

**U.S.
Environmental
Protection
Agency**

**Office of Policy,
Economics, and
Innovation**

March 2000

.....

Rewarding Environmental Stewardship:

Case Studies and
Tips for Creating
Incentives in the
National Metal
Finishing Strategic
Goals Program

.....



March 2000

Six Case Studies from Around the Nation

- 1** The Federal Integrated Contingency Plan (ICP)
- 2** The EPA Region 6 RCRA Delisting Process
- 3** Michigan's Clean Corporate Citizen (C3) Program
- 4** Wisconsin's Environmental Cooperation Pilot Program (ECP)
- 5** California's Environmental Technology Certification Program (CalCert)
- 6** Illinois' Accelerated Diffusion of Pollution Prevention Technology (ADOP²T)

⋮

Rewarding Environmental Stewardship:

Case Studies and Tips for Creating Incentives in the National Metal Finishing Strategic Goals Program

Introduction

The National Metal Finishing Strategic Goals Program (SGP) is one of the first industry-specific, cross-media, EPA programs focused on industry and government working together as partners to protect the environment. This voluntary program encourages metal finishers to meet environmental targets by 2002 by providing incentives, creating assistance tools, and removing regulatory and policy barriers to accomplishing these goals. While guided by a national steering committee, implementation of the SGP takes place at the local, state, and/or regional levels. Local stakeholders representing industry, non-government organizations, and various levels of government work together to explore more flexible, cost-effective, and environmentally protective regulatory solutions.

In looking for ways to improve the partnership between industry and government, potential participants are attracted to the SGP by the benefits made available to metal finishers. SGP stakeholders often want to identify regulatory flexibility opportunities to reward good environmental performers and improve the system of environmental regulation, monitoring, and reporting. Through the participation of Publicly Owned Treatment Works (POTWs), local groups have created flexibility within existing water requirements for top performing metal finishers. As metal finishers must comply with various wastewater treatment regulations, this flexibility greatly benefits participating facilities. However, metal finishers must also comply with a number of waste, air, and community right-to-

Introduction

Rewarding Environmental Stewardship Continued...

know requirements. In part due to the complicated nature of these regulations, local SGP groups have encountered difficulty in creating non-water benefits for participants.

In response to these challenges, EPA researched potential non-water related benefits that local SGP groups can incorporate into their incentives program. This brochure highlights six programs that could be replicated or harmonized with by local SGP groups or altered to meet local needs. Overall, these programs have the potential to reduce the administrative burden metal finishers face in complying with various environmental requirements.

The case studies presented here were selected for the range of regulatory issues and environmental media that they address the high levels of standards that they encourage for environmental performance, and the potential transferability of their ideas to local SGP implementation programs. Taken together, the six case studies also demonstrate the wide range of approaches that can be effective in creating opportunities for regulatory flexibility. A brief description of each of the case studies follows:

- **The Integrated Contingency Plan (ICP): Opportunity to create metal finishing-specific comprehensive emergency response plan** - created by several federal agencies to help facilities consolidate multiple plans for responding to oil and non-radiological hazardous substance spills into one comprehensive emergency response plan.
- **EPA Region 6 Delisting Process: Model for providing RCRA delisting of metal finishing waste** - process implemented by EPA Region 6 to assist facilities in navigating more efficiently through the federal delisting process for RCRA wastes.
- **Michigan's Clean Corporate Citizen Program (C3): Model for linking a State-based program with SGP** - voluntary program for encouraging and rewarding facilities that have good compliance records and that go beyond compliance by implementing environmental management systems and practicing pollution prevention.
- **Wisconsin's Environmental Cooperation Pilot Program (ECPP): Examples of flexibility opportunities for SGP facilities**- an initiative to test innovative environmental regulatory methods on a facility by facility basis through the creation of cooperative environmental agreements by facility owners and environmental regulators.
- **California's Environmental Technology Certification Program (CalCert): Access to innovative technology for SGP facilities** - a voluntary, self-reporting program that provides technology developers, manufacturers, and vendors an independent third-party evaluation of the performance of new and mature environmental technologies.
- **Illinois' Accelerated Diffusion of Pollution Prevention Technology Program (ADOP²T): An SGP-linked program providing metal finishers with verified technology and access to capital** - a program to promote widespread, expeditious adoption of new pollution prevention technologies through information sharing and financial support.

The brochure outlines each of the case studies in turn, describing the process for designing and implementing these programs and highlighting the potential benefits and links to SGP. Contact information and additional resources are provided at the conclusion of each case study for those who would like additional information. A brief summary closes the brochure with a discussion of offering incentives through the SGP benefits framework.

The Integrated Contingency Plan (ICP)

Overview

As industrial facilities with hazardous materials on-site, metal finishing operations must maintain and comply with multiple federal and state emergency response plans, local emergency planning committees, fire departments, and other external plans. These plans must be available on-site at all times for use during emergencies and for inspections.

Section 112(r)(10) of the Clean Air Act required the President to conduct a review of federal release prevention, mitigation and response authorities. This review found that while achieving the goals of protecting public safety and the environment, the current system with multiple planning requirements is complex, confusing and costly.

In 1996, the Integrated Contingency Plan (ICP) or the One Plan was created by several federal agencies to help facilities, like metal finishing operations, to consolidate multiple plans for responding to oil and non-radiological hazardous substance spills into one comprehensive emergency response plan. The Environmental Protection Agency (EPA), Coast Guard, the Department of Labor’s Occupational Safety and Health Administration (OSHA), Department of Transportation’s (DOT) Office of Pipeline Safety, and the Department of the Interior’s Minerals Management Service (MMS), along with state and local officials, industry and community representatives, joined together to develop this guidance.

The Integrated Contingency Plan

The ICP is designed to reduce paperwork and record-keeping duplication in the preparation of emergency response plans, eliminate confusion when dealing with an emergency situation, and improve coordination between facility response personnel and local, state, or federal response personnel. The ICP is not a regulatory requirement but guidance for facilities that are subject to the planning requirements listed below. New federal emergency planning requirements will be linked to the ICP.

The guidance presents a three-part template to guide facilities in creating their own plan that meets the above regulatory planning requirements. The ICP contains an introduction, a core plan containing main response information, and a series of appendices that contain

CASE STUDY 1

The Integrated Contingency Plan (ICP) Continued...

Getting Started on creating an SGP-based ICP

- Identify a project leader/coordinator.
- SGP facilities identify current planning requirements – federal, state, local (including fire department).
- Bring necessary emergency planning authorities together to review requirements.
- Cross-walk ICP matrix with non-federal planning requirements to identify gaps.
- Fill in gaps on model.
- Test model with selected SGP participants to determine if ICP will meet all of the necessary requirements.

more detailed supporting information and compliance documentation. This format is based on the National Interagency Incident Management System (NIIMS) Incident Command System (ICS). ICS has been used across the country in a variety of emergency situations, including releases of oil or hazardous substances. The contents of each section are briefly described below:

Introduction: Statement of purpose and scope, table of contents, information on the current revision date of the plan, general facility information, and the key contact(s) for plan development and maintenance.

