ENVIRONMENTAL MANAGEMENT TRAINING FOR SMALL- AND MEDIUM-SIZED BUSINESSES

A Workshop Co-Hosted by:

U.S. Environmental Protection Agency
Office of
Pollution Prevention

and

Occidental Petroleum Corporation

by

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SUMMARY

A meeting on Environmental Management Training for small- and medium-sized businesses, hosted by EPA and Occidental Petroleum, was held on May 23, 1990, in Los Angeles, California. The meeting brought together members of Federal and State government, academia, industry, and consultants to identify opportunities for improving the quality and accessibility of environmental management training for small- and medium-sized businesses.

The discussion agenda had six major elements: the elements of corporate environmental management; pollution prevention concepts applied to effective environmental management at the division and facility levels and by medium and small businesses; current practices in environmental training; evaluation of the effectiveness of training programs; identification of incentives for conducting training; and possible solutions to and recommendations for these subject areas. The last segment of the meeting focused on concrete solutions integrating recommendations from the previous discussions. The major recommendation is the creation of local small- and medium-sized business environmental education steering committees comprised of local businesses of all sizes, academia, trade associations, government, and environmental interest groups that would act as storehouses of information and providers of training. This approach stresses cooperation and not EPA's traditional enforcement posture. Through cooperation with these local groups, EPA can achieve greater compliance and foster trust. EPA would act as the instigator for the creation of these groups that would facilitate the timely dissemination of effective environmental management training to small- and medium-sized businesses.

INTRODUCTION

Many industries have shown a desire to go beyond violation- and enforcement-driven management of environmental compliance. Several large businesses have taken a lead in improving their environmental performance by instituting internal training programs, performance audits, and improved professionalization of their environmental managers. This has lead to improved voluntary efforts in pollution prevention, waste minimization, and source reduction which have become vital issues for EPA. The Agency has a critical interest in communicating these approaches to small- and medium-sized businesses as well. As part of this process, EPA and Occidental Petroleum Corporation hosted a meeting of leaders from Federal and State Governments, industry, and academia, to discuss the current state of training resources for small- and medium-sized businesses and possible steps for improvement. This meeting was the second in a series of forums under the same cosponsorship to address cooperative opportunities between government, business and academia to improve educational, training opportunities and technologies in the emerging discipline of professional environmental management.

The meeting was held on May 23, 1990, at Occidental Headquarters in Los Angeles, California. The goal of the meeting was to examine the current status of environmental training resources for small- and medium-sized businesses and to develop suggestions for improving both the availability and quality of different training resources. These businesses often are not familiar with, and cannot afford, training in new pollution prevention subjects. Topics discussed include: assessing the needs for training, content development, delivery mechanisms, evaluation of existing training programs, and incentives that motivate small- and medium-sized businesses to conduct training. A list of workshop participants appears in Appendix A of this report. The discussion topics contained in the original workshop agenda were found to not fully address the current training supply and needs of small- and medium-sized businesses. Workshop participants addressed topics of greater applicability to small- and medium-sized businesses, and those additional topics also appear in this report. The original discussion agenda appears in Appendix B.

This report was written to promote discussion of these topics, to facilitate dissemination of information, and to encourage additional participation in development of programs that will improve environmental performance and reduce the need for traditional "command and control" procedures.

CURRENT PRACTICES

The main goal of the meeting was to examine the current status of environmental training for small- and medium-sized businesses, and to assess training needs. Meeting participants recognized that small- and medium-sized businesses generally, have not given adequate attention to environmental protection. For example, when companies tightened their belts, often one of the first programs to be cut or eliminated was the environmental program. The first step in changing this situation is for businesses to recognize that environmental protection is a legitimate concern and an integral part of business operations. Pollution is not part of the cost of doing business, but a resource out of place. Now, more and more businesses are recognizing the cost of pollution and attempting to reduce costs through waste minimization and pollution prevention measures. Government, environmental groups, academia, and other businesses need to persuade more small- and medium-sized businesses that environmental problems are a legitimate business concern and that pollution prevention is a key to reducing costs.

How Can EPA Integrate Pollution Prevention Practices Into Small- And Medium-Sized Businesses?

