



Career Service Authority

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Materials Tester

GENERAL STATEMENT OF CLASS DUTIES

Performs full performance work conducting quality control material testing and analysis of soil, asphalt, aggregate, and concrete in a laboratory and at various job sites to ensure compliance with construction specifications.

DISTINGUISHING CHARACTERISTICS

This class conducts quality control material testing and analysis. This class is distinguished from the Materials Laboratory Supervisor class that performs supervisory duties over Materials Testers and manages the Materials Testing Laboratory which includes contract administration, ensuring proper testing procedures, and compliance with applicable standards and specifications.

Guidelines, Difficulty and Decision Making Level:

Guidelines are generally but not always clearly applicable, requiring the employee to exercise judgment in selecting the most pertinent guideline, interpret precedents, adapt standard practices to differing situations, and recommend alternative actions in situations without precedent.

Duties assigned are generally complex and may be of substantial intricacy. Work assignment is performed within an established framework under general instructions but requires simultaneous coordination of assigned functions or projects in various stages of completion.

Employee is responsible for determining time, place, and sequence of actions to be taken. Unusual problems or proposed deviations from guidelines, practices, or precedents may be discussed with the supervisor before being initiated.

Level of Supervision Received and Quality Review:

Under general supervision, the employee receives assignments and is expected to carry them through to completion with substantial independence. Work is reviewed for adherence to instructions, accuracy, completeness, and conformance to standard practice or precedent. Recurring work clearly covered by guidelines may or may not be reviewed.

Interpersonal Communications and Purpose:

Contacts with the public or employees where explanatory or interpretive information is exchanged, defended, and gathered and discretion and judgment are required within the parameters of the job function.

Level of Supervision Exercised:

Performs no supervisory duties.

ESSENTIAL DUTIES

Conducts field and laboratory performance tests to determine material properties such as content, gradations, and density.

Advises inspectors, contractors, or plant operator in aspects of choosing, approving, using, modifying, and quality verification of materials.

Prioritizes field job calls and lab work according to importance, time schedule, and distance.

Drills and cores materials for testing and analysis and coordinates and verifies locations of utilities.

Cleans, checks, and maintains proper calibration of equipment.

Calibrates nuclear density gauge and ensures proper storage and handling of radioactive material.

Maintains records of all testing and prepares reports.

By position, coordinates hauling of aggregates to stockpiles with the aggregate supplier to maintain sufficient quantities for plant operation, processes billing tickets of aggregate, and compiles aggregate haul records.

Performs other related duties as assigned or requested.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

MINIMUM QUALIFICATIONS

Competencies, Knowledge, & Skills:

Soil Science – Knowledge of the concepts, principles, or theories of soil composition, formation, classification, mapping, testing and management including erosion, pollution, conservation, and watershed management.

Building and Construction – Knowledge of the materials, methods, systems and the tools used to construct objects, structures, and buildings.

Teamwork – Encourages and facilitates cooperation, pride, trust, and group identity, fosters commitment and team spirit, and works with others to achieve goals.

Integrity/Honesty - Contributes to maintaining the integrity of an organization, displays high standards of ethical conduct, understands the impact of violating these standards on an organization, self, and others, and is trustworthy.

Attention to Detail – Is thorough when performing work and conscientious about attending to detail.

Diversity – Is sensitive to cultural diversity, race, gender, and other individual differences in the workforce.

Reading - Understands and interprets written material including technical material, rules, regulations, instructions, reports, charts, graphs, or tables and applies what is learned from written material to specific situations.

Writing - Uses correct English grammar, punctuation, and spelling to communicate thoughts, ideas, information, and messages in writing.

Oral Communication - Expresses ideas and facts to individuals or groups effectively, makes clear and convincing oral presentations, listens to others, and facilitates an open exchange of ideas.

Technical Competence – Uses knowledge that is acquired through formal training and extensive on-the-job experience to perform one's job, works with, understands, and evaluates technical information related to the job, and advises others on technical issues.

Technology Application – Uses machines, tools, instruments, and/or equipment effectively and uses computer applications to analyze and communicate information in the appropriate format.

Problem Solving – Identifies problems, determines accuracy and relevance of information, uses sound judgment to generate and evaluate alternatives, and makes recommendations.

Decision Making - Makes sound, well-informed, and objective decisions, perceives the impact and implications of decisions, commits to action even in uncertain situations to accomplish goals, and causes change.

Arithmetic/Mathematical Reasoning - Performs computations such as addition, subtraction, multiplication, and division correctly, solving practical problems by choosing appropriately from a variety of mathematical techniques such as formulas and percentages.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information, analyzes information, and makes correct inferences or draws accurate conclusions.

Customer Service - Works with customers to assess needs, provide assistance, resolves problems, and satisfy expectations, knows products and services, and is committed to providing quality products and services.

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, cooperation, concern, and politeness to others and relates well to different people from varied backgrounds and different situations.

Physical Demands (Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs):

Standing: remaining on one's feet in an upright position.

Walking: moving about on foot.

Carrying: transporting an object, usually by hand, arm, or shoulder.

Pushing: exerting force upon an object so that the object is away.
Pulling: exerting force on an object so that it is moving to the person.
Balancing: maintaining body equilibrium to prevent falling over.
Stooping: bending the body by bending spine at the waist.
Kneeling: bending legs to come to rest on one or both knees.
Reaching: extending the hand(s) and arm(s) in any direction.
Handling: seizing, holding, grasping, or otherwise working with hands.
Fingering: picking, pinching, or otherwise working with fingers.
Feeling: perceiving attributes of objects by means of skin receptors.
Talking: expressing or exchanging ideas by means of spoken words.
Hearing: perceiving the nature of sounds by the ear.
Repetitive motions: Making frequent movements with a part of the body.
Eye/hand/foot coordination: performing work through using two or more.
Lifting: raising or lowering an object 25 – 50 pounds.
Far acuity: ability to see clearly at 20 feet or more.
Near acuity: ability to see clearly at 20 inches or less.
Depth Perception: ability to judge distance and space relationships.
Field of Vision: ability to see peripherally.
Accommodation: ability to adjust vision to bring objects into focus.
Color Vision: ability to distinguish and identify different colors.

Working Environment:

Extreme Heat: temperature hot enough to cause marked bodily discomfort
Temperature Changes: variations in temperature from hot to cold.
Wet: frequent contact with water or other liquid.
Noise: sufficient noise to cause distraction or possible hearing loss.
Atmospheric Conditions: conditions that affect the skin or respiratory system.
Exposed to hazards from electro/mechanical/power equipment.
Working with and possible exposure to radiation hazards.
Subject to injury from moving parts of equipment.

Education Requirement:

Graduation from high school or GED Certificate including or supplemented by completion of course work in Algebra, Geometry, and Trigonometry.

Experience Requirement:

Two years of experience in sub professional engineering including one year of experience in construction working with concrete, asphalt, soil or related materials.

Education/Experience Equivalency:

Additional appropriate education may be substituted for the minimum experience requirement except for the one year of experience in construction working with concrete, asphalt, soil, or related materials.

Licensure and/or Certification:

Possession of a valid driver's license at the time of application.

CLASS DETAIL

FLSA CODE: Non-Exempt

ESTABLISHED DATE: 09/16/1995

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REVISED BY: Patricia Anderson

CLASS HISTORY 4/2010 - This class specification was revised and updated as part of the Technical Engineering Study (2010).