Simplifying Environmental Permitting in the United States

Christopher A. Hartwell
Environmental Policy Analyst
Reason Public Policy Institute

THE PROBLEMS WITH PERMITS

For the past 25 years, environmental regulation in the United States has been dominated by "end-of-the-pipe" and technology-based measures to control pollution. Early environmental regulations tended to take an ad hoc approach towards pollution, mandating equipment and processes for industries in a one-size-fits-all manner. The U.S. Environmental Protection Agency (EPA) championed this command-and-control approach as a way to limit emissions where both the effects of discharge and the consequences of control were ambiguous.

The main tool of this regulatory approach became the permit, a simple way for federal and state bureaucracies to certify equipment, with an expectation of reducing pollution. Permits took into account the limited resources that regulators faced, allowing them to theoretically focus on the large polluters and easy-to-identify compliance. They were also a way to apply general rules to specific cases, "making the actions of government fair and predictable."[1]

The actual performance of permits, however, has been less than impressive in meeting the goal of environmental protection. Permit-based approaches suffer from three major problems:[2]

1. *Focus on Compliance:* Permits control equipment and are merely a proxy for environmental improvement. Often, while businesses are lost in the shuffle of paperwork and worried about compliance, they lose sight of what these regulations actually mean. Compliance, not performance, becomes the main focus.

2. *Difficulty of Reform:* Permits create constituencies with a vested interest in their continuance, and reform becomes a very difficult exercise. The pressures against reform come from many sides as well, including environmental protection agencies and the businesses they regulate.

3. *Relationships with the Regulated:* The nature of the permitting process, the amount of paperwork that must be collected, and the need to obtain separate permits for each medium or process foster an adversarial relationship between business and government. The regulated and the regulators have little face-to-face contact, little allowance is made for local conditions and/or extenuating circumstances, and businesses are forced into the preconceived mold of regulation by a distant agency.

With these flaws inherent in the current permitting system, is there a viable alternative? Can the environment be protected in a manner that avoids these distortions while involving the private sector and local authorities in a more cooperative manner?

REFORMING THE PROCESS

At least at the state level, the answer is a resounding yes. With the major source of pollution shifting to nonpoint sources and a greater variety of small emitters, states are finding that the traditional approach of permitting has been inadequate for the new breed of environmental problems and often inefficient in addressing traditional problems.

States have been a laboratory for alternative permitting procedures, implementing several innovations to address the inadequacies of the current process. While each approach has its own benefits and drawbacks, they all seek to address the concern that a one-size-fits-all mentality is inadequate for environmental progress. Furthermore, these innovations engage the private sector in working towards environmental protection, recognizing that companies must make tradeoffs in their day-to-day operations in pursuit of environmental goals. Finally, by bringing the authority of protection to the local and state

level, those most closely affected by any changes are better able to introduce their local knowledge to environmental decisions.

The four main innovations in permitting at the state level are:

- One-stop permitting;
- Facility-wide permits;
- Industrial standards; and
- Permit streamlining.

These innovations, while differing from state to state in their particulars and implementation, generally pursue four broad goals of:[3]

- Achieving environmental performance that is superior to that achievable through compliance with current and reasonably anticipated future regulations;

- Promoting increased operational and administrative flexibility to reduce costs;

- Encouraging greater pollution prevention and other innovation efforts; and

- Facilitating increased local support with involvement of affected constituents in the design and implementation of permits.

This article will focus on two new types of permit instruments, the facility-wide permit and industry standards, using case studies from New Jersey and Massachusetts.

Facility-wide Permits

While permits may be a convenient administrative tool, current state and federal permit regimes do not foster the atmosphere necessary to achieve the goal of environmental protection. By prescribing every phase of the pollution-control process, down to what equipment should be used to attain emissions reductions, permits have created a regulatory morass.

A means to remedy this micromanagement of environmental protection is a facility-wide permit, which simplifies the web of per-

mits and regulations into one seal of approval that covers emission and discharge levels.

New Jersey—Tending to the Garden State

New Jersey was described in the early 1990s as "second only to California on a list of where not to manufacture chemicals in the U.S.," with regulations that were forcing companies to relocate to more "business-friendly" areas such as the South or outside of the United States.[4] Industry leaders publicly lamented the state's bureaucracy, with Huntsman Polypropylene's plant manager Tom Bates stating, "New Jersey's regulatory climate when I got here eight years ago was driving companies out. It was punitive. Everyone wanted to run, not walk, to the nearest exit."[5]

The root of the problem lay in the New Jersey Department of Environmental Protection (DEP). Described as an "ogre" by the majority of the business community, the DEP presided over a process that involved long delays in issuance of permits, spiraling costs, and uncertainty about the compliance standards.[6] This climate had the exact opposite effect of what was intended, as industry critics charged that the permit-approval process frequently delayed manufacturers from getting pollution-control equipment into service.[7] Even then-Gov. Jim Florio complained that, "the problem isn't the law, it's the Department of Environmental Protection, which has turned the [permit] review process into an 18-month ordeal in which no one in the DEP makes a decision while the small businessperson is strangled with interest charges."[8]

Permits were also the bread and butter of the Department of Environmental Protection, as 51 percent of their budget was dependent on fines and fees, while another 27 percent came from federal grants.[9] Throughout the late 1980s and early 1990s, New Jersey's National Pollutant Discharge Elimination System (NPDES) was funded exclusively through fees, with no money coming from federal funds or a state general fund (contrast this with Pennsylvania, which garners 65 percent of its NPDES funding through a state fund).[10] Thus, the incentive to continue issuing permits (and collecting the resulting fees) was directly related to the vitality of the DEP as an organization.

