BULLETIN OF POLLUTION PREVENTION

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The Model Law

by Tony Luppino

Two years ago the Massachusetts legislature unanimously passed the Toxics Use Reduction Act, a sweeping measure designed to reduce the use of toxic chemicals by Massachusetts industry. The state law and program has come to be viewed by many pollution prevention advocates as a good model of what state toxics use reduction programs should look like. While not perfect, TURA is clearly the most ambitious piece of pollution prevention legislation in the country.

The Massachusetts law explicitly requires toxics use reduction programs, as opposed to weaker and less clear waste reduction or waste minimization programs. Toxics use reduction is defined by the law as "in-plant changes in production process or raw materials that reduce, avoid, or eliminate the use of toxic or hazardous substances or generation of hazardous byproducts per unit of product, so as to reduce risks to the health of workers, consumers, or the environment, without shifting risks among workers, consumers, or parts of the environment."

Among techniques included in the law's definition of toxics use reduction are:

- Input substitution—the replacement of a toxic substance or raw material used in a production process with a non-toxic or less toxic substance;
- Product reformulation—changing an end product to reduce or eliminate the amount and toxicity of toxic substances used;
- Production process modification—redesign of existing production processes or development of new ones to reduce or eliminate the use of toxic substances and the generation of hazardous waste;
- Production process modernization—upgrading or replacing equipment or methods in the context of an existing production process;
- Improved operation and maintenance controls of production process equipment and methods, including improved housekeeping, system adjustments, and product and process inspections;
- In-process recycling—reuse or extended use of toxic chemicals within a production process by filtration and other closed-loop systems, reducing the use of toxics or waste per unit of production.

Excluded from the definition of toxic use reduction by the Massachusetts law are incineration, transfer from one medium of release or discharge to another, offsite waste recycling, and end-of-pipe treatment of toxics as wastes.

Chemicals covered

TURA currently covers all 300-plus chemicals listed in Title III of the U.S. federal Superfund Amendment and Reauthorization Act. Later this year the chemicals listed by the U.S. Comprehensive Environmental Response and Liability Act will be phased into TURA oversight. Up to 10 additional chemicals may be added to the list each year by the TURA-mandated Council on Toxics Use Reduction, which encourages coordination of all state regulations, reporting, and programs dealing with toxics, or by the Department of Environmental Protection.

User categories

Any company in TURA-covered industries that employs 10 or more full-time employees is affected in some way by the act. TURA divides users of toxic chemicals into small-quantity and large-quantity categories. LQUs are those companies that use at least 10,000 pounds of a listed substance per year, or that manufacture or process at least 25,000 pounds of a listed substance per year. All other users are classified as SQUs.

Reporting requirements

Massachusetts' TURA directs state LQUs to file annual toxic or hazardous substance reports. These reports must indicate, for each facility, the amounts of every listed chemical used, manufactured, generated as byproduct, put in a product shipped offsite, and/or recycled onsite.

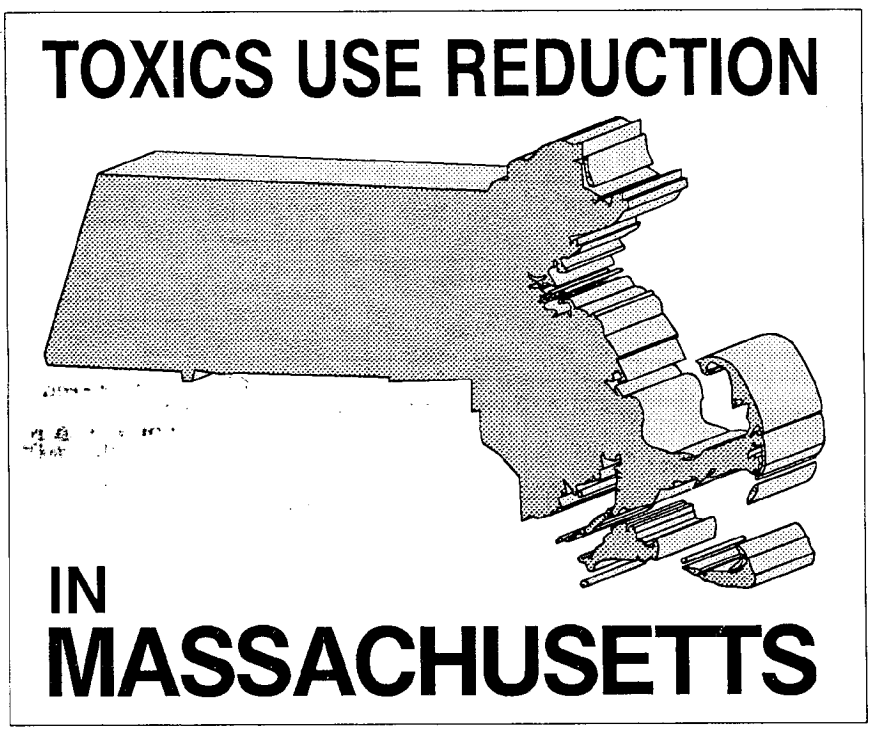
For each chemical in each production process the reports must show the year's byproduct and emissions reduction indexes (measures of percent reduction per unit of product). The reports are also to include a matrix for each chemical and production process showing the methods or techniques used to reduce the byproducts generated. The annual reports are reviewed by agency staff and made available to the public.

