

2009
SUNSHINE
LAW
REVIEW

Colorado Department of Regulatory Agencies
Office of Policy, Research and Regulatory Reform

Environmental Management System Permit Program



October 12, 2006

STATE OF COLORADO

DEPARTMENT OF REGULATORY AGENCIES
Office of the Executive Director
Tambor Williams
Executive Director

1560 Broadway, Suite 1550
Denver, CO 80202
Phone: (303) 894-7855
Fax: (303) 894-7885
V/TDD: (303) 894-7880



Bill Owens
Governor

October 12, 2006

Members of the Colorado General Assembly
c/o the Office of Legislative Legal Services
State Capitol Building
Denver, Colorado 80203

Dear Members of the General Assembly:

The Colorado Department of Regulatory Agencies has completed the evaluation of the Colorado environmental management system permit program. I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2007 legislative committee of reference. The report is submitted pursuant to section 24-34-104(8)(a), of the Colorado Revised Statutes (C.R.S.), which states in part:

The department of regulatory agencies shall conduct an analysis of the performance of each division, board or agency or each function scheduled for termination under this section...

The department of regulatory agencies shall submit a report and supporting materials to the office of legislative legal services no later than October 15 of the year preceding the date established for termination....

The report discusses the question of whether there is a need for the regulation provided under Article 6.6 of Title 25, C.R.S. The report also discusses the effectiveness of the Colorado Department of Public Health and Environment and staff in carrying out the intent of the statutes and makes recommendations for statutory changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

A handwritten signature in cursive script that reads "Tambor Williams".

Tambor Williams
Executive Director

Table of Contents

Executive Summary	i
Background.....	1
<i>The Sunset Process</i>	<i>1</i>
<i>Methodology.....</i>	<i>1</i>
<i>Profile of the Program.....</i>	<i>2</i>
<i>History of Regulation.....</i>	<i>5</i>
Legal Framework	6
Program Description and Administration.....	9
Analysis and Recommendations	19
<i>Recommendation 1 – Continue the Environmental Management System Permit Program for 11 years, until July 1, 2018.....</i>	<i>19</i>
<i>Recommendation 2 – Implement a three-tier system to expand membership in the EMS permit program.....</i>	<i>30</i>
Appendix A – Sunset Statutory Evaluation Criteria	33
Appendix B - EMS Permit Process Flowchart	34
Appendix C – Permit Process After Issuance	35

2006 Sunset Review Environmental Management System Permit Program

Department of Regulatory Agencies

Bill Owens
Governor

Tambor Williams
Executive Director



Executive Summary

Quick Facts

What Does it Do? The Environmental Management System (EMS) permit program provides operational flexibility to participating facilities. An EMS fosters a systematic approach that utilizes a framework that identifies problems, prioritizes issues, creates a plan to mitigate environmental issues, implements the plan, continually monitors progress, enables modifications to ensure maximum performance and documents and reports progress.

Who is Eligible to Participate? Facilities that have demonstrated a commitment to environmental compliance with no violations of applicable local, state or federal environmental laws for a period of three years are eligible to participate in the EMS permit program.

How is it Regulated? Facilities participating in the EMS permit program are subject to annual external audits. Annual audits are performed by CDPHE staff or by independent certified contractors. CDPHE retains its enforcement authority and continues to respond to complaints as well as maintain the authority to conduct inspections.

What Does it Cost? The Colorado Department of Public Health and Environment received a \$150,000-grant from the U.S. Environmental Protection Agency to administer and implement the EMS permit program. Grant funds were earmarked for operating costs, personal services, contractual services and indirect costs.

What Facilities Participated in the EMS Program? Initially, there were five facilities that participated in the EMS permit program – two concentrated animal feeding operations, one commercial swine feeding operation and two industrial facilities.

Where Do I Get the Full Report? The full sunset review can be found on the internet at:
<http://www.dora.state.co.us/opr/oprpublications.htm>

Key Recommendations

Continue the EMS permit program for eleven years, until 2018.

The EMS permit program was implemented in Colorado in 2003, and was designed to encourage companies from various sectors to participate and access opportunities designed to reduce pollution. Participating facilities within the EMS permit program demonstrated success in further mitigating pollution. Extending the EMS permit program until July 1, 2018, has the potential to provide increased environmental benefits throughout Colorado.

Implement a three-tier system to expand membership in the EMS permit program.

Expanding the EMS permit program will provide enhanced benefits for both the facilities that choose to participate and the environment. Expanding the EMS permit program to three tiers will enable a variety of facilities to participate, while still maintaining strict guidelines for entrance into the program. Achieving the compliance criteria set forth and allowing more facilities to participate in the program will mitigate pollution in Colorado, and, at the same time, the participating facilities will benefit from the operational flexibility the EMS permit program provides.

Major Contacts Made in Researching the 2006 Sunset Review of the EMS Permit Program

Aeroflex Colorado Springs
Badger Creek Farm, Inc.
Ball Aerospace and Technologies Corporation
Colorado Department of Health and Environment
Colorado Livestock Association
Magnum Feedyard, LLC.
Murphy-Brown of Yuma
U.S. Environmental Protection Agency

What is a Sunset Review?

A sunset review is a periodic assessment of state boards, programs, and functions to determine whether or not they should be continued by the legislature. Sunset reviews focus on creating the least restrictive form of regulation consistent with the public interest. In formulating recommendations, sunset reviews consider the public's right to consistent, high quality professional or occupational services and the rights of businesses to exist and thrive in a highly competitive market, free from unfair, costly or unnecessary regulation.

Sunset Reviews are Prepared By:
Colorado Department of Regulatory Agencies
Office of Policy, Research and Regulatory Reform
1560 Broadway, Suite 1550
Denver, CO 80202
www.dora.state.co.us/opr

Background

The Sunset Process

The regulatory functions of the environmental management system (EMS) permit program within the Colorado Department of Public Health and Environment (CDPHE) in accordance with Article 6.6 of Title 25, Colorado Revised Statutes (C.R.S.), shall terminate on July 1, 2007, unless continued by the General Assembly. During the year prior to this date, it is the duty of the Department of Regulatory Agencies (DORA) to conduct an analysis and evaluation of the EMS permit program pursuant to section 24-34-104, C.R.S.

The purpose of this review is to determine whether the EMS permit program should be continued for the protection of the public and to evaluate the performance of the program and staff of the CDPHE. During this review, the CDPHE must demonstrate that there is still a need for the EMS permit program and that the regulation is the least restrictive regulation consistent with the public interest. DORA's findings and recommendations are submitted via this report to the legislative committee of reference of the Colorado General Assembly. Statutory criteria used in sunset reviews may be found in Appendix A on page 33.

Methodology

As part of this review, DORA staff interviewed program participants and various Public Advisory Group members from each participating facility, interviewed CDPHE staff, and reviewed baseline and follow-up audits for participating facilities. Additionally, DORA attended the State - Environmental Protection Agency (EPA) Symposium on Environmental Innovation and Results and interviewed officials from the EPA and other states, reviewed Colorado statutes and EMS permit program rules, and reviewed the laws of other states.

Profile of the Program

The EMS permit program was established to create an alternative resource for businesses to manage and reduce their environmental impact in Colorado. The EMS permit program, which was derived from the international ISO 14001 Environmental System (a cyclical process of continual improvement through innovation and constant review of best practices models), that enables companies to use innovative strategies and a systematic approach to address environmental issues, including cross-media impacts. Cross media impacts are the transfer of pollution from a single environmental medium (e.g., air, groundwater, surface water, hazardous waste, or solid waste) to one or more other media.¹

Each EMS permit is tailored to the needs of the specific company or organization and provides an integrated environmental protection approach that can identify cross-media and other environmental problems that are not observed or addressed under the current regulatory structure.²

In creating the EMS permit program, the CDPHE established clear goals, including:

- Utilization of an EMS to deliver beyond-compliance long-range performance;
- Reliance upon an EMS with specific, CDPHE-approved, performance improvement goals that will serve to increase environmental performance through continual environmental improvement;
- Continuation of a selective policy that offers rewards and incentives to strong performers who have used or want to add an EMS to their environmental management approach;
- Consideration of cross-media impacts when making environmental decisions; and
- Identification of ways to have the regulated organizations' EMS efforts replace some of the government's environmental regulatory functions, including: inspections through external third-party audits; minor permit modifications through the EMS tracking system; as well as reporting through the EMS data collection, problem identification, root cause analysis, and system modification processes.

