels exceeding existing state groundwater quality protection standards if "exceedance of the groundwater quality standard has been minimized and beneficial use appropriate to the groundwater . . . has been returned; [and any] threat to human health or the environment has been minimized." *Id.* § 5/58.5(d)(4)(A)(i)-(ii). Illinois requires the developer to submit a "Remediation Objectives Report" demonstrating the calculation of site-specific standards, if those are chosen. *Id.* § 5/58.6(c); *see also* Survey Results, *supra* note 158.

268. Indiana's cleanup standards, defined in guidance documents, embody a three-tier approach. Tier I involves cleanups to background levels. Tier II involves a generic risk-based approach, with different exposure assumptions for residential and nonresidential scenarios; this approach cannot be used for sites where contamination has an adverse impact on critical habitats, including such areas as wetlands and dunes. Tier III standards are based on a site-specific risk assessment. COMING CLEAN, *supra* note 24, at 96; INDIANA VRP FACT SHEET, *supra* note 179, at 3; Telephone Interviews, *supra* note 160.

269. MASS. REGS. CODE tit. 310, §§ 40.0970-.0996 (WESTLAW through Register No. 794) specifies a three-tier system of cleanup standards. The overriding standard calls for a condition of "no significant risk" to exist with respect to health, safety, public welfare, or the environment at each site. *Id.* § 40.0902 (WESTLAW through Register No. 794); MASSACHUSETTS MCP FACT SHEET, *supra* note 227, at 4. Three methods of setting cleanup standards are available to meet the "no significant risk" requirement. "Method 1" standards are numeric standards for over 100 common chemicals in soil and groundwater; "Method 2" allows for site-specific adjustments (through modeling) to Method 1 standards; and "Method 3" sets standards based on a site-specific risk assessment. MASS. REGS. CODE tit. 310, §§ 40.0970-.0996 (WESTLAW through Register No. 794); MASSACHUSETTS MCP FACT SHEET, *supra* note 227, at 5.

sylvania,²⁷² Texas,²⁷³ Washington,²⁷⁴ and Wisconsin,²⁷⁵ and, due to the influence of the ASTM RBCA standard, is an increasingly popular

270. Prior to the 1995 statutory amendments, MICH. ADMIN. CODE r. 299.5705 (WESTLAW through ENFLEX Aug. 1996 Release) specified that cleanups of sites in Michigan may be "Type A," "Type B," or "Type C" cleanups. A "Type A" cleanup is a cleanup to background conditions. *Id.* r. 299.5703(p). A "Type B" cleanup is a cleanup to generic statewide standards for contaminants in groundwater, soil, surface water, and air, defined in *id.* r. 299.5709-.5715. A "Type C" cleanup is a cleanup following a site-specific risk assessment. *Id.* r. 299.5719. This "A-B-C" approach was heavily criticized as imposing cleanup standards that had "little bearing on reality." David H. Fink & Alan D. Wasserman, *Winds of Change—Legislative Reform of MERA*, 73 MICH. B.J. 1060, 1060 (1994). Rules to be developed under the new statutory authority will replace the "A-B-C" approach with a two-tier approach: the developer will have the option of performing a cleanup to meet generic standards developed for a variety of land use categories or a cleanup to meet site-specific criteria. MICH. COMP. LAWS ANN. § 324.20120a(1)-(2) (West Supp. 1996).

271. Missouri's two-tier approach allows for cleanups to meet generic standards (Tier 1 "Uniform Cleanup Standards"), or site-specific, risk-based standards (Tier 2 "Alternate Cleanup Standards"). MISSOURI CLEANUP STANDARDS, *supra* note 242, at 9-10. Meeting Tier 1 standards is a "walk-away remediation." *Id.* at 9; Helfrich, *supra* note 156, at 1. The Tier 1 Uniform Cleanup Standards for soils are the lower of the Missouri DNR's "Any Use Soil Levels" (ASLs) or levels for soils listed in the DNR's 1992 corrective action document. The ASLs are risk based, with a maximum cancer risk for carcinogens of 1 in 100,000. For groundwater, cleanups must meet background levels, or, if that is technically impracticable, MCLs listed in the Missouri Water Quality Standards or levels in the corrective action document. MISSOURI CLEANUP STANDARDS, *supra* note 242, at 11, app. 1; Helfrich, *supra* note 156, at 2. The Missouri DNR has discretion to require that cleanups meet Tier 2 standards in a number of situations such as if contamination adversely impacts habitat, or a threatened or endangered species. MISSOURI CLEANUP STANDARDS, *supra* note 242, at 9-10; *see also* COMING CLEAN, *supra* note 24, at 106.

272. PA. STAT. ANN. tit. 35, § 6026.301 (West Supp. 1996). Pennsylvania requires the developer to comply with one or more of the following standards: (1) a background standard; (2) a statewide health standard adopted by the Environmental Quality Board; or (3) a site-specific standard which achieves cleanup levels based on a site-specific risk assessment. *Id.*; *see* COMING CLEAN, *supra* note 24, at 89; Sweeney, *supra* note 20, at 153 n.311; Tuttle, *supra* note 170; *Brownfields: Pennsylvania Bill Signed into Law; Foes Appeased by Late Provisions*, Hazardous Waste News, May 22, 1995, available in WESTLAW, 1995 WL 2407234.

273. 30 TEX. ADMIN. CODE § 333.8(a) specifies that cleanups in the Texas Voluntary Cleanup Program (VCP) must meet "appropriate technical standards based upon the site characteristics and site contaminants." 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996). In its preamble to the new rules implementing the VCP, the Texas Natural Resource Conservation Commission (TNRCC) provided that the VCP will operate under existing cleanup standards of the "Risk Reduction Rules" until the TNRCC promulgates rules modifying cleanup standards. The Risk Reduction Rules, promulgated at 30 TEX. ADMIN. CODE §§ 335.554-.568 (WESTLAW through Jan. 1, 1996), allow cleanups to background levels (Risk Reduction Standard Number 1), to meet statewide health standards (Risk Reduction Standard Number 2), or to meet site-specific standards (Risk Reduction Standard Number 3). The criteria for response action selecting is different, however, from existing requirements under the Risk Reduction Rules. The new selection criteria under 30 TEX. ADMIN. CODE § 333.8(b) allow a demonstration that the response action "will achieve the response action objectives" for the site, instead of basing the selection on a comparison with other remedial alternatives. 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996); Survey Results, *supra* note 158.

274. WASH. ADMIN. CODE § 173-340-700 (WESTLAW through July 24, 1996) provides three methods for determining cleanup levels. "Method A" cleanups are based on tables for individual contaminants; "Method B" cleanups are based on risk equations; and "Method C" cleanups are based on site-specific risk information. Method C cleanups may take place only when "[c]ompliance with cleanup levels developed under the method A or B may be impossible to achieve or may cause greater environmental harm," or at sites that are qualifying industrial sites. WASH. ADMIN. CODE § 173-340-700(3)(c) (WESTLAW through July 24, 1996); *see also* Survey Results, *supra* note 158. Oregon is considering implementing a similar approach in its forthcoming rules. Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160.

option.²⁷⁶ In Pennsylvania, the developer chooses from one of several approaches: complying with a background standard, a generic state-wide standard, or a site-specific standard. There is no hierarchy among the standards in this tiered system; the developer is free to choose the standard deemed most efficient.²⁷⁷ Other states follow the Rebecca approach more closely, requiring cleanups to be based on site-specific risk assessments if applying generic standards would result in inadequate cleanups.²⁷⁸

d. Presumptive Remedies

Some states modify or reverse the usual statutory preference for permanent remedies such as destruction of hazardous substances.²⁷⁹ The preference for engineering controls (measures designed to entomb the contamination at the site, such as placement of a parking lot over contaminated soil)²⁸⁰ or institutional controls (managerial controls such as fences and warning signs, and land use restrictions),²⁸¹ which reduce cleanup costs significantly, is perhaps the "ultimate relaxation of cleanup standards."²⁸² States incorporate a variety of provisions regarding engineering or institutional controls.²⁸³ These

275. WIS. ADMIN. CODE ch. NR 720 (1996) outlines three methods for soil cleanups: numeric tables, with different standards for industrial and residential uses; site-specific equations for modeling of contamination; and cleanup levels based on site-specific risk assessments. See also COMING CLEAN, *supra* note 24, at 103; Telephone Interviews, *supra* note 160.

276. Arkansas, North Carolina, Oregon, and Rhode Island are considering the creation of tiered systems. N.C. GUIDELINES, *supra* note 191, at 1-3; RHODE ISLAND SOIL STANDARDS WORKSHOP, *supra* note 253, at 1, 3 (noting that the tiered approach is similar to the ASTM's methodologies); Telephone Interviews, *supra* note 160. The forthcoming Ohio rules will offer the developer the option to meet either generic standards or standards based on a property-specific risk assessment. OHIO REV. CODE ANN. § 3746.04(B)(1)-(2) (Anderson 1995).

277. PA. STAT. ANN. tit. 35, § 6026.301 (West Supp. 1996); see also Tuttle, *supra* note 170.

278. States continue to experiment, however. Illinois has adopted an approach that modifies the "Rebecca" standard; cleanups based on site-specific risk assessments will only be required if the state determines in writing that the background level of contamination poses an "acute threat" to human health or the environment. 415 ILL. COMP. STAT. ANN. 5/58.5(b) (West Supp. 1996).

279. The general rule for cleanup remedies under CERCLA is that "[r]emedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances . . . are to be preferred over remedial actions not involving such treatment." CERCLA § 121(b)(1), 42 U.S.C. § 9621(b)(1) (1994); see RODGERS, *supra* note 76, § 8.5, at 735-36; Anderson, *supra* note 109, at 23.

280. Engineering controls include such measures as caps, covers, leachate collection systems, groundwater containment systems, and treatment systems intended to control or contain migration of hazardous substances. See, e.g., CAL. HEALTH & SAFETY CODE § 25396(f) (West Supp. 1996).

281. "Institutional controls" is the general designation for measures such as fences, warning signs, and land use restrictions, undertaken to limit health risks. See, e.g., PA. STAT. ANN. tit. 35, § 6026.103 (West Supp. 1996).

282. McWilliams, *supra* note 20, at 740.

283. See, e.g., MICH. COMP. LAWS ANN. § 324.20120a(16) (West Supp. 1996) (providing that a cleanup must be for residential use or provide for land use controls); *id.* § 324.20120b(3) (land use controls required for all cleanups other than residential unless the cleanup is for a use in a "limited" category, and the state determines that these controls are "not necessary to protect the

controls are either presumed to meet redefined cleanup standards²⁸⁴ or specified to receive heightened consideration.²⁸⁵ Provisions calling for consideration of the cost-effectiveness of the proposed remedy²⁸⁶ or its technical feasibility²⁸⁷ also enhance the likelihood of using these forms of controls.

The use of these controls usually requires some means for recording and transferring this information to future users of a site, such as deed notices and restrictions on future use of the site.²⁸⁸

public health, safety, or welfare, or the environment and to assure the effectiveness and integrity of the remedial action"); OR. REV. STAT. § 465.315(1)(b) (Supp. 1996).

Michigan allows the use of institutional controls such as fences and warning signs for "limited" land use categories, when "the department determines that exposure to hazardous substances may be reliably restricted by an institutional control in lieu of a restrictive covenant, and that imposition of land use or resource use restrictions through restrictive covenants is impractical." MICH. COMP. LAWS ANN. § 324.20120b(5) (West Supp. 1996).

284. In Pennsylvania, engineering and managerial controls may be used to meet the site-specific standard. PA. STAT. ANN. tit. 35, § 6026.304(i) (West Supp. 1996); Tuttle, *supra* note 170. However, the state is directed to "disapprove a site-specific remediation plan that consists solely of fences, warning signs or future land use restrictions unless the site-specific standard is developed on the basis of exposure factors which are no less stringent than those which would apply to the site at the time the contamination is discovered." PA. STAT. ANN. tit. 35, § 6026.304(i) (West Supp. 1996); Tuttle, *supra* note 170. Pennsylvania does not allow the use of managerial controls to meet the background standard; however, they may be used to maintain the background standard after remediation. PA. STAT. ANN. tit. 35, § 6026.302(b)(4) (West Supp. 1996).

285. See, e.g., ARK. CODE ANN. § 8-7-523(j)(2)(E) (Michie Supp. 1995); MONT. CODE ANN. § 75-10-721(2)(c)(iv) (1995) (providing that engineering controls are to be given "due consideration"); OHIO REV. CODE ANN. § 3746.04(B)(2)(a)(ii)-(iii) (Anderson 1995) (providing for cleanup standards based on site-specific risk assessments to consider the existence of institutional and engineering controls); OR. REV. STAT. § 465.315(1)(c) (Supp. 1996); PA. STAT. ANN. tit. 35, § 6026.304(j)(1)(iv) (West Supp. 1996); VA. CODE ANN. § 10.1-1429.1(A)(1) (Michie Supp. 1996) (providing that rules establishing site-specific standards must consider this); see also Sweeney, *supra* note 20, at 151 n.297 (describing the Virginia provision). But see CAL. HEALTH & SAFETY CODE § 25398.6(c) (West Supp. 1996) (providing that no special preference is to be given to engineering and land use controls; state must evaluate merits of response options reasonably available in light of site-specific conditions); WASH. ADMIN. CODE § 173-340-360(5) (WESTLAW through July 24, 1996) (requiring preference for permanent cleanup solutions, with cleanups based primarily on institutional controls allowed only when it is not technically possible to select a more permanent cleanup alternative).

286. See, e.g., ARK. CODE ANN. § 8-7-523(j)(2)(C) (Michie Supp. 1995); CAL. HEALTH & SAFETY CODE § 25398.6(c)(4) (West Supp. 1996); MONT. CODE ANN. § 75-10-721(2)(c)(v) (1995); OR. REV. STAT. § 465.315(1)(d)(E) (Supp. 1996).

287. See, e.g., ARK. CODE ANN. § 8-7-523(j)(2)(C) (Michie Supp. 1995); COLO. REV. STAT. ANN. § 25-16-305(1)(c) (West Supp. 1996); MICH. COMP. LAWS ANN. § 324.20118(6)(a) (West Supp. 1996) (providing that the state may approve a remedial action plan relaxing cleanup standards in this fashion if compliance "is technically impractical"); MONT. CODE ANN. § 75-10-721(2)(c)(iii) (Supp. 1996); OR. REV. STAT. § 465.315(1)(d)(B) (Supp. 1996); PA. STAT. ANN. tit. 35, § 6026.304(j)(4) (1996); VA. CODE ANN. § 10.1-1429.1(A)(1) (Michie Supp. 1995) (providing that rules establishing site-specific standards must consider this); see also Sweeney, *supra* note 20, at 151 n.297 (describing the Virginia provision).

288. See, e.g., OTA STATE OF THE STATES, *supra* note 20, at 16-17; RHODE ISLAND SOIL STANDARDS WORKSHOP, *supra* note 253, at 1 (noting that the use of institutional controls will be restricted to sites where some form of deed notice is provided); Gwathmey & O'Brien, *supra* note 35.

3. *Limiting Future Liability*

Most voluntary cleanup programs allow developers and lenders to obtain some form of immunity from liability for contamination at the site.²⁸⁹ One commentator has termed this a "fundamental requirement" to spur developers' participation in a state program.²⁹⁰ Liability assurances for developers and, in some instances, lenders, come in a variety of forms and with a wide range of conditions and qualifications.²⁹¹

a. Forms of Liability Protection

The most common forms of liability protection include "no action" letters, covenants not to sue, releases from state CERCLA liability, and certificates of completion (a state's certification that the cleanup meets applicable standards), all extended to developers upon completion of cleanup activities. Some states also alter the liability of owners and lenders under the state CERCLA law. Michigan has gone the furthest of any state in this regard by changing the structure of its CERCLA law to provide blanket protection from liability to an owner that is not responsible for causing the contamination at the brownfield site.²⁹²

The following table illustrates the forms of liability protection offered by each state.

289. OTA STATE OF THE STATES, *supra* note 20, at 16-19; Anderson, *supra* note 109, at 24-26; Berger et al., *supra* note 23, at 97-100 (describing the types of liability releases); Dinsmore, *supra* note 24, at 11 (noting that liability protection is available in a number of states for prospective purchasers and current owners who undertake cleanup activities); Sweeney, *supra* note 20, at 121-22 (discussing covenants not to sue, certificates of completion, and no further action letters generally); Casserly, *supra* note 26, at 273 (contrasting Wisconsin's statute and rules, which contain no provisions for liability protections for developers who do partial cleanups, with Minnesota's law, which does allow developers to limit their liability under these circumstances); Solo, *supra* note 23, at 311 (citing to provisions in the Indiana, Michigan, Minnesota, and Oregon statutes).

290. Solo, *supra* note 23, at 318-19; *see also* Anderson, *supra* note 109, at 25 (asking "what would motivate an owner to cleanup and sell his property if his potential liability was unending?"); Pendergrass, *supra* note 26, at 6 (stating that "[o]ne of the key features of Minnesota's program is that it will release voluntary parties from liability by issuing 'no action' letters and 'certificates of completion'"); Sweeney, *supra* note 20, at 163 (terming written liability assurances "integral to the success of a Brownfields restoration and voluntary cleanup program").

291. OTA STATE OF THE STATES, *supra* note 20, at 16.

292. MICH. COMP. LAWS ANN. § 324.20126(1) (West Supp. 1996).

TABLE 4
FORMS OF LIABILITY ASSURANCES

Type of Limit on Liability	State	Comments
"No action" letter or determination	Arizona, California VCP, Colorado, Connecticut, Delaware, Illinois, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Rhode Island, Tennessee, Washington	<i>Washington</i> : applies to "independent remedial actions"
"Good neighbor" letter	Colorado, Minnesota	<i>Minnesota</i> : also features a "no association" letter
Covenant not to sue or release from state CERCLA liability	California ERAP, Connecticut, Delaware, Indiana, Louisiana, Massachusetts, Maine, Michigan, Minnesota, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, Virginia (<i>forthcoming</i>), Washington, Wisconsin	<i>Oregon</i> : release and covenant not to sue applies only to parties to a prospective purchaser agreement <i>Rhode Island</i> : no release for a responsible person <i>Washington</i> : applies to parties entering into consent decrees with state oversight of clean-ups
Certificate of completion	California VCP, Delaware, Indiana, Louisiana, Maine, Minnesota, Texas, Vermont, Virginia (<i>forthcoming</i>), Wisconsin	
Lender liability limits (protected if voluntary cleanup takes place)	Louisiana, Maine, Minnesota	
Lender liability limits (overall limits on liability)	Illinois, Massachusetts, Michigan, Ohio, Oregon, Pennsylvania, Rhode Island, Wisconsin	<i>Wisconsin</i> : also limits the liability of qualifying municipalities

Other

Arkansas

Arkansas: statute provides for consent order to establish cleanup liabilities and obligations; state considering implementing some form of liability assurance

i. No Action Letter

The "no action" letter, or its equivalent, is available in a number of states.²⁹³ It assures a developer that the state will not pursue an

293. A no action letter or its equivalent is available in: *Arizona* (ILLINOIS EPA GUIDE, *supra* note 158, at 2 (stating that in Arizona a "letter of completion" is available for the remedial action plan and for completion of cleanup)); *California* (COMING CLEAN, *supra* note 24, at 110 (under the California VCP, a "no further action" letter is available to a developer that completes a PEA showing that no cleanup is necessary)); *Colorado* (COLO. REV. STAT. ANN. § 25-16-307 (West Supp. 1996) ("no action determination")); *Connecticut* (COMING CLEAN, *supra* note 24, at 73 (indicating that in Connecticut, a letter of completion of remediation activities is available)); *Delaware* (Delaware Regulations, *supra* note 172, §§ 4.3(c), 5.3(c) ("no further action" letter available if no remedial action is necessary)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.10 (new law makes a "No Further Remediation letter" available after completion of cleanup; letter is "prima facie evidence that the site does not constitute a threat to human health and the environment and does not require further remediation under this Act, so long as the site is utilized in accordance with the terms of the [letter]")); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(9) (West Supp. 1995)); *Michigan* (MICH. COMP. LAWS ANN. § 324.20129a (West Supp. 1996) (letter of determination available after a baseline environmental assessment)); *Minnesota* (MINN. STAT. ANN. §§ 115B.177-.179 (West Supp. 1996) (provides for "off-site source determination letter"; state also offers several forms of written assurances, including a "no action letter," and "no association letter")); *Missouri* (MO. ANN. STAT. § 260.573 (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(6) (WESTLAW through ENFLEX Aug. 1996 Release)); *Montana* (MONT. CODE ANN. 75-10-738 (making a "letter of completion" available after a "petition for closure")); *Nebraska* (NEB. REV. STAT. § 81-15,186 (WESTLAW through end of 1995 Reg. Sess.)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 78 (New Hampshire provides for a no further action letter)); *New Jersey* (N.J. ADMIN. CODE tit. 7, § 26C-3.3, app. A § V(7) (WESTLAW through Aug. 19, 1996) (developer may receive a "no further action statement")); *New York* (COMING CLEAN, *supra* note 24, at 85 (a developer may receive a no further action letter in New York)); *North Carolina* (N.C. GUIDELINES, *supra* note 191, at 1-2 to 1-3 (noting that a "no further action" letter is available to any party conducting a site cleanup upon completion of all cleanup actions)); *Ohio* (OHIO REV. CODE ANN. §§ 3746.10(A), 3746.11 (Anderson 1995) (providing for the certified professional to review the cleanup and issue a no further action letter); OHIO ADMIN. CODE § 3745-300-13 (WESTLAW through Aug. 31, 1996) (defining the scope and content of "no further action" letters)); *Oregon* (COMING CLEAN, *supra* note 24, at 112 (before the 1995 amendment in Oregon, a "no further action" letter was available to participants in the Volunteer Cleanup Program, but not to parties who have entered into a prospective purchaser agreement)); *Rhode Island* (COMING CLEAN, *supra* note 24, at 80 (indicating that in Rhode Island, a "letter of compliance" is available to any performing party who completes a remedy)); *Tennessee* (TENN. CODE ANN. § 68-212-224(g) (Supp. 1995)); *Washington* (WASH. ADMIN. CODE § 173-340-550(7)(a)(i) (WESTLAW through July 24, 1996) (providing that the department may provide a "written determination regarding the adequacy of the remedial actions performed at a site" where an independent remedial action has taken place; state issues "no further action" letters under this authority)). See also COMING CLEAN, *supra* note 24, at 83-84, 87, 98 (describing the Delaware, Minnesota, and New Jersey letters); NEPI WHITE PAPER, *supra* note 20, at 45 (describing the New Jersey letter); OTA STATE OF THE STATES, *supra* note 20, at 19-20 (describing the Minnesota letters); TENNESSEE VOAP FACT SHEET, *supra* note 193, at 1 (noting that a "Letter of Completion" is available when voluntary activities are completed); Anderson, *supra*

enforcement action or require more cleanup activities at the site²⁹⁴ and is typically available in two situations:²⁹⁵ (1) if an initial or Phase I assessment reveals contamination at the site at levels too low for regulatory concern or no contamination at all²⁹⁶ or (2) if contamination exists at levels exceeding applicable standards, and the developer completes an approved cleanup.²⁹⁷ Ohio, which allows developers to request a "variance" from cleanup standards, allows no action letters to be issued to these developers as well.²⁹⁸

Variations of the "no action" letter include the "off site source determination" (or "good neighbor") letter available in Colorado and Minnesota²⁹⁹ and Minnesota's "no association" letter.³⁰⁰ The good

note 109, at 25; Michel, *supra* note 20, at 457 (describing the Ohio letter); Sweeney, *supra* note 20, at 134-35, 138 (describing the Minnesota and Colorado letters); Casserly, *supra* note 26, at 268 (describing the Minnesota letters); Survey Results, *supra* note 158 (regarding the Delaware, Missouri, New Jersey, North Carolina, and Rhode Island letters); Telephone Interviews, *supra* note 160 (regarding the California, Delaware, Illinois, Oregon, Rhode Island, and Tennessee provisions). Arkansas is considering extending some form of no action letter to developers. Telephone Interviews, *supra* note 160.

Unlike its other forms of liability protection, Minnesota's no action letter is not expressly provided for in the statute, but in a guidance document under the state's inherent authority to exercise discretion in enforcement actions. See Sweeney, *supra* note 20, at 134 n.188 (citing MINNESOTA POLLUTION CONTROL AGENCY: VOLUNTARY INVESTIGATION AND CLEANUP, GUIDANCE DOCUMENT NO. 4 (rev. Jan. 1994)); Casserly, *supra* note 26, at 268. This is the approach taken by Oregon and Rhode Island, Telephone Interviews, *supra* note 160, as well as the states such as California, New Hampshire, and New York that conduct voluntary cleanup programs without express statutory authority.

294. See, e.g., OTA STATE OF THE STATES, *supra* note 20, at 19-20 (describing this feature of Minnesota's no action letter). The no action letter can often be tailored to the specific circumstances of a cleanup (e.g., when a developer undertakes a cleanup of only part of the site, or investigates and cleans up a limited type of contamination). *Id.*; Sweeney, *supra* note 20, at 135 n.195; Casserly, *supra* note 26, at 268 (describing the Minnesota "limited no action" letter).

295. See, e.g., OHIO REV. CODE ANN. § 3746.10(A) (Anderson 1995); see also OTA STATE OF THE STATES, *supra* note 20, at 19-20 (describing the Minnesota letter); Michel, *supra* note 20, at 455 n.189, 456 n.202 (describing the circumstances under which the certified professional may issue a no further action letter in Ohio); Sweeney, *supra* note 20, at 138 (describing the Colorado "no action determination").

296. In Ohio, for example, the developer can conclude cleanup activities when the Phase I assessment demonstrates "that information indicates that there has been a release of hazardous substances or petroleum at or upon a property, but that the release is not in excess of applicable standards." OHIO ADMIN. CODE § 3745-300-13(A)(3) (WESTLAW through Aug. 31, 1996); see also Michel, *supra* note 20, at 455 n.189 (describing the Ohio statute's interim provision); cf. *Maine VCP Fact Sheet*, *supra* note 195, at 1 (providing that the party may receive a letter indicating that no remedial actions are necessary at the site under similar circumstances).

297. In the latter case, a developer usually requests a no action letter only after performing an approved cleanup. See, e.g., MO. CODE REGS. tit. 10, § 25-15.010(6)(B) (WESTLAW through ENFLEX Aug. 1996 Release); OHIO ADMIN. CODE § 3745-300-13(A)(4) (WESTLAW through Aug. 31, 1996); see also Michel, *supra* note 20, at 456 n.202 (describing the Ohio statute's interim provision). Maine also issues a "no-action assurance" letter at the plan approval stage, stating that if the cleanup is done properly, the state will not take enforcement action. *Maine VCP Fact Sheet*, *supra* note 195, at 2. Ohio, unlike most other states, provides that the "no further action" letter is issued by a certified professional, not the state agency. OHIO ADMIN. CODE § 3745-300-13(A) (WESTLAW through Aug. 31, 1996).

298. OHIO REV. CODE ANN. § 3746.04(B)(11) (Anderson 1995). For a description of the Ohio variance process, see *supra* note 240 and accompanying text.

299. COLO. REV. STAT. ANN. § 25-16-307(2)(a)(II) (West Supp. 1995); MINN. STAT. ANN. § 115B.177 (West Supp. 1996) (providing that the site owner may receive this type of letter if

neighbor letter informs the developer that contamination on the site was caused by activities on a nearby property and that the state will protect the developer if it does not hinder the cleanup activities on that property.³⁰¹ The no association letter informs the developer that it did not cause the contamination at the site and that its planned activities will not contribute to contamination at the site.³⁰²

In most states, a no action letter indicates only that the state will not pursue further enforcement actions. It does not release the developer from liability; it simply reduces the likelihood of future state actions.³⁰³ If new information about the site unknown at the time of the letter is discovered, the state is not precluded from requiring a

“the commissioner finds that the release originates from a source on adjacent or nearby real property and that the person is not otherwise responsible for the release”); *see also* OTA STATE OF THE STATES, *supra* note 20, at 20 (describing the Minnesota provision); Sweeney, *supra* note 20, at 138, 134 (describing the Colorado and Minnesota provisions); Casserly, *supra* note 26, at 269 (describing the Minnesota provision). Colorado makes this form of its no action determination available to a developer whose site does not contribute to groundwater contamination. Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160.

300. MINN. STAT. ANN. § 115B.178 (West Supp. 1995); *see also* OTA STATE OF THE STATES, *supra* note 20, at 20; Sweeney, *supra* note 20, at 134; Casserly, *supra* note 26, at 270.

301. MINN. STAT. ANN. § 115B.177(1)(b) (West Supp. 1995); *see also* OTA STATE OF THE STATES, *supra* note 20, at 20; Sweeney, *supra* note 20, at 134; Casserly, *supra* note 26, at 269.

Minnesota conditions the issuance of its good neighbor letter on the following:

- (1) agreement by the person to allow entry upon the property to the commissioner and the authorized representatives of the commissioner to take response actions to address the release, including in appropriate cases an agreement to grant easements to the state for that purpose;
- (2) agreement by the person to avoid any interference with the response actions to address the release taken by or at the direction of the agency or the commissioner, and to avoid actions that contribute to the release;
- (3) invalidation of the determination or agreement if the commissioner receives new information indicating that the property owned by the person is a source of the release or that the person is otherwise responsible for the release; and
- (4) any other condition that the commissioner deems reasonable and necessary to ensure that the agency and commissioner can adequately respond to the release.

MINN. STAT. ANN. § 115B.177(1)(b) (West Supp. 1995); *see also* Sweeney, *supra* note 20, at 134 n.188; Casserly, *supra* note 26, at 270 n.68.

302. MINN. STAT. ANN. § 115B.178 (West Supp. 1995); *see also* OTA STATE OF THE STATES, *supra* note 20, at 20; Sweeney, *supra* note 20, at 134; Casserly, *supra* note 26, at 270. The no association letter is available to determine that “certain actions proposed to be taken at real property subject to a release or threatened release of a hazardous substance or pollutant or contaminant will not constitute conduct associating the person with the release or threatened release.” MINN. STAT. ANN. § 115B.178(1) (West Supp. 1995).

303. OTA STATE OF THE STATES, *supra* note 20, at 20; Anderson, *supra* note 109, at 25; Sweeney, *supra* note 20, at 134 (describing this feature of the Minnesota letter); Telephone Interviews, *supra* note 160.

cleanup.³⁰⁴ Thus, the no action letter is of questionable utility for developers.³⁰⁵

ii. *Covenants Not to Sue*

Several states offer a developer a covenant not to sue.³⁰⁶ Because it offers express protection from future state administrative or enforcement actions for contamination found at the site,³⁰⁷ the covenant not to sue affords more protection to the developer.³⁰⁸ Typically, a developer may obtain a covenant not to sue in the same fashion as a no action letter: by undertaking a state-approved site investigation and voluntary cleanup.³⁰⁹ States often require a developer to obtain a

304. The no action letter will usually include a "reopener" provision allowing the state to take action against the developer if contamination that was not uncovered in the site investigation and cleaned up is found later, the cleanup remedy fails to work, or other new information becomes available (e.g., the discovery of fraud or other misrepresentations in the developer's reports to the state). OTA STATE OF THE STATES, *supra* note 20, at 20; *see, e.g.*, COMING CLEAN, *supra* note 24, at 99 (describing this feature of the Minnesota letters). For a broader description of conditions under which liability protections may be void or voidable, *see infra* notes 333-44 and accompanying text.

305. OTA Testimony, *supra* note 20, at 305 (claiming that a no action letter is less effective than a covenant not to sue, which provides a release from liability); OTA STATE OF THE STATES, *supra* note 20, at 17 (stating that letters of assurance other than covenants not to sue "vary in terms of their value"). *But see* Casserly, *supra* note 26, at 268-69 (stating that Minnesota regulators claim that "no action" letters "have been sufficient to allow property transactions to occur"). A number of state officials contacted for this article indicated that there had been no subsequent actions taken in their states with respect to recipients of no action letters. Telephone Interviews, *supra* note 160.

306. States offering covenants not to sue include: *California* (CAL. HEALTH & SAFETY CODE § 25398.2(b)(1)(C) (West Supp. 1996) (making covenants not to sue available in the ERAP)); *Connecticut* (COMING CLEAN, *supra* note 24, at 73 (indicating that Connecticut issues covenants not to sue to new owners)); *Indiana* (IND. CODE ANN. § 13-25-5-18 (WESTLAW through end of 1996 2d Reg. Sess.) (providing that a covenant must be given to a recipient of a certificate of completion; covenant bars all liability, including future liability)); *Massachusetts* (MASS. GEN. LAWS ANN. ch. 21E, § 3A(j)(1) (West Supp. 1996)); *Michigan* (MICH. COMP. LAWS ANN. § 324.20133(1) (West Supp. 1996)); *Ohio* (OHIO REV. CODE ANN. § 3746.12(A) (Anderson 1995) (providing that a developer may submit the "no further action" letter to the state to receive a covenant not to sue)); *Oregon* (1995 Or. Laws 662, § 4; OR. REV. STAT. § 465.325(7)(a) (Supp. 1996) (providing that the state may extend a covenant not to sue to parties entering into a prospective purchaser agreement)); *Rhode Island* (R.I. GEN. LAWS § 23-19.14-10 (Supp. 1995) (making "covenants not to sue" available only to bona fide prospective purchasers)); *Washington* (WASH. REV. CODE ANN. § 70.105D.040(4)(c) (West Supp. 1996)). *See also* MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET, *supra* note 189, at 1 (noting that covenants not to sue are available to participants in the Clean Sites Initiative); OTA STATE OF THE STATES, *supra* note 20, at 19-20; Anderson, *supra* note 109, at 25 (stating that the trend in recent statutes is to incorporate a provision for availability of a covenant not to sue); Andrew, *supra* note 29, at 28 (describing the Minnesota provision); Michel, *supra* note 20, at 457 (describing the Ohio provision); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 58 (describing the Indiana provision); Sweeney, *supra* note 20, at 122 nn.113, 125, 136, 143, 152 (citing the Massachusetts, Ohio, Minnesota, Indiana, and Virginia provisions); Survey Results, *supra* note 158 (regarding the Rhode Island provision).

307. OTA STATE OF THE STATES, *supra* note 20, at 17; Berger et al., *supra* note 23, at 98; Sweeney, *supra* note 20, at 122.

308. OTA STATE OF THE STATES, *supra* note 20, at 17 (stating that covenants not to sue are more effective than letters of assurance because they release developers from liability).

309. *See, e.g.*, Dinsmore, *supra* note 24, at 11; Michel, *supra* note 20, at 457 (describing the Ohio provision); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 58 (describing the Indiana pro-

no action letter or "certificate of completion" as a condition precedent to receipt of a covenant not to sue. In Ohio, for example, a developer may obtain a covenant not to sue from the state after it receives a no action letter.³¹⁰

iii. Certificates of Completion

In a number of states, the developer may obtain a "certificate of completion," a state approval of successful completion of cleanup activities.³¹¹ The developer is usually required to receive confirmation from the state that the cleanup has been performed properly³¹² and promise to work with the state in the future (e.g., by maintaining and monitoring the site and by cooperating with the state in future cleanup

vision); cf. MICH. COMP. LAWS ANN. § 324.20133(1)(a)-(e) (West Supp. 1996) (making the covenant not to sue available for "a person who proposes to redevelop or reuse a facility, including a vacant manufacturing or abandoned industrial site" who meets statutory conditions, including a condition that the covenant "would, when appropriate, expedite response activity consistent with the rules promulgated under this part"). *But see* COMING CLEAN, *supra* note 24, at 76; MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET, *supra* note 189, at 2-3 (covenant not to sue is available upon determination that developer is eligible for the program).

310. OHIO REV. CODE ANN. § 3746.12(A)(1) (Anderson 1995); *see also* Michel, *supra* note 20, at 457; Sweeney, *supra* note 20, at 129. Indiana requires that the developer obtain a certificate of completion before receiving a covenant not to sue. IND. CODE ANN. § 13-25-5-18 (WESTLAW through end of 1996 2d Reg. Sess.); Sweeney, *supra* note 20, at 143; Survey Results, *supra* note 158.

311. States offering certificates of completion include: *California* (COMING CLEAN, *supra* note 24, at 110 (indicating that a certificate of completion is available after a satisfactory cleanup under the California VCP); CAL. HEALTH & SAFETY CODE § 25398.15(a) (West Supp. 1996) (certificate of completion available in the ERAP)); *Delaware* (DEL. CODE ANN. tit. 7, § 9108 (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995); Delaware Regulations, *supra* note 172, § 11 (certification of completion of remedy)); *Indiana* (IND. CODE ANN. § 13-25-5-16 (WESTLAW through end of 1996 2d Reg. Sess.)); *Louisiana* (LA. REV. STAT. ANN. § 30:2287.1(A) (West Supp. 1996); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(5) (West Supp. 1995)); *Minnesota* (MINN. STAT. ANN. § 115B.175(5) (West Supp. 1995)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.609 (West Supp. 1996); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.10 (1996))); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(k) (Supp. 1996)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(3) (Michie Supp. 1996) (directing rules to provide certificates of satisfactory completion of remediation "where voluntary cleanup achieves applicable standards or where the Department determines that no further action is required")); *Wisconsin* (WIS. STAT. ANN. § 144.765(2)(a)(3) (West Supp. 1995) (certification that property has been satisfactorily restored)). *See also* OTA STATE OF THE STATES, *supra* note 20, at 17; Andrew, *supra* note 29, at 28; Clokey, *supra* note 26, at 38 (describing the Wisconsin provision); Sweeney, *supra* note 20, at 136 n.206, 143 n.240, 148-49 n.280, 150 n.289, 152 n.303 (describing the California ERAP, and Indiana, Minnesota, Texas, and Virginia provisions); Casserly, *supra* note 26, at 269 (describing the Minnesota provision); Survey Results, *supra* note 158 (regarding the Delaware and Virginia provisions); Telephone Interviews, *supra* note 160 (regarding the California VCP).