One of EPA's areas of opportunity for improving environmental compliance is application of pollution prevention technologies to small- and medium-sized businesses. EPA's Pollution Prevention Office is focusing on four areas designed to integrate pollution prevention practices into EPA and business.

- First, EPA must integrate pollution prevention into its current regulatory structure.
- Second, EPA must work to strengthen State pollution prevention programs through grants and technical assistance.
- Third, EPA must develop a system of collecting data on where and when pollution prevention programs are making progress.
- Finally, EPA must work to change attitudes and approaches from traditional command and control practices to pollution prevention.

Technology transfer is another key to integrating pollution prevention with current programs. Information on effective programs should be shared in order to help change the mindset of small-and medium-sized businesses. Participants felt that moving from total reliance on "command and control" approaches would be a key factor in increasing compliance. Pollution prevention is an effective way to avoid fines and the generation of expensive process wastes. Small businesses need

effective. Many businesses still believe that they can have either process efficiency or pollution prevention. Businesses need to understand that these two attitudes can be integrated to save money. Small businesses must be able to plan and conduct or receive appropriate training to integrate these two modes. Meeting participants also acknowledged that greater incentives need to be identified to motivate managers to obtain and provide environmental management training. Traditionally, government depended on large fines to motivate business to comply with environmental regulations. But for many small businesses, this is not an incentive since they cannot afford training or expensive process changes. Participants recognized that stronger and more positive incentives must be identified so that managers can implement training before any environmental damage is done. Meeting participants also believed that EPA must establish standards for managers' training, such as knowledge of regulations, the ability to stay abreast of changes in regulations, and the knowledge of technical assistance resources.

How Do Environmental Professionals Access Training Programs?

Many of the environmental problems that plague small businesses are due to inadequate environmental information. Most small businesses are not even aware of what environmental regulations apply to them or where they might receive training to address potential environmental problems. Outreach efforts rarely have focus or continuity in their content. Many small businesses simply wait for the local inspector to come. Then, they have to change their process under the burden of a regulated situation, and the damage to the environment has already been done. One vehicle for training that the group felt was under utilized was trade association activities. Meeting participants identified this as an opportunity to connect EPA activities to trade association information. If, for instance, EPA could connect their clearinghouses with a trade association's mailing list, EPA might find a direct line of communication to that type of business. Cooperative efforts with trade associations also can help identify training needs and can help emphasize pollution prevention. Most importantly, trade associations can help EPA get information to businesses. Most small- and medium-sized businesses belong to a trade association and receive periodic information from the association in the forms of bulletins or newsletters. EPA could use trade association delivery mechanisms to communicate information about training opportunities. By using existing lines of communication, and cooperating with business trade associations, EPA minimizes bureaucracy and increases effectiveness.

What Delivery Mechanims Are Utilized To Deliver Training?

Another mechanism for delivering training information that meeting participants felt could be very effective was to communicate through local permitting processes. Counties and municipalities have permit processes that could significantly assist EPA. When a new business applies for zoning or other types of permits, that information automatically should go to an office that would inform the business owner of environmental requirements. Once again, this system would utilize existing lines of communication and increase effectiveness. The group also recognized that similar businesses have similar environmental problems. A checklist based upon specific industry processes or materials could be developed and distributed by banks or trade associations. The checklist could identify possible problems, acceptable solutions, and resources for additional information. In other cases, local agencies could match similar businesses with similar problems, in an effort to discuss solutions. Many banks are involved with problems encountered by business; this is another vehicle for disseminating information about training requirements to members of the regulated community. For example, the South Coast Air Quality Management District (SCAQMD) distributes a brochure for businesses that outlines common air problems and acceptable solutions. This is an excellent model for communicating information to businesses. Another important way small- and medium-sized businesses seek to maintain environmental compliance is by consulting with compliance experts. Many small-and medium-sized businesses do not have the resources to develop and maintain inhouse environmental expertise so they must rely on the advice of outside consultants. An example is California's Registered Environmental Assessor (REA) program which includes over 2,000 individuals who render expert environmental compliance assistance. Efforts such as the REA program present a real opportunity to transmit pollution prevention and other sound environmental management practices to small- and medium-sized businesses, especially in light of its relationship to new state waste minimization legislation. Each of these ideas employs existing structures and cooperative efforts to improve communication between EPA and small businesses, using existing lines of communication which reduces new bureaucracy and still shares information in an innovative fashion.