¹ EMS Permit Program Regulation 1.2.3.

² Colorado's Environmental Management System Permit Project, CDPHE, March 2003, p. 2.

Additionally, the EMS permit program serves as an incentive for top-level environmental performing companies in Colorado. In addition to encouraging companies to create alternative methods for minimizing pollution, the EMS permit program includes reporting a baseline status of each entity, as well as updates on progress.

The EMS permit program also allows businesses more flexibility to design an environmental plan that mitigates both regulated and unregulated pollutants, including cross-media impacts. Under the current system, there are no incentive-based elements that could potentially inspire environmental improvements beyond what the existing permits require. An EMS, however, utilizes a systematic approach that identifies, prioritizes, manages, mitigates and documents the environmental impact a facility generates.

Businesses participating in the EMS permit program are subject to annual external audits. Annual audits are performed by CDPHE staff or by independent certified contractors. EMS permit program participants are typically audited less frequently than companies that do not have a program in place. EMS permit program participants are audited less because they are committed to designing and implementing an effective environmental mitigation system. A relaxed audit schedule enables a company to police its EMS plan from within, thereby providing opportunities for revisions to the EMS plan if and when necessary. However, CDPHE retains its enforcement authority and continues to respond to complaints as well as maintain the authority to conduct inspections. Focusing less on EMS permit program participants allows CDPHE staff to apply its limited resources on companies that need additional assistance with environmental compliance.

The EMS permit program allows individual companies to design strategies that include complying with existing permit requirements and encourages and mandates continuous improvement above minimum permit requirements.

Performance measures within the EMS permit program include:³

- 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)]);

³ "Colorado's Environmental Management System Permit Project", CDPHE, March 2003, p. 15.

-
- 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 and environmental cost accounting for the financial benefits; and
 - 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).

Furthermore, the EMS permit program enables companies to view and implement strategies to address cross-media impacts. Currently, facilities within Colorado must adhere to the single-medium laws; that is, facilities must obtain one permit for each medium source (i.e., water, air and waste). Under the current system, it is difficult to address the cross-media impacts and ultimately mitigate environmental pollutants on a holistic level. A single-medium approach, oftentimes, simply shifts pollution from one media source to another.

The current generation of environmental protection mechanisms is organized by the individual medium pollution sources. Through this single medium structure, regulation depends on a command and control model that issues individual permits for each medium source. Compliance through command and control is ensured by inspection and enforcement by federal, state or local agencies. The permits dictate how much a company can pollute in each medium. If a company exceeds its permit limitations, it is subject to fines and other forms of discipline from the aforementioned entities. Disciplinary action may include written warnings, sanctions or fines. Unlike the EMS permit program, the command and control model may not necessarily encourage innovation in proactively looking for ways to reduce pollution.

An EMS fosters a systematic approach that utilizes a framework that identifies problems, prioritizes issues, creates a plan to mitigate environmental issues, implements the plan, continually monitors progress, enables modifications to ensure maximum performance and documents and reports progress.

History of Regulation

The Colorado EMS permit program, created by House Bill 04-1147, was enacted in 2004. The purpose of the bill was to create a program that provided flexibility to businesses that demonstrated superior environmental performance, while potentially reducing oversight for companies participating in the program. The basis for creating an EMS permit program is to allow market forces to work to determine the best approach for environmental performance, thereby enabling regulators to focus on entities that are not performing responsibly.

The EMS permit program enables businesses to develop and implement environmental programs that foster innovative solutions and approaches in mitigating pollution. Top performing businesses were encouraged to participate in the EMS permit program and create their own strategies to meet and exceed current environmental standards.

Legal Framework

The environmental management system (EMS) permit program is created in section 25-6.6-101, *et seq.*, Colorado Revised Statutes (C.R.S)(Act). The Act outlines the statutory requirements implementing the EMS permit program. Specifically, the Act directs the Executive Director of the Colorado Department of Public Health and Environment (CDPHE) to promulgate rules that a facility shall meet in order to be considered for participation in the EMS permit program.

The facilities must possess the following as minimum criteria for participation:⁴

- An identified, established number of years without serious environmental noncompliance;
- An identified number of years without any environmental criminal noncompliance; and
- A demonstration that the participating entity is an environmental leader in Colorado.

Additionally, by rule, the criteria that facilities must adhere to in order to participate in the EMS permit program are further defined. The rules state that for a company to be considered for entry into the EMS permit program, the company must demonstrate a three-year record without serious environmental civil noncompliance, and five years with no criminal violations.⁵

The Act also provides facilities choosing to participate in the EMS permit program flexibility to implement the most effective pollution prevention strategies, source reduction and pollution reduction methods.⁶

Further, a Community Involvement Communication Plan (CICP) is required by all facilities participating in the EMS permit program. The CICP encourages facilities to establish relationships and seek input from the surrounding community regarding pollution mitigation. The CICP also serves as an educational tool for the community concerning the function of the facility and the pollutants which it emits. Community members are encouraged to participate in a facility's CICP and share their input concerning possible pollution mitigation strategies.

⁴ § 25-6.6-104(4), C.R.S.

⁵ EMS Permit Program Regulation 12.4.2.

⁶ § 25-6.6-102(1)(c), C.R.S.

The Act facilitates the consolidation of existing permits (air, water, solid waste, etc.), thereby consolidating several permits to a single permit.⁷ Facilities are still responsible for applying for renewal of conventional permits, modifying or amending the aforementioned permits, as well as paying all applicable fees.

Additionally, EMS Permit Program Regulation 8.1.1 outlines the conformance audit requirements for facilities. The requirements are as follows:

- An EMS conformance audit is conducted at least every two years;
- A conformance audit is conducted by an EMS auditor;
- A conformance audit ensures, at a minimum, that the EMS meets the criteria for an EMS established by the CDPHE;
- A conformance audit report must be maintained on-site and made available for CDPHE and local agency review upon request;
- An electronic summary of the EMS conformance audit results, signed by an EMS auditor, describing conformance, nonconformance, or any major nonconformance issues within the EMS must be on-site; and
- CDPHE or the local government may request access to the EMS auditor's documentation of findings when making the determination regarding the eligibility of a facility, the potential loss of eligibility or the change in ownership of the facility.

Facilities participating in the EMS permit program must also comply with various environmental compliance audit requirements. The environmental compliance audit requirements for facilities are as follows:

- An environmental compliance audit is conducted every two years by a date specified within the EMS permit;
- An audit must be completed by a compliance auditor;
- A copy of the compliance audit must remain on-site and the facility must submit an electronic summary of the compliance audit results to the CDPHE and local agency; and
- A summary of any noncompliance issues that provides objective evidence, describes corrective action plans to rectify the issues and details follow-up audit activity planned by the facility.

⁷ § 25-6.6-102(1)(f), C.R.S.

Finally, the Act also requires facilities to commit to measurable environmental benefits and continual environmental improvement.⁸ Facilities, in accordance with the EMS permit program, continually evaluate their EMS permits, looking for strategies to mitigate waste, thereby improving performance and environmental quality.

⁸ § 25-6.6-104(3)(f), C.R.S.

Program Description and Administration

Colorado's environmental management system (EMS) permit program offers whole-facility permits. Initially, five facilities were chosen by the Colorado Department of Public Health and Environment (CDPHE) to participate in the EMS permit program. One of the facilities chose not to continue because the owners of the facility felt that the reporting requirements were too burdensome. The remaining four facilities from various sectors and trades across the state participated in the three-year EMS permit program.

