

US EPA ARCHIVE DOCUMENT

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT'S
INNOVATIVE PERMIT PILOT PROJECT PROPOSAL
ENVIRONMENTAL MANAGEMENT SYSTEM PERMIT PILOT PROJECT
(May 2003)**

The Colorado Department of Public Health and Environment (CDPHE) is embarking on a project that could permanently change the state's environmental regulatory process. The project is the development of a system that allows an EMS to act as a cross media permit for certain regulated entities. The project will allow government to be more efficient and leverage its resources. This is critical due to declining revenues and increasing responsibilities as a result of emerging priorities.

The CDPHE's goals for an EMS permit program include:

- Utilizing an EMS to deliver compliance-equivalent performance through enforceable performance standards;
- Reliance upon an EMS with specific, department-approved performance improvement goals to raise environmental performance through continual environmental improvement;
- The use of an EMS to continue producing compliance and performance into the future;
- Continuation of our selective policy that offers rewards to good performers who have used or want to add an EMS to their environmental management approach;
- The appropriate allowance for stakeholder involvement in a participant's environmental footprint, compliance history, and community relations situation;
- The consideration of cross-media impacts when making environmental decisions; and
- Finding ways to have the regulated organizations' EMS efforts replace and/or augment some of government's environmental regulatory functions, including inspections through external third-party audits, minor permit modifications through the EMS tracking system, and reporting through the EMS data collection, problem identification, root cause analysis, system modification, etc. processes.

To pilot this divergent EMS approach, CDPHE is committed to issuing experimental cross-media permits to several motivated and committed regulated organizations. The permit may be developed in partnership with EPA under the Joint EPA/State Agreement to Pursue Regulatory Innovation, if EPA is able to provide grant funding.

The success of the project depends upon finding partner companies or entities that meet criteria for performance, are committed to compliance, have implemented or are planning to implement an EMS that includes third-party EMS audits, have a willingness to increase transparency, and are committed to good community relations. The purpose of the EMS permit project is to see if the rigor of the (ISO-like) EMS and third-party EMS auditing standards can, with some augmentation, stand in for some of CDPHE's regulatory functions.

Proposed EMS Permit Project Schedule

The proposed schedule for this project depends on when the EPA funding becomes available. If we do not receive EPA funding, the following is the schedule:

Jan. – Mar. 2003	Select partners and obtain confirmation from partners that they are committed to the project.
Feb. – July 2003	Allow partners to develop EMS and/or CDPHE shall develop EMS templates for certain industry sectors. Decide what performance measures they want to request for the EMS permit; the Department will keep in touch with the companies and be discussing the project internally and considering any possible legal issues and/or legislative action that may be required (i.e., whether the legal definition of a permit be captured by the EMS).
July – Dec. 2003	Negotiate with the company and EPA on the terms and conditions for each individual EMS permit, including the first continual improvement elements; draft the enforceable language and agreement between the parties. Hold stakeholder meetings as appropriate.
Jan. – Mar. 2004	Public notice the EMS permits, as and if required by regulation and statute.
Jan. – Dec. 2004	Implement EMS permits, track compliance rates, environmental improvements, and administrative efficiencies during this time.
Jan. 2005	Develop report and, if proven successful, begin to institutionalize the program.

See below for a more detailed explanation about this pilot project.

PILOT EMS PERMIT PROJECT

Introduction

Companies and regulated entities are faced with a wide variety of environmental issues. There are many different factors that contribute to the environmental impact of individual facilities and systems. Colorado has experienced a tremendous population and economic growth cycle in recent years, which translates into greater and greater levels of resource demand and the potential for greater environmental impacts.

Along with the increased population growth in Colorado has come a need for increased building materials, thus impacting the demand for Portland cement output. Portland cement facilities are likewise faced with a wide variety of environmental issues. Pollution from these facilities include both NAAQS pollutants, carbon dioxide, as well as hazardous pollutants. Other industries continue to grow and have a need for flexibility to meet certain market demands, such as the biotech or pharmaceutical industries. Finally, the agricultural sector is being introduced to environmental regulations as concentrated animal feeding operations (CAFOs) are obtaining water permits. The industry in Colorado is interested in exploring with CDPHE whether the Environmental Management System (EMS) permit approach could serve as a cross-media regulatory alternative to the traditional process. We have a unique opportunity to test, refine and establish this program for a sector that is newly entering the environmental regulatory arena. The partners we have selected include companies that already have an EMS developed and implemented and those in the process of developing EMSs. This allows CDPHE to work with companies with EMSs already in existence and to measure whether there are environmental benefits garnered from the implementation of an EMS.

