

ARTICLES

Some Thoughts on the Interdisciplinary Aspects of Environmental Enforcement

by Joel A. Mintz

Editors' Summary: A multitude of parties are involved in the enforcement of environmental laws. While attorneys, scientists, investigators, and other trained professionals working at the federal, state, and local level are all necessary to ensure compliance, the effective enforcement of environmental laws requires teamwork. In this Article, Prof. Joel Mintz explores this issue, focusing on environmental enforcement personnel within EPA. He looks at the typical circumstances under which civil and criminal cases are brought, describes the various skills different players bring to the table during the enforcement process, and presents an ideal model of interdisciplinary enforcement cooperation. He also reviews the historical background of environmental enforcement and the trends that have taken place at EPA over the years. And while future levels and styles of cooperation among environmental departments and agencies is too difficult to predict, he offers some recommendations to promote effective teamwork in the years to come.

I. Introduction

Effective cooperation between individuals trained in different academic and professional disciplines is one of the fundamental elements of a successful environmental enforcement program. Whether they work at the local, state, or federal level, the attorneys and technically or scientifically trained professionals who are responsible for enforcing environmental standards are called upon to work together in a variety of ways toward the common goal of environmental protection. Their ability to function and communicate with one another and with others—as investigators, analysts, negotiators, and litigators—is critical to the intensity, vigor, and efficacy of their efforts.

Focusing on the U.S. Environmental Protection Agency (EPA), this Article explores both the reality and the promise of interdisciplinary teamwork among government environmental enforcement personnel. It begins with descriptions of the development of both civil and criminal environmental enforcement cases under typical circumstances at the federal level, with particular emphasis on those points in the case development process in which attorneys and engineers (and/or other scientists) are called upon to meld their professional skills. The Article then presents an ideal model of interdisciplinary enforcement cooperation: a set of roles, ac-

tions, and attitudes that represent interdisciplinary teamwork at its most efficient and effective. From there, the Article reviews the historical background of interdisciplinary environmental enforcement work, including the broad trends that have established the often tense and shifting context in which such work is carried out. Finally, the Article discusses the future of interdisciplinary enforcement efforts by examining some emerging challenges and opportunities that may confront government environmental enforcement professionals in years to come.

II. The Reality: An Overview of Interdisciplinary Cooperation in Enforcement at EPA

At both federal and state levels, information critical to bringing administrative and civil enforcement cases—the compliance status of particular sources of pollution—may come from one or more of four sources. These sources include on-site inspections; self-monitoring, recordkeeping, and self-reporting; complaints from citizens; and ambient environmental monitoring of conditions close to facilities.

Government inspections, which are usually conducted by engineers and technically trained individuals, may be announced in advance or conducted on a surprise basis. Where search warrants are required, such inspectors will consult with attorneys for advice and assistance.

Inspections vary in complexity (and resource-intensiveness), from a quick “walk-through” survey of the premises, to a more thorough set of plant personnel interviews, reviews, and critiques of self-monitoring records along with

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examinations of process and pollution control equipment. They may also include all of the above as well as the collection and analysis of physical samples of pollutants. Inspections often compile relevant and reliable information regarding compliance status. However, because they tend to be resource-intensive, inspections must be carefully planned, targeted, and carried out by government enforcement officials.

Monitoring, recordkeeping, and reporting of operational and discharge levels by pollution sources themselves also provide extensive information regarding compliance status. Data gathered from those sources relies heavily on the capacity of sources to provide accurate data, as well as on the integrity of source personnel. This approach may increase the level of management attention within companies that are devoted to environmental protection. However, it also increases the paperwork burden placed upon both regulators and regulated entities.

Citizen complaints can sometimes detect environmental violations that have not come to the attention of government enforcement personnel through facility inspections and self-reporting. However, such complaints are only submitted to government officials on a sporadic, unpredictable basis. Moreover, environmental officials have no control over the quality of the compliance information they receive from citizen informants, nor can they regulate the depth or frequency of that information.

Finally, area monitoring (which is also generally conducted by government technical personnel) is useful as a means of checking whether applicable pollution control rules and standards are doing an adequate job of protecting the environment and public health. However, monitoring the ambient environment may be expensive and resource intensive. Furthermore, it is often difficult for the government to prove a causal connection between the environmental pollution detected in a specific area and a particular source or sources of contamination.

In recent years, EPA officials have added two other means of gathering relevant compliance information: multimedia enforcement and sector-based enforcement. Multimedia enforcement relies on intensive coordinated inspections by teams of EPA engineers and technical experts drawn from different, single media-focused programs, e.g., water, air, hazardous waste, etc. Multimedia inspections often yield evidence of a plethora of environmental infractions that are pursued by EPA regional counsel attorneys with expertise in a broad range of EPA regulatory requirements, in tandem with technical experts from different participating medium program offices.

In the 1990s, EPA also began to pursue large-scale national, "sector-based" enforcement initiatives against particular industries (such as oil refineries, diesel engines, wood products, and power plants) that the Agency determined were sources of extensive environmental pollution. EPA's decisions as to which industries to target for such initiatives were based on sophisticated investigations of industrial performance. These investigations relied upon improved computerized EPA databases and the increased use of other databases (such as Public Utility Commission and Federal Energy Regulatory Commission records of utility capital projects) to enhance the Agency's ability to do accurate, swift, and effective enforcement targeting.

After EPA and state officials gather all of the data they need to make a compliance determination for a particular source, they proceed to complete such a determination. This task is generally performed by staff engineers working from available engineering formulae and "emission factor calculations." Staff engineers also generally determine the type of enforcement action to take in the first instance. Where they determine that an informal action (such as a warning letter to the source) is appropriate, these enforcement engineers sometimes consult with staff attorneys as to the precise language that should be employed in communicating with the owners and operators of suspected violators.