Additionally, the CDPHE received a \$150,000-grant from the U.S. Environmental Protection Agency to implement and administer the EMS permit program. Approximately \$13,400 was used for general operating expenses related to the EMS permit program. More than \$50,000 was allocated for personal services expenses, and approximately \$22,000 was spent.

Additionally, although \$73,600 was earmarked for contractual services, approximately \$65,600 was spent on such services to complete both the baseline assessments of the participating facilities and the follow-up reports. Finally, approximately \$12,400 was allocated for indirect services in support of the EMS permit program. As of August 31, 2006, \$7,163 had been spent on indirect services by the CDPHE. The CDPHE has more than \$41,400 remaining in unspent grant funds. The CDPHE anticipates using the remaining project budget prior to the end of the project period which is scheduled to end on June 30, 2007.

The CDPHE did not allocate any new employees for implementation and administration of the program; existing staff assumed the responsibilities for activities related to implementing and administering the EMS permit program.

In order to participate in Colorado's EMS permit program, a facility must meet the requirements of a gold level member in the Colorado Environmental Leadership Program (ELP). The ELP is a voluntary program established by the CDPHE that encourages and rewards entities that exceed traditional environmental regulations. All Colorado businesses, industries, offices, educational institutions, municipalities, government agencies, community, not-for-profit and other organizations are eligible to participate in the program. Currently, the program includes three tiers: gold, silver and bronze. A platinum tier is currently in the developmental stage.

Gold level compliance-related eligibility requirements include:⁹

- No serious violations of applicable local, state or federal environmental laws and permits for a period of three years;
- No conviction of environmental laws or out-of-court settlements of formal charges of criminal violations within a five-year period; and
- No settlement agreement has been entered into and no compliance or consent order has been issued for serious violations of environmental laws and permits for three years prior to the date of submission of the application for participation in the program.

Also, at the time of application, any facility that applied for the program and is part of a corporation, partnership, sole proprietorship, municipality, county, city and county, special district, or state or federal agency or department that has other Colorado facilities may not be eligible for the program unless all of the said Colorado facilities are in compliance with applicable local, state and federal environmental laws and regulations. This provision is looked at on a case-by-case basis.

Silver level compliance-related eligibility requirements include:¹⁰

- No serious violations of applicable local, state or federal environmental laws and permits for a period of one year;
- No conviction of environmental laws or out-of-court settlements of formal charges of criminal violations within a two-year period; and
- No settlement agreement has been entered into and no compliance or consent order has been issued for serious violations of environmental laws and permits for a one-year period prior to the date of submission of the application for participation in the program.

Also, at the time of application, any facility that applied for the program and is part of a corporation, partnership, sole proprietorship, municipality, county, city and county, special district, or state of federal agency or department that has other Colorado facilities may not be eligible for the program unless all of the said Colorado facilities are in compliance with applicable local, state and federal environmental laws and regulations. This provision is looked at on a case-by-case basis.

⁹ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 16.

¹⁰ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 16.

Bronze level compliance-related eligibility requirements include:¹¹

- No serious violations of applicable local, state and federal environmental laws and permits for a period of one year;
- No conviction of environmental laws or out-of-court settlements of formal charges of criminal violations within a two-year period; and
- No settlement agreement has been entered into and no compliance or consent order has been issued for serious violations of environmental laws and permits for one year prior to the date of submission of the application for participation in the program.

EMS Permit Requirements

In Colorado, a variety of elements are required to participate in the EMS permit program.

Facilities participating in the EMS permit program must establish an environmental policy statement. The environmental policy statement demonstrates a commitment to environmental management through the establishment of guiding principles. The environmental policy statement includes a commitment to the following:

- Continual environmental improvement;
- Pollution prevention and reduction;
- Compliance with applicable environmental laws and regulations; and
- Communication with employees and the general public.

Facilities are also required to outline legal and other requirements within an EMS permit. An EMS permit should include all the current legal requirements, including federal, state and local applicable permits and regulations. These requirements are included in the EMS because although an EMS permit offers facilities operational flexibility regarding the implementation of a whole-facility permit, facilities are still required to remain in compliance with underlying permits and regulations.

¹¹ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 16.

One of the purposes of an EMS is to identify and prioritize environmental aspects and impacts. From the aspects and impact exercise, a comprehensive list of environmental impacts is developed in order to recognize the most significant elements among the list of environmental impacts. A facility then implements procedures in the EMS to identify both positive and negative, actual or potential, environmental impacts. The facility ensures that the impacts and opportunities for environmental improvement are considered when determining significance, as well as when setting environmental objective(s).

Facilities must also develop criteria to determine the significance of each environmental impact. The identification of significant impacts is used to develop various elements within an EMS. Various elements include:

- Establishing environmental objectives and targets;
- Developing and establishing operational procedures;
- Implementing EMS training for employees; and
- Creating monitoring and measuring programs.

Also, facilities are required to develop objectives and targets to address environmental impacts. Objectives and targets are used to address environmental impacts in a systematic fashion. Targets are detailed performance requirements that support a specific objective. Each objective should be realistic, achievable and measurable. For example, a facility may choose to include reducing air pollution by a specific amount, and as a result, under an EMS permit program, it would be required to document how much of a decrease in pollution (target) the facility would like to achieve. Also, the facility would be required to measure and report the actual decrease in air pollution, if any.

Since Colorado requires an EMS to adhere to continual improvement, the establishment of environmental improvement goals is essential. An EMS permit program sets continual environmental improvement goals. Continual improvement goals should promote the following:¹²

- Elimination or reduction of waste at the source of generation;
- Redirection of wastestreams for reuse or for substitution of commercial products;
- Environmentally sound on-site and off-site recycling programs; and
- Compliance activities and programs that exceed minimum standards.

¹² The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 18.

Additional goals might include sponsoring or attending environmental workshops, establishing pollution prevention strategies with suppliers, or drafting pollution prevention strategies and submitting them for publication or dissemination through the CDPHE. The commitment to continual improvement mirrors the significant environmental aspects identified in the EMS. Also, environmental improvement goals may address local environmental priorities and pollution mitigation opportunities.

Also, facilities must establish an environmental management program action plan. The EMS action plan is used to achieve compliance and meet objectives and targets. A detailed action plan identifies and defines the appropriate steps to achieve each stated target and objective. Furthermore, the action plan outlines who is responsible for meeting the target, the timeline for achieving milestones and a specific target date for completion.

Participating facilities must define the structure and responsibility of the EMS program. That is, facilities must define and document personnel responsible for implementing an EMS, while ensuring its operation and action plan are functioning and producing beneficial environmental results.

Within the EMS guidelines, facilities are required to establish and maintain measurable metrics and/or goals. Establishing and maintaining specific metrics and/or goals enables participating facilities to monitor progress toward achieving and obtaining goals. The outcomes must be measurable as well as linked to the environmental policy, objectives and targets. Examples of measurable goals include reductions in the quantity of:

- Air pollution;
- Water pollution;
- Hazardous and solid waste; and
- Water and energy use.

To ensure the success of an EMS permit program, facilities must establish a training and awareness program for employees. Training is essential for employees when implementing an EMS program. Employees, and often suppliers, are trained on the elements of the EMS. Training includes information on the environmental policy, the significant environmental aspects of their activities and related work instructions, objectives and targets, their EMS roles and responsibilities, the emergency action plan and other pertinent information related to the EMS.¹³

¹³ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 20.

Communication, both internal and external, is essential for the success of an EMS. Communication plans outline procedures for identifying and responding to concerns within the community, proactively communicating with the surrounding community regarding important environmental information, including providing information on pollution generated by the facility that may potentially effect or have an impact on the community. Communication plans also provide opportunities to promote community awareness, address community concerns, and encourage community input into the facility's EMS permit.