ASSESSING SPECIFIC INDUSTRY NEEDS

While the workshop participants had many perspectives on the types of training available to industry environmental managers, there was agreement from representatives of the regulatory and training resource sectors that small- and medium-sized businesses generally do not assess their own needs for environmental management training. Instead, these businesses are directed by permit

violations or permitting activities to seek direct information, assistance, or training. This generally means that these industries wait for regulatory agencies to tell them what kind of skills or knowledge base is required to achieve compliance. While direct training assistance is usually outside of the mission of most regulatory agencies, many of these offices can provide referral to local training resources, including community college and extension courses. For these small businesses it is critical that training be inexpensive, easy to access, and completed without a major time loss to the business. It appears that locally based training resources or video training are the most appropriate media to target small- and medium business needs.

What Mechanisms Are Used Currently By Organizations To Assess Training Needs?

An interesting example of a regulatory agency providing incentive and assistance came from the (California) South Coast Air Quality Management District - Enforcement Office. They maintain a "Violators Assistance Program" that provides technical assistance and partial abatement of penalties usually assigned to permit violations. This encourages businesses to seek the Board's help once a violation has been detected. Similarly, they waive penalties for industries that detect and remedy violations through self-audit programs. This encourages a certain amount of environmental activism and the development of a successful self-auditing program. There was a consensus, however, that small- and medium-sized industries generally rely on others, particularly government, to identify their needs. Training centers with successful outreach programs might also provide this service. The role of trade associations in identifying and providing training for businesses of this size probably varies greatly with the trade. It was clear that, in many cases, small businesses might not have access to the resources of trade associations. This probably reflects the limited time availability or cost for these resources. Some of the ways EPA can help is by conducting sample audits to let businesses know what inspectors look for, letting managers from a similar business accompany an inspector on a facility audit, and by integrating opportunities for training with compliance audits to help businesses identify their needs.

Finally, the group stressed the need to educate business executives as well as environmental managers. Environmental managers cannot perform their duties effectively without the support of upper management. A manifestation of this awareness would be the developing role of the environmental manager. The environmental manager performs duties such as creating carpools and recycling programs. But the environmental manager also must remind upper management, again and again, of the benefits of strong environmental programs. EPA must understand that training is no guarantee of compliance. Training also must be targeted to providing the environmental manager

with the skills to convince business management of the benefits of proactive environmental efforts, such as environmental training.

EVALUATING CURRENT TRAINING PROGRAMS

How Is The Training Program Evaluated?

One of the goals of the meeting was to evaluate current training programs and how they differ from business needs. Government and business must work together to develop effective compliance measures for the future. Many organizations, such as universities, training organizations, and continuing education programs, already offer training programs for medium and small businesses in environmental areas. Some of these organizations train environmental professionals in environmental law, waste management, facility design, etc... A major concern is evaluating the effectiveness of these existing training programs. Some of the factors to be considered in evaluation are the match between content of training and the needs of the participants, the results of training in improved environmental compliance, and the ways training organizations plan future course offerings.

The workshop participants identified several methods of evaluating training that are currently used for programs: a survey of participants toward the end of the course or after it, pre- and post-tests of the participants (not as a pass/fail vehicle, but a measure of course effectiveness), and course surveys completed immediately after the training, and 6 months later to check training implementation. All of these methods are used to enhance and improve course quality. Ideally, program evaluations should not only evaluate a change in environmental behavior due to training, but measure the effectiveness of the overall environmental program.

The group also recognized that, despite any organization's best training efforts, there are many other factors that delay or prevent environmental effectiveness. Problems such as employee turnover, lack of money, or poor management leadership can prevent good practices from being implemented. Proper training corrects a knowledge deficiency, but does not change organizational or management problems that can prevent compliance. Also, the skills taught in training courses might not be used until companies make a process change, or those who have training assure positions to effect a change. Therefore, it is difficult to track the overall effectiveness of training.

A key to evaluating the effectiveness of training at a facility is understanding the problem. In the past, pollution control was EPA's top priority. Now, EPA strives for pollution prevention, and this must be reflected in training. Knowing the problem and preventing it has become as important as trying to fix a problem with control equipment. Training organizations must project this mindset in order to meet the changing needs of environmental managers.