Core Plan: Contains essential steps necessary to initiate, conduct, and terminate an emergency response action. It should explain recognition, notification, and initial response, including assessment, mobilization, and implementation. Checklists or flowcharts should be used to present information in a concise, easy-to-understand manner. The plan should also contain references to the appendices and reflect a hierarchy of emergency response levels, based on the seriousness and response actions necessitated by the event.

Appendices: Contains detailed guidance on specific procedures. Appendices should contain facility information, notification steps, and a detailed description of response procedures. It should also contain information on post-response actions. The appendices also contain additional planning requirements that are specific to a particular regulation. For example, a fire department may have a specific need that cannot be addressed in the core plan.

ICP Benefits for SGP Participants

SGP participants can benefit from creating and implementing an ICP to manage their emergency response planning requirements. An ICP is a valuable tool, but it can be a time-consuming process to compile such a document. In

CASE STUDY 1

The Integrated Contingency Plan (ICP) Continued...

addition, the template published in the *Federal Register* is only a guidance that does not offer suggestions for how facilities can link an ICP to their local emergency planning committee or state emergency response plans.

If interested, local SGP groups could work with metal finishers to develop a region-specific model, which could then be easily replicated for other SGP metal finishers. Once a model has been developed, State and/or EPA Regional emergency response offices would be able to assist facilities in compiling and incorporating all of the needed information, including state or local requirements.

SGP benefits could be applied in at least two ways:

- Assistance in completing an ICP could be awarded to SGP participants depending upon a local group's incentive system or performance ladder. For example, an SGP participant may receive assistance ahead of a non-SGP participant.
- If a facility has an approved ICP in place, planning authorities could reduce the frequency of inspections or allow for a self-audit/certification.

Resources providing additional information on the Integrated Contingency Plan (ICP):

- Integrated Contingency Plan ("One Plan") Guidance Fact Sheet
<http://www.epa.gov/swercepp/pubs/one-plan.pdf>
- Complete Guidance on the Integrated Contingency Plan
<http://www.epa.gov/swercepp/pubs/one-plan.htm>

EPA Region 6 RCRA Delisting Process

Overview

Federal hazardous waste regulations (RCRA) identify waste as “hazardous” through either listing it by name or by the characteristics it exhibits. However, some processes used by facilities result in waste that is less hazardous than its classification. Therefore, RCRA allows facilities to demonstrate to EPA why the waste generated by that facility should be delisted and no longer regulated as hazardous waste. Since 1995, EPA regional offices have been given the authority to administer the delisting program.

As generators of various hazardous wastes, metal finishers can benefit greatly from successful delisting petitions. The management and disposal of hazardous wastes is expensive and time consuming. Therefore, metal finishers can save time spent on paper work and dollars spent on disposal after a waste has been reclassified as a non-hazardous waste.

Outlining the Delisting Process

Metal finishers participating in the Strategic Goals Program have expressed interest in expediting the delisting process. Currently, the federally recommended delisting process can take between two to three years to complete. The length of the process may deter metal finishers from submitting delisting petitions, despite using technology that may enable their waste to be reclassified as non-hazardous.

The following seven steps outline the procedures required under the federal delisting process:

1. The petitioner submits an application to EPA.
2. If the application is seriously deficient, EPA may immediately reject it.
3. EPA notifies the petitioner if more information is required. While the petitioner has up to 6 months to respond, EPA can set a shorter time frame.
4. Technical Review, Fate and Transport Model: The EPA Composite Model for Landfills (EPACML) is used to predict the potential environmental contamination resulting from the transport of the waste through soil and groundwater.
5. EPA notifies petitioner of its decision to grant or deny the petition based on the fate and transport model results. If EPA finds the

CASE STUDY 2

The EPA Region 6 RCRA Delisting Process Continued...

How to Initiate a More Expedited Delisting Process:

- Select a project leader/coordinator
- Identify steps of the federal delisting process used in your region.
- Contact delisting staff at your EPA Regional Office and relevant staff at your state regulatory agency. Familiarize them with the Goals program and the concept of expedited delisting.
- Develop a proposal of desired process changes; look to the EPA Region 6 Process for suggestions.
- Work with EPA Regional and state staff to incorporate process changes.

waste to be hazardous, the petitioner can choose to withdraw the application to prevent negative findings in the Federal Register.

6. Promulgation of Decision: EPA posts a copy of the petition and supporting information in the Federal Register for a public comment period of 45 days.
7. After considering public comment, a final notice is placed in the Federal Register. EPA's final delisting decision becomes official when this notice is posted.

Local SGP groups interested in expediting this process could look to the process developed by EPA Region 6. While it is not officially an "expedited" delisting process, this streamlined method takes approximately 180 days to complete. The main differences between the federally recommended and Region 6 processes include the following initial steps:

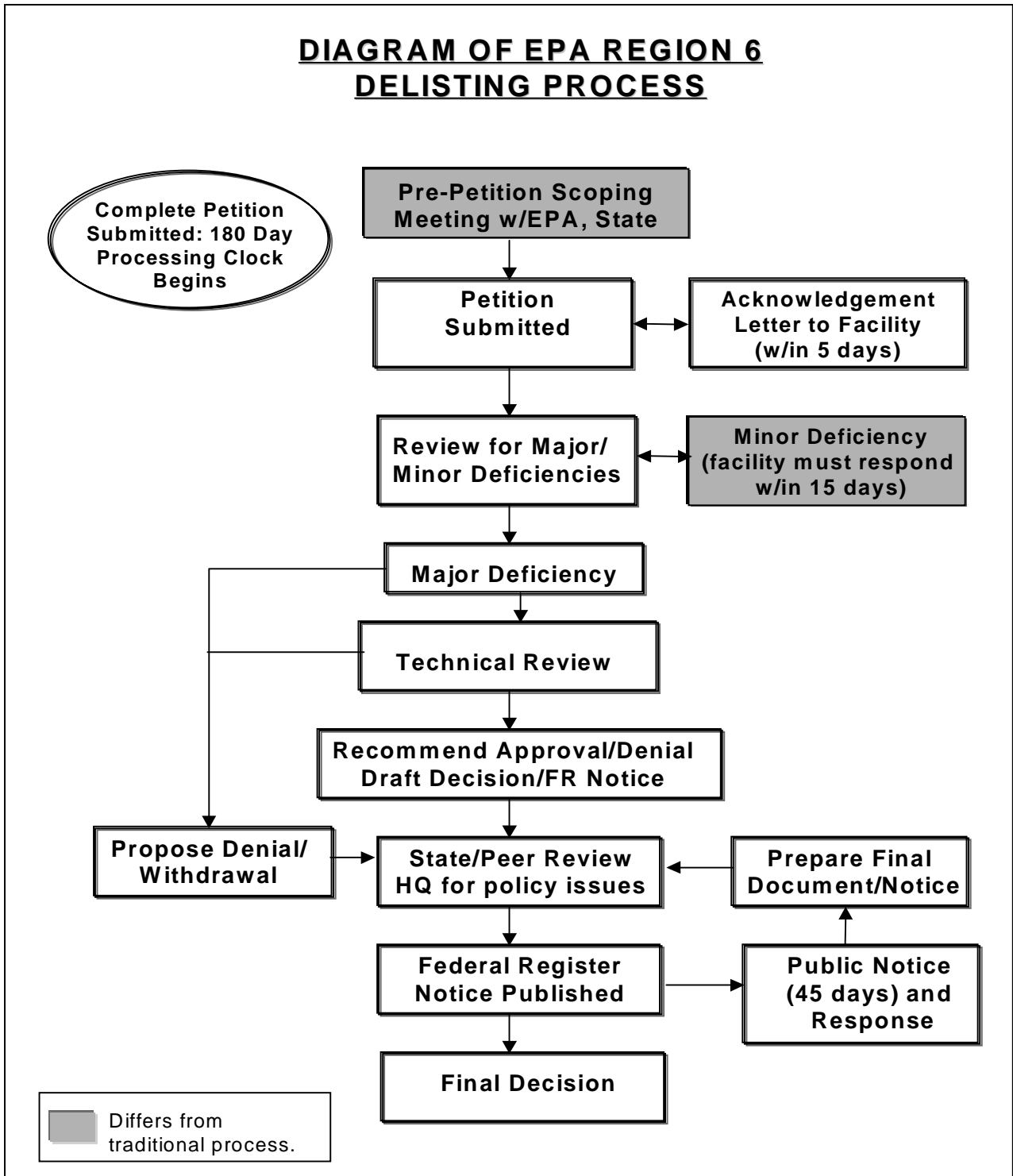
1. Initial, face-to-face meeting between Region 6, the petitioner and the appropriate state after the petitioner notifies Region 6 of interest in delisting.
2. Automatic rejection of incomplete applications.
3. 30-day application review by Region 6. EPA HQ and the appropriate state are also given the opportunity to comment.
4. 15 working days for applicant to correct any identified, minor deficiencies. Failure to correct a deficiency within 15 days results in application rejection.

