DIVISION: Strategic Planning & Development
DEPARTMENT: Project Engineering

MAXIMUM # OF OPENINGS: 1
JOB TITLE: Power (Mechanical) Engineer
Market Rate: Engineering & Scientific, Grade 4 - 5

GENERAL SUMMARY OF DUTIES:
Responsible for power engineering activities related to designing, constructing, operating and maintaining electric, water, steam, and chilled water production facilities, transmission and distribution facilities and common facilities. Most projects will involve some or all of the following activities: project management, investigations, studies, estimating, economic evaluations, budgeting, scheduling, designing, drawing development and drafting, construction, training and start-up activities.

ESSENTIAL FUNCTIONS:
Provides technical knowledge and design services related to power plant process systems including steam, condensate, feedwater, fuel, and balance of plant systems. Communicates with internal and external customers to determine their specific needs and concerns, coordinates activities, addresses complaints, and provides feedback and status and follow-up to ensure complete customer satisfaction within the framework of BWL policies and procedures. Develop project scope documents, justifications, budgets, schedules, cost estimates, design concepts, specifications, drawings and critical design calculations. Develop project documents, review and evaluate project proposals, direct bid negotiations, complete bid evaluations and recommend awards in compliance with purchasing policies and procedures. Ensure project needs for administrative approvals, legal/safety/environmental reviews, permits, easements; licenses, etc. are identified, properly obtained and complied with in a timely manner. Complete assignments within appropriate quality guidelines, budgets and schedules to achieve overall objectives. Ensure that project documents, drawings, and records are properly monitored, filed and maintained. Studies monitors and evaluates systems, equipment and structures to develop project plans, scopes and conceptual designs using engineering studies, field investigations, O & M records and data, tests, customer input, design and operating/performance criteria, plant operations and maintenance personnel input, outage requirements, etc. Keep abreast of industry laws, codes, standards and regulations. Follow and enforce the BWL Safety Manual and wear personal protective equipment as required. Attend training for safety awareness or skills improvement as required by supervisor, BWL or governmental agency such as MIOSHA.

JOB SPECIFICATIONS:

KNOWLEDGE/SKILLS/ABILITIES/BEHAVIORS
Must be a Licensed Professional Engineer in the State of Michigan (or have the ability to obtain the license within six months) with a minimum of seven years of demonstrated experience in power engineering design, consulting, or plant experience. Must have a working knowledge of ASME B31.1 Power Piping; B31 codes as they pertain to piping, valves and fittings; ASME Boiler & Pressure Vessel Code Sections I, IIA & IID; and State of Michigan Boiler Code. Successful candidate will also be experienced in Microsoft Office, Auto-CAD, and Project Scheduling software (e.g., Primavera or MS Project).

Preferred candidate will have experience specific to pulverized coal fired plants and natural gas fired combustion turbines with heat recovery steam generators, and will also be familiar with piping design, hanger design and pipe stress analysis.

PHYSICAL REQUIREMENTS:
Field inspections and measurements require traversing various terrains (including construction sites, operating plants, walking across grating, confined spaces), climbing, ability to observe site conditions, stooping, bending, kneeling and crouching. Able to be fit with respirator. Ability to lift materials weighing up to 30 pounds. AutoCAD and other computer usage requires visual acuity and physical dexterity to use monitor, develop drawings and computerized sketches and to input data using keyboard, mouse, trackball, etc. Ability to retrieve information from handwritten and typed design, reference and operational manuals, computerized data and information systems and drawings. Contacts with design personnel, vendors, construction crews, customers, and others require good oral and written communication skills. Must be able to drive a vehicle. Frequently required to sit, talk, hear and listen. Must provide own transportation to offsite meetings, plants, and construction sites on demand.

WORKING CONDITIONS:
Normal office environment with frequent field exposure to operating plants and construction sites involving excessive heat, cold, dust, dirt, noise, heights etc.

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