Reduction plans

TURA requires that LQUs develop toxics use reduction plans for each facility covered under the act. These plans focus solely on toxics use reduction and must include:

- An analysis of all production processes in which TURA-covered chemicals are manufactured or used;
- Current and projected use of toxic chemicals;
- Economic impacts of each chemical used;
- Appropriate technologies for meeting toxics use reduction goals;
- All training, technologies, and procedures to be used under the proposed toxics use reduction plan, and anticipated cost savings they may realize;
- An implementation schedule for the proposed toxics use reduction program;
- Two- and five-year toxics use reduction goals for each chemical in each production process, expressed as a byproduct reduction index (reduction per unit of product);
- Two- and five-year reduction goals for both use and byproduct generation for each chemical in each facility as a whole;
- Explanations of why particular toxics use reduction options were or were not implemented.

If a large quantity user fails to produce a plan, it can be fined up to $25,000. There are also criminal penalties for those who willfully violate the planning requirement. The toxics use reduction plans are to be updated every two years. Summaries of the plans are made available to the public.



Public involvement

TURA also includes provisions for worker and community involvement in the toxics use reduction process. Six months before toxics use reduction plans are due, LQUs must notify all employees of the planning process, identify substances covered by the plan, identify production units, and solicit comments or suggestions from the workers in the facility. Ten or more residents living within 10 miles of a facility may petition the Department of Environmental Protection to review the facility's plan, plan summary, and backup data. The DEP must then report back to the petitioners on its findings.

TURA also contains provisions allowing citizens to take legal action to compel enforcement of the act. Funding is provided to pay fees for attorneys and expert witnesses. Also funded are toxics use reduction training and assistance to citizens, community groups, and workers, primarily through the Toxics Use Reduction Institute at the University of Lowell.

Bureaucratic overhaul

More than any other U.S. toxics use reduction law, the Massachusetts TURA reforms the existing state environmental regulatory system so that it promotes toxics use reduc-

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The Pilot Project

by Karen Murphy

Discussions about toxics use reduction inevitably raise questions about the use of existing regulatory programs to promote toxics use reduction. Can "Best Available Control Technology" be redefined to mean process changes? How can greater coordination between programs help close regulatory loopholes? Is multimedia permitting possible and effective?

In 1987 the Massachusetts Department of Environmental Protection began to formulate a pilot project aimed at exploring the effectiveness of multimedia inspection and enforcement programs. Further development, planning, and fundraising for the project occurred through 1989 and the Blackstone Project was launched in 1990. The project has three primary goals mandated in the 1989 Massachusetts Toxic Use Reduction Act:

- Development of multimedia inspection procedures.
- Promotion of toxics use reduction through enforcement actions.
- Coordination of regulatory and technical assistance activities.

The DEP, which has responsibility for inspections and enforcement, and the Department of Environmental Management (DEM), which administers the state's pollution prevention technical assistance program, jointly conducted the project in cooperation with the Upper Blackstone Water Pollution Abatement District. The project targeted 26 metal-intensive manufacturing facilities located in the service area of the Upper Blackstone Publicly Owned Treatment Works (POTW).