If and when government officials determine to take more formal enforcement actions against violators, the involvement of environmental attorneys usually expands. Thus, for example, if a simple phone call or warning letter will not suffice to bring about source compliance, governmental enforcement officials will often issue a more formal, written notice of violation, followed by face-to-face negotiations with representatives of the source and, if necessary, formal administrative or judicial enforcement actions. In those contexts, government enforcement attorneys frequently play a leading role, with enforcement engineers also actively engaged in all stages of the process.

At the federal level, environmental criminal (as opposed to civil) cases are developed by EPA and the U.S. Department of Justice (DOJ) in a process that is parallel to, yet separate and distinct from, the development of civil enforcement matters. Criminal cases first come to the attention of government officials in a number of ways. A high percentage of them—"perhaps a majority," according to one EPA staff attorney familiar with EPA's criminal enforcement program—begin with tips from present and former employees of companies that are knowingly and willfully violating environmental requirements.¹ These "whistleblowers" often possess accurate information that their employers are violating environmental laws by, e.g., dumping untreated hazardous wastes down sewer lines, intentionally misrepresenting the extent and nature of the company's environmental releases in written reports to EPA or state officials, designing environmental audits so as to omit any mention of important pollution-generating operations, or otherwise intentionally breaking or evading environmental laws. Similar information about illegal practices may also be passed along to governmental officials by neighbors of environmental violators and by sales representatives of firms that do business with such companies.

Self-reporting documents submitted to EPA by regulated dischargers or emitters of pollution are another fertile source of federal environmental criminal cases. Where such documents repeatedly report exactly the same monitoring value, or where they indicate that the volume of pollutants that is reportedly being released is unrealistically low for a facility of that reported size, EPA's suspicions are very likely to be raised.

Many criminal cases also come to EPA's attention from non-EPA civil inspectors (such as local firefighters, hazmat teams, and representatives of state and local environmental or public health departments) who happen to notice environmental violations at facilities that they inspect. Some other criminal cases are referred to EPA regional criminal attor-

1. Personal communication to author from an EPA staff attorney (Mar. 2004).

neys by civil investigators employed by EPA or their counterparts in state and local agencies and departments.

EPA's organizational structure for developing environmental criminal prosecutions is quite decentralized. In 2004, the Agency had a staff of nearly 250 professional criminal enforcement investigators housed in field offices around the United States. These investigators have the lead role in investigating particular cases. In fact, they have a high level of autonomy. They work outside the organizational structures of regional offices and report directly to EPA headquarters.

Additionally, each EPA regional office employs a full-time regional criminal attorney who works closely with the Agency's criminal investigators and with other EPA personnel to assist in the development of environmental prosecutions. EPA's National Enforcement Inspection Center (NEIC) frequently also provides technical support to EPA criminal investigators. As one knowledgeable EPA attorney described a key aspect of NEIC's role:

EPA does many cases that involve companies who [unlawfully] dump hazardous wastes into city sewers. To prosecute these cases, the Agency must do covert monitoring of sewers and sample what they receive. The NEIC people know the appropriate kinds and numbers of samples to take for different enforcement purposes (e.g. getting a warrant, proving a prosecution, etc.). They are a very important part of the prosecution team, yet they often receive less prestige and respect than they deserve.²

Where they believe it is warranted, EPA criminal investigators are authorized to open criminal enforcement cases on their own authority, without first clearing that decision with other government officials. When they do so, the investigators generally initiate a series of interviews with potential witnesses to develop admissible evidence for trial. In that context, the investigators often attempt to work together with trained investigators from other federal agencies (including the Federal Bureau of Investigation, the Drug Enforcement Agency, the Immigration and Naturalization Service, the U.S. Coast Guard, the U.S. Fish and Wildlife Service, and others) as well as with state agency investigators. This arrangement allows EPA agents to have government observers present when they conduct witness interviews—a usual practice if and when the case goes to trial.

As criminal evidence is gathered in cases, EPA's criminal investigators often contact attorneys from the DOJ's Criminal Enforcement Section in Washington, D.C., and/or particular assistant U.S. attorneys in U.S. attorneys offices around the country that have a special interest (or expertise) in environmental criminal cases. These federal prosecutors are often briefed on a regular basis as evidence is amassed by EPA investigators, especially in those cases that appear appropriate for prosecution in the judgment of EPA criminal investigators and the investigating teams that they lead. The prosecutors may provide advice to the investigators as to additional items of evidence that should be gathered or other strategic matters. Moreover, particularly in difficult to investigate or complex environmental cases, a federal prosecutor may conduct some aspects of an investigation himself or herself under the auspices of a federal grand jury.

When prosecutors and investigators involved with a potential criminal case are satisfied that their investigations are complete (in the sense that they have in hand sufficient evidence to prove to a jury beyond a reasonable doubt all elements of the environmental crimes in question), they may proceed by obtaining indictments from the grand jury or by filing a criminal information with the appropriate U.S. district court. That last step, indictment or information, may culminate months or even years of painstaking case development and data gathering by government personnel. It generally heralds the start of a formal prosecution of the defendant.

Indictment or information is often preceded or accompanied by detailed settlement negotiations between representatives of the federal government and attorneys for the defendant. Moreover, since the government has an ongoing discovery limitation in criminal actions, indictment or information generally concludes the government's opportunity to evaluate and gather evidence of environmental crimes in particular cases.

Clearly, both the administrative/civil enforcement case development process and the typical criminal enforcement investigation described above call upon the unique skills and input of both attorneys and engineers. Members of both disciplines have an interest in an accurate determination of the nature and extent of environmental violations in cases they are preparing or pursuing. Both disciplines want a clear picture of the environmental damages done by the pollution sources on which they are focused. Moreover, especially in civil cases, engineers and lawyers are both interested in the implementation of a carefully designed, fully effective program for achieving compliance at these sources.

Particularly where it is encouraged by able supervisory personnel, these converging interests often give rise to effective interdisciplinary coordination. Nonetheless, the working relationships between environmental enforcement attorneys and enforcement scientists and engineers continue to vary widely by individual and by governmental organization. Where difficulties arise, it is often a result of disciplinary differences in training, professional attitude, personality, and vocabulary, which lead to conflicting opinions as to how to resolve enforcement problems.