312. *See, e.g.,* WIS. STAT. ANN. § 144.765(2)(a)(3) (West Supp. 1995) (providing that a developer in Wisconsin may receive a certificate of completion only by obtaining a certification from the state DNR that the property has been "satisfactorily restored and that the harmful effects from a release of a hazardous substance have been minimized"); *see also* OTA STATE OF THE STATES, *supra* note 20, at 20 (describing the Minnesota provision); Clokey, *supra* note 26, at 38 (describing the Wisconsin provision); Sweeney, *supra* note 20, at 143 (describing the Indiana provision); Casserly, *supra* note 26, at 269 (describing the Minnesota provision).

activities).³¹³ The certificate of completion provides broad liability protection for a developer, particularly when it is accompanied by an exemption from liability under the state's CERCLA law.³¹⁴ It is also the only form of liability protection that may shield the developer against further action by the state if additional contamination is discovered at the site.³¹⁵

iv. Release from State CERCLA Liability

In a number of states, protection from future state enforcement action for a developer who performs a site investigation and/or completes a state-approved cleanup takes the form of an express release from liability under the state CERCLA law.³¹⁶ For example, a developer in Michigan may petition the state within six months of comple-

313. See, e.g., MINN. STAT. ANN. § 115B.175(2)(a)(3) (West Supp. 1995) (providing that a developer in Minnesota that receives a certificate of completion must agree "to cooperate with . . . response actions necessary to address remaining releases or threatened releases, and to avoid any action that interferes with the response action"); WIS. STAT. ANN. § 144.765(2)(a)(4) (West Supp. 1995) (providing that a developer in Wisconsin that receives a certificate of completion must maintain and monitor the property as required by the DNR); see also Clokey, *supra* note 26, at 38 (describing the Wisconsin provision); Casserly, *supra* note 26, at 269 (describing the Minnesota provision).

314. For example, a recipient of Wisconsin's certificate of completion is exempted from liability under the state Hazardous Substance Discharge Law (the "Spill Statute") for contamination at the site prior to acquisition. WIS. STAT. ANN. § 144.765(2) (West Supp. 1995); see also Clokey, *supra* note 26, at 37-38 (describing the Wisconsin provision).

315. This is the case, for example, in Wisconsin and Minnesota. Wisconsin's exemption from liability applies even if any of the following occur:

1. Statutes, rules or regulations are created or amended that would impose greater responsibilities on the purchaser . . . [;]
2. The purchaser fully complies with the rules [and cleanup plan] . . . but it is discovered that the cleanup fails to fully restore the environment and minimize the effects from a release of a hazardous substance[; or]
3. The contamination from a hazardous substance that is the subject of the cleanup . . . is discovered to be more extensive than anticipated by the purchaser and the department.

WIS. STAT. ANN. § 144.765(2)(b) (West Supp. 1995); see also Clokey, *supra* note 26, at 38 (describing the Wisconsin provision); Casserly, *supra* note 26, at 269 (describing the Minnesota provision).

316. DEL. CODE ANN. tit. 7, § 9105(f) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (exempting the holder of a certificate of completion); LA. REV. STAT. ANN. § 30:2285.1(A) (West Supp. 1996); ME. REV. STAT. ANN. tit. 38, § 343-E(6) (West Supp. 1995); MICH. COMP. LAWS ANN. § 324.20129a(5) (West Supp. 1996); MINN. STAT. ANN. § 115B.175(1)(a) (West Supp. 1995); 1995 Or. Laws 662, § 4(1) (providing for a release for a qualifying participant that enters into a prospective purchaser agreement); PA. STAT. ANN. tit. 35, § 6026.501(a) (West Supp. 1996); R.I. GEN. LAWS § 23-19.14-7(b) (Supp. 1995) (providing an exemption for persons "who are defined as bona fide prospective purchasers and who enter an enforceable settlement agreement"); TEX. HEALTH & SAFETY CODE ANN. § 361.610(a) (West Supp. 1996) (making release available; statute indicates that there is no requirement that developer purchase property prior to issuance of the certificate of completion); VT. STAT. ANN. tit. 10, § 6615a(c) (Supp. 1996) (providing an exemption for an "eligible person" who obtains a certificate of completion); VA. CODE ANN. § 10.1-1429.2 (Michie Supp. 1996) (providing immunity from state enforcement actions to the holder of a certificate of completion); WIS. STAT. ANN. § 144.765(2) (West Supp. 1995); see also COMING CLEAN, *supra* note 24, at 90 (describing the Pennsylvania provision); Sweeney, *supra* note 20, at 155 n.323, 150 n.290, 152 n.306 (describing the Pennsylvania, Texas, and Virginia provisions); Survey Results, *supra* note 158 (regarding the Texas provision); Telephone Interviews, *supra* note 160 (regarding the Oregon provision).

tion of a "baseline environmental assessment" for a "letter of determination" that it warrants a release from liability under the Michigan CERCLA statute.³¹⁷

b. Protection for Other Parties

i. Lenders

Some states extend the benefit of the liability protections in their voluntary cleanup statutes to lenders.³¹⁸ Some of these states and others have amended their CERCLA laws to provide sweeping protections similar to those found in the EPA's invalidated lender liability rule,³¹⁹ which redefined the situations in which a lender is "participating in the management" at a site.³²⁰ The apparent rationale for such provisions is that they facilitate a developer's efforts to persuade a lender to loan money for cleanup and redevelopment activities.³²¹ One commentator terms the various forms of liability protection for lenders "mandatory for redevelopment of urban industrial sites."³²² Other states, however, appear to be relying on the liability protection that they extend to developers to alleviate lenders' fear of extending credit at brownfield sites.³²³ Several major voluntary cleanup pro-

317. MICH. COMP. LAWS ANN. § 324.20129a (West Supp. 1996).

318. LA. REV. STAT. ANN. § 30:2288.1(D) (West Supp. 1996) (protecting the lender unless it is a "responsible person" as defined in *id.* § 30:2276); ME. REV. STAT. ANN. tit. 38, § 343-E(6)(B)-(C) (West Supp. 1996); MINN. STAT. ANN. § 115B.175(6) (West Supp. 1995); *see also* Anderson, *supra* note 109, at 25 (describing the Minnesota provision); Pendergrass, *supra* note 26, at 6; Sweeney, *supra* note 20, at 136 n.200 (describing the Minnesota provision); Casserly, *supra* note 26, at 265 n.37 (describing the Minnesota provision).

319. The EPA's rule was invalidated in *Kelley v. EPA*, 15 F.3d 1100 (D.C. Cir. 1994); *see supra* notes 137-38 and accompanying text.

320. This approach has been adopted in Illinois, Massachusetts, Michigan, Ohio, Oregon, Pennsylvania, and Wisconsin. 415 ILL. COMP. STAT. ANN. 5/58.10(b) (West Supp. 1996) (redefining the situations in which a lender is exempt or released from liability at a site); MASS. GEN. LAWS ANN. ch. 21E, § 3A (West Supp. 1996); MICH. COMP. LAWS ANN. § 324.20101b (West Supp. 1996) (exempting a lender from liability if it has not "participated in the management of a property," as defined in *id.* § 324.20101a); OHIO REV. CODE ANN. § 3746.26 (Anderson 1995); OR. ADMIN. R. 340-122-120 to -140 (WESTLAW through Oct. 31, 1995) (providing, however, that the state will review these rules to determine if they should be amended); PA. STAT. ANN. tit. 35, § 6027.5 (West Supp. 1996); WIS. STAT. ANN. § 144.76(9m) (West Supp. 1995); *see also* COMING CLEAN, *supra* note 24, at 88 (describing the Pennsylvania provision); Anderson, *supra* note 109, at 25-26; Clokey, *supra* note 26, at 36 n.6 (describing the Wisconsin provision); Michel, *supra* note 20, at 459 (describing the Ohio provision); Survey Results, *supra* note 158. Wisconsin also exempts municipalities from liability in certain situations. WIS. STAT. ANN. § 144.76(9)(e) (West Supp. 1995).

321. *See* Anderson, *supra* note 109, at 25; Sweeney, *supra* note 20, at 136 (stating that the Minnesota provision for lender protection "creates incentives for redevelopment").

322. Sweeney, *supra* note 20, at 161. The National Environmental Policy Institute's "model" state brownfield approach would include liability relief for lenders. NEPI WHITE PAPER, *supra* note 20, at 49.

323. *See* OTA STATE OF THE STATES, *supra* note 20, at 17 (noting that "[s]ome lenders have voiced approval of certificates of completion and no further action letters as easing concerns involving loan decisions"); Congdon, *supra* note 160, at 7 (noting that a developer's receipt of a certificate of completion in Virginia's voluntary cleanup program "should reassure nervous lenders and investors").

grams, including Indiana's, provide no liability protection for lenders.³²⁴

States extending the benefits of liability assurances to lenders often specify what a lender can do to protect itself without incurring liability.³²⁵ As noted above, this is intended to avoid the uncertainty associated with lenders' liability for taking actions to protect their security interests.³²⁶

ii. *Transferees, Successors, and Assigns*

The statutes often extend liability protection to the developer's transferees, successors, and assigns, such as subsequent owners.³²⁷

324. Sweeney, *supra* note 20, at 145, 151 (noting that the Texas statute also incorporates no specific provisions to protect lenders).

325. Illinois's "No Further Remediation Letter" protects not only the "remediation applicant" or other person to whom it was issued, but also a financial institution that acquires ownership, operation, management, or control of a site through foreclosure or other means of protecting a security interest. 415 ILL. COMP. STAT. ANN. 5/58.10(d)(1), (d)(10) (West Supp. 1996).

326. See *supra* note 321 and accompanying text.

327. Those states extending liability protection include: *Arkansas* (ARK. CODE ANN. § 8-7-523(p) (Michie Supp. 1995) (extending protection to subsequent owners if they were not or are not responsible for causing or contributing to contamination)); *Delaware* (DEL. CODE ANN. tit. 7, § 9105(e) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (extending protection of a certificate of completion to "any person who owns, operates or otherwise controls activities at the facility after the date of issuance of the certification . . . provided such person does not interfere or permit any interference with any aspect of the remedy addressed by the certification of completion of remedy")); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.10(d) (West Supp. 1996) (a No Further Remediation Letter applies to a successor-in-interest as well as other defined parties)); *Indiana* (IND. CODE ANN. § 13-25-5-18(b)(2) (WESTLAW through end of 1996 2d Reg. Sess.) (protection of covenant not to sue extends to transferee of the certificate of completion or the property to which it applies)); *Louisiana* (LA. REV. STAT. ANN. § 30:2288(A)(1) (West Supp. 1996) (protecting an owner if it "is not responsible for any discharge or disposal or threatened discharge or disposal identified in the approved voluntary remedial action plan"); *id.* § 30:2288(A)(2) (person who "acquires or develops" the site), *id.* § 30:2288(A)(3) (successor or assign of any person exempt from liability)); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(6)(E) (West Supp. 1995) (protection from state liability); *id.* § 343-E(9)(B) (no action determination extends to successors and assigns "bound by the conditions in the determination or agreements")); *Minnesota* (MINN. STAT. ANN. § 115B.175(6a)(c)(1)-(3) (West Supp. 1995) (protecting owners, purchasers, successors, and assigns in the same fashion as the Louisiana statute); *id.* § 115B.177(2) (protection of "good neighbor" letter extends to successors and assigns if they "are not otherwise responsible for the release and are bound by the conditions in the determination or agreement")); *Ohio* (OHIO REV. CODE ANN. § 3746.12(E) (Anderson 1995) (covenant not to sue remains in effect so long as property meets standards that were in effect when cleanup took place)); *Oregon* (1995 Or. Laws 662, § 4(5) (benefits and burdens run with the land to successors who agree to be bound by prospective purchaser agreement)); *Pennsylvania* (PA. STAT. ANN. § 6026.501(a)(1)-(4) (West Supp. 1995) (current or future owner who participates in cleanup, developer, successor or assign, or public utility)); *Rhode Island* (R.I. GEN. LAWS § 23-19.14-10 (Supp. 1995) (covenant not to sue may be transferred "to successors or assigns who are not otherwise found to be a responsible party," as long as they agree to any performance requirements, such as operation or maintenance)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.610(c) (West Supp. 1996) (protecting an owner or lender that becomes involved with the site after a certificate of completion is issued, unless it was originally a "responsible party")); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(c)(2) (Supp. 1996) (exemption from liability extends to successors)); *Wisconsin* (WIS. STAT. ANN. § 144.765(3) (West Supp. 1995) (exemption from liability applies to successors and assigns unless they know that certificate of completion was obtained by fraud or misrepresentation)). See also Anderson,

States may protect all successors and assigns or only future purchasers and owners. In order for the state's approval to extend to future buyers, the statutes usually require some form of notice to the purchaser.³²⁸ The typical means of notice is recordation of institutional controls, such as a restriction of the site to industrial uses, with the deed to the site.³²⁹ This puts subsequent purchasers on notice that certain activities at the site are restricted and some contamination may remain at the site.³³⁰ At sites cleaned to levels suitable for industrial uses, subsequent purchasers desiring to use the sites for residential purposes are required to notify the states and, in some cases, undertake additional cleanup activities.³³¹ Other states incorporate

supra note 109, at 25; Sweeney, *supra* note 20, at 143 n.243, 156 n.325 (describing the Indiana and Pennsylvania provisions); Survey Results, *supra* note 158 (regarding the Arkansas and Rhode Island provisions).

328. See, e.g., O'Reilly, *Indiana's Incentives*, *supra* note 24, at 64 (describing the Indiana provision).

329. ARK. CODE ANN. § 8-7-523(o) (Michie Supp. 1995) (required for "industrial activities and compatible uses"); CAL. HEALTH & SAFETY CODE § 25398.7(a) (West Supp. 1996) (land use controls, if any, must be recorded); DEL. CODE ANN. tit. 7, § 9115(b) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (certificate of completion must be recorded); 415 ILL. COMP. STAT. ANN. 5/58.8(a)-(b) (West Supp. 1996) (remediation applicant receiving a "No Further Remediation Letter" must record it for it to be effective); IND. CODE ANN. § 13-25-5-16(c) (WESTLAW through end of 1996 2d Reg. Sess.) (requirement to record certificate of completion); MICH. COMP. LAWS ANN. § 324.20120b(4) (West Supp. 1996) (restrictive covenant running with the land required to be recorded if cleanup relied on land use restrictions); OHIO REV. CODE ANN. § 3746.14 (Anderson 1995) (recording of no further action letters and covenants not to sue required); 1995 Or. Laws 662 § 4(5) (recording required of prospective purchaser agreement); TEX. HEALTH & SAFETY CODE ANN. § 361.609(c) (West Supp. 1996); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.9 which requires certificate of completion to be recorded in order to satisfy existing deed certification requirements); VT. STAT. ANN. tit. 10, § 6615a(h)(6), (k)(3) (Supp. 1996) (recording required for approved corrective action plans and certificates of completion); see also Anderson, *supra* note 109, at 25 (stating that Indiana's covenant not to sue runs with the land to "lenders, successors or assigns of the protected entity"); Michel, *supra* note 20, at 457 (describing the Ohio provision); Sweeney, *supra* note 20, at 149 n.283 (describing the California provision for the recording of land use controls); *id.* at 154 (noting that the Pennsylvania exemption from deed notice requirements for sites cleaned up under the background or statewide health standard allows a site to "be sold and redeveloped free and clear of any indicia of past or present contamination"); Survey Results, *supra* note 158 (regarding the Texas provisions). In Michigan, if the state approved institutional controls instead of land use restrictions in a restrictive covenant, these controls may be the subject of a local ordinance published in the same manner as zoning ordinances. MICH. COMP. LAWS ANN. § 324.20120b(5) (West Supp. 1996). But see PA. STAT. ANN. tit. 35, §§ 6026.302(d), -.303(g) (West Supp. 1996) (if background or statewide health standard met, no deed notice required).

330. Michel, *supra* note 20, at 457; Sweeney, *supra* note 20, at 164.

331. ARK. CODE ANN. § 8-7-523(q) (Michie Supp. 1995); CAL. HEALTH & SAFETY CODE § 25398.7(c) (West Supp. 1996) (providing that "terms and conditions of a land use control may be modified only with the express written consent of the department"); 415 ILL. COMP. STAT. ANN. 5/58.8(c) (West Supp. 1996) (site with a land use limitation may not be used in a manner inconsistent with the limitation unless investigation and/or new cleanup performed, and new "No Further Remediation Letter" obtained and recorded); MICH. COMP. LAWS ANN. § 324.20116(3) (West Supp. 1996) (transferor required to disclose applicable land or resource use restrictions); *id.* § 324.20120b(4) (restrictive covenant with land use restrictions binds successors, assigns, and lessees); PA. STAT. ANN. tit. 35, §§ 6026.505(4), -.903 (West Supp. 1996) (state must approve requests to change the property from nonresidential to residential land uses, and may require additional cleanup if risk increases by a change from nonresidential to residential land uses);

provisions designed to ensure that engineering and managerial controls are maintained properly.³³²

c. Qualifications and Limitations

i. *Situations Voiding the Limit on Liability*

Many statutes provide that if the developer fails to properly perform the cleanup activities called for in the remedial action plan,³³³ aggravates the contamination, or interferes with cleanup activities,³³⁴ it will not receive protection from liability. States also retain their

TEX. HEALTH & SAFETY CODE ANN. §361.610(c) (West Supp. 1996) (no liability protection for "a person who changes land use from the use specified in the certificate of completion if the new use may result in increased risks to human health or the environment").

332. See also OTA STATE OF THE STATES, *supra* note 20, at 16.

333. CAL. HEALTH & SAFETY CODE § 25398.2(b)(1)(D) (West Supp. 1996) (providing for the removal of a site from the list of eligible sites for the ERAP upon failure to comply with program requirements); COLO. REV. STAT. ANN. § 25-16-306(3)(a) (West Supp. 1996) (failure to "materially comply" with the plan renders approval "void"); DEL. CODE ANN. tit. 7, § 9108(a) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (state may condition certificate of completion on "the performance of additional remedies in the event that the remedial goals contained in the final plan of remedial action are not achieved as required by the plan"); 415 ILL. COMP. STAT. ANN. 5/58.10(e) (West Supp. 1996); IND. CODE ANN. § 13-25-5-19 (WESTLAW through end of 1996 2d Reg. Sess.) (state may withdraw approval of a work plan upon failure to substantially comply with terms and conditions of work plan or voluntary remediation agreement); MICH. COMP. LAWS ANN. § 324.20133(3)(c) (West Supp. 1996); MO. ANN. STAT. §§ 260.569(3)(1)-(6) (West Supp. 1996) (constituting grounds for termination for cause); MONT. CODE ANN. § 75-10-736(10)(a) (1995) (failure "of the applicant or the applicant's agents to materially comply with the voluntary cleanup plan" renders approval void); N.J. ADMIN. CODE tit. 7, § 26C-3.3, app. A, § IV(1) (WESTLAW through Aug. 19, 1996) (state reserves the right to terminate the developer's participation if the developer violates the terms of the Memorandum of Agreement); 1995 Or. Laws 662, § 4(4)(d) (no release for party to prospective purchaser agreement in the event of "failure to exercise due care or take reasonable precautions with respect to any hazardous substance at the facility"); see also Survey Results, *supra* note 158 (regarding the Indiana, Missouri, and New Jersey provisions).

334. ARK. CODE ANN. § 8-7-523(n) (Michie Supp. 1995) (specifies that "the purchaser shall take all the steps necessary to prevent aggravating or contributing to the contamination of the air, land, or water, including downward migration of contamination, from any existing contamination on the site"); LA. REV. STAT. ANN. § 30:2289(1) (West Supp. 1996) (no exemption for a "person who aggravates or contributes to a discharge or disposal or threatened discharge or disposal that was not remedied under an approved voluntary remedial action plan"); MICH. COMP. LAWS ANN. § 324.20133(3)(b) (West Supp. 1996) (covenant not to sue does not bar claims for "[i]nterference with or failure to cooperate with the department, its contractors, or other persons conducting response activities"); MINN. STAT. ANN. § 115B.175(7)(1) (West Supp. 1995) (no exemption from liability for "a person who aggravates or contributes to a release or threatened release that was not remedied under an approved voluntary response action plan"); 1995 Or. Laws 662, § 4(1)(c), (4)(b)-(c) (no release from state liability for party to prospective purchaser agreement); VT. STAT. ANN. tit. 10, § 6615a(d)(3) (Supp. 1996) (no limit on liability for "eligible person" or successor if that person "engages in activities that are inconsistent with or interfere with monitoring, investigation, abatement, removal or remediation activities, or conditions or restrictions in a certificate of completion"); *id.* § 6615a(d)(5) (no limit on liability if an "eligible person or successor worsens an existing release or threatened release prior to the issuance of a certificate of completion, and that release or threatened release is not abated, removed, remediated or monitored pursuant to an approved corrective action plan prior to the issuance of a certificate of completion"). Michigan also imposes an affirmative obligation on an owner or operator who has knowledge that a site has been contaminated by hazardous substances to do all of the following, with fines and penalties for a failure to comply:

authority to respond to imminent hazards.³³⁵ Even in states where liability assurances protect the developer against the discovery of additional contamination, the developer is not protected if it caused that contamination.³³⁶ This may be difficult to discern; as one commentator notes, "The longer the party has conducted operations on the site, the more difficult it may be to document that contamination is not the result of that party's activities."³³⁷

Once the developer receives protection from liability, many states provide that the liability assurance is either void automatically or voidable at the state's election in certain circumstances. In many states, protection from liability is offered only with respect to contamination known about at the time of site assessment and remediation activities.³³⁸ This is intended to provide an incentive to discover and

(a) Undertake measures as are necessary to prevent exacerbation of the existing contamination.

(b) Exercise due care by undertaking response activity necessary to mitigate unacceptable exposure to hazardous substances and allow for the intended use of the facility in a manner that protects the public health and safety.

(c) Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that foreseeably could result from those acts or omissions.

MICH. COMP. LAWS ANN. § 324.20107a(1) (West Supp. 1996). *But see* LA. REV. STAT. ANN. § 30:2287(1) (West Supp. 1996) (no liability for "aggravating or contributing to any discharge or disposal or threatened discharge or disposal identified in an approved voluntary remedial action plan" if work performed in a "workmanlike" manner); ME. REV. STAT. ANN. tit. 38, § 343-E(6)(F) (West Supp. 1995) (providing that a person who, "while implementing the voluntary response action plan and exercising due care in implementation, causes, contributes or exacerbates a discharge or release [may be released from liability] provided that the discharge or release is removed or remediated to the satisfaction of the commissioner"); *see also* Survey Results, *supra* note 158 (stating that in Maine, a developer that does not remove or remediate the "contribution or exacerbation" is disqualified from the program).

335. *See, e.g.*, IND. CODE ANN. § 13-25-5-19(2) (WESTLAW through end of 1996 2d Reg. Sess.); MO. ANN. STAT. § 260.569(3)(1) (West Supp. 1996) (constituting grounds for termination for cause).

336. WIS. STAT. ANN. § 144.765 (West Supp. 1995); *see also* Clokey, *supra* note 26, at 43 (describing the Wisconsin provision).

337. Clokey, *supra* note 26, at 43.

338. States that offer protection only for known contamination include: *Arkansas* (ARK. CODE ANN. § 8-7-523(m) (Michie Supp. 1995)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.10(e)(6) (West Supp. 1996) (providing that discovery of additional contamination that represents a threat may result in voidance of "No Further Remediation Letter")); *Indiana* (IND. CODE ANN. § 13-25-5-18(c)(2) (WESTLAW through end of 1996 2d Reg. Sess.) (covenant not to sue may not apply to future liability for contamination "not known to the commissioner at the time the commissioner issued the certificate of completion")); *Maine* (ME. REV. STAT. ANN. tit. 38, § 343-E(1) (West Supp. 1995) (providing that liability protection applies only to "known" releases)); *Missouri* (MO. ANN. STAT. § 260.573 (West Supp. 1996) (providing that additional cleanup may be required)); *Montana* (MONT. CODE ANN. § 75-10-736(7) (1995) (approval "applies only to conditions at the facility that are known to the department at the time of department approval")); *Nebraska* (NEB. REV. STAT. § 81-15,186 (WESTLAW through end of 1995 Reg. Sess.)); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.505(2) (West Supp. 1996) (state may require additional cleanup)); *Rhode Island* (Survey Results, *supra* note 158 (Rhode Island typically requires that any grounds for disqualification be written into the settlement agreements)); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(3) (Michie Supp. 1995) (providing for the certificate of satisfactory completion of remediation to be based on existing conditions and available information)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(d)(1)(B) (Supp. 1996)). *See also* *Maine VCP Fact Sheet*, *supra* note 195, at 3; Berger et al., *supra* note 23, at 98; Sweeney, *supra* note 20, at 145 n.253 (describing the Indiana provision); Survey Results, *supra* note 158 (regarding the Illinois

clean up all contamination.³³⁹ The states are typically empowered to deny liability protection in a number of other situations: if the cleanup remedy fails to eliminate the risk to health or the environment;³⁴⁰ if the developer contaminates the site later;³⁴¹ if the developer fails to maintain controls at the site;³⁴² or if a change in land use at the site, usually from industrial to residential uses, would result in the violation of applicable standards.³⁴³ Many states also provide that fraudulent statements or misrepresentations in program documents will void the liability protection.³⁴⁴

and Virginia provisions). *But see* VT. STAT. ANN. tit. 10, § 6615a(c)(3)(A)-(C) (Supp. 1996) (providing that the release from liability extends to protect the developer in three instances: (1) if existing contamination is discovered later by methods not recognized as standard at the time of cleanup plan approval; (2) if contaminants are first regulated as hazardous after plan approval; and (3) if additional cleanup activities would otherwise be required by more stringent cleanup standards that became effective after plan approval).

339. *See* Berger et al., *supra* note 23, at 98; Solo, *supra* note 23, at 314 n.155.

340. OHIO REV. CODE ANN. § 3746.12(C)(2) (Anderson 1995) (providing that the state may deny a covenant not to sue if a remedy identified in the "no further action" letter fails to protect health and the environment); PA. STAT. ANN. tit. 35, § 6026.505(3) (West Supp. 1996); *see also* Michel, *supra* note 20, at 458 (describing the Ohio provision).

341. ARK. CODE ANN. § 8-7-523(k) (Michie Supp. 1995); MICH. COMP. LAWS ANN. § 324.20133(3)(a) (West Supp. 1996); NEB. REV. STAT. § 81-15,186 (WESTLAW through end of 1995 Reg. Sess.); 1995 Or. Laws 662, § 4(4)(a) (providing no limit on liability for releases at the facility after the date of acquisition for party to prospective purchaser agreement, and developer has the burden to prove that contamination existed before the date of acquisition); PA. STAT. ANN. tit. 35, § 6026.504 (West Supp. 1996); TEX. HEALTH & SAFETY CODE ANN. § 361.610(a) (West Supp. 1996); VT. STAT. ANN. tit. 10, § 6615a(d)(1)(A) (Supp. 1996) (extending liability limit to "releases and threatened releases which result from the nonreckless performance of an approved site investigation work plan or an approved corrective action plan and which are abated, removed, remediated or monitored pursuant to an approved corrective action plan prior to the issuance of a certificate of completion"); WIS. STAT. ANN. § 144.765(2)(a) (West Supp. 1995) (providing that exemption from liability applies only to a release occurring "prior to the date of acquisition of the property").

However, Wisconsin's liability exemption applies even if:

1. Statutes, rules or regulations are created or amended that would impose greater responsibilities on the purchaser than those imposed under par. (a)2.
2. The purchaser fully complies with the rules promulgated by the department and any contract entered into under those rules under par. (a)2 but it is discovered that the cleanup fails to fully restore the environment and minimize the effects from a release of a hazardous substance.
3. The contamination from a hazardous substance that is the subject of the cleanup under par. (a)2 is discovered to be more extensive than anticipated by the purchaser and the department.

WIS. STAT. ANN. § 144.765(2)(b) (West Supp. 1995); Telephone Interviews, *supra* note 160.

342. OHIO REV. CODE ANN. § 3746.12(E) (Anderson 1995) (providing that a covenant not to sue is voidable upon the developer's discontinued maintenance of engineering controls); *see also* Michel, *supra* note 20, at 458.

343. PA. STAT. ANN. tit. 35, § 6026.505(4) (West Supp. 1996) (providing that the state may require additional cleanup activities if land use changes alter exposure patterns); TEX. HEALTH & SAFETY CODE ANN. § 361.610(c) (West Supp. 1996) (providing that a release from liability in Texas is void if a change in the land use increases the risk to human health or the environment); *see also* COMING CLEAN, *supra* note 24, at 90 (describing the Pennsylvania provision); Sweeney, *supra* note 20, at 150 n.290 (describing the Texas provision).

344. COLO. REV. STAT. ANN. § 25-16-306(3)(b) (West Supp. 1996) (rendering the approval of a voluntary cleanup plan void); DEL. CODE ANN. tit. 7, § 9111(a) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (voiding any limitation on liability); 415 ILL. COMP. STAT. ANN. 5/58.10(e)(5) (West Supp. 1996) (stating that fraud or misrepresentation

ii. Limited Utility of Liability Assurances

The various forms of liability assurances protect the developer from state enforcement actions but are not comprehensive. As a result, they are of limited utility to a developer.³⁴⁵ In all but a few states, they do not provide immunity from private party suits.³⁴⁶ They also do not provide complete release from CERCLA liability.³⁴⁷ The EPA has taken steps to minimize the likelihood of a CERCLA enforcement action at a site cleaned up in a state program³⁴⁸ but some risk remains.

in obtaining a "No Further Remediation Letter" may result in its voidance); LA. REV. STAT. ANN. § 30:2289(3) (West Supp. 1996); ME. REV. STAT. ANN. tit. 38, § 343-E(7)(C) (West Supp. 1995) (extending to a successor or assign with knowledge); MICH. COMP. LAWS ANN. § 324.20139(2) (West Supp. 1996) (imposing criminal penalties for false statements and misrepresentations in cleanup documents and applications); MINN. STAT. ANN. § 115B.175(7)(3) (West Supp. 1995); MONT. CODE ANN. § 75-10-736(10)(b) (1995); OHIO REV. CODE ANN. § 3746.12(C)(3) (Anderson 1995) (providing that the state shall deny a covenant not to sue if the no further action letter was submitted fraudulently); PA. STAT. ANN. tit. 35, § 6026.505(1) (West Supp. 1996) (providing that state may require additional cleanup actions if fraud was committed in meeting a cleanup standard); TEX. HEALTH & SAFETY CODE ANN. § 361.610(b) (West Supp. 1996); VT. STAT. ANN. tit. 10, § 6615a(d)(2) (Supp. 1996); WIS. STAT. ANN. § 144.765(2)(a)(6) (West Supp. 1995); see also Survey Results, *supra* note 158 (regarding the Montana provision).

345. See OTA STATE OF THE STATES, *supra* note 20, at 26 (stating that "state assurances may not go far enough for some stakeholders to promote further brownfield cleanups and redevelopment").

346. Maine, Massachusetts, Oregon, and Wisconsin, among others, do not bar private party lawsuits over contamination at brownfield sites. See, e.g., COMING CLEAN, *supra* note 24, at 74 (regarding the Maine program); MASSACHUSETTS CLEAN SITES INITIATIVE FACT SHEET, *supra* note 189, at 1; Clokey, *supra* note 26, at 38 ("[T]he [Wisconsin] legislature stopped short of barring private party claims for recovery of remediation costs brought under federal or state law"); Telephone Interviews, *supra* note 160; see also OTA STATE OF THE STATES, *supra* note 20, at 16 (stating that state liability assurances do not protect developers from third-party actions).

Indiana and Pennsylvania are among the states providing that satisfactory completion of cleanup activities insulates a developer from certain third-party lawsuits. IND. CODE ANN. §§ 13-25-5-18(b), -20(b) (WESTLAW through end of 1996 2d Reg. Sess.); PA. STAT. ANN. tit. 35, § 6026.502(a) (West Supp. 1996) (applying only to sites located in "special industrial areas"); see also Sweeney, *supra* note 20, at 123 (describing the Indiana and Pennsylvania provisions); Survey Results, *supra* note 158 (regarding the Indiana provisions).

347. OTA STATE OF THE STATES, *supra* note 20, at 26; Michel, *supra* note 20, at 458; Sweeney, *supra* note 20, at 165. One commentator calls a state covenant not to sue an "implicit shield against the threat of federal cleanup action suits," because a developer that qualifies for the covenant presumably also will be meeting federal cleanup standards. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 59; see also Michel, *supra* note 20, at 458 n.213 (quoting this statement). But there are circumstances under which this would not be the case, such as when the developer obtained a variance from Ohio's statewide cleanup standards. Michel, *supra* note 20, at 458 n.216.

348. The EPA's Region V has entered into an amended "Superfund Memorandum of Agreement" (SMOA) with the Minnesota Pollution Control Agency (MPCA), which designates the MPCA as the lead agency for cleanups at sites in the state. Under the SMOA, the EPA only will respond under CERCLA at sites cleaned up in the state program that pose an "imminent threat or emergency situation." OTA STATE OF THE STATES, *supra* note 20, at 19; see also Andrew, *supra* note 29, at 27 (terming EPA's Region V "one of the first EPA regional offices to respond officially to the issue of brownfield redevelopment"). Region V also has developed SMOAs with Indiana and Illinois, and a number of other EPA Regions, including Region VI (developing an agreement with Texas), and Region VII (with Missouri) are developing similar memoranda of agreement with states. Anne Slaughter Andrew, *IDEM and EPA Sign Superfund*

Developers may be deterred from taking part in voluntary cleanup programs and seeking liability protection for other reasons. Because they receive no advance guarantee of liability protection, they may perceive that cleanups are too lengthy and expensive to warrant the effort of obtaining protection from liability.³⁴⁹ This is particularly likely to be true in states that apply cleanup standards of existing laws at brownfield sites.³⁵⁰ Finally, the costs of continuing state involvement (e.g., monitoring of the site and associated reporting requirements) may deter some developers.³⁵¹

4. *State Oversight and Responsibility*

a. *Varying Levels of Involvement*

The voluntary cleanup programs vary considerably in the extent of state agency involvement in the process of evaluating and remediating each brownfield site. States usually require the developer to pay

Memorandum of Agreement, 6 Ind. Envtl. Compliance Update (M. Lee Smith), No. 1, at 5-6 (Jan. 1996) (describing the Region V agreement with Indiana); Telephone Interviews, *supra* note 160.

Colorado's statute attempts to provide additional assurances to developers regarding federal action. COLO. REV. STAT. ANN. § 25-16-309 (West Supp. 1996) (providing that if the EPA "indicates that it is investigating a site which is the subject of an approved voluntary cleanup plan or no action petition, the department shall actively pursue a determination by the United States environmental protection agency that the property not be addressed under the federal act"); see also Sweeney, *supra* note 20, at 139 & n.221 (claiming that the Colorado provision "creates a cause of action in mandamus" if the state fails to take action). *But see* IND. CODE ANN. § 13-25-5-1(b) (WESTLAW through end of 1996 2d Reg. Sess.) (providing that "[t]his section does not affect a person's legal obligations set forth in 42 U.S.C. 6901 *et seq.* [CERCLA] regardless of a person's participation in this chapter"); LA. REV. STAT. ANN. § 30:2285.1(C) (West Supp. 1996) (providing that a developer receives no exemption from federal liability).

349. Clokey, *supra* note 26, at 43; Casserly, *supra* note 26, at 269-70. The certificate of completion is not a "pre-approval"; the developer has to wait until the completion of a cleanup to obtain it. The site investigation and cleanup process will often take six to twelve months or more, during which time the developer has no assurance that it will be exempted from liability. See Clokey, *supra* note 26, at 43. Andrew, *supra* note 29, at 31, reports that this has led some developers in states such as Minnesota and Indiana to criticize the voluntary cleanup programs, "claiming that the time and money it takes to obtain a final cleanup does not result in an economic incentive for the redevelopment of a brownfield."

350. In 1995, the Minnesota legislature recognized this disincentive to development, amending the state voluntary cleanup statute to provide that the planned use of the property be taken into account in determining the cleanup standard at each site. See Andrew, *supra* note 29, at 28; *supra* note 254 and accompanying text. Previously, Minnesota had applied existing cleanup standards at sites participating in its voluntary cleanup program. See OTA STATE OF THE STATES, *supra* note 20, at 19; Pendergrass, *supra* note 26, at 6.

351. See Clokey, *supra* note 26, at 43.

application fees³⁵² and cover costs of state oversight and involvement.³⁵³

352. Application fees are required in: *California* (Telephone Interviews, *supra* note 160 (the California VCP requires a deposit of up to half of estimated oversight costs)); *Colorado* (COLO. REV. STAT. ANN. § 25-16-303(4) (Supp. 1996) (fee not to exceed \$2,000)); *Delaware* (Survey Results, *supra* note 158 (Delaware has no fee, but requires a deposit of \$5,000 to cover oversight costs)); *Indiana* (IND. CODE ANN. § 13-25-5-2(c)(3) (WESTLAW through end of 1996 2d Reg. Sess.) (\$1,000 application fee)); *Maine* (*Maine VCP Fact Sheet*, *supra* note 195, at 2 (initial fee of \$500 may be charged)); *Michigan* (MICH. COMP. LAWS ANN. § 324.20129a(4) (West Supp. 1996) (\$750 fee for developer requesting a "letter of determination")); *Missouri* (MO. ANN. STAT. § 260.567(1) (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(3)(B), (4)(B) (WESTLAW through ENFLEX Aug. 1996 Release) (\$200 application fee and \$5,000 deposit or lesser amount the state deems sufficient; state usually requires a deposit of between \$1,000 and \$2,000)); *Nebraska* (NEB. REV. STAT. § 81-15.184(6) (WESTLAW through end of 1995 Reg. Sess.) (\$5,000 application fee)); *Oregon* (Survey Results, *supra* note 158 (Oregon requires \$2,500 deposit for entrants into a prospective purchaser agreement; \$5,000 deposit for entrants into the program)); *Pennsylvania* (PA. STAT. ANN. tit. 35, § 6026.703(a)(1)-(2) (West Supp. 1996) (\$250 fee upon submitting report demonstrating compliance with background or statewide health standards; for developers choosing site-specific standards, \$250 fee on "submission of a remedial investigation, risk assessment and cleanup plan and . . . additional \$500 [fee on] . . . submission of the final report")); *Tennessee* (TENN. CODE ANN. § 68-212-224(b) (Supp. 1995) (\$5,000 fee for participation in program)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. §361.604(b)(3) (West Supp. 1996) (\$1,000 application fee)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(e)(1)(B), (g)(1) (Supp. 1996) (\$500 application fee and \$5,000 fee "to be applied toward the direct and indirect costs of the secretary's review and oversight of the performance of the site investigation and any corrective action plan")); *Virginia* (VA. CODE ANN. § 10.1-1429.1(A)(5) (Michie Supp. 1995) (registration fee "not to exceed the lesser of \$5,000 or one percent of the cost of the remediation")); *Washington* (Survey Results, *supra* note 158 (Washington requires a \$1,000 fee for review of work performed in an independent remedial action; maximum fee is two percent of remediation action costs up to a total of \$15,000)); *Wisconsin* (WIS. STAT. ANN. § 144.765(5) (West Supp. 1995) (providing that the department may assess fees; current charge is \$250 application fee, plus a deposit of between \$1,000 and \$3,000 to cover costs of review and oversight; unused portion of deposit is refundable)). See also O'Reilly, *Indiana's Incentives*, *supra* note 24, at 61 (describing filing fees and other administrative requirements of Indiana's program); Sweeney, *supra* note 20, at 142 n.236, 149 n.285, 152 n.305 (describing the Indiana, Texas, and Virginia provisions); Survey Results, *supra* note 158 (regarding the Indiana and Wisconsin provisions); Telephone Interviews, *supra* note 160 (regarding the Delaware, Missouri, Oregon, Washington, and Wisconsin provisions).