DEM staff were trained to conduct multimedia inspections for air quality, hazardous waste, water pollution/industrial pretreatment, and Superfund Title III compliance. Crucially important, inspectors were also charged with identifying source reduction opportunities during the inspections, recommending source reduction enforcement strategies, and drafting enforcement documents.

1990 Findings

The primary focus for the Blackstone Project's first year was on testing various multimedia inspection models and determining if they were effective given a number of different parameters ranging from cost to environmental protection.

Cost. The Blackstone Project demonstrated that certain multimedia inspection models were more cost-effective than their single-media counterparts, particularly in small to mid-sized facilities. At very large facilities the project team recommended coordinated single-media inspections of a facility or multimedia inspections of particular production units.

Violations. Of the 26 facilities inspected, 20 were found to be violat-

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GLU's First Pollution Prevention Workshop

A good neighbor agreement does not just address the environment, but also job security and the long-term sustainability of the community.
–Sanford Lewis
National Toxics Campaign

by Karen Murphy

Negotiating good neighbor agreements was the major focus of Great Lakes United's first citizen's pollution prevention workshop.

Held in Western New York in mid-April and co-sponsored by the Citizens' Environmental Coalition, the workshop trained citizens in getting information on local companies, developing organizing strategies, and building coalitions with labor.

Good Neighbor Agreements

Over the last five years the idea of good neighbor agreements has captured the imagination of community organizations throughout the United States. These agreements between communities and the industries they host address issues such as:

- pollution prevention
- remedial actions
- accident prevention
- the right to inspect
- access to information
- health monitoring and
- long-term job security

One California community is negotiating for a local health clinic. Another negotiated and won the right to inspect a facility. Other communities have negotiated for reductions in the use of toxic chemicals.

Sanford Lewis, of the National Toxics Campaign, told workshop participants that good neighbor agreements should be approached as contractual arrangements—that is, put in a legal form with enforcement clauses written in.

A good neighbor agreement is not easy to obtain. It takes hard work, persistence, clear thinking, and a good organizing campaign.

Waste Audits

The first step in obtaining an agreement is determining what problems need to be addressed. This process can begin by conducting waste audits—research to identify what chemicals are going into and out of a facility. There is a lot of public information available. Charlie Griffith, of the Ecology Center of Ann Arbor, Michigan, and Charlie Tebbutt, of Allen, Lippes and Shonn of Buffalo, New York, led workshop participants through a series of permits and other public documents that can provide important information:

Resource Conservation and Recovery Act. Waste generators must submit "hazardous waste manifests," forms detailing the types, quantities and destinations of wastes in each offsite shipment of waste. The government compiles an annual report summarizing the manifests.

Emergency Planning and Community Right to Know Act. Companies are required to identify various hazardous chemicals stored onsite in amounts over 10,000 pounds on what are called Tier I and Tier II forms. Companies must also report all releases of certain chemicals to the air, land or water on Form Rs.

Clean Air Act and Clean Water Act. Industries are required to obtain permits for all discharges to air and water. The Clean Water Act requires companies to report on their compliance with the permits. All permitted companies must also fill out an annual survey detailing the chemicals its facilities use.

Mounting a Campaign

To get companies to change the way they operate, community and labor organizations must build strong coalitions that can effectively apply pressure. Keith Mestrich, of the Food and Allied Service Trades, led workshop participants through exercises to help community and labor organizations identify what they want to do, how they plan to go about doing it, and who they will target:

Goals

- What are labor's short- and long-range goals?
- What are environmentalists' short- and long-range goals?
- What are the common goals?
- What will be called a victory?

Organization

- How will the organization be structured?
- Will the campaign recruit new members and allies?
- Who are potential allies?
- How will the organization be lead, and who will lead it?
- How will money be raised?
- What are potential strengths and problems in working together?
- What resources does each coalition member bring to the campaign?

Research

- How will the target's environmental problems be researched?
- Its labor problems?
- Who are the regulators at the city, state and federal levels that may have information on the target? What are their powers?
- What other facts could be of use? (E.g., company finances, executives' backgrounds.)
- Can research be done in ways that build neighborhood and union involvement?