Other Region 6 innovations include:

- Pre-scoping and application checklist
- Simplified/streamlined Quality Assurance/Quality Control and sampling requirements
- Updated fate-transport model
- Incorporation of dispute resolution procedures
- Requirement for successful petitioner to notify all affected states
- Formal opportunities for industry input into improving the process

CASE STUDY 2

The EPA Region 6 RCRA Delisting Process Continued...



CASE STUDY 2

The EPA Region 6 RCRA Delisting Process Continued...

Expedited Delisting as an SGP Benefit

The initial pre-scoping meeting with the petitioner helps to decrease the length of the delisting process. EPA Region 6 and state agency staff help the petitioner to determine whether a request has merit during this meeting. The petitioner must bring a completed Pre-Petition Scoping Meeting Checklist to this session. This interaction helps the petitioner to understand the types of information that Region 6 and the state will need to make a final decision. In addition, it helps the Delisting review team members to gain an understanding of the facility's waste generation and disposal processes.

Region 6 also makes it a point to involve the appropriate state agency early on in the process. In the long run, it is helpful to have the state's approval prior to delisting. If the delisting application is approved, the petitioner will need to work with state regulators to comply with state-imposed solid waste disposal requirements.

Thus, a shorter, more streamlined delisting process could be a potential incentive that local SGP groups develop with Regional EPA offices and state agencies. Based on a group's incentive system, this approval process could be offered for all SGP participants or for only top performing metal finishers.

Resources providing additional information on expediting the RCRA Delisting Process:

- For more information on EPA Region 6 Expedited Delisting Process contact:
William Gallagher, Chief
U.S. EPA Region 6
OK/TX RCRA Permits Section
(214) 665-6775
gallagher.william@epa.gov
http://www.epa.gov/earth1r6/6pd/rcra_c/pd-o/delist.htm
- For more information on regulations governing the Federal Delisting Process see:
40 CFR 260 Subpart C

Michigan's Clean Corporate Citizen (C3)

Overview

The Michigan Clean Corporate Citizen (C3) Program is a voluntary program based on the premise that facilities dedicated to environmental protection will continue their high performance under less rigorous government oversight. The C3 Program grants permitting flexibility and recognition to facilities recognized as Clean Corporate Citizens. These facilities have good compliance records and go beyond compliance by implementing an environmental management system and practicing pollution prevention. This program is included in this document to demonstrate a range of benefits and possible criteria that could be utilized by a local SGP group.

This case study also illustrates how local SGP groups can take advantage of existing state and local programs, such as C3 in Michigan, to design their programs and create their performance incentive structures. For example, the Michigan SGP group structured their environmental performance measures so that they incorporate those of the C3 program. In doing so, the Michigan SGP uses the C3 program as the mechanism through which metal finishing companies can receive regulatory benefits from the Michigan Department of Environmental Quality in turn for achieving the national strategic goals. By integrating the two programs, Michigan not only takes advantage of already developed and functioning incentive reward procedures, but also promotes consistency, collaboration, and common goals across state programs.

The Clean Corporate Citizen (C3) Program

Announced in January 1996, Michigan's Clean Corporate Citizen Program became final in May 1997 following changes to state rules to enable the implementation of the C3 program. The Governor charged the Department of Environmental Quality (DEQ) with writing the necessary rules to provide for C3's regulatory flexibility. DEQ's Environmental Assistance Division worked with the appropriate media offices to develop the rules. The rules went through the state's standard Administrative Rules Process, which included a public comment period and approval by EPA Region 5. The air rules were approved in approximately six months, making them among the fastest ever adopted. Although the program is multi-media in orientation, benefits are currently only available in the Air Quality Division program. DEQ is working to expand the program benefits to other media.

A candidate facility must meet the following criteria to be awarded C3

CASE STUDY 3

Michigan's Clean Corporate Citizen (C3) Continued...

status:

- Utilize an Environmental Management System (EMS);
- Identify, pursue, and report on pollution prevention (P2) activities;
- Demonstrate consistent compliance with environmental requirements; and
- Have no outstanding violations.

Before the application process begins, a facility must post public notice. Only after the 60-day comment period can the facility submit its application. C3 certification is renewed annually.

Flexibility Benefits Offered by the C3 Program

The program currently offers benefits intended to provide greater flexibility and shorten the waiting period in receiving necessary permit authorizations. All benefits are allowable within federal standards and requirements. The existing benefits summarized below all relate to the granting and review of air permits.

- **C3 Benefits Relating to Air Permits**

Faster Review of Permits: Requires Michigan DEQ to issue or deny within 30 days of receiving a complete application. C3 facilities must submit additional information including an analysis of the applicable control technology requirements (e.g., best available control technology, best available control technology for toxics, and maximum achievable control technology) along with an analysis demonstrating that the operation or equipment covered by the application will comply with applicable requirements. Additional time is also specified if a public hearing is required on the proposed permit.

Plant-Wide Applicability Limits (PAL Permit): Establishes a cap on emissions for the entire facility. As long as emissions stay below this cap, PAL permitted facilities are not required to obtain a construction permit for new processes. The permit requires a facility to conduct monitoring and recordkeeping to verify that the PAL is being met. A facility may request that the PAL establish an emissions cap set equal to actual emissions plus the significant emissions for each pollutant being considered in the PAL application. Alternatively, the facility may request that the PAL establish an emissions cap set equal to existing allowable emissions, if the levels are consistent with state and federal requirements.