The DEP, in its quest for compliance and adherence to the rules, lost sight of the original goal of protecting the environment. The maze

of regulations and permits was not effectively protecting the environment. But this maze *was* tying up the DEP's resources and driving businesses away from the Garden State.

New Jersey's Innovation

The New Jersey Pollution Prevention Act of 1991 sought to comprehensively change the regulatory process, providing business and government with an opportunity to work in a more cooperative atmosphere. While the act was substantially flawed in some of its aspects (especially in its right-to-know provisions), the act allowed for innovation in the chaotic permit process. Following the mandate of this act, Gov. Christine Todd Whitman announced in 1995 that "we can protect the environment without taking years to process a permit."[11] The method chosen to simplify New Jersey's labyrinth of permits was the facility-wide permit.

The most-important innovation in the development of the facility-wide permit was its targeting of process levels and not source levels; rather than using "end-of-the-pipe" counts and technology-based, source-focused standards, the facility-wide permit allowed a facility to install new equipment without having to undergo the sometimes lengthy preconstruction review process. This allowed the facility greater operational flexibility in formulating and marketing new products. Developed in conjunction with industry and environmental leaders, the facility-wide permit took the place of the plethora of permits that a company needed (sometimes as many as 80 to 100 per facility). More importantly, the facility-wide permit devolved authority to the producers themselves, reducing oversight of minor air permits and "allowing the DEP to concentrate its efforts on the 10 percent of industry permits that release nearly 90 percent of the emissions."[12]

In terms of organizational capacity, a new office was created to handle the administration of facility-wide permits. The Office of Pollution Control (OPC) was composed of individuals cross-trained in a wide variety of competencies, including environmental media, inspections, and materials accounting.[13] By housing the innovation in a new office, it was isolated from the old mindset of the DEP and was better able to experiment with new approaches in environmental management. The budget of the OPC was generated through the state's existing right-to-know legislation and federal pollution-prevention grants,

thus encouraging cooperation among agencies (as no one's budget was going to be transferred or slashed because of the new office).[14]

Actually beginning facility-wide permitting was not as easy as the government synopsis promised. As Frank Gorski, Environmental Health and Safety Manager of Huntsman Polypropylene, noted, "New Jersey regulators... have a very strong enforcement mentality, so it takes a lot of commitment to go into the State of New Jersey and be willing to work through this process with them."[15]

Yet Huntsman Polypropylene was willing to give the facility-wide permit a chance, as they were undergoing the process of retrofitting their Woodbury plant. According to Gorski:

> *The plant was going to be rebuilt to accommodate modernization of the catalyst system. Approximately 80 air pollution stacks and 300 sources ranging from new permits to grandfathered sources were going to be required. One prior permit renewal took 2-1/2 years, and the state would not approve a compressor, which cost us an 18-month delay and $3.5 million. With the 80 stacks and 300 sources being affected by modernization and needing to be re-permitted, we needed a streamlined regulatory process. It was critical for New Jersey to work with us to do this in a process manner, versus an individual point-by-point, source-by-source permit.*[16]

The Results

The DEP has engaged in extensive quantitative research into the effectiveness of the planning process for the facility-wide permit, finding that:[17]

- The average cost to a facility of preparing a plan was $26,000;
- The average estimated time a company spent in putting together a plan for the facility-wide permit was 60.7 days;
- 69 percent of the companies using a plan predicted net cost savings because of the process;
- The average net benefit to the facilities was $6.3 million per year;

- For every dollar spent in the process, there was a net savings of $5 to $8.

In addition, the permit reforms also led to improvements in efficiency. To give a typical example, Huntsman Polypropylene was the first South Jersey company (and the third in the state) to receive a facility-wide permit, taking the place of 80 permits. A few years before, Huntsman "was threatening to leave New Jersey, citing the burdensome regulatory process at DEP as the main reason," but under the facility-wide permit ten thick binders' worth of paperwork was reduced to a 1.5-inch packet.[18] Not only was the regulatory burden reduced; the evaluation that Huntsman experienced resulted in the elimination of 8.5 million pounds of emissions per year, and the flexibility that the facility-wide permit program engendered allowed Huntsman to modernize their plant, eliminating 107 out of the plant's 350 pieces of equipment.

In another case, the president of Schering-Plough estimated a savings of $300,000 per year due to reduction of costs for waste disposal, with a further savings accruing through elimination of "the need to go back to the DEP with every minor change [avoiding] the need to assemble masses of... paperwork for individual permit renewal."[19]

Panacea or Problematic?

