

CLASS TITLE: **Filtration Engineer III**

CHARACTERISTICS OF THE CLASS: Under supervision, the class performs fully functional professional engineering work in connection with the operation, instrumentation and maintenance of water purification equipment and facilities; and performs related duties as required. These positions require at least one year of professional filtration engineering experience.

ESSENTIAL DUTIES: Coordinates and participates in the operation and maintenance of purification and chemical feeding equipment; investigates equipment breakdowns and makes recommendations to prevent their recurrence; observes instruments registering purification plant processes and conditions and records relevant data on operations logs; adjusts pumpage rates and chemical dosages to maintain water quality standards; evaluates laboratory reports on the analyses of water samples and notifies management of changes in water purification levels; calculates actual dosage rates of water purification chemicals and monitors residuals to ensure compliance with City or other governmental standards; repairs and replaces malfunctioning instruments and controls on purification equipment; participates in developing specifications for new equipment purchases; assists in conducting specifications tests on new and refurbished equipment; calibrates recording, regulating and treatment devices on purification equipment; completes daily control logs detailing plant activity, treatment changes, equipment readings and problems; prepares reports on plant operations and water quality levels for management to use in improving operational efficiencies.

RELATED DUTIES: Maintains records of inspections, permits, work orders, correspondence and related documentation; participates in researching water treatment processes to keep abreast of changes and trends in new equipment and chemicals; participates in the planning and conduct of research projects pertaining to purification engineering; assists in training and providing guidance to lower level staff.

MINIMUM QUALIFICATIONS:

Training and Experience. Graduation from an accredited college or university with a Bachelor's degree in Chemical or Civil Engineering or a directly related field of engineering supplemented by one year of filtration engineering experience, or an equivalent combination of training and experience, provided the minimum degree requirement is met.

Knowledge, Abilities and Skill. Good knowledge of modern chemical engineering principles and practices. Good knowledge of filtration plant monitoring and measuring equipment and instruments. Good

knowledge of filtration system maintenance methods. Good knowledge of water treatment operations. Some knowledge of pertinent laws, codes and regulations.

Code: **5518**

Operation and Construction Service
Engineering, Designing and Structural Group
Chemical Engineering Series

CLASS TITLE: **Filtration Engineer III (Cont'd)**

Ability to calibrate and maintain recording and regulating equipment. Ability to prepare statistical calculations and computations. Ability to conduct extensive inspections of filtration equipment. Ability to make changes to chemical processes.

Working skill in the application of modern principles and practices of chemical engineering. Good skill in maintaining filtration equipment. Working skill in advanced technical math. Working skill in interpreting instrument panel readings. Some skill in coordinating the installation and testing of filtration equipment. Some skill in preparing specifications and cost estimates for equipment installation and maintenance projects. Good oral and written communication skills.

Physical Requirements. Ability to access filtration equipment and instruments on multiple levels.

Working Conditions. Inside: General office environment. Outside: Occasional exposure to inclement weather and extreme temperatures.

Equipment. Filtration monitoring and measuring instruments. Standard office equipment including personal computers.

NOTE: While the list of essential duties is intended to be as inclusive as possible, there may be other duties which are essential to particular positions within the class.

May, 2002
City of Chicago
Department of Personnel