Targeting

- Who has the power at the plant or in the community to meet demands and solve problems?
- How does each target hold power—by voters, by appointment, by ownership, or in some other way?
- What are the strengths and weaknesses of each target?

A recurrent theme of the workshop was the need to build stronger coalitions with labor. Plants workers may be the most affected by releases of toxic chemicals, since 284,000 cases of new work-related disease are reported annually, but they are also the most vulnerable to intimations that solving environmental problems is a threat to their economic well-being.

Representatives of the United Steel Workers of America shared with participants a number of pertinent recommendations approved at the union's recent national convention that addressed the issue of job blackmail and the environment. The recommendations closed by declaring that, "In the long run, the real choice is not jobs or environment. It's both or neither. What kind of jobs will be possible in a world of depleted resources, poisoned water and foul air, a world where ozone depletion and greenhouse warming make it difficult even to survive? The only answer is to link environmental issues with economic justice."

...Massachussetts' Model Law: The Toxics Use Reduction Act

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tion. The act sets a goal of 50 percent reduction in the toxic byproducts generated in Massachusetts by 1997.

Beginning in 1995, the state may designate segments of industry as priorities for achieving reduction goals, based on toxics use and economic feasibility. Performance standards for levels of toxics use will then be set based upon the industry segment's average byproduct reduction index. Those companies falling below the performance standard will be required to implement additional toxics use reduction measures in order to comply with their segment's current standard.

Multimedia enforcement

The Massachusetts law mandates that state environmental enforcement efforts be "multimedia" in nature, that is, designed counter the effects of pollution control efforts that merely transfer toxic chemicals from one medium to another, say from air to landfill. The workplace is expressly considered one of the environmental media.

This multimedia orientation should push Massachusetts environmental enforcement toward toxics use reduction, because it is the only method of pollution control that does not simply transfer pollution from one place or form to another.

Massachusetts environmental agencies are currently studying methods of multimedia enforcement via the Blackstone Project, a pilot initiative employing whole-facility inspections to regulate industries in the state's Upper Blackstone Water Pollution Abatement District (see article elsewhere in this issue).

Innovation waivers

The act also provides for the formulation of new environmental regulations so that obstacles standing in the way of toxics use reduction can be eliminated. TURA allows the state to grant "innovation waivers" that can relax or delay specific permit or regulatory requirements. Innovation waivers may be granted if they:

- Help implement toxics use reduction techniques;
- Achieve compliance with environmental regulations within two years;
- Do not cause too much risk;
- Achieve greater net environmental benefits than would be possible without a waiver.

Technical assistance

The Massachusetts law funds programs to assist toxics users in their efforts to reduce their use of toxic chemicals. TURA created the Office of Technical Assistance, a department separate from the state's environmental regulatory agencies that is prohibited from giving company information to those agencies except in specific circumstances. Free services offered to businesses by the OTA include:

- Onsite technical evaluation of toxics use reduction opportunities;
- Economic analyses to help identify relative costs and benefits of toxics use reduction options;
- Conferences, workshops, and trade fairs to disseminate information on toxics use reduction;
- Training in the recognition of toxics use reduction opportunities.

TURA also established the Toxics Use Reduction Institute at the University of Lowell. The institute combines technical assistance with toxics use reduction research. Its important activities include:

- Curriculum development and training of toxics use reduction planners.
- Sponsoring research in new technologies or methods that reduce toxics use.
- Development of public policy to decrease risk to the environment and to public health.
- Providing technical support and scientific advice to government in advancing pollution prevention programs.

TURA funding

TURA is funded by a scaled fee structure. LQUs pay a base fee for each facility and $1,100 per chemical used in quantities over the threshold amount, with a ceiling on both the base and total fees determined by the number of employees at that facility.

This dedicated fee system is perhaps the most important element of the Massachusetts TURA. Even the best toxic use reduction law cannot be implemented without sufficient funding. The type of funding source determines how consistently long-term funding will be available for the program. Dedicated fees and taxes are the most reliable source of funding for toxics use reduction programs. The Massachusetts fee system raises $4 million to $5 million each year. Federal waste reduction grants bring the current annual funding for the Massachusetts program up to $5,242,000, far greater than any other state program, according to "An Ounce of Toxic Pollution Prevention," a report on ten of the nation's toxics use reduction laws released by the Center for Policy Alternatives, the National Environmental Law Center, and the Center for Public Interest Research. Minnesota came in a very distant second with $1,525,000.

