UTILITIES CONTROL SYSTEMS SUPERVISOR

JOB DESCRIPTION

Classification Responsibilities: A Utilities Control Systems Supervisor (UCSS) is responsible for performing highly complex technical work and supervising technical personnel involved in the development, installation, programming, upgrade, maintenance, security, and support of the Supervisory Control and Data Acquisition (SCADA) system, which consist of servers, network, Master Terminal Units (MTUs), Remote Telemetry Units (RTUs), and Programmable Logic Controllers (PLCs). The SCADA controls, monitors, collects, and records process variables, events, and alarms from gas, electric, water, and wastewater facilities including substations, wells, pump stations, lift stations, and plants. The UCSS is responsible for the overall SCADA system for the Water Resources and Energy Resources Departments and serves as a backup to PDIT for overseeing the maintenance, operation, and troubleshooting of the Facilities Security System (includes Field Cameras, DVRs, and Computer Terminals used for Security Monitoring). This class also has the following additional responsibilities: serving as a primary point of contact and liaison with the Information Technology Department; developing standards and specifications for SCADA (examples: standards for wiring, equipment, system security, and routing protocol); reviewing proposals and overseeing projects to ensure technical and departmental requirements are met; initiating or participating in network and data systems analysis studies; forecasting project costs and helping with budgeting for SCADA, network, and related automation equipment; and performing other duties as assigned. An employee in this class is required to use appropriate safety equipment and follow safety procedures in performing assignments. This class performs related duties as required.

Distinguishing Features: This class ensures that the work performed by subordinates complies with applicable safety standards and operating procedures, as well as meeting the specifications set forth in the construction plans and/or Operation and Maintenance Manuals. This class also provides guidance to administrative and management staff in making decisions regarding utilities network, SCADA, and related systems. This includes preparing short and long term strategic plans concerning automation for the department, establishing priorities regarding Control Systems projects, and deciding on computer hardware/software to be purchased. Work requires considerable independent judgment and initiative in combining a broad scope of technical knowledge in software, hardware, networks, and applications. Employees in this class are required to participate in team on-call support, 24 hours a day, 7 days a week. This class is FLSA exempt-administrative.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, and experience equivalent to graduation from an accredited college or university with a Bachelor's Degree in Computer Science, Computer Information Systems, Business Administration, or related field. Extensive (5+ years) experience in the installation, maintenance, calibration, configuration, programming, and troubleshooting of SCADA network including PLC programming. A minimum of two years of supervisory or lead experience is also required.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire or promotion date. Because of the confidential and sensitive nature of information handled, successful completion of a background investigation is required *(by assignment)*. Must successfully complete operator qualification training administered by the Energy Resources Department within 18 months of hire or promotion into the class and must retain qualification throughout employment in order to work on the City of Mesa's natural gas system.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. None.

ESSENTIAL FUNCTIONS

Communication: Communicates with other City employees, Information Technology Department (ITD) personnel, vendors, management, contractors, and other government agencies in order to identify problems or required changes, communicate recommendations and specifications, coordinate the implementation of solutions, provide project status reports, design system requirements, and purchase/install automated systems. Communicates with management to keep them informed and seek directions. Communicates with team members in order to maintain continuity and quality of customer service. Instructs and/or trains others regarding computer systems design, documentation, programming, and/or testing and debugging techniques. Communicates with subordinates and other City personnel to coordinate construction projects, task assignments, and technical issues. Prepares written performance appraisals on subordinate personnel. Prepares a written inventory on supplies and equipment. Assists in and prepares bid specifications for new installations and renovation projects. Prepares written documents such as memos, project plans, reports, etc., and technical documentation, with clearly organized thoughts, using proper sentence structure, punctuation, and grammar.

Manual/Physical: Reviews the work products of others to ensure compliance with standard operating procedures, federal or state regulations, or other standards/guidelines. Inspects, monitors, and evaluates work related conditions or objects, such as utility computer network and SCADA related equipment, printers, terminals, and wiring to determine compliance with prescribed operating and safety regulations/guidelines including manufacturer's specifications and City Management Policy. Conducts and directs field tests of controls and equipment. Operates a half ton pickup truck requiring a standard Class D Arizona Driver's License to inspect field locations and make equipment repairs. Distinguishes colors to identify color-coded cable, wiring, and electronic components. Moves hardware weighing up to 75 pounds using a cart or other aid when necessary. Enters data into a personal computer to generate reports and budgets. Reads blueprints and schematics. Monitors expenditures for equipment and supplies. Meets scheduling and attendance requirements.

Mental: Plans, organizes, and directs the activities related to emergency response and the design, acquisition, installation, and modification of departmental automation and controls equipment. Plans, assigns, supervises, prioritizes, evaluates, and reviews the work of professional and technical personnel. Prioritizes, assigns, and responds to service calls. Resolves procedural, operational, technical, and other work related problems by contacting vendors, reviewing procedures, and conducting audits. Documents requirements for new or improved information systems, and assists subordinates and ITD personnel in developing and implementing such systems. Develops policies, procedures, technical standards,

specifications, and security guidelines related to utilities network and SCADA systems. Develops short and long-term plans/goals regarding departmental automation and information systems. Finds creative solutions to multiple complex interrelated systems and departmental needs. Utilizes complex circuitry and programmable control knowledge to diagnose and correct problems encountered. Understands blueprints and schematics. Determines equipment, materials, supplies, staff, and other resources needed to complete assigned projects. Comprehends and makes inferences from written material.

Knowledge and Abilities:

Knowledge of:

basic data processing procedures, operations, data flow, and records maintenance;
network architecture and protocols including Ethernet, IP, and other SCADA hardware and software;
programmable logic controller applications and/or programming;
electrical theory;
solid-state electronics theory and practice;
the installation, maintenance, and repair procedures for telemetering and PLCs;
the capabilities and limitations of currently available controls instrumentation and telemetering devices;
safety procedures and practices related to electronic and electrical work;
general principles and practices of employee training, evaluation, supervision; and
basic budgeting principles and practices.

Ability to:

construct, install, maintain, and repair a variety of electronic controls, SCADA network, telemetering devices, and related components;
initiate personnel actions including hiring, terminating, and disciplinary actions;
plan and manage the work of technical personnel through organizing, motivating, and evaluating performance objectively;
logically analyze complex systems, problems, or conflicting requirements and develop solutions;
think conceptually, observe and evaluate trends, analyze data, draw logical conclusions, and make sound recommendations; and
establish and maintain effective working relationships with management, coworkers, other utility officials, customers, and subordinates.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised 10/24 – update wording in Requirements
MZ/sb/eb

CS5504.DOCX	PAY GRADE: 61
EEO-O/A	IND-9410
JOB FCTN-TEC	SWORN-N
Non-DOT Safety and Security-Y	Non-DOT Random-N
CDL-N	DOT-N
RESP-N	INCREMENTS 47-200