For the most part, attorneys view the civil environmental enforcement cases that are assigned to them as disputes between conflicting parties. They also sometimes have a tendency to be more moralistic about the cases they work on, casting them in black and white terms as a "struggle" between the "good" public-serving government and "bad" self-serving "polluters." In addition, both by training and by trait, attorneys often tend to be more talkative, outgoing, and assertive than their engineer/scientist partners.³

In contrast, engineers are focused more on resolving problems by the application of accepted scientific principles than they are on "doing good" in the world. Their approach to problem solving involves gathering technical evidence and applying correct formulae or principles to that evidence. They frequently tend to be less outgoing and ver-

2. Personal, anonymous communication to author from an EPA staff attorney (Mar. 3, 2004).

3. This observation is based on the author's professional experience as an enforcement attorney and chief attorney in EPA Region 5 and EPA headquarters. It is not invariably true. As with all generalizations respecting the personalities of particular professions, exceptions almost always exist.

bal than attorneys are, with skills that are more analytical than communicative.⁴

These various differences often translate into differences in disciplinary working styles and approaches. Acting out of premises and motives that are entirely acceptable in their own professions, attorneys and engineers may inadvertently run afoul of one of the taboos of their counterparts' profession. These misunderstandings are most likely to arise in the give and take of civil enforcement settlement negotiations, where freewheeling discussions give participants spontaneous opportunities to "jump in" to the conversation and elaborate on, or rebut, points that have been made. They need not, however, be fatal to effective interdisciplinary cooperation.

Interdisciplinary teamwork is obviously a part of the development of criminal environmental cases as well. As we have seen, the lead role in federal criminal investigations is generally reserved for EPA criminal enforcement investigators. These individuals are often experienced professional law enforcement officers, with years of service at other federal law enforcement agencies prior to coming to work at EPA.

EPA criminal investigators do not work in a vacuum, however. They depend considerably on environmental legal advice from the Agency's regional criminal attorneys and on guidance on criminal law and procedure that they receive from assistant U.S. attorneys and criminal trial attorneys within the DOJ. Moreover, as noted above, technical experts from the NEIC are often involved in covert monitoring and sampling of chemicals intentionally dumped into public sewer systems. They perform a dirty, dangerous job that is critical to the success of a criminal prosecution.

The extent to which differing disciplines work effectively together in the development of criminal environmental cases is, in large measure, a function of the attitudes and personalities of the individuals involved. Particularly where assistant U.S. attorneys, DOJ attorneys, and EPA criminal investigators are unappreciative of the work of other members of their prosecution teams, morale suffers and the quality and quantity of the collective work effort may experience a long-term decline. On the other hand, where all members of prosecution teams respect one another's expertise and try to assist and reward one another for work well done, the entire criminal enforcement effort is enhanced and energized.

III. The Ideal: Some Thoughts on the Optimal Interdisciplinary Relationship in Environmental Enforcement

What elements will contribute to the success of interdisciplinary coordination in the enforcement of environmental laws? No magic panacea exists that will assure smooth interdisciplinary cooperation. Nonetheless, there are certain practices, arrangements, attitudes, and habits that, if adopted by governmental enforcement teammates, will go a long way toward building the mutually helpful, supportive relationships between enforcement attorneys and enforcement engineers.⁵

First, *all* members of interdisciplinary environmental enforcement teams must carry out their tasks with a common purpose in view. That purpose may simply be to protect the environment. More specifically, enforcement teammates may aim to bring errant pollution sources into compliance as promptly as possible and/or to hold them accountable for their environmental failures. However it is articulated, staff members' common purpose should be emphasized frequently to the individual enforcement professionals by the first-line supervisors of each member of an interdisciplinary enforcement team. A common goal can serve to motivate all members of the team to succeed, and it may also facilitate the realization that both their individual *and* their collective success depends on their working together harmoniously to keep their enforcement cases moving forward expeditiously.

Second, early in their handling of a civil enforcement case, the enforcement attorney and engineer assigned to it should develop a written, mutually acceptable case development plan that sets forth who will do what and when with respect to anticipated developments in the case. This plan, which can be updated and revised as the case progresses, should include an estimated timetable for further information gathering and site visitations, for the beginning and completion of settlement negotiations, and for the involvement of DOJ attorneys, expert witnesses, and/or others (inside or outside of EPA) whose assistance will be helpful in the case.

Third, enforcement attorneys and engineers must communicate effectively and frequently the amount and type of evidence that is needed to demonstrate that a source of pollution is (or is not) in violation of a particular environmental requirement as well as the most effective, reliable techniques that should be encouraged for the source to achieve compliance. Part of the responsibilities of each enforcement team member should be the education of his or her colleague from other disciplines as to how the team member's own profession analyzes the compliance problems at different types of facilities. The enforcement team must be capable of proposing unified alternative government strategies to eliminate source noncompliance. Moreover, they must evaluate together the efficacy of any pollution control strategy that representatives of the source may propose in settlement discussions.

Particularly at the early stages of civil enforcement matters, the interdisciplinary communication and mutual education that is needed to accomplish these important enforcement tasks may be furthered by an in-person visit by *all* members of the enforcement team to the facility or plant that is the target of the enforcement action. At the plant site, the engineer should explain to the attorney the facility's production process, the causes of the plant's environmental violation, and the most promising technical, pollution control solutions that may be applied to achieve compliance.

It may also be helpful for the attorney to accompany his technically trained enforcement teammate to court (or to at least to a formal administrative enforcement proceeding) to demonstrate how the legal process works. In that setting, the attorney can explain to the engineer the rudiments of plead-

4. Dale S. Bryson & David A. Ullrich, *Legal and Technical Cooperation for Effective Environmental Enforcement*, in U.S. ENVIRONMENTAL PROTECTION AGENCY & NETHERLANDS MINISTRY OF HOUSING, PHYSICAL PLANNING, AND ENVIRONMENT, INTERNATIONAL ENFORCEMENT WORKSHOP PROCEEDINGS 144-45 (1990).