The development of an EMS manual that is accessible to all employees within a facility is an important element of an effective EMS. There are two EMS documentation elements within an EMS: an EMS manual and written procedures. Documentation can be maintained either in paper or electronic format. The development of a manual ensures that participating entities create and maintain the appropriate documentation. The purpose of having a manual is to detail the overall structure of the EMS, while ensuring the EMS is understood and operating as designed. EMS procedures should be referenced in the manual, but for clarity and consistency, a separate document should be established containing relevant procedures. Commonly, a document hierarchy is established. The document hierarchy, in descending order, is as follows:

1. Policy;
2. EMS manual;
3. Procedures;
4. Work instructions; and
5. Records.

Facilities are required to establish a document control process to track progress and improvements. Tracking progress and improvements is an important component within an EMS. An effective EMS should contain a master EMS document that tracks progress and improvement. The master document should be updated periodically and obsolete documents should be removed; however, removed documents should be retained for legal or historical record keeping purposes.

Finally, facilities must outline specific procedures to conduct self-initiated audits. An EMS should undergo annual audits to identify any inconsistencies between the EMS requirements and the actual practices and measurements. An audit is an important component of an EMS because it can determine whether an EMS is properly maintained and implemented. Audits also assist in identifying and resolving deficiencies and are used to assess regulatory compliance. Annual audits should include:¹⁴

- Audit procedures and protocols that are specific to a company and its operations;
- A schedule of appropriate frequency of audits;
- Auditor training; and
- Appropriate audit records.

EMS Permit Issuance Process

There are a variety of steps a facility must complete prior to receiving an EMS permit in Colorado. A flowchart outlining the process is included in this report in Appendix B on page 34.

The first step in obtaining an EMS permit in Colorado is for representatives of a facility to attend a pre-application meeting with CDPHE staff. Although not required, the pre-application meeting covers a variety of topics, including the information, plans, specifications, and the data required to be submitted with the EMS permit application. CDPHE staff also advises prospective facilities on the overall EMS program and the required Community Involvement Communication Plan (CICP). All of the facilities participating in the EMS permit program attended a pre-application meeting.

Additionally, facilities requesting an EMS permit in Colorado must submit a formal application to the CDPHE. The CDPHE and local agency (if applicable) will ensure that the application for an EMS permit is also an application for modification to the conventional environmental permits. Because an EMS permit is a whole-facility permit, if the facility achieves approval from CDPHE, the facility operates under the EMS permit, and existing permits are incorporated into the EMS permit.

¹⁴ The Colorado Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 21.

A compliance certification must be submitted with the application and must include:¹⁵

- All applicable environmental requirements and a statement of methods used for determining compliance; and
- A statement indicating the facility's compliance status with any applicable compliance plan schedule.

Upon submitting an EMS permit application, the CDPHE conducts a review of the application and determines whether any modifications are needed. If modifications are warranted, there are two processes: minor modification and major modification. Modifications are defined as minor if the modification is considered under the conventional permit program. Minor modifications do not involve significant changes to existing monitoring, reporting, or record keeping elements of an EMS permit.

Major modifications are used for all permit modifications not considered to be minor modifications. Prior to a major modification, the CDPHE must provide official notice to the general public, community members outlined in the CICP and the facility's Public Advisory Group (PAG). A PAG is created by the facility and is comprised of a group of volunteers that serve as an advisory group to the facility regarding the EMS permit. Each PAG creates its own meeting schedule, protocols and procedures.

Additionally, if a new EMS permit is requested, the CDPHE, in concert with the local agency (if applicable), determines the facility's eligibility with input from the United States Environmental Protection Agency.

Upon working with the aforementioned agencies, the CDPHE conducts a completeness determination, whereby the CDPHE or the local agency could request additional information prior to issuing a complete EMS permit to a facility. The purpose of a completeness determination is to establish a timeline for determining completeness of an EMS permit application. As a result, the CDPHE will not take longer than 30 days to determine the eligibility of an EMS permit.

When the completeness determination is concluded, the CDPHE and local agency (if applicable) prepares a preliminary analysis, equivalency determination and drafts the EMS permit. The equivalency determination is conducted to ensure that the participating facility will not exceed any applicable ambient air quality standards, radiation controls or water standards, in addition to demonstrating compliance with federal laws and regulations.¹⁶

¹⁵ EMS Permit Program Regulation 3.3.

¹⁶ EMS Permit Program Regulation 4.2.1.

Within 15 calendar days of completing the preliminary analysis, equivalency determination and the draft EMS permit, the CDPHE provides the following notices:

- A notice for public comment hearing to the applicant;
- A notice to the CICP and the PAG; and
- A draft of the EMS permit and equivalency is posted on the CDPHE website.

If any member of the public requests a hearing on the EMS permit, this request must be submitted in writing to the CDPHE. All requests for public comment must be submitted to the CDPHE within 30 days of publication of the notice. The CDPHE may hold a public comment hearing within 60 days of receipt of the request.

Finally, the CDPHE and local agency (if applicable) may issue an EMS permit with a determination that the compliance with the EMS permit is equivalent to compliance with any conventional environmental permit held by the facility.

Permit Process After Issuance

There are a number of elements included in the permit process after issuance. A detailed flowchart can be found in Appendix C on page 35.

During the time a facility operates under an EMS permit, all existing conventional permits are incorporated into the EMS permit. Although incorporated into the EMS permit, during the pilot project, facilities were required to adhere to the existing requirements outlined within each conventional permit.

Additionally, prior to issuance of the EMS permit, a facility is required to complete an EMS conformance audit, which ensures that the EMS meets the requirements for an EMS established by the CDPHE. After the EMS permit is issued, a conformance audit must be conducted every two years by an independent EMS auditor, and the facility must maintain, on-site, an electronic summary of the EMS conformance audit results describing conformance, minor nonconformance, or any other major nonconformance found.

A facility is also required to complete a compliance audit. A compliance audit is a systematic evaluation, review or assessment of compliance with the EMS permit, and is completed every two years by an independent environmental compliance auditor. Results of the compliance audit are posted on the CDPHE website for public review.

If serious noncompliance issues are discovered, the summary of the compliance audit outlines corrective action planned by the facility including compliance dates as well as follow-up audit activity to ensure compliance by the participating facility.

Upon completion of the conformance and compliance audits, a facility's EMS permit is implemented. The facility is required to comply with all of the elements outlined in the EMS permit.

Furthermore, a facility's EMS permit may be revoked by the CDPHE for noncompliance with existing guidelines outlined within the EMS, if the facility is in serious civil noncompliance with the EMS permit or applicable law(s), or the facility does not wish to comply or has shown a significant lack of progress in meeting continual environment improvement goals and targets.

If a facility wishes to cancel its EMS permit, the CDPHE will issue a revocation order, which includes the following:¹⁷

- A compliance schedule to facilitate transition from the EMS permit to the conventional permits, not to exceed one year in duration, if operational flexibility is eliminated from the facility's conventional permits or a conventional permit has not been obtained, and the CDPHE and local agency determine that a compliance schedule is necessary to provide the facility a reasonable amount of time to either conform with the conventional environmental permits in effect at the time of revocation of the EMS permit or to obtain the necessary conventional environmental permits; and
- Practical interim requirements to replace any requirements of the EMS permit that the CDPHE and local agency determine the facility will not be able to comply with during the duration of the compliance schedule, provided that such interim requirements shall not allow pollution from the facility in excess of that allowed by applicable law at the time the EMS permit is proposed to be revoked.

¹⁷ EMS Permit Program Regulation 5.4.4.

Analysis and Recommendations

Recommendation 1 – Continue the Environmental Management System Permit Program for 11 years, until July 1, 2018.

The first sunset criterion asks whether regulation is necessary to protect the public health, safety and welfare. The Environmental Management System (EMS) permit program was implemented in Colorado in 2003, and was designed to encourage companies from various sectors to participate and access opportunities designed to reduce pollution. The main criterion required for entrance into the program stipulated that facilities achieved minimum standards that mirrored gold level members in the Colorado Environmental Leadership Program (ELP). Participating facilities within the EMS permit program experienced success in further mitigating pollution. Extending the EMS permit program until July 1, 2018, has the potential to provide increased environmental benefits throughout Colorado.

