Office of Environmental Stewardship
2003 Annual Report

United States
Environmental Protection
Agency New England

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On behalf of all the employees of EPA New England's Office of Environmental Stewardship, I am pleased to present our Annual Report for 2003. This report captures the results of the integrated efforts of our Enforcement and Assistance & Pollution Prevention Offices.

Our work this past year continues to show that we are most effective when we identify environmental, public health or compliance problems and appropriately integrate the tools at our disposal to solve them. The organization of this report reflects how we view and go about tackling the challenges remaining in New England.

We've also learned that there are readers who are interested in greater detail about the work of either the Enforcement or Assistance & Pollution Prevention Offices. We will be making reports for each office and other information relating to our work available on EPA New England's Enforcement and Assistance web page: www.epa.gov/ne/enforcementandassistance.

We hope you will find this report informative and that it will inspire you—whether as a citizen, a public sector official, or a company owner—to embrace your role as a steward of New England's environment. We welcome your feedback on this report; send us an email at: r1web.mail@epa.gov or call us at 617-918-1831.

Stephen S. Perkins, Director
Office of Environmental Stewardship
EPA New England

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Introduction

The Office of Environmental Stewardship is home to the enforcement and compliance assistance programs in EPA's New England Office. We protect the environment and public health by improving the environmental performance within both the private and public sectors through ensuring compliance with environmental requirements, preventing pollution and promoting environmental stewardship.

Highlights of our achievements in New England over the past federal fiscal year (October 2002 through September 2003) include:

- $12.24 million paid by violators to settle enforcement cases, including a record $8.7 million for environmental projects that will result in tangible environmental and public health benefits to New Englanders;
- 158 settlements and orders completed for a total of $87 million in expenditures by violators to come into compliance and to reduce, treat, or properly manage 14.3 million pounds of pollutants;
- $42.3 million recovered from responsible parties for past and future clean-up costs at Superfund sites throughout New England;
- 700 inspections carried out across the region, a 33 percent increase from last year;
- 115 self-disclosures of environmental problems identified and fixed; and
- 25,000 New Englanders reached through 319 workshops and 74 stakeholder meetings.

But numbers alone do not tell the entire story of our accomplishments. This report will provide you with the details of how we achieved these impressive results. It places our work in the context of the tools and approaches we use to achieve our compliance mission. For example, our work with area colleges and universities exemplifies how we have integrated aggressive enforcement and assistance to achieve improved environmental compliance at these institutions of higher learning. In this report, we discuss why and how we are working to reduce childhood lead poisoning in New England and striving to create an environment that is safe for our children. And, we want you to know that through negotiated enforcement settlements, which result in environmental projects, we are producing tangible environmental and public health results for the benefit of all New Englanders.

We continue to present our accomplishments in this annual report around the problem-solving themes adopted by our office in 2002. Our intent is to help you better understand how our actions support our mission. These themes include:

- Health effects on sensitive populations;
- Environmental impacts on communities;
- Persistent and widespread non-compliance;
- Homeland security and emergency preparedness;
- Continuous improvement through Environmental Management Systems; and
- Advocacy for superior environmental performance.

Protecting the Health of Our Most Sensitive Populations

While protecting human health and the environment is the overall mission of EPA, we focus particular attention on certain groups of people such as children, the elderly, and minority and low income groups because of their increased vulnerability to environmental threats. Children, for example, breathe more air, drink more water and eat more food in proportion to their size than adults. This puts them at greater risk of exposure to pollutants. Also, children's bodies are less able to metabolize, detoxify and eliminate pollutants.

As we age, our bodies become more susceptible to pollutants because the capacity of our immune system diminishes. This is due in part to the aging process itself, medications we may take or chronic illnesses we may have developed. In addition, older adults already have a lifetime of exposures to toxic substances that persist in their bodies. These factors become even more troubling when you consider that the United States is undergoing a demographic transformation. By 2030, the number of elderly is expected to double to 70 million. The 85 and older population represents the fastest growing age group, which is expected to number 14 million by 2030.

EPA is committed to ensuring that everyone enjoys an equal level of environmental protection. Unfortunately, we know from the past that some communities, such as those in minority or low income areas, may not have had the access or resources to get their concerns addressed. As a result, these communities suffer a disproportionate impact from pollution or public health threats. Since 1993, when EPA New England established its first environmental equity policy, we have been incorporating environmental justice principles for fair treatment and meaningful involvement into our enforcement and compliance assistance programs. Whether establishing office priorities or settling enforcement violations, we look for opportunities to promote and support environmental justice for all New Englanders.

In the next sections of this report, you will read about our enforcement and compliance assistance activities over the past year and how they reflect the Agency's focus on our most vulnerable citizens.

Improving the K-12 School Environment

Typically, you can find a wide variety of chemicals in a school environment such as cleaning solutions, pesticides, and laboratory supplies. Over the past year, we have continued to assist schools with selecting, utilizing and managing these chemicals. We have found that schools are interested in improving procedures for handling and storing chemicals so that they can reduce the risk of an accidental release of these hazardous materials. We disseminate technical information on regulatory requirements, as well as on the proper selection, handling, storage and disposal of these chemicals. In 2003, we provided chemical management training at three workshops in Maine and Massachusetts to over 200 participants. With $22,000 in grant funds, we are supporting a project in Massachusetts that will assist K-12 schools in increasing their ability to purchase "greener" products, such as less toxic cleaning supplies.

Lead in drinking water is another area that we are working collaboratively with our New England states and K-12 schools to address. Through our outreach efforts, we want school administrators to understand the seriousness of the issue and the importance of testing drinking water for lead. Unless a school is considered a drinking water system by EPA or state regulation, regular testing for lead in a school's drinking water is not required. Lead can be found in schools in both urban and suburban communities.