Expanded Waiver for Construction and Operation During Permit Review: C3 facilities may begin construction and operation of new or modified air sources while their permit is under review and not be required to show hardship as is required under the current waiver provision. The request for a waiver must:

- (1) be submitted in writing;

CASE STUDY 3

Michigan's Clean Corporate Citizen (C3) Continued...

- (2) be accompanied by an administratively complete application for a permit to install;
- (3) not include proposed construction, operation or equipment for which an approved permit for construction and operation is required by federal regulations; and
- (4) be signed by the owner or the owner's authorized agent.

The request for a waiver will be automatically approved 15 calendar days after receipt of the request and required information, unless, within the 15-calendar-day period, either the request is denied in writing for cause by the department or an extension of up to 15 additional calendar days is specified in writing by the department.

In addition to the air permitting benefits outlined above, the C3 Program is investigating a wide-range of additional regulatory flexibility opportunities. The following section presents some of the proposed flexibility benefits for each environmental media, as well as, additional compliance requirements under review for the program.

- **Proposed C3 Benefits Relating to Solid Waste Management**

Reduced Fees and Inspections: The benefits could include reduced fees for facility operating licenses, reduction in the number of regularly scheduled facility inspections, self-approval authority for certain operational activities, and other items to be determined.

- **Proposed C3 Benefits Relating to Wastewater Permits**

Expedited Permit Reissuance: A C3 applying for a reissuance of a national permit may certify that previous application information still represents current discharge. The facility would not have to provide new discharge monitoring information.

Extended Coverage by General Permit: A C3 that qualifies for coverage under a general permit does not have to obtain an individual national permit solely because EPA designates them as a major discharger.

Alternative Treatment Options: A non-municipal C3 may construct and use wastewater treatment processes to comply with effluent limits without DEQ approval of plans or specifications.

Reduced Frequency of Inspections: A C3 will have no more than one comprehensive DEQ sampling inspection during the effective period of their national permit.

Reduced Monitoring Frequency: A national permit will include a provision allowing for monitoring frequency to be reduced.

Reduced Reporting: Reduce discharge monitoring reports to an annual, versus monthly, basis.

Expedited Responses from DEQ: Expedited response from DEQ for request to use a water treatment additive.

- **Proposed C3 Benefits Relating to Groundwater Permits**

Accelerated Application Review: Accelerated application review for a new state permit,

CASE STUDY 3

Michigan's Clean Corporate Citizen (C3) Continued...

Summary of C3 Benefits:

- Plant-Wide Applicability Limits
- Faster Permit Review
- Expanded Waiver for Construction and Operation of Sources
- Reduced License Fees
- Reduced Monitoring
- Reduced Inspections
- Extended Permits

Resources providing additional information on the C3 Program:

Michigan Department of
Environmental Quality
Environmental Assistance
Division
Bill Stone
(517) 241-7969
stonew@state.mi.us

Or visit the C3 web site at:
[http://www.deq.state.mi.us/
ead/tasect/c3](http://www.deq.state.mi.us/ead/tasect/c3)

renewal permit, or permit modification.

Reduced Monitoring Frequency: Reduced frequency of effluent and groundwater monitoring by up to 50%, based on compliance over a 1-year period or 12 sampling events.

Extended Permit Options: Extend existing permit for up to five years.

- **Proposed C3 Compliance Requirements**

Statement of Compliance Record: Provide to the Department as part of application, a statement signed by responsible official that he or she has reviewed the facility's compliance record and that, to the best of his or her knowledge, the facility is in compliance with all applicable environmental requirements and has no outstanding unresolved past or current violations that have not been corrected or resolved by adherence to a binding compliance schedule to abate the violations.

No Criminal Violations Within 10 Years: Not have been convicted of a criminal violation of applicable environmental requirements within a 10-year period before filing the initial C3 application.

No Fines of \$10,000 or More: Not have been assessed, by a court of appropriate jurisdiction, a civil fine or penalty of \$10,000 or more for violation of applicable environmental requirements within a 3-year period before filing the initial C3 application.

No Findings of Illegal Actions Within 10 Years. Not have been found, by a court of appropriate jurisdiction, to have been responsible for an illegal action that caused substantial endangerment to the public health, safety, or welfare or to the environment within a 10-year period before filing the initial C3 application.

All Notice of Violations Appropriately Addressed: Have addressed any violation cited in a Notice of Violation by resolving the violation, making a showing to the Director that the violation did not occur, or be in compliance with a binding schedule, agreed to by the Director, to correct any violation specified in a notice of violation issued by the Director.

No Violations of Local Environmental Requirements: Not have been found by the Director to be in significant violation of environmental requirements established by a local unit of government.

C A S E S T U D Y 4

Wisconsin's Environmental Cooperation Pilot Program (ECPP)

Overview

The Metal Finishing Strategic Goals Program is one of a number of different efforts designed to explore more flexible, cost-effective, and environmentally protective regulatory solutions. Among these efforts is the Environmental Cooperation Pilot Program, an initiative established by the state of Wisconsin to test innovative environmental regulatory methods on a facility by facility basis. Specifically, the program enables the Wisconsin Department of Natural Resources (WDNR) to enter into up to ten cooperative environmental agreements over a period of five years with persons who own or operate facilities that are covered by licenses or permits under current environmental law. The intent of these agreements is to establish superior environmental performance, including reduction of overall pollution levels, while lessening administrative burdens associated with permits and regulatory approvals.

In general, a cooperative environmental agreement includes the following components:

- Plans to implement an environmental management system (EMS);
- A commitment to specified environmental goals;
- Pollution limits at least as stringent as those prescribed in current law;
- A commitment to release periodic performance evaluations and report any violations;
- A listing of any regulatory approvals that are replaced by the agreement;
- Operational flexibility and variances granted; and
- A plan for public involvement with the pilot project.

In terms of regulatory flexibility, the cooperative agreements can supersede requirements of permits and approvals to reduce administrative burdens for both participating firms and the state. An agreement may also waive procedural or administrative provisions of state and federal regulations on the facility-specific basis.

CASE STUDY 4

Wisconsin's Environmental Cooperation Pilot Program (ECPP) Continued...

The Environmental Cooperation Pilot Project has much to offer Wisconsin's top environmental performers as a result of the integrated nature of the program, its high level of broad-based support, and the individual consideration it can provide to facilities. As the first state innovation initiative approved under the "Joint EPA/State Agreement to Pursue Regulatory Innovation," the ECPP is precedent-setting in the level of cooperation it enjoys between state and federal environmental agencies. In addition to the benefits offered to participating companies, the ECPP can provide valuable insights to other cooperative environmental programs on potential regulatory flexibility areas as well as strategies for creating a process where such innovation is possible.

A program similar to ECPP could be used by local SGP groups to further decrease the administrative burden faced by top performing metal finishers. The program could also be used to improve SGP collaboration between metal finishers and regulators at the state and federal levels.

The Process Behind Creating ECPP

Wisconsin's Governor introduced the Environmental Cooperation Pilot Program into the state legislature in 1997 as Assembly Bill 100. The state legislature passed the program on October 11, 1997 as part of Wisconsin's 1997-1998 Biennial Budget. The code authorizing the program is found within Wisconsin Statutes Section 299.80. The Bureau of Cooperative Environmental Assistance within WDNR administers the program.