353. States requiring developers to cover the costs of state oversight and involvement include: *Arizona* (ARIZ. REV. STAT. ANN. § 49-285(B) (West Supp. 1996) (providing that "[a]ny person who requests the director's approval of a remedial action shall reimburse the department for the total reasonable cost to the department for the review of the remedial action," unless requirement waived)); *Arkansas* (Survey Results, *supra* note 158 (indicating that Arkansas may assess fees for staff time incurred in review and approval of work products submitted throughout the process)); *California* (Telephone Interviews, *supra* note 160 (indicating that under the California VCP, the Voluntary Cleanup Agreement provides for recovery of oversight costs)); *Connecticut* (CONN. GEN. STAT. ANN. §§ 22a-133m(c)-(d) (West 1995) (providing for the state to recover oversight costs at Type I sites, and pay costs of remediating Type II and Type III sites; state may recover the latter through property leases)); *Delaware* (DEL. CODE ANN. tit. 7, §§ 9109(e), 9113(b)(2) (WESTLAW through end of 1st Special Sess. of 138th General Assembly, 1995); Delaware Regulations, *supra* note 172, § 14.4 (state may bring action in Superior Court to recover all oversight costs incurred)); *Illinois* (415 ILL. COMP. STAT. ANN. 5/58.7(b) (West Supp. 1996) (if the Remediation Applicant (RA) requests state oversight, the state may require that the RA pay reasonable costs incurred by the state)); *Indiana* (IND. CODE ANN. § 13-25-5-8(a)(1)(B) (WESTLAW through end of 1996 2d Reg. Sess.)); *Louisiana* (LA. REV. STAT. ANN. § 30:2289.1(B) (West Supp. 1996) (must pay costs incurred if state provides assistance)); *Maine* (*Maine VCP Fact Sheet*, *supra* note 195, at 2 (recovery of costs exceeding initial fee)); *Missouri* (MO. ANN. STAT. § 260.569(1) (West Supp. 1996); MO. CODE REGS. tit. 10, § 25-15.010(8) (WESTLAW through ENFLEX Aug. 1996 Release)); *Minnesota* (COMING CLEAN, *supra* note

Beyond this, the levels of state oversight vary. The types of oversight can be divided roughly into three categories that correspond to the amount of state review and level of responsibility delegated to certified environmental professionals.³⁵⁴ The highest level of involvement is in states that have active state oversight throughout the process in order "to provide technical guidance and oversight for any stage of the cleanup process from site investigation through remediation that results in certification of completed work."³⁵⁵ The Indiana Department of Environmental Management is involved in reviewing and evaluating the site and documentation of site investigations, reviewing, approving, and overseeing implementation of the work plan,

24, at 99 (in Minnesota oversight costs are recovered on a quarterly basis)); *Montana* (MONT. CODE ANN. § 75-10-733(3) (1995) (reimbursement for "any remedial action costs that the state incurs in the review and oversight of a voluntary cleanup plan")); *Nebraska* (NEB. REV. STAT. § 81-15,184(4) (WESTLAW through end of 1996 Reg. Sess.)); *New Hampshire* (COMING CLEAN, *supra* note 24, at 78 (in New Hampshire, cost recovery is to be included, but state is "lax" in recovering costs)); *New Jersey* (N.J. ADMIN. CODE tit. 7, § 26C-3.3 & app. A, § III (WESTLAW through Aug. 19, 1996) (MOA will specify procedures for the recovery of oversight costs)); *New York* (COMING CLEAN, *supra* note 24, at 85 (indicating that in New York, agreement must provide for indemnification of the state for its oversight costs)); *Ohio* (OHIO ADMIN. CODE § 3745-300-03(B)-(C) (WESTLAW through Aug. 31, 1996) (providing for recovery of direct and indirect costs associated with reviewing no further action letters submitted for covenants not to sue and other reviews)); *Oregon* (COMING CLEAN, *supra* note 24, at 112 (indicating that in Oregon, the state recovers oversight costs in excess of deposit, and refunds unused amount of deposit)); *Tennessee* (TENNESSEE VOAP FACT SHEET, *supra* note 193, at 2 (consent order must provide for oversight cost reimbursement)); *Texas* (TEX. HEALTH & SAFETY CODE ANN. § 361.603(b)(2) (West Supp. 1996) (all costs)); *Vermont* (VT. STAT. ANN. tit. 10, § 6615a(j)(1) (Supp. 1996) (requiring eligible person or successor to pay costs above fees paid)); *Washington* (WASH. ADMIN. CODE § 173-340-550(1)-(2), (7)(a) (WESTLAW through July 24, 1996) (providing that the state may recover remedial action costs, and costs of review of independent remedial actions; state charges two percent of the cost of the total remedial action to review an independent remedial action, up to a total fee of \$15,000)); *Wisconsin* (WIS. STAT. ANN. § 144.765(5) (West Supp. 1995) (state recovers oversight costs)). See also COMING CLEAN, *supra* note 24, at 73, 83, 87 (describing the Connecticut, Delaware, and New Jersey provisions); Sweeney, *supra* note 20, at 142 n.236, 149 n.285, 152 n.305 (describing the Indiana, Texas, and Virginia provisions); Casserly, *supra* note 26, at 265 (noting that a developer in Minnesota "pays for the investigation and cleanup, including all assistance received from the MPCA"); Survey Results, *supra* note 158 (regarding the Arkansas, Delaware, Indiana, Montana, New Jersey, and Washington provisions); Telephone Interviews, *supra* note 160 (regarding the Delaware, Oregon, Tennessee, Washington, and Wisconsin provisions). A number of states require the developer to reimburse the state for oversight costs when they exceed the application fee or deposit. See, e.g., IND. CODE ANN. § 13-25-5-8(a)(1) (WESTLAW through end of 1996 2d Reg. Sess.).

California's approach in the Expedited Remedial Action Program requires that the responsible persons pay for all of the state's response costs, subject to apportionment among the parties. CAL. HEALTH & SAFETY CODE §§ 25398.2(b)(1)(B), 25398.8 (West Supp. 1996). Tennessee employs a comparable cost recovery process for participants who enter into consent orders. TENN. CODE ANN. §§ 68-212-224(d)(2), -224(h) (Supp. 1995) (if state enters into consent order, it may establish liability allocations and recover from program participants amounts spent on site investigation and cleanup up to the participant's share of liability; although authorized by statute, this method of cost recovery is not feasible in practice, as monies from the Remedial Action Fund are allocated to higher priority sites rather than voluntary sites); see also Survey Results, *supra* note 158.

354. OTA STATE OF THE STATES, *supra* note 20, at 14.

355. *Id.*

and issuing a release from liability when the cleanup is completed.³⁵⁶ Minnesota has adopted a similar approach.³⁵⁷ The Minnesota Pollution Control Agency approves the initial site assessment,³⁵⁸ work plans, and final reports (to determine whether liability protection is appropriate),³⁵⁹ develops cleanup standards for the site,³⁶⁰ and maintains a limited on-site presence during the assessment and cleanup.³⁶¹

Second, the state may adopt a "medium" level of involvement. These states delegate certain responsibilities to certified environmental professionals, who undertake tasks that the state would otherwise perform. These professionals "provide oversight and expertise throughout the remediation process and present evidence of the completed work to the state agency."³⁶² The state retains independent authority to review the work of the private sector professionals.³⁶³ For example, it may review the cleanup process that took place at a site before it issues a limitation on liability such as a certificate of completion.³⁶⁴ The new Illinois statute provides this type of approach: The state delegates authority to conduct investigations, prepare plans and reports,³⁶⁵ and review and approve the progress of cleanups³⁶⁶ to a

356. IND. CODE ANN. §§ 13-25-5-9 to -17 (WESTLAW through end of 1996 2d Reg. Sess.). Once the work plan is approved, a state agency manager or technical contractor hired by the state supervises the remedial action. *Id.* § 13-25-5-9; *see also* INDIANA VRP FACT SHEET, *supra* note 179, at 2; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 61-62 (stating that "[s]chedules for submissions, coordination of activities, estimated costs, and a timetable for state officials' actions are included in the [Voluntary Remediation] Agreement"); Sweeney, *supra* note 20, at 144; Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160. Other states that oversee cleanups actively, usually under the supervision of state project managers, include Minnesota, Oregon, Vermont, and Wisconsin. Telephone Interviews, *supra* note 160; *cf.* MO. ANN. STAT. § 260.567(1) (West Supp. 1996) (calling for state oversight); *id.* § 260.567(8) (requiring review of quarterly progress reports); *id.* § 260.567(10) (requiring review of the remedial action).

357. *See* OTA STATE OF THE STATES, *supra* note 20, at 19 (noting that Minnesota's program "offers a high level of technical assistance and oversight to the entire cleanup process").

358. MINN. STAT. ANN. § 115B.175(3)(b) (West Supp. 1995).

359. *Id.* § 115B.175(3); *see also* OTA STATE OF THE STATES, *supra* note 20, at 19; *cf.* CAL. HEALTH & SAFETY CODE § 25398.15(b) (West Supp. 1996) (requiring state review of a request for certificate of completion).

360. Cleanup standards are to be set by the state, reflecting the planned use of the property. MINN. STAT. ANN. § 115B.175(3)(c) (West Supp. 1995) (providing that cleanups "must meet the same standards for protection of public health and welfare and the environment that apply to response actions taken or requested under section 115B.17, subdivision 1 or 2"); *see also* OTA STATE OF THE STATES, *supra* note 20, at 19; Andrew, *supra* note 29, at 28. Cleanup standards are determined with reference to state guidance documents. *Id.*

361. MINN. STAT. ANN. § 115B.175(3)(a) (West Supp. 1995). The state's involvement in this phase of the cleanup is discretionary; it may "provide assistance to review voluntary response action plans or supervise response action implementation." *Id.*; *see also* Andrew, *supra* note 29, at 28; *cf.* LA. REV. STAT. ANN. § 30:2286.1(A) (West Supp. 1996).

362. OTA STATE OF THE STATES, *supra* note 20, at 14.

363. *See id.*

364. *Id.* at 17.

365. In Illinois, direct state review of activities other than required reports is not mandatory. The state may provide oversight services for the Remediation Applicant's activities, in which case it may require that the RA pay the state's costs in furnishing services. 415 ILL. COMP. STAT. ANN. 5/58.7(b)(1) (West Supp. 1996). The RA may also contract with a "Review and Evaluation Professional Engineer" (RELPE) for review and evaluation services; the contract with the RELPE must provide that the RELPE will take directions from the state, submit reports to it,

“Licensed Professional Engineer,”³⁶⁷ but the state retains final approval authority.³⁶⁸

The most lenient level of oversight is in states which are involved only in final reviews to verify that cleanups are complete and extend liability protection.³⁶⁹ An example of this type of oversight is that contemplated under the Ohio statute. Ohio involves the state in the process less than any other state program,³⁷⁰ authorizing the developer to evaluate and remediate a brownfield site on its own, acting essentially unsupervised by the state EPA.³⁷¹ By statute, the Ohio EPA maintains the power to audit cleanups; however, the state has

and work on behalf of the state. *Id.* §§ 5/58.2 (defining a “Licensed Professional Engineer” as “a person, corporation, or partnership licensed under the laws of this State to practice professional engineering”), 5/58.6(a), 5/58.7(c)(2).

366. *Id.* § 5/58.7(b)-(d).

367. *Id.* § 5/58.7(d).

368. *Id.* § 5/58.7(d)(3).

369. OTA STATE OF THE STATES, *supra* note 20, at 14. This category includes states with extensive devolvement to licensed environmental professionals, and states with “independent remedial action” programs, as well as Colorado, where at present there is no statutory mechanism for state approval of the final cleanup. COMING CLEAN, *supra* note 24, at 108.

370. See Andrew, *supra* note 29, at 28 (describing the Ohio program as involving “minimal state oversight”); Michel, *supra* note 20.

Both Connecticut and Massachusetts have also acted to vest substantial discretion with licensed environmental professionals. In Connecticut, the 1995 amendments to the Transfer Act created a procedure for devolving responsibility to Licensed Environmental Professionals (LEPs) in the remediation process at voluntary cleanup sites. 1995 Conn. Pub. Acts 190, § 2; see also Elizabeth C. Barton, *Privatization of Environmental Cleanups*, CONN. L. TRIB., Dec. 25, 1995/Jan. 1, 1996, at 13A. LEPs are empowered to conduct site assessments, prepare remedial action plans, supervise cleanups, and make final reports to the state at voluntary cleanup sites. 1995 Conn. Pub. Acts 190, § 2. Regulations are currently under development to expand upon the statutory mandate, and apply this procedure to Type I sites in the Urban Sites Remedial Action Program. Telephone Interviews, *supra* note 160. Massachusetts relies extensively on Licensed Site Professionals (LSPs) for oversight of assessment and cleanup actions at all but the most serious disposal sites in the state. The LSP is required to make certain submissions (see MASS. REGS. CODE tit. 310, § 40.0015 (WESTLAW through Register No. 794)) but essentially operates independently. The LSP may, for example, forego certain statutory requirements if, in its judgment, the actions are unnecessary. MASS. REGS. CODE tit. 310, § 40.0193 (WESTLAW through Register No. 794). The state is required to audit only 20% of cleanups. *Id.* §§ 40.1101-.1170.

North Carolina’s statute specifies that cleanups in the state will eventually be implemented and overseen by licensed professionals; the state is working on rules, based in part on the Massachusetts and Ohio programs, that would privatize cleanups. N.C. GEN. STAT. § 130A-310.9(c) (1995) (authorizing privatization of voluntary party cleanup oversight under the Registered Environmental Consultant (REC) program); Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160.

371. See OHIO REV. CODE ANN. § 3746.10 (Anderson 1995); cf. PA. STAT. ANN. tit. 35, §§ 6026.302(e)(3), .303(h)(3) (West Supp. 1996) (limiting the state’s review for developers in Pennsylvania choosing cleanups under background or statewide health standards to evaluating final reports demonstrating that the standards have been met). For developers choosing cleanups under site-specific standards in Pennsylvania, however, the state is required to review the “remedial investigation report, risk assessment report, cleanup plan and final report demonstrating compliance with the site-specific standard.” *Id.* § 6026.304(n)(2).

In New Jersey, the amount of state oversight is determined by negotiation between the state and the developer upon entering into the Memorandum of Agreement. N.J. ADMIN. CODE tit. 7, § 26C-3.3, app. A, § I (WESTLAW through Aug. 19, 1996); COMING CLEAN, *supra* note 24, at 82-83.

undercut this authority by admitting it will examine no more than twenty-five percent of sites taking part in this program.³⁷² A number of other states provide that a developer may conduct "independent" remedial action, operating on its own until making a final report to the state.³⁷³

b. Time Limits

To reduce the time it takes to remediate a site, some states put time limits on various stages of the decision-making process. States restrict the time period for the state to approve or reject developers' applications to take part in state programs,³⁷⁴ site assessment reports,³⁷⁵ work plans, and progress reports,³⁷⁶ or for issuing liability assurances after requests.³⁷⁷ In some cases, developers' activities are

372. See OHIO ADMIN. CODE § 3745-300-14(D) (WESTLAW through Aug. 31, 1996) (providing for random audits of 25% of the "no further action" letters annually); *Ohio Voluntary Action Program*, *supra* note 156, at 4; see also Andrew, *supra* note 29, at 29; Jones, *supra* note 156. The new Connecticut statute empowers the state to conduct audits of voluntary cleanups supervised by LEPs but does not set a target number. A final remedial action report is deemed approved unless the state determines, within 60 days of its submission, that an audit is necessary. 1995 Conn. Pub. Acts 190, § 2(c); see also Paul Frisman, *Massachusetts Model Bodes Well for Voluntary Pollution Cleanups*, CONN. L. TRIB., Nov. 27, 1995, at 13. As noted above, the Massachusetts statute outlines an audit procedure and sets a goal of auditing 20% of sites. See *supra* note 370 and accompanying text.

373. In these states, the developer proceeds at its own risk and typically has the option to obtain more comfort by entering into more binding agreements with the state. For example, in North Carolina, the developer may conduct an independent remedial action or negotiate a consent order with the state. N.C. GUIDELINES, *supra* note 191, at 1-1 to 1-2. In Rhode Island, only a "voluntary party" may proceed without state oversight; volunteers are encouraged to enter into agreements with the state. RHODE ISLAND USER'S GUIDE, *supra* note 175, at 4-5. In Washington, the "independent remedial action" proceeds without state oversight, except for final review of the cleanup report. WASH. ADMIN. CODE § 173-340-550(7) (WESTLAW through July 24, 1996).

374. See, e.g., N.J. ADMIN. CODE tit. 7, § 26C-3.2(c), app. A (WESTLAW through Aug. 19, 1996) (within 30 days of receipt, state must either inform developer that a site investigation is required or submit a Memorandum of Agreement for developer's approval); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.4 which requires acceptance or rejection within 45 days of receipt).

375. MO. ANN. STAT. § 260.567(3) (West Supp. 1996) (180 days to review Phase I assessment); *id.* § 260.567(5) (180 days to determine whether remedial action is necessary, following Phase II assessments; state has "not come close" to exceeding either time limit); PA. STAT. ANN. tit. 35, § 6026.304(n)(2)(ii) (West Supp. 1996) (for developers choosing cleanups under site-specific standards, remedial investigation report deemed approved if the state does not respond with deficiencies within 90 days); see also Telephone Interviews, *supra* note 160 (regarding the Missouri provision).

376. COLO. REV. STAT. ANN. § 25-16-306(1)(a) (West Supp. 1996) (deemed approved if not acted on within 45 days after request, with independent review prohibited); MO. ANN. STAT. § 260.567(6) (West Supp. 1996) (90 days); 1995 Mont. S.B. 382, § 10(1) (30 days to make "completeness" determination); *id.* § 10(2) (60 days to approve or disapprove plan); PA. STAT. ANN. tit. 35, § 6026.304(n)(2)(ii) (West Supp. 1996) (for developers choosing cleanups under site-specific standards, cleanup plan deemed approved if the state does not respond with deficiencies within 90 days).

377. CAL. HEALTH & SAFETY CODE § 25398.15(b) (West Supp. 1996) (state has 90 days to approve or deny a request for a certificate of completion from a participant in the ERAP); COLO. REV. STAT. ANN. § 25-16-307(1) (West Supp. 1996) (petition for no action determination deemed approved if not acted on within 45 days of request); DEL. CODE ANN. tit. 7, § 9108(b)

deemed approved unless the state responds within the time limits,³⁷⁸ a provision intended to spur a rapid response.

c. Administrative Appeal and Dispute Resolution Procedures

Several states provide administrative appeals for developers dissatisfied with the state's decisions, particularly decisions to reject applications to take part in state programs, or decisions to reject site assessment reports and other progress reports.³⁷⁹ Other states provide for dispute resolution mechanisms.³⁸⁰ California's statute features the most comprehensive alternative dispute resolution process. If a timely petition is filed with the Director of Environmental Health Assessment, an arbitration panel must be convened to resolve disputes regarding any of a number of issues.³⁸¹

(WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (state required to grant or deny certificate of completion within 180 days of application); 415 ILL. COMP. STAT. ANN. 5/58.10(b) (West Supp. 1996) (state has 30 days from approval of a Remedial Action Completion Report to issue a No Further Remediation Letter); MICH. COMP. LAWS ANN. § 324.20129a(2) (West Supp. 1996) (state has 15 business days to act on a request for a "letter of determination"); 1995 Mont. S.B. 382, § 12(2) (state must review petition for closure within 60 days).

378. See, e.g., COLO. REV. STAT. ANN. § 25-16-307(1) (West Supp. 1996) (petition for no action determination deemed approved if not acted on within 45 days of request); 1995 Conn. Pub. Acts 190, § 2(c) (final remedial action report from an LEP deemed approved unless the state determines, within 60 days of its submission, that an audit is necessary).

379. 415 ILL. COMP. STAT. ANN. 5/58.7(d)(5) (West Supp. 1996) (Remediation Applicant may appeal disapprovals of any plan or report, or approvals with conditions, by filing for appeal within 35 days); IND. CODE ANN. § 13-25-5-6(a)(1) (WESTLAW through end of 1996 2d Reg. Sess.) (applicant may appeal if its application is rejected); MO. CODE REGS. tit. 10, § 25-15.010(9) (WESTLAW through ENFLEX Aug. 1996 Release) (providing for administrative appeal of any departmental action); MONT. CODE ANN. § 75-10-732(4) (1995) (if application to take part in the program is rejected, applicant may request a hearing before the state board of environmental review); see also Survey Results, *supra* note 158 (regarding the Indiana and Montana provisions).

380. IND. CODE ANN. § 13-25-5-8(a)(2) (WESTLAW through end of 1996 2d Reg. Sess.) (voluntary remediation agreement must include mechanism to resolve "disputes arising from the evaluation, analysis, and oversight of the implementation of the work plan" through arbitration, adjudication, or another dispute resolution procedure); PA. STAT. ANN. tit. 35, § 6026.304(o) (West Supp. 1996) (mediation may be used as part of a community only involvement plan, required if the affected municipality requests to be involved); see also Sweeney, *supra* note 20, at 143 n.246 (describing the Indiana provision); Survey Results, *supra* note 158 (regarding the Indiana provision).

381. Issues subject to arbitration include:

- (1) The remedial action plan . . . , including disputes regarding remedy selection, other technical issues, conditions of approval, or any other element of the plan[;]
- (2) The department's proposed apportionment of liability . . . [;]
- (3) Any proposed de minimis settlements . . . [;]
- (4) The department's approval or denial of a change in land use . . . [; or]
- (5) The department's approval or denial of a certificate of completion

CAL. HEALTH & SAFETY CODE § 25398.10(a) (West Supp. 1996). Petitions for arbitration may be made by any responsible person, the affected community, or the public, at any time before the matter in dispute becomes final. *Id.* § 25398.10(b)(2). The arbitration panel must hold a public hearing to take testimony and evidence, and make a decision by majority vote that is supported by "substantial evidence in light of the whole record." *Id.* §§ 25398.10(d), 25398.13. It must provide notice of its decisions, and judicial review is available in certain instances. *Id.*

5. *Public Participation*

A number of states do not mandate public participation in their voluntary cleanup programs.³⁸² The reason for this is readily apparent: public involvement is often viewed as a "deterrent to undertaking a voluntary cleanup."³⁸³ Ohio makes no reference to community involvement in individual brownfield development projects.³⁸⁴ Pennsylvania allows for public participation beyond notice only if requested by the affected municipality and then only if the developer chooses to cleanup a site using the site-specific cleanup standard.³⁸⁵ Illinois provides that the developer may elect to develop a "community outreach plan," but requires only that the state develop guidance to assist developers in reaching out to the affected community.³⁸⁶

§ 25398.10(d)-(e). Arbitrators may receive technical support from the state and are disqualified for conflicts of interest or inadequate performance. *Id.* §§ 25398.11-12.

382. These states include Colorado, Illinois, Louisiana, Maine, Missouri, New Hampshire, New Jersey, New York, and Ohio. Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160. In Colorado, however, the April 11, 1996 Superfund Memorandum of Agreement with the EPA requires that the developer give public notice within 30 days of approval of the cleanup plan if the developer wants forbearance from EPA enforcement under CERCLA. Survey Results, *supra* note 158. In Washington, independent remedial actions may take place without any public participation, unless the developer intends to seek contribution from other parties. In that situation, the state would consider an independent remedial action to be the equivalent of a state-conducted cleanup (and hence protective against third parties) if "reasonable steps have been taken to provide advance public notice." WASH. ADMIN. CODE § 173-340-550(5)(c)(iii), -550(7) (WESTLAW through July 24, 1996); Telephone Interviews, *supra* note 160.

383. Sweeney, *supra* note 20, at 160; see also Paul Frisman, *Goldilocks and the Cleanup Standards: Too Strict, Too Lax or Just Right?*, CONN. L. TRIB., Nov. 27, 1995, at 14 (quoting the statement of attorney Elizabeth C. Barton that "a proposal for a discretionary public hearing and comment period could easily add more than three-and-a-half months to the remediation process," which is critical to a developer because "often the projected time to get through a [state] approval process is as critical as the projected cost of remediation"). See *infra* notes 548-49 and accompanying text. Another justification asserted for excluding public participation is that the developer has come to the state voluntarily and should control the project.

384. Ohio currently requires public participation only upon an application for a variance from applicable cleanup standards. OHIO ADMIN. CODE § 3745-300-12(H)(3) (WESTLAW through Aug. 31, 1996) (public meeting required). However, state regulators held public meetings to review the proposed rules. *Ohio VAP Update*, *supra* note 243, at 1 (noting that five public meetings were held on the first set of rules).

385. PA. STAT. ANN. tit. 35, § 6026.304(o) (West Supp. 1996) (providing that if the affected municipality requests to be involved, a community involvement plan is required); see also PENNSYLVANIA DEP'T OF ENVTL. PROTECTION, OPPORTUNITIES FOR PUBLIC PARTICIPATION IN THE LAND RECYCLING PROGRAM, LAND RECYCLING PROGRAM FACT SHEET No. 9 (1996) (copy on file with author) [hereinafter PENNSYLVANIA PUBLIC PARTICIPATION FACT SHEET]. This plan must propose measures to involve the public, including (depending on the site) such measures as:

- developing a proactive community information and consultation program that includes door step notice of cleanup activities;
- holding public meetings and roundtable discussions;
- providing convenient locations where documents can be made publicly available;
- designating a single contact person for community residents;
- forming a community-based group to solicit suggestions and comments on reports; and
- retaining trained, independent third parties to facilitate meetings and discussions and perform mediation services.

See PA. STAT. ANN. tit. 35, § 6026.304(o) (West Supp. 1996).

386. 415 ILL. COMP. STAT. ANN. 5/58.7(h) (West Supp. 1996).

Some states provide that the developer may elect to conduct further community outreach efforts; Rhode Island mandates this.³⁸⁷

In states that require public participation at each site, some require that the affected community be notified of proposed cleanup activities.³⁸⁸ The most typical form of public participation is a brief notice and comment period (often less than thirty days) on the pro-

387. Pennsylvania, as noted below in footnote 389, requires a "community involvement plan" only if one is requested by the affected municipality. Rhode Island requires a "community involvement process," to be coordinated with the opportunity for notice and comment on the proposed settlement agreement. R. I. GEN. LAWS § 23-19.14-5 (Supp. 1995). Finding explicitly that the state must consider "the effects that clean-ups would have on the populations surrounding each site" and "issues of environmental equity for low income and racial minority populations," the statute requires the state to "develop and implement a process to ensure community involvement throughout the investigation and remediation of contaminated sites." *Id.* That process is required to include, at a minimum, the following:

(a) Notification to abutting residents when a work plan for a site investigation is proposed;

(b) Adequate availability of all public records concerning the investigation and clean-up of the site, including, where necessary, the establishment of informational repositories in the impacted community; and

(c) Notification to abutting residents, and other interested parties, when the investigation of the site is deemed complete by the department of environmental management.

Id. There is no requirement that the abutting community approve the work plan. This process is expected to be clarified in forthcoming rules. Telephone Interviews, *supra* note 160. In Washington, a "public participation plan" must be developed for cleanups other than independent remedial actions. WASH. ADMIN. CODE § 173-340-600(8) (WESTLAW through July 24, 1996).

388. ARK. CODE ANN. § 8-7-523(d)(3) (Michie Supp. 1995) (requiring notice of consent administrative order); CAL. HEALTH & SAFETY CODE § 25398(d)(1) (West Supp. 1996) (requiring notice of all activities and regular progress reports to the city or county in which an ERAP site is located; state applies this and comparable public participation requirements of the ERAP to the VCP); 1995 Conn. Pub. Acts 190, § 2(b) (requiring notice of remedial action plan); Delaware Regulations, *supra* note 172, § 12 (voluntary cleanup agreement will provide for public notice once the proposed plan of remedial action is prepared); MASS. REGS. CODE tit. 310, § 40.1403(3) (WESTLAW through Register No. 794) (requiring notice to public officials and to the community); N.C. GEN. STAT. § 130A-310.4(c)(2), -310.9(b) (1995) (requiring that notice of proposed Areas of Concern (AOC) and proposed remedial action plans be given; a notice is to be mailed at least 30 days before state enters into an AOC and 30 days prior to approving a remedial action plan); PA. STAT. ANN. tit. 35, § 6026.302(e), -.303(h) (West Supp. 1996) (establishes a notice obligation for developers who choose to clean up sites to meet either background or statewide health standards); TENN. COMP. R. & REGS. § 1200-1-13-10(3)(i) (WESTLAW through EN-FLEX Aug. 1996 Release) (requiring public notice in the form of a newspaper advertisement upon party's entrance into the program and upon submission of the FS; all public notices must be approved by the Department); 21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE § 333.11 which requires, in particular, notice to property owners and interest holders within two weeks of agency approval of a report describing contamination at a site at or below residential health-based levels, and direct notice in the form of letters to "affected individual households, businesses, and other interest holders, when concentrations of contaminants exceeding residential health-based levels have migrated off-site"); WASH. ADMIN. CODE §§ 173-340-550(5)(c)(iii) to -550(7) (WESTLAW through July 24, 1996) (requiring public notice if independent remedial actions will lead to contribution actions); *id.* § 173-340-600 (requiring notice for cleanups other than independent remedial actions); WIS. ADMIN. CODE §§ NR 714.05, 714.07 (WESTLAW through ENFLEX Aug. 1996 Release) (requiring notice of proposed remedial action; responsible parties to decide whether additional notice is necessary, but public notice is required only if the party plans to use "performance standards" defined under § NR 720.19(2)); *see also* COMING CLEAN, *supra* note 24, at 87 (regarding the Delaware program); Survey Results, *supra* note 158 (regarding the California, Delaware, North Carolina, Tennessee, Washington, and Wisconsin programs). Arkansas is considering implementing additional public participation requirements, including notice requirements and a notice and comment period. Telephone Interviews, *supra* note 160.

posed remedial action plan.³⁸⁹ The form of notice to be used varies, with few states requiring direct notice to residents in the affected community.³⁹⁰ A minority of states provide for more participation than a

In Pennsylvania, a developer must notify the department of its intent to remediate the site, provide a copy of that notice to the municipality where the site is located, and publish the notice in a local newspaper of general circulation. The developer also must provide the same notice for the final report demonstrating attainment of the cleanup standard. PA. STAT. ANN. tit. 35, §§ 6026.302(e), .303(h) (West Supp. 1996). There is no requirement for community involvement beyond this notice, unless the developer chooses a cleanup under the site-specific standard. *Id.* § 6026.304(n)-(o). If the developer submits the final report to the state within 90 days of a release, these notice requirements do not apply. *Id.* § 6026.303(h)(4).

389. CAL. HEALTH & SAFETY CODE §§ 25398(d)(1), 25398.7(c)(2) (West Supp. 1996) (providing for a 30-day notice and comment period at an ERAP site); DEL. CODE ANN. tit. 7, § 9107(b) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995), Delaware Regulations, *supra* note 172, § 12.1(3) (requiring a 20-day comment period on proposed plan of remedial action); IND. CODE ANN. § 13-25-5-11(b) (WESTLAW through end of 1996 2d Reg. Sess.) (providing for a 30-day notice and comment period); MICH. COMP. LAWS ANN. § 324.20120d(3) (West Supp. 1996) (providing for notice and comment opportunities for proposed cleanups based on generic cleanup criteria or for sites where the state "determines that there is a significant public interest"); MONT. CODE ANN. § 75-10-735 (1995) (requiring a 30-day comment period); OR. REV. STAT. § 465.325(4)(d) (Supp. 1996) (requiring notice and comment if the agreement is submitted as a proposed consent decree); OR. REV. STAT. § 465.320(2) (1992), OR. ADMIN. R. 340-122-100 (WESTLAW through Oct. 31, 1995) (requiring a 30-day notice and comment period); PA. STAT. ANN. tit. 35, § 6026.304(n)(1)(ii) (West Supp. 1996) (providing for a 30-day notice and comment period for cleanups to meet the site-specific standards); R.I. GEN. LAWS § 23-19.14-11(a) (Supp. 1995) (providing for a 14-day notice and comment period before entry of a settlement agreement as a final judgment); VT. STAT. ANN. tit. 10, § 6615a(h)(5) (Supp. 1996) (providing for a 15-day notice and comment period on a corrective action plan); WASH. ADMIN. CODE § 173-340-600(3)(e) (WESTLAW through July 24, 1996) (requiring a minimum 30-day notice and comment period for cleanups other than independent remedial actions); *see also* Survey Results, *supra* note 158 (regarding the Delaware, Indiana, and Montana provisions). During Pennsylvania's notice and comment period, the municipality may request to be involved in the cleanup plans. PA. STAT. ANN. tit. 35, § 6026.304(n)(1)(ii) (West Supp. 1996). Then, and only then (and only if requested to do so by the municipality) would the developer be required to develop and implement a "community involvement plan." *Id.*; *see also* PENNSYLVANIA PUBLIC PARTICIPATION FACT SHEET, *supra* note 385, at 1. Developers are encouraged to take a "proactive approach" in working with the community, however. PA. STAT. ANN. tit. 35, § 6026.304(n)(1)(ii) (West Supp. 1996).

In Massachusetts, a site may be designated as a "Public Involvement Plan" (PIP) site on the request of 10 or more persons. MASS. REGS. CODE tit. 310, § 40.1404 (WESTLAW through Register No. 794). At a PIP site, additional public participation requirements are imposed, including both public meetings and a notice and comment period on the Public Involvement Plan itself as well as cleanup activities. *Id.* § 40.1405.

390. California's notice requirement for the Expedited Remedial Action Program is one of the most comprehensive, providing that the state must:

Notify the public, including those persons reasonably believed to be members of the affected community, of the response action proposed in the plan in a manner that provides reasonable assurance of reaching those persons on a timely basis. The notice shall include posting notices in the area where the proposed remedial action would be taken and notification, by direct mail, of the recorded owners of property contiguous to the site addressed by the plan, as shown in the latest equalized assessment roll and all potentially responsible persons identified in the plan.

CAL. HEALTH & SAFETY CODE § 25398.6(i)(1) (West Supp. 1996); *cf.* MASS. REGS. CODE tit. 310, § 40.1405 (WESTLAW through Register No. 794) (requiring notice at PIP sites). More typical are forms of notice such as those required in Indiana and Pennsylvania. Indiana requires the developer to notify local government units, place a copy of the proposed work plan in at least one public library, and publish a notice requesting comments on the proposed work plan. IND. CODE ANN. § 13-25-5-11(a) (WESTLAW through end of 1996 2d Reg. Sess.); *see also* O'Reilly, *Indiana's Incentives*, *supra* note 24, at 62; Sweeney, *supra* note 20, at 144 n.249; Survey

notice and comment process allows by requiring that a public hearing be held on the remedial action plan; the hearing, however, is often available only upon a written request.³⁹¹ The California Expedited Remedial Action Program is unique in providing that a public hearing may be held on the proposed use of the site.³⁹² Several states require the state to consider public comments and testimony in the decision-making process and provide discretion to require revisions to cleanup plans if that is appropriate.³⁹³ However, no statute mandates that a

Results, *supra* note 158. In Pennsylvania, a developer choosing a cleanup under the site-specific standard must notify the department of its intent to remediate the site, provide a copy of that notice to the municipality where the site is located, and publish the notice in a local newspaper of general circulation. PA. STAT. ANN. tit. 35, § 6026.304(n)(1)(i) (West Supp. 1996); *see also* PENNSYLVANIA PUBLIC PARTICIPATION FACT SHEET, *supra* note 385, at 1.

391. ARK. CODE ANN. § 8-7-523(j) (Michie Supp. 1995); CAL. HEALTH & SAFETY CODE § 25398.6(i)(3) (West Supp. 1996) (requiring one or more public meetings for information and/or comment; information to be provided must include "an assessment of the degree of contamination, the characteristics of the hazardous substances, an estimate of the time required to carry out the response action and a description of the proposed response action, the planned use, and the remedial objectives"); DEL. CODE ANN. tit. 7, § 9112 (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995); Delaware Regulations, *supra* note 172, § 12.1 (providing for a public hearing "if the Secretary receives a meritorious request . . . from any person on the . . . proposed plan of remedial action"); IND. CODE ANN. § 13-25-5-11(c) (WESTLAW through end of 1996 2d Reg. Sess.) (providing that if the state receives at least one written request during the notice and comment period, a public hearing may be held, at which the state is required to consider all written comments and public testimony); MASS. REGS. CODE tit. 310, § 40.1405 (WESTLAW through Register No. 794) (requiring public meetings at PIP sites); MICH. COMP. LAWS ANN. § 324.20120d(3) (West Supp. 1996) (providing that a hearing be held if "(i) [t]he department determines that there is a significant public interest or that for any other reason a public meeting is appropriate[;] (ii) [a] city, township, or village in which the facility is located, by a majority vote of its governing body, requests a public meeting[;] or (iii) [a] local health department with jurisdiction in the area in which the facility is located requests a public meeting."); MONT. CODE ANN. § 75-10-735(2) (1995) (providing for a hearing upon a written request by "10 or more persons, by a group composed of 10 or more members, or by a local governing body of a city, town or county"; the meeting must "be held within 45 days of the department's completeness determination under [section] 75-10-736(1)"); OR. REV. STAT. § 465.320 (1992); OR. ADMIN. R. 340-122-100 (WESTLAW through Oct. 31, 1995) (providing for a hearing on a written request by 10 or more persons or a group of 10 or more members); WASH. ADMIN. CODE § 173-340-600(5) (WESTLAW through July 24, 1996) (state may elect to hold public meetings; provision applies to cleanups other than independent remedial actions and therefore, a public hearing is required for consent decrees, orders, and agreed orders); WIS. ADMIN. CODE § NR 714.07(6)(d) (WESTLAW through ENFLEX Aug. 1996 Release) (public informational meetings required if the developer or state decides they are necessary); *see also* Sweeney, *supra* note 20, at 144 n.249 (describing the Indiana provision); Survey Results, *supra* note 158 (regarding the Delaware, Indiana, Montana, and Washington provisions).