Improving Air Quality

Pollutants in the air we breathe come from a multitude of sources and degrade the quality of our air by creating smog, causing cancer, and triggering asthma and other respiratory illnesses. Over the past year, we pursued several significant Clean Air Act enforcement cases that will reduce the levels of air pollutants such as volatile organic compounds (VOCs), particulate pollutants, and methane gas.

For example, the Rhode Island Resource Recovery

Corp., owner/operator of Central Landfill, the largest landfill in the state, will pay a $321,000 penalty and spend more than $5 million on air pollution control measures for alleged violations of the Clean Air Act. Central Landfill, located in Johnston, RI, is a 190-acre landfill which handles most of the state's household and commercial waste. Noxious odors from the landfill gas have been a long-standing source of complaints among residents living near the landfill, and controlling and capturing landfill gas at this site is a complex challenge.

As part of its settlement, the Rhode Island Resource Recovery Corp. will install new pollution control systems that will capture and control over 30,000 tons of methane (a global warming pollutant), 215 tons of VOCs (a contributor to smog air pollution), and 175 tons of nitrogen oxides between now and 2010. Also, the corporation will boost the facility's overall capture/control efficiency of landfill gas to 90 percent or better, and will retire 175 tons of emission credits (allowances to emit smog-causing pollutants). This case represents one of the first enforcement actions in the country taken against a solid waste landfill for violations of the Clean Air Act's New Source Review requirements and should lead to significant improvements in air quality for Rhode Islanders living in close proximity to the facility.

Retiring emission credits provides environmental benefits by reducing pollution. Under the market-based pollution trading rules, companies can sell their rights to emit certain amounts of air pollution to other companies that may be building a new facility or expanding an existing one. However, once these credits are retired, the pollutants they represent are no longer available for trading.

In another action, MacDermid Graphic Arts Inc. of Waterbury, CT agreed to pay a penalty of $230,000 and to permanently retire as much as 150 tons of VOC emission credits per year to settle an enforcement case regarding alleged Clean Air Act violations at its former manufacturing plant in Adams, MA. Between 1997 and 2001, MacDermid exceeded allowable emission limits for VOCs at its plant, which manufactured rubber products for the commercial graphic arts industry. The agreement ensures that these VOC credits will never be available to be used by other sources of pollution.

Also, Allied Waste Systems, Inc., a Boston trash hauler, paid a penalty of over $780,000 and will spend $2.3 million on an environmental project to improve Boston's air quality surrounding its transfer station in Roxbury, MA. The settlement stems from the company's alleged violations of Clean Air Act rules intended to protect the stratospheric ozone layer from harmful effects of certain chemicals known as chloroflurocarbons (CFCs) and hydrochloroflurocarbons (HCFCs). These chemicals, commonly found in refrigerants, are known to cause the depletion of the stratospheric ozone layer that protects the earth's surface from harmful ultraviolet radiation. Under EPA regulations, waste haulers who dispose of household appliances containing CFCs or HCFCs, such as refrigerators, freezers and air conditioners, must take steps to ensure that these chemicals are not released into the atmosphere.

Between July 1997 and August 1998, the company allegedly compacted or crushed discarded appliances picked up in Boston's neighborhoods without recovering remaining refrigerants from the appliances or verifying that the refrigerants were already removed. Allied's environmental project involves constructing a new building at its Roxbury transfer station and installing state-of-the-art emissions control technology capable of reducing dust, odors and VOCs. This will not only improve the aesthetics of the station and provide for more efficient waste transfer operations, but more importantly, it will improve the quality of the air in the surrounding neighborhoods.

In another case involving ozone-depleting chemicals,

we ordered Pratt & Whitney of East Hartford, CT, to adopt a more accurate method for calculating leak rates of its refrigeration equipment and to provide more information about the recovery and disposition of approximately 50,000 pounds of CFCs and HCFCs at its Andrew Willgoos Turbine Laboratory. The facility tests commercial and military gas turbine engines and uses an older refrigeration system to simulate the low temperatures encountered at high altitudes. Pratt & Whitney will cease using these chemicals in May 2004.

Also, Ethan Allen, a Vermont-based wood manufacturer and retailer, agreed to pay a $74,00 penalty for allegedly emitting particulate matter at a rate more than twice the legal limit in 2001 at its manufacturing facility in Orleans, VT. The company promptly shut down the two violating wood-fired boilers and repaired the pollution controls. After the repairs, the boilers were tested and determined to be back in compliance with their emission limits.

Particulate matter (PM) is a term for particles found in the air, including dust, dirt, soot, smoke and liquid droplets. These particles come from a variety of sources such as vehicle exhaust, factories, construction sites, unpaved roads, and the burning of wood. They are formed indirectly when gases from burning fuels react with sunlight and water vapor. PM causes a variety of health and environmental impacts, which can be especially serious for people with heart and lung disease.

Reducing Lead Paint Exposure

Lead is a toxic metal that causes a variety of health effects from behavioral problems and learning disabilities to seizures and death. Children under the age of six are most at risk because their bodies are growing rapidly. The problem is of particular concern to us here in New England due to the age of our housing stock, much of which pre-dates 1978, and a housing shortage that forces many low-income families in urban areas to remain in older housing with deteriorating lead paint or face homelessness.

In order to tackle the problem of childhood lead poisoning, EPA New England set a goal to eliminate medically confirmed blood levels greater that 10 micrograms per deciliter among children under age 6 in New England by 2010. A critical component of the strategy includes increased compliance assistance and enforcement activity to ensure that landlords and property owners are complying with the federal law, known as the "Disclosure Rule." This rule requires them to notify tenants and prospective buyers of potential lead paint hazards in their buildings. This year, we conducted more than 100 inspections affecting more than 40,000 housing units within New England.