The facility-wide permit has not been without its detractors. Critics of the program have alleged that the permit will provide a lower level of environmental protection. A coalition of 20 environmental groups gave Gov. Whitman a "C-minus" for her environmental efforts, with the cutting back of enforcement programs (a direct result of the facility-wide permit) as the main impetus for this rating.[20] Pete McDonough, a spokesman for Gov. Whitman, responded to this claim by saying:

The best thing to look at is environmental indicators. All the indicators, whatever they are, are up. How do you measure a commitment to the environment, by the number of bureaucrats or by the environmental indicators? I say you measure it by indicators.[21]

Furthermore, many environmental activists have claimed that the DEP is getting too cozy with industry, acting as another arm of the

chamber of commerce rather than as a regulator. In a vitriolic, yet award-winning, series, *The Bergen Record*, a northern New Jersey newspaper, savaged the facility-wide permit approach and the office of the business ombudsman as being "used solely by polluters to do an end ran around the DEP's normal permits and enforcement process.[22] New Jersey Public Interest Research Group lobbyist Curtis Fisher went even further, stating, "Governor Whitman's policies are designed to try to cozy up to companies and weaken standards and extend the periods for compliance."[23]

Contrary to what some critics charged, the facility-wide permit was not going to sacrifice environmental protection for convenience or efficiency. Indeed, permits already granted to some companies had "sliding" emissions scales put into place (keyed to pound-per-product baselines) that made any future production increase contingent on emission decreases.

The future of the facility-wide program may have some problems as well, though not because of the charges critics have leveled against it. The difference between batch-manufacturing plants, industries that produce a discrete amount of products, and continuous-process manufacturing plants has caused something of a headache for New Jersey regulators, as the DEP must evaluate much more at a batch-manufacturing plant (due to the ever-shifting nature of the processes utilized). This increased work has slowed the permit process for batch industries: for example, Sybron Chemical applied for a facility-wide permit in 1991 and has seen other plants such as Huntsman obtain their facility-wide permit while they still await an outcome.[24] The DEP has attempted to remedy these problems, most notably by working on a "Flexible Track for Good Environmental Performers" targeted at the batch industry. Issues remain to be ironed out, presenting the facility-wide permit with another important obstacle to surmount.

Industry-wide Standards

New Jersey experiences with the facility-wide permit show the promise and pitfalls of innovations in permitting. The key component of their innovations was a willingness to be flexible, allowing flexibility in the rules and letting the states be a laboratory for environmental experiments. As Peder Larson of the Minnesota Pollution Control

Agency said, an important aspect of experimentation is the iterative process: some things will fail, while others will succeed.[25] But only experimentation, a "discovery" process, will allow us to find workable systems.

Flexibility in permitting has been pursued in other ways as well. Rather than merely simplifying the permit process on a case-by-case, plant-by-plant basis, as the facility-wide permit does, some states have attempted to innovate on the basis of entire industries. This approach also allows for more flexibility in the regulatory process, granting leeway in exchange for actual environmental results.

Massachusetts—Focus on Results

For 25 years, environmental regulation in Massachusetts used the stringent assumption that "the government can best regulate what goes into the air, water, and land by telling business and industry not only how they must limit pollutants but also precisely how to do it."[26]

This system presented a host of problems for the individual businesses that were regulated. Permits were required for each piece of equipment within a plant or factory, and a new permit had to be issued if there was to be a change in the equipment. This laborious process often took over a year to complete (a major problem for companies who changed their line production frequently) and was blamed by companies for a loss of competitiveness.[27]

This concern for minutiae strained the already-scarce resources of the Massachusetts Department of Environmental Protection (DEP), which found that regulating 10,000 companies through 16,000 individual permits was not feasible given the agency's resources.[28] Worse still, the huge number of permits appeared to be nothing more than a bureaucratic exercise. The actual goal of environmental protection was not attained, as "all but one of [Massachusetts'] 6,000 Superfund sites were formerly permitted facilities.[29] Additionally, the complex labyrinth of codes and regulations was hard to navigate, meaning that a large number of small and medium-sized businesses were unwittingly out of compliance. These sectors represented "a disproportionate amount of time spent by staff writing permits relative to their environmental risk. For example DEP... spent significant resources issuing air permits to 4,400 facilities, of which two-thirds are small and me-

dium-sized firms that together generate less than five percent of the state's total air pollution."[30]

The Innovation

"This frustrating reality prompted DEP staff in 1995 to begin looking at regulation from a radically new perspective: Why not take many of the requirements embedded in individual permits and convert them to comprehensive industry-wide performance standards with which all facilities in a given industry sector or process can comply?"[31] The Massachusetts DEP began a pilot project known as the Environmental Results Program (ERP), which scrapped the entire permit system and instituted industry-wide performance standards that would apply to all applicable processes at all company facilities within a given sector. By shifting the focus of the DEP to auditing and enforcement and transferring the burden of compliance to businesses themselves, the ERP hoped to gain from the comparative advantages of both the public and private sector. As DEP Commissioner David Struhs testified before the House Oversight Committee, "DEP will be able to refocus its efforts on what government does best: setting health based standards and aggressively enforcing them.[32]

In 1996, the DEP invited 18 companies to participate in the pilot project for the ERP. The invited companies ran the gamut of operations, from plastic-bucket manufacturing to dry cleaning, from photoprocessors to prefabricated storage-building manufacturers. In 1997, the program was rolled out to the dry cleaners and photo-processors with strong support from the state's political leaders.