392. CAL. HEALTH & SAFETY CODE § 25398(d)(2) (West Supp. 1996). The city's or county's determination of the proposed use is to be presumed by the state to be the appropriate use for the site and enjoys a rebuttable presumption of its validity in any subsequent proceeding. The state may rebut that presumption by determining that there should be a different planned use for the site. In making this determination, the state is required to hold a hearing, then determine the planned use, and explain its determination in writing to the city or county and to any person requesting an explanation. *Id.* § 25398(d).

393. CAL. HEALTH & SAFETY CODE § 25398.6(j) (West Supp. 1996) (requiring the state to "review and consider any comments received at the public meeting or by other means within the specified time period" and "consider the affected community's acceptance of the proposed remedial alternative or alternatives," in order to propose revisions to the cleanup plan, "if appropriate"); DEL. CODE ANN. tit. 7, § 9107(e)(3) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995); Delaware Regulations, *supra* note 172, § 8.7(3) (requiring final

state reject a remedial action plan if it receives unfavorable public input.

The following table summarizes the public participation requirements of the existing state voluntary cleanup programs.

TABLE 5
PUBLIC PARTICIPATION REQUIREMENTS

Requirement	State(s)	Comments
Public Notice of Remedial Activities	Arkansas, California ERAP, California VCP, Connecticut, Delaware, Massachusetts, North Carolina, Pennsylvania, Tennessee, Texas, Washington (<i>independent remedial actions where contribution sought</i>), Wisconsin	<i>Arkansas</i> : considering additional forms of public participation, including additional notice and a notice and comment period <i>California</i> : imposes a general notice obligation in addition to other requirements <i>Pennsylvania</i> : provision applies to cleanups to meet background and statewide health standards only
Public Notice and Comment Period	California ERAP, California VCP, Delaware, Indiana, Massachusetts, Michigan, Montana, Oregon, Pennsylvania, Rhode Island, Vermont, Washington (<i>cleanups other than independent remedial actions</i>)	<i>Pennsylvania</i> : provision applies only to cleanups under the site-specific standard

plan to be prepared "with due consideration of the comments received"); IND. CODE ANN. § 13-25-5-11(c) (WESTLAW through end of 1996 2d Reg. Sess.) (requiring state to consider comments and public testimony); MICH. COMP. LAWS ANN. § 324.20120d(5)(e) (West Supp. 1996) (requiring the state to prepare an administrative record that "summarizes the significant concerns raised by the members of the public and how they are to be addressed"); MONT. CODE ANN. § 75-10-735(3) (1995) (requiring the state to "consider and respond to relevant written or oral comments submitted during the comment period or at the public meeting"); OR. REV. STAT. § 465.325(4)(d) (Supp. 1996) (directing the state, if the agreement is submitted as a proposed consent decree, to "withdraw, withhold or modify its consent to the proposed agreement if the comments, views and allegations concerning the agreement disclose facts or considerations which indicate that the proposed agreement is inappropriate, improper or inadequate"); OR. REV. STAT. § 465.320(3) (1992) (requiring the consideration of written or oral comments before approving a cleanup plan); R.I. GEN. LAWS § 23-19.14-11(a) (Supp. 1995) (providing that the "state may withdraw or withhold its consent to the proposed settlement if the comments, views, or allegations concerning the judgment disclose facts or considerations which indicate that the proposed judgment is inappropriate, improper or inadequate"); VT. STAT. ANN. tit. 10, § 6615a(h)(5) (Supp. 1996) (requiring the state to review public comments prior to approval of corrective action plan); *see also* Survey Results, *supra* note 158 (regarding the Delaware, Indiana, and Montana provisions).

Public Hearing on Remedial Activities	Arkansas, California ERAP, Delaware, Indiana, Massachusetts, Michigan, Montana, Oregon, Washington (<i>cleanups other than independent remedial actions</i>), Wisconsin	<i>Delaware, Indiana, Michigan, Montana, and Oregon</i> : require requests for hearings <i>Massachusetts</i> : applies to all sites classified as "PIP" sites (on public request) <i>Washington, Wisconsin</i> : state may decide to hold public meetings (<i>Washington</i> : meetings required for actions by consent decrees, orders, and agreed orders)
None Required	Colorado, Illinois, Louisiana, Maine, Missouri, New Hampshire, New Jersey, New York, Ohio, Washington (<i>independent remedial actions where no contribution sought</i>)	<i>Colorado</i> : notice required if forbearance sought from the EPA under CERCLA
Other	Massachusetts ³⁹⁴	

6. Technical and Financial Incentives

A few states have created state funds to make loans and grants for site assessments and cleanups; these loans and grants are provided to public entities and (in some cases) private developers.³⁹⁵ Michi-

394. Massachusetts makes technical assistance grants (TAGs) available to qualifying applicants and requires public notice of the availability of TAGs at all sites. MASS. REGS. CODE tit. 310, §§ 40.1401(1)(a), 40.1450-.1462 (WESTLAW through Register No. 794). TAGs are available for any group of affected individuals at a site, in amounts up to \$10,000. Grants may be used to secure expert assistance in evaluating project risks, encourage more effective participation (e.g., by affording more effective dissemination of relevant information), and allow issues of concern to be addressed. *Id.* § 40.1451. Applications are evaluated on the basis of a scoring system that awards points for such factors as the severity of contamination at the site, the ability of the grant to foster public participation, and the nature of the applicant (including the applicant's ability to represent the affected community). *Id.* §§ 40.1453, 40.1457.

395. OTA STATE OF THE STATES, *supra* note 20, at 18 (stating that "[f]unding assistance for initial site assessment, cleanup, or redevelopment typically comes in the form of public grants, loans or loan guarantees, and tax incentives"); Andrew, *supra* note 29, at 29-30 (describing the Michigan, Minnesota, and Ohio programs); Berger et al., *supra* note 23, at 117 (describing the Minnesota program); Clokey, *supra* note 26, at 36 (describing the Wisconsin program); Dinsmore, *supra* note 24, at 11 (noting that "New Jersey, Ohio and Michigan have created such funds"); Casserly, *supra* note 26, at 273-74 (describing the Wisconsin program); Solo, *supra* note 23, at 318 n.177 (describing the Minnesota program). Delaware makes tax credits available to certain developers under the authority of DEL. CODE ANN. tit. 30, §§ 2011(l), 2021(d) (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995). COMING CLEAN, *supra* note 24, at 87; Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160.

States usually condition loans and grants on such criteria as "demonstrated need, the relationship of the volunteer to the contamination at the site (some states will not assist responsible

gan's "Environmental Protection Bond Implementation Act" established programs for communities to apply for state bond funding for cleanups and site investigations at brownfield sites.³⁹⁶ Minnesota's "Contaminated Site Cleanup and Development Account" has provided funding for cleanups to local governments or quasi-governmental units.³⁹⁷ New Jersey provides up to a total of \$55 million in grants and loans for developers.³⁹⁸ Ohio administers a number of programs that provide financial assistance to developers and local governments.³⁹⁹ Pennsylvania has created two funds, the "Industrial Sites Cleanup Fund"⁴⁰⁰ and the "Industrial Sites Environmental Assessment Fund."⁴⁰¹ The first of these provides grants and low-interest loans for cleanup activities; the second is intended to finance site assessment activities at sites located in areas designated as "distressed communities."⁴⁰² Washington offers limited funding from the "Model

parties), and demonstrated potential of the site for economic development." OTA STATE OF THE STATES, *supra* note 20, at 18; *see also* Casserly, *supra* note 26, at 274.

396. The Environmental Protection Bond Authorization Act, MICH. COMP. LAWS ANN. §§ 324.19301-19306 (West Supp. 1996), authorizes bond funding up to \$660,000,000, and the Environmental Protection Bond Implementation Act, *id.* §§ 324.19501-19513 designates \$35,000,000 for cleanups at contaminated sites, and \$10,000,000 in grants to eligible communities to perform site assessment activities. *See also* Andrew, *supra* note 29, at 29.

397. MINN. STAT. ANN. § 116J.555 (West Supp. 1995); *see also* COMING CLEAN, *supra* note 24, at 99; Andrew, *supra* note 29, at 29; Berger et al., *supra* note 23, at 117.

398. The Hazardous Discharge Site Cleanup Program makes \$55 million available in loan and grant funding; a major use of funds to date has been for site evaluation and investigation activities by municipalities. *See* N.J. STAT. ANN. § 58:10-23.34 (WESTLAW through L. 1996, c. 30, apv. 5/16/96); COMING CLEAN, *supra* note 24, at 84; NEPI WHITE PAPER, *supra* note 20, at 44; Dinsmore, *supra* note 24, at 11; Survey Results, *supra* note 158.

399. Developers may qualify for low-interest loans and loan guarantees from existing institutions, including the Water Pollution Control Loan Fund, Ohio Water Development Authority, and Ohio Economic Development Authority. OHIO REV. CODE ANN. §§ 6111.036, 6123.032, 6123.041 (Anderson Supp. 1995); *see also* Andrew, *supra* note 29, at 30; Michel, *supra* note 20, at 464.

400. PA. STAT. ANN. tit. 35, § 6026.702 (West Supp. 1996); *see also* PENNSYLVANIA DEP'T OF ENVTL. PROTECTION, FINANCIAL ASSISTANCE (GRANTS AND LOANS), LAND RECYCLING FACT SHEET No. 8, at 1 (1996) [hereinafter PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET].

401. PA. STAT. ANN. tit. 35, §§ 6028.1-5 (West Supp. 1996); *see also* PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET, *supra* note 400, at 1.

402. PA. STAT. ANN. tit. 35, §§ 6026.702, 6028.1-5 (West Supp. 1996); *see also* COMING CLEAN, *supra* note 24, at 90. Both programs are administered by the Pennsylvania Department of Commerce. PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET, *supra* note 400, at 1; Survey Results, *supra* note 158. The Industrial Sites Cleanup Fund provides up to 75% of the costs of site assessment and cleanup; the fund is capitalized at up to \$15 million. PA. STAT. ANN. tit. 35, §§ 6026.702(b), (g) (West Supp. 1996). Eligible applicants for grants include political subdivisions or their instrumentalities, and local economic development agencies. *Id.* § 6026.702(c); *see also* PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET, *supra* note 400, at 1-2. Eligible applicants for loans include these entities and others deemed eligible by the Department of Commerce. PA. STAT. ANN. tit. 35, §§ 6026.702(d) (West Supp. 1996); *see also* PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET, *supra* note 400, at 2. The Industrial Sites Environmental Assessment Fund empowers the Department of Commerce to make grants to municipalities, municipal or other local authorities, nonprofit economic development agencies, and other similar agencies for site assessments in distressed communities as determined by the Department of Commerce. The total annual amount authorized for this fund is \$2,000,000. PA. STAT. ANN. tit. 35, §§ 6028.2, 6028.4 (West Supp. 1996); *see also* PENNSYLVANIA FINANCIAL ASSISTANCE FACT SHEET, *supra* note 400, at 2. As of the end of 1995, a total of \$4.7 million in requests for loans

Toxics Control Account" in certain instances.⁴⁰³ Wisconsin does not have a brownfields-specific funding program, but offers other sources of funding.⁴⁰⁴

Connecticut's "Urban Site Remedial Action Program" has gone further, specifying conditions under which the state will acquire brownfield sites itself, clean them up, and offer them to developers; the state also offers bond funding for cleanups.⁴⁰⁵ The acquisition program is limited, however, by the state's financial resources.⁴⁰⁶

C. Federal Initiatives

1. The EPA's Brownfields Action Agenda

While the states have taken the lead in promoting voluntary cleanups at brownfield sites, the EPA has also been active. In 1995, it launched a "Brownfields Economic Redevelopment Initiative,"⁴⁰⁷ with an "Action Agenda" consisting of several projects designed to spur brownfield redevelopment.⁴⁰⁸ The EPA announced its intent to remove sites from the CERCLIS database, expand an existing grant program for local brownfield pilot projects, clarify liability issues

and grants had been made, and \$1.62 million in loans and grants had been granted. PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 8.

403. WASH. REV. CODE § 70.105D.070(2)(d)(xi) (West Supp. 1996) (making funds available only to potentially liable parties who have entered into a consent decree at mixed funding sites); WASH. ADMIN. CODE § 173-340-560 (WESTLAW through July 24, 1996); *see also* COMING CLEAN, *supra* note 24, at 114; Survey Results, *supra* note 158.

404. For sites contaminated with petroleum, funding is available from the Petroleum Environmental Cleanup Fund. WIS. ADMIN. CODE ch. ILHR 47 (1996). Funding is also available for qualifying sites from the state's Agricultural Chemicals Cleanup Fund. WIS. STAT. ANN. § 94.73 (West Supp. 1995). The Wisconsin environmental repair statute provides for grants to political subdivisions for investigations and cleanups at "spill sites"; the state has begun to use this authority to fund Phase I and Phase II site assessments by municipalities. *Id.* § 144.442(9m); *see also* COMING CLEAN, *supra* note 24, at 103 (describing both funds); Clokey, *supra* note 26, at 36; Casserly, *supra* note 26, at 273-74; Survey Results, *supra* note 158 (regarding the use of DNR staff); Telephone Interviews, *supra* note 160 (regarding the funding of site assessments).

405. CONN. GEN. STAT. ANN. § 22a-133m (West 1995). In 1995, Connecticut also established a "Special Contaminated Property Remediation and Insurance Fund," and provided for the issuance of up to \$30 million in bond funding for cleanups, secured by the Fund. 1995 Conn. Pub. Acts 190, §§ 4-5; *see also* NEPI WHITE PAPER, *supra* note 20, at 45.

406. Tondro, *supra* note 20, at 811 (noting that less than five percent of the sites covered by Connecticut's Transfer Act are within the Urban Sites program).

407. The EPA's Administrator, Carol M. Browner, announced the "Brownfields Action Agenda" at a press conference held on Jan. 25, 1995. *Browner Testimony*, *supra* note 77, at 870-71; Solo, *supra* note 23, at 323; Jones, *supra* note 156; *see* U.S. Envtl. Protection Agency, *The Brownfields Action Agenda* (last modified on Jan. 25, 1995) <<http://www.epa.gov/docs>> [hereinafter *Brownfields Initiative*].

408. *Browner Testimony*, *supra* note 77, at 870-72; *Brownfields Initiative*, *supra* note 407, at 1. The response to the EPA's proposals has been positive. Carol Andress, the Environmental Defense Fund's economic development specialist, stated that "EPA's Brownfield Initiative helps to make environmental cleanup a cornerstone of urban revitalization Prompt and thorough clean-up can save jobs that might otherwise be lost to outlying areas." Brooks, *supra* note 158; *see also* NWF Testimony, *supra* note 66, at 608 (calling the Initiative a welcome "first step in ensuring that environmental cleanup is a building block to economic development, not a stumbling block"); Holusha, *supra* note 136 (stating that local officials call the removal of sites from the CERCLIS database "a great leap forward" in brownfield policy).

under CERCLA (particularly for prospective purchasers, municipalities, and lenders),⁴⁰⁹ and work with states implementing voluntary cleanup programs.⁴¹⁰

a. Deletion of CERCLIS Sites

In early 1995, there were about 38,000 sites listed in the CERCLIS database of sites to be evaluated for cleanups under CERCLA.⁴¹¹ Many of these were sites where the EPA had performed an initial screening (a "Preliminary Assessment") and determined that no further investigation or remedial action was required.⁴¹² Even though a notation to this effect was added to the sites' listings,⁴¹³ lenders had stigmatized these sites and routinely refused to extend loans to developers.⁴¹⁴ In February 1995, as part of the Action Agenda, the EPA deleted approximately 25,000 of these sites from the CERCLIS list;⁴¹⁵ it announced its intent to delete another 3,300 sites in 1996 as part of a package of Superfund administrative reforms.⁴¹⁶

b. Pilot Projects

The EPA is funding a number of brownfield "pilot projects" to develop strategies for redeveloping brownfield sites,⁴¹⁷ with individual grants of up to \$200,000. This seed money may not be used for actual

409. The Brownfields Initiative targeted the following liability issues as the subjects of EPA guidance: (1) prospective purchaser liability; (2) the liability of owners of property containing contaminated aquifers; (3) lender liability; (4) municipal acquisition liability; and (5) lender liability at Underground Storage Tank (UST) sites. *Brownfields Initiative*, *supra* note 407, at 2; see also *Browner Testimony*, *supra* note 77, at 872 (stating that the EPA is "identifying options and developing guidance" on these issues).

410. See *Browner Testimony*, *supra* note 77, at 872 (testifying that "[o]ther elements of the Agenda call for building strong and effective state and local cleanup programs which will prevent the need for Federal involvement in many sites with economic development potential"). This issue is largely addressed in the context of reform to CERCLA to allow the EPA to approve cleanups taking place under a state voluntary cleanup program; see *infra* notes 459-61 and accompanying text.

411. RODGERS, *supra* note 76, § 8.4, at 712 (noting that "[a]s of July 7, 1993, 37,921 sites were listed on the CERCLIS inventory").

412. *Browner Testimony*, *supra* note 77, at 871; *Fields Testimony*, *supra* note 3, at 224; RODGERS, *supra* note 76, § 8.4, at 712-13.

413. The notation "No Further Response Action Planned" was added to records in the CERCLIS for sites where the EPA had decided not to proceed beyond the Preliminary Assessment stage. RODGERS, *supra* note 76, § 8.4, at 712-13; Buzbee, *supra* note 26, at 79 n.144.

414. *Browner Testimony*, *supra* note 77, at 871 ("The mere fact that these sites have remained in CERCLIS has caused potential developers to shy away from them and many lending and real estate investment communities have denied loans for businesses in or near CERCLIS sites as a matter of policy."); *Fields Testimony*, *supra* note 3, at 224; *Brownfields: EPA Announces 11 New Pilot Projects to Return Brownfields to Productive Use*, Daily Envtl. Rep. News (BNA), Jan. 26, 1996, available in WESTLAW, 1996 DEN 17 d11 [hereinafter *11 New Pilot Projects*] (quoting EPA Administrator Browner's statement to the U.S. Conference of Mayors that a listing in the CERCLIS database is "like a bad credit rating that never goes away").

415. *Browner Testimony*, *supra* note 77, at 871.

416. *11 New Pilot Projects*, *supra* note 414.

417. *Browner Testimony*, *supra* note 77, at 870-71.

cleanups.⁴¹⁸ Instead, it is intended to achieve three purposes: testing of redevelopment strategies and models;⁴¹⁹ promoting cooperative efforts to bring together the stakeholders involved in brownfield policy;⁴²⁰ and forcing “jump start” assessment and evaluation activities at individual sites.⁴²¹ Projects started in 1993 in Cleveland, Ohio, and in 1994 in Richmond, Virginia, and Bridgeport, Connecticut.⁴²² By July 1995, eighteen cities and localities had started pilot projects or had projects approved by the EPA.⁴²³ In the Action Agenda, the EPA announced its intent to fund fifty new projects by the end of 1996.⁴²⁴ It announced eleven more grants in January 1996, for a total of forty projects.⁴²⁵ Participants in these pilot projects are involved in a wide range of activities: developing intergovernmental cooperation networks for brownfield cleanups;⁴²⁶ identifying sites for cleanups (often those within qualifying federal empowerment zones);⁴²⁷ and selecting sites to use as test beds for site-specific evaluation and development strategies.⁴²⁸ Although there is no typical pilot project, the tasks be-

418. See *Browner Testimony*, *supra* note 77, at 871; *Brownfields Initiative*, *supra* note 407, at 5; Brooks, *supra* note 158 (stating that “[f]unds are not for actual clean up, but for assessment efforts to ‘generate interest by pulling together community groups, investors, lenders, developers, and other affected parties to address the issues of cleaning up contaminated sites and returning them to appropriate, productive use,’ according to EPA”).

419. *Browner Testimony*, *supra* note 77, at 871 (testifying that the Brownfields Initiative “will give us, and others, an opportunity to observe which approaches are best suited for different types of communities”); *Brownfields Initiative*, *supra* note 407, at 3.

420. *Browner Testimony*, *supra* note 77, at 871; *Brownfields Initiative*, *supra* note 407, at 3.

421. *Brownfields Initiative*, *supra* note 407, at 5.

422. *Browner Testimony*, *supra* note 77, at 871; *Brownfields Initiative*, *supra* note 407, at 5. Administrator Browner testified to the success of the Cleveland pilot project. See *Browner Testimony*, *supra* note 77, at 871 (“Our first pilot in Cleveland, OH, has already leveraged \$1.7 million in private investment, obtained a quarter of a million dollars in private donations, created 100 jobs with another 100 jobs expected within one year, and generated over \$600,000 in new tax revenue for the city.”).

423. Pilot projects were underway in the following cities and localities: Baltimore, MD; Birmingham, AL; Bridgeport, CT; Cape Charles, VA; Cleveland, OH; Detroit, MI; Indianapolis, IN; Knoxville, TN; Laredo, TX; Louisville, KY; New Orleans, LA; Oregon Mills Site, OR; Richmond, VA; Rochester, NY; Sacramento, CA; St. Louis, MO; Trenton, NJ; and the “West Central Municipal Conference” (Chicago, IL suburbs). *COMING CLEAN*, *supra* note 24, at 28; Brooks, *supra* note 158.

424. *Browner Testimony*, *supra* note 77, at 870; *COMING CLEAN*, *supra* note 24, at 28; Brooks, *supra* note 158; see Eric Rothenberg, *New EPA Guidance Shields Buyers of Contaminated Sites*, N.Y. L.J., June 12, 1995, at 53.

425. 11 *New Pilot Projects*, *supra* note 414.

426. Brooks, *supra* note 158 (noting that Sacramento is developing a “streamlined system with all levels of government and the community to develop a future land use planning and permitting process in conjunction with cleanup planning,” and the West Central Municipal Conference pilot is “combin[ing] efforts of 36 municipalities in the Chicago area to create a regional council of governments approach to brownfield redevelopment”).

427. Detroit, for example, is developing a relationship between empowerment zone activities and brownfield cleanups. *COMING CLEAN*, *supra* note 24, at 33 (stating that Baltimore is working to “coordinate empowerment zone and brownfields pilot activities”); Brooks, *supra* note 158 (observing that “Detroit will marry empowerment zone activities with case studies of assessment, cleanup and redevelopment”).

428. Knoxville is using its funding “to focus on 25 inner city sites that have been chosen for an urban business park.” Brooks, *supra* note 158. The Richmond pilot project has selected one

ing conducted in the Richmond pilot project are representative of the range of activities involved. The Richmond "Project Team" includes representatives from EPA Region III, staff from a number of city offices, and outside consultants.⁴²⁹ This Team is working with a "task force" of city and state staff, local and regional community leaders, and economic development officials.⁴³⁰ The project's activities include establishing a list of three or four sites deemed most suitable for redevelopment,⁴³¹ evaluating these sites, which may include conducting Phase I and limited Phase II investigations,⁴³² and developing site-specific property redevelopment strategies.⁴³³ Activities also include strategies designed to involve local residents and business in brownfield redevelopment activities.⁴³⁴

c. Prospective Purchaser Agreements

Another EPA initiative to spur brownfield redevelopment is expansion of the coverage of its "Prospective Purchaser Agreement" (PPA).⁴³⁵ In a PPA, the EPA offers protection from liability under CERCLA in the form of a release and covenant not to sue for prospective purchasers of contaminated properties who commit to specific cleanups.⁴³⁶ Therefore, a prospective developer of a brownfield

brownfield site as a prototype site to implement the strategies developed in the program. RICHMOND BROWNFIELDS PILOT PROJECT STATEMENT, *supra* note 26, at 13. That site is a 64-acre parcel owned by CSX Transportation, Inc., located in a state-designated enterprise zone. COMING CLEAN, *supra* note 24, at 32.

429. RICHMOND BROWNFIELDS PILOT PROJECT STATEMENT, *supra* note 26, at 11.

430. *Id.*

431. *Id.* at 2.

432. *Id.* at 3-6.

433. *Id.* at 8.

434. COMING CLEAN, *supra* note 24, at 33. These include the use of the "Neighborhood Teams Process" program and the development of courses to inform citizens about environmental hazards. *Id.*

435. Superfund Program; De Minimis Landowner Settlements, Prospective Purchaser Settlements, 54 Fed. Reg. 34,235 (1989) [hereinafter EPA PPA Guidance] (setting forth the criteria under which EPA would enter into PPAs); *see also* COMING CLEAN, *supra* note 24, at 34-35; Buzbee, *supra* note 26, at 48 n.35; Howard M. Shanker & Laurent R. Hourcle, *Prospective Purchaser Agreements*, 25 ENVTL. L. REP. 10,035 (1995).

436. *See* COMING CLEAN, *supra* note 24, at 35; Berger et al., *supra* note 23, at 86; McWilliams, *supra* note 20, at 728; Rothenberg, *supra* note 424; Brooks, *supra* note 158.

The Agency's criteria for entering into agreements with prospective purchasers of contaminated property included the following:

- a. Enforcement action is anticipated by the Agency at the facility;
- b. A substantial benefit, not otherwise available, will be received by the Agency for cleanup;
- c. The Agency believes that continued operation of the facility or new site development, with the exercise of due care, will not aggravate or contribute to the existing contamination or interfere with the remedy;
- d. Due consideration has been given to the effect of continued operations or new development on health risks to those persons likely to be present at the site; and
- e. The prospective purchaser is financially viable.

EPA PPA Guidance, *supra* note 435; *see also* COMING CLEAN, *supra* note 24, at 35; Berger et al., *supra* note 23, at 86; Buzbee, *supra* note 26, at 77-78.

site may avail itself of the “innocent landowner defense”⁴³⁷ and avoid liability under CERCLA by entering into an agreement with the EPA before buying the property.⁴³⁸ The terms of these agreements are based upon site-specific factors, particularly the nature and extent of contamination discovered in a site investigation.⁴³⁹

In May 1995, the EPA acted to redefine the criteria by which it will consider entering into a PPA agreement.⁴⁴⁰ Under the original guidance, the EPA insisted on receiving a “substantial benefit” from the developer such as either an agreement to perform cleanup work or reimbursement of response costs.⁴⁴¹ This proved, however, to be more than most prospective purchasers were willing to spend. The revised guidance document adds that the EPA may enter into a PPA if it receives an “indirect public benefit in combination with a reduced direct benefit to the EPA.”⁴⁴²

One commentator calls the revised guidance on PPAs the “most important step under the ‘Brownfields Action Agenda.’”⁴⁴³ Given the PPAs’ track record to date, that may be overly optimistic. The availability of a PPA has had little success in spurring brownfield redevelopment as the EPA has entered into only sixteen such agreements since 1989.⁴⁴⁴ The EPA’s decision to count a project’s indirect benefits removes a major obstacle, but others remain. The PPA is not a complete release from liability because it does not apply to contamination

437. Brooks, *supra* note 158.

438. COMING CLEAN, *supra* note 24, at 34-35; McWilliams, *supra* note 20, at 728; Rothenberg, *supra* note 424; Brooks, *supra* note 158. The EPA derives its authority to offer a covenant not to sue to prospective purchasers from CERCLA § 122(f), 42 U.S.C. § 9622(f) (1994), which provides that the EPA may offer a covenant not to sue to any person if the covenant is “in the public interest,” “would expedite response action consistent with the [NCP],” and the person is in “full compliance” with a consent decree for cleanup action. See generally Strock, *supra* note 105 (discussing settlement policy under CERCLA § 122).

439. COMING CLEAN, *supra* note 24, at 35; Rothenberg, *supra* note 424; Brooks, *supra* note 158.

440. Announcement and Publication of Guidance on Settlements with Prospective Purchasers of Contaminated Property and Model Prospective Purchaser Agreement, 60 Fed. Reg. 34,792 (1995); U.S. ENVTL. PROTECTION AGENCY, GUIDANCE ON SETTLEMENTS WITH PROSPECTIVE PURCHASERS OF CONTAMINATED PROPERTY (1995) [hereinafter MAY 1995 PPA GUIDANCE MEMORANDUM]; see also COMING CLEAN, *supra* note 24, at 35; Buzbee, *supra* note 26, at 48 n.35; Rothenberg, *supra* note 424.

441. EPA PPA Guidance, *supra* note 435; COMING CLEAN, *supra* note 24, at 34-35; Buzbee, *supra* note 26, at 78; McWilliams, *supra* note 20, at 728.

442. MAY 1995 PPA GUIDANCE MEMORANDUM, *supra* note 440; see also COMING CLEAN, *supra* note 24, at 35; Buzbee, *supra* note 26, at 78-79; Rothenberg, *supra* note 424. This decision was also consistent with the Clinton administration’s earlier proposal for Superfund reform. See McWilliams, *supra* note 20, at 748-49.

443. Rothenberg, *supra* note 424.

444. Shanker & Hourcle, *supra* note 435, at 10,036 & nn.9-10; see also Buzbee, *supra* note 26, at 80 n.148 (citing the Shanker and Hourcle count of PPAs and stating that the first four PPAs entered into under the new criteria are awaiting EPA approval); McWilliams, *supra* note 20, at 728 (stating that “PPAs have an insufficient track record for prospective purchasers to confidently rely on them when assessing the liability risks of purchasing an urban industrial property”); Rothenberg, *supra* note 424.

"unknown" at the time the Agreement is signed.⁴⁴⁵ Finally, under both the original and new guidance document, PPAs are targeted at sites where the EPA believes it would otherwise be interested in bringing an enforcement action.⁴⁴⁶ This would preclude many brown-field sites from participation. Commentators also attribute the lack of PPAs to the EPA's overall reluctance, given its statutory mandate, to release parties from CERCLA liability.⁴⁴⁷

2. Superfund Reform Legislation (The "Reform of Superfund Act")

Brownfield redevelopment may also be encouraged by proposed amendments to CERCLA that would remove disincentives to development. A wide variety of stakeholders currently support reforms to CERCLA⁴⁴⁸ and view reform as more necessary than ever because the basic authorizations for the Superfund expired in December

445. U.S. ENVTL. PROTECTION AGENCY, MODEL AGREEMENT ON SETTLEMENTS WITH PROSPECTIVE PURCHASERS OF CONTAMINATED PROPERTY pt. IX (1996) (stating that the United States "reserves and the Agreement is without prejudice to all rights against Settling Defendants with respect to . . . (d) any liability resulting from the release or threat of release of hazardous substances, pollutants or contaminants, at the Site after the effective date of this Agreement, not within the definition of Existing Contamination"); see also Rothenberg, *supra* note 424; Brooks, *supra* note 158.

446. MAY 1995 PPA GUIDANCE MEMORANDUM, *supra* note 440 (criteria for entering into a PPA include whether "[a]n EPA action at the facility has been taken, is ongoing, or is anticipated to be undertaken by the Agency"); see also COMING CLEAN, *supra* note 24, at 35; Buzbee, *supra* note 26, at 77; Rothenberg, *supra* note 424; Brooks, *supra* note 158. The May 1995 memo states, for example, that "sites designated by EPA as No Further Response Action Planned (NFRAP) and removed from CERCLIS will rarely be deemed appropriate for a [PPA]." MAY 1995 PPA GUIDANCE MEMORANDUM, *supra* note 440. Many brownfield sites fit this definition, as indicated by the EPA's own action to remove 28,000 sites from the CERCLIS database as part of its "Action Agenda" to spur brownfield redevelopment. See *supra* notes 411-16 and accompanying text.

447. Buzbee, *supra* note 26, at 76-80 (noting the EPA's reluctance to offer true final settlements to PRPs); McWilliams, *supra* note 20, at 728.

448. As any account of the calls for reform of Superfund can barely scrape the tip of the proverbial iceberg, the following list is only representative.

Superfund reform is a high priority for industry groups. The Chemical Manufacturers Association's President, Fred Webber, recently called upon Congress to "pass a Superfund reauthorization bill that reforms the program and funds cleanups into the next century." *Interest Groups Mixed on Impact of CERCLA Shutdown During Budget Impasse*, Daily Rep. for Executives (BNA), No. 3, at A-4 (Jan. 4, 1996) [hereinafter *Interest Groups Mixed*]; see also *Reform of Superfund Act of 1995: Hearings on H.R. 2500 Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Energy and Commerce*, 104th Cong., 1st Sess. 249 (Oct. 26, 1995) (testimony of George D. Baker, Executive Director of Superfund Reform '95, "a coalition of over 1200 small and large businesses, trade associations, environmental professionals, insurance companies, municipalities, chambers of commerce, and concerned citizens, all of whom are dedicated to comprehensive reform of the Superfund law") (testifying that the current Superfund program is "horribly broken and wasteful").

The Clinton administration has recognized the need for legislative reforms to Superfund. See, e.g., *Browner Testimony*, *supra* note 77, at 856 (testifying that "there have been serious proposals for improvement of the [CERCLA] statute which we agree need to be addressed"); *Reform of Superfund Act of 1995: Hearings on H.R. 2500 Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Energy and Commerce*, 104th Cong., 1st Sess. 192 (Oct. 26, 1995) (testimony of Lois Schiffer, Assistant Attorney General, Environmental & Natural Resources Div., U.S. Dep't of Justice) [hereinafter *Schiffer Testimony*] (testifying that the administration supports "responsible reform" of Superfund).

1995.⁴⁴⁹ Congress has been moving in recent years to promote comprehensive reform legislation;⁴⁵⁰ as of the date of this article, however, prospects are unclear for the "Reform of Superfund Act" (ROSA),⁴⁵¹ the principal bill proposed to amend CERCLA. The Clinton administration opposes ROSA on a wide variety of grounds, prompting the likelihood that the bill would be vetoed if passed in its current form.⁴⁵² State officials are critical of the proposal to "cap" the NPL and other provisions which they perceive as shifting cleanup costs to them.⁴⁵³ The bill's provisions redefining cleanup standards and public partici-

Environmental groups, though cautious about legislative proposals, also recognize the need for reform. See, e.g., *Reform of Superfund Act of 1995: Hearings on H.R. 2500 Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Energy and Commerce*, 104th Cong., 1st Sess. 272 (Oct. 26, 1995) (testimony of Karen Florini, Senior Attorney, Environmental Defense Fund) [hereinafter *Florini Testimony*] (testifying that "the Environmental Defense Fund supports improvement to the Superfund program"); *NWF Testimony*, *supra* note 66, at 600.

The states' frustration with the current Superfund scheme is acute. See, e.g., *Hearing on H.R. 2500 Before the Subcomm. on Water Resources and Environment of the House Comm. on Transportation and Infrastructure*, 104th Cong., 1st Sess. (Nov. 8, 1995) (testimony of Robert M. Cox, Jr., on behalf of the Pennsylvania Chamber of Business & Industry), available in WESTLAW, 1995 WL 668671 (testifying that "[t]he Chamber believes that unless Congress fundamentally reforms this important hazardous waste cleanup program now the drain on the state's economy will only worsen"); see also BARNETT, *supra* note 98, at 268-82 (describing the characteristics of a proposed revamped program); EASTERBROOK, *supra* note 24, at 607-18 (describing the problems of the current program and possible revisions to it).

449. *Interest Groups Mixed*, *supra* note 448. The provisions that expired included provisions for the excise and corporate environmental income taxes that replenish the Superfund. See RODGERS, *supra* note 76, § 8.2, at 699-700 (describing the tax provisions). BARNETT, *supra* note 98, at 223-27, contains a fascinating account of the legislative origins of these taxes. An agreement reached by the House Ways and Means Committee and Senate Finance Committee on Nov. 12, 1995, extended Superfund excise taxes through Sept. 30, 1996, and corporate environmental income taxes through Dec. 31, 1996.

450. The "Reform of Superfund Act" is the second major recent attempt at Superfund reform legislation. Despite broad-based support, comprehensive legislative proposals to amend CERCLA failed to be enacted in 1994, at the end of the 103d Congress. According to Professor Abrams, "[p]opular wisdom has it that the amendment package died a political death or [failed] because of a lack of consensus on other Superfund reform issues." Abrams, *supra* note 109, at 582.

451. H.R. 2500, 104th Cong., 1st Sess. (1995). The Senate counterpart to this bill is S. 1285, introduced by Senator Robert Smith of New Hampshire. S. 1285, 104th Cong., 1st Sess. (1995).

452. See, e.g., *Schiffer Testimony*, *supra* note 448, at 192 (testifying that "H.R. 2500 is not a responsible proposal for reform of Superfund," and "[a]lthough the bill addresses each of the key issues involved in Superfund reform, and proposes some innovative new ideas such as liability exemptions for municipal landfill sites and de minimis parties, it is fundamentally flawed"). Assistant Attorney General Schiffer also testified that the administration prefers the "consensus" reform bill reintroduced by Rep. John Dingell (D-MI) as H.R. 228. See *id.*; *Superfund: EPA Official Says Reform Bills Sacrifice Cleanup for "Exposure Control,"* Nat'l Env't Daily (BNA), Nov. 8, 1995 (quoting the EPA's Jerry Clifford).

453. See *State Officials Warn Superfund Bills Would Generate Serious Problems*, Env't Week, Jan. 5, 1996, available in WESTLAW, 1996 WL 7980833 (quoting comments of attendees at the annual meeting of the National Council of State Legislatures).