5. A number of the ideas in this section were first suggested by two superb former EPA enforcement professionals, Dale S. Bryson and David A. Ullrich, in an incisive article, Bryson & Ullrich, *supra*

note 4. I acknowledge with pleasure my intellectual debt to them and to our widely respected, inspiring, former mutual boss, the Director of the EPA Region V Enforcement Division in the 1970s, James O. McDonald.

ing and motion practice, discovery, trial practice, the rules of evidence, and any other information that will allow the engineer to feel more secure and comfortable in future legal proceedings and settings.

Fourth, as the case progresses, both the attorney and the engineer assigned to it should be thoroughly familiar with the facts of the case and capable of communicating those facts to others within the government readily and accurately. It is particularly important that the staff enforcement team regularly and promptly keep their supervisors and managers, at all pertinent organizational levels, informed of every significant case development and event. That approach is all the more necessary where an enforcement case is unusually important and/or complex. In the end, supervisors and managers must approve any settlement or referral for formal enforcement action that enforcement staff members recommend. Typically, acceptance by those higher-ups will be far easier to obtain if they have been consistently briefed about how a case has progressed at every important stage in its evolution.

Fifth, enforcement engineers and attorneys must be completely candid with one another regarding any and all problems that unexpectedly arise in their cases. They should also make certain to brief one another with regard to any important conversations they have with significant individuals (from witnesses to representatives of sources to agency managers and supervisors). Moreover, enforcement staff members should keep one another apprised of any changes (or proposed changes) in statutes, regulations, policies, or guidance documents they become aware of that have any bearing on their cases.

Sixth, where they become involved in case settlement negotiations, enforcement attorneys and engineers should prepare together in person for each negotiation session by deciding certain matters in advance of bargaining sessions. Specifically, they should agree on who will lead the discussion for the government on which issues, what the agenda for the meeting will be, what substantive position they will take on all relevant issues, and what they hope to achieve in the session. Where settlement documents will serve as the basis for negotiations, the case attorney and engineer should prepare and/or review those documents together before the meeting and decide upon a unified strategy for having the documents “marked up” to their satisfaction in the forthcoming discussions. In addition, within a reasonable time following each negotiation meeting, the enforcement attorney assigned to a case should write a “memo to the file,” with separate copies to his or her engineering/technical counterpart and to all individuals within the agency’s supervisory and management structure with the authority to approve or reject case settlements. That memo should set forth the interparty agreements arrived at in the meeting, any remaining areas of disagreement between the parties, and an indication of when the next negotiation session is scheduled to take place.

Seventh, a number of factors outside of the enforcement staff’s control can also contribute to successful interdisciplinary environmental enforcement efforts. As already noted, the full support of supervisors—especially immediate supervisors—for interdisciplinary comity and coordination is an essential ingredient of enforcement success. It is also crucial that the enforcement staff have a sense that their entire agency or department, up to the very highest levels,

will be supportive of their stance, even if staff members very firmly disagree with positions taken by representatives of wealthy, politically influential companies in enforcement negotiations. As one veteran EPA enforcement professional once said, “good enforcement sometimes means having to say no to the guy in the thousand dollar suit.”⁶ Enforcement staff members are *much* more likely to take that difficult step where they feel confident that they will ultimately receive the support of their governmental superiors on charged and controversial questions.

Lastly, whether they work in an enforcement division in which differently trained professionals are integrated together or in offices separated along disciplinary lines, enforcement case attorneys and engineers should receive equivalent pay for the work they do. The artificial elevation of one group of professionals over the other, as reflected in unequal levels of compensation, tends to breed jealousies and resentments that can lead to damaging frictions in the pursuit of environmental enforcement cases.

IV. The Background: Political Events and Trends That Have (and Have Not) Affected Environmental Enforcement

For the most part, the interdisciplinary teamwork that is key to environmental enforcement success takes place at a low level of visibility. It is also substantially a function of the working styles and habits of a large number of individuals who comprise the enforcement staffs of federal, state, and local environmental agencies. The efficacy of interdisciplinary coordination is thus typically unaffected by any innovations in policy and approach that may be initiated by elected or appointed officials who occupy high-level posts within environmental departments.

There have, however, been some exceptions to this rule. To exemplify those, this section provides a brief description of certain key trends and events that have occurred in the history of enforcement at EPA.⁷ As it will illustrate, there have, indeed, been instances in which the actions of elected and appointed environmental agency leaders, as well as the U.S. Congress and to a lesser extent the courts, have been sufficiently far-reaching and dramatic as to affect the interdisciplinary interactions of federal environmental enforcement staff members. Although rare, depending upon the circumstances, such affects may benefit the implementation of environmental enforcement programs or else disrupt them quite significantly.

Enforcement of environmental laws has been considered a crucial activity of EPA from its very beginnings. Established by Executive Order by President Richard M. Nixon in 1970,⁸ EPA went through a period of rapid growth from 1970 to 1972 under the leadership of its first Administrator, William D. (Bill) Ruckelshaus. The Agency hired a great many new employees during this period, both in its Wash-

6. Personal communication to author from a former EPA enforcement official (Apr. 2004).

7. The section draws extensively from JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES (Univ. of Texas 1995). Readers who wish a more in-depth discussion of the historical events and developments mentioned herein should consult that work.

8. Reorganization Plan No. 3 (July 9, 1970). After being cleared through hearings in the U.S. Senate and the U.S. House of Representatives, EPA came into being on December 2, 1970.

ington, D.C., headquarters and in 10 EPA regional offices around the country. Enforcement (and particularly enforcement action against Fortune 500 companies) was emphasized as a priority activity by EPA's top leaders; its actual implementation was delegated extensively to regional office personnel.