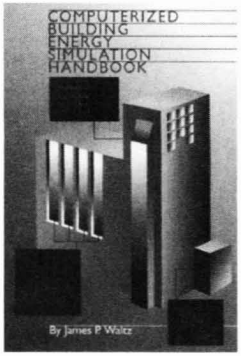
The ERP pilot was a success on many levels, First, the program was popular with those in the regulated community: unlike most regulatory programs in Massachusetts which usually receive a 30-35 percent positive response rate, the ERP received an 85 percent response rate for certification—virtually unheard of in Massachusetts regulatory history.[33] And 80 percent of all received applications were accurate, which also set a record. Usually, the accuracy rate of applications for new programs or permits, such as the Massachusetts toxic use reduction program, was only half that high.[34]

Struhs observed that the program was popular for good reason: it offered the regulated community a chance for a long-desired streamlining of their environmental compliance efforts. One firm,

Find out how you can get more accurate results using building energy simulation in your energy conservation project planning...

COMPUTERIZED BUILDING ENERGY SIMULATION HANDBOOK

NEW



By James P. Waltz

This book provides practical, down-to-earth coverage of the non-software aspects of using computerized building energy simulation. While software is the principal "tool" in the process, the focus of this presentation is on the data needed to build a model, how to build a model, examining the results, diagnosing problems with a model, and calibrating them to reality. If you have been frustrated trying to build faithful models of existing buildings, or have become skeptical of the efficacy of building simulation — or are just trying to do a better job simulating buildings — this book will offer you welcome assistance.

ISBN: 0-88173-259-1

ORDER CODE: 0447

6 x 9, 215 pp., Illus.
Hardcover, $87.00

CONTENTS

BOOK ORDER FORM

① Complete quantity, book title, order code, price and amount due for each book you wish to order:

QUANTITY	BOOK TITLE	ORDER CODE	PRICE*	AMOUNT DUE

② Indicate shipping address: **CODE: Journal 99**

NAME (Please print) BUSINESS PHONE

SIGNATURE (Required to process order)

COMPANY

STREET ADDRESS ONLY (No P.O. Box)

CITY, STATE, ZIP

Applicable Discount	
Georgia Residents add 6% Sales Tax	
Shipping Fees*	**6.50**
TOTAL	

MEMBER DISCOUNTS
A 15% discount is allowed to AEE members.
☐ AEE Member (Member No._____)

③ Select method of payment:
☐ **CHECK ENCLOSED**
☐ **CHARGE TO MY CREDIT CARD**
☐ *VISA* ☐ *MASTERCARD* ☐ *AMERICAN EXPRESS*

Make check payable in U.S. funds to: **AEE ENERGY BOOKS**

CARD NO.

Expiration date *Signature*

④ Send your order to:
AEE BOOKS
P.O. Box 1026
Lilburn, GA 30048

INTERNET ORDERING
www.aeecenter.org

TO ORDER BY PHONE
Use your credit card and call:
(770) 925-9558

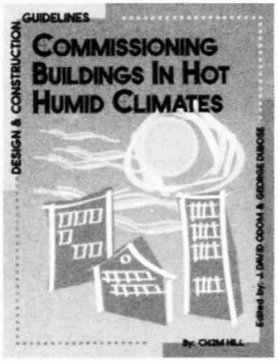
TO ORDER BY FAX
Complete and Fax to:
(770) 381-9865

INTERNATIONAL ORDERS
Must be prepaid in U.S. dollars and must include an additional charge of $10.00 per book plus 15% for shipping and handling by surface mail.

Learn proactive strategies to prevent potentially costly and dangerous building IAQ problems associated with hot, humid climatic conditions...

COMMISSIONING BUILDINGS IN HOT HUMID CLIMATES: DESIGN & CONSTRUCTION GUIDELINES

NEW



By CH2M Hill
Edited by J. David Odom and George DuBose

Prepared in cooperation with Disney Development Company, this book deals exclusively with aspects of the design, construction or operation of buildings for which even relatively minor errors can have devastating results when the building is located in a hot, humid climate. Disney's consistent adherence to the principles outlined in this manual has dramatically reduced problems in its new construction. The information presented combines the experience of CH2M Hill, the largest environmental engineering firm in the U.S., and Disney, one of the premier facility planning and management firms in the world. Key issues covered include indoor air quality problem factors; hot humid climate considerations; new building failure; and a model for future success. Specifically addressed are schematic design, design development, final design, construction, and post-construction startup and system commissioning. The concepts and approaches presented are those which have proven successful in designing and operating problem-free indoor building environments in hot and humid locations.