TURA's shortcomings

The panel of experts that rated state toxics use reduction laws for "An Ounce of Toxic Pollution Prevention" found some shortcomings in the Massachusetts act. Several of the experts found TURA's reporting requirements inadequate because facilities must annually report toxics use for the facility as a whole, not for individual production processes. David Allen, coordinator of the National Toxics Campaign Fund, believes that TURA's exclusive focus on a list of individual chemicals may limit its effectiveness. "The Massachusetts program could be broadened through a two-tiered approach which, in addition to seeking reduction in the use of the specific chemicals on a list, also seeks to reduce the generation of all wastes regardless of their specific chemical content."

A pollution prevention grant program providing grants to businesses, trade associations, and labor and environment organizations to develop pollution prevention methods and programs would also make the Massachusetts TURA more effective. At present the act includes only a limited loan program.

Of course, even the best pollution prevention law is ineffective if it is not well implemented. Since almost all the important deadlines written into the act have yet to be reached, it is still too early to assess how TURA is performing. Many of the large quantity users must file their annual toxics use reports by July 1.

Bulletin of Pollution Prevention
Reg Gilbert
editing, design, production

Pollution Prevention Project
Tony Lupino
research writer
Karen Murphy
field coordinator
Valerie Galante
information manager

Great Lakes United
Buffalo State College, Cassety Hall
1300 Elmwood Ave., Buffalo, N.Y. 14222, or
P.O. Box 548, Station A, Windsor, Ontario N9A6M6

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pollution prevention SUCCESS STORIES

TORONTO

by Monica Campbell,
Toronto Dept. of Public Health

Two years ago Toronto's Environmental Protection Office began planning a hazardous waste program. It was not to become a typical pollution control effort.

Consistent with the prevention (rather than treatment) philosophy of the Department of Public Health, of which the environment office is a division, the program emphasizes hazardous waste prevention. The idea is to limit the amount of hazardous waste created rather than simply to find the best ways to contain the waste after it has been produced.

To this end the program will help Toronto's waste-generating establishments reduce their production of hazardous emissions or wastes and/or to recycle them. It is hoped that 80 percent of these establishments will be involved in the program—undertaking hazardous waste audits and actively pursuing waste minimization options—within three years. The focus will be on small industrial, commercial and institutional sectors.

After two and a half years, the program's performance will be assessed. The city can then consider making waste audits and waste reduction targets mandatory.

Hazardous Waste Assessment

The program will develop a profile of hazardous waste generators in Toronto. All industrial establishments will be listed, ranked and categorized according to the types and quantities of waste they generate and/or haul off-site. Where possible, the waste minimization potential for each industry will be estimated.

Finally, a preliminary compendium of company profiles will be compiled in order to identify those establishments with the greatest potential for minimizing the wastes they produce.

All this information will be made available to the public through computerized data files.

Plant Visits

The program will make site visits to consult hazardous waste generators on waste minimization measures. Initial visits will involve informing these organizations about the Hazardous Waste Minimization Program and its services. Subsequent visits will provide assistance in identifying the source and composition of wastes, and in their handling, treatment and disposal.

Program staff will conduct investigations and research to determine appropriate waste minimization measures for specific waste types. Staff will help determine estimated cost reductions and approximate payback periods after implementation of waste minimization measures.

Information Clearinghouse

The program will establish a clearinghouse to provide general, technical and financial information on hazardous waste minimization opportunities to other government departments, industrial companies and associations, and the public.

General introductory materials will address the underlying principles of hazardous waste minimization, its benefits and its constraints, and include examples of establishments that have been successful in minimizing their hazardous wastes.

Technical information will be available on specific hazardous waste minimization methods, organized by industrial categories, industrial waste streams and industrial processes. Technical bibliographies, journal articles, database information, contacts and self-assessment or auditing materials will also be collected and made available.

Financial information explaining how to obtain low-interest and long-term loans and grants will be provided. Resource lists of financial institutions and public grant programs will also be made available.

Program staff will design waste minimization presentations and actively solicit hazardous-waste generators for opportunities to provide speeches, videos and slide shows.