INCENTIVES FOR TRAINING

There are many reasons why small- and medium-sized businesses do not receive environmental training. Training is expensive and time consuming, and many of the small businesses must face the alternative of closing the doors so that people could participate in training. Under the circumstances, many businesses operate in marginal compliance or face process changes they cannot afford. Workshop participants felt that it was necessary to discuss possible incentives for businesses to enroll employees in training programs. Once incentives have been identified, EPA, industry, academia, and training organizations can develop methods to motivate small- and medium-sized businesses to implement training.

What Incentives Exist For Small- And Medium-Sized Businesses To Plan And Implement Training?

Workshop participants identified four categories of incentives:

- possibility of a fine for not complying with environmental regulations;
- money saved through pollution prevention;
- an impressive environmental record creates a good image for your customers and in the community;
- conducting training to make your business environmentally sound is the right thing to do.

In the past few years, EPA has tried to deemphasize enforcement in favor of cooperative efforts leading to compliance. Yet, the possibility of a large fine is still a significant incentive for small businesses. Many small businesses are not even aware of regulatory requirements, much less their penalties. The key to this incentive is making sure small businesses know the consequences of non-compliance.

That pollution prevention saves a business money is a verifiable fact. Through improvements in process and recycling, a business can save money spent on disposal, clean up, or a non-compliance fine. It is in the best interests of businesses to conduct proper training for employees. As part of its pollution prevention mandate, it is government's job to help small businesses plan and implement training.

The benefits of environmental compliance are not limited to not getting fined or incurring costs. A sound environmental record is good for business. Americans are increasingly aware of the need for environmental protection. Some small to medium-sized businesses will conduct proper training and work at compliance because, they believe it is the right thing to do. It is also a wise public relations strategy to publicize achieved training and compliance. Many states are now developing certificates and awards for businesses that excel in environmental compliance. Workshop participants recommended a certificate program similar to that used by the Better Business Bureau to recognize businesses that participate in training programs. Federal or State environmental agencies could award a plaque or certificate to businesses that participate in training programs. If a business no longer pursues a sound environmental policy - the certificate would be rescinded. Federal and state agencies should develop more of these type of programs to recognize businesses that try to be environmentally responsible. A large business interested in good public relations could help its smaller suppliers receive the training they need. A group of businesses in one area could share the costs of training and publicize their accomplishment as an "environmentally safe market." The group felt that more of these programs needed to be implemented in order to increase the power of this incentive.

What Incentives Can EPA Provide?

Workshop participants believed that EPA could help by changing its traditional enforcement role. By fostering a cooperative atmosphere with business, EPA can achieve greater compliance. Participants felt that EPA could help in tangible ways such as writing regulations or summaries that are easy to understand. Many small business owners might not be native English speakers and even those who do speak English have a difficult time comprehending the regulations. EPA also could help by emphasizing pollution prevention and encouraging businesses of all sizes to conduct proper training. Finally, EPA could promote the idea of stewardship, in which people see themselves as caretakers of the earth and promote environmental responsibility. The workshop participants felt that the most important factor for EPA is to change its own attitude from that of enforcer to that of helper. Many businesses will not turn to EPA for help because of its enforcer image. If EPA

works cooperatively with businesses to achieve compliance, they will begin to ask for EPA's assistance. EPA's goal is not enforcement but compliance with environmental laws. Participants suggested that EPA could give low-cost loans to small businesses for pollution prevention investments. EPA could require that managers receive proper training before they are eligible for these loans. This would ease the financial burden on small businesses seeking proper training and enhance compliance and EPA's image as a helper. Some very small businesses still would not be able to afford training because these operations might have to close shop for employees to attend training. Therefore, EPA must structure training in a way to minimize cost to business.

NEXT STEPS

The final agenda item was a discussion of future steps. Having identified various problems and opportunities associated with environmental training for small- and medium-sized businesses, the workshop participants examined ideas on how to solve problems programmatically. It is important that these solutions be implemented as soon as possible. Both EPA and the U.S. Congress have identified the need for environmental training, and if cooperative solutions are not found soon, EPA eventually will feel the need to regulate. The group felt that EPA should try to regulate in these areas as little as possible and made suggestions regarding how to close the training gap voluntarily.