ISBN: 0-88173-319-9

ORDER CODE: 0454

8½ x 11, 100 pp., Illus.
Hardcover, $69.00

CONTENTS

BOOK ORDER FORM

① Complete quantity, book title, order code, price and amount due for each book you wish to order:

QUANTITY	BOOK TITLE	ORDER CODE	PRICE*	AMOUNT DUE

② Indicate shipping address: **CODE: Journal 99**

NAME (Please print) BUSINESS PHONE

SIGNATURE (Required to process order)

COMPANY

STREET ADDRESS ONLY (No P.O. Box)

CITY, STATE, ZIP

Applicable Discount	
Georgia Residents add 6% Sales Tax	
Shipping Fees*	**6.50**
TOTAL	

MEMBER DISCOUNTS
A 15% discount is allowed to AEE members.
☐ AEE Member (Member No. _____)

③ Select method of payment:
☐ **CHECK ENCLOSED**
☐ **CHARGE TO MY CREDIT CARD**
☐ *VISA* ☐ *MASTERCARD* ☐ *AMERICAN EXPRESS*

Make check payable in U.S. funds to:
AEE ENERGY BOOKS

CARD NO.

Expiration date *Signature*

④ Send your order to:
AEE BOOKS
P.O. Box 1026
Lilburn, GA 30048

INTERNET ORDERING
www.aeecenter.org

TO ORDER BY PHONE
Use your credit card and call:
(770) 925-9558

TO ORDER BY FAX
Complete and Fax to:
(770) 381-9865

INTERNATIONAL ORDERS
Must be prepaid in U.S. dollars and must include an additional charge of $10.00 per book plus 15% for shipping and handling by surface mail.

Struhs noted, took actions during the pilot project and saved the company 60 hours of staff time, a $3,700 application fee, and a "lengthy" wait for permit approval.[35] It was one of those rare win-win situations. Said Struhs, "The company was still required to meet strict performance standards, so environmental protection was not compromised, and eliminating the permit review also resulted in a time savings for us."[36]

Additional results of the pilot project were:[37]

- 12 out of 18 companies reported changes to environmental-management structures;
- nine reported enhancement to environmental policies and procedures;
- four reported increases in environmental staffing;
- three reported increased access of environmental managers to formal business decision making;
- two reported increases in environmental training;
- two reported increased budgets for environmental-management activities;
- 19 firms said the certification process helped in identification of, and compliance with, applicable rules;
- 12 firms said that ERP would have a positive impact on their ability to implement pollution prevention (five firms were neutral on this question, and one firm was mixed); and
- seven companies reported "insignificant costs," others spent less than $15,000 and/or 200 hours of staff time to comply.

Businesses involved in the ERP were generally satisfied with the flexibility it offered, noting that their own internal work complemented the DEP's focus:

> *We can't dictate environmental work from a desk in an office; we need a working relationship on the floor, transmitting what we need to the employees. I think the ERP is similar to this—the same "handshake" from the DEP side down to us. We still need to have a proper attitude... some look at the program as a burden, but I see it as a polite reminder to know with what I'm supposed to comply.*[38]

Environmental protection, not regulatory compliance, is the stated goal of the Environmental Results Program, and there have been demonstrable results from the pilot program. There was a 43 percent reduction in fugitive emissions of the carcinogen PERC (perchloroethylene) from the drycleaners enrolled in the program, and a 99 percent reduction of discharges of silver from photoprocessors.[39] Some businesses were able to cut usage of chemicals that were superfluous:

> *As part of FRP, we have a relatively detailed checklist, we are aware of these things. That's helped in where we stand. A lot of substances that we used, we wondered "Why are we using these things? Why do we need these materials?" In one case, it was because the department manager said "That's the way I learned at this other company." We didn't have financial gains from this program, but we did identify hazardous materials that were being used for no logical reason, other than someone didn't know any better.* [40]

Despite the political support and early indicators of success, however, program implementation faced some obstacles. Unionists and agency staff viewed the ERP as an attempt to eliminate jobs in a heavily unionized state. Environmental advocacy groups assumed that, as an initiative of the first Republican commissioner of the Department of Environmental Protection in state history, the ERP would actually eviscerate environmental protection in the state. Finally, agency staff had been caught by surprise: Trudy Coxe, Secretary of Environmental Affairs, had proclaimed the ERP's inception to the media before the staff had been briefed.

According to Bedwell, the EPA also resisted the program. Massachusetts was given a very short leash by the federal government in implementing changes to its programs. Indeed, Bedwell characterized

the federal/state relationship as "a parent-child relationship... Not only are we being told to clean up our rooms, but we're being told how to clean them up."[41] The EPA was concerned that it would lose this authority. Under the ERP, firms would not have to seek and gain approval for individual pieces of equipment, nor furnish detailed information about the equipment they use, or the processes they employ—information that EPA had long collected, though rarely used.

The EPA was also recalcitrant about the waiving of some regulations that were necessary to insure the operation of the program and avoid putting corporations in double jeopardy. One of the keystones of the Environmental Results Program was its flexibility, the latitude it gave to work around existing rules and regulations and "replace traditional bean-counting exercises of the past, not simply layer[ing] on top of what is already required.[42] The EPA was simply not willing to sign off on the program entirely, fearing that waiving some requirements would establish a precedent for polluters. By late 1998, Massachusetts still did not have a final agreement negotiated with the EPA.