Because the Disclosure Rule is an important part of our work in creating an environment that is safe for our children, we have taken enforcement actions against several property owners and managers across the region for failing to notify prospective tenants of potential lead paint hazards. For example, we have filed complaints against landlords and property managers in Pepperell, MA (Nissitissit Group, Ltd.), in Hartford, CT (Intown Management Corporation; Intown West Associates, Limited Partnerships; and Apartment Investment and Management Company), and in Biddeford, ME (94 Cleaves Street) for alleged Disclosure Rule violations.

The Lead Disclosure Rules apply to all landlords, including agencies of the federal government. As a result, we cited three Veterans Administration Hospitals in Maine and Massachusetts for allegedly failing to notify VA employees of potential lead paint hazards in their rental housing units. These medical centers provide a total of 61 units of on-site housing for employees and their families.

In one of the first actions of its kind, a Portland, ME lead abatement contractor faces a potential $112,000 fine from EPA for allegedly violating state regulations regarding lead paint removal work at nine residences

in Portland, Lewiston, and Livermore Falls. Because lead poisoning can cause a lifetime of problems for children, it is also important that procedures for lead paint abatement work be followed.

While we have placed a great deal of attention on outreach and enforcement to reduce the risk of lead paint exposure, we are also working to identify and support the development of new lead removal and encapsulation technologies. During the process of home renovation and remodeling, large amounts of lead dust can be produced. Unfortunately, traditional cleaning methods often leave hazardous levels of lead dust behind. The result is that children and workers face an increased risk of acquiring elevated blood lead levels. In order to lower the risk, it is necessary to develop efficient and cost-effective technologies for stabilizing lead-based paint or removing the paint without creating dust.

Section 1018/Real Estate Notification and Disclosure Rule *requires landlords, property management companies, real estate agencies and real estate sellers of pre-1978 housing to notify potential tenants and buyers of the presence of lead paint and its hazards.*

Section 406(b)/Pre-Renovation Education Rule *requires remodelers, renovators, contractors and landlords of pre-1978 housing to notify owners and tenants of the presence of lead paint before the remodeling or renovation work is performed.*

Working with EPA's national Research and Development Office, we were able to secure $365,000 in funding through the Small Business Innovative Research program for two companies, Phoenix Science and Technology of Chelmsford, MA and Pennsylvania-based EMEC, to develop and test lead removal technologies that do not create lead dust. These technologies will be ready for demonstration and testing in 2004.

Reducing Environmental Impacts on Our Communities

Creating healthy communities for us to live and raise our families in requires that we work hard to protect the quality of our water and land resources. Pollutants continue to impact our communities from a variety of sources. Some pollutants occur naturally, such as arsenic in groundwater. Every time it rains or snows, however, storm water runoff negatively impacts the quality of our surface waters. Municipal sewer systems that are not operating properly can also pose a significant public health threat. In addition, contaminated Superfund sites continue to remain as legacies of yesterday's poor waste disposal practices. Following are the highlights of our work last year to reduce environmental impacts in communities throughout New England.

Reducing Arsenic Levels in Small Drinking Water Systems

More than 100 small public water systems in Maine have levels of arsenic in their drinking water that exceed the new 2006 federal limit of 10 parts per billion (ppb) and a large number of these systems are schools. Research studies link ingested arsenic with health effects, including cancers of the bladder, skin, lung, and kidney, as well as non-cancerous conditions such as high blood pressure and diabetes.

To help small drinking water systems comply with the stricter arsenic standard, we teamed up with the Maine Drinking Water Program, the Maine Rural Water Association and the University of Maine to conduct four workshops on the regulations and treatment options. These workshops attracted 110 participants who represented nearly half of the 102 small public water systems and 42 schools in the state with high arsenic levels. As part of the workshops, participants identified a number of challenges they will face in meeting the upcoming regulatory standard and developed an action plan that will help them to meet their obligations. Similar outreach efforts are planned for New Hampshire and Vermont in 2004.

Controlling Runoff from Storm Water

Storm water runoff is caused by rain and melting snow that runs off land, pavement, construction sites, rooftops, and other surfaces and flows into water bodies. The runoff accumulates sediment and pollutants as it travels across land. In addition, heavy precipitation or snow melt can cause sewer overflows which, in turn, leads to contamination of water sources with untreated human waste, industrial waste, toxic materials and other debris.

While significant progress has been achieved in controlling and reducing pollutants in our waterways, storm water runoff remains a leading cause of water quality problems nationwide. In New England, more than one-third of our streams and rivers remain unsafe for swimming, boating and other activities, especially after wet weather events.

Storm water runoff transports pollutants such as oil and grease, toxic chemicals, pesticides, nutrients, and bacteria from land to our surface water resources. These waters are vital to meeting our drinking water needs, supporting wildlife, and for our recreational enjoyment.

Because storm water runoff remains the leading cause of water quality problems, we are continuing our efforts to bring municipalities and the construction industry into compliance with storm water regulations and new permitting requirements that went into effect in March 2003. These efforts include extensive outreach and increased inspections and enforcement. As a result of our outreach activities, 90 percent of the regulated municipalities and municipal operations in the non-delegated states of Massachusetts and New Hampshire applied for permit coverage. In addition, through our construction workshops and presentations, we reached over 1,100 people with information on compliance. Since 2001, we have conducted nearly 50 inspections at construction sites across the region and more are planned.

