

# **WATER/WASTEWATER PLANT OPERATOR**

Revised: June 2012; February 2000; July 1999; December 1994; November, September, May 1993

Department: Public Works

Section: Water or Wastewater Treatment Plant

Reports to: Water/Wastewater Plant Supervisor

Approved by:

(1) EMPLOYEE'S SIGNATURE \_\_\_\_\_

(2) DEPT. HEAD'S SIGNATURE \_\_\_\_\_

## **DESCRIPTION OF WORK**

General Statement of Duties: Operators perform skilled work in the operation of a Water/Wastewater Treatment Plant. Work includes skilled laboratory analysis and requires advanced technical knowledge in operating and maintaining the plant. Performs analysis of water/wastewater, for operational control and to determine compliance with various state and federal laws and regulations. Responsible for safe and efficient operations, and maintenance of water and wastewater treatment facilities. Position requires direct operational responsibility for the plant; that involves shift work, including nights, holidays, and weekends.

Supervision Received: Works under the general supervision of an administrative/technical superior, as designated. Work is performed with a high level of independence.

Supervision Exercised: May serve as a team leader when working with other operators, maintenance staff or other lower level technical or semi-skilled workers as needed.

**EXAMPLES OF WORK:** An asterisk (\*) denotes those functions important and essential in accomplishing the purpose of this job. Some of the reasons why a function could be considered essential are: 1. The position exists to perform the function. 2. There are a limited number of other employees available to perform the function, or among whom the function can be distributed. 3. A function is highly specialized and the person in the position is hired for special expertise or ability to perform it.

\*B2 D-20% Operates plant equipment to manage the flow and maintain proper treatment levels.

## WATER/WASTEWATER PLANT OPERATOR

- \*B2 D-10% Maintains recordings of laboratory results, and logs data into computers. Performs quality control and calibration on laboratory tests, meters, and equipment. Records all meter reading, water and chemical flows, and keeps other records as required.
  - \*B2 D-10% Coordinates and/or carries out corrective action as necessary.
  - \*A1 W-5% Orders and maintains inventories of operational chemicals and other operational supplies. Works with vendors and suppliers to evaluate and implement ideas and changes.
  - \*B2 D-10% Monitors computers, programmable logic controllers, SCADA system, chemical feeders, motors, pumps, mixers, gauges, valves, and ventilation systems.
  - \*B2 A-5% Provides training/support to new personnel on techniques and procedures related to water/wastewater analyses, operational and maintenance and related duties and inspects their work.
  - \*A1 W-5% Supervises and handles the loading and unloading of hazardous chemicals.
  - \*A1 W-5% Works closely with maintenance staff to repair equipment and insure quality control of the plant process during maintenance shut downs. Opens and closes work orders in computerized maintenance management system.
  - \*B2 M-10% Performs preventative maintenance on chemical feeders, motors, pumps, mixers, valves, and gauges. Cleans, maintains and stores instruments and equipment.
  - \*A1 D-10% Collects samples of plant influent, effluent and various locations throughout the process. Collects samples from various industrial/residential users. Installs portable sampling and flow monitoring equipment and provides traffic control as needed.
  - \*A1 D-10% Performs chemical and bacteriological analysis on plant samples and makes necessary process control adjustments. Performs analysis on samples collected from industrial/residential users. Prepares media for chemical and bacteriological testing.
- Performs other duties of a comparable level/type as required.

### **MINIMUM QUALIFICATIONS**

Education and Experience: High school diploma (GED) and three to five years related experience or any equivalent combination of education and experience.

Required Knowledge, Skills and Abilities:

Knowledge of water or wastewater characteristics.

Knowledge of the operation, maintenance and repair of motors, pumps, electrical systems and related equipment in a water or wastewater plant.

## WATER/WASTEWATER PLANT OPERATOR

Knowledge of basic chemistry and mathematics.

Ability to make accurate readings, keep accurate records and reports.

Ability to communicate effectively and react quickly to situations that develop.