Five facilities were invited to participate at the EMS permit program's inception. One facility, a concentrated animal feeding operation (CAFO) elected to withdraw from the EMS permit program. The CAFO expressed concerns regarding the reporting requirements and the community participation portion for the EMS permit program. The CAFO did not believe that the EMS permit program was appropriate for the facility; therefore, it chose to discontinue its participation in the EMS permit program.

Four facilities remain in the EMS permit program. The four facilities participating include: two agricultural facilities (one CAFO facility, one housed commercial swine feeding operation (HCSFO)) and two industrial facilities. While participating in the EMS permit program, the facilities are responsible for maintaining compliance with existing permits.

Facilities submitted EMS permit applications to the CDPHE outlining their respective EMS permit information, including continuous improvement projects. Because of the short duration of the EMS permit program, facilities chose not to include projects that would involve large capital expenditures that may have improved environmental performance.

Each facility met with its respective Public Advisory Group (PAG) to discuss the EMS permit, including continual improvement projects outlined in the EMS permit application. Each PAG provided input and informally approved the improvement projects prior to the formal submission of the EMS permit program application to the Colorado Department of Public Health and Environment (CDPHE).

The CAFO and HCSFO facilities are not members of the ELP; however, both are recognized by the CDPHE as environmental leaders and have no serious prior environmental compliance violations. The industrial facilities are gold level members of the ELP. The CDPHE encouraged the aforementioned facilities to participate in the EMS permit program.

A baseline audit was completed on all four participating facilities by EnviroGroup Limited, a full service environmental consulting firm. The intent of the baseline assessment was to determine the environmental footprint of each facility and to gather baseline data related to environmental impacts.¹⁸

A follow-up assessment was conducted in August 2006 to analyze the environmental performance of the participating facilities.

Agricultural Facility Participants

The CAFO facility operates a feedyard (a beef cattle feeding operation), and has a confinement capacity of up to 22,000 head of feeder cattle. The facility occupies approximately 2,100 acres; 90 acres are utilized for the cattle feeding operations. The facility is recognized as an environmental leader in Colorado and is committed to continual improvement that will enhance environmental performance.

The feedyard outlined a variety of continual improvement projects within its EMS permit program application, including:

- Wastewater management;
- Mortality management;
- Recycling;
- Universal waste;
- Noxious weeds management;
- Dust control;
- Odor reduction;
- Water usage;
- Energy usage;
- Stormwater; and
- Fuel management.

¹⁸ EMS Permit Pilot Project Follow-up Environmental Assessment Murphy-Brown of Yuma. (August 2006), p. 1. Prepared by EnviroGroup Limited.

The facility utilizes two lagoons for the storage of its wastewater from the cattle confinement area. The facility implemented a plan to improve its wastewater management practices by adding concrete to the inlets that extend from the confinement area to the lagoons. The concrete was added to minimize erosion from the inlet flows. Adding the concrete to minimize erosion from the inlet flows reinforces containment of the wastewater generated by the cattle and ensures that the wastewater stays centralized, thereby further protecting the environment.

The facility, through continually searching for ways to improve its environmental performance, began a mortality composting operation as well as grading its manure to create a dry surface for the cattle to use.

The start-up of a mortality composting operation now uses approximately 30 percent of the manure generated at the feedyard and reduces transportation impacts caused by rendering trucks that made daily trips to the feedyard. Other best management practices identified during the follow-up assessment remain in place such as the grading of manure waste to create mounds in the center pen area. This practice creates a dry surface for cattle to use, promotes positive runoff, reduces the generation of fugitive dust, allows pen surfaces to dry quicker and prevents ponding of surface runoff...Manure removed from the pens is either stockpiled for on-site composting or given to local farmers for fertilizer.¹⁹

Additionally, new recycling programs targeting light bulbs and batteries have been implemented at the facility since the inception of the EMS permit program. The follow-up assessment did not quantify the number of florescent light bulbs recycled; however, the follow-up assessment did state that the facility, in 2005, recycled 17 pounds of used batteries. In 2006, the facility increased its recycling efforts by recycling 25 pounds of batteries.

Controlling noxious weeds was another continual improvement project the facility chose to address. The facility looked for alternative resources to control weeds on its property other than the use of herbicides. In 2005, the facility began a test program using goats to control noxious weeds on dry land pasture. The goat project is in its second year and is exceeding expectations.²⁰

¹⁹ EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 8. Prepared by EnviroGroup Limited.

²⁰ EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 11. Prepared by EnviroGroup Limited.

The facility has also implemented several dust control strategies in order to mitigate dust generation. Dust control strategies include:²¹

- Maintaining feed alleys by adding road base;
- Applying water to suppress dust during feeding operations; and
- Periodically scraping pens, and encouraging vegetation growth on barren ground to reduce wind erosion.

Although the facility's overall water consumption increased between the baseline assessment and the follow-up assessment, the increase can be explained by the fact that feedmill operations were added to the county water system in late 2004.²²

In an effort to mitigate water consumption, the facility installed new temperature sensing devices on cattle watering tanks that prevent water from overflowing unless temperatures approach freezing.²³ As a result, the facility expects to significantly reduce its water consumption related to watering operations in the future.

The facility is currently in the process of addressing a possible ephemeral stream that may run through the site. A survey of the site has been completed and discussions are underway to begin examining the ephemeral stream and its potential impacts related to stormwater management.

Further, the facility's primary resource to provide heat to various buildings is propane. Propane usage during the baseline assessment and the follow-up assessment remained virtually the same. The facility used 10,830 gallons of propane in 2004 and 10,780 gallons in 2005. However, the amount of pollution emitted into the air is not significant enough to warrant an air permit from the CDPHE.

The facility has two 1,000-gallon above ground fuel storage tanks.²⁴ One of the storage tanks stores diesel fuel and the other stores gasoline. The facility did show improvement (although modest) in decreasing its consumption of diesel fuel and gasoline. The more recognizable improvement was the implementation of a Spill Prevention Containment and Countermeasures (SPCC) Plan. The SPCC Plan outlines procedures for containing a spill and best practices for preventing fuel spills.

²¹ EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 10. Prepared by EnviroGroup Limited.

²² EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 8. Prepared by EnviroGroup Limited.

²³ EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 15. Prepared by EnviroGroup Limited.

²⁴ EMS Permit Pilot Project Follow-up Environmental Assessment Magnum Feedyard, LLC. (August 2006), p. 7. Prepared by EnviroGroup Limited.

The facility's participation in the EMS permit program strengthened its environmental performance because the facility was encouraged to focus on continual improvement projects. The follow-up assessment, completed by EnviroGroup Limited, highlights several continual improvement projects initiated and implemented by the facility. The EMS permit program was instrumental to the facility's success in increasing its environmental performance.

While participating in the EMS permit program, the feedyard did not experience any significant decreases in usage in the following areas:

- Energy;
- Propane;
- Gasoline;
- Diesel fuel; and
- County water.

However, the facility operates within acceptable usage levels and does not require a permit for the aforementioned areas. Although the follow-up report, which was completed by EnviroGroup Limited in August 2006, does not illustrate significant improvement in performance in these areas, the facility nevertheless targeted the areas in addition to several other elements of its operation in its continual improvement goals. The data outlined in the EnviroGroup Limited follow-up assessment report provides information for two years, 2004 and 2005.

Although the data does not necessarily reflect improved environmental performance, it is important to note that less than two years elapsed since the baseline assessment was completed. In order to determine whether the EMS permit program was beneficial to the facility and environment, a longer period of time is necessary to suitably yield longitudinal data regarding each facility's performance.