In that early period, prior to the passage of the modern version of the Clean Water Act (CWA)⁹ and other fundamental federal legislation, there were often no federal laws that provided a clear legal foundation for initiating enforcement actions. Nonetheless, EPA's new, young, enthusiastic enforcement staff made creative use of conservation laws that did then exist (such as the Rivers and Harbors Act of 1899¹⁰ and early federal pesticide control laws¹¹) to "jaw-bone" polluters into cleaning up the massive pollution problems that plagued many parts of the United States.¹²

In this initial, formative period for EPA, a number of working arrangements, habits, and patterns were begun in Agency enforcement work that lasted long into the future. One of these was the practice of assigning regional office attorneys and engineers to work together in teams to develop and pursue particular enforcement cases and problems. As they did so, these staff members and their supervisors gradually established regular case development routines and began to learn how to integrate their disciplinary approaches.

Unfortunately, in their zeal to create change, EPA's new enforcement staff sometimes ran afoul of state environmental authorities, who were intent on guarding their pollution-control "turf" against federal incursions.¹³ EPA's first enforcement programs also had some initial criticism from congressional oversight committees.¹⁴ Nonetheless, the Agency's early work, particularly its creative, non-nonsense approach to enforcing environmental laws, won broad public praise. As former EPA enforcement manager Richard D. (Dick) Wilson later recalled, "it was a glory day. EPA was a new Agency and everyone was for it. You couldn't do anything wrong."¹⁵

This mood began to change during 1973 to 1976, the period that Russell E. Train served as EPA's Administrator. Like his rather more flamboyant predecessor, Train continued to support vigorous Agency enforcement efforts. Nonetheless, political problems arose for EPA during his tenure.

From 1973 to 1976, at the highest levels of the Nixon Administration, political support for environmental protection decreased significantly.¹⁶ At the same time, EPA's enforce-

ment staff became embroiled in disputes with industries over what pollution control technologies were needed to achieve compliance with newly established state implementation plans under the Clean Air Act (CAA) of 1970.¹⁷

Regional autonomy in enforcement matters expanded in this period, and most regions used their discretionary authority to emphasize administrative enforcement as their approach of choice in dealing with polluters.¹⁸ Under the newly enacted CWA, meanwhile, EPA made a massive (and successful) effort to issue national pollutant discharge elimination system permits to the thousands of sources who had applied for them.¹⁹ Regional relationships with the states appeared to improve modestly, as EPA's growing role in pollution control enforcement became more accepted by state-level officials. At the same time, however, rapid growth brought internal management problems and a greater need for supervisory controls over newly hired "problem employees."²⁰

Notably, however, none of the internal and external changes or obstacles that arose during the early 1970s resulted in discernable changes in the relationships between enforcement attorneys and engineers. Those interactions continued to vary from team to team within various EPA offices, and from EPA region to region. The attitudes and habits of individual enforcement staffers, and the extent of their willingness to coordinate their work plans and efforts with one another, remained crucial to the success of integrated enforcement efforts.

The advent of the Jimmy Carter Administration brought a different set of political changes to EPA. Marvin B. Durning, President Carter's choice to be EPA assistant administrator for enforcement, implemented an immense change in the Agency's enforcement approach. Durning instituted a "file first/negotiate later" policy in which all major violations of the CAA and CWA were to be referred by EPA regional officers, without prefiling negotiations, to Agency headquarters and the DOJ for civil litigation.²¹ Regional enforcement attorneys and engineers were required to prepare detailed litigation reports on their cases for the use of DOJ lawyers. And a controversial memorandum of understanding between EPA's new Administrator, Douglas M. Costle, and Attorney General Griffin B. Bell significantly expanded the role of DOJ lawyers in EPA enforcement matters.²²

Not surprisingly, regulated industries reacted to these enforcement changes with resentment and political resistance. They also persuaded their allies in some state environmental agencies to reassert their desire for greater autonomy, and EPA-state contention in the enforcement area was once again revived.²³

9. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

10. 33 U.S.C. §§401-466n.

11. For example, in 1974, EPA banned the pesticide dieldrin under an early iteration of the Federal Insecticide, Fungicide, and Rodenticide Act (the current version is codified at 7 U.S.C. §§136-136y, ELR STAT. FIFRA §§2-34). This highly toxic compound had been found in small quantities in the fatty tissues of over 99% of Americans tested. Dieldrin had also been detected in millions of chickens in Mississippi at levels that were more than 15 times the allowable limits.

12. See MINTZ, *supra* note 7. For a compelling account of this period, see JOHN QUARLES, *CLEANING UP AMERICA: AN INSIDER'S VIEW OF THE ENVIRONMENTAL PROTECTION AGENCY* (Houghton Mifflin 1976).

13. MINTZ, *supra* note 7, at 23.

14. *Id.*

15. *Id.* at 22.

16. See John Brooks Flippen, *The Nixon Administration, Politics, and the Environment* (1994) (unpublished Ph.D. dissertation, Univ. of

Maryland); RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW 75-79* (University of Chicago 2004); and RUSSELL B. TRAIN, *POLITICS, POLLUTION, AND PANDAS: AN ENVIRONMENTAL MEMOIR 118-20* (Island Press 2003).

17. MINTZ, *supra* note 7, at 25-26.

18. *Id.* at 27.

19. *Id.*

20. *Id.* at 24.

21. *Id.* at 28.

22. *Id.* at 29. See MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF JUSTICE AND THE ENVIRONMENTAL PROTECTION AGENCY (June 15, 1977) (available from the ELR Guidance & Policy Collection, ELR Order No. AD00867).

23. MINTZ, *supra* note 7, at 31.

Late in the Carter period, the public began to become aware of the public health dangers posed by the haphazard disposal of hazardous wastes. Agency leaders encouraged public concerns and addressed the hazardous waste problem by creating a Hazardous Waste Enforcement Task Force at EPA headquarters to spearhead Agency efforts to redress hazardous waste endangerments in the federal courts. EPA also lobbied Congress for the passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),²⁴ the Superfund statute, a goal finally achieved in the lame duck period of the Carter Administration.²⁵

Some of these trends and changes did, indeed, affect the way EPA attorneys and engineers worked together in carrying out their enforcement tasks during the Carter presidency. Many EPA regional office enforcement attorneys were distracted from their interdisciplinary efforts by disputes that arose with DOJ attorneys regarding the direction and resolution of particular cases. Regional enforcement engineers, for their part, were now called upon to work almost entirely in a litigation context. They were also asked to work with a new set of lawyers (from the DOJ) while continuing to cooperate with their disgruntled EPA attorney colleagues—a difficult challenge for some technically trained individuals with enforcement responsibilities.