The bureau will also provide workshops for interested groups and appropriate organizations. Workshop topics could include waste auditing, improved effluent monitoring and sampling, waste reduction identification, assessment opportunities for reducing wastes, building management and employee support for waste reduction, waste management alternatives, the costs and benefits of alternatives, and implementation of simple, inexpensive measures to immediately reduce waste.

ERIE COUNTY

by Tony Luppino

Erie County, New York, which includes the Buffalo metropolitan area, has initiated a three-year, $1 million demonstration effort to help small and medium-sized businesses reduce the amounts and toxicity of the wastes they generate. The new Office of Pollution Prevention is part of the county's Department of Environment and Planning.

Printing, photography, metal manufacturing, electroplating, dry cleaning, and auto body repair are among the industries being targeted by the program. The office will offer businesses in these and some other sectors workshops, seminars, informational materials, environmental/waste audits, and onsite consultation.

"With the creation of the Office of Pollution Prevention, Erie County is taking a proactive role in forging ahead as a national pioneer into the pollution reduction frontier," said Erie County Executive Dennis Gorski. The office is partially funded by two grants from the federal Environmental Protection Agency.

The new office will be working closely with the Western New York Economic Development Corporation, the New York State Center for Hazardous Waste Management at the University of Buffalo, and RECRA Environmental Inc., a local consulting firm. A project advisory group, with representation from industry, labor, academia, the environmental community, and area economic development agencies, has also been formed.

The office will collaborate with RECRA Environmental and the Center for Hazardous Waste Management to evaluate new waste-reduction technologies useful for smaller-scale businesses. "This program is aimed to bridge the gap between the inventor/developer of new and improved waste reduction technologies and the owner of a small business producing wastes," explained Dr. Ralph Rumer, executive director of the Center for Hazardous Waste Management.

While the public and the environmental community correctly pay the most attention to larger corporate polluters, it is important that small toxic waste generators are not neglected. Their contribution to the hazardous waste stream is significant because of their numbers. Their contribution is estimated to be about 15 percent in New York. And with limited in-house technical resources at their disposal, smaller polluters have a great need for the kind of pollution prevention assistance being offered by the new office.

Erie County's program offers local Great Lakes governments a clear example of what they can do to help make zero discharge through pollution prevention a reality in the Great Lakes Basin.

MILWAUKEE

by Steven Skavroneck,
Milwaukee Metro Sewerage District

Preventing the discharge of toxic substances into the waste stream is cheaper and more effective than treating waste to remove toxics. Accordingly, the Milwaukee Metropolitan Sewerage District is sponsoring and staffing a community-wide group to "minimize toxic waste discharged to the MMSD system."

The Greater Milwaukee Toxics Minimization Task Force comprises representatives of industry and labor, trade associations, educational institutions, environmental advocacy groups (including the Lake Michigan Federation and Citizens for a Better End), as well as consulting engineers, environmental lawyers, and support staff from MMSD and the Wisconsin Department of Natural Resources.

The Milwaukee Metropolitan Sewerage District serves nearly one million people in a 420-square-mile area. It maintains the region's major sewers and operates two sewage treatment plants that discharge approximately 200 million gallons of treated effluent into Lake Michigan daily.

MMSD is currently in compliance with all state and federal regulations, but increasingly stringent state and federal limits on the discharge of toxic substances to all media, as well as the objectives of the Great Lakes Water Quality Agreement, are forcing the district to go beyond its current programs in order to meet future requirements. Needed will be:

- Participation in local and national research focused on the impact of toxic substances;
- Identification of toxic materials presently in Milwaukee-area rivers and in Lake Michigan and its bottom sediments;
- Creation of programs to encourage individuals, businesses, industries, and government to comply with toxics regulations and reduce the use of toxic substances;
- Education of homeowners, business owners and industrial personnel about their role in minimizing the use and eventual discharge of toxic materials.

