NEVADA IRRIGATION DISTRICT

HYDROELECTRIC PLANT OPERATOR I
HYDROELECTRIC PLANT OPERATOR II

Range B45/B65 – BOD 10/10/12

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

To perform semi-skilled and skilled duties associated with the operation and maintenance of the District's hydroelectric generation plant; to perform high voltage switching, maintain flumes and canals, adjust water flows, and perform daily inspections; and to read, record and report electrical and water flow data.

DISTINGUISHING CHARACTERISTICS

Hydroelectric Plant Operator I: This is the entry level class in the Hydroelectric Plant Operator series. Positions in this class typically have little or no directly related work experience. The Hydroelectric Plant Operator I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes of assigned area of responsibility are learned.

Hydroelectric Plant Operator II: This is the journey level class in the Hydroelectric Plant Operator series and is distinguished from the I level by the assignment of the full range of duties. Employees at this level receive only occasional instruction or assistance as new, unusual or unique situations arise and are fully aware of the operating procedures and policies within the work unit. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

This class is distinguished from the Senior Hydroelectric Plant Operator in that the latter performs the most difficult and responsible types of duties assigned to classes within this series and provides technical and functional supervision over assigned staff.

SUPERVISION RECEIVED AND EXERCISED

Hydroelectric Plant Operator I

Receives immediate supervision from the Hydroelectric Generation Supervisor; receives technical and functional supervision from the Senior Hydroelectric Plant Operator.

Hydroelectric Plant Operator II

Receives general supervision from the Hydroelectric Generation Supervisor; receives technical and functional supervision from the Senior Hydroelectric Plant Operator.

ESSENTIAL FUNCTION STATEMENTS

Essential and other important responsibilities and duties may include, but are not limited to, the following:

Essential Functions:

1. Inspect and operate District hydroelectric generating facilities; perform minor maintenance tasks; read, record, and report electrical and water flow data; report abnormal conditions to supervisor.

2. Start up and shutdown hydroelectric power house generators; operate and inspect unattended generating facilities.

3. Prepare and implement switching orders; prepare generators for clearance using lockout/tag out procedures ensuring a safe working environment.

4. Perform routine electrical, mechanical and building maintenance tasks associated with hydroelectric plant, substations, water collection and delivery systems and related facilities.

5. Operate water collection and delivery systems including flumes, canals, penstocks, weirs, gaging stations, fore-bays, after-bays, reservoirs, dams and spill gates.

6. Perform annual maintenance to hydroelectric generation plants, water collection and delivery systems; perform annual and semi-annual testing of hydroelectric generators and related auxiliary equipment.

7. Build and maintain positive working relationships with co-workers, other District employees and the public using principles of good customer service.

8. Perform related duties as assigned.

QUALIFICATIONS

Hydroelectric Plant Operator I

Knowledge of:

Uses and purposes of general construction tools and equipment.
Safe work practices.
Principles and practices of effective customer service.
Basic mathematics.
Modern office equipment including use of applicable computer applications.

Ability to:

Learn to operate and maintain the District's hydroelectric generation plants and related facilities and equipment.
Learn to maintain logs, records and reports.
Learn to recognize and respond to emergency situations.
Operate and use modern office equipment including a computer and applicable software.
Establish and maintain effective working relationships with those contacted in the course of work.
Communicate clearly and concisely, both orally and in writing.
Respond to after hours emergency situations.
Work after hour night call on normal workdays, weekends and holidays and be subject to callout.

Responsibility to:

Obey safe work practices, procedures, and regulations including wearing protective equipment and safety devices.
Operate equipment in a careful and safe manner.
Acknowledge the use of safeguards by other employees.
Report any removal, displacement, damage, destruction, or tampering of safety devices, safeguards, notices or warnings.
Report any safety risks or hazards to your supervisor or other management personnel.
Report to your supervisor or other management personnel any work assignment that you feel would require you to perform the work in an unsafe manner.

EXPERIENCE AND EDUCATION GUIDELINES

Any combination of experience and education that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

One year of experience involving the operation and maintenance of all hydroelectric plant equipment and facilities.

Education:

Equivalent to completion of the twelfth grade.

License and Certificate:

Possession of a valid California driver's license.

Hydroelectric Plant Operator II

In addition to the qualifications for the Hydroelectric Plant Operator I:

Knowledge of:

Hydraulics and water properties.
Operating parameters and basic services practices associated with generators, turbines, high voltage breakers, transformers, compressors, valves and pumps.
Operating practices associated with penstocks, water gates, canals, weirs, and other water control features of hydroelectric plants.
Calculations used to determine water flow, capacity, and total electric generation.
Electrical theory and safe use of electrical equipment.
Pertinent Federal, State and local laws, codes and regulations.
Reservoir, canal, flume and penstock layouts, capabilities and flow requirements.

Ability to:

Inspect and correctly assess plant and component operations and conditions and make recommendations for limitations on operations.
Synchronize, state and shut down hydroelectric generating plants.
Accurately calculate water flow, capacity, generation and related values.
Read and interpret blue prints, gauges, dials and enunciators.
Perform routine servicing and maintenance of mechanical and electrical components of a hydroelectric plant.
Recognize and respond effectively to emergency situations.
Maintain accurate records, logs and reports.

EXPERIENCE AND EDUCATION GUIDELINES

Any combination of experience and education that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Two years of responsible experience similar to Hydroelectric Plant Operator I with the Nevada Irrigation District.

Education:

Equivalent to completion of the twelfth grade.

License and Certificate:

Possession of a valid California driver's license.

WORKING CONDITIONS

Environmental Conditions:

Work is performed in an outdoor environment on a year-round basis subject to outdoor weather conditions including extreme heat and cold and to wet, humid conditions, fumes and/or airborne particles. Duties may be performed near moving mechanical parts and on slippery and uneven surfaces with exposure to toxic or caustic chemicals and risk of electric shock.

Physical Conditions:

Essential functions may require maintaining physical condition necessary to sit while studying or preparing reports; bend, squat, climb, kneel and twist when performing installation/repair of equipment; perform simple and power grasping, pushing, pulling, and fine manipulation; and lift or carry weight of 50 pounds or less.

Mental Conditions:

Essential functions may require maintaining mental condition necessary to know and understand maintenance activities, and observe safety rules; intermittently analyze problem equipment; identify and locate equipment; interpret work orders; remember equipment location; and explain jobs to others; handle conflict.