Many of the inspections led to enforcement actions against violators. For example, Lowe's Home Centers, Inc. agreed to pay a penalty of $137,500 for allegedly failing to obtain the necessary federal permits for storm water discharges and to prepare required storm water pollution prevention plans for four construction sites in Massachusetts. In addition, the company allegedly failed to implement adequate storm water controls in 2001 at its Woburn, MA site. As a result, silt-laden water was discharged into a storm drain that led to the Aberjona River.

Lowe's, the second largest home improvement retailer in the world and the 14th largest retailer in the country, has more than 800 stores in 45 states and is in the midst of an expansion plan that involves opening a new store on an average of every three days across the country. As a result of our action, the national chain has embarked on a comprehensive nationwide plan to improve its storm water management program. The company has set up new criteria and staff training to ensure that all of its sites meet or exceed EPA storm water criteria.

In a second case, Brox Industries, Inc. of Dracut, MA, agreed to pay more than $260,000 for allegedly failing to comply with various provisions of the federal storm water rules at six of its eight asphalt manufacturing and mineral mining sites in Massachusetts and New Hampshire. The company will also spend a minimum of $138,000 on an environmental project at its Hudson, NH facility to reduce discharges of process waste water and increase the use of recycled water for its operations.

Protecting and Restoring Wetlands

Wetlands are among the most biologically important and productive ecosystems on earth. Not only do they provide critical habitat for fish and wildlife, wetlands also offer protection against flooding and erosion. They replenish the groundwater, improve water quality, and provide countless recreational opportunities. Our New England states estimate that up to 250 acres of wetlands are being lost or altered annually in each state. In the face of continuing population growth and development pressure, our efforts to eliminate wetland loss and restore these valuable ecosystems become increasingly important.

For example, Tuckahoe Turf Farm, a Berwick, ME sod farm, agreed to pay a $27,500 penalty and restore 54 acres of destroyed wetlands in Berwick to settle a claim that it illegally dredged and filled these wetlands. The company will also spend $150,000 to create conservation easements on two parcels of land in Berwick, including 108 acres of ecologically significant land. These easements will protect habitat for endangered and threatened species of turtles and provide access to the public for hiking and other low-impact recreational activities.

Improving Water Quality

Properly managed municipal wastewater treatment plants play an important role in protecting community health and local water quality. Under the National Pollutant Discharge Elimination System (NPDES) permit program, we regulate the discharge and treatment of the wastewater that enters our waterways by setting limits on the amounts of certain pollutants contained in a facility's wastewater. We are committed to taking the necessary enforcement action to ensure these plants operate within their permit limits.

For example, last year in Massachusetts, we resolved a case regarding alleged sewage treatment plant violations with the City of North Adams, the Town of Williamstown and the Hoosac Water Quality District, which manages sewage treatment for the two municipalities. The sewage treatment plant, which discharges to the Hoosic River, allegedly violated its permit limits for total suspended solids, biochemical oxygen demand, wastewater flow volume and fecal coliform. Excess suspended solids and oxygen demand can adversely impact the river's ecosystem, while excess fecal coliform creates heath risks for humans in contact with the river. Under the settlement, North Adams will pay a penalty of $70,000, while Williamstown will pay a penalty of $30,000 and undertake a project valued at $168,000

to map their storm drain system. These communities are also taking steps to upgrade their collection systems to reduce infiltration and inflow. The Hoosac Water Quality District is required to take a number of corrective steps to come into full compliance with all permit limits.

Cleaning Up Superfund Sites

The Superfund Program investigates and cleans up the worst hazardous waste sites. The law requires that companies and individuals responsible for a contaminated site perform and pay for the investigation and cleanup. If the responsible parties are unwilling to cooperate, EPA can either issue an order requiring them to carry out the cleanup or can perform the cleanup ourselves, often in cooperation with the state, using funds appropriated by Congress. Once the cleanup is complete, we will seek to recover our costs from those responsible. Over the past year, we continued to carry out clean-up activities at numerous sites throughout New England and received $42.3 million in cost recovery claims against potentially responsible parties.

For example, we ordered several potentially responsible parties (Saltire Industrial Inc., Joseph Calabrese, Calabrese Construction Company and Store Avenues Associates, LLC) at the Scovill Industrial Landfill Superfund Site in Waterbury, CT, to continue site investigation studies begun by us in 2002. These studies will help to determine the type and extent of contamination and the potential environmental and health risks posed by the contaminants at the site, which was used from 1919 until the mid-1970s for disposal of ash, cinder and other industrial wastes. The majority of the site has already been developed with residential and commercial buildings. The remaining portion of the site was in the process of being developed when industrial wastes, contaminated with polychlorinated biphenyls, or PCBs, were discovered. When the results from the studies are known and we have a better understanding of what contaminants are present, we will hold a public meeting to discuss the findings with interested citizens.

Over the past year, we completed temporary clean-up measures valued at $1.5 million and reached a $10 million agreement with the U.S. Army, the U.S. Department of Energy, Whittakker Corporation, MONY Life Insurance Company, and Textron, Inc. to conduct extensive studies at the Nuclear Metals Superfund Site in Concord, MA. These studies will be designed to determine clean-up options at the site, which was used from 1958 to the present as a specialized research and metal manufacturing facility licensed to possess low-level radioactive substances. The agreement calls for the federal government agencies to pay 98 percent of the expected costs of the studies. The settlement allows this project to move forward and ensures that a comprehensive evaluation of all areas of potential contamination be conducted. Ultimately, these measures will provide for the development of a clean-up plan.

Last year, we also settled several long-standing cost recovery cases, which we had pursued to recover our clean-up costs from potentially responsible parties and, ultimately, to provide more funding for future cleanups. For example, at the Re-Solve Superfund Site in North Dartmouth, MA, the Vulcan International Corporation agreed to reimburse $3.8 million to the Superfund account. To date, over 400 parties have agreed to settlements worth $64 million, representing close to 95 percent of the costs associated with the site.