The proposal to cap the NPL is detailed in H.R. 2500, 104th Cong., 1st Sess. § 502 (1995), which would amend CERCLA § 105, 42 U.S.C. § 9605 (1994), to provide that "the President may not add any facility to the National Priorities List after December 31, 2002." No more than 125 facilities could be added through the year 2002 (under a schedule set forth in the legislation), and a facility could be added only with the concurrence of the state and the affected local government. H.R. 2500, § 502.

pation have drawn fire from the environmental community⁴⁵⁴ and interested community groups.⁴⁵⁵

Nonetheless, ROSA is noteworthy because it contains a number of initiatives intended to make cleanup costs and liability more predictable.⁴⁵⁶ Title III, labeled "Brownfields and Voluntary Cleanups," calls for providing technical and financial assistance to qualifying state programs⁴⁵⁷ and contains two major incentives to brownfield redevelopment: a limit on liability under CERCLA at brownfield sites cleaned up in an approved state voluntary cleanup program and a clarification of the "innocent landowner" defense.⁴⁵⁸ Provisions of other titles, particularly those of Title I that would modify CERCLA cleanup standards, are also relevant.

a. Title III: Promoting State Cleanups

i. *No Liability for Sites Remediated in Approved State Programs*

ROSA's most significant direct incentive for brownfield redevelopment is a provision designed to decrease uncertainty generated by the states' inability to release developers from CERCLA liability.⁴⁵⁹

454. See, e.g., *Florini Testimony*, *supra* note 448, at 270-80 (opposing these provisions and others).

455. See, e.g., *Hearing on H.R. 2500 Before the Subcomm. on Water Resources and Environment of the House Comm. on Transportation and Infrastructure*, 104th Cong., 1st Sess. (Oct. 31, 1995) (testimony of Florence T. Robinson, representing the North Baton Rouge Environmental Association, Louisiana Environmental Action Network, and the Communities at Risk Network), available in WESTLAW, 1995 WL 668738 [hereinafter *Robinson Testimony*] (opposing provisions of H.R. 2500 on remedy selection, cleanup standards, and public participation, among others).

456. Representatives Ralph Regula of Ohio and Peter Visclosky of Indiana have introduced two free-standing brownfield bills, the "Brownfield Cleanup and Redevelopment Act" and "Brownfield Cleanup and Redevelopment Revolving Loan Fund Pilot Project Act." See H.R. 1620 and H.R. 1621, 104th Cong., 1st Sess. (1995); *COMING CLEAN*, *supra* note 24, at 54-56. These bills called for federal financial support of state voluntary cleanup programs. H.R. 1620, for example, "would authorize the EPA Administrator to establish a three-year, \$20 million pilot project providing revolving loans to states." *Reform of Superfund Act of 1995: Hearings on H.R. 2500 Before the Subcomm. on Commerce, Trade, and Hazardous Materials of the House Comm. on Energy and Commerce*, 104th Cong., 1st Sess. 6 (Oct. 18, 1995) (testimony of Rep. Peter J. Visclosky) [hereinafter *Visclosky Testimony*]; *COMING CLEAN*, *supra* note 24, at 54. The bills also would extend protection comparable to that envisioned by the omnibus Superfund reform bill. See *Visclosky Testimony*, *supra*, at 6 (testifying that the provision of Title III of ROSA limiting federal liability for sites cleaned up in an approved state program "is remarkably similar to the process established by legislation Mr. Regula and I introduced in May, H.R. 1621"). In his testimony before the House Commerce Committee, Rep. Visclosky expressed his hope that brownfield legislation would be enacted separately if Superfund reform fails again. *Id.* at 7.

457. H.R. 2500, 104th Cong., 1st Sess. § 301 (1995).

458. *Id.* §§ 304 and 303, respectively.

459. See *Hearing on H.R. 2500, A Bill to Amend the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Before the House Transportation and Infrastructure Comm., Subcomm. on Water Resources and Environment*, 104th Cong., 1st Sess. (Nov. 2, 1995) (testimony of Michael A. Kahoe, Deputy Secretary, California Environmental Protec-

Title III attempts to encourage participation in state voluntary cleanup programs by limiting liability under CERCLA where a developer has cleaned up a site in accordance with the requirements of a state program.⁴⁶⁰ This could increase certainty for developers, who would know in advance that complying with a state's requirements will preclude the EPA from pursuing an action against them. State programs would not qualify automatically for this deference; the EPA would be required to approve the state program before developers could receive a limit on federal liability.⁴⁶¹

ii. Clarification of the Innocent Landowner Defense

Title III would clarify CERCLA's "innocent landowner" defense, which, as noted above, is poorly defined and rarely available to brownfield developers.⁴⁶² Section 303 of ROSA would amend CERCLA to provide that a purchaser of real property has "made all appropriate inquiry," as that term is used in the statute,⁴⁶³ if it conducts a Phase I site assessment.⁴⁶⁴ This would entitle the purchaser to avail itself of the innocent landowner defense.⁴⁶⁵ Changing the statute in this fashion would be of great value to a brownfield developer, if it were willing to underwrite the expense of a Phase I site assessment.

Clarifying the circumstances under which a purchaser can use the innocent landowner defense is important.⁴⁶⁶ However, under the proposed Section 303, there would be no guarantee that those who use

tion Agency), available in WESTLAW, 1995 WL 645085 [hereinafter *Kahoe Testimony*] (observing that "[t]he primary value of [Title III] is its' [sic] release of federal liability for sites handled under state voluntary or brownfield programs"); see also McWilliams, *supra* note 20, at 748 (stating that "the federal government can streamline the remediation process by delegating or deferring to efficient state programs").

460. Section 304 of H.R. 2500, as introduced, would add the following language to CERCLA § 114, 42 U.S.C. § 9614 (1994):

(e) Facilities in states with approved remedial action programs.

(1) Enforcement prohibition.

(A) Releases subject to State plans. For any facility at which there is a release or threatened release of hazardous substances subject to a State remedial action plan adopted under a state program approved as provided in this subsection, neither the President nor any other person may use any authority of this act to take a new administrative or judicial enforcement action, or to bring a private civil action, against any person regarding any matter that is within the scope of such plan.

461. Section 304 would provide that a state may apply for approval of its voluntary cleanup program. At the U.S. Conference of Mayors meeting, in January 1996, Rep. Thomas Bliley (R-VA), Chairman of the House Commerce Committee, announced his intent to offer an amendment to delete this provision. *Clinton Backs U.S. Mayors*, *supra* note 29.

462. See *supra* note 102 and accompanying text.

463. CERCLA § 101(35), 42 U.S.C. § 9601(35) (1994).

464. H.R. 2500, 104th Cong., 1st Sess. § 303 (1995). Section 303 would amend CERCLA § 107, 42 U.S.C. § 9607 (1994).

465. If a purchaser has made all appropriate inquiries, it is not in a "contractual relationship" and may qualify for the defense set forth in CERCLA § 107(b)(3). See *supra* note 102 and accompanying text.

466. See, e.g., *NWF Testimony*, *supra* note 66, at 607 (testifying that the NWF "recommends that some form of liability relief is provided to prospective purchasers, lenders and innocent landowners").

the defense are bona fide innocent purchasers. Opponents claim that developers will be able to purchase brownfield sites without ensuring that they are remediated. They point to Section 303's lack of a requirement that the property be cleaned up if the Phase I assessment discovers the presence of contamination or that the purchaser cooperate with a cleanup (if one takes place).⁴⁶⁷

b. Title I: Revising Cleanup Standards

Like state voluntary cleanup statutes, ROSA contains provisions that would relax cleanup standards expressly amending Section 121 of CERCLA. It would require the EPA to conduct "objective and unbiased" risk assessments, implement "cost-effective and cost reasonable" remedies, and base cleanup remedies on anticipated future uses of land, water, and other resources.⁴⁶⁸ Section 102, for example, directs the EPA to use "the most plausible assumptions" for risk assessments and specifies that "remedies selected at individual facilities shall be those necessary to protect human health and the environment from realistic and significant risks through cost-effective and cost-reasonable means."⁴⁶⁹ ROSA also removes the "ARAR" requirement that other federal and state environmental standards be followed in Superfund cleanups.⁴⁷⁰ Some have criticized these proposals as creating standards that fail to protect health and the environment, particularly in minority and lower-income communities.⁴⁷¹

3. Other Federal Initiatives

The Clinton administration's budget proposal for fiscal year 1997 offers a tax deduction for environmental cleanup expenses in "targeted areas," which include distressed areas such as the current empowerment zone and enterprise communities areas⁴⁷² and areas

467. H.R. 2500, 104th Cong., 1st Sess. § 303 (1995); see *NWF Testimony*, *supra* note 66, at 607-08 (testifying that "[i]n order for bona fide prospective purchasers to obtain Superfund liability relief, they must not contribute waste to the site, make a good faith effort to determine if the site was contaminated, cooperate with the cleanup effort at a contaminated site and not aggravate existing contamination conditions"); *Schiffer Testimony*, *supra* note 448, at 201 (testifying that "H.R. 2500's 'innocent landowner' liability exemption . . . fails to require the purchasers to cooperate with cleanup of the property [which is] inconsistent with the purpose of the provision to encourage the cleanup, as well as redevelopment, of brownfields sites").

468. *Florini Testimony*, *supra* note 448, at 274-77; *Robinson Testimony*, *supra* note 455.

469. H.R. 2500, 104th Cong., 1st Sess. § 102 (1995); see also *Florini Testimony*, *supra* note 448, at 277. The Environmental Defense Fund's Karen Florini stated that this provision "implicitly disallows consideration of atypically sensitive subpopulations (e.g., developing fetuses, infants, children, asthmatics, the elderly)." *Id.* at 276.

470. See H.R. 2500, 104th Cong., 1st Sess. § 101 (1995); see also *Florini Testimony*, *supra* note 448, at 275.

471. See, e.g., *Swanston*, *supra* note 123, at 567-72.

472. Empowerment zones operate on the theory that removing governmental barriers to investment, and providing incentives for redevelopment, will spur urban revitalization and growth. See *McWilliams*, *supra* note 20, at 752 n.232 (citing STUART M. BUTLER, ENTERPRISE ZONES: GREENLINING THE INNER CITIES 3 (1981)). The Omnibus Budget Reconciliation Act of

where brownfield pilot projects are in place.⁴⁷³ There is a direct relationship between the proposed tax deduction and other federal programs which focus on economic redevelopment activities, because these activities are already targeted to the empowerment zones and enterprise communities.⁴⁷⁴ Moreover, federal agencies involved in redevelopment activities in these communities could work cooperatively with state regulators administering voluntary cleanup programs.⁴⁷⁵ Professor Michael Allan Wolf cautions, however, that targeting these areas for cleanups raises distributional concerns.⁴⁷⁶

IV. COMPARING VOLUNTARY CLEANUP STATUTES AND NEGOTIATED COMPENSATION STATUTES

A broad-based coalition of industry, policy makers, and the public is prompting the states to take action to facilitate voluntary cleanups, touting the voluntary cleanup statutes' incentives for

1993 authorized the creation of six urban empowerment zones (later designated in Detroit, Philadelphia, Baltimore, New York, Chicago, and Atlanta) and 65 "enterprise communities"; Cleveland and Los Angeles were designated as "supplemental zones" qualifying for federal grants. COMING CLEAN, *supra* note 24, at 50; Dinsmore, *supra* note 24, at 13; Michael Allan Wolf, *Compete and Empower*, CHRISTIAN SCI. MONITOR, Dec. 20, 1993 [hereinafter Wolf, *Compete and Empower*].

473. See *White House Statutory Language*, Tax Notes Today, Tax Analysts, Mar. 20, 1996, available in WESTLAW, TNT database, 96 TNT 56-1 (proposing Title IX, Subtitle D of the Revenue Reconciliation Act of 1996) [hereinafter *Administration Tax Deduction Bill*]; *Administration Looking at FY 1997 Budget as Vehicle for Brownfields Tax Proposal*, Daily Tax Rept. (BNA), Feb. 1, 1996, at DTR 21 G7 [hereinafter *FY 1997 Budget Proposal*]. The administration's bill would add a new § 198 to the Internal Revenue Code that would allow a deduction for a "qualified environmental remediation expenditure" in the taxable year in which it was paid or incurred. Qualifying expenditures would be those at a site within a "targeted area," defined as a population census tract with a population of less than 2,000 if more than 75% of the tract is zoned for commercial or industrial use, an empowerment zone or enterprise community, or a site included in a brownfield pilot project. *Administration Tax Deduction Bill, supra*, § 9476(a); *FY 1997 Budget Proposal, supra*; cf. S. 1542, 104th Cong., 2d Sess. (1996) (proposing to allow taxpayers to deduct costs incurred "in connection with the abatement or control of environmental contaminants located within an empowerment zone or enterprise community"); *FY 1997 Budget Proposal, supra* (describing S. 1542).

474. A wide variety of federal assistance is available in empowerment zones and enterprise communities, including programs for economic development and job training. See Michael Allan Wolf, *U.S. Urban Areas Seek New Paths to Prosperity*, F. FOR APPLIED RES. & PUB. POL'Y, Winter 1995, at 84, 87-88 [hereinafter Wolf, *U.S. Urban Areas*]; Wolf, *Compete and Empower, supra* note 472. The University of Richmond School of Law's "EZ Project" maintains a site on the Internet's World Wide Web to provide useful information about the federal program, including specific federal regulations regarding federal program enhancements to empowerment zones and enterprise communities. See *Optimism Is Surviving for "Empowerment Zones,"* ARIZ. REPUBLIC, Dec. 25, 1995, at B15 (mentioning the EZ Project); *EZ Gazette: A Newsletter on Empowerment Zones, Enterprise Communities, and Enterprise Zones* (last modified Sept. 25, 1996) <<http://www.urich.edu/~ezproj>>.

475. See Wolf, *U.S. Urban Areas, supra* note 474, at 90.

476. *Id.* at 90:

Because of the high concentration of African-Americans, Hispanics, and Asians in the nation's most distressed inner-city neighborhoods (in which there may be greater likelihood of exposure to environmental hazards), any sweeping waivers of environmental controls in such areas would directly conflict with the goals of the environmental justice movement.

redevelopment.⁴⁷⁷ Proponents claim that many sites have been addressed successfully in the pioneer state programs.⁴⁷⁸ But most observers conclude that the state statutes are too new for their effectiveness to be measured accurately and that there is still a high degree of uncertainty about the investment climate for developers.⁴⁷⁹ There are a number of unresolved issues in the implementation of voluntary cleanup programs, many of which may hamper the states' ability to fulfill proponents' expectations over the long run.⁴⁸⁰

This part will assess the challenges facing the voluntary cleanup statutes by comparing them to "negotiated compensation" statutes. The negotiated compensation statutes represent a notable effort to overcome "NIMBY-ism" and facilitate the siting of new waste disposal facilities.⁴⁸¹ Scholars at the Massachusetts Institute of Technology (MIT) and Harvard University, recognizing that previous approaches had failed to address NIMBY opposition adequately, created the concept of negotiated compensation. They drafted the Massachusetts negotiated compensation statute, hailed at the time of its enactment in 1980 as a "major advance in siting policy by both industry and envi-

477. See, e.g., NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 4 (stating that at the recent NEPI forum, "not one panelist spoke in favor of the status quo"); Buzbee, *supra* note 26, at 109; Black, *supra* note 42, at 51.

478. In its "Six-Month Progress Report," Pennsylvania's Department of Environmental Protection claims that since the Pennsylvania statute took effect in July 1995, 13 brownfield sites have been remediated, and cleanups are underway at 47 other sites. PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 6-7. Of the 13 completed cleanups, eight had met state-wide health standards, three met background standards, and two met the requirements for "special industrial areas"; none had met the requirements for site-specific cleanups. *Id.* at 7; see also Casserly, *supra* note 26, at 271 (describing the Minnesota program):

Four hundred and twenty two parcels have been examined by developers with the assistance of the VIC program. Of the 222 completed projects, 58 sites were completely cleaned up, 57 required no cleanup, 57 were referred to other programs more appropriate for their cleanup, 26 received off site source determination letters, and 13 received no association determination letters.

The OTA report describes a successful voluntary cleanup under the California program at the former Culver City Kite site, a 4.5-acre property used for manufacturing purposes. The site was cleaned up, and the developer received a certificate of completion from the state. The site, according to the OTA, is "currently being developed as an industrial park . . . expected to provide approximately 100 new jobs." OTA STATE OF THE STATES, *supra* note 20, at 21 (citing DEPARTMENT OF TOXIC SUBSTANCES CONTROL, CALIFORNIA ENVTL. PROTECTION AGENCY, THE VOLUNTARY CLEANUP PROGRAM, May 1995, at 6, and Interview with Javier Hinojosa, Site Mitigation Branch, California Environmental Protection Agency, Department of Toxic Substances Control (June 1, 1995)).

479. See, e.g., NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 12; OTA STATE OF THE STATES, *supra* note 20, at 28.

480. OTA STATE OF THE STATES, *supra* note 20, at 2-3.

481. See Arthur J. Harrington, *The Right to a Decent Burial: Hazardous Waste and Its Regulation in Wisconsin*, 66 MARQ. L. REV. 223 (1983); Bernd Holznagel, *Negotiation and Mediation: The Newest Approach to Hazardous Waste Facility Siting*, 13 B.C. ENVTL. AFF. L. REV. 329 (1986) (discussing the Connecticut, Massachusetts, Rhode Island, and Wisconsin statutes); Michael Wheeler, *Negotiating NIMBYs: Learning from the Failure of the Massachusetts Siting Law*, 11 YALE J. ON REG. 241 (1994) (discussing the failure of the Massachusetts statute); Mary Beth Arnett, Comment, *Down in the Dumps and Wasted: The Need Determination in the Wisconsin Landfill Siting Process*, 1987 WIS. L. REV. 543.

ronmentalists.”⁴⁸² The Massachusetts statute served as a model for other states, such as Wisconsin, that subsequently enacted negotiated compensation statutes.

States now have over a decade of experience with these statutes. Like the voluntary cleanup statutes, the enactment of negotiated compensation statutes was accompanied by heady optimism and a consensus among a variety of stakeholders about the need for a process to foster decision making by developers and communities.⁴⁸³ But the negotiated compensation statutes have had a rather poor record of success in addressing the difficult issues of the siting process,⁴⁸⁴ despite strong arguments that they might have succeeded. An analysis of the similarities between the two types of statutes, and an assessment of the shortcomings of negotiated compensation statutes, offer a framework for examining challenges that lie ahead in the implementation of voluntary cleanup programs. Scholars have articulated criticisms of features of compensation schemes (particularly those of the Massachusetts Hazardous Waste Facility Siting Act) that find parallels in the voluntary cleanup programs. These include the lack of effective public participation, both before the initial decision to site a facility has been made and during the siting process; the chronic problems with the legitimacy of the states’ decision making; the moral hazards inherent in trusting developers’ motives and actions; and the failure to address issues central to the programs’ success. Following a brief introduction to the negotiated compensation statutes, this part will address each of these sets of issues in turn, primarily with reference to the Massachusetts statute.

A. *A Brief Introduction to Negotiated Compensation Statutes*

1. *The Waste Disposal and “NIMBY” Problems*

For the foreseeable future, we will continue to rely on building new facilities to dispose of our waste.⁴⁸⁵ In recent years, it has become increasingly difficult to site solid waste landfills and hazardous waste disposal facilities, due in large part to the “NIMBY syndrome.” People benefit from waste disposal facilities, but no one wants these facilities to be located “in my backyard.” Thus, fierce opposition is

482. Vicki Been, *Compensated Siting Proposals: Is It Time to Pay Attention?*, 21 *FORDHAM URB. L.J.* 787, 811 (1994) [hereinafter Been, *Compensated Siting Proposals*].

483. For a discussion of the theory of the negotiated compensation approach, see Lawrence S. Bacow & James R. Milkey, *Overcoming Local Opposition to Hazardous Waste Facilities: The Massachusetts Approach*, 6 *HARV. ENVTL. L. REV.* 265 (1982).

484. Comprehensive analyses of the successes and failures of the “negotiated compensation” approach are found in Been, *Compensated Siting Proposals*, *supra* note 482, and Wheeler, *supra* note 481.

485. A number of commentators have advocated source reduction, but its full implementation is still many years away. See, e.g., Jerry L. Anderson, *The Environmental Revolution at Twenty-Five*, 26 *RUTGERS L.J.* 395, 424-26 (1995) (calling for economic incentives to reduce waste generation).

likely whenever a developer attempts to site a new disposal facility.⁴⁸⁶ The "negotiated compensation" statutes promised to alleviate America's waste disposal crisis⁴⁸⁷ and the role of "NIMBY-ism" in perpetuating it.

2. *The Principle of Negotiated Compensation*

By the early 1980s, many states required developers to provide compensation to the community that hosted a waste facility.⁴⁸⁸ The innovation of the negotiated compensation approach was to encourage developers and communities to negotiate compensation awards—both their amounts and forms of payment.⁴⁸⁹

The negotiated compensation approach attempts to recast the economics of NIMBY opposition to proposed projects. The conflict over any siting dispute involves diffuse benefits for a large number of people (e.g., customers of a waste disposal facility) at the expense of concentrated costs to the immediately affected community. A facility's opponents are therefore able to organize a group of residents to protest the imposition of the facility on them. There is usually no corresponding group of potential beneficiaries, because individuals may not perceive the gains from supporting the facility.⁴⁹⁰ Negotiated compensation attempts to solve this problem by providing compensation to residents who perceive that a project may harm them. Under this approach, private waste facility developers are required to bargain with communities to establish terms for accepting facilities. There are several types of compensation that a developer of a waste disposal facility may offer a local community: (1) measures to avoid

486. See Been, *Compensated Siting Proposals*, *supra* note 482, at 788-89; Denis J. Brion, *An Essay on LULU, NIMBY, and the Problem of Distributive Justice*, 15 B.C. ENVTL. AFF. L. REV. 437 (1988); Orlando E. Delogu, "NIMBY" Is a National Problem, 35 S.D. L. REV. 198 (1990); Ivan Fong, *Hazardous Waste Facility Siting Through Negotiation*, 6 STAN. ENVTL. L. J. 161 (1986-87); Bradford C. Mank, *The Two-Headed Dragon of Siting and Cleaning Up Hazardous Waste Dumps: Can Economic Incentives or Mediation Slay the Monster?*, 19 B.C. ENVTL. AFF. L. REV. 239 (1991); Bruce J. Parker & John H. Turner, *Overcoming Obstacles to the Siting of Solid Waste Facilities*, 21 N.M. L. REV. 91 (1990); A. Dan Tarlock, *Siting New or Expanded Treatment, Storage, or Disposal Facilities: The Pigs in the Parlors of the 1980s*, 17 NAT. RESOURCES L. 429 (1984); Wheeler, *supra* note 481.

487. Parker & Turner, *supra* note 486 (discussing the magnitude of America's solid waste problem).

488. See, e.g., Been, *Compensated Siting Proposals*, *supra* note 482, at 794 n.46 and statutes cited therein; Rodolfo Mata, *Hazardous Waste Facilities and Environmental Equity: A Proposed Siting Model*, 13 VA. ENVTL. L.J. 375 (1994) (describing compensation programs in states such as Colorado, Connecticut, and Minnesota). In these programs, compensation is often fixed as a lump-sum amount, or as a percentage of the facility's gross receipts or amount of wastes processed. Mata, *supra*.

489. Wheeler, *supra* note 481, at 253. As Professor Wheeler indicates, the "political symbolism" of allowing the host community to bargain freely with the waste developer was intended to represent "a clear departure from regulatory regimes under which the state merely awards damages to a community chosen to host a facility." *Id.*

490. This phenomenon, and the corresponding need for collective action, was described in James E. Krier, *Environmental Watchdogs: Some Lessons from a "Study" Council*, 23 STAN. L. REV. 623, 662-64 (1971).

or reduce a facility's adverse impacts on the community (e.g., installation of a groundwater monitoring system, double liners, and a leachate collection system); (2) measures to reverse or mitigate adverse impacts that occur (e.g., provision of money or equipment to improve fire and police response capabilities in case of an accident); and (3) compensatory benefits (e.g., provision by the developer of tax benefits to the municipality or direct cash payments to individuals).

3. *Features of Negotiated Compensation Statutes*

The negotiated compensation statutes create a process that, as the name implies, involves negotiation between communities and waste facility developers. A developer triggers the negotiation process by contacting the host community itself,⁴⁹¹ or it may contact a state agency that has oversight responsibility for the siting process, often a new agency created in the statute.⁴⁹² The developer declares its intent to site a facility in a host community.⁴⁹³ Then, the commu-

491. In Massachusetts, the process of siting a proposed facility begins when the developer files a "notice of intent" with the responsible state agency. The notice of intent is required to include a description of the facility (including the wastes that would be processed on the site and the techniques that would be used to treat or dispose of them), the developer's prior experience in constructing or operating waste facilities, and the developer's plans for financing the project. MASS. GEN. LAWS ANN. ch. 21D, § 7 (West 1988 & Supp. 1996); see Been, *Compensated Siting Proposals*, *supra* note 482, at 811; Holznagel, *supra* note 481, at 358-59; Wheeler, *supra* note 481, at 264-65. In Wisconsin, the developer's first step is to apply for "local approvals" (e.g., building permits, licenses, and zoning approvals or variances) from the host community. By taking this step, the developer becomes eligible to proceed in the process envisioned by the statute. This is a two-track process that involves the state Department of Natural Resources (DNR) in evaluating the project's feasibility and the host community in negotiating with the developer over compensation and other issues. WIS. STAT. ANN. § 144.44(1m)(b)-(c) (West 1989); see Arnett, *supra* note 481, at 548.

492. Recognizing that existing agencies "lacked the neutrality necessary to facilitate the negotiations" between developers and host communities, the Massachusetts statute created a new state agency, the "Hazardous Waste Facility Site Safety Council" (HWFSSC), to oversee the process. MASS. GEN. LAWS ANN. ch. 21D, § 4 (WESTLAW, MA-STANN96 database, 1996) (repealed 1996); see Holznagel, *supra* note 481, at 358. Other state agencies involved in the process include the Department of Environmental Quality and Engineering, and the Department of Environmental Management (DEM). *Id.* It was the HWFSSC, however, that bears responsibility for evaluating the siting agreement. *Id.* There were 21 members of the HWFSSC: eight state officials (or their designees), seven representatives of interest groups, and six representatives of the general public. In addition, two "temporary" members from the host community may be appointed. MASS. GEN. LAWS ANN. ch. 21D, § 4 (WESTLAW, MA-STANN96 database, 1996) (repealed 1996); see Holznagel, *supra* note 481, at 358.

The Wisconsin statute created the "Waste Facility Siting Board" (WFSB), a state agency with similar responsibilities. The WFSB has seven members: four state officials (or their designees); two town officials, and one county official. WIS. STAT. ANN. § 15.105(12) (1986); see Arnett, *supra* note 481, at 547 n.23.

493. Typically, a developer may either select the host community or ask the state to select one. In Massachusetts, the notice of intent may name a specific proposed site, or describe the type of site that the developer would prefer, and ask the state to select potential candidates. MASS. GEN. LAWS ANN. ch. 21D, § 9 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 812; Holznagel, *supra* note 481, at 360. In the latter case, the state conducts a site suggestion process, accepting suggestions from interested individuals and entities (state agencies, the developer, communities, and other persons). The state may suggest a site if it receives no proposals using this process. MASS. GEN. LAWS ANN. ch. 21D, § 9 (West 1988);

nity and the developer enter into a negotiation process;⁴⁹⁴ in Massachusetts, a preliminary review of the proposal by the state has already taken place.⁴⁹⁵ Representatives of a number of constituencies are ap-

Holznagel, *supra* note 481, at 360. In practice, most developers identified specific sites in which they were interested, bypassing the state. In Wisconsin, the developer is also free to choose the location of the proposed facility. See, e.g., Arnett, *supra* note 481, at 551 (stating that “[w]ithout state or local input, the applicant [in Wisconsin] selects the location of the proposed landfill site and proceeds to obtain the necessary local permits and state operating license”).

494. In Massachusetts, the negotiation process involves the developer and a “local assessment committee” (LAC) from the host community; these parties negotiate the terms (e.g., compensation and protective measures) under which the host community agrees to accept the facility. MASS. GEN. LAWS ANN. ch. 21D, § 5 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 813; Holznagel, *supra* note 481, at 364; Wheeler, *supra* note 481, at 257. In Wisconsin, the negotiation process starts when the host community adopts a “siting resolution” in response to the developer’s request for local approvals. The siting resolution declares the community’s intent to negotiate with the developer. WIS. STAT. ANN. § 144.445(6)(a) (West 1989); see Been, *Compensated Siting Proposals*, *supra* note 482, at 820; Arnett, *supra* note 481, at 548. There is a strong incentive for the host community to adopt a siting resolution: if it does not do so within 120 days after the developer applies for local approvals, the developer may continue in the state’s process for determining the need and feasibility of the project without being subject to any local approvals. WIS. STAT. ANN. § 144.445(6)(f) (West 1989); see Been, *Compensated Siting Proposals*, *supra* note 482, at 820; Arnett, *supra* note 481, at 548.

495. In Massachusetts, the HWFSSC is required to make a threshold assessment whether the notice of intent is “complete.” If the HWFSSC finds this to be the case, it must review the proposed project and make a further finding within 15 days whether the proposal is “feasible and deserving of state assistance.” MASS. GEN. LAWS ANN. ch. 21D, § 7 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 813; Holznagel, *supra* note 481, at 359; Wheeler, *supra* note 481, at 266. This finding indicates only that the proposal is appropriate for further review. Holznagel, *supra* note 481, at 359; Wheeler, *supra* note 481, at 266. Shortly after the enactment of the Massachusetts act, the Massachusetts Supreme Judicial Court held that a HWFSSC decision about whether a developer’s proposal was “feasible and deserving of state assistance” was not subject to judicial review. *Town of Warren v. Hazardous Waste Facility Site Safety Council*, 466 N.E.2d 102 (Mass. 1984). In *Town of Warren*, the HWFSSC had decided that a site in the town of Warren proposed as the location of a hazardous waste facility was “feasible and deserving of state assistance.” The town argued that the Massachusetts Administrative Procedure Act entitled it to judicial review of this decision as a “final decision of [an] agency in an adjudicatory proceeding.” The court disagreed, holding that the HWFSSC’s determination was a preliminary step in a lengthy siting process. *Town of Warren*, 466 N.E.2d at 107-08. For further commentary on *Town of Warren*, see Been, *Compensated Siting Proposals*, *supra* note 482, at 816-17; Note, *The Hazardous Waste Facility Siting Controversy: The Massachusetts Experience*, 12 AM. J.L. & MED. 131 (1986).

There is no analogue in Wisconsin to the Massachusetts “feasible and deserving” screening process. Instead, the DNR conducts a separate determination of the need for the proposed facility; if it determines that the facility is not necessary, the developer may not build it. WIS. STAT. ANN. § 144.44(2) (West 1989); see Arnett, *supra* note 481, at 555.

pointed to a committee⁴⁹⁶ that negotiates on behalf of the community⁴⁹⁷ with the developer.

The developer and host community negotiate on such issues as the facility's design, construction, maintenance, operation, and monitoring procedures.⁴⁹⁸ The committee and developer are usually required to negotiate the amount and type of services the host community will provide the developer and the compensation, services, and benefits that the developer will provide the community.⁴⁹⁹ Some issues, particularly the need for the facility, are expressly precluded from negotiations.⁵⁰⁰ To obtain information to enhance its ability to negotiate, the committee is authorized to receive technical and financial assistance from the state.⁵⁰¹ While the negotiations are ongoing,

496. In Massachusetts, the LAC consists of as many as 13 members, five of whom are defined by the statute: the chief executive officer of the host community, the chair of the local board of health, the chair of the local planning board, the chair of the local conservation commission, and the chief of the fire department. MASS. GEN. LAWS ANN. ch. 21D, § 5 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 813-14; Holznagel, *supra* note 481, at 362. The five statutory members select four additional members, three of whom must be residents of the host community. The chief executive officer may nominate, and the city council (or other municipal legislative body) may approve, up to four additional members.

In Wisconsin, a "local committee" negotiates with the developer. The city council or other municipal governing body of the municipality may appoint four members, no more than two of whom may be elected officials or municipal employees; the host county may appoint two members; and if it is another "affected municipality" as defined in the statute, any other affected community may appoint one member. WIS. STAT. ANN. § 144.445(7)(a) (West 1989); see Been, *Compensated Siting Proposals*, *supra* note 482, at 820; Arnett, *supra* note 481, at 547 & n.25.

497. In Massachusetts, the LAC is authorized to bind the community to the siting agreement. The LAC is charged with representing the "best interests of the host community" by negotiating with the developer "to protect the public health, the public safety, and the environment of the host community, as well as to promote the fiscal welfare of said community through special benefits and compensation." MASS. GEN. LAWS ANN. ch. 21D, § 5 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 813-14; Holznagel, *supra* note 481, at 362. In Wisconsin, the siting agreement becomes binding when, and only when, it is approved by the governing body of the host community. WIS. STAT. ANN. § 144.445(9)(k) (West 1989); see Been, *Compensated Siting Proposals*, *supra* note 482, at 820; Arnett, *supra* note 481, at 548.

498. Massachusetts requires the siting agreement (and, therefore, the negotiation process) to address facility construction and maintenance, design and operation, and monitoring procedures. MASS. GEN. LAWS ANN. ch. 21D, § 12 (West 1988); see Holznagel, *supra* note 481, at 364. In Wisconsin, these issues (along with compensation) may be the subject of negotiation between the committee and the developer, but are not specifically enumerated as issues that must be included in the siting agreement. See, e.g., Arnett, *supra* note 481, at 548 (stating that "[c]ommonly negotiated items include property diminution, municipal costs of negotiation activities, facility appearance and hours of operation, road maintenance, control of noise, dust, debris, odors and rodents, and other neighborhood concerns").

499. Massachusetts requires the siting agreement to describe services to be provided by the developer to the community; compensation to be provided by the developer to the community; services and benefits to be provided by the state agencies to the community, among other components of the agreement. MASS. GEN. LAWS ANN. ch. 21D, § 12 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 814; Holznagel, *supra* note 481, at 364.

500. MASS. GEN. LAWS ANN. ch. 21D, § 12 (West 1988); WIS. STAT. ANN. § 144.445(8)(a)(2) (West 1989); see Holznagel, *supra* note 481, at 364 (describing the Massachusetts approach); Arnett, *supra* note 481, at 544 (describing the Wisconsin approach). The negotiators also cannot agree to relax the environmental, or health and safety standards of state and federal laws. See, e.g., Holznagel, *supra* note 481, at 364 (describing the Massachusetts approach).

501. In Massachusetts, an LAC may obtain a technical assistance and planning grant from the HWFSSC to enable it to assess the project more effectively. In deciding whether to award a

there is a separate state review of environmental issues.⁵⁰² In addition, the community is usually precluded from changing its local laws to block the project.⁵⁰³ The negotiations are intended to culminate in a siting agreement that sets forth the agreement between the parties.⁵⁰⁴ There are time limits for the negotiations; if negotiations reach an impasse, there is recourse to either state-authorized mediation, binding arbitration,⁵⁰⁵ or both, to resolve contentious issues. Finally,

grant, the HWFSSC evaluates the proposal's merit, deciding whether the funds will be expended for purposes clearly related to the siting process, whether the budget for the project is reasonable, and whether the proposed project itself is necessary. MASS. GEN. LAWS ANN. ch. 21D, § 11 (West 1988); see Holznagel, *supra* note 481, at 362; Wheeler, *supra* note 481, at 257.

502. In Massachusetts, the proposed facility is subject to the state's environmental impact process under the "little NEPA" statute, the Massachusetts Environmental Policy Act. MASS. GEN. LAWS ANN. ch. 30, §§ 61-62H (WESTLAW through c. 76 of 1996 2d Annual Sess. of the General Court); see Holznagel, *supra* note 481, at 363; Wheeler, *supra* note 481, at 267. To facilitate this review, the developer prepares a preliminary project impact report, consisting of an environmental impact report and a socioeconomic appendix, that detail the proposed facility's environmental impacts. Preparation of the final environmental impact report begins at this point and concludes only after a siting agreement is in place, with information from the negotiations added to supplement the initial report. MASS. GEN. LAWS ANN. ch. 21D, § 10 (West 1988); see Been, *Compensated Siting Proposals*, *supra* note 482, at 813 n.182; Holznagel, *supra* note 481, at 363. In Wisconsin, environmental review takes place in the DNR's process of determining the feasibility of the proposed project. This process, as noted above, is a decision-making track for the project that parallels the negotiation process. Arnett, *supra* note 481, at 550. Its principal component is the approval of a "feasibility report" submitted to the DNR. WIS. STAT. ANN. § 144.44(2) (West 1989 & Supp. 1995); see Arnett, *supra* note 481, at 550. The feasibility report contains a general summary of the site and surrounding area (including topography, soils, geology, groundwaters, and surface waters), preliminary engineering design concepts, and information about the wastes to be treated, stored, or disposed. This information, together with information obtained at public hearings, enables the DNR to complete its environmental review of the facility. The DNR also approves a plan of operation setting forth operational details for the proposed facility and issues the facility's operating license. *Id.* at 550 & n.43.

503. A developer might need a number of local approvals; for example, approval of a traffic plan, or a building or fire permit. See Holznagel, *supra* note 481, at 367 & n.269. The host community, in Massachusetts, is prohibited from imposing new permit requirements, if they had been unnecessary prior to the effective date of the statute. MASS. GEN. LAWS ANN. ch. 21D, § 16 (West 1988); see Holznagel, *supra* note 481, at 367. The host community is also prohibited from excluding the facility by changing the zoning of the proposed site. MASS. GEN. LAWS ANN. ch. 21D, § 16 (West 1988); Holznagel, *supra* note 481, at 367-68. In Wisconsin, there is a similar prohibition of new local approvals. The host community may require the developer to secure only those local approvals that would have been required at least 15 months before the developer submitted either an "initial site report" or "feasibility report." WIS. STAT. ANN. § 144.445(3)(fm), 144.445(5) (West 1989); see Been, *Compensated Siting Proposals*, *supra* note 482, at 819 n.226.

504. In both Massachusetts and Wisconsin, the terms upon which the host community and developer agree are documented in a written siting agreement. MASS. GEN. LAWS ANN. ch. 21D, § 12 (West 1988); WIS. STAT. ANN. § 144.445(9)(g) (West 1989). See Been, *Compensated Siting Proposals*, *supra* note 482, at 814, 820 (describing the Massachusetts and Wisconsin approaches); Holznagel, *supra* note 481, at 364 (describing the Massachusetts approach); Arnett, *supra* note 481, at 548-49 (describing the Wisconsin approach).

