

Missouri Department of Transportation

Code: R04780

Title: Chemist

Exemption Status: Non-Exempt

Grade: 11

Job Description

Effective Date 12-01-2013

Replaces (Effective Date) 04-01-2006

General Summary The chemist conducts entry-level chemical and physical tests and analyses by gravimetric, volumetric, and potentiometric methods, using specialized instruments to determine properties and ensure compliance with specifications. Responsibilities are performed under direct supervision.

Minimum/Required Qualifications Bachelor's Degree: Chemistry

Supervisory Responsibilities None

Location Central Office - Construction and Materials

Special Working Conditions/Job Characteristics Job requires exposure to moderately adverse and undesirable environmental conditions.

Job requires moderate physical activity.

Job may require operation of vehicles to plow snow and spread ice control materials.

Examples of Work

- (1) Conducts quantitative and qualitative analyses of bituminous materials, paints, soil fertility, metals, concrete, reflective materials, and other materials used in the construction and maintenance of the state highway.
- (2) Performs calculations, maintains records, tracks materials, and prepares reports on all testing activities and results.
- (3) Demonstrates test procedures during on-site American Association of State Highway and Transportation Officials (AASHTO) Materials Reference Laboratory and the Cement and Concrete Reference Laboratory inspections, maintains assigned Quality Systems Manual, and accurately analyzes proficiency samples as required to maintain national laboratory accreditation.
- (4) Follows necessary procedures to properly handle and dispose of hazardous and carcinogenic waste generated by laboratory testing.
- (5) Calibrates, repairs, and maintains precision test equipment including pycnometers, Ph meters, thermometers, and other test equipment.
- (6) Utilizes specialized testing equipment such as infrared spectrophotometer and inductively coupled plasma spectrophotometer to conduct tests necessary to increase proficiency in equipment usage.

- (7) Monitors supplies and equipment for availability, and requests the re-supply of chemicals and glassware as needed.
- (8) Provides technical support and training to department personnel.
- (9) Lifts and moves barrels, boxes, or containers of chemicals and samples; items are lifted or moved by hand, cart, or other methods.
- (10) Performs other responsibilities as required or assigned.

The Missouri Department of Transportation promotes an equal opportunity workplace that includes reasonable accommodation of otherwise disabled applicants and employees. Please see your manager should you have any questions about this policy or these job duties.