

RISK MANAGEMENT PLANNING FOR WATER AND WASTEWATER TREATMENT FACILITIES

On June 20, 1996, regulations were promulgated under the Clean Air Act Amendments of 1990 at 40 CFR Part 68 requiring applicable facilities to prepare hazard assessments and to develop Risk Management Plans (RMP) relative to 77 toxic substances and 63 flammable substances. Some of the more common chemicals and their threshold quantities that are typically present at water and wastewater treatment facilities include the following chemicals. All values are in pounds.

Ammonia (anhydrous)	10,000
Ammonia (>20%)	20,000
Chlorine	2,500
Hydrochloric Acid (>50%)	1,000
Hydrochloric Acid (>30%)	15,000
Hydrofluoric Acid (>50%)	1,000
Sulfur Dioxide (anhydrous)	5,000
Methane	10,000
Propane	10,000

Any facilities that have greater than the threshold quantities listed above are required to comply with the regulations. The regulations require that all covered facilities register with EPA by June 21, 1999.

Covered facilities are categorized into three program levels based on the relative potential for public impact and the level of effort needed to prevent accidents. Most water and wastewater treatment facilities that are subject to the RMP regulations will fall under Program 2. Program 2 requirements include three primary elements: a hazard assessment, a prevention program, and an emergency response program.

A hazard assessment involves identification of all toxic and/or flammable substances regulated under the RMP rule, evaluation of a range of releases, analyses of potential offsite consequences, and a five-year accident history. This assessment can be conducted using readily-available modeling software from EPA, which is free, or from private companies for a fee.

ALL COVERED FACILITIES MUST REGISTER WITH EPA BY JUNE 21, 1999.

The models determine the estimated distance to the toxic endpoint if a substance is released. It is then necessary to determine whether the distance to the toxic endpoint is smaller than the distance to the nearest public receptor. Mapping of the releases is generally accomplished using topographic maps.

A prevention program includes the following key elements: maintaining safety information such as material safety data sheets (MSDS), maximum chemical inventories and equipment standards

on file; a hazard review that involves identification of any hazards associated with regulated substances, possible equipment failure or human errors that could lead to a release, safeguards used or needed to prevent failures or errors, and steps used or needed to detect or monitor releases; written standard operating procedures (SOPs) for operations and maintenance (O&M) activities; employee training; compliance audit certification; and incident investigation which resulted in or could result in a catastrophic release of a regulated substance.

An Emergency Response Program includes actions to be taken to protect human health and the environment in response to a release such as informing public and local agencies, emergency health care, and employee training. An Emergency Response Plan developed under this guidance would also be provided to the local emergency planning agencies.

The completed RMP will be preferably submitted to EPA electronically. EPA anticipates having the final electronic submission program, *RMP *Submit*TM, available in January 1999. If a facility cannot submit their RMP electronically, a hardship waiver must be requested.

EPA has guidance documents available for preparing RMPs for water and wastewater treatment facilities. EPA's telephone number is (800) 424-9346 and their website address is www.epa.gov/ceppo.

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CET RMP Survey

CET mailed surveys to more than 1,100 water and wastewater treatment facilities in October 1998 dealing with RMP compliance issues. A summary of the responses received was prepared and mailed in December 1998. If you have not received a copy of the survey response summary and would like a copy, please do not hesitate to contact CET.

A brief overview of the survey responses is provided below.

- Approximately 36% of survey respondents operate water treatment plants while 64% operate wastewater treatment plants.
- Approximately 44% of the survey respondents have chlorine onsite in quan-

ties exceeding 2,500 pounds, 2% have propane onsite exceeding 10,000 pounds, and 2% have sulfur dioxide onsite exceeding 5,000 pounds.

- The sizes of the facilities that responded to the survey are as follows: 37% for <0.5 MGD, 16% for 0.5-1 MGD range, 22% for 1-3 MGD range, 6% for 3-5 MGD range, 10% for 5-10 MGD range, and 8% for >10 MGD.

- For Survey responses that reported chemical inventories greater than the RMP threshold quantities, most will change the chemical or disinfection method. Many are unsure how they will comply. A couple facilities will reduce inventories to remain below the threshold quantities.

Certification Update

The State Board for Certification of Sewage Treatment Plant and Waterworks Operators is conducting a second public comment period on proposed changes in the Sewage Treatment Plant and Waterworks Operators Certification Act. Copies of the proposed regulations can be obtained from DEP at 1-877-724-7336 or the DEP web site at <http://www.dep.state.pa.us/dep/deputate/waterops/proposed322.htm>. Comments on the proposed Regulations can be submitted to DEP until February 10, 1999. Summary of the proposed regulations can be found on CET's web page at www.cet-inc.com.

Key items in the revised regulations include a continuing education requirement for certified operators, changes in certification categories for both water and wastewater operators, and changes in the process for suspending and revoking certifications.

Process control decisions are to be made by certified operators.

Certified operators are also required to operate the facility in compliance with the appropriate regulations and to make the owners aware of violations and actions needed to prevent or eliminate violations.

Exceptional Quality Biosolids Demonstration Project

The cooperative efforts between PA DEP, several Dauphin County municipal wastewater systems, RDP Technologies (a PA equipment vendor), and CET Engineering Services on the design, construction, and implementation of an Exceptional Quality Biosolids project is continuing. The goal of this project is that an Exceptional Quality Biosolids production and recycle/reuse facility utilizing the alkaline pasteurization process can be successfully built and implemented with Pennsylvania resources.

Recently, members of the project group visited several wastewater treatment plants that utilize this particular biosolids treatment process. As a result of the visits, and more importantly, discussions with and input from several of the facilities' operating personnel, the project scope of work and proposed facility needs were better defined for our joint municipal project. This information is being used in the current project design.

One of the key issues observed was

the need to provide for the addition of yard waste type materials (i.e. leaves, shredded wood, etc.) to the dewatered biosolids to produce an end product that will be more acceptable for use by the public. The air handling requirements were discussed, with recommendations made for our project. Also, refinement of the overall project layout was undertaken to accommodate raw product, final product, mechanical equipment, and traffic issues based on the recommendations agreed to during the recent visits to other facilities.

The current project schedule is for design completion sometime in early 1999, with construction to commence shortly thereafter. With the revised scope of work, we are currently refining the proposed project budget for municipal review. We will keep you informed as this cooperative joint project proceeds or if you have any questions, please do not hesitate to contact us.

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- CET's Technology Transfer contains useful articles and links of operational, administration and engineering interest, look up at www.cet-inc.com

- Waterworks and Wastewater Operators now have on-line resources available at www.dep.state.pa.us/dep/deputate/waterops/

- Y2K bugged? This site describes the Y2K problem for water and wastewater facilities and provides a 6-step approach for finding and fixing problems. Check out this excellent site at www.cpa.gov/year2000/ow.htm#Millbug/