To objectives of the toxics minimization task force are to:

- Quantify mass balances for certain toxic substances across the MMSD system. Major inputs that have been quantified are domestic, permitted industries, other industries and commercial activities, and stormwater. Major outputs that have been quantified are effluent, sludge, and air emissions;
- Assess the existing and future regulatory environment for effluent, sludge, and air emissions and potential implications for MMSD;
- Determine priority areas for toxics minimization initiatives and evaluate waste minimization strategies for each;
- Develop an implementation plan that identifies recommended actions, timetables, and lead roles;
- Work with appropriate organizations to facilitate solutions to environmental problems within the Greater Milwaukee ecosystem;
- Generate task force recommendations for presentation to the MMSD Commission, other appropriate agencies and the community.

The task force has completed a toxics reduction strategy and submitted it to the commission for its consideration. The task force sees an ongoing role for itself advising MMSD on implementation of the strategy.

For further information on the district's toxics use reduction efforts, call Steve Skavroneck at 414-225-2174.

The Federal Lakes Agendas

by John Jackson

Five Great Lakes governors and U.S. EPA Administrator William Reilly met in Chicago this April to sign the "Great Lakes Pollution Prevention Action Plan." The highly orchestrated event was broadcast to media by satellite and followed by a "media availability session" and lunch. The announcement stressed partnerships between government and industry and put out challenges to all involved to institute pollution prevention programmes.

In May, Environment Canada brought about 70 people together in Toronto to discuss formation of a multistakeholder committee that would develop sectoral pollution prevention plans. The meeting mirrored the Chicago event's emphasis on partnerships, challenges and voluntary approaches to pollution prevention.

The two events were part of the buildup to the International Joint Commission's biennial meeting scheduled for the end of September in Traverse City, Michigan. The meeting has become a focal point for people involved in Great Lakes issues. The U.S. and Canadian federal governments plan a day-and-a-half-long "International Symposium on Pollution Prevention" at the event to showcase advances in pollution prevention.

As we count down to Traverse City, we must ask what the two federal governments have accomplished in the area of pollution prevention since the last meeting of the IJC two years ago.

Zero Discharge

Pollution prevention programmes in the Great Lakes are supposedly aimed at achieving the goal of zero discharge. Due to long-term pressure by citizen activists across the lakes, the phrase "zero discharge" is now found everywhere—in the U.S.-Canada Great Lakes Water Quality Agreement, in speeches by the IJC commissioners and in all IJC publications, in all environmental and citizens' group publications and presentations, and even in presentations by some representatives of industry.

Zero discharge is now found everywhere—except in official statements from the two federal governments. In all descriptions of their pollution prevention strategies both governments studiously avoid use of the words. Canada's former environment minister, Robert de Cotret, fumbled awkwardly when challenged to use the phrase at a news conference in March 1991. The materials presented by the U.S. EPA at the April signing of the Great Lakes Pollution Prevention Action Plan make no reference to zero discharge.

"Virtual elimination" is commonly found in government statements, but "zero discharge" is not. The problem is that we will never achieve virtual elimination without zero discharge.

Targets

Over a year ago, the IJC declared that, "Target dates for the staged reduction and early elimination of these substances [persistent toxic substances] should be set in the very near future and strictly enforced by incorporating them into appropriate parts of the legislative program discussed below."

But in the past year the two federal governments have made little if any progress towards setting target dates. The U.S. government has set up its "33/50 Program," by which the releases of 17 pollutants are to be reduced by 50 percent by 1995. This target has two major flaws:

- The formula applies to only 17 chemicals. These chemicals were chosen on a nationwide basis and do not, therefore, address the persistent bioaccumulative chemicals of major concern in the Great Lakes. For example, major Great Lakes pollutants such as chlorine and benzo(a)pyrene are not on the list. Only two of the 17 chemicals on the EPA list are on the IJC's critical pollutants list.
- The targets are only 50 percent of current levels, even though the U.S.-signed Great Lakes Water Quality Agreement calls for zero discharge of persistent toxic substances.

As for the Canadian government, it has failed to set any targets for reductions in the use or release of persistent toxic substances.

Voluntarism/Partnerships

The word "partners" permeates Canadian and U.S. federal government talk about pollution prevention. The Chicago signing of the Great Lakes Pollution Prevention Plan was like a love-in, with repeated challenges and calls for partnerships.