Strategic use of EMSs can provide the next generation of tools for synthesizing economic development activities and environmental protection for sustainable development. The traditional strategy of regulating pollution at the end of pipe or after the fact has achieved significant environmental improvement at high cost. This command and control system, which has created piecemeal prescriptive environmental standards with associated permitting and reporting requirements, may make it difficult for some companies to maintain a competitive edge. Permit requirements may not keep pace with the rate of technological advancement necessary for a company to compete in the global marketplace. For many companies, environmental compliance is not enough and the traditional procedural environmental requirements may stand as an obstacle to superior environmental performance.

CDPHE's Proposal

We propose a pilot innovative environmental regulatory project that includes whole-facility permits with three to five facilities, including at least one Portland cement facility in Colorado. The facilities must commit to compliance, as well as continued environmental improvement and superior performance through the development and implementation of an EMS premised on the ISO 14000 standards. These systems envision a continual cycle of planning, implementing, reviewing and improving the actions that an organization takes to meet its environmental obligations. The department-approved EMS would be a cross-media (air and water, there are no RCRA permits involved) permit(s) for the facility in this pilot initiative. Even though the required EMS will be premised on the ISO 14000 program, it will also include a requirement for compliance with regulatory requirements, a commitment to continual improvement projects, and enhanced community involvement and communications.

The goal of the strategic communicative management style, is to include:

- Written environmental policies with commitments from top management to superior environmental performance, planning that takes into account environmental aspects and impacts, compliance with legal requirements, objectives and targets, and corporate-wide environmental programs; and
- Implementation which focuses on structure and responsibility, training and communication for employees, EMS documentation and control, operational control and emergency preparedness and responses, checking and corrective action which include monitoring and measurement, corrective and preventive action, regular EMS audits and a continual improvement (including pollution prevention¹) plan as the central theme.

The strategic communicative management style, if done properly, results in an increased assurance of an entity maintaining compliance. It requires every employee understand and be responsible for assuring compliance with regulatory requirements.

Enforceable Standards and Requirements

The EMS permit will include specific environmental standards and work practice requirements. But, it will not necessarily dictate technology requirements. The entity would have the responsibility of proposing the methods and technologies it will use to comply. This provides incentives for the regulated entity to implement pollution prevention alternatives wherever possible. In addition, the EMS permit would require the entity and CDPHE to review and consider the cross-media impacts of the technology and/or work practice selected.

CDPHE is currently exploring the regulatory and statutory flexibility that already exists to allow such an analysis (i.e., the Best Available Control Technology definition requires environmental impacts be considered, EPA is proposing an alternative Maximum Achievable Control Technology standard). If the authority to consider cross-media impacts for certain programs does not currently exist, CDPHE will work with EPA in developing any regulatory modifications. The EMS permit will also include the specific administrative requirements, such as when an EMS permit modification would be required and the public comment provisions.

During the pilot project period, the participating facilities' existing permits will remain in place.

Community Involvement

This proposal also includes effective community involvement in the development of this initiative, including a dialogue involving the pilot facility's environmental impact decisions and the community's perceptions and reactions to engender sufficient trust that results in changes to operations, processes, continuous environmental improvement and implementation of pollution prevention plans that are meaningful to the community. It does not mean involvement by the community in business decisions, fiscal matters, proprietary information, etc. CDPHE will require the partner facilities' to enhance the overall communication and involvement with the community. The EMS permit project also anticipates that the public comment requirements could be modified. Instead of the public comment occurring at the end of the permitting process, it would be encouraged and allowed at the beginning of the process.

¹ Pollution prevention is defined by Colorado statute, and does not include treatment of wastes after they are created.

Thus, we would look to shorten the comment period at the end of the process. CDPHE will explore this approach with its partner stakeholders.