The HCSFO facility is a commercial swine feeding operation, which is permitted for 39,682 hogs and typically markets 210,000 commercial swine annually.²⁵ The facility has a number of operations, including:

- Breeding;
- Birthing;
- Nurseries;
- Feeder barns;

²⁵ EMS Permit Project Follow-up Environmental Assessment Murphy-Brown Yuma. (August 2006), p. 2. Prepared by EnviroGroup Limited.

-
- Boar farm; and
 - Feedmill.

The HCSFO facility is required to obtain both a Permit to Operate and a Colorado Discharge Permit. Both permits are required for facilities that have the capacity to house more than 800,000 pounds of swine. The Permit to Operate outlines the odor compliance regulations for a HCSFO. For example, under a Permit to Operate, a HCSFO must comply with property line and receptor odor standards within the facility's Odor Management Plan. The Odor Management Plan includes information on the location and processes to minimize odor to the greatest extent practicable across all operations (compost areas, inside of confinement structures, manure storage and collection areas, management practices and odor controls, etc.). The HCSFO facility is in compliance with the Permit to Operate. Also, the facility has not received any odor related complaints in the last several years.²⁶

The Colorado Discharge Permit requires HCSFO facilities to provide the following plans to the CDPHE:

- Swine waste management;
- Operations;
- Financial assurance; and
- Construction.

The Colorado Discharge Permit also requires HCSFO facilities to submit quarterly reports to the CDPHE to verify compliance with the permit. The HCSFO facility participating in the EMS permit program is a responsible industry leader in Colorado and has not received any violations in the last several years.

In addition to the aforementioned permits, the HCSFO facility agreed to participate in the EMS permit program. The HCSFO facility identified several continual improvement projects to address, while maintaining current levels of environmental performance on its existing permits. Continual environmental improvement projects include:

- Develop lagoon erosion plan;
- Develop pull plug retrofit plan; and
- Develop feedmill SPCC plan.

²⁶ EMS Permit Project Follow-up Environmental Assessment Murphy-Brown Yuma. (August 2006), p. 10. Prepared by EnviroGroup Limited.

All of the pigs at the facilities are housed in barns. The facility operates a two-lagoon system that collects waste and wastewater from manure pits inside the barns. An aerobic layer is maintained on its lagoons, which serves as a biological cap that reduces odor. The facility recently embarked on an aggressive project to de-sludge lagoons, and is working on redesigning and improving some of its larger process lagoons.²⁷ The process will improve the life of the ponds and provide greater odor control. Erosion control is an important component for maintaining and extending the life of a waste lagoon. As a result, the facility has recently begun lining the shoreline with a plastic liner and recycled concrete to reinforce the lagoon banks.

The facility developed a pull plug retrofit plan to ensure that each cellar, which collects pig waste, has a functioning pull plug. All of the barns at the facility have gravity fed pull plug flush systems with the exception of the nursery and the sow barn, which both use flush tanks to remove waste from barn cellars.²⁸ The waste flows through pipes, via gravity, to the lagoons. With the exception of the nursery, the facility has completed all of the inspections and replacements of pull plugs. The facility's goal is to complete the nursery in the near future.

The facility has three above ground storage tanks, designed to store gasoline, diesel fuel and fats and oil used at the feedmill. The facility is currently working to develop a Spill Prevention Containment and Countermeasures (SPCC) plan, which outlines procedures for containing spills as well as best practices for preventing spills. The SPCC plan has not been completed by the facility; however, the facility anticipates completing the SPCC plan in the near future.

In addition to the environmental improvement projects outlined in the EMS permit application submitted to the CDPHE, the facility also addressed a host of additional projects, as described in the remainder of this section.

For example, the facility implemented a training program for employees highlighting the importance of an EMS and its relation to environmental performance. All employees of the facility are required to attend EMS training.

The facility also maintains a "red book" that outlines company policies, checklists and procedures for operations; the red book is accessible to all employees in English or Spanish.

²⁷ EMS Permit Project Follow-up Environmental Assessment Murphy-Brown Yuma. (August 2006), p. 6. Prepared by EnviroGroup Limited.

²⁸ EMS Permit Project Follow-up Environmental Assessment Murphy-Brown Yuma (August 2006), p. 5. Prepared by EnviroGroup Limited.

The facility has begun composting its mortalities at a local composting operation rather than shipping them offsite to a rendering facility.²⁹ This new process reduced operating costs, reduced impacts from transportation, and offers a more environmentally neutral means of managing mortality waste.

Additionally, the facility experienced a 23 percent increase in propane usage between 2004 and 2005. To address the issue, the facility has begun installing additional ventilation fans that will circulate the air within the barns more efficiently. Also, the facility has committed to purchasing new controllers for the barns. This will enable staff to more accurately monitor and regulate air temperature. The facility is adding additional training on the proper usage, as well as the importance of the proper regulation of the barns, both for the health of the pigs and the overall cost of heating the barns.

The facility believes that implementing additional fans, installing new controllers and properly training employees at the facility will result in a substantial decrease in future use of propane.

The facility has also implemented a system to reduce water consumption. The system includes:³⁰

- Daily checks of drinking water lines to minimize leaks;
- Recycling of lagoon wastewater back into manure pits to reduce the use of groundwater;
- Detailed water balance calculations; and
- General on-going preventative maintenance.

The facility has experienced substantial reduction in water consumption during participation in the EMS permit program. For example, sow water usage decreased during 2004 to 2005 from 10.83 gallons per head to 7.02 gallons per head. The overall gallon decrease, per head, represents a 35 percent savings in sow water usage. Nursery water consumption also decreased during 2004 to 2005, falling from 1.67 to 1.13 gallons per head; the resulting reduction totaled a 32 percent savings.

The facility has remained in good standing with its Permit to Operate and Colorado Discharge Permit while participating in the EMS permit program. The facility's participation in the EMS permit program has generated increases in its overall environmental performance. The facility initiated a variety of environmental improvement projects that assisted in mitigating environmental impacts.

²⁹ EMS Permit Pilot Project Follow-up Environmental Assessment Murphy-Brown of Yuma. (August 2006), p. 9. Prepared by EnviroGroup Limited.

³⁰ EMS Permit Pilot Project Follow-up Environmental Assessment Murphy-Brown of Yuma. (August 2006), p. 14. Prepared by EnviroGroup Limited.

Industry Facility Participants

The first industry facility operates as an electronics manufacturer supplying custom and semi-custom microelectronics to the aerospace and defense industries.³¹ The facility has been a member of the ELP since 2002.

The facility is required to operate under an air permit, issued by the CDPHE, which limits emissions to 16.5 tons annually. While participating in the EMS permit program, the facility maintained a high level of compliance with its air permit by emitting approximately five tons per year. This is well under the emission standards established within the air permit, indicating that the facility continues to maintain a consistently high performance level.

Additionally, the facility has a stormwater permit, issued by the CDPHE. The facility has not received any violations of its stormwater permit, and is not required to comply with any sampling requirements.

The facility has committed to long-range goals, including reducing the amount of waste generated. Specifically, management within the facility has identified and set objectives and targets for the facility, which include five percent reduction in electrical energy usage, solid wastes, reduction of hazardous waste and water usage.

It is important to note that, according to the follow-up assessment completed by EnviroGroup, the specific means to achieve those targets are not formally articulated, documented or communicated to the workforce.

As previously mentioned, the facility established a target of reducing its total energy usage by five percent. Energy consumption at the facility includes electricity and natural gas. According to the follow-up assessment, completed in August 2006 by EnviroGroup Limited, the facility has not decreased its energy consumption during its participation in the EMS permit program. Instead, the facility's energy usage has increased by approximately 1.04 percent from 2003 through 2005. In an effort to achieve the five percent reduction in energy usage goal, the facility, in December 2005, installed more energy efficient ballasts and used more energy efficient "green" florescent tubes. Current information is not available to confirm that the installation of the energy efficient ballasts and tubes have contributed to a decrease in energy usage.

³¹ EMS Permit Pilot Project Follow-up Environmental Assessment Aeorflex. (August 2006), p. 1. Prepared by EnviroGroup Limited.