What Can Industry, Academia, And EPA Do To Disseminate And Implement The Recommendations Of This Panel?

Participants recommended that EPA should take the lead in forming local steering committees, comprised of leaders from businesses, environmental groups, and academia. This organization would locate businesses with potential problems and maintain the information on environmental training programs that these businesses need. The identification of businesses that need help would be accomplished through knowledge of the local economy and by surveying businesses that work with members of the committee. A local steering committee would have a greater knowledge base of local environmental problems and which resources exist to help solve these problems. This steering committee could be seen as a community consulting firm on environmental problems. This is a cooperative approach that stresses assistance and not enforcement. The workshop participants stressed that this committee must not be a tool for enforcement. As soon as this committee tried to enforce regulations, local businesses would no longer cooperate. The workings of this committee would be a significant step toward cooperation and a step away from the traditional adversarial role

played by EPA. Another benefit of this program is that it would feature local leaders solving local problems. Using local groups would internalize the effort and perhaps make the group a permanent organization. Workshop participants stressed that local businesses and trade associations would be vital members of this committee. These members would draw other businesses and trade associations to join because of the emphasis on cooperative efforts and the minimization of enforcement. Small-and medium-sized businesses would recognize that this group wants businesses to succeed and wants to cooperate in its efforts to protect the environment. In addition to forming the local steering committees, EPA should capitalize on the valuable opportunities for disseminating sound environmental management practices through programs such as the Registered Environmental Assessor program, in cooperation with the California Secretary of Environmental Affairs.

What Types Of Partnerships Can Be Formed To Provide Cost-Effective Training In Environmental Management For Small- And Medium-Sized Businesses?

Before convening any local steering committee, workshop participants felt that EPA would need to identify local priorities, environmental needs, and local interest. For example, in Detroit, where numerous small electroplating business supply the automobile industry, a local committee that would couple the environmental expertise of the large industries to the needs of small manufacturers through local training resources would be a positive step. Larger businesses, trade associations, and environmental groups located in Detroit would have an interest in minimizing pollution from plating manufacture. This raised another issue that meeting participants believed to be very important: It would be best if EPA picked a target industry to test the process, such as the small electroplating business example above. EPA would choose this industry based on available support and interest in cooperative programs as well as environmental need. Input from trade associations, suppliers, and equipment manufacturers would help identify training needs as well as effective communication systems. By demonstrating that the process could work, and by having a clear success study, other local communities would see that the process works and might initiate their own steering committees. In Southern California, the industries with inadequate environmental training include dry cleaning, auto refinishing, printing, and manufacture of wood products. Environmental training for these small- and medium-sized businesses would make a significant difference in their environmental performance.

As part of this demonstration, the steering committee also should recommend a variety of delivery mechanisms for training. The steering committee could recommend workshops, seminars, continuing education courses, video training and other mechanisms. By trying a variety of delivery

mechanisms, the steering committee could discern which methods work best in their community. Different industries in the same community might not respond to the same type of training. Similar industries in different locations might not respond to the same type of training. This is an ongoing process, but by trying different delivery mechanisms, the steering committee could identify what works. Also, this committee would serve as a model for any metropolitan area interested in cooperative environmental programs.

Two cities ideally suited for this demonstration are Detroit and Los Angeles. Detroit has many small businesses that serve as suppliers to the large automakers. Similarly, Los Angeles has many large companies that purchase supplies from smaller businesses. There is also a significant amount of interest in cooperative environmental programs in Los Angeles. California is traditionally known to be a state with significant environmental concerns and an active environmentalist movement. By working with small businesses with connections to larger ones, it is hoped that large businesses will see this as an opportunity and contribute money and support to the steering committee.

For this demonstration, and for environmental training in general, it is important not to overwhelm participants. Environmental training must be more than a list of regulations. Also, training should not be geared toward "beating" or getting around regulations. Environmental training should teach acceptable methods for achieving environmental compliance. Subjects that should be considered include waste minimization, pollution prevention, simulated inspections, and source reductions. Trainers also should be aware of language and cultural barriers and provide appropriate training for those individuals who need help. Finally, it is important to train businesses to find their own help. Part of achieving compliance is being able to stay informed about changes in laws and regulations. Small- and medium-sized businesses should be able to identify the organizations that can help them and ways to access these organizations. In the end, a major part of environmental training is helping businesses help themselves.

