

ASSISTANT ENVIRONMENTAL CHEMIST (ENVIRONMENTAL FACILITIES)

DISTINGUISHING FEATURES OF THE CLASS: Under supervision of a higher level professional, an incumbent in this position is responsible for performing, conducting and interpreting various environmental chemical, physical and bacteriological analyses of water, wastewater, estuarine water and other environmental materials, for the detection of elements and compounds following established New York State and Environmental Protection Agency procedures to insure that all tests adhere to established standards of proficiency. The incumbent must maintain a satisfactory rating of performance for those procedures for which approval has been granted to the laboratory by the New York State Department of Health. The incumbent in this position will be designated laboratory director of the laboratory they supervise; therefore, the incumbent must have and must maintain credentials which are approved by the New York State Department of Health. This position may provide instruction to subordinates in laboratory procedures or specific chemistry analysis. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Evaluates and prepares samples for analysis utilizing the most effective or appropriate chemical techniques;

Performs and interprets environmental chemistry and physical analyses of drinking water, raw and processed waste, sludges and ashes for nitrates, nitrites, Kjeldahl nitrogen, ammonias, chlorides, hardness, alkalinities, solids, chemical oxygen demand, biochemical oxygen demand, oils and greases, etc., utilizing colorimetric, titrimetric, extraction, distillation and gravimetric techniques and analytical procedures as required by the State of New York and used in U.S. Environmental Protection Agency laboratories for the examination of ground and surface waters, domestic and industrial waste effluents, and treatment process samples;

Performs statistical analyses (i.e.: linear regression, standard deviation) utilizing spike samples, duplicate samples, etc. in order to evaluate instruments and analyses data;

Maintains quality control through the preparation and standardization of reagents and standards, and the generation of standard curves using reference and primary standards;

Performs analyses on quality assurance reference samples as required by current guidelines, which include initial calibration verification and continuing calibration verification to assure stability of the instruments;

Maintains assigned areas, instrumentation and equipment in a clean and safe manner and at operational readiness; troubleshoots and does repairs when necessary;

Performs environmental bacteriology examinations by means of culture and microscopic examinations to determine the presence of organisms pathogenic to humans as required;

Assists in the process control of a wastewater treatment plant using results obtained from chemical analysis;

EXAMPLES OF WORK: (Cont'd)

Performs quality control on all media, biochemicals, reagents and stains by use of known organisms;

Prepare reagents and a variety of stains and special media;

Interprets the results of examinations to insure adherence to quality control standards;

May be required to testify in court or before other administrative hearings regarding results of examinations;

Assists in gathering statistical data for monthly and other reports;

Maintains inventories of supplies as well as assisting in the purchasing of supplies;

Participates in the New York State Department of Health proficiency testing programs in the assigned areas of discipline;

May instruct trainees or subordinates in a specific chemical analyses or general laboratory procedures;

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, e-mail and database software in performing work assignments;

May perform other incidental tasks, as needed.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Good knowledge of environmental bacteriological and chemistry laboratory procedures, techniques and safety precautions; knowledge of instrumental methods of analyses, skill in the use, operation and care of laboratory equipment; ability to compile and present data in a clear and concise manner; ability to communicate effectively both orally and in writing; ability to follow detailed oral and written instructions; ability to plan, organize and supervise the work of subordinate laboratory personnel in the performance of laboratory tasks and analyses; ability to research new methods and procedures and prepare reports of findings; ability to read, write, speak, understand, and communicate in English sufficiently to perform the essential duties of the position; ability to use computer applications such as spreadsheets, word processing, e-mail and database software; thoroughness; dependability; initiative; judgment; integrity; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: A Bachelor's Degree* including 16 credits in chemistry or biology; and 4 credits in microbiology and two years experience in an environmental chemistry laboratory or related chemistry experience in instrumentation or methodology used in an environmental chemistry laboratory.

*SPECIAL NOTE: Education beyond the secondary level must be from an institution accredited or recognized by the Board of Regents of the New York State Education Department as a post-secondary, degree-granting institution.

SUBSTITUTIONS: A current Wastewater Treatment Plant Operators certificate issued by the NYSDEC or 3 credits in sanitary microbiology may be substituted for the credits in microbiology.

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Job Group: X