505. In Massachusetts, the developer or the LAC may notify the HWFSSC that an impasse in the negotiations has been reached. The HWFSSC is then empowered to require the parties to submit disputed issues to arbitration. The arbitrator (or panel of arbitrators) creates a siting agreement, taking into account the presentations made by the host community, the developer, and abutting communities. The arbitrator or arbitration panel's determination is binding upon the parties and is subject to limited judicial review. MASS. GEN. LAWS ANN. ch. 21D, § 15 (West 1988); Been, *Compensated Siting Proposals*, *supra* note 482, at 814-15; Holznagel, *supra* note

there are additional approval and enforcement responsibilities for the state after a siting agreement has been reached.⁵⁰⁶

B. *Learning from the Successes and Failures of Negotiated Compensation*

The negotiated compensation statutes have had a decidedly mixed record of success and have been largely unsuccessful in facilitating the siting of hazardous waste facilities. The Massachusetts statute has been completely unsuccessful⁵⁰⁷ and has prompted criticism and legislative proposals for its abolition or change.⁵⁰⁸ One commentator calls the Massachusetts statute a "conspicuous failure . . . [that] became a focal point for community resistance."⁵⁰⁹ Wisconsin, by contrast, has had modest success with its statute. One analysis indicates that by the end of 1993, communities and developers had reached siting agreements at five hazardous waste sites and forty-one solid waste sites in Wisconsin.⁵¹⁰

The siting of a waste disposal facility, unlike certain reuses of brownfields, is guaranteed to impose environmental and other costs on its host community.⁵¹¹ The opposition of local residents to waste disposal facilities and siting of other "locally undesirable land uses" is well-known and documented.⁵¹² Such opposition, however, is unlikely to exist at every brownfield site because residents may welcome certain development activities. Nevertheless, voluntary cleanup programs and negotiated compensation statutes share a number of common attributes, and the lessons learned from the shortcomings of the latter are instructive.

481, at 365; Wheeler, *supra* note 481, at 271-72. Although the Wisconsin statute also provides for arbitration after an impasse occurs, the Wisconsin provision for arbitration is more limited. Topics for arbitration are restricted to eight specific areas: (1) compensation for adverse economic impacts caused by the facility; (2) reimbursement of the local committee's negotiation, mediation, and arbitration costs not exceeding \$2,500; (3) screening and fencing; (4) operational concerns including noise, dust, debris, odors, and hours of operation; (5) traffic flows and patterns; (6) postclosure site use; (7) economically feasible methods for reducing the quantity of waste disposed at the site including recycling; and (8) applicability of local approvals. The WFSB makes arbitration awards, choosing between offers made by the committee and developer. This decision is binding on the committee and developer. See WIS. STAT. ANN. § 144.445(8)(b), (10) (West 1989); Arnett, *supra* note 481, at 549.

506. In Massachusetts, for example, after the siting agreement is entered into, the HWFSSC is required to review and approve it, and the licensing and permitting processes begin. See Wheeler, *supra* note 481, at 267-68.

507. For comprehensive descriptions of the unsuccessful attempts to site hazardous waste facilities in Massachusetts, see Been, *Compensated Siting Proposals*, *supra* note 482, at 815-18 and Wheeler, *supra* note 481, at 259-61.

508. See Been, *Compensated Siting Proposals*, *supra* note 482, at 818; Wheeler, *supra* note 481, at 261-64.

509. Wheeler, *supra* note 481, at 244.

510. Been, *Compensated Siting Proposals*, *supra* note 482, at 821.

511. As Professor Wheeler notes, "The magnitude of such costs may vary markedly with both the type of facility and the setting in which it operates, but there should be little question about the existence of such costs." Wheeler, *supra* note 481, at 248.

512. See, e.g., Been, *Compensated Siting Proposals*, *supra* note 482, at 789.

1. *Promoting Effective Public Participation*

The relative failure of the negotiated compensation statutes may be traced in large part to deficiencies in involving the affected community in the decision-making process. The statutes have been widely perceived as hampering consensual decision making, largely because communities believe their opportunity to participate in the siting process is not meaningful. As a result, they have resisted projects from the outset; as one commentator stated recently, this resistance was entirely rational.⁵¹³

Similarly, states with voluntary cleanup programs fail to encourage direct communication among developers, state regulators, and representatives of the affected community.⁵¹⁴ Although there has been considerable focus on relaxing cleanup standards and providing for liability releases, little attention has been paid to issues related to public participation.⁵¹⁵ Indeed, providing for effective public participation is often viewed as a potential deterrent to redevelopment activities. As experience with the negotiated compensation statutes has shown, this could not be further from the truth. The voluntary cleanup programs are likely to encounter public resistance precisely because they do not provide an opportunity for meaningful public participation.

Negotiated compensation statutes establish mechanisms to deal with a number of fundamental public participation issues. Thus, the comparison between the two types of statutes is not perfect. The premise of negotiated compensation statutes is that unless communication between project developers and communities takes place, few facilities can be sited, and the statutes establish mechanisms to facilitate that communication. In the case of voluntary cleanup statutes, the states operate on the premise that timely and meaningful communication is largely unnecessary, and, as a result, provide weak mechanisms for community involvement. Nevertheless, the primary lesson of experience with negotiated compensation statutes applies equally to voluntary cleanup programs: if communities do not view opportunities for participation as meaningful, even meritorious projects will encounter resistance.

To illustrate this proposition, this subpart examines the public participation provisions of Michigan's voluntary cleanup program, which provide a typical process for community input. The brownfield redevelopment process in Michigan calls for the developer to assess

513. Wheeler, *supra* note 481, at 274.

514. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 32 (noting that the panel on "A New Stakeholder Empowerment" discussed "the failure of many existing statutes and policies to encourage direct communication between the local community and the decision makers").

515. *Id.* at 33 (quoting the statement of Patricia Williams, Legislative Representative, National Wildlife Federation).

contamination at the site and notify the state of proposed cleanup activities.⁵¹⁶ The statute provides for public input at the investigation stage only for sites where the state is spending cleanup funds or where the state decides there is “significant public interest”,⁵¹⁷ neither of these is likely to be the case at most brownfield sites.⁵¹⁸ Public input is required, however, on cleanup plans at sites where developers propose to meet generic statewide standards. Michigan, like a number of other states, provides that the state may develop a number of specific categories of generic cleanup standards, including “commercial,” “industrial,” and “limited” categories such as “limited industrial.”⁵¹⁹ The developer has the option to choose the cleanup category, subject only to state approval.⁵²⁰ Before the state approves a remedial action plan consisting of a cleanup to meet a generic standard, it must, at a minimum, provide for notice and comment,⁵²¹ and hold a public meeting if the municipality or local health department requests one.⁵²² The state also may hold a public meeting if it determines such a meeting is appropriate.⁵²³ With its approval of the remedial action plan, the state must document the comments received and the state’s responses to “significant” concerns.⁵²⁴

516. MICH. COMP. LAWS ANN. § 324.20126(1)(c) (West Supp. 1996) provides that a purchaser of a brownfield site can avoid liability under the state mini-CERCLA statute by performing a “baseline environmental assessment.” See NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 40 (quoting David Fink, Partner, Cooper, Fink and Zausner); Andrew, *supra* note 29, at 29. If this assessment reveals the presence of contamination at the site, the purchaser must perform cleanup activities or face liability under the state’s mini-CERCLA law. MICH. COMP. LAWS ANN. § 324.20107a (West Supp. 1996). The first step in the remedial process would be the submission of a proposed plan for remedial action. See *id.* § 324.20118.

Occasionally, other states use the same terms as negotiated compensation statutes to describe the developer’s request to enter into the cleanup process. In Pennsylvania, the voluntary cleanup process starts with a developer’s “notice of intent” to remediate the site to background standards. PA. STAT. ANN. tit. 35, § 6026.302(e)(1) (West Supp. 1996); see also PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 6 (describing the “Notice of Intent to Remediate” as the “initial notice requirement” of the Pennsylvania program).

517. MICH. COMP. LAWS ANN. § 324.20120d(1) (West Supp. 1996).

518. In Michigan, state funds are only spent on cleanups of sites listed on the state analogue to the NPL. *Id.* §§ 324.20105, 324.20113(2). According to one commentator, this excludes 84% of all sites from eligibility for state cleanup funding. Anderson, *supra* note 109, at 24.

519. MICH. COMP. LAWS ANN. § 324.20120a(1) (West Supp. 1996).

520. *Id.*

521. Before the state approves a remedial action plan based on categorical criteria, it must publish “a notice and brief summary of the proposed remedial action plan,” and “[p]rovide for public review and comment pertinent to documents relating to the proposed remedial action plan, including, if applicable, the feasibility study that outlines alternative remedial action measures considered.” *Id.* § 324.20120d(3)(a)-(b).

522. *Id.* § 324.20120d(3)(c)(i)-(iii) provides that the state must hold a public meeting if any one of the following occur:

- (i) The department determines that there is a significant public interest or that for any other reason a public meeting is appropriate.
- (ii) A city, township, or village in which the facility is located, by a majority vote of its governing body, requests a public meeting.
- (iii) A local health department with jurisdiction in the area in which the facility is located requests a public meeting.

523. *Id.* § 324.20120d(3)(c)(i).

524. *Id.* § 324.20120d(5).

a. The Role of the Affected Community

There is considerable agreement that a voluntary cleanup program's success depends on meaningful input by the surrounding community in decisions on site uses and cleanup activities.⁵²⁵ The community often has concerns about a project's potential for economic development.⁵²⁶ In addition, complex judgments must be made about the acceptable level of risks to health and safety in a community.⁵²⁷ Relaxing cleanup standards at brownfield sites may lower cleanup costs for developers and speed up cleanups, but it also shifts health risks to the neighboring communities.⁵²⁸ Legislatures⁵²⁹ and commentators⁵³⁰ often state explicitly that the voluntary cleanup statutes codify a tradeoff of increased health risk for new jobs and increased tax revenues. To take just one example, some states allow a

525. The recommendation of several panelists at the National Environmental Policy Institute's brownfield policy forum, for example, is to "[e]ncourage early participation with local community stakeholders in establishing the level of cleanup and devising redevelopment plans." NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 10; *see id.* at 34 (quoting the statement of Edwin "Toby" Clark, President, Clean Sites, Inc., that "[s]takeholder empowerment [at brownfield sites] is not a luxury, as many people think, it has to be done to get an effective program going"). Among the commentators advocating early participation by the community are McWilliams, *supra* note 20, at 772, and Solo, *supra* note 23, at 319. *See also* Andrew, *supra* note 29, at 31 (stating that "[t]here is general agreement that community support is necessary to succeed with a voluntary cleanup"); Frisman, *supra* note 383 (citing a statement by Donald S. Strait, Executive Director of the Connecticut Fund for the Environment, that "[c]leanup plans must be prepared in the full light of day, with adequate opportunity for affected citizens to . . . voice their concerns and suggest improvements"); *cf.* Wolf, *U.S. Urban Areas*, *supra* note 474, at 89 (concluding that if "local residents and community organizations are not actively involved in the [empowerment zone-enterprise community] initiative's economic, political, and social goals, the [initiative] is likely to repeat the costly failures of its precursors").

526. OTA STATE OF THE STATES, *supra* note 20, at 9.

527. Of course, the question of "acceptable risk" to the community has wide-ranging moral, political, and scientific dimensions. *See generally* ACCEPTABLE EVIDENCE: SCIENCE AND VALUES IN RISK MANAGEMENT (Deborah G. Mayo & Rachelle D. Hollander eds., 1991) [hereinafter ACCEPTABLE EVIDENCE]; NATIONAL RESEARCH COUNCIL, RISK ASSESSMENT IN THE FEDERAL GOVERNMENT (1983); Sanford E. Gaines, *Science, Politics, and the Management of Toxic Risks Through Law*, 30 JURIMETRICS J. 271 (1990); Howard Latin, *Good Science, Bad Regulation, and Toxic Risk Assessment*, 5 YALE J. ON REG. 89 (1988); Symposium, *Risk Assessment in the Federal Government*, 3 N.Y.U. ENVTL. L.J. 251 (1995).

528. McWilliams, *supra* note 20, at 767. Professor Tondro expresses the challenge as follows:

If we establish a given level of pollution as the maximum acceptable, and have clear and well established procedures for accomplishing a clean-up to those levels, any flexibility benefiting the owner or lender will shift the environmental risk from that person to someone else—to the public, if the DEP pays for the clean-up, to the neighbors if the site does not have to be cleaned up as much as before, or to a future developer if a full clean-up can be postponed.

Tondro, *supra* note 20, at 798-99.

529. Legislative findings frequently specify that a voluntary cleanup program intends to alter the relative risk calculus to consider future land uses. *See, e.g.*, 415 ILL. COMP. STAT. ANN. 5/58(1) (West Supp. 1996) (providing that "[i]t is the intent of this Title . . . [t]o establish a risk-based system of remediation based on protection of human health and the environment relative to present and future uses of the site").

530. *See, e.g.*, Rubinstein, *supra* note 154 (praising the Michigan approach of allowing standards for carcinogens to be set at a health risk of 1 in 100,000 which "trad[es] a slightly greater health risk for the prospect of jobs and taxes").

developer to clean up a site to meet a site-specific standard set at a level of cancer risk higher than a 1 in 1,000,000 lifetime risk.⁵³¹ The opportunity for developers to relax cleanup standards based on the proposed land use is particularly troubling in this respect. Limiting the future of a site to industrial or commercial uses⁵³² may be viewed as turning the community into a “sacrifice zone” where residents are forced to live with industry in their midst for the foreseeable future.⁵³³ Many states attempt to prevent future site conversions to residential uses without additional cleanup activities.⁵³⁴ But a community may want the first cleanup to anticipate a future conversion to residential uses. It may reject the use of engineering or institutional controls as unprotective.⁵³⁵ It may believe a cleanup should anticipate future uses of the site⁵³⁶ or decide that it wants a cleanup to residential levels of contamination because it is difficult to predict what use a site will be put to in the future.⁵³⁷ Moreover, if a cleanup fails, the community will have to shoulder some or all of the additional cleanup costs; in the

531. See McWilliams, *supra* note 20, at 767 (criticizing this aspect of the Ohio scheme).

532. This will occur, for example, in states such as Michigan that specify different cleanup standards for sites to be used for industrial and residential purposes, with the latter being more strict. See, e.g., MICH. COMP. LAWS ANN. § 324.20120a (West Supp. 1996).

533. See, e.g., *Robinson Testimony*, *supra* note 455; McWilliams, *supra* note 20, at 767; Swanston, *supra* note 123, at 568; Casserly, *supra* note 26, at 272 (suggesting that some might view reduced cleanup standards for industrial zones as a “loophole”); Solo, *supra* note 23, at 310 (stating that “[p]roposals which simply call for differentiated standards based on [the] designated use [of a brownfield site] may not provide adequate protection to current and potential residents of urban industrial areas”); Evans, *supra* note 159 (citing the statement in the minority report in Maryland that a “[c]leanup based on background levels would be particularly unacceptable for 79 percent of industrial properties that are located near residential communities,” and should “be allowed only when there is buy-in from the communities that live near and work at the site”).

534. See *supra* note 343 and accompanying text; see also Tondro, *supra* note 20, at 799 (describing the proposal in Connecticut to require additional cleanups when a commercial or industrial site is converted in the future to residential use).

535. The Environmental Defense Fund’s Karen Florini addressed the potential for the use of engineering and institutional controls at Superfund sites:

Engineering controls can fail: fences can fall down, fallible human beings can disregard institutional controls (as, for example, the Niagara School Board disregarded the “do not excavate” notice in the deed by which Hooker Chemical conveyed Love Canal to the township of Niagara). Because excluding people by fencing and perhaps paving sites will generally be far cheaper than actually cleaning them up enough to allow productive use, *Title I of ROSA is a recipe for creation of dead zones*—a result fundamentally at odds with the purposes of Titles III and IX of the same bill, to “return . . . contaminated sites to economically productive or other beneficial uses”

Florini Testimony, *supra* note 448, at 275 & n.14; see also Swanston, *supra* note 123, at 570 (criticizing proposals to use remedies other than permanent remedies).

536. See, e.g., Dinsmore, *supra* note 24, at 18 (stating that “[t]hose addressing the Brownfields problem should plan not only for a site’s initial cleanup and reuse, but also for the subsequent reuses of the site and the buildings on it”).

537. See, e.g., *Florini Testimony*, *supra* note 448, at 275-76 (pointing out that “redevelopment often occurs in ways that may not be easily anticipated. Who would have envisioned housing on the site of the old Denver airport, or rapid redevelopment for residential use of formerly industrial properties in Minneapolis?”); Swanston, *supra* note 123, at 568.

view of some observers, this lends added urgency to making the first cleanup a thorough one.⁵³⁸

The legitimacy of a voluntary cleanup program depends to a great extent on whether the program provides the community a voice in making these judgments.⁵³⁹ This is especially true for minority and lower-income communities where brownfield sites are concentrated. As the environmental justice movement has vividly illustrated, these communities are often excluded from decisions that can profoundly affect their health and quality of life.⁵⁴⁰ Some commentators have advanced the proposition that voluntary cleanup statutes may foster an equitable solution to the urban redevelopment problem, suggesting it is inequitable to leave brownfield sites abandoned.⁵⁴¹ But brownfield redevelopment strategies may perpetuate environmental inequities by

538. See, e.g., *Maryland Proposal*, *supra* note 159.

539. OTA STATE OF THE STATES, *supra* note 20, at 9 (stating that "community groups . . . expect some assurance that remediation will adequately protect their health and the environment"); Swanston, *supra* note 123, at 569; Frisman, *supra* note 383 (citing a statement by Donald S. Strait, Executive Director of the Connecticut Fund for the Environment, that "reducing public input could undermine confidence in the new system," because a community will resist any attempt by the state to "hand over the fate of public resources to private interests without giving the public even a minimal opportunity to [make] comments").

540. The "environmental justice" movement is a rapidly growing coalition that focuses on inequities associated with the current distribution of environmental hazards, particularly the disproportionate imposition of these burdens on minority and lower-income communities. See BUNYON BRYANT & PAUL MOHAI, *RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE* (1992); UNITED CHURCH OF CHRIST COMM'N FOR RACIAL JUSTICE, *TOXIC WASTES AND RACE IN THE UNITED STATES* (1987); Vicki Been, *Locally Undesirable Land Uses in Minority Neighborhoods: Disproportionate Siting or Market Dynamics?*, 103 YALE L.J. 1383 (1994); Vicki Been, *What's Fairness Got to Do with It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001 (1993); Robert D. Bullard, *Environmental Racism and 'Invisible' Communities*, 96 W. VA. L. REV. 1037 (1994); Robert D. Bullard, *The Threat of Environmental Racism*, NAT. RESOURCES & ENV'T, Winter 1993, at 23; Luke W. Cole, *Empowerment as the Means to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOLOGY L.Q. 619 (1992); Robert W. Collin, *Environmental Equity: A Law and Planning Approach to Environmental Racism*, 11 VA. ENVTL. L.J. 495 (1992); James H. Colopy, *The Road Less Traveled: Pursuing Environmental Justice Through Title VI of the Civil Rights Act of 1964*, 13 STAN. ENVTL. L.J. 125 (1994); Rachel D. Godsil, *Remediating Environmental Racism*, 90 MICH. L. REV. 394 (1991); Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1993); Naikang Tsao, *Ameliorating Environmental Racism: A Citizens to Combatting the Discriminatory Siting of Toxic Waste Dumps*, 67 N.Y.U.L. REV. 366 (1992); Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law*, NAT'L L.J., Sept. 21, 1992, at 52.

A common criticism advanced by environmental justice advocates is that the environmental protection laws designed to redress inequities fail to allow for effective participation by affected communities. See, e.g., Anne L. Kelly, *Reinvention in the Name of Environmental Justice: A View from State Government*, 14 VA. ENVTL. L.J. 769 (1995) (stating that "[f]or decades, citizens bearing the brunt of our collective environmental insults have been excluded from environmental decision making affecting their lives"); Solo, *supra* note 23, at 289.

541. Berger et al., *supra* note 23, at 73 (stating that the "[f]ailure to clean these sites perpetuates the existence of health hazards in depressed urban regions"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 45 (stating that "[w]hile . . . decisions [to shun brownfield sites] may be justified as economically efficient, their consequences are equally pernicious to inner-city communities as are the more traditional forms of environmental racism allegedly occurring in siting decisions"); Solo, *supra* note 23, at 289 n.21 (claiming that the existence of brownfields creates "additional unfairness" for inner-city residents).

increasing the high degree of risk that affected communities are already forced to bear.⁵⁴² In lower-income or minority communities, environmental justice advocates who view streamlined and lenient cleanup processes as adding to the community's environmental burden may be on a "collision course" with brownfield redevelopment proponents.⁵⁴³

Thus, communication between the developer and community will often be indispensable to a project's success.⁵⁴⁴ At the same time, there is widespread discomfort on the part of developers about addressing issues related to public participation and environmental justice.⁵⁴⁵ The historical ignorance and distrust of developers and residents for each other fuels tension among stakeholders.⁵⁴⁶ Community involvement can enhance a project's chances of success,⁵⁴⁷ but it creates risks for developers. Soliciting the community's input takes time⁵⁴⁸ and may threaten to delay the project or prompt a developer

542. McWilliams, *supra* note 20, at 758 (stating that "low income, urban communities have a higher rate of exposure to industrial pollutants because they tend to be in close proximity to the industries that emit these toxins"); Swanston, *supra* note 123, at 566; *see also* Andrew, *supra* note 29, at 31 ("A developer's interest is in cleaning up the site just enough so that it can be redeveloped as an industrial facility. Certain public interest groups claim that this approach perpetuates the disproportionate impact of urban industrial pollution on the economically disadvantaged.").

543. *See, e.g.*, Kelly, *supra* note 540, at 770 (stating that "[c]ommunities that demand self-determination will rally against projects imposed on them without their consent"); *id.* at 780 (stating that "[t]he interest groups battling in the area of brownfields are on the verge of a head-on collision"); Solo, *supra* note 23, at 325 (citing a number of environmental justice advocates for the proposition that "[t]he general public may prefer to have property sit idle (and even contaminated) than to have their tax dollars used to profit private individuals who have no obligation to benefit the community"). McWilliams, *supra* note 20, at 707, states:

One group seeks to attract potentially hazardous industries back to urban "brownfields" while the other strives to shut them out. One group seeks to lower cleanup standards in urban areas, a policy that the other denounces as racist. One group seeks to streamline government oversight while the other wants to expand opportunities for public participation.

544. OTA STATE OF THE STATES, *supra* note 20, at 9-10.

545. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 32 (noting that "many public officials and potential investors are uncomfortable addressing this issue"); Tondro, *supra* note 20, at 801 (terming public participation the "wild card" of brownfield policy).

546. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 32; *see id.* at 34-35 (quoting the statement of Edwin "Toby" Clark, President, Clean Sites, Inc., that the stakeholders in brownfield projects "are generally ignorant of each other's needs, are inclined to distrust one another, and may even fear each other").

547. McWilliams, *supra* note 20, at 774; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 65; Frisman, *supra* note 383 (citing the statement of Donald S. Strait, Executive Director, Connecticut Fund for the Environment, that when the public is involved in the cleanup process, "[s]tudies have shown that people comment in only a small percentage of cases, and that their comments are usually constructive and often help speed the process along").

548. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 35. One commentator argues, however, that the time spent on public participation efforts would be outweighed by time saved in the development process. Kelly, *supra* note 540, at 782 (stating that "a receptive, informed, non-resistant community outweighs any losses resulting from a time-sensitive development option").

to abandon the project entirely.⁵⁴⁹ Public ventilation of issues raises the possibility that a debate over the project might scuttle it, and local politicians often prefer to "balance sensitive environmental and economic issues without high profile proceedings."⁵⁵⁰ Developers also may face tougher cleanups than would otherwise be the case. If the community rejects the proposed standard of cleanup as insufficient to protect the health of the site's neighbors, it can threaten to stop a project.⁵⁵¹

b. Public Participation Ex Ante

There are critical issues associated with public participation in making threshold decisions at brownfield sites, such as determining the proposed use of the site and cleanup standard. Should the developer, the community, or the state make these decisions? If, as is frequently the case, the developer controls these decisions, should the community have power to veto or modify them? Suppose a developer proposes to build a manufacturing plant at a site, and residents living immediately nearby reject reindustrialization as "repollution."⁵⁵² If the affected community wants a park or a hospital to be located on a brownfield site, not another polluting industry, should that desire be honored?⁵⁵³ If a developer chooses a cleanup to a statewide health standard for soil and residents reject that choice as not protective

549. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 8 (stating that "[p]rotracted conflicts among [local residents, developers, and regulators] can cause the 'window of opportunity' for a redevelopment project to close"); McWilliams, *supra* note 20, at 773. At the National Environmental Policy Institute's brownfield policy forum, Mary Gade, Director of the Illinois Environmental Protection Agency, was asked "whether investors would still prefer greenfields to brownfields if public participation requirements were too onerous." Her response implied that Illinois does not mandate public participation for this reason. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 24.

550. McWilliams, *supra* note 20, at 775.

551. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 35 (quoting the statement of Edwin "Toby" Clark, President, Clean Sites, Inc., that residents "already have the power to ignore, to delay, to interfere, or to negate"); Kelly, *supra* note 540, at 770 (stating that "communities that demand the right to participate in every level of decision making will resist efforts to streamline or privatize the cleanup process"); McWilliams, *supra* note 20, at 766 (noting that environmental justice advocates can mobilize community opposition to redevelopment projects that rely on inequitable standards for cheaper site remediation); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 65-66.

552. Patricia Williams, the legislative representative for the National Wildlife Federation, recently testified before a municipal forum that not all communities want to participate in cleaning up a brownfield site only to see another type of industry move in. She stated that many affected communities did not want "repollution," but instead want "parks and hospitals on those sites." *Brownfields: Contaminated Site Cleanups Solve Only Some Problems in Urban Areas*, Haz. Waste News, May 29, 1995, available in WESTLAW, 1995 WL 2407245; see also NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 34 (quoting the statement of Patricia Williams that "[y]ou would be amazed at how many people think of re-industrialization as 're-pollution'").

553. The community often may expect to have input in this decision. See OTA STATE OF THE STATES, *supra* note 20, at 9 (stating that "[w]hen considering the prospects for site redevelopment, community members may feel that they have a stake in the type of activity that is planned for the property"); Kelly, *supra* note 540, at 770 (stating that "communities that insist on

enough, should the developer have to perform additional cleanup activities? The timing of community input is an important consideration. Community participation would be merely symbolic if opportunities for public involvement came after significant decisions had already been made.⁵⁵⁴

Michigan largely ignores these questions, joining the vast majority of states that provide for public participation only after a remedial action plan is prepared.⁵⁵⁵ Indeed, no state other than California extends any power to the affected community to affect threshold decisions.⁵⁵⁶ Moreover, certain critical decisions such as the choice of an appropriate cleanup standard are, by design, removed from community scrutiny. Experience with the negotiated compensation statutes suggests that these features of voluntary cleanup programs may foster community resistance to brownfield redevelopment projects.

i. Decisions About Project Siting and Proposed Land Uses

A developer always faces difficult decisions in assessing how much of its plans it should reveal to a community and when it should do so.⁵⁵⁷ If a developer approaches a community with an incomplete proposal, the community may suspect that the developer is withholding information or is contriving to change its plans.⁵⁵⁸ In some cases, the developer may risk losing the project to a rival developer that takes advantage of its groundwork.⁵⁵⁹

Negotiated compensation statutes recognize this by allowing developers to make initial decisions about facility locations. In Massachusetts, for example, the process begins when a developer submits a "notice of intent" with accompanying documentation about a proposed site.⁵⁶⁰ But to communities, decisions to site facilities in their midst "seem[] more like a preemptive strike than an invitation to

redevelopment consistent with their neighborhood vision will demand participation in redevelopment decisions before a project is packaged for public review").

554. See, e.g., NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 34 (citing the statement of Patricia Williams, Legislative Representative, National Wildlife Federation, that "[g]oin[]g in early is particularly important, as many local stakeholders will need time to become familiar with the issues and form their own opinions"); McWilliams, *supra* note 20, at 773-74 (labeling public participation under these terms a "hoax").

555. Indiana, for example, mandates public involvement only in commenting on a proposed voluntary remediation work plan. IND. CODE ANN. § 13-25-5-11(b) (WESTLAW through end of 1996 2d Reg. Sess.); Survey Results, *supra* note 158; cf. Florini *Testimony*, *supra* note 448, at 278 (stating that under the current Superfund law, "citizen participation in the cleanup process is not mandated to occur until after EPA has selected a proposed cleanup plan—well after critical and often irreversible cleanup decisions are made").

556. Rhode Island, as noted later, provides for public input at an early stage; however, its "environmental equity and public participation" process does not mandate involvement other than notice and comment opportunities. See *infra* notes 573-77 and accompanying text.

557. Wheeler, *supra* note 481, at 265.

558. *Id.* (commenting on reasons why waste facility developers approached communities with fully formed proposals).

559. See, e.g., ROBERT CLARK, CORPORATE LAW 757 (1986).

560. Wheeler, *supra* note 481, at 264.

negotiate.”⁵⁶¹ Not surprisingly, many communities react as if they have only two options: to accept projects or resist them.⁵⁶² In Massachusetts, this has prompted communities to spurn the negotiations envisioned by the statute⁵⁶³ and choose instead to resist projects as assaults on self-determination.⁵⁶⁴ One commentator explains that the Massachusetts statute failed to recognize that communities instinctively resist proposals in which they had no input, regardless of their merits.⁵⁶⁵ This defensive posture has been exacerbated by the perception that the state has approved a project: in Massachusetts, for example, when proposals received rapid threshold determinations from the state that they were “feasible and deserving,” communities perceived that the state had already approved them. Communities readily observe that a developer who has secured financing and passed initial reviews has a vested interest in the project.⁵⁶⁶

Thus, communities may react to proposed brownfield redevelopment projects in the same fashion as communities facing the negotiated compensation process did: by resisting them due to a lack of input in threshold decisions.⁵⁶⁷ As noted above, Michigan, like virtually every other state that requires public participation, defers input from the community until the developer formulates a remedial action plan. Therefore, when a community first becomes involved in a brownfield redevelopment project, three critical decisions will already have been made: the decision to develop the site, the proposed use of the site, and the proposed cleanup standard. If the community per-

561. *Id.*

562. Professor Wheeler describes this “defensive posture” as follows:

From the outset, the law cast communities in a defensive posture, forcing them to cope with unfamiliar regulations and to respond to proposals which they neither solicited nor desired. Residents and officials in both Haverhill and Warren first learned that they had been targeted for hazardous waste facilities through press conferences the developers held in Boston.

Id. at 259-60.

563. See Been, *Compensated Siting Proposals*, *supra* note 482, at 815; Wheeler, *supra* note 481, at 261.

564. For example, when officials in Haverhill learned that a developer intended to site a facility there, they promptly sued the state Siting Council. Been, *Compensated Siting Proposals*, *supra* note 482, at 816; Wheeler, *supra* note 481, at 264-65.

565. Wheeler, *supra* note 481, at 264-65; see also Been, *Compensated Siting Proposals*, *supra* note 482, at 791 (stating that “[s]tudies show that risks a community assumes voluntarily are more likely to be accepted than those foisted upon a community”); McWilliams, *supra* note 20, at 766.

566. McWilliams, *supra* note 20, at 773 (discussing this feature of brownfield redevelopment); cf. Wheeler, *supra* note 481, at 266.

567. Several commentators have already suggested this as a possible reaction. See Kelly, *supra* note 540, at 770; McWilliams, *supra* note 20, at 710 (stating that “much of the resistance to [brownfield redevelopment] projects probably stems from a community’s experience that decisions about its future are made by others, leaving residents with only two options: resignation or resistance”).

ceives that it has no opportunity to influence these decisions, projects may be thwarted by local resistance.⁵⁶⁸

Consider the community's reaction to a hypothetical proposal to clean a site in Michigan to meet a generic cleanup standard for "industrial" purposes. The decision to specify the industrial use already has been made by the developer in its proposed remedial action plan with no community input. Limiting the community's freedom to determine the use to which a site will be put invites criticism that uses other than industrial uses have been precluded.⁵⁶⁹ This is particularly true when the cleanup is proposed to be based on a cleanup standard that the state already has approved. The proposed use of the site is tied to a specific cleanup standard, and the community may perceive that by approving the generic cleanup standards, the state has "approved" the proposed level of cleanup. Like the "feasible and deserving" determination in the Massachusetts negotiated compensation statute, the state's threshold approval of a cleanup standard seems likely to provoke a response that the project has received the state's endorsement.⁵⁷⁰ Other states make threshold decisions such as determining that an application is "complete" that may have the same unintended impact.⁵⁷¹

There are two appropriate responses to this concern. First, states such as Michigan should modify their programs to involve communities in the decision-making process before decisions are made to redevelop brownfield sites.⁵⁷² Rhode Island, in a section of its statute entitled "Environmental equity and public participation," attempts to do this.⁵⁷³ The state is required to "develop and implement a process to ensure community involvement throughout the investigation and

568. See Kelly, *supra* note 540, at 770; McWilliams, *supra* note 20, at 757 (stating that "[a]ny attempt to impose redevelopment on . . . a community without community consent . . . is more likely to face inspired opposition").

569. See, e.g., Swanston, *supra* note 123, at 568. It also invites speculation about how sites will be used many years after initial cleanups are completed. Thus, an environmental problem may be transferred to future generations, which forces us to consider the nature of our obligations to them. Been, *Compensated Siting Proposals*, *supra* note 482, at 825; Swanston, *supra* note 123, at 568.

570. Wheeler, *supra* note 481, at 266 n.100 (stating that "[a]lthough this procedure [the 'feasible and deserving' screening] was intended merely as a threshold to be crossed before the agency could award technical assistance to a community, the unfortunate choice of statutory language made the 'feasible and deserving' designation seem like a hasty endorsement of the proposal").

571. See, e.g., IND. CODE ANN. § 13-25-5-4 (WESTLAW through end of 1996 2d Reg. Sess.) (determination of program eligibility); MONT. CODE ANN. § 75-10-736(1) (1995) ("completeness" review); VT. STAT. ANN. § 6615a(e)(2) (Supp. 1996) (determination of eligibility); see also Survey Results, *supra* note 158 (regarding the Indiana and Montana provisions).

572. See, e.g., Kelly, *supra* note 540, at 770; McWilliams, *supra* note 20, at 711 (stating that "I conclude that those most impacted by redevelopment should be involved early in planning redevelopment projects and in promoting neighborhood sites to attract projects consistent with the community's development vision").

573. R.I. GEN. LAWS § 23-19.14-5 (Supp. 1995).

remediation of contaminated sites.”⁵⁷⁴ That process is to be coordinated with a notice and comment opportunity already required for the proposed settlement agreement.⁵⁷⁵ Such notice must be given to nearby residents when a site investigation is proposed and when it is deemed complete.⁵⁷⁶ The state is also required to make public records about the site investigation and cleanup process available to the community.⁵⁷⁷

Although this effort is commendable, it is insufficient to ensure meaningful input by the community in threshold decisions. Neither Michigan nor Rhode Island has structured a decision-making process that gives a community the ability to help define the scope of redevelopment activities early in the planning process;⁵⁷⁸ at present, Rhode Island merely provides another notice opportunity. A better proposal to empower the community would involve the community in the site’s planning process and accord substantial deference to the community’s recommendation regarding the proposed land use.

Second, the states should provide for public review of the initial screening processes, such as decisions on the “completeness” of a developer’s application. This will help alleviate the perception that the state has “approved” a project.

ii. Issues Precluded from Community Scrutiny

Another criticism of the negotiated compensation statutes is that certain decisions are deliberately removed from public scrutiny. The primary decision treated in this fashion is any consideration of the need for the waste facility, which the community often views as the single most important issue to be discussed. Massachusetts and Wisconsin preclude the developer and community from negotiating this issue, on the theory that if the community could open discussion on it, the negotiations would quickly reach a stalemate. This, however, ignores the possibility that the community would find the resulting constraint on the negotiation process to limit its ability to provide meaningful input. Not surprisingly, this was one factor in leading communities to shun the statutory negotiation process.

The analogue in the voluntary cleanup context is the community’s lack of an opportunity to influence the development of a cleanup standard, particularly a statewide generic cleanup standard. Having the ability to help determine the appropriate level of cleanup at a brown-field site has been identified as the single most important issue for

574. *Id.*

575. *Id.* §§ 23-19.14-5, -11.

576. *Id.* § 23-19.14-5(a), (c).

577. *Id.* § 23-19.14-5(b).

578. McWilliams, *supra* note 20, at 772-73, identifies this as a central characteristic of a “community-responsive” voluntary cleanup program; see also Kelly, *supra* note 540, at 770.

many communities.⁵⁷⁹ But the voluntary cleanup statutes substitute critical decisions at the state level for local, site-specific decisions. Consider again the hypothetical developer in Michigan who elects to clean the property to meet a cleanup standard set for the "industrial" category. Limiting the required level of cleanup to that prescribed in a generic standard necessarily precludes a local decision to require a stricter cleanup. This, of course, is the *raison d'être* of the generic standard: its certainty and predictability in preempting local variations in cleanup requirements. Thus, Michigan provides no mechanism for a community to challenge the decision to choose a cleanup to a statewide health standard,⁵⁸⁰ and industrial groups can sway cleanup decisions for years to come by influencing the development of a statewide health standard.⁵⁸¹

Proponents of voluntary cleanup programs tout the generic statewide cleanup standards as streamlining regulatory oversight. However, they have overlooked the potential that a community might resist a brownfield redevelopment project because it rejects cleanup standards set at different levels for different communities.⁵⁸² Cleanup standards set at a statewide basis at levels less than those of CERCLA also invite a characterization that the state is discriminating against a community.⁵⁸³ Again, the appropriate remedy is to modify the statutory approach to involve the community in making the fundamental decision about applicable cleanup standards at a brownfield site.

c. Public Participation Ex Post

A favorable response from the community to a proposed brownfield redevelopment project that involves risks is more likely when legitimate representatives of neighborhood interests have been in-

579. See, e.g., Andrew, *supra* note 29, at 31 (stating that "[t]he primary concern of these public interest groups [and citizens] is the level of contamination allowed to remain after the cleanup is certified as complete."); Kelly, *supra* note 540, at 770; McWilliams, *supra* note 20, at 764.

