

POSITION DESCRIPTION
LAB TECHNICIAN/OPERATOR

Revised May 21, 2008

GENERAL PURPOSE

Performs a variety of skilled and semi/skilled tasks related to the successful completion of laboratory analysis and provide assistance to the plant operators and maintenance personnel to maintain water and wastewater treatment plants processes.

SUPERVISION RECEIVED:

Works with minimum supervision under the policy guidance and direction of the Public Works Director. Works closely with the Chief Wastewater Plant Operator and Chief Water Plant Operator to provide daily analysis and quality control analysis for plant process changes.

SUPERVISION EXERCISED:

Generally works independently, may supervise operators in training to provide process control recommendations. Cross training of each operator.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Prepares culture media and reagents for bacteriological testing of water and wastewater in accordance with the IEPA standard methods

Performs industrial wastewater sampling and/or inspection as needed.

Responsible for the collection and preserving of laboratory samples and maintaining laboratory worksheets and records.

Performs calibrations and maintenance and cleaning of lab and equipment.

Chemical, bacteriological and physical test of raw partially treated and treated wastewater, potable water and by-products to determine the effectiveness and efficiency of the water and wastewater treatment plant processes.

Develop and evaluate analytical procedures and other aspects of the laboratory operation.

Testing to ensure treatment plants effluent meets established standards.

Purchase of chemicals, office and lab equipment.

Answering phones messages, answering question and directing people to correct personal.

Record keeping and forwarding reports to the proper authority.

Preparation of NPDES and 503 Regulation permit application.

Preparation of wastewater treatment plant Discharge Monitoring Report forms.

Water treatment plant daily log and water quality analysis

Water and Wastewater Treatment Plant pumpage figures comparison
Industrial pretreatment samples

Typing reports and filing for Public Works Director

Updating employee time records

Log distribution and collection system maintenance records

Recording financial reports

Collect treatment samples from the out-fall sewer and at various stages of processing.

Prepare chemical reagents as needed to carry out testing procedures.

Perform laboratory analysis of all stages of wastewater treatment; compile and evaluate test data in terms of plant process performance.

Recommend process changes based on laboratory data.

Maintain lab records and files.

Wires and unwires pump or blower motors, which involves removing and replacing rears, drive shafts, pistons, rods, cranks shafts, bearings sleeves, gaskets and packing glands.

Checks bearing clearances; repairs variable speed motor drives. Diagnoses problem with a variety of equipment and instruments and institutes corrective measures. Remove and test pumps, motors, and gauges to check for proper electrical current, and other potential problems, and repair or rebuild as needed and directed.

Replaces worn pipe segments with anti-corrosive materials; performs cutting and welding work with electric arc and acetylene welding equipment; and fabricates needed parts to keep equipment operational or to retrofit equipment to allow for the replacement of outdated technology with more modern equipment.

Participates in the operations of the treatment plant; practices safe and efficient operating methods in executing treatment procedures; controls the flow of raw sewage into the

plant. Directs sludge processing, aerobic digesters, operations of the Fine Screen and runs collected materials out of grit chambers. Transfers sludge to and from the aerobic digesters; adds polymer emulsifiers, and other chemical to the process; channels thickened sludge dewatering press for final processing. Collects samples for laboratory testing; and performs laboratory test to control plant operations.

Operates and checks equipment, instruments, pumps, valve, meters and other apparatuses. Shuts down portion of plant operation to deal with emergencies; and maintains accurate records of instruments readings and chemical added to the process during the shift. Checks efficiency of pumps, overflows and by-pass, maintains an awareness of worker safety guidelines and procedures and applies these in performing daily activities and tasks; and performs related work as required.

Answers alarms from Wastewater Treatment Plant lift stations, water plant and etc. during off-hours to correct problem.

Assists in the monitoring and ensuring the proper operation of gauges, meters, pumps, and control panels which affect the efficient flow and processing of wastewater, sludge and effluent. Coordinate sludge hauling to land application site.

Assists in the evaluation of all plant processes to achieve satisfactory treatment as required by the EPA. To perform a variety of skilled and semi-skilled tasks in the operation, repair and maintenance of the sewer plant. In addition, the Chief plant operator provides assistance to other operator and maintenance personnel when directed in the performance of various tasks as required. Performs equipment, building and grounds maintenance activities, applies chemicals, makes process controls decisions using own judgement, collects samples and conducts laboratory test. This position operates under general supervision during the workday. Accountability is measured through accuracy of work and successful completion of task assigned within specified deadlines. The rules and regulations governing this position include departmental and Village policies.

Monitor and interpret laboratory and operational data; ensure treatment processes are in compliance with regulated guidelines; make adjustments to treatment process including chemical application as required.

Occasional operations such as pressing, sludge pumping, greasing of Bio Discs, Screw Pumps, motors and general maintenance, of the sewage treatment plant, operates according to plant limits set by EPA on the N.P.D.E.S permit.