The Environmental Cooperation Pilot Program reached an important milestone in March 1999 when Wisconsin became the first state to sign a Memorandum of Agreement (MOA) with EPA under the "Joint EPA/State Agreement to Pursue Regulatory Innovation," which dates from April 1998. In essence, the MOA gives EPA approval to Wisconsin's initiative and details the specific phases needed to bring about full implementation of the program. The MOA also lays out the respective roles and responsibilities of EPA and WDNR for managing the cooperative agreement projects and states EPA's commitment to support Wisconsin in its encouragement of environmental innovation without jeopardizing compliance with federal regulations.

Under the MOA, the mechanism for inter-agency collaboration on the cooperative agreements is an Interagency Innovations Team (IIT) to be made up of representatives from EPA and WDNR. The IIT will act as the communications center while each pilot cooperative agreement is selected, negotiated, and implemented. This team will also identify and address ECPP programmatic issues, such as permit modification procedures and enforcement and compliance schedules for participating companies.

CASE STUDY 4

Wisconsin's Environmental Cooperation Pilot Program (ECPP) Continued...

Example Regulatory Flexibility Requests from ECPP:

- Reduced sampling frequency for wastewater discharges.
- Removal of requirements to monitor for pollutants not in the system based upon previous analyses.
- One-stop permitting with one individual contact from the WDNR.
- Simplification of environmental regulations and standards.
- Reduced inspections as a result of implementation of an ISO 14001 Environmental Management System.
- Single permit to cover a facility with a single, simplified reporting form.
- Recognition of the Cooperative Agreement as enforceable as a Title V air permit.
- Administrative approval of reuse of waste products.
- Extension of an effective permit period to allow for evaluation of alternate pollution prevention technology.

Process for Participation in ECPP

Application to the WDNR's Environmental Cooperation Pilot Program is a two-step process. Candidates first submit a *Preliminary Application*, or letter of intent, consisting of the following four types of information:

- Plans for development of a stakeholder or Interested Persons Group;
- Facility specific information;
- Description of the proposed Environmental Performance Plan; and
- Information on plans to measure and evaluate pilot project performance.

Based on the content of the application, the WDNR Secretary makes a decision regarding acceptance or non-acceptance of the candidate firm into the Program.

The second step in the application process is completion of a *Proposed Draft Agreement*. Project candidates submit a Proposed Draft Agreement that communicates their commitments to superior environmental performance as well as their initial requests for regulatory flexibility. Next, WDNR, in consultation with EPA, drafts a counter-proposal that responds to the requests proposed by the company. Once the pilot company receives the counter-proposal, a round of negotiations commences between the company and WDNR. If consensus is reached on a joint cooperative agreement, the document is made available to the public and to the designated

Interested Persons Group for a thirty-day comment period, which can also include public information meetings if deemed necessary. Once an agreement is enacted, WDNR has the following means to ensure compliance with it:

- Required systematic reviews of environmental performance by the participants. If a review reveals

CASE STUDY 4

Wisconsin's Environmental Cooperation Pilot Program (ECPP) Continued...

violations of the cooperative environmental agreement, the participant has 90 days to correct the violation before the agreement faces potential termination.

- If a longer compliance schedule becomes part of the environmental agreement, the agreement can specify penalties if a participant does not meet specified obligations.
- WDNR retains the right to terminate or renegotiate an environmental agreement.

As of Autumn 1999, six companies have submitted letters of intent or draft agreements to ECPP, and several others have expressed interest in the program. By January 2000, WDNR hopes to have the first two Cooperative Environmental Agreements negotiated and signed and plans to have all ten agreement slots filled by December 2000. Among the challenges ECPP has set for itself is to increase the participation of small businesses within the program. One strategy for meeting this goal that ECPP is exploring is a component that would eliminate some regulatory requirements for small businesses that can demonstrate environmental conscientiousness.

Resources providing additional information on Wisconsin's Environmental Cooperation Pilot Program:

Mark Harings

WDNR

(715) 831-3263

Harinm@dnr.state.wi.us

<http://www.dnr.state.wi.us/org/caer/cea/ecpp/ecpp.htm>

John Glenn

US EPA

(202) 260-5029

glenn.john@epa.gov

<http://www.epa.gov/reinvent/ecos/>

California's Environmental Technology Certification Program (CalCert)

Overview

In the field of environmental technology verification, the California Environmental Protection Agency (Cal/EPA) operates a pioneering program called the Environmental Technology Certification Program (hereafter known as CalCert). In operation since 1993, CalCert is a voluntary, self-supporting program that provides technology developers, manufacturers, and vendors an independent, recognized third-party evaluation of the performance of new and mature environmental technologies. CalCert's overall purpose includes the following:

- Encourage pollution prevention and improved environmental performance in general;
- Ensure the safety and efficiency of environmental technologies used in the state;
- Increase acceptance of innovative environmental technologies; and
- Facilitate and streamline compliance with environmental protection regulations.

The program is aimed at providing assistance to the developers of innovative technologies as well as to the industrial facilities that may benefit from such technologies and the permitting officials who must regulate their use. It is included as a case study in this document because facilities striving to improve environmental performance oftentimes look to new, innovative technologies to incorporate in their industrial processes. CalCert offers a model of a program to promote the development, verification, and diffusion of such technologies.

Building on the CalCert example, local SGP programs could offer environmental technology assistance to companies to reward progress towards performance goals and enable them to go even further.

CASE STUDY 5

California's Environmental Technology Certification Program (CalCert) Continued

The Process Behind Creating CalCert

In 1993, Cal/EPA, in conjunction with the California Trade and Commerce Agency, brought together stakeholders from industry, academia, public interest groups, and the financial and legal communities to form a public-private partnership known as the California Environmental Technology Partnership (CETP). The mission of CETP was to promote improved environmental protection through the development and diffusion of environmental technologies within California. Through research it conducted, the group discovered that a key obstacle to the commercialization of new environmental technologies lay in the multiple regulations, jurisdictions, and complex procedures characterizing the State's environmental permitting procedures. For example, CETP found that the unpredictable nature of permitting decisions across different regulatory jurisdictions significantly impeded private sector financing of environmental innovations.

To address the obstacles to innovation and to ensure the availability of the best possible environmental technology, CETP recommended the creation of CalCert. Once broad-based support existed for an environmental certification program, the state legislature passed the legislation necessary to incorporate the multi-media certification and permit streamlining program within the existing California environmental regulatory framework.

Also critical to the development of today's CalCert program was the 1995 policy decision by the Governor of California to bring about one coordinated, statewide environmental technology certification program as part of his administration's regulatory reinvention efforts. The State's Secretary for Environmental Protection created the Office of Environmental Technology (OET) to implement the newly integrated program by coordinating the expertise and relevant activities of the Air Resources Board, the Department of Toxic Substances Control, the State Water Resources Control Board, the Integrated Waste Management Board, and the Department of Pesticide Regulation. OET is also responsible for directing CalCert marketing and outreach efforts and technology transfer activities.