Charles George Trucking Co. will also pay $3.8 million for clean-up costs incurred at the Charles George Landfill site and for natural resource damages. The settlement is the last at the site and ends 17 years of contentious cost recovery litigation. The Charles George Landfill, located in Tyngsborough, MA, consists of 69 acres of mixed industrial, municipal and hazardous waste. Clean-up actions have now been completed, but we continue to monitor groundwater at the site.

At the Johns Manville Superfund Site in Nashua, NH, we were able to recover $2.5 million from responsible parties, including Johns Manville International Inc. of

Denver, CO; BNZ Materials of Littleton, CO; and Samuel Tamposi, Jr. and Elizabeth Tamposi, both as individuals and trustees of Bridge Street Realty Trust. The four-acre site in Nashua was used for over 80 years as an asbestos product manufacturing facility. EPA performed a cleanup at the site from 1995 to 1997. After the cleanup, the site was developed as a soccer field and is now owned by the City of Nashua.

We also reached a settlement last year with the Kayser-Roth Corp. for $7.2 million for the reimbursement of EPA clean-up and oversight costs at the Stamina Mills Superfund Site in North Smithfield, RI. The site is a five-acre parcel of land that was originally a textile mill in the early 1900's. In 1981, the state discovered that the groundwater was contaminated with volatile organic compounds, primarily trichloroethylene. All residences that relied on private wells have since been connected to the public water supply. We are continuing to work with the Rhode Island Department of Environmental Management to ensure that the required clean-up levels are achieved.

We also filed suit against the Atlas Tack Corp. and its president, M. Leonard Lewis, seeking approximately $6 million to reimburse EPA for clean-up activities already performed, and seeking an order for payment for future clean-up costs, currently estimated to be $18 million. The Atlas Tack Corporation facility in Fairhaven, MA, was built in 1901. Metal products, including tacks, steel nails, rivets, bolts, and eyelets, were manufactured at the site until about 1985. Soils and sediments at the site are contaminated with hazardous substances including cyanide, heavy metals, polychlorinated biphenyls, pesticides, and polycyclic aromatic hydrocarbons. Groundwater at the site is contaminated with hazardous substances including toluene, cyanide, nickel, and zinc.

We were able to reach a settlement with General Electric regarding GE's reimbursement of EPA's indirect costs related to the 1.5 Mile Reach Removal Action at the GE Pittsfield, MA Superfund Site. In September 2000, GE and EPA entered into a consent decree whereby GE is required to clean up its plant and the Housatonic River. For a 1.5 mile portion of the river, EPA is performing the cleanup, and EPA and GE are sharing the costs for the work. GE objected to a nationwide change in EPA's accounting methodology, claiming the revision would increase the indirect costs that GE was required to pay by $4.75 million. According to the terms of the settlement agreement, we will receive approximately one-half of the estimated increase in indirect costs, or nearly $2.4 million.

Over the past year, we also issued numerous administrative orders and sought judicial warrants that enabled us to gain access to properties so that we could take immediate and necessary action to remove hazardous waste. Often, these properties are abandoned or their ownership is unclear. For example, we were able to remove drums and containers of hazardous waste from an abandoned furniture factory, the Sanborn Wood Factory, located at the Gellallen Mill in Winchedon, MA. In Houlton, ME, an access warrant was necessary to remove high levels of PCBs and lead in surface soils at the Green Street Superfund Site.

In other instances, we have sought judicial warrants because site owners refuse to cooperate. For example, we obtained a warrant for access to property owned by Louis Vinagro Jr. of Green Hill Road in Johnston, RI. This property contains more than one million cubic yards of construction and demolition debris. The debris has been smoldering below the surface and would periodically break out into surface fires. The smoke from the burning waste contains hazardous substances some of which are known carcinogens.

In Plainfield, CT, we issued an administrative order to the Old Village Mill LLC, to gain access to and initiate a removal action at the Brunswick Mill and Carvell Combing Company Superfund sites. A fire destroyed an abandoned mill building at the site, causing the release of asbestos into the air. Initially, the owners had granted access for us to begin removing the hazards, but later rescinded it. The order was necessary for us to take immediate action to protect this residential area and the Moosup River, which is a source of drinking water for the residents.

Addressing Widespread Non-Compliance

While we continue to maintain a strong enforcement presence within the regulated community, we are also developing new and innovative ways to achieve environmental compliance. We have, for example, developed integrated strategies that include coordinating enforcement actions with compliance assistance in sectors where we believe there is significant and widespread non-compliance with environmental laws. Our work over the past several years with colleges and universities is just one example of such an integrated strategy. Also, we are encouraging particular sectors, including municipal public works departments, to take advantage of EPA's audit policy. On the other hand, we still use a strong enforcement-based strategy to deal with the widespread mismanagement of hazardous wastes and toxic substances across the region.

Improving Environmental Performance and Compliance at Colleges and Universities

Since the mid-1990s, we conducted inspections at sixteen New England colleges and universities. Many of these inspections detected serious compliance problems that led to significant enforcement actions with penalties ranging from $300,000 to well over $1 million. Last year, we invited the region's 330 colleges and universities to take advantage of EPA's audit policy as one way to encourage them to be responsible for their own environmental performance. This policy encourages regulated entities to identify environmental violations, disclose them to us and voluntarily correct them. By disclosing and correcting violations, it is possible that facilities will get reduced penalties of up to 100 percent.