How Can Organizations Measure Training Impact?

A potential problem for this type of training program involves measuring effectiveness. Meeting participants recognized that cooperative approaches to training still need to be tracked by EPA. Participants felt that a number of methods should be tried to find the most accurate and effective measure. Steering committees could develop, with the help of businesses and trade associations, baseline levels of knowledge. Periodic testing would determine effectiveness of training leading to environmental compliance. Participants suggested that EPA could track progress by

modeling or extrapolation. In terms of the effectiveness of waste minimization training, EPA and the states could provide training for their inspectors on compliance criteria. Inspectors' evaluations and citations could assess training impact by measuring compliance of businesses that have participated in training.

Group participants felt that the above paradigm would be the most effective means of achieving cooperative environmental management training. A local steering committee designed to identify need and help businesses find solutions would step away from traditional command and control methods that have not proved to be fully effective. These committees would put control of programs into local groups and would solve environmental problems with an eye toward preserving these small- and medium-sized businesses. While many details still must be addressed in the future, meeting participants felt they had developed a good base of ideas for future discussion and implementation.

U.S. ENVIRONMNENTAL PROTECTION AGENCY - OCCIDENTAL PETROLEUM CORPORATION ENVIRONMENTAL MANAGEMENT EDUCATION FORUM

MAY 23, 1990

APPENDIX A - PARTICIPANTS

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ENVIRONMENTAL MANAGEMENT EDUCATION FORUM

MAY 23, 1990

AGENDA

8:30 - 8:45	Welcome and Introduction Jim Hayes - EPA Vinay Dighe - Occidental Petroleum Corporation Jerry Filbin - TRI
8:45 - 9:00	The Elements of Environmental Management Frank Friedman - Occidental Petroleum Corporation
9:00 - 9:30	Pollution Prevention Concepts Applied to Effective Environmental Management at the Division and Facility Levels and by Medium and Small Businesses: Agency Overview John Atcheson - EPA
9:30 - 10:00	Overview of the Process: Phase I and Phase II Jim Hayes
10:00 - 10:15	Break
	For each topic below, discuss, from your organization's perspective, strategies you use to identify training needs, deliver training programs, and evaluate the training program's success. In addition, discuss incentives for providing training to environmental management professionals.
10:15 - 10:45	Needs Assessment Approaches

How do you identify training needs of facility and division level environmental professionals?

How do you identify training needs of small and medium business environmental professionals?

What type(s) of training programs are division and facility environmental professionals seeking?

What type(s) of training programs are medium and small business environmental professionals seeking?

How is needs assessment information used to design and develop training programs?

What forms do your training programs take (e.g., one-day seminars, video-training, formal courses)?

How is needs assessment information used in the training program evaluation process?

10:45 - 12:00

Current Practices

Who plans the training programs?

What delivery mechanisms do you use?

How are training and education standards established?

How do environmental professionals access the training program?

How is the training program paid for?

Who provides the training?

12:00 - 1:30

Lunch

1:30 - 2:15

Evaluation

How is the training program evaluated?

Is the content of the training program appropriate to the need?

Is the form of the training program appropriate to the need?

How is the evaluation information used in planning future training programs?

2:15 - 3:00

Incentives

What are the incentives for providing training to environmental professionals at the division and facility levels?

What are the incentives for providing training to environmental professionals from medium and small businesses?

Has training for the individual(s) responsible for environmental management resulted in better compliance or increased profitability?

What can industry do to facilitate the provision of environmental management training at the division and facility levels and to medium and small businesses?

What can academia do to facilitate the provision of environmental management training at the division and facility levels and to medium and small businesses?

What can EPA do to facilitate the provision of environmental management training at the division and facility levels and to medium and small businesses?

How can industry, academia, and EPA collaborate to provide environmental management training at the division and facility levels and to medium and small businesses?

What can industry, academia, and EPA do to disseminate and implement the recommendations of this panel?

What steps can be taken to build effective networks among specific industries, academic institutions, and government offices that provide mechanisms for useful training?

How can assistance be provided to medium and small business to help them identify their environmental management training needs?

What types of partnerships can be formed to provide cost effective training in environmental management for medium and small businesses?