In 1996, CalCert became the only state program to be named one of EPA's 12 Environmental Technology Verification (ETV) pilot projects. The ETV program is an EPA-sponsored initiative with an aim similar to that of CalCert: to verify the performance of environmental technologies through the evaluation of objective and quality-assured data for the benefit of potential purchasers and permit writers. By entering into the partnership with EPA, Cal/EPA was able to secure EPA grant funds to partially subsidize testing of some of the technologies. When seeking companies to participate in the pilot program, EPA and CalCert announced that they were especially interested in verifying pollution prevention and waste treatment technologies for use in several particular industries, including the metal plating and

CASE STUDY 5

California's Environmental Technology Certification Program (CalCert) Continued

Example Environmental Technologies Certified under the CalCert Program

- Curtiss-Wright No Leak Valve Models 100 and 120 -- solenoid-actuated flow-control valves that reduce fugitive emissions of volatile organic compounds (VOCs).
- Dionex Accelerated Solvents Extraction (ASE) Model 200 Extractor -- technology for removal of analytes from solid matrices with reduced solvent usage.
- Fulton Low Emission Boilers -- boilers designed for specific industrial applications and producing reduced emissions of oxides of nitrogen and carbon monoxide.
- Thermatrix Flameless Thermal Oxidizer, Model ES-300H -- technology for treatment of gaseous hazardous wastes and process emissions containing trichloroethylene (TCE).

finishing sectors.

In another effort to expand the benefits of CalCert, Cal/EPA has also recently entered into an Memoranda of Understanding (MOU) with the states of New Jersey, Illinois, Massachusetts, New York, and Pennsylvania to foster cooperative testing, technical transfer, and approval of environmental technologies among the states.

Process for Participation in CalCert

The CalCert process begins when the developers, manufacturers, or vendors of environmental technology approach the program for a determination of eligibility. A number of different kinds of environmental technologies are eligible for participation in the certification program. The main exception is for technologies that incorporate incineration, which the authorizing legislation stated ineligible for participation. The CalCert program encompasses all environmental media and evaluates a number of different classes of technology, including the following:

- Pollution prevention (e.g., waste minimization, recovery, and "clean technology");
- Measurement, monitoring, and sampling (e.g., site characterization methods);
- Conversion or increased efficiency technologies (e.g., alternative fuels);
- Pollution control and treatment (e.g., fugitive emission flow control valves);
- Remediation (e.g., soil and ground water cleanup methods); and
- Software (e.g., process control, decision support tools).

Under the CalCert process, participating developers and manufacturers define quantitative performance standards for their technologies and provide supporting documentation of the claims. CalCert technical evaluation teams, drawn from Cal/EPA offices, universities, and national laboratories, review

CASE STUDY 5

California's Environmental Technology Certification Program (CalCert) Continued...

the information and conduct additional testing when necessary to verify the claims. The technologies and other products proven to work as claimed receive official state certification that is valid for a three-year period. The certifications issued by CalCert include the following components:

- A statement of the technical specifications applicable to the technology;
- Where applicable, a determination of the composition of the hazardous wastes or chemical constituents for which the technology can appropriately be used;
- Where applicable, an estimate of the efficacy and efficiency of the technology in regard to the hazardous wastes or chemical constituents for which it is certified; and
- A specification of the minimal operational standards the technology is required to meet to ensure that the certified technology is managed properly and used safely.

Certifications typically provide estimates of performance in areas such as:

- Efficacy and efficiency for specified uses, matrices, and chemicals;
- Percent reductions in constituent/waste concentrations;
- Reductions in constituent/waste concentrations to specified levels or thresholds;
- Accuracy, precision, and detection limits for measurement of specified constituents (e.g., for monitoring and detection technologies); and
- Other performance criteria.

The CalCert program is self-supporting. Developers and manufacturers participating in the program pay the costs of evaluating and certifying their technologies. The final stage in the CalCert process is the marketing program in which certified technologies are publicized through key networks in the environmental community, and exposure is given through trade shows, conferences, the Internet, and industry and other publications. To date, the program has certified 99 different technologies, examples of which are listed in the following table.

In addition to the performance certification process described above, the legislation enacting the CalCert program authorized it to perform another level of evaluation, known as regulatory certification. This second type of certification involves all aspects of the performance certification plus a regulatory review to determine conformance with all applicable federal, state, and local rules. The purpose of the regulatory certification is to completely eliminate the engineering as well as various other components of the permit process for approved technologies (i.e., essentially permit by certification).

According to CalCert, no manufacturer has yet to try for regulatory certification due to the expense of such extensive evaluation and because very few technologies are developed to meet the different criteria of all applicable regulatory jurisdictions (e.g., local air quality districts) within the state. CalCert staff report, however, that even without the regulatory certification, local permitting

CASE STUDY 5

California's Environmental Technology Certification Program (CalCert) Continued...

Summary of the Overall Benefits of CalCert

For Metal Finishers Purchasing and Using Environmental Technologies:

- State verification of a technology's application and performance;
- Reduction of duplicative and costly studies and redundant reviews required by different regulatory jurisdictions;
- Establishment of operating conditions, limitations, and safety and environmental factors needed for permitting;
- Facilitation of quicker permit issuance and environmental compliance procedures.

For Regulatory, Permitting, and Environmental Compliance Officials:

- State verification of a technology's application and performance;
- Technical data and results for decision-making;
- Consistent and recognized evaluation standards;
- Early, more effective interagency and cross-media coordination;
- Reduced permit and compliance review workload.

agencies often accept the performance certification in lieu of additional testing, thus accomplishing the streamlining intent of the program.

CalCert Benefits for SGP Participants

A program like CalCert will help SGP participants to select reliable, new technology to further improve their environmental performance. The program tests and disseminates information on technologies for potential buyers. According to CalCert, anecdotal evidence from both facilities and permitting authorities also shows that the technology certification program has streamlined their permitting process. Such a technology verification program can be integrated into a local group's incentive program or be offered to all participants.

Cal/EPA has compiled a summary of CalCert's overall benefits to users of the technologies and to regulators.

Resources providing additional information on California's Environmental Technology Certification Program:

Jennifer Akins
Cal/EPA Office of Environmental Technology
(916) 327-5789
OET@arb.ca.gov
<http://www.arb.ca.gov/oet/oet.htm>

Tony Luan
Cal/EPA-US EPA ETV Pilot Manager
(916) 322-5244
<http://www.dtsc.ca.gov/sppt/opptd/etv/txppetvp.htm>

Illinois's Accelerated Diffusion of Pollution Prevention Technology (ADOP²T)

Overview

Metal finishers participating in SGP, like many firms across industrial sectors, cite a variety of factors that limit the widespread, expeditious adoption of new pollution prevention technologies. Often near the top of this list are two obstacles in particular: a lack of information about innovative environmental technologies and difficulties in gaining financial backing for the new technologies. The Illinois Waste Management and Research Center (WMRC), a participant within the Greater Chicago Regional Metal Finishing Strategic Goals Program Stakeholder Group (hereafter known as GoalsChicago), launched an initiative in the Spring of 1999 to address both of these barriers. The program, known as Accelerated Diffusion of Pollution Prevention Technology or ADOP²T, grew out of a separate WMRC study on pollution prevention assistance and has since been become part of the local implementation plan for GoalsChicago.