As of October 2003, 141 out of the 176 educational institutions participating in the audit initiative received penalty reductions for violations that might otherwise be fully assessed through an enforcement action. Most of the disclosed violations involved hazardous waste management, oil spill prevention and control, emergency planning, storm water management, water supply and wastewater disposal.

We are also encouraging colleges and universities to use Web-based tools to improve their environmental performance. For example, the Virtual Environmental Campus, www.c2e2.org/evc, is a tool developed by the Massachusetts Institute of Technology. The Web site uses an engaging and easy-to-navigate format to highlight potential environmental issues in nine subject areas, including arts/theater areas, cafeterias, dormitories, drains/sewers, grounds/vehicles, labs, medical areas, power plants and waste storage. The site also provides compliance information and good management practices.

MIT developed this Web site as part of a 2001 settlement of an enforcement case with EPA. The site is hosted by the Campus Consortium for Environmental Excellence, a consortium of colleges and universities dedicated to improving their campuses' environmental performance in higher education through environmental professional networking, information exchange, the development of professional resources and tools, and the advancement of innovative regulatory models.

The second Web site, www.epa.gov/ne/assistance/univ/bmpcatalog.html, is a Best Management Practices Catalog that provides a useful tool to assist colleges and universities that want to implement best management practices, but need practical information to convince administration, faculty, or staff to move forward. The catalog also answers such basic questions as "How do I get started?" and "What are the potential cost savings?" The catalog currently contains 16 case studies highlighting environmentally sustainable practices such as energy efficiency, green building design, recycling, composting, environmental revolving funds, water conservation, storm water control, green chemistry, management of construction debris, pollution prevention in the arts, integrated pest management, and environmental performance reporting.

Improving Public Sector Environmental Compliance

Also since the mid-1990s, we have focused a portion of our enforcement efforts on municipal departments of public works (DPWs). DPWs manage diverse facilities such as auto service and repair operations, wastewater treatment plants, drinking water systems, hazardous waste management operations, landfills and incinerators. These municipal departments face a wide range of public health and environmental compliance issues. Because the New England DPW sector comprises numerous facilities across the region, we found it difficult to achieve compliance through traditional means such as inspections and penalties.

Following a number of significant enforcement actions against municipal highway garages, we developed the DPW Audit Initiative in partnership with the New England Chapter of the American Public Works Association as a way for municipalities across New England to improve their environmental performance through EPA's audit policy. More than 350 facilities in 250 municipalities are participating in this voluntary program.

The initiative has produced 322 self-disclosures of environmental violations. The environmental benefit of this program is enormous. Among the violations being reported and corrected are: improper handling, disposal and storage of hazardous wastes and petroleum products; inadequate emergency procedures, training programs and plans; unpermitted discharges of wastewater to ponds, streams and wetlands; and improper use of floor drains. These are all problems that if left unchecked could cause substantial environmental harm.

Improving Hazardous Waste and Toxic Substances Management

Over the past year, we settled a case with the Rogers Corporation in Rogers, CT, in which the company will pay a $45,000 penalty and undertake three innovative supplemental environmental projects that will cost an estimated $269,000. The settlement stems from allegations of the improper disposal of PCBs discovered at the company's East Woodstock, CT facility. In addition to the cash penalty, Rogers agreed to install solar photovoltaic lighting at the East Woodstock facility to conserve fossil fuels and diminish conventional power plant emissions; provide hazardous materials training and equipment to the local fire department so that they are better prepared to deal with a broader array of fire events; and switch the fuel used at its South Windham, CT facility to a lower sulfur fuel oil, thus decreasing sulfur emissions from the plant.

Federal law requires that any product making claims about killing pests, including viruses and bacteria, be registered with EPA. The pesticide registration process is intended to ensure that before a product is sold to the public, it is found by EPA to be effective and used in strict compliance with the label directions so as not to present any unreasonable risks. As a result, we continue to pursue fines against pesticide firms who fail to properly register or mislabel their products.

Among our pesticide cases last year, we are seeking a significant penalty against the American Biophysics Corporation of East Greenwich, RI for failing to properly register a mosquito attractant used in its popular "Mosquito Magnet" insect control equipment. The company allegedly produced and sold the Mosquito Magnet between March and July 2002 without having a valid registration for the attractant. The company also included false or misleading information on the product's label. Upon receiving an approved registration application from EPA and including proper labeling on its products, the company resumed worldwide sales of the product.

In addition, the Doctor's Research Group of Plymouth, CT, faces federal penalties for allegedly not properly registering and labeling a plastic cover called SafeSeal, in accordance with federal law. The cover, which is designed to be placed over a medical stethoscope, contains an antimicrobial compound intended to protect the diaphragm itself from bacteria, but the company was marketing the product

as though it would also protect patients and medical professionals from harmful bacteria.

We are also pursuing penalties against two Rhode Island companies (Johnston Pool Supply of Johnston and AMCO Inc. of Central Falls that distribute swimming pool disinfectants) for selling and distributing their products with a concentration of sodium hypochlorite that was significantly below the concentration indicated on the products' labels. Individuals who swim in pools without the proper level of protection are exposed to viruses and bacteria that can lead to skin irritations and possible gastrointestinal problems.

In addition to registering pesticide products, federal law also requires each company to submit an annual production report to EPA on or before March 1 each year. These reports allow EPA to track the amount of pesticides that are being produced and distributed either domestically or for export. This information is crucial in the event of a product recall. We have approximately 160 pesticide-producing establishments in New England. Last year, all but six of these companies submitted their annual reports. Under expedited settlement agreements, these companies paid a total of more than $17,000 in penalties.