580. If a community objected to a proposed remedial action plan on this basis, the state would almost certainly be required to respond to this as a "significant" concern. MICH. COMP. LAWS ANN. § 324.20120d(5) (West Supp. 1996). But there is no requirement that the state require a stricter cleanup.

581. See Solo, *supra* note 23, at 317 n.176 (stating that "[s]tates which allow for varying degrees of cleanup and little public participation could more easily use favoritism and politics to determine which plans are 'beneficial' and what standards of cleanup are required").

582. See, e.g., Robinson Testimony, *supra* note 455; Swanston, *supra* note 123, at 568-69.

583. See, e.g., McWilliams, *supra* note 20, at 764; Tondro, *supra* note 20, at 801; Frisman, *supra* note 383 (citing a statement by Donald S. Strait, Executive Director of the Connecticut Fund for the Environment, criticizing lenient cleanup standards for industrial and commercial uses, warning that "the standards could be perceived as founded on a disregard for the health of occupants of these areas, which are often inhabited by lower-income groups and minorities"). Professor Tondro claims, however, that the political pressure to do a "complete" cleanup might be deflected by applying formal, numerical, nondiscriminatory standards. Tondro, *supra* note 20, at 801-02.

volved in a meaningful decision-making process.⁵⁸⁴ Defining the "affected community" and selecting its representatives requires a great deal of care, particularly in view of the environmental justice movement's claims about exclusion from participation in decision-making processes. A system of public participation is problematic if it requires the community to evaluate a project's risks in too short a time frame. In addition, the weight given to community representatives' recommendations is of paramount concern, because public participation is meaningless if a developer is free to disregard community input. Finally, if the disparity in access to technical and financial resources renders it difficult for the community to make an informed decision, that too is problematic.⁵⁸⁵

Each of these have been exposed as weaknesses of ex post decision making under the negotiated compensation statutes, and each finds an analogue in the voluntary cleanup programs' systems of public participation. Again, a discussion of the Michigan statute and others will illustrate the similarities.

i. Threshold Conditions on Participation and Designation of Community Representatives

Michigan's public participation provisions, like those of a number of other states, differ from those of the negotiated compensation statutes in one significant respect: they impose threshold conditions on public participation. The state may hold a public hearing if it decides to do so, but it must hold one if the elected representatives of the community or the local health department request it.⁵⁸⁶ This provision is comparable to Pennsylvania's provision conditioning public

584. See McWilliams, *supra* note 20, at 714; Frisman, *supra* note 383 (citing a statement by Donald S. Strait, Executive Director of the Connecticut Fund for the Environment, that "[n]eighbors are more likely to stall or block approval of a cleanup if they have no formal opportunities to be heard that [sic] if they do").

585. Despite recent efforts by the EPA, urban communities continue to lack basic information about the nature of the hazardous waste problems in their communities. See OFFICE OF POLICY, PLANNING & EVALUATION, U.S. ENVTL. PROTECTION AGENCY AND AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, U.S. DEP'T OF HEALTH & HUMAN SERVS., PUBLIC KNOWLEDGE AND PERCEPTIONS OF CHEMICAL RISKS IN SIX COMMUNITIES: ANALYSIS OF A BASELINE SURVEY 53 (1990) [hereinafter EPA/ATSDR BASELINE SURVEY] (concluding that survey respondents have a "low level of perceived knowledge" about chemical risks in their areas); see also *Florini Testimony*, *supra* note 448, at 278.

586. MICH. COMP. LAWS ANN. § 324.20120d(3)(c)(i)-(iii) (West Supp. 1996); cf. DEL. CODE ANN. tit. 7, § 9112 (WESTLAW through end of 1st Special Sess. of the 138th General Assembly, 1995) (providing for a public hearing "if the Secretary receives a meritorious request . . . from any person on the proposed consent decree and the proposed plan of remedial action"); IND. CODE ANN. § 13-25-5-11(c) (WESTLAW through end of 1996 2d Reg. Sess.) (providing that if the state receives at least one written request during the notice and comment period, a public hearing may be held); MONT. CODE ANN. § 75-10-735(2) (1995) (providing for a hearing upon a written request by "10 or more persons, by a group composed of 10 or more members, or by a local governing body of a city, town or county"); see also Survey Results, *supra* note 158 (regarding the Indiana and Montana provisions).

participation on a request by the affected municipality.⁵⁸⁷ The ultimate condition precedent to public participation, of course, exists in those states with no specific provisions for mandatory community input.

Given the broad consensus that public participation is desirable, the imposition of threshold conditions on participation is wholly unwarranted. This is particularly true of statutes such as Michigan's that place decisions about whether hearings should take place in the hands of local officials. Although some have suggested that brownfield sites pose issues of interest to a city as a whole,⁵⁸⁸ there is no guarantee that a city's elected representatives represent the specific views of the community that abuts a proposed development site.⁵⁸⁹ If the affected community is represented primarily (or, in this case, exclusively) by elected officials, significant questions arise as to whether they would consider fundamental questions about the distributional consequences of a brownfield project.⁵⁹⁰ In this respect and others, states such as Michigan have failed to provide for a genuine forum for articulating the affected community's concerns, because they do not mandate that the developer communicate directly with specific members of the affected community, other than by notice and comment opportunities or public hearings. This is likely to provoke criticism from the communities most directly affected by the projects; Professor Wheeler, for example, cites a definition of a "public hearing" as "an event where the public speaks and the officials don't listen."⁵⁹¹

Moreover, having a voice in remedial decisions does not necessarily give the community a stake in the future of a project. Michigan, like several other states, requires nothing beyond responding to public comments and taking those comments into account.⁵⁹² Without an enforceable right to have their input considered in the process, communities could perceive that their recommendations will be disregarded by the developers and states. There is an asymmetry in the value put on parties' input. Although the states provide scant assurances that

587. PA. STAT. ANN. tit. 35, § 6026.304(o) (West Supp. 1996).

588. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 33 (quoting Charles Graves, Director of Planning, Baltimore, MD).

589. *Id.* (quoting Patricia Williams, Legislative Representative, National Wildlife Federation) ("We cannot afford to presume that everyone in federal, state, or local government is going to empower these communities and make sure that these stakeholders are active participants in the remediation process.")

590. See, e.g., Vicki Been, *Conceptions of Fairness in Proposals for Facility Siting*, 5 MD. J. CONTEMP. LEGAL ISSUES 13 (1993-94) [hereinafter Been, *Conceptions of Fairness*]; cf. *Florini Testimony*, *supra* note 448, at 277 (criticizing § 102 of the Reform of Superfund Act, which would amend CERCLA § 121(f)(1)(D) to provide that "only elected officials—not the community as a whole—get to have their views 'considered' in remedy selection" at Superfund sites).

591. Wheeler, *supra* note 481, at 246 (quoting the definition advanced by the Citizens' Clearinghouse for Hazardous Waste).

592. In Michigan, for example, the state is required to develop a document summarizing significant public comments and how the state addressed them. MICH. COMP. LAWS ANN. § 324.20120d(5)-(6) (West Supp. 1996); cf. statutes cited at note 393 and accompanying text.

the community can have its views considered, the developer is given every reason to believe its decisions will find favor with the state. In addition to informal assurances of lax enforcement, developers enjoy the benefits of provisions such as those deeming their reports approved unless the state acts within a specified time frame.⁵⁹³

For brownfield projects to succeed, the members of the affected community must be partners throughout the entire redevelopment process.⁵⁹⁴ At the National Environmental Policy Institute's recent policy forum, one panelist stated that redevelopment efforts require the willing cooperation of the community, which includes agreement on a "common plan for redevelopment."⁵⁹⁵

ii. *Time Limits and the Perils of Turning to ADR*

Both voluntary cleanup statutes and negotiated compensation statutes impose severe time limits on public participation. Under the Massachusetts negotiated compensation statute, the waste facility developer could request arbitration within sixty days of the commencement of negotiations if an impasse was reached.⁵⁹⁶ Professor Wheeler states that the quick recourse to arbitration in the Massachusetts statute prompted residents in communities selected to host waste facilities to act as if they were taking part in "gun-point negotiation."⁵⁹⁷ If the experience with these statutes is instructive, members of the public who want to have input on the scope of brownfields redevelopment projects may feel as if they have little meaningful input in the decision.

The time limits set on public participation in the voluntary cleanup statutes, particularly the brief notice and comment periods, invite comparison. The period of review of a developer's proposal is often as short as fifteen days.⁵⁹⁸ This is a woefully insufficient period to review the project. There is no guarantee that the members of the community will receive notices that are printed in a newspaper or placed in a library. The required form of notice is likely to be useless

593. See *supra* note 377.

594. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 13 (stating the common recommendation that "[e]xisting reform proposals should enhance the level of community participation by enacting requirements for early public involvement in the cleanup and redevelopment decisions"); Kelly, *supra* note 540, at 770; McWilliams, *supra* note 20, at 766 (calling for "collaborative solutions" to brownfield redevelopment); cf. Wolf, *U.S. Urban Areas*, *supra* note 474, at 90 (calling for early public involvement in decision making in the "empowerment zone-enterprise communities" initiative).

595. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 35 (quoting Edwin "Toby" Clark, President, Clean Sites, Inc.); cf. *Florini Testimony*, *supra* note 448, at 278 (stating that "the adversely affected community members should determine the future use of any Superfund parcel in their community").

596. Wheeler, *supra* note 481, at 271.

597. *Id.* at 276.

598. See, e.g., VT. STAT. ANN. § 6615a(h)(5) (Supp. 1996); cf. statutes cited at note 389 and accompanying text.

to residents whose primary language is not English.⁵⁹⁹ Even those who receive the notice will feel that their options for participation are limited. Because the state solicits comments on the full cleanup plan, the community must, in that short time period, develop sufficient expertise to comment on the proposed use of the site, the choice of cleanup standards, and other issues. Residents in the communities where brownfield sites are located, who typically have not worked with state regulators or developers in the past,⁶⁰⁰ will have little opportunity to alter redevelopment proposals.

In some states, the alternative dispute resolution (ADR) methods are a possible means to provide for additional community input. ADR has some useful applications in resolving environmental disputes.⁶⁰¹ For example, negotiation over the content of federal regulations (regulatory negotiation, or "reg-neg") is increasingly taking place.⁶⁰²

However, experience under the negotiated compensation statutes indicates that it would be counterproductive to turn to ADR in the brownfields context. Again, the availability of arbitration under the state-negotiated compensation statutes provides an analogy. In Professor Wheeler's view, when mediation or arbitration is available under a process with severe time constraints, it resembles "conven-

599. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 34 (citing the statement of Patricia Williams, Legislative Representative, National Wildlife Federation, that "[p]roviding information to the community may require notice in several languages"); Kelly, *supra* note 540, at 783.

600. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 13.

601. Joel B. Eisen, *Alternative Dispute Resolution in American Environmental Conflicts: A Framework for Analysis and Application to Environmental Protection in Israel*, in VI A PRESERVATION OF OUR WORLD IN THE WAKE OF CHANGE 321 (Y. Steinberger ed., 1996). See generally Richard C. Collins, *The Emergence of Environmental Mediation*, 10 VA. ENVTL. L.J. vi-x (1990) (discussing the ADR program at the University of Virginia's Institute for Environmental Negotiation, by its Director); Carol Dinkins, *Shall We Fight or Will We Finish: Environmental Dispute Resolution in a Litigious Society*, 14 ENVTL. L. REP. 10,398 (1984); Frank P. Grad, *Alternative Dispute Resolution in Environmental Law*, 14 COLUM. J. ENVTL. L. 157 (1989); Nancy Kubasek & Gary Silverman, *Environmental Mediation*, 26 AM. BUS. L.J. 553 (1988); Charlene Stukenborg, *The Proper Role of Alternative Dispute Resolution (ADR) in Environmental Conflicts*, 19 DAYTON L. REV. 1305 (1994).

602. Regulatory negotiation, or "reg-neg," seeks to create agreement on potentially divisive government rules and regulations before they are issued and thus preempt unnecessary or protracted litigation. See Philip Harter, *Negotiating Regulations: A Cure for Malaise*, 71 GEO. L.J. 1 (1982); Lawrence Susskind & Gerard McMahon, *The Theory and Practice of Negotiated Rulemaking*, 3 YALE J. ON REG. 133 (1985). The Negotiated Rulemaking Act of 1990, 5 U.S.C. §§ 583-590 (1994), has been the catalyst for increased reg-neg activity by the EPA. See, e.g., Chris Kirtz, *Regulatory Negotiation: The New Way to Develop Regulations?*, ENVTL. PERMITTING, Summer 1992, at 269 (article by the head of the EPA's reg-neg project, describing the EPA's successes and failures in reg-neg implementation). Vice President Al Gore's "National Performance Review" recently recommended that federal agencies put added emphasis on reg-neg. OFFICE OF THE VICE PRESIDENT, THE NATIONAL PERFORMANCE REVIEW, CREATING A GOVERNMENT THAT WORKS BETTER & COSTS LESS (1993); OFFICE OF THE VICE PRESIDENT, ACCOMPANYING REPORT OF THE NATIONAL PERFORMANCE REVIEW: IMPROVING REGULATORY SYSTEMS (1993). But see Susan Rose-Ackerman, *Consensus Versus Incentives: A Skeptical Look at Regulatory Negotiation*, 43 DUKE L.J. 1206 (1994) (criticizing the use of reg-neg).

tional collective bargaining in which a neutral party is called in to avert a strike."⁶⁰³ As Professor Wheeler notes, "[T]he collective bargaining model offers a poor analogy to siting decisions," because third-party neutrals, developers, and communities have no shared history from which to draw guidance.⁶⁰⁴ Moreover, a substantial number of commentators criticize ADR processes as reducing the influence of disadvantaged communities.⁶⁰⁵

Professor Wheeler describes the arbitration provision of the Massachusetts statute as asymmetrical in its treatment of developers and communities.⁶⁰⁶ A community might perceive that it enjoyed substantial leverage with a developer, because it could proceed to arbitration if it was offered too little compensation, but it would have no recourse if the arbitrator rejected the community's position; it would "have to swallow the result."⁶⁰⁷ On the other hand, the developer always had an alternative to accepting an unfavorable decision: it could decide not to build the facility if it did not approve of an arbitrator's award.⁶⁰⁸ In practice under the voluntary cleanup statutes, the same is likely to be true: developers can walk away from the table if their proposals are not accepted, whereas communities cannot appeal unfavorable results. Given this and other limitations of ADR, the states should not rely on it in brownfield cleanups.

d. Addressing Disparities in Technical and Financial Resources

Finally, if the disparity in access to technical and financial resources renders it difficult for the community to make an informed decision, that, too, is problematic. Given the wide range of proposed brownfield redevelopment projects, and the complex judgments that the community is being asked to make, it is reasonable to ask whether the affected community has sufficient information to evaluate the projects. Douglas McWilliams, for example, argues that "[b]ecause the pathways of risk exposure vary greatly from industry to industry, the community needs reliable and adequate information about the particular facility proposed in order to assess the increased risk it is being asked to accept as compared to the benefits the facility offers."⁶⁰⁹ Moreover, little empirical evidence exists on how redevelop-

603. Wheeler, *supra* note 481, at 270.

604. *Id.*

605. See, e.g., Richard Delgado, et al., *Fairness and Formality: Minimizing the Risks of Prejudice in ADR*, 1985 WIS. L. REV. 1359; Trina Grillo, *The Mediation Alternative: Process Dangers for Women*, 100 YALE L.J. 1545 (1991).

606. Wheeler, *supra* note 481, at 272.

607. *Id.*

608. *Id.*

609. McWilliams, *supra* note 20, at 723; see also Kelly, *supra* note 540, at 777 (stating that "it is important to provide communities with the technical assistance that will enable them to know

ment projects have worked, so communities may find it difficult to learn from the experience of other communities.⁶¹⁰

The states that have allocated substantial sums to developers to facilitate cleanups⁶¹¹ provide no funding for communities to perform independent health and safety analyses, or even to retain their own consultants to review developers' remedial action plans and site investigations. The states should provide technical and financial resources to the community to assist it in performing these functions.⁶¹² Professor Wheeler cautions that in the negotiated compensation context, communities used these grants to hire experts who would generate studies intended to defeat projects.⁶¹³ That, however, is not a reason to deny communities meaningful rights to assistance under the voluntary cleanup statutes.

2. *Proposals for Adequate Community Input*

For the reasons noted above, states such as Michigan have failed to provide for an enforceable right to effective participation by those members of the community most directly affected by decisions being made in voluntary cleanup programs. Without such a right, notice and comment opportunities and public hearings are essentially meaningless.⁶¹⁴ A number of different approaches have been proposed for ensuring the community's input. These include the "community impact statement" approach, the creation of nonprofit organizations to perform cleanups, and the "community working group" concept.

a. The Community Impact Statement

One possible means of soliciting additional community input in brownfield redevelopment projects is to allow the community to prepare a statement of a project's environmental impacts. This "community impact statement" (CIS) would be similar in purpose to the environmental impact statement of the National Environmental Policy Act (NEPA) and its state analogues.⁶¹⁵ That is, it would seek to force

as much as possible, and as much as necessary about the complex regulatory provisions and processes that are intrinsic to environmental law and policy").

610. Anecdotal evidence of brownfield "success stories" offers some useful information (see, e.g., *COMING CLEAN*, *supra* note 24, at 117-37), but more targeted information will be necessary for communities grappling with the difficult issues addressed in specific projects.

611. See *supra* notes 395-406 and accompanying text.

612. This assistance could take the form of "Technical Assistance Grants," similar to those given by Massachusetts to qualifying groups of citizens. See MASS. REGS. CODE tit. 310, §§ 40.1451-.1453 (WESTLAW through Register No. 794); Kelly, *supra* note 540, at 777-78.

613. Wheeler, *supra* note 481, at 268-69.

614. McWilliams, *supra* note 20, at 772; cf. *Florini Testimony*, *supra* note 448, at 278 (criticizing public participation provisions of CERCLA on similar grounds).

615. 42 U.S.C. §§ 4321-4370d (1994); see generally Dinah Bear, *The National Environmental Policy Act: Its Origins and Evolutions*, NAT. RESOURCES & ENV'T, Fall 1995, at 3. About 26 states have "little NEPA" statutes. Bear, *supra*, at 71; see, e.g., California Environmental Quality Act, CAL. PUB. RES. CODE §§ 21000-21177 (West 1996). NEPA requires that an environmen-

state regulators and developers to consider environmental impacts of their project decisions, such as the community's perception of added health risk stemming from the proposed project. The CIS idea has already been proposed in environmental justice legislation advanced in Congress,⁶¹⁶ where, in Professor Been's view, it attempts to reflect a "treatment as equals" notion of fairness by trying "to bring the concern shown to poor and minority communities up to par with that already shown to wealthier and white communities."⁶¹⁷

Environmental impact statements, however, have proven to be largely unhelpful in changing agency decisions. As Professor Been and a number of others have indicated, experience to date with NEPA and the state "little NEPAs" engenders "great dissatisfaction with the impact statement as a tool for 'making bureaucracies think.'"⁶¹⁸ A community impact statement would therefore be unsuccessful in prompting regulators and developers to consider the consequences of their actions and act accordingly. Another problem is that impact statements create only a procedural mandate and confer no rights of review of their substance.⁶¹⁹ However, legislation creating the obligation to allow the community to prepare a CIS, unlike NEPA and the state "little NEPAs," could feature a substantive component. A resident of an affected community, for example, could be given an enforceable right to challenge decisions such as a state's approval of a remedial action plan over the community's objection. In light of the prevailing interpretation of NEPA, however, states would almost certainly not follow this course. For these reasons, the CIS appears unlikely to promote effective community involvement.

b. Creating Nonprofit Organizations

In a number of communities, newly created nonprofit organizations have become "a popular structure for facilitating the remedia-

tial impact statement (EIS) be prepared for "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment." NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C); *see also* Bear, *supra*, at 6.

616. Been, *Conceptions of Fairness*, *supra* note 590, at 22.

617. *Id.*

618. *Id.*; *see also* Lynton K. Caldwell, *A Constitutional Law for the Environment: 20 Years with NEPA Indicates the Need*, 31 ENV'T 6 (1989) (article by one of NEPA's authors calling for an environmental protection amendment to the Constitution to remedy NEPA's shortcomings).

619. The Supreme Court has constrained the interpretation of NEPA to a procedural mandate. In *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 558 (1978), the Court concluded that "NEPA does set forth significant substantive goals for the Nation, but its mandate to the agencies is essentially procedural." *See also* Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) (holding that NEPA is procedural and not substantive); Bear, *supra* note 615, at 5. As Professor Rodgers observes, "Some observers believe the procedural nature of the endeavor robs it of consequence and reduces it to a paper-pushing formality." RODGERS, *supra* note 76, § 1.4, at 58.

tion and rehabilitation of contaminated sites.”⁶²⁰ For example, Bartsch and his coauthors describe the efforts of the “Rejuvenate Davenport” group in Davenport, Iowa, to reclaim and reuse an abandoned manufacturing plant, as a “model of broad-based community involvement in reuse projects.”⁶²¹ There is no evidence, however, to indicate that these organizations would be more effective than other entities at representing residents of the community.⁶²²

c. The Community Working Group Concept

Deficiencies in the public participation provisions of the voluntary cleanup statutes might be alleviated by statutory amendments calling for the establishment of “Community Working Groups” (CWG) similar to those provided for in H.R. 3800, the CERCLA reform proposal that failed to be enacted at the end of the 103d Congress.⁶²³ A CWG could be formed either when a state deemed it necessary⁶²⁴ or when a sufficient number of citizens requested the state to do so.⁶²⁵ In order to facilitate community involvement, the state would be required to provide sufficient notice to the community by posting notices in the area near the site,⁶²⁶ notifying residents by direct mail, and, in some communities, providing doorstep notice of program activities. Once a CWG is formed, its responsibilities, as in the Superfund context, would be to provide input on actions taken at all stages of the voluntary cleanup process, including, for example, the designation of a cleanup standard. Although it is unlikely that a CWG would reach a consensus about each step in the remedial process, it would enable a community to articulate common concerns about brownfield projects throughout the decision-making process.⁶²⁷ This would meet the environmental justice advocates’ desire to allow the community to take part in fundamental decisions about its future.⁶²⁸

620. McWilliams, *supra* note 20, at 775; *see, e.g.*, COMING CLEAN, *supra* note 24, at 131-34 (describing the efforts of the “Williams Economic Reuse Advisory Board” in overseeing the redevelopment of the Williams Air Force Base in Mesa, Arizona).

621. Charles Bartsch et al., REVIVAL OF CONTAMINATED INDUSTRIAL SITES: CASE STUDIES 5 (1992).

622. McWilliams, *supra* note 20, at 779.

623. H.R. 3800, 103d Cong., 2d Sess. § 102 (1994); *see also* McWilliams, *supra* note 20, at 774 (describing the administration’s proposal); Solo, *supra* note 23, at 316 n.160.

624. The state, for example, might provide that it could establish a CWG on its own initiative if it deemed it to be “in the public interest” to do so. *Cf.* MICH. COMP. LAWS ANN. § 324.20120d(3)(c)(i) (West Supp. 1996) (providing that the state may hold a public meeting on a remedial action plan when it deems that “there is a significant public interest”).

625. H.R. 3800 directed the establishment of a CWG when either the President determines such a group will be helpful or 50 citizens, or at least 20% of the population of the locality in which an NPL site is located, requested it. H.R. 3800, 103d Cong., 2d Sess. § 102 (1994). This threshold would be an appropriate one for brownfield sites as well, as it would ensure the formation of a CWG when there is a high level of community interest in the proposed project.

626. *See* CAL. HEALTH & SAFETY CODE § 25398.6(i)(1) (West Supp. 1996) (requiring this form of notice for public meetings on approval of remedial action plans).

627. McWilliams, *supra* note 20, at 775.

628. *Id.*

The CWG would be composed primarily of local residents near the proposed site, because their health is directly at risk.⁶²⁹ This would avoid the flaw inherent in provisions of the negotiated compensation statutes that specified the composition of local committees. The CWG's representatives would be local residents and others most directly affected by the project, not elected officials.⁶³⁰ Provisions establishing the CWGs would require the states to impose a mandatory obligation to foster public participation throughout the voluntary cleanup process, at each of the important stages of the process from project planning through to completion of the cleanup.⁶³¹ This would require the state to allow for the formation of a CWG immediately upon receipt of a notice of intent by the developer to enter into the voluntary cleanup program. Pennsylvania's statute already allows for "the formation of a community-based group which is used to solicit suggestions and comments,"⁶³² but this is neither a mandatory obligation nor required from the commencement of the project.

Existing statutes should be amended to require consultation with the CWG in addition to existing notice and comment and public hearing opportunities at each of the following points in the process: (1) determining the planned use of the site; (2) approving the developer's application for participation in the program; (3) performing and approving a Phase I and/or Phase II site investigation; (4) approving the cleanup standard; (5) approving the remedial action plan; and (6) making a decision on extending liability protection to the developer.⁶³³ In addition, the CWG would have to be consulted any time a state official with authority to make significant decisions meets with anyone else who would be affected by the decision, and the subject of the meeting involves identification, investigation, or remedial activities at the site.⁶³⁴

To provide an obligation to consider the CWG's views, the states should amend their statutes to follow the "substantial weight" standard of the 1994 Superfund proposal, a consensus bill that nevertheless failed to be enacted into law. That bill directed the EPA to give

629. H.R. 3800 provided that local residents would make up no less than 50% of a CWG. H.R. 3800, 103d Cong., 2d Sess. § 102 (1994); see also *Florini Testimony*, *supra* note 448, at 278 (criticizing provisions of the Reform of Superfund Act that would allow fewer than 50% of a "Community Assistance Group," the citizens' group formed for purposes of informing Superfund decisions, to be local residents).

630. McWilliams, *supra* note 20, at 774 (observing that direct representation is necessary for community input to avoid bypassing of community input); cf. H.R. 3800, 103d Cong., 2d Sess. § 102 (1994).

631. Cf. *Florini Testimony*, *supra* note 448, at 278 (calling for changes to the Reform of Superfund Act to "confer on EPA a nondiscretionary obligation to foster community participation in the process at all significant points in the cleanup process").

632. PA. STAT. ANN. tit. 35, § 6026.304(o) (West Supp. 1996).

633. Cf. *Florini Testimony*, *supra* note 448, at 278 (calling for community participation at similar points in the Superfund cleanup process).

634. *Id.* (calling for this provision in the Superfund cleanup process).

substantial weight in remedial decisions to a consensus recommendation of a CWG, or, absent a consensus, to the views of the affected community.⁶³⁵ This would give the community influence in helping make decisions such as one regarding the proposed use of the site.⁶³⁶ A community that felt aggrieved by a state's decisions would have an enforceable right to challenge any or all of the state's actions at an individual brownfield site.

The community also should be given an enforceable right to make the most fundamental decision at a brownfield site: the determination of an applicable cleanup standard. To facilitate this, the states should amend their statutes to reverse the existing hierarchy of cleanup standards. Unless a community indicates that it is willing to accept a lower level of cleanup, the cleanup at every brownfield site should be presumed to meet residential standards.⁶³⁷ This is the only approach that guarantees meaningful community involvement in cleanup standard setting. Ohio's approach—allowing individuals to comment on statewide rules setting cleanup standards while precluding involvement by an affected community in setting the cleanup standard for an action affecting its health and welfare—is especially egregious in this respect.

If the states will not take this action, another intriguing option is available to communities. They could conceivably use their zoning power to displace a generic cleanup standard. Unlike the negotiated compensation statutes, which prevent localities from adopting zoning provisions that would defeat proposed facilities,⁶³⁸ voluntary cleanup statutes contain no preemption provisions. In Michigan, for example, it does appear that redevelopment foes could achieve their goal through the zoning process. Michigan imposes an affirmative obligation to satisfy zoning requirements, because cleanups based on any

635. H.R. 4916, 103d Cong., 2d Sess. § 502 (1994) (proposing to amend CERCLA § 121(b)(2)(B)).

636. See, e.g., *Florini Testimony*, *supra* note 448, at 278.

637. See, e.g., *id.* at 276 (testifying that Superfund cleanups “should routinely seek to make sites available for unrestricted (residential) land use, unless the proponent of a less-stringent cleanup can demonstrate that such a use is implausible”). It has been argued elsewhere that the appropriate response to a community's resistance to a more lenient cleanup standard is negotiation:

For redevelopment to occur, the community and the developer, with the government's approval, must reach a point of equilibrium where the community is comfortable with the standard and the developer is willing and able to pay for the remediation. Assuming that the government considers the agreement an appropriate risk, then the developer's liability should be capped at that level of equilibrium.

Kelly, *supra* note 540, at 781; see also McWilliams, *supra* note 20, at 767. However, given the potential inequities of generic cleanup standards, and the disparity in technical and financial resources between developers and communities, any negotiations should start with a presumption that differential cleanup standards are inapplicable. My proposal would give the initial entitlement to the community, which it could bargain away, but only if it so chose. Cf. McWilliams, *supra* note 20, at 767 (excluding the application of tiered cleanup standards from collaborative solutions).

638. See *supra* note 503 and accompanying text.

land use other than residential are made expressly contingent on existence or adoption of appropriate zoning for the site.⁶³⁹

3. *Problems Related to State Decision Making*

The rise of the voluntary cleanup statutes is consistent with the trend of devolving responsibility for environmental protection to the states. The states are bearing an increased share of the environmental protection burden, and some states are moving forward aggressively with environmental protection programs. However, there is reason for concern. The federal environmental laws were developed in large part because the states' environmental protection efforts were viewed as dismal failures,⁶⁴⁰ and concern about state regulatory efforts has not abated.⁶⁴¹ States may be inclined to approve less stringent cleanups at brownfield sites because they want to attract businesses and the tax revenues and jobs they provide.⁶⁴² State involvement in both the negotiated compensation and voluntary cleanup contexts invites two specific forms of criticism: regulators are captured by pro-development interests⁶⁴³ or are otherwise unaccountable to the public.

a. Capture of State Regulators

Developers have strong incentives to participate politically in the states' decisions influencing waste facility siting or brownfield sites.⁶⁴⁴ The experience with the negotiated compensation statutes has evoked the frequent criticism that state regulators' decisions are swayed by the predominant influence of industrial interests. For example, state siting councils, established to make fundamental decisions in the waste facility siting process, were criticized for a lack of neutrality.⁶⁴⁵ In the voluntary cleanup context, the various regulatory bodies estab-

639. See, e.g., MICH. COMP. LAWS ANN. § 324.20120a(6) (West Supp. 1996) (providing that the state may not apply remedial action plans specifying cleanups for any use other than residential use without documentation that "the current zoning of the property is consistent with the categorical criteria being proposed, or that the governing zoning authority intends to change the zoning designation so that the proposed criteria are consistent with the new zoning designation, or the current property use is a legal nonconforming use"). The state may not approve a remedial action plan that depends on a zoning change, "until a final determination of that zoning change has been made by the local unit of government." *Id.*

640. NAPA REPORT, *supra* note 3, at 14; Buzbee, *supra* note 26, at 111; James R.L. Jones, *Beyond the Beltway Buzzwords*, ENVTL. F., Sept./Oct. 1995, at 35. The most frequent criticism of the states' efforts is that those states interested in business projects will compete with other states to attract the projects by relaxing environmental standards and spurring a "race to the bottom." See Buzbee, *supra* note 26, at 11.

641. See generally Lynda L. Butler, *State Environmental Programs: A Study in Political Influence and Regulatory Failure*, 31 WM. & MARY L. REV. 823 (1990) (discussing the limitations of state environmental protection efforts); Anderson, *supra* note 109, at 417-22; Buzbee, *supra* note 26, at 111.

642. Buzbee, *supra* note 26, at 114-15.

643. Butler, *supra* note 641, discusses this limitation of state environmental programs.

644. Buzbee, *supra* note 26, at 113.

645. Wheeler, *supra* note 481, at 277; cf. Krier, *supra* note 490, at 665 (suggesting that a lesson learned from the actions of California's Environmental Quality Study Council is that "en-

lished to streamline the regulatory process feature little or no public representation. These include, for example, the bodies constituted to establish statewide health standards, as in Pennsylvania, where there will be few public representatives on the standard-setting board.⁶⁴⁶ Ohio also empowers a "Property Revitalization Board," composed of state bureaucrats, without representation from the public, to influence whether a variance should be granted from a specific cleanup standard at a given site.⁶⁴⁷ Experience from the negotiated compensation context suggests that unless there is more significant public representation on these boards to guarantee neutrality, they will be criticized as captured by the interests they purportedly regulate.⁶⁴⁸ A board such as Ohio's Property Revitalization Board appears to be a potential "regulatory 'backroom' for cutting deals that shift risk to the excluded community,"⁶⁴⁹ because it does not require any representation from affected communities. The states should take action to expand public representation in these bodies that will be making critical decisions in the voluntary cleanup programs.⁶⁵⁰

b. The Lack of Meaningful State Oversight

Besides the prospect of regulatory capture, there are other reasons to be suspicious of the likely quality of state regulatory decision making in voluntary cleanup programs. By definition, the developer's compliance with the voluntary cleanup process earns it reduced oversight by state regulators, with streamlined regulation and limited likelihood of enforcement actions. In imposing time limits on various stages of the proceedings, the states are embodying the spirit of what Gregg Easterbrook has called "ecorealism": the preference for rapid, "reasonable" action over the "quest of hypothetical perfection" in siting decisions or cleanups.⁶⁵¹ In many cases, the state's role in the cleanup at a brownfield site will be merely to confirm the soundness of what a developer has already done.⁶⁵² In some cases, decisions will be devolved even further to private individuals not responsible to the

environmental interests, as a general rule, will be underrepresented before legislative bodies, administrative agencies, and courts").

646. See PA. STAT. ANN. tit. 35, 6026.105(b) (West Supp. 1996).

647. The "property revitalization board" consists of "the directors of commerce, development, environmental protection, health, industrial relations, natural resources, and taxation or their designees." OHIO REV. CODE ANN. § 3746.08 (Anderson 1995); see also McWilliams, *supra* note 20, at 771 (describing the proposal embodied in the statute); Michel, *supra* note 20, at 463.

648. Wheeler, *supra* note 481, at 277.

649. McWilliams, *supra* note 20, at 771.

650. Kelly, *supra* note 540, at 782 (stating that "[p]articipation at this [state] level is central to the environmental justice movement and cannot be compromised in such redevelopment efforts").

651. EASTERBROOK, *supra* note 24, at 611.

652. This will be the case, for example, in states such as Connecticut, Illinois, Massachusetts, North Carolina, Ohio, Pennsylvania, and Washington (in the Independent Remedial Action Program) that confine their oversight role to approval of the reports submitted by the developer.

public.⁶⁵³ A number of states, most notably Connecticut, Illinois, Massachusetts, North Carolina, and Ohio, contemplate that regulators will approve the activities of developers and their licensed environmental professionals without performing independent investigations. Given the lack of state resources to devote to oversight, the states will often—and intend to—find themselves rubber-stamping developers' decisions. For example, when a state is determining whether a cleanup is complete (e.g., for purposes of issuing a certificate of completion), it will often rely on an after-the-fact analysis of a licensed professional's assessment that the cleanup has been satisfactorily completed.⁶⁵⁴ Ohio has indicated that its goal is to audit only twenty-five percent of all cleanups.⁶⁵⁵

This has the potential to undermine the public's confidence in state oversight abilities. Although purportedly devoted to serving the public interest, state regulators are making decisions that have the appearance of creating a deregulated climate for business interests.⁶⁵⁶ A developer can obtain the state's imprimatur regarding the finality of a cleanup, complete with liability protection, while leaving the impression that contamination remains unabated.⁶⁵⁷ Similar situations have arisen in the negotiated compensation context. Professor Wheeler states that the neutrality of the Massachusetts siting board was undermined in the public eye by the board's involvement in such decisions as certifying a project's feasibility.⁶⁵⁸ The states should guard the neutrality of their decision making by taking a more proactive role in overseeing the cleanups at brownfield sites and by rejecting approaches such as Ohio's assignment of responsibility to the private sector. This might take the form, for example, of adopting approaches such as those of Indiana, Vermont, and Wisconsin, with comprehen-

See, e.g., PA. STAT. ANN. tit. 35, §§ 6026.302-304 (West Supp. 1996); see *supra* notes 362-68 and accompanying text.

653. See, e.g., McWilliams, *supra* note 20, at 751 (stating that under Ohio's statute, "removing the responsibility for assessing public risk one step further from an accountable public servant could make it more difficult for community activists to obtain full disclosure regarding contamination at a site").

654. See, e.g., 415 ILL. COMP. STAT. ANN. 5/58.7(e)(4) (West Supp. 1996) (considering approval of the "Remedial Action Completion Report").

655. *Ohio Voluntary Action Program*, *supra* note 156, at 4 (stating that "Ohio EPA will audit at least 25 percent of the properties which have been cleaned up in the Voluntary Action Program to make sure that cleanup standards are met"); see also Andrew, *supra* note 29, at 29.

656. See *Dunlop Testimony*, *supra* note 123, at 237 (testifying that "[t]he cleanup process will be streamlined, the regulatory approach is non-confrontational and emphasis is placed on achieving compliance—not heavy-handed enforcement actions"); McWilliams, *supra* note 20, at 772. Perhaps the most obvious manifestation of this new attitude is the large logo on Ohio's Internet (World Wide Web) site, which displays the word "SUE" with the international sign for "no" prominently displayed across it. *Ohio Voluntary Action Program*, *supra* note 156, at 1.