The Process Behind Creating ADOP²T

WMRC, a division of the Office of Scientific Research and Analysis in the Illinois Department of Natural Resources that acts as a clearinghouse for pollution prevention information, assistance, and research, recently conducted a study evaluating the effectiveness of pollution prevention assistance methods. In the study, WMRC concluded that a lack of practical "how-to" knowledge is often the most critical element affecting an individual company's decision as whether to adopt a particular innovative technology.

To facilitate dissemination of this working knowledge, WMRC designed ADOP²T as a sequential process for identifying best industry practices among environmental technologies and conducting pilot trials of those practices in order to provide participants with the site specific information needed to positively influence technology adoption decisions (see ADOP²T process flow diagram on next page).

Through the demonstration component and a financing aspect,

CASE STUDY 6

Illinois's Accelerated Diffusion of Pollution Prevention Technologies (ADOP²T) Continued...

ADOP²T is focused on offering metal finishers more options for meeting their obligations under SGP. The program has received funding from US EPA Region 5, US EPA's Design for the Environment (DFE) program, the Illinois Department of Commerce and Community Affairs, and the Illinois Department of Natural Resources. Though ADOP²T now concentrates solely on metal finishing, WMRC hopes to expand the program to metal fabrication and other sectors in the coming years.

Process for Participation in ADOP²T

Demonstration Projects

Under the ADOP²T program, WMRC is recruiting metal finishing operations to act as pollution prevention technology demonstration sites. In exchange for agreeing to open up their facilities and to share assessment information from the demonstration with other metal finishers, the ADOP²T pilot facilities receive the technology at no cost during the duration of the project. The primary criterion for selecting the demonstration sites is whether or not a candidate firm is considered to be an opinion leader in its sector. WMRC uses this particular selection criterion because research has shown that if opinion leaders (i.e., the top 10 to 15% of firms in a sector) can be convinced to adopt an innovation, then the rest of the sector will have to adopt the technology to stay competitive. WMRC has identified opinion leader firms in the area with the help of the Chicago Metal Finishers Institute, metal finishing consultants, and other experts on the sector. In addition to conducting direct outreach with these firms, WMRC has begun publicizing ADOP²T in metal finishing newsletters and through other industry forums.

The administrators of the ADOP²T program have thus far selected the technologies to be tested through consultation with the opinion leaders selected as demonstration sites. WMRC has met with these metal finishers and sought their input on the following three questions:

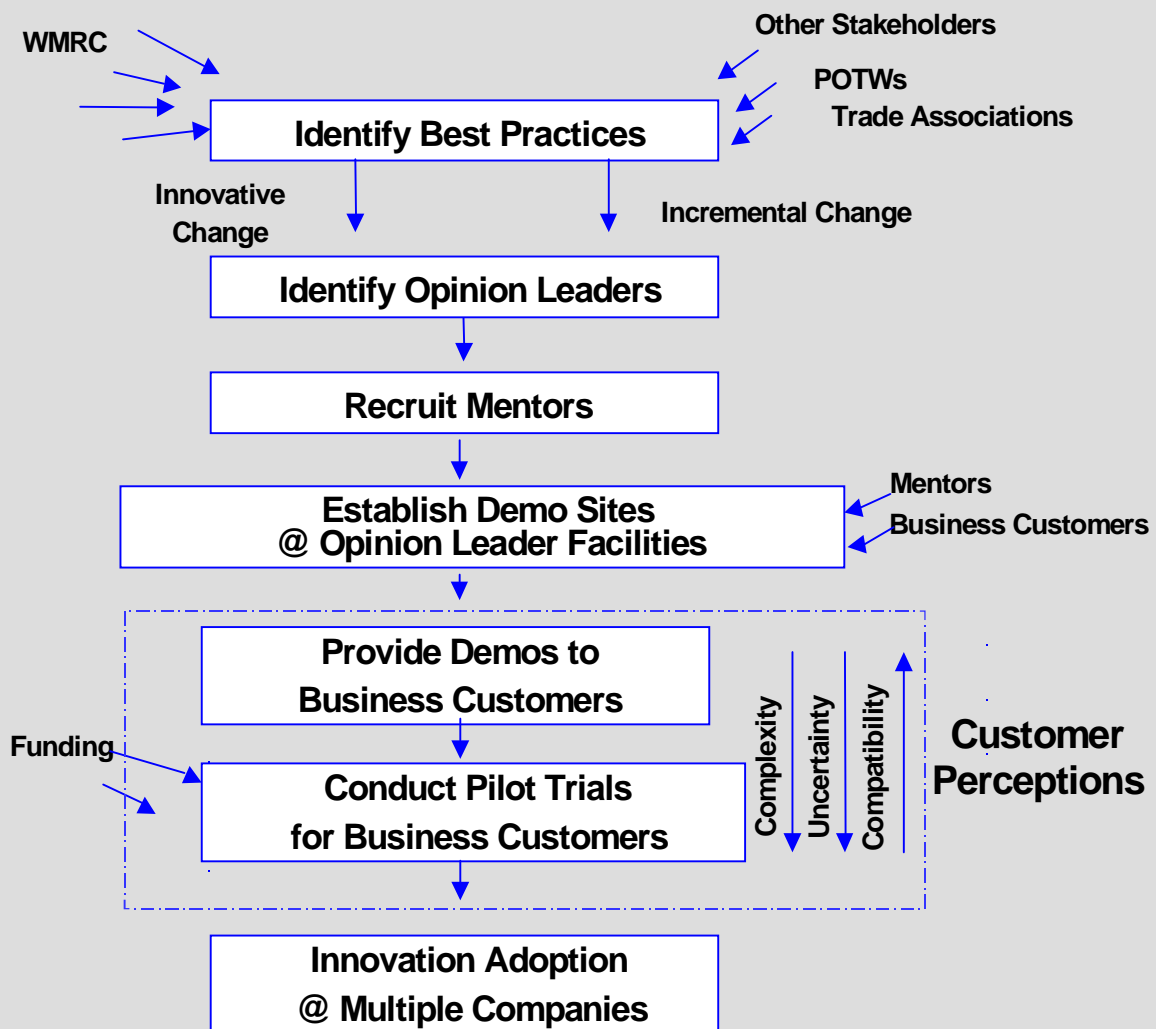
- (1) What environmental problems do you currently have for which there appears to be no existing technological solutions?
- (2) What technologies have you heard of that would potentially be useful if they lived up to performance claims?
- (3) What innovative environmental technologies have you already implemented from which your peers might benefit?

WMRC representatives and the participating metal finishers held brainstorming sessions on these topics, and WMRC prioritized the metal finishers' ideas through a weighted voting system. In addition to arriving at specific pilot project topics, this process enabled ADOP²T administrators to identify a variety of technology development, transfer, diffusion, and

CASE STUDY 6

Illinois's Accelerated Diffusion of Pollution Prevention Technologies (ADOP²T) Continued...

Accelerated Diffusion of P2 Technologies ADOP²T Program



from GoalsChicago Implementation Plan, June 1999

CASE STUDY 6

Illinois's Accelerated Diffusion of Pollution Prevention Technologies (ADOP²T) Continued...