Ability to work in an environment with a high risk of exposure to pathogenic bacteria (wastewater only).

Ability to work and exercise judgment independently.

Ability to instruct and supervise other employees.

Ability to establish and maintain effective working relationships with employees and the public.

Ability to climb stairs and to enter confined spaces, using proper safety equipment.

Ability to properly handle hazardous chemicals and to follow safety procedures.

Ability to work rotating shifts including days, evenings, nights, weekends, and holidays.

Skill in the operation of mechanical and technical equipment.

Skill in communication, interpersonal skill as applied to interaction with co-workers, supervisor, general public, etc. sufficient to exchange or convey information and to provide and/or receive work direction.

### Necessary Special Requirement:

Must attain, after meeting all state experience requirements, a Grade 3 or higher North Dakota Water/Wastewater Plant Operator certificate, or equivalent certification from another state.

### The physical activities of this position are:

**Climbing:** Ascending or descending ladders, stairs, scaffolding, ramps, poles, and the like, using feet and legs, and/or hands and arms. Body agility is emphasized. This factor is important if the amount and kind of climbing required exceeds that required for ordinary locomotion.

**Balancing:** Maintaining body equilibrium to prevent falling when walking standing or crouching on narrow, slippery or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance or body equilibrium.

## WATER/WASTEWATER PLANT OPERATOR

**Stooping:** Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.

**Kneeling:** Bending legs at knee to come to a rest on knee or knees.

**Crouching:** Bending the body downward and forward by bending leg and spine.

**Crawling:** Moving about on hands and knees or hands and feet.

**Reaching:** Extending hand(s) and arm(s) in any direction.

**Standing:** Particularly for sustained periods of time.

**Walking:** Moving about on foot to accomplish tasks, particularly for long distances.

**Pushing:** Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.

**Pulling:** Using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion.

**Lifting:** Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles.

**Fingering:** Picking, pinching, typing or otherwise working primarily with fingers rather than with the whole hand or arm as in handling.

**Grasping:** Applying pressure to an object with the fingers and palm.

**Feeling:** Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of fingertips.

**Talking:** Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly, or quickly.

**Hearing:** Perceiving the nature of sound with no more than a 40 db loss @ 500 Hz, 1,000 Hz and 2,000 Hz with or without correction. Ability to receive detailed information through oral communication, and to make fine discriminations in sound, such as when making the fine adjustments on machined parts.

**Repetitive motions:** Substantial movements (motions) of the wrists, hand and/or fingers.

## WATER/WASTEWATER PLANT OPERATOR

### The physical requirements of this position are:

Heavy Work: Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.

### The visual acuity requirements including color, depth perception and field of vision for this position are:

MACHINE OPERATORS (including inspection), INSPECTION, CLOSE ASSEMBLY, CLERICAL, ADMINISTRATIVE: This is a minimum standard for use with those whose work deals largely with preparing and analyzing data and figures, accounting, transcription, computer terminal, extensive reading, visual inspection involving small parts, operation of machines (including inspection), using measurement devices, assembly or fabrication of parts at distances close to the eyes.

### The conditions the worker will be subject to in this position are:

The worker is subject to inside environmental conditions: Protection from weather conditions but not necessarily from temperature changes.

The worker is subject to both environmental conditions: Activities occur inside and outside.

The worker is subject to noise: There is sufficient noise to cause the worker to shout in order to be heard above the ambient noise level.

The worker is subject to hazards: Includes a variety of physical conditions, such as proximity to moving mechanical parts, electrical current, working on scaffolding and high places, exposure to high heat or exposure to chemicals, human waste or other body fluids.

The worker is subject to atmospheric conditions: One or more of the following conditions that affect the respiratory system or the skin: Fumes, odors, dusts, mists, gases, or poor ventilation.

The worker is subject to oils: There is air and/or skin exposure to oils and other fluids.

The worker is required to wear a respirator or use a self-contained breathing apparatus.