Even without the formal acknowledgment of an EPA agreement, the Massachusetts DEP has made some assurances that were "not technically allowed."[43] In the pilot program dealing with dry cleaners, the DEP offered a two-year reduction in the standard five-year window during which dry cleaners must retain records of perchloroethylene utilization. The EPA took issue with this, and the Massachusetts DEP claims EPA threatened to "withhold the delegation of certain federal air pollution control authorities to the state and the disbursement of some federal grants that have helped in the implementation of the ERP."[44]

Surprisingly, even some of the beneficiaries of the ERP were skeptical of the plan. Rather than celebrating over the prospect of less paperwork and more flexibility, corporations were also, to a lesser extent, resistant to change.[45] The new industry standards embodied a change for participating companies that included a commitment not to pollute and a pledge to make an annual declaration of what has been done to insure compliance, in a publicly available report signed by a high-ranking officer of the company. They viewed these requirements as a vast increase in liability for a company, a loss of the security that they had with permits. Other complaints heard from the industry side came from businesses that had grown familiar with the command-

and-control system. The old way limited their need for independent knowledge of environmental issues, "provided easy answers regarding what equipment was needed," and "did not require companies to expend resources on determining such things as their emission rates.[46]

DEP's Bedwell admits that bringing people into the process could have been done better.[47] Too little formal dialogue occurred between staff and agency management to explain why the ERP was necessary, seek their buy-in and input, and reassure them that the ERP wasn't a jobs-cutting measure. Still, during the coalition-building process, the ERP planners did talk to many outside participants in both agency management and staff on an informal basis. They also consulted agency opinion leaders who'd been there for many years, giving them responsibility to implement the ERP. Though Bedwell was "instantly suspect" because of his experience in the business sector, some agency personnel, tired of "bean counting," strongly supported the ERP and rose to the challenge of the ambitious timelines and goals that had come from the commissioner.[48]

The process of bringing together disparate groups behind the ERP involved give-and-take for everyone—industry, the agency, and environmental activists. Not surprisingly, environmental activists were often the most reluctant to compromise, since they suspected the motivations of the administration. They perceived the ERP's main goal as reducing regulation, not heightening enforcement. Paul Donohue, president of the Massachusetts Organization of State Engineers and Scientists, fretted that the plan would give too much discretion to companies who generate hazardous wastes, thereby "compromis[ing] 25 years of environmental progress.[49] Likewise, Rob Sargeant of the Massachusetts Public Interest Research Group noted that:

> *This is the barn door opening. I don't think we want big chemical facilities self-certifying their compliance with environmental standards. I'm on the design group and we have had some reservations about this all along, especially not knowing all the details. There are no solid answers.*[50]

In this case, however, the suspicion of the environmental groups may have helped the process by ensuring the accountability of the firms involved and projecting a watchdog stance. The environmental

groups also "represented" environmental interests throughout the process, pushing for more-stringent enforcement methods.

The environmental groups have also applauded some of the ERP's work in ferreting out those companies in the program who were not in compliance. In 1998, Walgreen and CVS, two photo-processors, were fined a total of $55,000 for not properly documenting their disposal of silver.[51] Jim Gomes, president of the Environmental League of Massachusetts, chimed, "Thanks to the DEP, the enforcement picture is becoming very clear: photoprocessors that don't take care of the environment expose themselves to fines. This is a very positive development, a true Kodak moment."[52]

Lessons from Massachusetts

Massachusetts ran into problems with federal regulators who were concerned about granting greater autonomy to the states, and like New Jersey, the DEP was criticized by some environmental groups for weakening its mission of environmental protection. Despite this, Massachusetts showed a commitment to flexibility that was previously absent in environmental protection programs. And Massachusetts's willingness to experiment was paying off in environmental improvement for small business owners.

CONCLUSIONS AND RECOMMENDATIONS

These state environmental programs focus on institutional innovations that emphasize flexibility and encourage private stewardship. Moving the permitting process towards greater industry flexibility allows the government to concentrate on crafting incentives for environmental protection, rather than acting as a detailed plant manager and mandating certain types of equipment or processes.

Assuming that the comparative advantage of government is enforcement against public harms, the strength of the private sector is its resilience and adaptability, qualities crucial to solving environmental problems. Each of the state programs examined here is based in some part on this division of labor, recognizing where markets can make a difference. As the Dutch government realized in the early 1990s:

> *Environmental problems cannot be solved simply through obligations imposed unilaterally by government. It is necessary to seek other instruments which are more in line with the concept of individual responsibility for ensuring a clean environment.*[53]

This process of selecting the "right mix of instruments" is not an easy one. Each of the states that has implemented or tried to implement permit innovations has confronted a series of obstacles, some from expected quarters and some unforeseen. Environmental groups are frequently opposed to any perceived weakening of enforcement and compliance, while federal regulators are concerned that their authority will be less effective if the states are allowed to go their own way. Business leaders are worried about their possible liability if they participate in new programs and are often not willing to invest new resources in a plan that may not come to fruition or may leave them open to enforcement actions by "outsiders." Finally, management in state agencies attempting to reorient their departments may face opposition from their own employees, who have a standard operating procedure and are likely not always receptive to the prospect of sudden change.

The shift to alternative permitting regimes has exposed the deeper demarcation between the traditional view of environmental regulation and a new approach. The traditional view, like the traditional permitting structures, focused on punishment as the measure of success. Compliance rates were the goal, rather than tangible environmental improvement. Thus, opponents of the New Jersey facility-wide permit could accept the permit in practice, but only if it had more onerous restrictions (thus negating what it actually attempted to achieve).