The magnitude of these required adjustments during the Carter years paled, however, when compared to the wholesale shifts, distractions, threats, and instability that EPA's enforcement staff endured during 1981 to 1983, the first two years of the Ronald Reagan Administration. Although that period was short-lived, its events disrupted the day-to-day staff operations of EPA's enforcement work and traumatized EPA enforcement personnel more drastically (and for a longer time) than anything that has occurred before then or since at EPA.²⁶

The Reagan Administration switched EPA's enforcement preference from litigation to "nonconfrontational enforcement," an attempt to induce voluntary compliance on the part of environmental violators.²⁷ The Administration's political appointees put emphasis on deference to the states in enforcement matters. They also implemented a major Agency-wide reorganization that abolished the headquarter's Office of Enforcement and segregated EPA enforcement attorneys and engineers into separate organizational components (both at headquarters and the regional offices).²⁸ Rumors of imminent staff firings (known as rifs (reductions in force)) were widely circulated, and the Reagan Administration significantly cut EPA's budget, imposed a freeze on hiring new employees, and negotiated several case settlement agreements (outside the presence of the enforcement staff) that were widely viewed as "giveaways" or "sweetheart deals."²⁹

Although enforcement attorneys and engineers continued to work together on some existing cases, the development of new enforcement cases trickled to a halt.³⁰ Staff morale plummeted, and levels of attrition soared among

demoralized, confused enforcement staff members.³¹ As one former EPA headquarters enforcement manager remembered the period:

You spent a lot of time figuring out ways to get around obstacles that were internal [to EPA] now, rather than external. You were trying to survive, trying to continue to do your job, while most of your days were spent worrying about whether you would actually have a job, in some cases, or whom you would be working for and whether that person would be a rational human being.³²

As EPA's enforcement work output steadily declined, the Reagan Administration's enforcement changes met increasing resistance from congressional oversight committees.³³ In the fall of 1981, Reps. John D. Dingell (D-Mich.) and Elliott H. Levitas (D-Ga.) launched separate U.S. House of Representatives' subcommittee investigations into the Administration's failure to enforce the Superfund statute.³⁴ Those investigations made numerous headlines when the Administration made the strategic mistake of refusing to comply with subcommittee subpoenas for enforcement-related documents. Ultimately, after a brief, unsuccessful court battle,³⁵ and amidst a storm of negative publicity, the Reagan Administration submitted to Congress' subpoenas in March 1983. It then "cleaned house" at EPA by seeking and accepting the resignations of Administrator Anne M. Gorsuch and some 19 other top-level EPA political appointees.³⁶

The first two years of the Reagan Administration did considerable harm to EPA's interdisciplinary enforcement efforts. By placing staff engineers and attorneys in different offices, the Administration's reorganization placed significant obstacles for staff to cooperate effectively on a day-to-day basis. Attorneys and engineers now sometimes had different work priorities that reflected the different goals of their supervisors and managers. They were also often physically separated by long distances in the workplace, another factor that inhibited interdisciplinary cooperation. Beyond this, however, the disorganization and anxiety created by the new Administration's managerial approach created distractions and conflicts that inhibited virtually all EPA enforcement work for a sustained period of time.

During the remainder of the Reagan Administration, EPA enforcement made some very gradual progress toward recovering its former vigor. The Agency-wide hiring freeze was soon lifted, and EPA's new administrator (Bill Ruckelshaus, who had agreed to return to EPA at President Reagan's request) placed renewed emphasis on vigorous, effective EPA enforcement.³⁷ EPA regional officers were again given more discretion in handling enforcement cases, and the vol-

24. 42 U.S.C. §§9601-9675, ELR STAT. CERCLA §§101-405.

25. MINTZ, *supra* note 7, at 33-39.

26. See generally *id.* at 40-59.

27. *Id.* at 42.

28. *Id.* at 43.

29. *Id.* at 45-46.

30. *Id.* at 49.

31. *Id.* at 50.

32. Interview with Richard Smith, former Acting Director, EPA Office of Legal Enforcement Policy, in Washington, D.C. (Mar. 18, 1986) (cited in MINTZ, *supra* note 7, at 50).

33. MINTZ, *supra* note 7, at 51-57.

34. Representative Dingell's subcommittee was the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce. Representative Levitas chaired the Subcommittee on Investigations and Oversight of the House Committee on Public Works and Transportation.

35. See *United States v. House of Representatives*, 556 F. Supp. 150 (D.D.C. 1983).

36. MINTZ, *supra* note 7, at 57.

37. *Id.* at 60-61.

ume of enforcement actions taken by the Agency once again began to increase.

To be sure, Congress remained watchful of EPA's enforcement programs. Further, congressional investigations of EPA's Resource Conservation and Recovery Act³⁸ and Superfund enforcement programs in the late 1980s continued to prod the Agency into doing more in those areas.³⁹ EPA also continued to receive mostly negative coverage in the press.