Homeland Security and Emergency Preparedness

Chemical releases, whether accidental or deliberate, have the potential to seriously impact public health and the environment. We continue to vigorously enforce laws that improve the safety of facilities, which use, handle, produce or store hazardous chemicals. We are also devoting considerable effort working with local and state emergency planning committees to assist these facilities in improving their security and preparedness.

Training New England's First Responders

Over the past year, we have participated in numerous terrorism and hazardous materials exercises that help prepare the local, state and federal response community in the unlikely event of an incident happening in New England. These exercises stress communication, information exchange and resource needs, as well as the need for protecting critical infrastructure, such as water supplies and power generating capacity. In addition to these exercises, our emergency preparedness training program, which is designed to prepare and support state and local emergency responders, instructed over 7,600 individuals at 150 workshops over the past year.

Reducing Risk from Chemical Releases

The Clean Air Act requires facilities to identify and assess their chemical hazards and carry out certain activities designed to reduce the likelihood and severity of accidental chemical releases. This process is known as risk management planning. These plans are designed to ensure that facilities, which store certain quantities of hazardous materials, have implemented procedures to minimize the adverse effects from any accidental release of these materials. One such facility, Morgan Advanced Ceramics of Hudson, NH, has agreed to pay a penalty of more than $44,000 for allegedly failing to submit a risk management plan for its plant, which uses highly toxic chemicals as part of its ceramics manufacturing process.

Promoting Continuous Environmental Improvement Through Environmental Management Systems

Another way we are working with the regulated community to do more than just simply comply with environmental laws is through the use of an environmental management system (EMS). Through an EMS, facilities are encouraged to adopt sound management practices to address environmental compliance. In addition, an EMS also encourages facilities to address important environmental issues not fully covered by laws and regulations, such as efficient water and energy use, recycling, and reduced greenhouse gas emissions. An EMS encourages responsible environmental behavior and is applicable to a wide range of entities from schools and private businesses to government agencies.

An Environmental Management System is a systematic approach to ensuring that environmental activities are well managed in any organization. It requires an organization to identify the environmental impacts of its operations, decide which ones are the most significant, and then set measurable pollution reduction goals. EMSs vary from one organization to another, but there are common elements such as training, high-level management involvement, data measurement, and documentation of procedures and results.

Environmental Management Systems within Schools

Elementary and secondary schools are responsible for a number of environmental matters, such as maintaining indoor air quality, properly managing chemicals, ensuring safe drinking water and minimizing diesel bus idling. Last year, we initiated several projects, which were designed to test the use of an EMS as a tool to help K-12 schools identify, prioritize and address environmental issues, and ultimately, adopt a systematic approach for continuous environmental improvement. In Maine, such projects are underway at schools in Wiscasset, South Portland and Farmington. In Massachusetts, schools in Lee, Lenox and Montery are working together on an EMS project while individual projects are underway in Amherst and Newton. We are eager to learn what motivates or prevents schools from implementing an EMS, compare different EMS models for their effectiveness in schools and to determine if long-term behavioral and environmental changes have occurred.

At the college and university level, we are collaborating with the University of Massachusetts-Lowell to assist several area colleges and universities in implementing EMSs at their respective campuses by using our *EMS Guide for Colleges and Universities.* These institutions include the University of Massachusetts-Amherst, the University of New England, Wentworth Institute of Technology, the University of New Hampshire, the University of Rhode Island, and Westfield State College.

Environmental Management Systems for the Metal Finishing Industry

Many of the small manufacturing facilities regulated in New England are suppliers to larger companies in the aerospace and electronics industries. To encourage small facilities to go beyond compliance and to embrace the environmental ethics of the larger corporations, we developed a Corporate Sponsor Program. Companies involved in this program so far include Raytheon, Pratt & Whitney and New Hampshire Ball Bearings.

Pratt & Whitney is sponsoring two EMS User groups for metal finishing suppliers, one at its Hartford, CT facility, where four suppliers have completed EMSs, and one at its North Berwick, ME facility where 11 suppliers and other companies from the area are developing EMSs for their facilities. Nine suppliers to New Hampshire Ball Bearings completed a six-month EMS training course hosted by the company at its

Peterborough, NH facility. The results of these EMSs ranged from one small laboratory saving $600 per year on solid waste costs to one large machine shop saving $230,000 per year by recycling scrap metal. All companies involved agreed that the EMS process introduced them to the theory of continuous improvement and going beyond compliance.

Environmental Management System for Our Regional Office

Executive Order 13148, "Greening the Government Through Leadership in Environmental Management," requires the development of an EMS at all federal facilities by December 2005. EPA New England is well ahead of the federal deadline. In January 2003, the Boston Office's environmental policy was signed by the Regional Administrator and co-signed by the building management. This policy confirms our commitment to reach a higher standard of environmental excellence and to serve as a public example, fostering an understanding of the relationships among natural and man-made environments, economics, and society as a whole. As part of the EMS development process, we have identified the significant environmental impacts of our regional offices in Boston and Chelmsford and prioritized them in order to address the most important issues. The list of impacts, the status of our current improvement programs, and the priority list will be reviewed and updated annually.

We recognize that regulations often fail to provide positive incentives that will motivate businesses to do more than is required by law, that is, to go beyond compliance. We also realize that regulations may not address an emerging environmental issue that requires a new solution. In the following sections, you will read about some of the innovative projects we have undertaken to further improve environmental protection in New England.

Performance Track

EPA's National Environmental Performance Track program recognizes and rewards facilities, which consistently exceed regulatory requirements, work closely with their communities and excel in protecting the environment and public health. Launched in 2000, Performance Track has grown from 228 charter members to over 300 members in 41 states, including 34 in the six New England states. The Performance Track facilities represent virtually every manufacturing sector, as well as facilities in the public sector.