ADOP²T's Current Demonstration Projects

- Diffusion dialysis for recovering pickling acids;
- Ultrafiltration for recovering caustic cleaners;
- Conductivity controls for reducing rinse water usage;
- Membrane filtration of finishing bath chemicals;
- Techniques for reuses of treated wastewater within plating processes;
- Substitutes to cyanide plating; and
- Alternative barrel design for reducing drag-out.

education issues that have become part of the overall program strategy.

To date, several of these identified demonstration projects are underway or nearing completion, and a number of other companies have expressed interest in serving as ADOP²T sites. The technologies currently being tested range from conductivity controls to reduce rinse water usage to diffusion dialysis techniques for recovering pickling acids. The following table presents a complete list of current ADOP²T pilot projects.

When each ADOP²T demonstration project is completed, WMRC will document the performance results and other relevant information in the form of case studies. The ADOP²T program plans to publish these case studies in trade association newsletters and other publications, post them on the WMRC internet site, and give presentations on the demonstration projects at metal finishing trade association meetings.

Financing for Tested Environmental Technologies

Once an environmental technology is tested, the metal finishing firms that have acted as demonstration sites can qualify for the financing component of ADOP²T. Under the program, companies that decide to permanently adopt the demonstrated technology can receive loan guarantees through an arrangement with the Small Business Administration (SBA) so that they do not have to secure the financing with personal assets. Administrators of ADOP²T submitted a proposal to enable participating metal finishers to be eligible for the SBA's Pre-qualification Pilot Loan Program. Under the Pre-qualification Loan Program, qualified businesses receive assistance from intermediaries in developing viable loan application packages and securing loans. In the case of ADOP²T, a Chicago area Community Development Corporation (CDC), which has an established relationship with the local Bank of America, works with participating metal

CASE STUDY 6

Illinois's Accelerated Diffusion of Pollution Prevention Technologies (ADOP²T) Continued...

Resources for additional information on Illinois's Accelerated Diffusion of Pollution Prevention Technologies:

Rich Sustich
Chicago
MWRD/GoalsChicago
(312) 751-3050

Tim Lindsey
IL WMRC
(217) 333-8940
tlindsey@wmrc.uiuc.edu
<http://www.wmrc.uiuc.edu>

Anthony McMahon
Small Business
Administration
Illinois District Office
(312) 353-5031

finishers to prepare the necessary paperwork and secure a loan from the bank.

This financing aspect of ADOP²T is expected to provide tangible as well as significant intangible benefits to metal finishers. First, the SBA's Pre-qualification Loan Program can guarantee 80% of loans \$100,000 or less and 75% of loans above \$100,000 and up to \$250,000. The maximum loan maturities to be established are flexible, though usually around seven to 10 years, and the interest rates are negotiated between the borrower and the lender but subject to SBA maximums, which are pegged to the current prime rate.

As important as the financing itself is the guidance provided to the metal finishers by the intermediary as well as by the SBA, who reviews all applications before they are submitted to the bank. The purpose of the assistance is to cut red tape and uncertainty for both lender and prospective borrower and thus facilitate the permanent adoption of environmental innovations by metal finishers. As of December 1999, ADOP²T contacts report that three metal finishers with pilot technologies in place plan on using the SBA process to finance purchase of the equipment and that the application process for their loans is to be completed within a few months.

ADOP²T Benefits for SGP Participants

Overall benefits of ADOP²T lie in the development and distribution of practical information about innovative environmental technologies and in the on-site guidance and pilot technologies gained free of charge by facilities acting as demonstration partners. While the details of how the program is to be integrated within local SGP implementation have not all been fully resolved, current thinking among the GoalsChicago stakeholder group is that the environmental technology case study information and other ADOP²T benefit opportunities will be available to all participating SGP firms regardless of goals performance level attainment. Some stakeholder group members have suggested exploring an

Summary

Offering Incentives Within a Performance Ladder Framework

Four Key Elements of a Performance Ladder

- **Performance Levels-** describes how many steps there are on the ladder
- **Achievement Marks-** describes the quantitative measurement of progress required at each level (e.g., number of environmental goals achieved, percentage achieved, etc.)
- **Verification-** describes the process for measuring and confirming progress for the purpose of providing benefits
- **Benefits-** describes the incentives that will be given for each level

Offering Incentives Within a Performance Ladder Framework

While improving the system of environmental regulation, monitoring, and reporting benefits both regulators and industry, incentives must be designed carefully, rewards and responsibilities communicated thoroughly, and appropriate criteria set in determining facility eligibility and participation. The National Metal Finishing Subcommittee promotes the creation and use of performance ladders to structure the process for determining eligibility and rewarding environmental performance. The SGP Performance Ladder is a concept that links incremental progress toward meeting the Strategic Goals with incremental benefits.

Local stakeholder groups can follow the performance ladder framework defined by the national workgroup or develop their own system for awarding benefits associated with progress. Regulatory flexibility opportunities offer a powerful incentive and as such can be an effective component of any performance ladder. Other incentives that reward progress toward goals and help companies improve even further include: increased face-to-face interaction, more rapid response times, technology assistance, non-enforcement audits, and training and information resources. However, it is important to remember that benefits, especially those entailing regulatory flexibility with regard to environmental monitoring, reporting, and oversight, be tied to specific performance levels and compliance history standards.

Summary

Offering Incentives Within a Performance Ladder Framework Continued

A National Performance Ladder Model			
Performance Level	Requirements		Menu of Suggested Benefits*
Participating	Submitted 1992 baseline worksheet Submitted most recent year worksheet		Welcome Aboard Kit Compliance and Pollution Prevention training Free or low-cost Pollution Prevention, Hazardous Waste, and Energy Audits Assistance in environmental cost accounting Access to Capital financing for participants
MF2000 Bronze Level	<i>Percentage Model</i> 33% achievement (cumulative goals); Local review panel recommends level	<i>Cumulative Model</i> 2 goals met	Bronze level recognition Reduced monitoring for pollutants not in system Reduced lab fees Reduced notifications for changes to system Reduced pretreatment monitoring Enforcement Response Plan modification/clarification New project assistance
	Passed local compliance review		
MF2000 Silver Level	<i>Percentage Model</i> 66% achievement (cumulative goals); Local review panel recommends level	<i>Cumulative Model</i> 4 goals met	Silver level recognition Reduced permit fees Expedited new permits and/or permit modifications Waive fines for first minor NOV Reduced monitoring to semi-annually
	Passed local compliance review		
MF2000 Gold Level	<i>Percentage Model</i> 100% achievement or recommendation by local technical review panel	<i>Cumulative Model</i> 100% achievement	Gold level recognition Expedited delisting Expedited variances Expedited permit review POTW conducts monitoring for SIU (semi- annually)
	Passed local compliance review		
*This list of suggested benefits is not meant to be exhaustive. Each local program may develop additional unique benefits/incentives.			

For additional resources on the National Metal Finishing SGP and the SGP Performance Ladder Framework:

Visit the web site at:

[Http://www.strategicgoals.org](http://www.strategicgoals.org)

Or contact:

Mindy Gampel

U.S. EPA

(202) 260-2748

gampel.mindy@epamail.epa.gov