Nonetheless, in the late Reagan years, the Agency improved its cooperation with many state environmental departments. It also began to standardize some successful approaches to administering the Superfund program, and (together with the DOJ's Environmental Enforcement Section) EPA won a number of key victories in legal disputes that defined important liability provisions in the Superfund statute along pro-governmental lines.⁴⁰

During the Administration of George H.W. Bush (Bush I), from 1989 through 1993, EPA enforcement enjoyed some further, modest gains.⁴¹ Congressional criticism of the implementation of Superfund continued. However, under EPA Administrator William K. (Bill) Reilly, the Agency was able to mollify its critics, at least in the short run, by implementing a set of administrative reforms of the program that had been recommended in an EPA study (the Ninety Day Study) of Superfund strengths and shortcomings.⁴²

The Bush I Administration's first assistant administrator for enforcement, James M. (Jim) Strock, proved to be a skillful and innovative enforcement manager. Building positive relationships with Capitol Hill and the press, Strock lobbied Congress successfully for significant increases in the Agency's cadre of criminal investigators. He supported multimedia enforcement, and a number of national multimedia enforcement initiatives occurred during his tenure.⁴³

Notwithstanding those successes, however, Strock was unable to persuade Reilly to reorganize the Agency so as to place enforcement engineers and attorneys in a single organizational unit.⁴⁴ This unfortunate failure may have slowed the reintegration of disciplines within EPA enforcement programs. In all other major respects, however, Strock's able leadership appears to have boosted enforcement staff morale and productivity.

EPA enforcement did not fare well during 1993 and 1994, the first two years of the William J. Clinton Administration. Notwithstanding the fact that the Democratic party held majorities in both houses of Congress, antiregulatory initiatives put pro-environmental officials in the Administration (including EPA Administrator Carol M. Browner) on the defensive during this period.⁴⁵ Reacting to congressional pressures, EPA's new leadership fashioned a series of nonenforcement initiatives (in the areas of "compliance assistance" and "compliance incentives") that a number of re-

gional office enforcement staff members perceived as an attempt to deemphasize traditional enforcement approaches.⁴⁶ In addition, EPA promulgated several important sets of regulations, particularly under the CAA, that contained requirements that were ambiguously drafted or unduly complex and, thus, immensely difficult to enforce.⁴⁷

One bright spot in the early Clinton years was a massive reorganization of the Agency that, at long last, reunited headquarters enforcement attorneys in a single office (though that interactive step was not required in all EPA regions). Yet this reorganization was handled in a somewhat slow manner and in a way that engendered confusion and disaffection—particularly among the Agency's engineering enforcement staff.⁴⁸

EPA enforcement efforts were revived, however, during and following a bitter, high-profile partisan battle between the Republican-controlled 104th Congress and the Clinton Administration over the size of EPA's budget. That prolonged struggle, which included employee furloughs that kept the Agency closed for 33 days in late 1995 and early 1996, ultimately led to a victory for the Administration, a stunning defeat for antiregulatory forces and renewed political stability for EPA through the year 2000.⁴⁹

In the final six years of the Clinton period, EPA enforcement was enhanced by several innovations. As mentioned above, following sophisticated investigations of industrial compliance records and other databases, EPA took large-scale, coordinated, sector-based initiatives against major industries such as the oil refining, automobiles, and electricity generating sectors. These initiatives led to very considerable reductions in the emission of pollutants.⁵⁰ So, too, did a series of letters that EPA sent to certain environmental violators offering them significantly reduced civil penalties in exchange for the immediate installation of needed pollution control equipment.⁵¹

Also during this time, the Agency reformed the Superfund program by a series of administrative changes,⁵² increased its use of supplemental environmental programs that incorporated environmental restoration efforts into settlement agreements with violators,⁵³ and (with Congress' blessing) significantly expanded the scope of its criminal enforcement program.⁵⁴ The Agency's enforcement work was helped by a good relationship between EPA and the DOJ.⁵⁵ However, it was hindered to some extent by ongoing

46. *Id.* at 10393.

47. *Id.* at 10394-95.

48. *Id.* at 10395-98.

49. *Id.* at 10398-401.

50. *Id.* at 10407-08.

51. *Id.* at 10408.

52. *Id.* at 10408-09. Among other things, these reforms included an increased emphasis on completion of construction of Superfund sites, expanding the use of orphan shares and de minimis settlements, establishing de micromis contributor policies, targeting a wider range of potentially responsible parties, streamlining oversight costs, increasing community participation in site decisions, addressing the special problems of lending institutions, municipalities, and legitimate recyclers, promoting CERCLA settlements more effectively, and establishing new measures of program success.

53. *Id.* at 10409.

54. *Id.* at 10408. EPA expanded its permanent criminal investigation staff from approximately 65 to nearly 200 investigators and established a number of criminal investigation "field offices" around the United States. *Id.*

55. *Id.* at 10405.

38. 42 U.S.C. §§6901-6992k, ELR STAT. RCRA §§1001-11011.

39. MINTZ, *supra* note 7, at 65-67.

40. *Id.* at 64.

41. *See generally id.* at 84-100.

42. *Id.* at 87-88; U.S. EPA, A MANAGEMENT REVIEW OF SUPERFUND (1989).

43. *Id.* at 89-93.

44. *Id.* at 94-95.

45. Joel A. Mintz, "Neither the Best of Times Nor the Worst of Times": EPA Enforcement During the Clinton Administration, 35 ELR 10390, 10392-93 (June 2005).

conflicts between EPA and state environmental officials (some of which were undoubtedly motivated by political partisanship) and by a government-wide requirement (imposed by Vice President Al Gore) that all federal agencies and departments maintain a 1:11 ratio of supervisors to line staff members. The latter mandate required many EPA enforcement supervisors, both in headquarters and in regional offices, to return to staff positions—a move that a number of them viewed as a demotion, and deeply resented.⁵⁶

Overall, interdisciplinary cooperation in EPA enforcement appeared to have improved during the Clinton Administration. Although imperfectly executed, the EPA reorganization of 1993 and 1994 did succeed in creating an organizational climate that was more hospitable to interdisciplinary exchange. Beyond this, EPA's sector-based enforcement initiatives, well-supported by the Agency's top management, created exciting work opportunities for a great many enforcement staff members. These opportunities helped keep enforcement staff morale at reasonably high levels, particularly as the 1990s drew to a close.