Performance Measurements

Measuring environmental performance is critical to this pilot proposal. Performance measures may include:

- Environmental performance measures (e.g., measures of emissions of pollutants, risk factors, use of energy and natural resources, etc.);
- Environmental condition indicators (measures of environmental quality in relation to the facility and its discharges, e.g., substantiate the well-being of the air, land, water, and living things as part of a larger eco-system);
- Environmental compliance indicators (specify and describe deficiencies in terms of unauthorized releases and government requirements);
- Pollution prevention indicators (include pollution prevention performance information and what stakeholders believe are the priority pollution prevention actions);
- Cost/benefit measures;
- Community involvement measures (identify ways the facility has played a leadership role in involving the public in defining goals and objectives and how it has incorporated public insights and recommendations).

Environmental cost accounting will capture the financial benefits that result from the implementation of an ISO-like EMS.

Incentives for Facility Involvement

CDPHE is willing to work towards certain incentives, in return for the facility being involved in this project, including implementing an ISO-like EMS, using a third-party certified auditor to oversee development and maintenance of the EMS and conducting annual compliance and EMS audits, and committing to specific annual environmental goals that are beyond-compliance (compliance is baseline). These incentives can include:

- Waiving certain procedural requirements including requiring permit revisions for minor modifications,
- Streamlining reporting and monitoring requirements,
- Reducing or eliminating inspections,
- Alternative monitoring and enhanced corrective actions,
- Reduced reporting/decreased administrative expense,
- Annual discharge monitoring reports,
- Wastewater noncompliance notifications,
- Electronic reporting/submittals,
- Stormwater permit classification, and
- Single cross-media inspections at a reduced frequency.

Developing the audit process will require input and involvement from multiple stakeholders. CDPHE will be developing the elements of a required compliance audit with assistance from other states, CDPHE inspectors, partner facilities, and the environmental community. Ultimately, a compliance audit

through the EMS permit could stand in the stead of a traditional State inspection. The State will not be relinquishing any enforcement authority, ability to respond to complaints or ability to conduct inspections. Instead, the State will consider on a case-by-case basis whether conducting an inspection at the partner facility is the best use of its limited compliance assurance resources – or could those resources be better used targeted towards an identified environmental problem or facility.

CDPHE is also planning to include in the EMS permit a statement concerning the facility's ability to use Colorado's Self Audit Law. Currently, facilities required to conduct audits by law are not eligible to use the protection of the law. CDPHE will use its enforcement discretion and allow participating facilities to use the self audit law protection, if the only restricting factor is the fact the audit is required.

Continual Environmental Improvement Projects

The EMS permit will require the facility to select, agree to, and implement continual improvement projects. As CDPHE develops the program, it will be answering questions such as:

- Should the facility's specific continual improvement projects be enforceable?
- Should a failure to complete the continual improvement projects result in the facility leaving the EMS permit program? If so, criteria should be developed to guide those decisions.
- What type of review or approval of the continual improvement projects by CDPHE and/or other stakeholders should occur?

CDPHE will be working with its stakeholders and partners to answer and develop policies and procedures to address those issues. Potential types of continual environmental improvements include:

- For a power plant, energy recovery projects, e.g., re-use of fly ash as an alternative combustion fuel – reduce coal use by a negotiated amount of tons/year and generate a certain amount MWh/year from recovered fly ash (measurement: tons of coal displaced by recovered ash; megawatt-hours of energy recovered from previously landfilled ash).
- Conduct industrial ecology projects (e.g., beneficial re-use of high-volume industrial wastes in construction materials).
- Commitments to opacity limits well below the current regulatory requirements, except during periods of malfunction (measurement: opacity as read by continuous emission monitors or using other methods).
- Improved land use and reduced risk of environmental contamination through commitments to reduce solid and hazardous waste sent to landfills and find beneficial uses. Eventual goal is to completely eliminate waste streams to landfills. A second goal is to reduce risk and potential liability for groundwater contamination caused by leaching or leaking of materials from the landfills. (Measurement: volume of waste diverted and landfill space made available.)
- EMS audits of all key suppliers that may present significant environmental aspects as part of the service they provide the plant. ISO 14001 like protocols shall be used for these audits. Feedback will be supplied to the suppliers. (Measurement: list of audits conducted and qualitative and quantitative performance measures specific to the company's contract with each supplier.)
- Toxic release and use reduction project(s). For example, a power plant would contribute to research and conduct field-testing at the plant to characterize mercury emissions and to evaluate the performance of mercury control technologies for coal-burning plants. (Measurement: percent complete and results of testing.)

