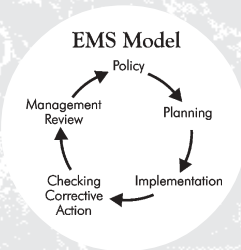


EMS CASE STUDY:



BUNCOMBE COUNTY METROPOLITAN SEWERAGE DISTRICT WASTEWATER TREATMENT PLANT

Location:	Asheville, N.C. (Buncombe County)
Industry:	Sewerage Systems (SIC Code 4952)
Pollution Prevention Application:	Environmental Management System
Waste Reduction:	Not Calculated
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BACKGROUND

The Buncombe County Metropolitan Sewerage District Wastewater Treatment Plant (MSD WWTP) is located in western North Carolina (WNC) and is responsible for processing more than 20 million gallons of wastewater each day. The plant has 39 full-time employees, and holds a WNC regional Air Quality air permit, land application permit, National Pollution Discharge Elimination System (NPDES) permit, and a stormwater permit.

The MSD WWTP attained ISO 14001 certification for its environmental management system (EMS) in August 2002. The certification was attained out of a desire to take a proactive position on environmental responsibility. The plant's general manager saw ISO 14001 certification as a way for the plant to go above and beyond compliance and to take its place as a community steward.

PLANNING AND IMPLEMENTATION

While members of upper management are involved and give their support to the EMS, three plant employees share primary responsibility for the oversight of environmental management issues. The plant director is responsible for ensuring that the EMS is developed, implemented and sustained according to the ISO 14001 standard. Another responsibility of the plant director is to make certain that legal and other requirements are satisfied according to the EMS. The plant director must also conduct compliance reviews, coordinate external communications, and review and finalize all procedures and work instructions included in the EMS. The environmental

management representative (EMR) has a wide variety of responsibilities, including review and approval of all procedures and work instruction in the EMS and assuring that all training is conducted and documented according to the EMS. The EMR must also:

- ensure that emergency procedures are communicated throughout MSD;
- communicate with the management team concerning environmental performance;
- ensure that environmental aspects are identified, documented, communicated and updated;
- ensure that all EMS internal audits are programmed, conducted and communicated;
- ensure that all corrective and preventive actions are documented, communicated and verified;
- ensure that management review meetings are conducted, documented and the results communicated; and
- act as the EMS champion and represent and manage all aspects of the EMS for MSD.

Finally, the document administrator is responsible for developing and maintaining the documentation framework, retaining records and developing procedures pertaining to documentation of the EMS.

The above three positions manage the EMS. The decisions, however, are made in accordance with three bodies, rather than people. The decision-making system includes an EMS Steering Committee composed of supervisors from each



department who meet monthly to review corrective action requests, internal audit results, discuss objective and target status, and review and recommend training. The second decision-making body is an EMS Team comprised of an internal team of volunteers/line employees who, in conjunction with the EMR, review and recommend ideas and corrective actions to the steering committee. Lastly, the plant manager approves and finalizes decisions made by the Steering Committee. Important environmental issues may also be brought to the meetings of the division heads and factored into business decisions.

The facility set about determining its aspects and impacts and setting boundaries for the EMS beginning with the development of an EMS team comprised of department heads. For each department, key aspects and impacts were identified. Impacts such as discharges to surface water, uses of energy, hazardous waste and emergency response were considered. Beginning with 200 aspects, the EMS team used a systematic approach to quantify the significance according to frequency and severity of environmental impacts. The top four significant aspects were then assigned objectives and targets, primarily chosen to satisfy legal requirements. In addition to legal requirements, technological options, cost, operational requirements and general MSD business goals were also taken into account when setting objectives and targets. Of the four significant aspects chosen for the EMS, two had targets that were completed earlier than scheduled. As a result, two additional objectives and targets were developed.

The MSD WWTP has done several things to involve and inform the community, employees and other interested parties of developments in its EMS. MSD WWTP ran an article in the local newspaper announcing its certification and public meetings were held. In front of the building, a flag with "ISO 14001" flies on the flagpole and a sign declares the organization's ISO 14001 status. Also, all information of the MSD is public record and anyone may visit the facility and request information on the EMS.

Employees are made aware of their individual responsibility to the EMS through training, periodic internal audits, and the provision of wallet cards printed with the significant aspects and impacts, objectives and targets, and the environmental policy statement. Employees are kept up-to-date on the EMS and their responsibilities through monthly training refreshers and postings around the plant. Contractors and visiting personnel receive a copy of the MSD EMS policy, applicable standard operating procedures, and applicable safety guidelines prior to entering the facility.

CONTINUAL IMPROVEMENT

Legal requirements are kept current through the use of an environmental calendar. This calendar lists every legal requirement of the plant and the days when the inspections, paperwork or audits should be completed.

Evaluations to aid in the continual improvement of the EMS take place on several different levels. An annual employee evaluation for both the EHS division and the EHS director includes performance in relation to their role in the EMS. On a monthly basis, employees are randomly interviewed to ensure an adequate knowledge and understanding of the EMS. Continual improvement is also assured through annual management reviews as well as annual reviews of aspects, impacts, objectives and targets. Also taking place are monthly EMS Team environmental inspections, internal audits, an annual review of documents, monthly Steering Committee and EMS Team meetings, monthly training for plant staff, and annual fire drills with the local fire department.

Facility performance has improved as a result of an increased focus on procedures, which in turn has increased efficiency and made procedures more effective. Facility compliance has also improved greatly through use of the environmental calendar.

COST INFORMATION

The initial costs of the EMS implementation process included independent consultant costs along with approximately 2,000 hours of staff time. Maintenance of the EMS requires approximately 50 hours per month of staff time.

LESSONS LEARNED

Some of the challenges seen by the Buncombe County MSD WWTP include continued team building, standard operating procedure review and creation, ongoing training in the EMS, and dealing with the diversity of people and educational backgrounds of the staff.

The most significant benefits have been increased facility communication and efficiency. The EMS has changed the way things are done and has led to new procedures, better communication, more teamwork and more training. Finally, the EMS has initiated a good relationship with the state, local communities and regulatory bodies.



The N. C. Division of Pollution Prevention and Environmental Assistance (DPPEA) provides free, non-regulatory technical assistance and education on methods to eliminate, reduce or recycle wastes before they become pollutants or require disposal. Call DPPEA at (919) 715-6500 or (800) 763-0136 or e-mail nowaste@p2pays.org, or visit DPPEA's Web site at www.p2pays.org for assistance with issues in this fact sheet or any of your waste reduction concerns.