Inspect park grounds, structures, and related facilities for safety, appearance, and vandalism. Clean and clear park grounds, facilities, structures and playing fields of debris and potentially dangerous conditions; set up park for special events.

Plant, mow, prune, and maintain turf, trees, shrubs, and plants.

Repair and replace street surfaces, sidewalks, curbs, and cutters including back filling trenches and evacuation.

Perform the maintenance, repair, construction, and installation work of streets, storm drain, parking lots, street lights, and traffic control signs.

Perform repaving, patching, overlaying, pot hole, and crack sealing repair of asphalt.

Perform underground service locates.

Weekend work and holiday, early mornings and/or nights may be required. Over time is expected when it is required by the position workload, or as directed and approved by the Public Works Director or immediate supervisor. Respond to emergency call ins and to carry a pager.

Pursues professional development.

Read and be familiar with the Village Personal Policy Manual.

Conducts duties in a safe manner with regard but not limited to. Attitude and actions; use of drugs and alcohol, use of clothing and accessories; operation of tools, equipment, and vehicles; observance of rules and procedures; use of protective gear; maintenance of hazard free work space; and use of proper body mechanics such as when lifting.

Effectively and efficiently operate a variety of equipment ranging from hand tools to large motorized machinery and vehicles, and is responsible for the maintaining such equipment for safe operation.

Other duties, including those of all lower positions, as may be assigned.

PERIPHERAL DUTIES

Meter reading, hydrant flushing, valve exercising, leak detection, conduct plant tours, post community event sign, assist in public works operations and maintenance duties, etc.

DESIRED MINIMUM QUALIFICATIONS

Education and Experience:

Graduation from a senior high school or GED equivalent, supplemented by two (2) years of post-secondary collage or technical training in advance biological and chemistry.

Possession of a Class “2” IEPA Wastewater Operators License, with a minimum of 3 to 6 years of operating experience.

Possession of a Class “C” IEPA Water Operator Licenses, with a minimum of 3 to 6 years of operating experience.

Necessary Knowledge Skills, Abilities, and Attitudes:

Proficient computer skills knowledge of. Laboratory techniques, equipment, terminology, and procedures.

Knowledge principles of chemical and physical analysis.

Knowledge of sampling procedures and field equipment, and occupational hazards and standard safety procedures.

Knowledge of pertinent federal, state, and local laws, codes and regulations.

Requires thorough knowledge of the standard method procedures as required by USEPA and IEPA Regulations; requires thorough knowledge of chemicals and their interactions with each other or testing interference's as prerequisite.

Ability to prepare accurate, thorough written records and reports as required or requested.

Ability to read, write, speak, and understand mathematical and algebraic calculations by hand and advanced calculations with use of calculator or computer.

Ability to convey lab data to operating personnel enabling them to effect a process change to increase efficiency.

Requires working knowledge of rules and regulations related to the Industrial

Pretreatment Program; requires working knowledge of pertinent health and safety rules and regulations relevant to laboratory operations.

Advanced training/calibration of oxygen detector. Ability to use S.C.B.A.

Advanced mathematical and computer skills.

Job often requires decision making skills in the absence of specific policies and guidelines. Some direct guidance received from superiors.

Frequent internal and external contacts which require dealing with the public by phone which require verbal and interpersonal communication skill in dealing with the public.

TOOLS AND EQUIPMENT USED

Motorized vehicles and equipment, dump truck, pickup truck, utility truck, pumps, back hoe, chipper, bucket truck, generators, mowers, shovels, personal computer, calculator, pencil, ruler, fax machines, portable radio, phone, ladder or scaffolding, tape measurer, of lab instruments, light and heavy-duty vehicles and related construction equipment, air compressors, jack hammer, air pack, air monitor, snow plow and blower.

SPECIAL REQUIREMENTS:

Possession of a Class "2" IEPA Wastewater Operators License and valid class B CDL Illinois drivers license.

After hour, weekends, and holiday shifts will be assigned as needed.

Special Certifications or Licenses may be required in 1 year or when the job duties expand.

PHYSICAL DEMANDS--The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this position. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this position the employee is frequently required to reach with hands and arms; stand; walk; and use hand/finger/handle/feel/operate objects, tools, or controls; to sit; climb or balance; stoop; kneel; crouch or crawl; talk; and hear.

The employee must frequently lift and /or move up to 50 pounds and occasional lift and /or move 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT-- The work environment characteristic described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high, precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic or chemicals, and risk of electrical shock.

In addition, the position does require office work. The noise level in the office work environment is usually quiet, and the noise level is moderate to loud in the field.

SELECTION GUIDELINES

Formal application, rating of education and experience, oral interview and reference check, criminal background, and job related tests (skills, physical, medical, psychological, etc.) may be required.

The duties listed above are intended only as illustration of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer

and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.