- Projects that can demonstrate better overall environmental performance, with the allowance for higher media-specific emissions standards (but still within the parameters of the required technology given the required considerations in making the control technology determinations).

Conclusion

This innovation is geared toward providing an alternative to the permit and other procedural processes through commitments and demonstrations that the state is gaining a superior environmental benefit with less regulatory process. The goals include to allow flexible, cross-media, whole-facility decisions to be made that will garner the greatest environmental benefit without creating a overly bureaucratic system. CDPHE recognizes that the first EMS permits will be more time consuming and likely more bureaucratic than is ideal. This is an iterative process. We expect that over time, the continual improvement projects, cross-media analyses, and incentives will become more standardized and will require less administrative resources.

Another goal of this project is to make a program that is easily replicable between facilities and sectors. But, the intent of CDPHE is that after the pilot project is complete, to offer this program only to members of Colorado's Environmental Leadership Program.

This project is a new way of thinking about a tried and tested comprehensive system, an EMS, can permanently change the way environmental regulations are applied at the state and federal level if proven successful. The EMS permit offers an approach to overcoming some of the limitations of the existing regulatory structure while helping the regulated community make sound business decisions for the environment - decisions that result in greater gains for both the environment and for public health. By working together, proactive companies and the State of Colorado can drive regulatory change at both the federal and state level that is highly efficient and lasting.

Implementation Strategy

During the first year of the agreement, CDPHE will complete the EMS permit agreement and the EMS template(s), and review and approval of facilities' existing EMSs. CDPHE will convene the facilities that will implement the EMS permit, along with a cross-section of local governments and community representatives. The first year will also include developing the methodology/links necessary to measure and evaluate the results.

For the second year of the project, CDPHE will continue measuring and evaluating the results of the early stages of EMS implementation and will make adjustments as necessary. All traditional permits will remain in place until the second year. During the second year, statutory and/or regulatory changes that are necessary to redefine a permit on a facility-specific basis and to make the compliance portions of the EMS federally enforceable will be proposed and modified. It will also include preparation of the report containing the results of this project. The final evaluation of this project will be done by CDPHE in conjunction with the facility partners and other stakeholders.

Convene Industry Implementers and Local Communities

CDPHE will convene a meeting of facilities and local community representatives that will be participating in the EMS permit pilot project and begin the process of developing an EMS template(s) for specific facilities and making it part of the culture of each facility. For facilities with an EMS in place already, CDPHE will review and make recommendations to improve the EMS. This portion will be funded by CDPHE with possible financial contributions from the industry partners.

A citizen advisory panel may be established to allow the environmental community, local government representatives and community members to participate.

Determine Relationship between “traditional” and “focused” Inspections

CDPHE plans to determine the relationship between the “traditional” and “innovative” regulatory permit approaches. This would involve a comprehensive review of “traditional” results for the universe of participating sectors over the past years, as well as administrative resources required for each approach. This review will establish a baseline compliance rate and resource use that can then be correlated to the compliance rate, environmental performance, and resource use resulting from the implementation of a comprehensive environmental management system. This will allow comparison of innovative permit pilot implementation to traditional regulatory implementation across the entire sector. It will also give CDPHE more complete information regarding the adequacy of “traditional” regulatory structures in measuring environmental performance and outcomes.

Linking Measured Changes In Indicators To Environmental Outcomes

CDPHE plans to develop methodology to determine environment outcomes achieved through measured changes in compliance indicators, pollution prevention indicators, and non-traditional emission sources. The proposed measure will draw the link between the measured change in an indicator and an environmental outcome. For example, the measure will estimate the change in the amount of a pollutant that does, or does not enter the environment based upon implementation of the EMS permit.

CDPHE will work with each facility in performing baseline environmental performance audits and annual reviews thereafter for the duration of the pilot project. Key findings and follow-up actions shall be communicated to the interested stakeholder group. (Measurement: number of findings, corrective actions, and time periods required for corrective actions.)

Develop Performance Reports

CDPHE plans to develop a performance report that will summarize the results of this project. This report may include:

- Baseline performance indicators and measurement results,
- Performance based on EMS-based permit pilot approach, and
- Environmental improvements and cost-benefit analyses of innovative permit project efforts.