In contrast, the presidency of George W. Bush (Bush II) has thus far been a time of trouble and difficulty for EPA's enforcement efforts.⁵⁷ From her first days in office, the first Bush II EPA Administrator, Christine Todd Whitman, alienated much of the Agency's enforcement staff by requesting that Congress cut EPA's already strained enforcement budget by \$25 million while boosting the amount to be transferred in enforcement program grants to state environmental agencies in the same amount.⁵⁸ Whitman also made the mistake of neglecting to clearly identify enforcement as a high EPA priority, an omission that many staffers took as a signal from her that enforcement should only be employed by them as a last resort.⁵⁹

Even more damaging to enforcement, however, were changes made in EPA's policies regarding CAA new source review of power plants (apparently imposed by the White House on a resistant EPA). These regulatory shifts had the effect of scuttling a large-scale vigorous and promising enforcement initiative against the electric utility industry.⁶⁰ Moreover, all of these events occurred in a period of continuing budget cuts, secretiveness among EPA's top managers, intra-Agency perceptions of enforcement politicization, and declines in enforcement outputs in a number of categories.

Notwithstanding all of those changes and difficulties, however, the consensus among the Agency's enforcement staff is that, through the Bush II years, interdisciplinary cooperation in the enforcement program has continued to be effective and beneficial.⁶¹ To the extent that this assessment is true, it is indeed a credit to the maturity and motivation of the staff members themselves and to the sound guidance provided to them by EPA enforcement supervisors and career managers.

In sum, as this discussion has illustrated, EPA has had an immensely turbulent, controversial political history. The attitudes of its top managers toward federal environmental en-

forcement programs has ranged from fully supportive to openly hostile; at various times, EPA enforcement work has been both staunchly defended and bitterly attacked by its congressional overseers. These shifting political developments may well have affected the extent of interdisciplinary cooperation within the Agency's enforcement program at particular points in time. Nonetheless, as we have seen, most interdisciplinary enforcement coordination takes place at lower levels of EPA.

Enforcement work is essentially a professional nonpolitical activity, and the 10 regional offices that do most of EPA's day-to-day enforcement work are somewhat isolated from EPA headquarters and Capitol Hill. Moreover, the aggregate extent of interdisciplinary teamwork is always difficult to estimate precisely. For these reasons, many of the high-profile policy struggles of elected and appointed political officials regarding EPA's work have had no more than a minimal impact on this important facet of environmental enforcement.

V. The Future: Interdisciplinary Cooperation in Environmental Enforcement in Years to Come

Of all of the interdisciplinary work that is (and will be) occurring in the environmental field, the future of the interdisciplinary component of government environmental enforcement may be the most difficult to predict. There are several reasons for this.

As we have seen from our brief examination of EPA's political history, this important yet controversial federal Agency has experienced drastic shifts in the political trends and pressures that have shaped the parameters of its existence. Nonetheless, few of the political influences that have come to bear upon EPA (including its politically appointed leaders and its career staff) could have been predicted with much precision beforehand. They were as much a result of the *interaction* of clashing political forces in Congress and the White House as they were part of a well-defined plan by any one party faction or interest group to impose its political will on EPA's way of doing business.

Second, as we have also observed, even if one could predict with great precision the political atmosphere of the future and its impact on the future of EPA (as well as state and local environmental agencies), that atmosphere will not necessarily have a significant affect on the interdisciplinary component of environmental enforcement. Interdisciplinary enforcement cooperation is a very important responsibility of the line of enforcement staff—the attorneys, engineers, scientists, and investigators with primary responsibility for developing enforcement cases. The policy preferences, approaches, and actions of politically appointed agency managers—and their congressional overseers—may have much to do with the enthusiasm, motivation, and morale of environmental enforcement staff professionals. They seem likely to have far less influence, however, over the skill with which those professionals work together as a unified, effective team across disciplinary lines.

Finally, by its very nature, environmental enforcement work is highly decentralized. Although first level supervisory personnel are in the best position to observe and influence its interdisciplinary aspects, even their influence is necessarily limited. Enforcement staff members have very considerable discretion to shape those aspects of their work

56. *Id.* at 10409-10.

57. See generally Joel A. Mintz, "Treading Water": A Preliminary Assessment of EPA Enforcement During the Bush II Administration, 34 ELR 10912 (Oct. 2004).

58. *Id.* at 10914-15.

59. *Id.* at 10915.

60. *Id.* at 10916-19.

61. *Id.* at 10923.

activities that involve sharing and collaborating with their differently trained enforcement colleagues.

What, then, can be done to promote effective interdisciplinary cooperation in the enforcement activities of environmental departments and agencies? Certainly, those responsible for hiring enforcement staff members can stress to them the importance of interdisciplinary work, from the initial job interview stage onward. Where staff recruitment and hiring are done within disciplines (as is typically the case), staff members and supervisors from other disciplines may be asked to sit in on interview sessions and assess job candidates' potential for successful interdisciplinary cooperation. Enforcement supervisors can also work together to assign staff workers to interdisciplinary enforcement teams that are relatively equal in professional experience and ability—apparently one of the key facets of interdisciplinary compatibility. And, as mentioned previously, front-line supervisors would do well to repeatedly and emphatically emphasize to those who report to them that interdisciplinary cooperation is an essential job skill.

Political-level officials can also promote good interdisciplinary collaboration on government environmental enforcement. They can do so by creating background circum-

stances and conditions in which interdisciplinary exchange, and environmental enforcement in general, will thrive. Political leaders can provide steady, adequate budgets for environmental enforcement, along with clear and consistent public support for vigorous enforcement, and they can write statutes and regulations that are comprehensible, unambiguous, and readily enforceable. At minimum, political leaders can certainly refrain from unreasonable, self-serving political interference in the work of enforcement professionals.

In the end, however, the future success or failure of interdisciplinary environmental enforcement work will lie where it always has: in the hands of that multitude of government attorneys, scientists, investigators, and others whose primary task is—and will be—to enforce environmental requirements. As we have seen above, there are certainly practices and good habits that those professionals may adopt that will improve the interdisciplinary aspects of their efforts and, at the same time, increase their chances of prevailing. Nonetheless, whether or not these suggestions will be adopted, and how diversely trained enforcement professionals will choose to do their individual jobs, will be up to each of them. The collective consequences of their decisions, however, will be enormous.