Performance Track applicants must demonstrate that they have maintained a record of sustained compliance as well as established and maintained an EMS. In addition, they must be committed to public outreach and reporting and to continuous environmental improvement in areas that go beyond legal requirements. During the first year in the program, Performance Track facilities nationwide reported a reduction of 692 tons of hazardous wastes generated. First year results for New England Performance Track companies include a reduction of 189 tons of hazardous wastes generated and 138 million gallons of water saved. Six of these companies reduced their VOC emissions by approximately 13.5 tons or 24% of their baseline amount.

New England Performance Track Companies

Acushnet Rubber Company Inc. DBA Precix Inc., New Bedford, MA
BAE Systems - South Nashua Facility, Nashua, NH
Clairol Worldwide Beauty Care-P&G, Stamford, CT
DDLC Danielson, Danielson, CT
DDLC Energy, New London, CT
DePuy Orthopaedics Inc., New Bedford, MA
DePuy Orthopaedics Inc., Raynham, MA
Fairchild Semiconductor Corp., South Portland, ME
Gillette Andover Manufacturing Center, Andover, MA
Heidelberg Web Systems Inc., Dover, NH
Henkel Loctite, Seabrook, NH
IBM Burlington, Essex Junction, VT
Interface Fabrics Group Inc., Guilford, ME
International Paper - Androscoggin Mill, Jay, ME
International Paper- Bucksport Mill, Bucksport, ME
Naval Undersea Warfare Center Division, Newport, RI
New Hampshire Ball Bearings Inc., Peterborough, NH
Nexfor Fraser Papers Inc., Madawaska, ME
Oil Express, East Falmouth, MA
Perkin Elmer Optoelectronics, Salem, MA
Shipley Company LLC , Marlborough, MA
Skanska USA Building - New England Division, Boston, MA
Snap-On Natick Plant, Natick, MA
Teradyne Inc., North Reading, MA
Texas Instruments Inc., Attleboro, MA
The Topflite Golf Company, Chicopee, MA
Timken U.S. Corporation, Watertown, CT
U.S. Coast Guard Air Station, Cape Cod, MA
U.S. Postal Service - Hartford Processing and Distribution Center, Hartford, CT
U.S. Postal Service - Hartford Vehicle Maintenance Facility, Hartford, CT
U.S. Postal Service - Portland Processing and Distribution Center, Portland, ME
Unilever Home & Personal Care USA, Clinton, CT
USGen New England, Inc.- Hydro Generation, Concord, NH
Valley Oil Company, Willimantic, CT

Healthy Hospitals

In providing quality health care, New England's 280 hospitals use large volumes of material, generate diverse waste streams (including biological, chemical and radioactive waste), and consume great amounts of energy. In particular, healthcare facilities contribute to the presence of mercury, dioxin and other persistent toxins in the environment. The Hospitals for a Healthy Environment Program is a national voluntary program created to help hospitals take a leadership role in reducing their impact on the environment. The goals of the program are to eliminate the use of mercury by 2005; to reduce overall hospital waste through prevention, reuse and recycling; and to identify and eliminate other persistent toxins in the healthcare system.

Hospitals are the fourth largest source of mercury discharged into the environment.

Hospitals generate two million tons of solid waste, which represents one percent of the total municipal solid waste in the US, and manage a host of hazardous wastes.

Hospitals rank second in intensity of energy usage and use more than twice as much energy per square foot as office buildings. In total, hospitals consume almost 50 billion kilowatt hours of electricity and spend close to $3 billion each year in electricity alone, a cost that represents as much as eight percent of operating expenses.

We are actively promoting this program in New England. Of the 491 national partners in this program, 104 of them are from our region. Last year, we developed a Hospital Assessment Tool Template as a way to collect information from hospitals on environmental performance indicators, waste generation, pollution prevention and energy/water conservation. Three states (CT, RI and NH) adopted the template and conducted site visits to 25 hospitals in order to collect data assessing environmental performance and potential opportunities at each hospital. We are also planning to use the data collected to evaluate hospital mercury programs, to identify sector-wide issues, to develop compliance assistance tools, and to further define healthcare sector activities.

Leveraging Environmental Improvements

Last year, we conducted over 700 inspections at regulated facilities throughout New England. During these times of decreasing resources, we are always looking for ways to leverage further environmental improvements. Last year, we developed a standardized letter called the Post Inspection Letter and now mail it out to each facility that has been inspected as a way to encourage compliance and beyond compliance behavior. The Post Inspection Letter provides a summary of publicly-available information regarding environmental sustainability and compliance. This information is also accessible on a dedicated Web site with extensive links to other helpful sites. During the first year, we sent 108 letters and received 1,670 hits on our Solutions web site. Since this site is not available through any search engine, these statistics tell us that inspected facilities are very interested in finding ways to improve their compliance with environmental laws.

Conclusion

Protecting human health and the environment is the mission of EPA New England. The Office of Environmental Stewardship is responsible for improving the environmental performance of businesses, government and the public through compliance with environmental requirements, preventing pollution and promoting environmental stewardship. Over the past year, we have achieved notable success by using a variety of enforcement and assistance approaches that address today's environmental problems and promote environmentally sustainable performance. We hope that this report has illustrated our problem-solving philosophy. Once again, your feedback on our efforts is important to us.

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Web Pages of Interest
For more detailed information on the programs and activities of the Office of Environmental Stewardship:
www.epa.gov/ne/enforcementandassistance

For information on the EPA New England Office:
www.epa.gov/ne

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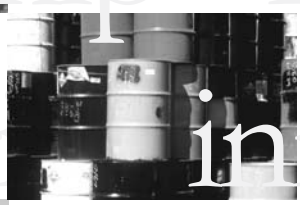

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