The commitment by the facility to decrease energy usage includes natural gas consumption. The facility uses natural gas to fuel the boilers at the facility. No changes have been made to increase efficiency, and consumption has risen by approximately 1.03 percent from 2003 to 2005. The facility has committed to decreasing its energy usage by five percent; however, a plan to achieve this goal has not been implemented.

The facility has proactively addressed ways to improve its solid waste management, including both non-hazardous and hazardous waste. In the fall of 2005, three different categories for non-hazardous waste were created. One 30-yard compactor is used for cardboard; one eight-yard bin is used for cafeteria and office waste and smaller bins are provided for paper products.³² EnviroGroup Limited did not provide the amount of solid waste generated or recycled in 2005; therefore it is impossible to determine whether the new practice implemented by the facility was successful.

Although there have not been any changes made to the management practices in the amount of hazardous waste generated, the facility has decreased the amount of waste, by approximately 1.2 percent each year while participating in the EMS permit program.

The total water usage increased 1.2 percent from 2004 to 2005. However, the overall increase belies the fact that the facility has actually saved an average of 2 million to 3 million gallons of water per year. The actual increase in water consumption is attributable to an overall increase in production at the facility.

In addition to the goals outlined in the continual improvement section of the EMS permit program application, the facility has improved its community outreach efforts with the surrounding community. A dialogue has been established with community members to look for ways to improve environmental performance, and an annual meeting schedule has been established to continue the dialogue.

The facility is an environmental leader in Colorado and has committed to continually enhancing its environmental performance by implementing several policies created to achieve systematic increases in environmental outcomes. The facility did not achieve all of its continual improvement goals outlined in the EMS permit program application. However, the facility has demonstrated a commitment to improvement by establishing the goal of a five percent reduction in the aforementioned categories.

³² EMS Permit Pilot Project Follow-up Environmental Assessment Aeroflex (August 2006), p. 6. Prepared by EnviroGroup Limited.

It is important to note that the performance by the facility in the EMS permit program regarding continual improvement projects is limited to a three-year pilot project. In order to achieve an accurate assessment of the facility's performance in the EMS permit program, progress should be tracked over a longer period of time in order to reflect fluctuations in operations. A long-term evaluation of the facility's performance could potentially yield more accurate data regarding performance.

The final facility participating in the EMS permit program provides advanced imaging, communication products, and information solutions to government and commercial aerospace markets.³³

The facility identified three continual improvement projects within its EMS permit application. The three projects are as follows:

- Hazardous materials approval;
- Isopropyl alcohol tank removal; and
- EMS system improvements.

The facility developed a hazardous materials acquisition system to evaluate the purchase or acquisition of hazardous materials. The system was developed to prevent extremely toxic, carcinogenic, banned or other high environmental impact chemicals from entering the facility.

Additionally, the facility has targeted the removal of the isopropyl alcohol tank, and will replace it with refillable intermediate bulk containers (totes). The facility has developed a process for managing the totes, as well as an implementation strategy for proper storage of isopropyl alcohol.

While participating in the EMS permit program, the facility worked to refine its EMS permit through the implementation of policies and strategies to achieve improved environmental performance. The facility implemented a change in its EMS policy to include a commitment to environmental responsibility.

Also, the facility has worked to improve the planning of the EMS by establishing objectives and targets indicating who is responsible for the environmental mitigation task and the means and timeframe for achieving the targets. This process has strengthened and increased the efficiency of the EMS permit program.

The facility's quarterly executive management meetings address the progress of the EMS permit program, and explore solutions to existing problems.

³³ EMS Permit Pilot Project Follow-up Environmental Assessment Ball Aerospace. (August 2006), p. 1. Prepared by EnviroGroup Limited.

In sum, participating facilities were amenable to the program because it provided operational flexibility and encouraged participants to focus on innovative ways to improve their environmental performance. The follow-up assessments, completed by EnviroGroup Limited, indicate that the four facilities experienced increased environmental performance, in various capacities and to varying degrees, while participating in the program. Also, facilities that have existing permits remained in compliance with those permits.

The data collected and presented in the follow-up assessments authored by EnviroGroup Limited may not necessarily reflect significant improvement to the environment due to the fact that less than two years elapsed since the baseline assessment was completed. In order to determine whether the EMS permit program was beneficial to the facility and the environment, a longer period of time is necessary to suitably yield longitudinal data regarding a facility's performance.

Although the program included a relatively small number of participating facilities, a greater level of environmental performance was achieved. Preliminary results from the EMS permit program suggest that extending the EMS permit program would serve the state of Colorado by providing a pollution tool that would provide greater environmental benefits. Participating facilities are amenable to the program because it allows participants operational flexibility to implement environmental strategies that mitigate pollution.

Recommendation 2 – Implement a three-tier system to expand membership in the EMS permit program.

In order to foster an environmental program that could potentially benefit Colorado by mitigating pollution, the EMS permit program should be expanded into a three-tier program that enables an increased number of companies to participate.

The three-tier program would allow Colorado to receive greater environmental benefits by enabling more facilities to participate in the EMS permit program. Additionally, the three-tier program would enable facilities that demonstrate a commitment to continual environmental improvement to participate in the program. The three-tier program would mirror the tiers established within the ELP. The tiers are outlined as follows:

- Platinum;
- Gold; and
- Silver.

The CDPHE is currently developing the requirements for eligibility at the platinum level. The requirements for entry into the platinum level would be higher than the gold level. When the criteria are established, platinum level members will also be eligible to participate in the EMS permit program.

The gold tier, as stated earlier in the report, contains specific milestones a facility must achieve in order to qualify for entry into the ELP's gold tier. The criteria are as follows:³⁴

- No serious violations of applicable local, state or federal environmental laws and permits for a period of three years;
- No conviction of environmental laws or out-of-court settlements of formal charges of criminal violations within a five-year period; and
- No settlement agreement has been entered into and no compliance or consent order has been issued for serious violation of environmental laws and permits for three years prior to the date of submission of the application for participation in the program.

At the time of application, any entity that applies to the EMS permit program and is part of a corporation, partnership, sole proprietorship, municipality, county, city and county, special district, or state or federal agency or department that has other Colorado facilities may not be eligible for the EMS permit program unless all of the said Colorado facilities are in compliance with applicable local, state and federal environmental laws and regulations. This provision is looked at on a case-by-case basis.

The silver tier, which was recently established, allows an entity to develop and work toward implementation of an EMS over a three-year period. Each year in the silver level requires an increase in goal setting and implementation. The ultimate goal is to have a fully functional EMS in place by the third year. Silver members are required to have less time, in terms of compliance, with the aforementioned criteria outlined for gold level membership. The criteria are as follows:³⁵

- No serious violations of applicable local, state or federal environmental laws and permits for a period of one year;
- No conviction of environmental laws or out-of-court settlements of formal charges of criminal violations within a two-year period; and

³⁴ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 16.

³⁵ The Colorado Environmental Leadership Program Handbook. (January 2006) Colorado Environmental Leadership Program, p. 16.

-
- No settlement agreement has been entered into and no compliance or consent order has been issued for serious violations of environmental laws and permits for a one-year prior to the date of submission of the application for participation in the program.