In taking a "partnership" approach the governments are making voluntarism the cornerstone of their environmental protection strategies. The stress is on challenging the various sectors of society (i.e., industry, agriculture, municipalities, etc.) to prepare their own plans for pollution prevention. The danger with such an approach is that each sector will come up with a plan that simply lists the great things it is already doing. "Challenges" and "partnerships" can only be real if high reduction targets are set by governments in advance and polluters have to develop plans that will achieve them.

The U.S. EPA is working on its Great Lakes Initiative, which is aimed at developing new uniform standards for water quality throughout the Great Lakes states. This could push polluters to develop tougher pollution prevention plans.

The Canadian federal approach to pollution prevention is almost totally based on voluntary methods. It calls on each sector to develop its own goals for pollution prevention; amazingly, polluters are even asked to identify what the target pollutants should be. These plans are to be completed by October 1992.

Lake Superior

Citizens at the last IJC meeting stressed that Lake Superior should be subjected to zero discharge guidelines and plans immediately, in order to protect what is still a relatively pristine lake. Six months later the IJC called on the U.S. and Canadian governments to designate Lake Superior a demonstration area in which "no point source discharge of any persistent toxic substances will be permitted."

After more than a year neither government has committed itself to achieve this objective. In April the U.S. government committed itself to "reducing the quantity of persistent toxic substances entering the lake," but gave no targets or objectives. It certainly did not say its objective was "no point source discharge." The Canadian government has made no announcements on Lake Superior.

The State of Progress

The U.S. and Canadian federal governments have failed to live up to the challenges given them two years ago by a concerned public, and over a year ago by the IJC. Perhaps this failure is due to the governments' setting their objectives too low. At the Toronto multistakeholder meeting, the official responsible for Canada's Great Lakes efforts said that the government's zero discharge programme was an attempt just to get to first base on the issue. The two federal governments first committed themselves to zero discharge in 1978. Thirteen years have passed since then. Why are we still just trying to get to first base on zero discharge? Isn't it time for a home run?

...Blackstone Project: Multimedia Enforcement

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ing some environmental protection regulation. Sixteen violations and five other problems found through Blackstone inspections would probably not have been found during single-media inspections. The violations fell into several categories:

- Unregistered waste streams in media regulated by programs with which the facility was otherwise registered;
- Illegal or unpermitted waste streams in media regulated by programs with which the facility was not registered;
- Hazardous waste generators either incorrectly listed or acting out of status;
- Facilities in proximate but legally separate locations, reducing regulatory scrutiny. One facility was taking advantage of a loophole created by a disjuncture between the air and POTW programs.

Compliance with the Emergency Planning and Community Right-to-Know Act. Five facilities were found to have chemical and chemical amount discrepancies in their Toxics Release Inventory reports. Three other companies failed to file reports.

Water Pollution Problems. Fifteen of the 26 facilities discharge to the sewage treatment plant, while four have direct discharge permits. "Some of the most severe water pollution problems found by Blackstone Project inspectors had to do with inadequate pretreatment plant operation and maintenance manuals, and/or staffing, as well as violations of pretreatment standards for reporting and effluent." Many of pretreatment program's problems identified by the Blackstone Project have not been resolved.

Single-media bureaucracy. The DEP's single-media "structure and culture" raised continuous problems for Blackstone Project staff. Information on facilities was housed in separate files—there was no master file on a facility. Facilities were often referenced through different systems or nomenclature. Facility classification systems were not uniform. Finally, communication between programs was limited.

"Much of the cost of the Blackstone Project was due to the mismatch between the Project's multimedia mission and the single-media structure and culture which currently characterizes DEP. The multimedia/single-media mismatch was apparent in all aspects of planning and implementing each inspection."

Changes at DEP

DEP is currently compiling a master file system. A total of 45,000 records are being merged to 18,000 files on individual facilities. DEP program offices are slated to be linked by an electronic mail system.

DEP is not planning to dismantle the single-media structure or approach to pollution control, but does plan to improve the quality of its information, the coordination of its efforts, and the number of areas of interface between multi- and single-media programs.

Just as significantly, the project has begun the difficult cultural process of internal retraining, moving DEP personnel to think in terms of toxics use reduction rather than pollution control, and to assess the gaps engendered by the single-media approach.

For a copy of the state report on the Blackstone Project, contact Walter Hope at (617) 292-5953, or Great Lakes United.