The new approaches to permitting, typified in the states examined in this study, rely on a model that focuses on performance measures, rather than procedural measures. Massachusetts's experiment succinctly summed it up in its title: the Environmental Results Program. These results must be attained from a bottom-up determination of goals, involving those directly affected by those choices, and not from an "obligation imposed unilaterally by the government."

Despite the numerous obstacles that exist and will continue to exist, several states have been able to simplify and reform the permit process, injecting greater flexibility while continuing to protect the environment. In many cases, the greater ease of the process, coupled

with a less-adversarial relationship between government and industry, can improve environmental protection in a way not possible under the old permits.

For states that wish to institute their own innovations and implement flexibility into their permitting practices, how can they go about this change? What lessons can be learned from the cases presented above?

In order to implement a successful innovation in permitting, states should take care to follow these guidelines:

- *Insure involvement by affected constituents:* By bringing all parties to the table early, and letting them voice their concerns, an atmosphere of inclusion is created. Rather than springing changes on the community, as the Massachusetts ERP did, allowing all groups to have their say will increase the chances for acceptance of changes.

- *Balance goals:* Involving all parties does not mean that every interested member of the community can have the opportunity to derail a project.

- *Reorganize environmental departments:* This may help circumvent some of the problems that entrenched interests can cause. As a regulator at the Minnesota Pollution Control Agency noted, "The world hasn't changed, we have. The day of the single-media expert is gone. If you don't understand linkages between your area of expertise and others, you won't be successful."[54]

- *Involve the EPA:* EPA will probably become involved at some stage of the innovation process. Some states recommend bringing the EPA on board as quickly as possible, while others recommend a later-stage involvement.

Once these guidelines have been adhered to, the following elements will help facilitate innovation:

- *A "grace period" during implementation:* A form of liability immunity for procedural and noncriminal permit violations, this pe-

riod should allow companies that wish to improve their processes some leeway and freedom from prosecution. This type of amnesty should follow the lines of Massachusetts's ERP, which waived provisions for photoprocessors that would have impeded the ERP's successful completion. Of course, this will also involve the EPA at the bargaining table if federal statutes are to be debated.

- *Concurrent compliance assistance:* Many businesses are violating emissions caps or standards simply because they don't know what the standards are. A form of assistance, coupled with temporary liability immunity for noncriminal permit violations, will help businesses understand their impact on the environment and allow them to change.

- *Intensive background knowledge:* Permit innovators need to know the industries and the companies they are addressing. Facility-wide permits and industry standards work because of similar processes that lend themselves to simplification. Companies need to be in compliance before they can go beyond compliance. If they ignore the terms of the agreement, however, the state regulatory body should be able to enforce and (if necessary) penalize.

- *Finally, knowledge of the political climate:* Some states are simply unable to implement this flexibility because of the prevailing political mood at the time. Christine Todd Whitman was able to implement the facility-wide permit in large part because of bipartisan support for the program. Other experiments in other states have not been as successful because of the populace's mood.

Following this checklist will not guarantee success of an innovative program, but these criteria will lessen the chances of failure. For, as these states have shown, innovation is experimentation.

References

1 Max Weber, *Economy and Society*, vol. 3, ed. Guenther Roth and Claus Wittich (New York, NY: Bedminster Press, 1968), p. 979.

2 We focus here only on the procedural problems associated with permits, not the more fundamental challenge of whether a particular environmental standard is appropriate.
3 Peder A. Larson, Minnesota Pollution Control Agency, Testimony Before the U.S. House of Representatives Committee on Commerce, Subcommittee on Oversight and Investigations, November 4, 1997.
4 Rick Mullin, "'New Jersey's New Take On Industry," *Chemical Week,* September 10, 1997, p. s3.
5 Ibid.
6 Ibid.
7 Dennis J. Krumholz, "Changing Direction Without Losing Focus," *New Jersey Law Journal,* June 6, 1994, p4.
8 Randall Kirkpatrick, "Why New Jersey Doesn't Work," *Business Journal of New Jersey,* vol. 10, no. 6 (February 1993), p. 38.
9 James T. Prior, "New Jersey Open for Business and Environment," *New Jersey Business,* March 1995, Sec. 1; pg. 14.
10 Interview with Al Pagano, E.I. DuPont, New Jersey, December 8, 1998.
11 Gary A. Greene, "Governor Whitman Fosters a Pro-Business Change in Environmental Laws and Regulations," *The Metropolitan Corporate Counsel* (November 1995), p. 57.
12 "Governor Whitman Signs Overhaul of Air Pollution Law," *The Metropolitan Corporate Counsel,* October 1995, p. 52.
13 Dan Beardsley, Terry Davies, and Robert Hersh, "Improving Environmental Management: What Works, What Doesn't," *Environment,* vol. 39 no. 7 (September 1997), p. 6.
14 Barry G. Rabe. "Facility-wide Permits an Environmental Regulatory Integration: Lessons from New Jersey," *National Environmental Enforcement Journal,* April *1997,.*
15 Frank Gorski, Environmental Health and Safety Manager, Huntsman Polypropylene Plant, Woodbury, New Jersey, at National Advisory Council for Environmental Policy & Technology Information Impacts Committee Meeting, September 10-11, 1996.
16 Ibid.
17 Beardsley, *et al.,* "Improving Environmental Management: What Works, What Doesn't,." p6.
18 Diane Mastrull, "An In-Your-Face Tactic for Economic Development," *Philadelphia Business Journal,* Vol. 14 No. 45 (January 5, 1996), p. 18; also Peter Silverberg, "Huntsman Polypropylene Corporation Receives Facility-wide Permit," *Chemical Engineering,* vol. 103, no. 1 (January 1996). p. 45.
19 Ibid.
20 Bruno Tedeschi, "Environmentalists Lukewarm to Both Whitman, McGreevey," *The Bergen Record,* October 6, 1997, p. Al.
21 Ibid.
22 Joseph E. Gonzalez Jr., "Industry Group Responds to Open For Busi-