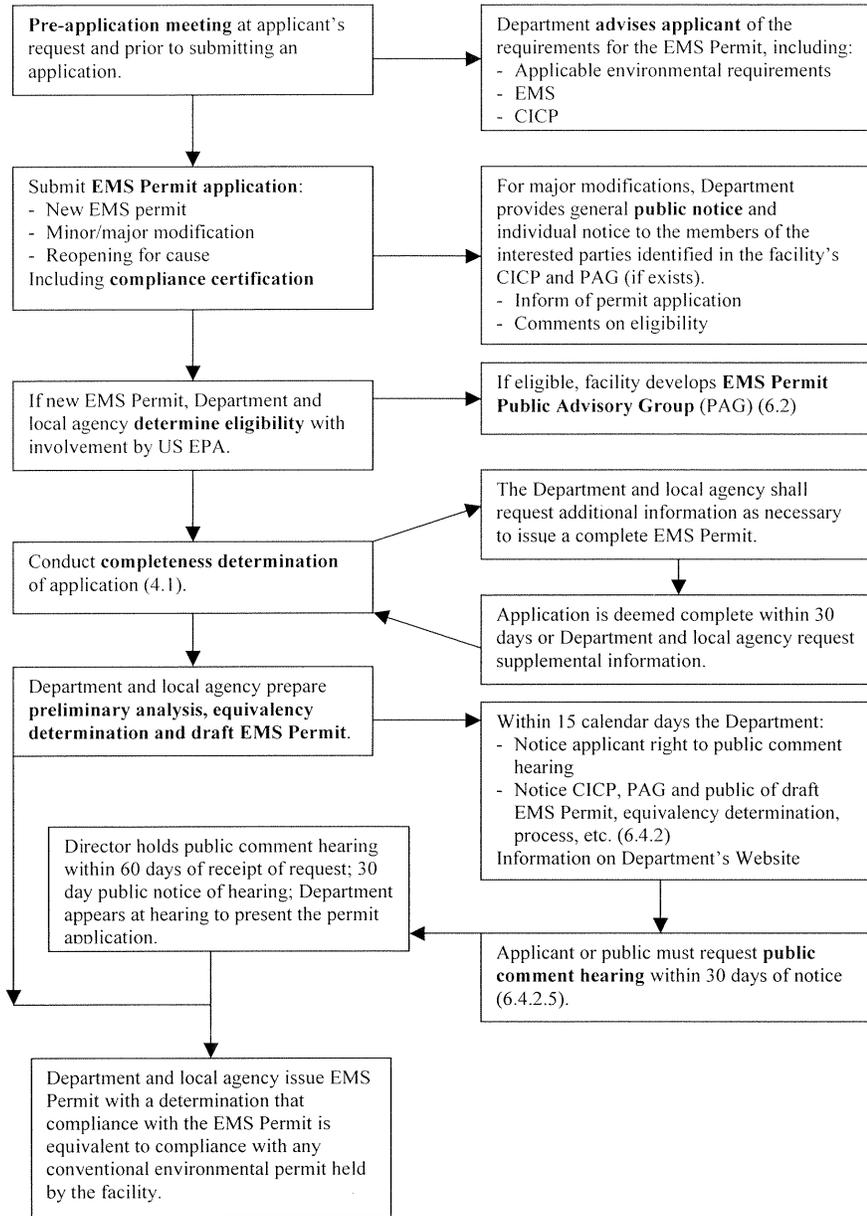
Expanding the EMS permit program will provide enhanced benefits for both the facilities that choose to participate and the environment. Expanding the EMS program to three tiers will enable a variety of facilities to participate, while still maintaining strict guidelines for entrance into the program. Achieving the compliance criteria set forth and allowing more facilities to participate in the program will mitigate pollution in Colorado, and, at the same time, the participating facilities will benefit from the operational flexibility the EMS permit program provides.

Appendix A – Sunset Statutory Evaluation Criteria

- (I) Whether regulation by the agency is necessary to protect the public health, safety and welfare; whether the conditions which led to the initial regulation have changed; and whether other conditions have arisen which would warrant more, less or the same degree of regulation;
- (II) If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms and whether agency rules enhance the public interest and are within the scope of legislative intent;
- (III) Whether the agency operates in the public interest and whether its operation is impeded or enhanced by existing statutes, rules, procedures and practices and any other circumstances, including budgetary, resource and personnel matters;
- (IV) Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- (V) Whether the composition of the agency's board or commission adequately represents the public interest and whether the agency encourages public participation in its decisions rather than participation only by the people it regulates;
- (VI) The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- (VII) Whether complaint, investigation and disciplinary procedures adequately protect the public and whether final dispositions of complaints are in the public interest or self-serving to the profession;
- (VIII) Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action;
- (IX) Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

Appendix B - EMS Permit Process Flowchart

EMS PERMIT PROCESS FLOWCHART Permit Issuance Process

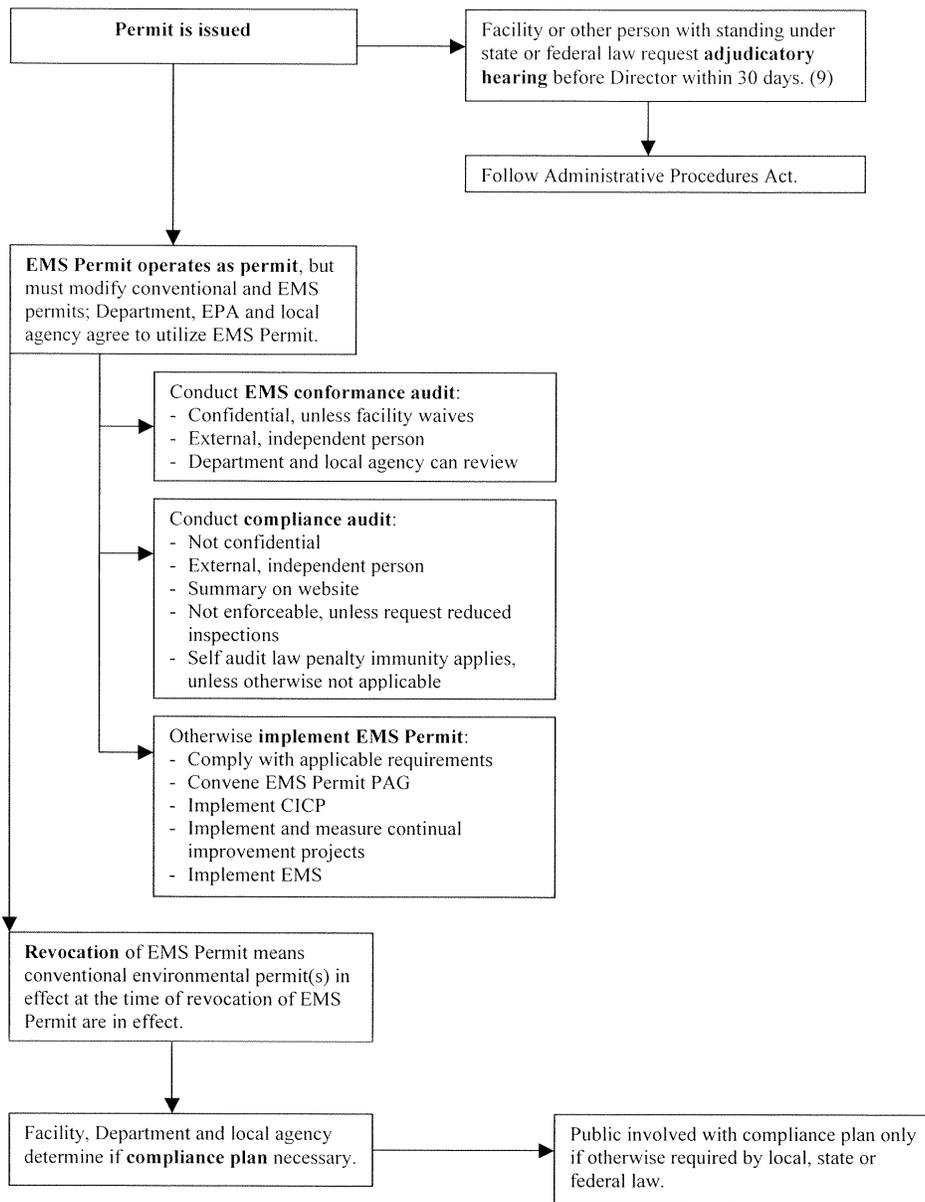


Last Revised: August 19, 2004

882031

Appendix C – Permit Process After Issuance

Permit Process After Issuance



Last Revised: August 19, 2004