

Job Description

Human Resource Use Only

Position Number:

Step/Grade - [GH](#)

Effective Date: [12/20131/2017](#)

POSITION IDENTIFICATION

Position Title: Chemist/[Pretreatment Coordinator](#)

Division: Wastewater Treatment Facility

Status: Full Time Nonexempt

Workweek: Mon-Fri (6:30 a.m. – 3:00 p.m.)

SUPERVISORY RELATIONSHIPS

Reports to: Superintendent

Directly Supervises: Assistant Chemist

POSITION PURPOSE

The Chemist performs and oversees all professional laboratory functions and duties required for reporting and to operate the WWTF in manner that is compliant with its NPDES permit. Oversees or collects samples for in house laboratory testing and for specialized tests shipped to contracted labs. The Chemist conducts a variety of routine chemical and biochemical analyses on influent and effluent wastewater, and the raw and digested biosolids as necessary for plant process control and to satisfy all reporting requirements. Chemist is responsible for keeping all paper and electronic records relating to laboratory, the QA/QC program, and all plant operational data. [Directs the City's industrial pretreatment program and coordinates pretreatment operations with industrial representatives and City officials](#) ~~The Chemist also assists the Superintendent in the recordkeeping and in administration and inspection requirements of the Industrial Pretreatment Program.~~

ESSENTIAL DUTIES

- Responsible for generating all lab analytical data as required for permit compliance and process control of the WWTF.
- Performs routine and specialized tests on sewage and sludge samples including: fecal Coliform, pH, ammonia-nitrogen, dissolved oxygen, suspended and total solids, biochemical oxygen demand, chlorine residual, and total phosphorus in accordance with Standard Methods and Wisconsin Department of Natural Resources approved methodologies
- Documents and prepares stock and standard solutions and mixes chemical reagents required for lab testing.
- Calibrates, operates and also maintains specialized lab equipment such as D.O. meters, pH meter and ion selective probes, spectrophotometer, incubators, drying oven, autoclave, and muffle furnace.
- Develops, institutes, and maintains the lab quality control and quality assurance program.
- Responsible for all electronic and paper bench sheets and the retention of all laboratory records.

- Inventories and orders all laboratory supplies, reagents, glassware, chemicals, and lab instruments and equipment.
- Interprets lab results and recognizes treatment efficiency problems and communicates with plant staff on the treatment process.
- Analyzes and interprets sample results to make timely adjustments in chemical feed rates.
- ~~➤ Reviews and records industrial monitoring data and performs industrial inspections at permitted industries.~~
- Directs the required industrial pretreatment program that includes 22 different permitted industries. Program requirements include: conduct annual inspection of each industrial facility, drafts facility discharge permits, handles participant inquiries, maintains submitted lab result database, collates data and completes semi annual and annual compliance reports, issues NOV's (Notice of Violation) as necessary and enforces compliance with permit holders.
- Inputs data, reviews, and transmits the facility's monthly Discharge Monitoring Report.
- Trains other plant staff in lab protocol and in required weekend lab sampling and procedures.

OTHER DUTIES

- Analyzes beach and pool samples for the County Health Department.
- Performs suspended solids on backwash return for MPU Water Department
- Performs related Utility work as required

MINIMUM POSITION QUALIFICATIONS

Education: Bachelor of Science degree from an accredited university or college with a major in Chemistry, biology or closely related field of study or a Water Pollution Control Associate degree with laboratory experience.

Experience: A minimum of 2 years of laboratory experience in water chemistry including biological and chemical analyses of water and/or wastewater.

Certifications/Licenses: Valid driver's license. A Wisconsin Wastewater Operator's Certificate is desirable.

Other Requirements: Must familiar and understand the wastewater treatment process and how and when adjustments are made in order to optimize plant performance. Ability to calculate chemical standard concentrations, calculate percentages, averages, formulas, fractions and decimals. Chemist must be able to apply concepts such as percentages, ratios, area, volume, circumference, and be able to interpret basic statistical data and reports.

KNOWLEDGE, SKILLS, & ABILITIES

This position requires thorough knowledge of wastewater laboratory procedures, chemical reagents, standards, and laboratory equipment. Must be able to operate, calibrate, and maintain all in house lab instruments with the ability to perform all analyses in accordance with US EPA, Standard Methods, and Wisconsin DNR protocol. This position must possess the ability to read and interpret DNR and EPA regulations and codes; the ability to prepare and submit Discharge Monitoring Reports; ability to communicate results and correspondence effectively in both written

and oral form; must have good written and oral communication skills; and the ability to perform a variety of chemical and mathematical equations and calculations.

BACKGROUND CHECKS- Condition of Employment

PHYSICAL DEMANDS

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. The employee may be required to climb, balance, stoop, kneel or crouch. Vision and hearing should be of normal ability and is suitable if corrected by glasses and/or hearing aids. Must have the ability to use a calculator, computer, telephone, hand held radio units, and copy machines.

Manual Dexterity: Position requires good hand-eye coordination and manual dexterity necessary for pipeting, measuring, and the titrations necessary to perform the essential functions of the position.

Physical Effort: A good deal of walking is required to the composite samplers and sample points in various locations and levels within the facility. Will be required to stoop, kneel, bend, crouch, grab, twist, push and pull in performance of daily duties. Requires vision and hearing requirements of normal ability, or corrected by glasses and/or hearing aids. Must regularly lift and/or move up to 50 pounds and occasionally lift and/or move up to 100 pounds. Must be able to lift seventy fifty pound along with the ability to stand for several hours.

Working Conditions: While performing the duties of this job, the employee is generally indoors but is regularly exposed to outside weather conditions to collect samples, adjust chemical feeding rates, and to evaluate the WWTF process. Safety toe shoes and safety glasses are required to be worn when working in the lab and when in the plant.

This position description has been prepared to define the general duties of the position, provide examples of work and to detail the required knowledge, skills and abilities as well as the acceptable experience and training for the position. The description is not intended to limit or modify the right of any supervisor to assign, direct, and control the duties of employees under supervision. The City of Manitowoc retains and reserves any and all rights to change, modify, amend, add to or delete from any portion of this description in its sole judgment.

This job description is not a contract for employment.

The City of Manitowoc is an equal opportunity employer, in compliance with the Americans with Disabilities Act. The City will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.

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