ness," *The Bergen Record*, August 19, 1996, p. A 11.

23 Kelly Richmond and Dunstan McNichol, "A Valuable Ally: Ombudsman Aids Businesses," *The Bergen Record*, July 2, 1996, p. Al.

24 Rick Mullin, "Producers Are Frustrated With Pace of Change," *Chemical Week*, September 8, 1998, p. S4.

25 Peder Larson, Minnesota Pollution Control Agency, plenary session meeting at Environmental Council of the States Annual Conference, October 28, 1998.

26 Commonwealth of Massachusetts, Executive Office of Environmental Affairs and Department of Environmental Protection, "The Environmental Results Program," November 1997.

27 Ibid.

28 Ibid.

29 Interview with Allan Bedwell, Deputy Commissioner, Massachusetts Department of Environmental Protection, March 1998. Unless noted, all other quotes in this section come from this interview.

30 Ibid.

31 Commonwealth of Massachusetts, Executive Office of Environmental Affairs and Department of Environmental Protection, "The Environmental Results Program," November 1997.

32 Prepared Testimony of David B. Struhs, Commissioner, Massachusetts DEP, before the House Commerce Committee Oversight and Investigations Subcommittee, November 4, 1997.

33 DEP News, Massachusetts Department of Environmental Protection, November 13, 1997.

34 Ibid.

35 Ibid.

36 Ibid.

37 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, and Department of Environmental Protection, "Evaluation of the Environmental Results Program Demonstration Project," November 13, 1997.

38 Bob Fife, Komtek Industries, Worcester, Massachusetts, interview with the author, December 3, 1998.

39 Prepared Testimony of David B. Struhs, Commissioner, Massachusetts DEP, before the House Commerce Committee Oversight and Investigations Subcommittee, Boston, Massachusetts, November 4, 1997.

40 Bob Fife, Komtek Industries, Worcester, Massachusetts, interview with the author, December 3, 1998.

41 Margaret Kriz, "Feuding with the Feds," *The National Journal*, vol. 29, no. 32 (August 9, 1997), p. 1598.

42 Prepared Testimony of David B. Struhs, Commissioner, Massachusetts DEP, before the U.S. House of Representatives Committee on Commerce, June 23, 1998.

43 Bedwell interview.

44 "Massachusetts Nears Deal with USEPA to Expand Permit Alternatives," *State Environmental Monitor,* vol. 3, no. 1 (January 12, 1998), p. 4.
45 John J. Monahan, "Weld Unveils Deregulation of Pollution," *Worcester Telegram & Gazette,* May 1, 1996, p. El.
46 "Environmental Community Says 'Jury Still Out' On Mass. ERP," *State Environmental Monitor,* vol. 3, no. 1 (January 12, 1998), p. 4.
47 Bedwell interview.
48 Ibid.
49 Monahan, "Weld Unveils Deregulation of Pollution."
50 Ibid.
51 CVS, Walgreens Chains Fined for Polluting," *New Bedford Standard-Times* On-line, June 26, 1998, Web site: http://www.s-t.com/daily/06-98/06-26-98/b06bu103.htm.
52 Press Release, Massachusetts Department of Environmental Protection (DEP), June 25, 1998.
53 Jit Peters, quoted in Daniel Beardsley, *Incentives for Environmental Improvement: An Assessment of Selected Innovative Programs in the States and Europe,* Global Environmental Management Initiative, September 1996, p. 27.
54 Quoted in Minnesota's Department of Administration "Data Collection on Goal 21" report.

ABOUT THE AUTHOR

Christopher A. Hartwell is an environmental policy analyst at Reason Public Policy Institute, and is project manager for RPPI's State Innovations Project, which examines the continuing trend towards state and local-based environmental management. He is also the co-author of a forthcoming study on watershed management and another study on Minnesota's environmental innovations. Mr. Hartwell received his B.A. in political science and economics from the University of Pennsylvania and his Master's of Public Policy from Harvard University.

Prior to his work at RPPL Mr. Hartwell was at the Harvard Institute for International Development (HIID), where he was involved with environmental economics in the Czech Republic, editing an economics textbook for researchers at Charles University in Prague. Mr. Hartwell has also worked at the German Ministry for Economics in their European Department and at the U.S. Department of Labor.

Reason Public Policy Institute, (310) 391-2245, fax (310) 391-4395; chrish@reason.org; www.reason.org