657. See, e.g., Andrew, *supra* note 29, at 31.

658. Wheeler, *supra* note 481, at 277.

sive state involvement and oversight in the redevelopment and cleanup process.⁶⁵⁹

4. Moral Hazards

There are serious moral questions raised by programs that have as their express goal rewarding voluntary participation by developers, as is the case under both types of statutes.

a. Promoting Effective Risk Communication

Both types of statute make the fundamental assumption that requiring developers to communicate environmental risks accurately to the community would frustrate the goals of the statute. Thus, in neither case is the developer forced to fully disclose environmental risks to the community. The risk communication provisions of the voluntary cleanup statutes are thin, typically requiring only that the developer notify the public of its proposed remediation activities.⁶⁶⁰ Given the lack of knowledge in most communities about basic risk concepts,⁶⁶¹ let alone the ability to understand complicated information necessary to make a judgment on a brownfield redevelopment project, this turns effective decision making on its head.⁶⁶² Communities' abilities to judge project risks require a careful presentation of evidence about risks,⁶⁶³ not ineffective risk communication. This is particularly true in the context of cleanup of contaminated sites, because current risk assessment methodologies have shortcomings that must be presented as qualifications to the community.⁶⁶⁴

In the negotiated compensation context, it turned out to be a serious mistake to rely upon companies' voluntary disclosures. Communities distrusted promises made to them about companies' environmental records.⁶⁶⁵ This was particularly true in one case in Massachusetts where the developer obfuscated the risks by refusing to disclose what wastes it would treat at the site.⁶⁶⁶ To avoid this result, states should require developers to make a more substantial effort to

659. See Frisman, *supra* note 383 (citing statements by Donald S. Strait, Executive Director of the Connecticut Fund for the Environment, criticizing the proposal to rely upon licensed environmental professionals for voluntary cleanups, expressing concern that "the [Connecticut DEP] won't give LEPs enough guidance, . . . [and that] the department should retain its supervisory role").

660. See *supra* notes 382-93 and accompanying text.

661. See, e.g., Paul Slovic, *Beyond Numbers: A Broader Perspective on Risk Perception and Risk Communication*, in ACCEPTABLE EVIDENCE, *supra* note 527, at 48, 50; EPA/ATSDR BASELINE SURVEY, *supra* note 585, at 99.

662. EPA/ATSDR BASELINE SURVEY, *supra* note 585, at 99.

663. Slovic, *supra* note 661, at 62.

664. See, e.g., Brian D. Israel, *An Environmental Justice Critique of Risk Assessment*, 3 N.Y.U. ENVTL. L.J. 469, 520-22 (1995).

665. Wheeler, *supra* note 481, at 269.

666. The would-be developer in Warren, Massachusetts, "antagonized local residents and state officials by refusing to reveal what kinds of wastes it intended to treat." *Id.* at 259.

educate the community about the risks involved in a voluntary remediation project. The California provision requiring the information to be provided to the community is a good starting point.⁶⁶⁷ Before development activities proceed, developers should be required to conduct targeted educational programs to explain the risks of brownfield projects to affected communities.

b. Some Developers Are Not "Good Actors"

There are additional moral hazards in the brownfield context. The reduced likelihood of enforcement actions guarantees that the primary responsibility for ensuring cleanups' efficacy rests with the developers. The "reopener" provisions in many statutes that allow the state to sue the developer if it violates the terms of its agreement may not be invoked⁶⁶⁸ or may come into play too late⁶⁶⁹ to stop irreversible damage.

The states therefore place a premium on trusting developers to be "good actors,"⁶⁷⁰ that is, entities with good environmental records. But, as in the negotiated compensation context, there are reasons to be wary of developers' honesty.⁶⁷¹ The expense of site assessment may limit participation in the process to large corporations with suspect environmental records because "they alone have the funds to invest in site assessment and cleanup."⁶⁷² Because developers voluntarily provide information to regulatory agencies that might later use it against them in enforcement actions,⁶⁷³ the potential exists for deceitful behavior. Developers can obscure the real nature of con-

667. CAL. HEALTH & SAFETY CODE § 25398.6(i)(3) (West Supp. 1996) (requiring information to be provided that includes "an assessment of the degree of contamination, [and] the characteristics of the hazardous substances").

668. In this era of limited enforcement resources, the state may be too preoccupied with other enforcement actions to revisit the subject of the efficacy of a cleanup at a brownfield site.

669. Solo, *supra* note 23, at 308-09. If a site is initially cleaned up to meet standards applicable to commercial and industrial uses, it may be too late to clean up the property later, when converting the site to residential use: "A change in use from industrial to residential, or to a school or playground could have serious results if cleanup procedures are not extremely protective from the outset." *Id.* at 309; see also McWilliams, *supra* note 20, at 743.

670. See, e.g., *Dunlop Testimony*, *supra* note 123, at 237 (testifying that Virginia's voluntary remediation program rewards "good actors").

671. Berger et al., *supra* note 23, at 77 (citing "an unfortunate history of environmental misdeeds and a deep public skepticism" as factors inhibiting redevelopment). Even if developers are honest, there is no guarantee that contamination has been remediated. Cleanups may fail to work after the state has certified their effectiveness.

672. McWilliams, *supra* note 20, at 737; see also Clokey, *supra* note 26, at 43 (noting that the Wisconsin program will "see its primary application in the purchase of large industrial properties where the parties can afford the costs of investigation and cleanup and can tolerate the delays inherent in administration of the program").

673. If a cleanup proves ineffective, or if additional contamination is discovered later, a state retains all of its enforcement authority to force a cleanup at the site. See, e.g., O'Reilly, *Indiana's Incentives*, *supra* note 24, at 62. O'Reilly notes that this gives a developer an incentive to "make the site cleanup successful." *Id.* This assumes that developers are concerned with environmental liability only in the short term. If a developer knows it may face liability in the future, it may conceal contamination and rely on the state's lack of investigative resources.

tamination at a brownfield site in a number of ways.⁶⁷⁴ They can build a structure or other improvement that makes discovery and cleanup of contamination more difficult.⁶⁷⁵ In addition, because they are assessing and remediating the preexisting level of contamination, developers are not guaranteeing that they will not cause pollution in the future.⁶⁷⁶

The states should extend additional consideration to the existing environmental record of their remediators. States currently allowing PRPs to take part in their programs should disqualify them from participating, as these parties have demonstrated that there are reasons for serious concern about their environmental records. A person's conduct elsewhere should be relevant as well. Developers should not be required to have faultless records; however, a pattern of violations at other sites may be a sign of potential problems in the cleanup at a brownfield site. Thus, a developer's persistent failure to comply with state and federal environmental laws at other sites and facilities should disqualify that developer from participation in a state's voluntary cleanup program. "Persistent failure" could be defined with reference to pending enforcement actions but should also incorporate considerations for past conduct viewed as egregious.

5. *The Failure to Address Central Issues*

Finally, proponents of both statutes oversell their ability to address the underlying problems that the statutes are intended to address. Both involve the states taking the lead to solve a national problem with local land use implications, NIMBY-ism and the onerous nature of Superfund liability, respectively, in situations where the federal government is perceived as either unable or unwilling to address the central issue.

a. *The Shortcomings of Site-Specific Urban Development*

The negotiated compensation statutes failed in part because they did not address the central concern of their proponents: pervasive NIMBY-ism. Perhaps their greatest failure in this regard was assuming that a site-specific approach to development would work.⁶⁷⁷ The statutes, with their focus on benefits and costs of individual projects, addressed only the dynamic in a single community. The offer of compensation, no matter how lucrative, could not prevent a community from resisting a facility and forcing it to go elsewhere. The community, in other words, was not required to internalize the external costs

674. See generally *RESOURCES FOR THE FUTURE*, *supra* note 26, at 20-21.

675. *Id.* at 21; Solo, *supra* note 23, at 309 (noting that "[t]he prospect of conducting full site remediation after foundations and buildings have been constructed on the property could be enormously costly").

676. *RESOURCES FOR THE FUTURE*, *supra* note 26, at 20-21. A developer may also be a "good actor," but lack the ability to control future contamination at the site. See *id.*

677. Wheeler, *supra* note 481, at 282.

imposed on the unfortunate community that wound up hosting the waste facility. Professor Wheeler, an original supporter of the negotiated compensation statutes, now calls for structured regionwide discussions of waste facility siting to address this concern.⁶⁷⁸

As in the negotiated compensation context, a more comprehensive solution to the brownfield paradox may be the adoption of a more regional approach to urban development, instead of the piecemeal, site-specific development approaches inherent in voluntary cleanup programs.⁶⁷⁹ The voluntary cleanup statutes may not be successful in reversing the loss of worthy projects to greenfield locations. States tend to sidestep the question of how much their voluntary cleanup programs will benefit the local economy. Cleanups may still be too difficult⁶⁸⁰ or perceived as too expensive for redevelopment activities to take place,⁶⁸¹ unless the real costs of suburban and ex-urban development are factored into the decision. Moreover, cleaning up a site and resolving liability problems of owners and lenders does nothing to address the other barriers to redevelopment, such as the crime rates and shrinking population bases near brownfield sites.⁶⁸² Although some form of regional approach may be necessary, the design of a regional land development process is beyond the scope of this article.

b. The Need for Effective Federal Involvement

Without some form of federal approval of states' actions, states cannot address what developers term the central issue in brownfield policy—the fear of environmental liability.⁶⁸³ State agreements to limit liability, release prospective purchasers, or certify a site as clean do not preclude private party lawsuits⁶⁸⁴ or interfere with the EPA's

678. *Id.* at 281-82 (calling for regional interdependence and reciprocity in the siting process).

679. See Dinsmore, *supra* note 24, at 17.

680. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 64-65 (noting that "three of the earliest projects [under the Indiana program] involved groundwater contaminant cleanup, one of the most challenging environmental remedies").

681. Solo, *supra* note 23, at 313 (noting that liability releases may not encourage prospective purchasers to develop on brownfield sites if they have to pay remediation costs). Casserly, *supra* note 26, at 272, cites one example of a site in Minnesota that remains undeveloped notwithstanding the incentives offered by the state.

682. *Voluntary Cleanup Programs Downplay Enforcement, Emphasize Cooperation*, Haz. Waste News, Apr. 3, 1995 (quoting Lydia Duff of the Baltimore firm Miles & Stockbridge), available in WESTLAW, 1995 WL 2407170.

683. See, e.g., *Bartsch Testimony*, *supra* note 22, at 29 (stating that "[o]ne option is to encourage the development of credible, EPA-certified state voluntary cleanup programs that allow states to define a remediation process, and give states final oversight and sign-off on remediations at low and medium priority sites"); NEPI WHITE PAPER, *supra* note 20, at 37; OTA STATE OF THE STATES, *supra* note 20, at 26; Buzbee, *supra* note 26, at 48 n.36 (citing the statement of Mark Anderson, Editor of The Greenfields Report, Comments at the 1995 University of Georgia Red Clay Conference (Mar. 11, 1995) that "state programs are a step in the right direction, but . . . a federal signoff is needed to reduce disincentives to voluntary cleanups").

684. OTA Testimony, *supra* note 20, at 305; OTA STATE OF THE STATES, *supra* note 20, at 26.

ability to bring a RCRA or CERCLA enforcement action in states where the applicable EPA Region has not entered into a "Superfund Memorandum of Agreement" with the state.⁶⁸⁵ Professor Buzbee notes that CERCLA is the only major federal environmental statute that lacks a "feedback" mechanism whereby a developer or state government can obtain a federal response about the legality of its conduct.⁶⁸⁶ The need for some form of approval will become particularly acute as the states, in their zeal to redefine cleanup standards and offer liability protection, create programs that depart further from CERCLA's mandates.⁶⁸⁷

Until the EPA offers significant releases from liability or covenants not to sue under federal law, or CERCLA is reformed to redefine the federal role at sites taking part in a state program,⁶⁸⁸ state brownfield programs will face some uncertainty.⁶⁸⁹ Some commentators suggest that sites will be developed even without releases from federal liability, noting that the EPA will focus its limited enforcement resources on NPL sites, not brownfield sites (which typically are not on the NPL).⁶⁹⁰ They also claim that if a state informs a developer that the site is clean, that would constitute a defense against federal enforcement action.⁶⁹¹ But it is also possible that in a state such as Ohio or Pennsylvania, the EPA will monitor the state program by commencing enforcement actions at high profile sites.⁶⁹² Although the risk of this occurring is probably minimal,⁶⁹³ it leaves an amount

685. *Pennsylvania Chamber Testimony*, *supra* note 74, at 258 (claiming that the Pennsylvania voluntary remediation statute "cannot overcome the major disincentives that the federal Superfund's liability system produces"); OTA STATE OF THE STATES, *supra* note 20, at 26; Clokey, *supra* note 26, at 38; McWilliams, *supra* note 20, at 733; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 59-60; Solo, *supra* note 23, at 288 n.20 (stating that "[s]tate and local laws, however, cannot override federal law, and sites that contain sufficient contamination, which have been targeted by the federal government will still be dealt with under CERCLA"); Jones, *supra* note 156; *see* OTA Testimony, *supra* note 20, at 305.

686. Buzbee, *supra* note 26, at 71-72.

687. OTA STATE OF THE STATES, *supra* note 20, at 26.

688. *See supra* notes 448-70 and accompanying text.

689. Jones, *supra* note 156.

690. Berger et al., *supra* note 23, at 96 (stating that "[b]ecause the sites which are the focus of this report would have made it to neither the state nor the federal priority list, chances are slim that they will ever be the target of a federal Superfund action"); O'Reilly, *Indiana's Incentives*, *supra* note 24, at 60. However, this might not be the case in a state where virtually any site qualifies for the voluntary cleanup program. *See supra* note 194 and accompanying text.

691. O'Reilly, *Indiana's Incentives*, *supra* note 24, at 59 (suggesting that "federal comity" gives the developer "an implicit shield against the threat of federal cleanup action suits" if it complies with a state's requirements). One commentator goes further, suggesting that "voluntary cleanup activity [in a state program] should be asserted as a defense at federal environmental enforcement proceedings." Sweeney, *supra* note 20, at 165. However, this would fit none of the commonly available defenses to a CERCLA action. *See* CERCLA § 107(b)(3), 42 U.S.C. § 9607(b)(3) (1994).

692. McWilliams, *supra* note 20, at 733; Casserly, *supra* note 26, at 272 (stating that "[o]ne of the biggest complaints of developers is the remote, but possible threat that the U.S. EPA will target a 'recycled' parcel through the federal Superfund program").

693. Casserly, *supra* note 26, at 272. The EPA's guidance memo on Prospective Purchaser Agreements supports this proposition, suggesting that "future EPA activity at such a site [being

of uncertainty that may discourage brownfield investments. There is also the uncertainty generated by the state's ability to sue for additional contamination discovered at the site.⁶⁹⁴

In sum, the federal government may be "in the best position to define a framework for determining the true risks involved with old industrial sites and to identify standards for cleanup and remediation."⁶⁹⁵ This could be accomplished in a number of ways. Congress could redefine the CERCLA cleanup standards, as Title I of the Reform of Superfund Act proposes to do.⁶⁹⁶ The EPA could be more aggressive in entering into more Prospective Purchaser Agreements⁶⁹⁷ or entering into other agreements, such as the Superfund Memorandum of Agreement between EPA Region V and Minnesota, to recognize the primacy of state voluntary cleanup programs.⁶⁹⁸ Professor Buzbee suggests that the EPA go further and develop an omnibus "Cleanup Approval Process" (CAP) that would delegate authority to the states but retain federal oversight and review capabilities.⁶⁹⁹ The CAP scheme would involve a federally created model cleanup process that states could implement and administer in a fashion similar to state administration of the Clean Water Act or Resource Conservation and Recovery Act permit schemes.⁷⁰⁰ A considerable disadvantage of this approach is that it would almost certainly require congressional action to alter the basic nature of the Superfund cleanup and settlement scheme.⁷⁰¹ The EPA has not shown interest to date in creating a federal voluntary cleanup program, viewing it as a dilution of the statutory mandate to clean up hazardous waste sites and punish the responsible parties.⁷⁰² Congress appears more inclined to provide credibility to the state programs with some form of explicit

cleaned up in a state program] is extremely unlikely." MAY 1995 PPA GUIDANCE MEMORANDUM, *supra* note 440.

694. Solo, *supra* note 23, at 301.

695. Bartsch Testimony, *supra* note 22, at 30.

696. A number of panelists at the National Environmental Policy Institute's recent forum advocated this approach. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 11 (stating that "many panelists looked to Superfund reauthorization as the catalyst for rationalizing cleanup standards").

697. Sweeney, *supra* note 20, at 165, advocates this approach.

698. See *supra* note 348. The Pennsylvania Department of Environmental Protection is negotiating a "Performance Partnership" with the EPA's Region III, which may include a provision that the EPA will not initiate federal enforcement actions at sites taking part in the Pennsylvania program. PENNSYLVANIA SIX-MONTH PROGRESS REPORT, *supra* note 33, at 13. The DEP has also participated in discussions aimed at developing a model Superfund Memorandum of Agreement. *Id.*

699. Buzbee, *supra* note 26, at 41-42, 100-04. A CAP scheme would involve developers and the EPA in agreeing to consent decrees that would differ from current consent decrees negotiated under CERCLA in a number of respects. For example, a CAP consent decree would preclude future state and federal enforcement actions. *Id.* at 103.

700. *Id.* at 100-04, 115.

701. *Id.* at 100-01 (stating that because "it is unlikely EPA would ever voluntarily create such a procedure, . . . statutory modification is likely necessary").

702. *Id.* at 95, 106.

approval of state programs from the EPA, such as that contemplated under the approval process proposed in Title III of ROSA.

As the Office of Technology Assessment has recognized, the relationship between the state and federal governments in this area requires considerable attention, far more attention than Title III of ROSA empowers the EPA to devote to the task.⁷⁰³ One state official testifying before Congress strongly opposed federal involvement in approving state voluntary cleanup programs.⁷⁰⁴ Federal oversight, however, is necessary to ensure the efficacy of cleanups,⁷⁰⁵ and federal approval of state programs should be a condition to any decision to certify cleanups.⁷⁰⁶ Federal approval can reduce the state's ability to approve lax cleanups and provide developers with additional certainty.⁷⁰⁷

Given this, there are reasons to be concerned about the effectiveness of the proposed system of approvals. There would be no opportunity for public participation in the decisions.⁷⁰⁸ The EPA's ability to disapprove a state's program would be severely limited.⁷⁰⁹ Under the proposal, it could not, for example, consider a state's prior performance in supervising remedial actions (e.g., under a state's CERCLA law). If the EPA were concerned that a state might sanction cleanups that did not protect the environment, its ability to disapprove the program or condition approval on the adoption of modifications would be limited.⁷¹⁰ An application would be deemed approved unless EPA

703. OTA STATE OF THE STATES, *supra* note 20, at 26.

704. *Kahoe Testimony*, *supra* note 459 (testifying that "[w]e strongly oppose expansion of federal authority to [brownfield] sites, a situation which would only add to the time, cost, and complexity of a working system"). Deputy Secretary Kahoe testified that the state of California was working with the EPA's Region IX to secure an administrative release for sites in the California cleanup program. *Id.*

705. *See supra* notes 651-59 and accompanying text (regarding the legitimacy of state decision making in the brownfield context); *see also* Buzbee, *supra* note 26, at 110-11.

706. Buzbee, *supra* note 26, at 115.

707. *Id.*

708. *See* H.R. 2500, 104th Cong., 1st Sess. § 304 (1995); *Florini Testimony*, *supra* note 448, at 279. This is especially troubling, given the ability of federal involvement to offset the ability of developers to influence political choices at the state and local level. *See* Buzbee, *supra* note 26, at 115.

709. Section 304 would allow the EPA Administrator to disapprove a state's application only if the Administrator finds that "the State does not have the legal authority and the financial and personnel resources, organization, and expertise to carry out such [a] remedial action program." H.R. 2500, 104th Cong., 1st Sess. § 304 (1995). The Administrator would not be able to place any condition on approval. *See id.* A disapproval of a state program would be subject to judicial review under the Administrative Procedure Act as a "final agency action." *Id.*; *see* 5 U.S.C. § 704 (1994) (provision for judicial review of a "final agency action").

710. The EPA might be expected, for example, to express concern about the delegation of decision-making responsibility to private individuals in the Connecticut, Illinois, Massachusetts, North Carolina, and Ohio programs. *See* OTA STATE OF THE STATES, *supra* note 20, at 26 (noting that the EPA viewed unfavorably a proposal in the Illinois legislature to privatize the cleanup process and "only involv[e] the Illinois Environmental Protection Agency (IEPA) on completion of remediation to enable closure at a site with a [no action] letter by the state"). However, it could not reject the state's program on that basis, nor could it condition approval on

disapproved it within sixty days.⁷¹¹ This has been called "an absurdly inadequate period given the massively increased workload imposed by other provisions of the [Superfund reform] bill as well as the lack of resources provided."⁷¹² Although there is a provision for withdrawal of federal approval if the EPA finds deficiencies in the program,⁷¹³ that too is subject to criticism if the EPA is not provided sufficient resources to monitor state performance.

Title III's proposal to exempt from CERCLA liability sites that have been cleaned up in an approved state program amounts to a license to evade CERCLA's protective cleanup standards.⁷¹⁴ At a minimum, the EPA must be given latitude to disapprove of a nonconforming program on substantive grounds (e.g., if the cleanup standards are not strict enough, in the EPA's view, to protect health and the environment).⁷¹⁵ The EPA must require that a state's program provide for effective public participation, both in decision making at individual sites and in statewide fora that set brownfield policy.⁷¹⁶ Finally, because the states' programs are evolving rapidly, the states should be required to recertify their programs frequently; Representative Visclosky proposes that this take place every two years.⁷¹⁷

V. CONCLUSION

The incentives for brownfield redevelopment are based on a "Brownfields of Dreams" premise: "if you provide the appropriate climate, they [developers] will clean and invest."⁷¹⁸ At the National Environmental Policy Institute's brownfield policy forum, Mary Gade,

the state's adoption of more comprehensive review procedures. See H.R. 2500, 104th Cong., 1st Sess. § 304 (1995).

711. H.R. 2500, 104th Cong., 1st Sess. § 304 (1995).

712. *Florini Testimony*, *supra* note 448, at 279 (adding that "the bill elevates the form of federalism over the substance of cleanup"). For an opposing view, see *Kahoe Testimony*, *supra* note 459 (stating that "[i]nstead of applying [the release from liability] voluntarily or as a matter of state right, Title III exacts the price of federal review and approval of state laws that are now solely within the purview of the states").

713. H.R. 2500, 104th Cong., 1st Sess. § 304 (1995).

714. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 26 (citing the statement of Representative Peter Visclosky (D-IN) that "minimum standards must still be met [because] 'a race to the bottom must be avoided'"); OTA STATE OF THE STATES, *supra* note 20, at 26 (stating that the EPA's difficult task in this area is to "develop criteria for agreements that would be flexible enough to meet individual state needs, yet rigorous enough to ensure adequate cleanups").

715. See *Florini Testimony*, *supra* note 448, at 279 (criticizing the Reform of Superfund Act because "EPA's sole ground for rejecting a delegation application is that the state lacks adequate authority," and neither the "adequacy of resources" or "the state's prior performance" are considered.).

716. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 26 (citing the statement of Representative Peter Visclosky (D-IN) calling for this requirement).

717. *Id.*

718. NEPI BROWNFIELDS POLICY FORUM PROCEEDINGS, *supra* note 20, at 27 (quoting the statement of Charles Bartsch, Senior Policy Analyst, Northeast-Midwest Institute).

Director of the Illinois EPA, was asked "whether investors would still prefer greenfields to brownfields if public participation requirements were too onerous." She responded that Illinois does not mandate public participation.⁷¹⁹ Proponents of the voluntary cleanup statutes say that the command-and-control regime of pollution control laws has backfired, in this case spawning a pervasive fear of environmental liability that chills productive redevelopment. Cleanups, they say, are too slow and expensive, and only a streamlined cleanup process with economic incentives to developers will get abandoned sites back into commerce. The transition away from the rigorous cleanup standards of the regulatory regime, however, is prompting the states to move too far to relax cleanup standards and requirements for contaminated sites, jeopardizing public health and safety. Experience from the negotiated compensation context, moreover, shows that the voluntary cleanup statutes may fail to attain the goal of revitalizing moribund urban economies.

As one commentator notes, the "ultimate test of success" of the programs established for brownfield cleanups is "the development of procedures that ensure the legitimate remediation of contaminated industrial property."⁷²⁰ The nascent state voluntary cleanup programs stake a claim to legitimacy with their frequent references to "recycling" and "reuse."⁷²¹ All recycling activities are not beneficial, however,⁷²² and neither are the state programs, in their present form. Some states' voluntary cleanup programs may produce abandoned cleanups, not clean up abandoned sites.⁷²³

The shortcomings of the state programs include the lack of effective public participation, the likelihood that state regulators will be captured by industry or otherwise unaccountable to the public, and the moral hazards inherent in trusting developers' motives and actions. Experience with the negotiated compensation statutes suggests that, without statutory amendments to address these concerns, even meritorious projects will be stymied by local resistance. The states must provide for meaningful opportunities for community input in the

719. See *id.* at 24.

720. Sweeney, *supra* note 20, at 165.

721. Stakeholders in the brownfield debate frequently use the terms "recycling" and "reuse" to invoke the image of pollution prevention (that is, by preventing the despoliation of greenfields by reusing brownfield sites). See, e.g., *Bartsch Testimony*, *supra* note 22, at 25; *NWF Testimony*, *supra* note 66, at 606 (calling brownfield redevelopment a form of pollution prevention); Berger et al., *supra* note 23, at 73; O'Reilly, *Indiana's Incentives*, *supra* note 24, at 47-49 (describing "recycling [of] manufacturing sites in the inner city"); Solo, *supra* note 23, at 326 (stating that "[s]afely redeveloping previously contaminated sites is essentially 'recycling' of industrial land").

722. "Recycling" involves some activities so dangerous that former recycling facilities find their way on to the NPL in substantial numbers. See Philip L. Comella, *Understanding a Sham: When Is Recycling, Treatment?*, 20 B.C. ENVTL. AFF. L. REV. 415 (1993); Jeffrey M. Gaba, *Solid Waste and Recycled Materials Under RCRA: Separating Chaff from Wheat*, 16 ECOLOGY L.Q. 623, 634 (1989); Barry Needleman, *Hazardous Waste Recycling Under the Resource Conservation and Recovery Act: Problems and Potential Solutions*, 24 ENVTL. L. 971 (1994).

723. See Pendergrass, *supra* note 26, at 6.

process, both in the planning stage and during the cleanup process. The suspect legitimacy of the states' decision making under voluntary cleanup statutes should be addressed by increased public participation in statewide decision-making bodies. The moral hazards should be addressed by amendments requiring effective risk communication and disqualifying prospective developers who are not "good actors." Finally, the EPA should be given authority to disapprove of a state's program if it does not impose protective cleanup standards or provide for effective community input. Then, and only then, will the voluntary cleanup programs begin to fulfill their tremendous promise.

APPENDIX: AUTHORITIES FOR STATE VOLUNTARY CLEANUP
PROGRAMS

States' voluntary cleanup programs operate under a combination of authorities. These include new statutes intended to promote voluntary cleanups, existing statutory authorities (typically state CERCLA laws), regulations promulgated under the authority of new statutes, existing regulations, and informal policy and guidance documents.

In the following list, the first citation is to the legislative enactment commonly considered to be the "voluntary cleanup statute" (abbreviated herein as *VCP Statute*). The second citation, where applicable, is to regulations promulgated under the authority of that statute (abbreviated herein as *VCP Regs*). The third and fourth citations, where applicable, are to state CERCLA laws and regulations promulgated thereunder, where applicable (abbreviated, respectively, as *State CERCLA Law* and *State CERCLA Regs*). If a state bases a feature of its program substantially on guidance or policy documents, that fact is noted as well. Indiana's voluntary cleanup statute, for example, makes no reference to applicable cleanup standards; that feature of the program is dealt with in guidance documents. Telephone Interviews, *supra* note 160.

The programs in Iowa and Kansas are pilot projects and are listed as such in this appendix. The Utah statute is listed; however, no developer has entered into an agreement in the Utah program. See *supra* note 158. Connecticut's program includes a voluntary cleanup program that operates in conjunction with the requirements of the Transfer Act (with authorities listed below as *State Transfer Act/VCP Statute*) and the Urban Sites Remedial Action Program (with authorities listed below as *VCP Statute*).

STATE	AUTHORITIES
ARIZONA:	<p><i>VCP Statute</i>: ARIZ. REV. STAT. ANN. § 49-285(B) (West Supp. 1996).</p> <p><i>VCP Regs</i>: In development. Telephone Interviews, <i>supra</i> note 160.</p>
ARKANSAS:	<p><i>VCP Statute</i>: ARK. CODE ANN. §§ 8-7-503, -520(a), -523 (Michie Supp. 1995). <i>(brownfield program that the state is considering merging with existing administrative voluntary cleanup program; see Telephone Interviews, supra note 160)</i></p>
CALIFORNIA:	<p><i>VCP Statute (Expedited Remedial Action Program)</i>:</p>

CAL. HEALTH & SAFETY CODE §§ 25396-25399.2 (West Supp. 1996).

VCP Regs:

CAL. CODE REGS. tit. 22, §§ 67401-67401.12 (WESTLAW through Oct. 25, 1996).

(regulations for ERAP)

State CERCLA Law:

CAL. HEALTH & SAFETY CODE § 25201.9 (West Supp. 1996)

(authorizing charges for consultation)

CAL. HEALTH & SAFETY CODE §§ 25396-25399.2 (West Supp. 1996).

(elements of Voluntary Cleanup Program)

COLORADO:

VCP Statute:

COLO. REV. STAT. § 25-16-301 to -311 (West Supp. 1996).

VCP Regs:

None expected. Telephone Interviews, *supra* note 160.

CONNECTICUT:

State Transfer Act/VCP Statute:

CONN. GEN. STAT. ANN. §§ 22a-452d, -452e, -432, -133k, -134(e), -133(o), -133(p), -134d (West 1995); 1995 Conn. Pub. Acts 190 §§ 1-6, 14).

(allowing additional voluntary cleanups; defining the role of LEPs and other issues)

1995 Conn. Pub. Acts 183.

(redefining responsibilities under the transfer act)

VCP Statute:

CONN. GEN. STAT. ANN. § 22a-133m (West 1995).

(Urban Sites Remedial Action Program)

State Transfer Act Regs:

CONN. GEN. STAT. ANN. § 22a-133k (West 1995).

(authorizing regulations for all hazardous substance spill sites)

CONN. AGENCIES REGS. §§ 22a-133k-1 to -3 (WESTLAW through Sept. 24, 1996).

(defining cleanup standards)

VCP Regs:

CONN. AGENCIES REGS. §§ 22a-133m-1 to -3 (WESTLAW through Sept. 24, 1996).

(governing Type III site cleanup process in the USRAP)

- DELAWARE:** *State CERCLA Law:*
70 Del. Laws ch. 218 (1995), *amending* DEL. CODE ANN. tit. 7, §§ 9101-9120.
State CERCLA Regs:
Delaware Regulations Governing Hazardous Substance Cleanup §§ 1-15 (1996).
- ILLINOIS:** *VCP Statute:*
415 ILL. COMP. STAT. ANN. 5/58-58.12 (West Supp. 1996).
VCP Regs:
In development. Telephone Interviews, *supra* note 160.
State CERCLA Law:
415 ILL. COMP. STAT. ANN. 5/22.2 (West Supp. 1996).
- INDIANA:** *VCP Statute:*
IND. CODE ANN. § 13-25-5-1 to -23 (WESTLAW through end of 1996 2d Reg. Sess.).
VCP Regs:
None at present. Telephone Interviews, *supra* note 160.
Guidance Documents:
Define applicable cleanup standards. Telephone Interviews, *supra* note 160.
- IOWA:** Pilot project.
- KANSAS:** Pilot project.
- LOUISIANA:** *VCP Statute:*
LA. REV. STAT. ANN. §§ 30:2272.1, :2285-90 (West Supp. 1996).
VCP Regs:
None at present.
- MAINE:** *VCP Statute:*
ME. REV. STAT. ANN. tit. 38, § 343-E (West Supp. 1995).
VCP Regs:
None expected. Telephone Interviews, *supra* note 160.
- MASSACHUSETTS:** *State CERCLA Law:*
MASS. GEN. LAWS ANN. ch. 21E, § 3A (West Supp. 1996).
State CERCLA Regs:
MASS. REGS. CODE tit. 310, §§ 4.01-.10 (WESTLAW through Reg. No. 794).
(*fee structure*)
Id. § 40.0001-.1600.

- (Massachusetts Contingency Plan)*
- MICHIGAN:** *State CERCLA Law:*
 MICH. COMP. LAWS ANN. §§ 324.20101 to
 -.20142 (West Supp. 1996).
State CERCLA Regs:
 MICH. ADMIN. CODE r. 299.5101-.5823
 (WESTLAW through ENFLEX Aug. 1996
 Release).
(cleanup standards to be defined in MICH.
ADMIN. CODE r. 299.5701-.5727)
- MINNESOTA:** *VCP Statute:*
 MINN. STAT. ANN. §§ 115B.175-.179 (West
 Supp. 1995).
State CERCLA Law:
Id. § 115B.17.
(directing that land use be taken into account
in setting of cleanup standards)
Guidance Documents:
 Define a number of program features,
 including the scope of certain liability
 assurances. *See supra* note 176.
- MISSOURI:** *VCP Statute:*
 MO. ANN. STAT. §§ 260.565-.575 (West Supp.
 1996).
VCP Regs:
 MO. CODE REGS. ANN. tit. 10, § 25-15.010
 (WESTLAW through ENFLEX Aug. 1996
 Release).
Guidance Documents:
 Define applicable cleanup standards. *See*
 Helfrich, *supra* note 156; Telephone Interviews,
supra note 160.
- MONTANA:** *VCP Statute:*
 MONT. CODE. ANN. §§ 75-10-701, -721, -722
 (1995); *id.* §§ 75-10-730 to -738.
VCP Regs:
 None expected. Telephone Interviews, *supra*
 note 160.
- NEBRASKA:** *VCP Statute:*
 NEB. REV. STAT. §§ 81-15,181 to -15,188
 (WESTLAW through end of 1995 Reg. Sess.).
VCP Regs:
 None.
- NEW HAMPSHIRE:** *VCP Statute:*

None. Program operates under administrative discretion. COMING CLEAN, *supra* note 24, at 77-78.

NEW JERSEY:

State Transfer Act:

N.J. STAT. ANN. §§ 13:1K-6 to -13 (West Supp. 1996).

State Transfer Act Regs:

N.J. ADMIN. CODE tit. 7, chs. 26C, E (WESTLAW through Aug. 19, 1996).

NEW YORK:

VCP Statute:

None. Program operates under administrative discretion. COMING CLEAN, *supra* note 24, at 84-85.

NORTH
CAROLINA:

VCP Statute:

N.C. GEN. STAT. §§ 130A-310.8, -310.9, -310.12 (1995).

VCP Regs:

In development. Telephone Interviews, *supra* note 160.

State CERCLA Law:

N.C. GEN. STAT. §§ 130A-310 to -310.23 (1995).

(*defining certain features of current program; see Survey Results, supra note 158*)

Guidance Documents:

Define most features of current program. Telephone Interviews, *supra* note 160.

OHIO:

VCP Statute:

OHIO REV. CODE ANN. §§ 3746.01-99 (Anderson 1995 & Supp. 1995).

VCP Regs:

OHIO ADMIN. CODE §§ 3745-300-01, 3745-300-03 to -05, 3745-300-12 to -14, 3745-300-99 (WESTLAW through Aug. 31, 1996).

OREGON:

VCP Statute:

OR. REV. STAT. §§ 465.315, -.325 (Supp. 1996); 1995 Or. Laws 662, §§ 4, 8 (to be codified at OR. REV. STAT. §§ 465.200-.455).

VCP Regs:

Required to be promulgated by 1997 for certain aspects of the 1995 law; applicable to other cleanups as well; forthcoming. Survey Results, *supra* note 158; Telephone Interviews, *supra* note 160.

State CERCLA Law:

- OR. REV. STAT. §§ 465.200-.391 (Supp. 1996).
State CERCLA Regs:
OR. ADMIN. R. 340-122-010 to -140
(WESTLAW through Oct. 31, 1995).
- PENNSYLVANIA:
VCP Statute:
PA. STAT. ANN. tit. 35, §§ 6026.101-.908 (West Supp. 1996).
VCP Regs:
In development. Telephone Interviews, *supra* note 160.
- RHODE ISLAND:
VCP Statute:
R.I. GEN. LAWS §§ 23-19.14.1 to -19, 23-63-4.2 (Supp. 1995).
VCP Regs:
In development and will include generic cleanup standards. Telephone Interviews, *supra* note 160.
- TENNESSEE:
VCP Statute:
TENN. CODE ANN. §§ 68-212(4), -207(b), -224 (Supp. 1995).
State CERCLA Regs:
TENN. COMP. R. & REGS. §§ 1200-1-13-.01 to -.13 (WESTLAW through ENFLEX Aug. 1996 Release).
- TEXAS:
VCP Statute:
TEX. HEALTH & SAFETY CODE §§ 361.601-.613, 361.133(b), (c) (West Supp. 1996).
VCP Regs:
21 Tex. Reg. 3203 (WESTLAW, Apr. 12, 1996) (adopting 30 TEX. ADMIN. CODE §§ 333.1-.11).
State CERCLA Regs:
30 TEX. ADMIN. CODE §§ 335.554-.569 (WESTLAW through Jan. 1, 1996).
(*defining applicable cleanup standards*)
- UTAH:
VCP Statute:
UTAH CODE ANN. § 19-6-325 (1995).
VCP Regs:
None at present. Telephone Interviews, *supra* note 160.
- VERMONT:
VCP Statute:
VT. STAT. ANN. tit. 10, § 6615a (Supp. 1996).
VCP Regs:
None at present. Telephone Interviews, *supra* note 160.
- VIRGINIA:
VCP Statute:

VA. CODE ANN. §§ 10.1-1429.1 to .3 (Michie Supp. 1996).

VCP Regs:

Forthcoming. *See supra* note 175.

WASHINGTON:

State CERCLA Law:

WASH. REV. CODE ANN. §§ 70.105D.010 to .921 (West 1992 & Supp. 1996).

State CERCLA Regs:

WASH. ADMIN. CODE §§ 173-340-100 to -890 (WESTLAW through July 24, 1996).

(Independent Remedial Action Program is found in WASH. ADMIN. CODE § 173-340-550(7).)

WISCONSIN:

VCP Statute:

WIS. STAT. ANN. § 144.765 (West Supp. 1995).

VCP Regs:

None at present. Telephone Interviews, *supra* note 160.

State CERCLA Law:

WIS. STAT. ANN. §§ 144.442, 144.76 (West 1989 & Supp. 1995).

State CERCLA Regs:

WIS. ADMIN. CODE chs. NR 140, 700-726 (WESTLAW through ENFLEX Aug. 1996 Release).

