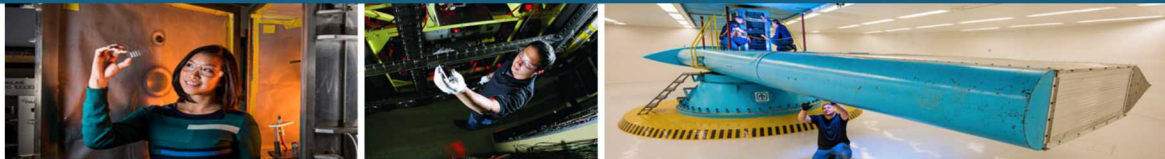
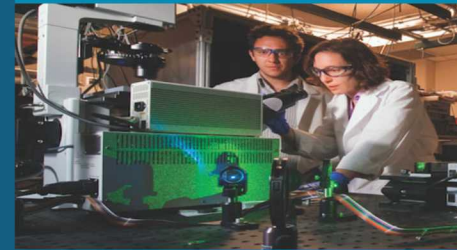




# Quality Job Family Descriptions



Presented to Longenecker and Associates

PRESENTED BY

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Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia LLC, a wholly owned subsidiary of Honeywell International Inc. for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.



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Note: These descriptions are not intended to be complete statements of every aspect of the listed position, but rather to act as a guide to the essential functions to be performed by the member. Assigned functions of a job may vary, and other duties and responsibilities may be assigned or changed at the discretion of management.



## **JOB DESCRIPTION**

**Job Title: Administrative Support**

**Job Family: Quality**

**FLSA Status: Non-Exempt**

### **JOB SUMMARY:**

Provides administrative support, performing a wide range of projects and tasks and a variety of generalized business-related activities.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Performs administrative support tasks for a specific function, project, or organization.
- Gathers, collects, records, tracks, and verifies data and information from multiple sources.
- Reviews and analyzes data and information and reconciles report discrepancies.
- Uses common office software and proprietary software to compile and generate reports, statistics, timelines, tables, and graphs; to review status of projects and budgets; and to create presentations.
- May design processes to enhance workflow.
- Assists in implementing and administering Sandia National Laboratories' policies and programs and provides guidance, interpretation, and administrative assistance on a wide variety of procedures.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Knowledge of and experience with general administrative services and activities.
- Knowledge of and experience with common office software.
- Knowledge of governmental regulations and potential environmental impacts related to administrative practices and assigned business function.
- Excellent oral and written skills, including proofreading, grammar, spelling, punctuation, accuracy, and attention to detail.
- Excellent customer service skills.
- Ability to effectively work in a team environment and interact with all levels of internal and external personnel, including the ability to network with senior internal and external administrative personnel.
- Demonstrated ability to organize, prioritize, and follow through to completion on multiple tasks, often under strict deadlines, frequent interruptions, and competing priorities.
- Ability to work with sensitive information and classified matter.
- Ability to model behaviors that reflect Sandia's core values.
- Demonstrated analytical skills.



## **JOB DESCRIPTION**

**Job Title: Governance, Risk, and Compliance Analyst**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Combines processes for strategy management, enterprise risk management, compliance, and audit with powerful technology to provide deep analysis and insights into the performance of business and operational activities.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Improves, develops, implements, and drives critical business processes related to analytical and operating policies and practices, regulatory and legal commitments, quality assurance requirements, and business policies and procedures.
- Initiates and sponsors continuous improvement and strategic initiatives across functions.
- Work with the organization to analyze and document current business operating processes and recommend areas for improvement; supports the organization in implementing improvements to operational systems, processes, and policies.
- Monitors and updates processes through the effective use of metrics and measures and regularly updates performance metrics for areas such as staff capacity, performance against target, and compliance.
- Leads resource allocation across business units.
- Manages technology planning and development initiatives ensure consistent application.
- Adheres to enterprise mandates.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Strong understanding of information technology and data management processes.
- Experience in business process management and knowledge of process mapping and Six Sigma.
- Experience in project management and working in a regulated environment.
- Ability to work effectively within an organization's complex decision making and organizational structures.
- Highly-developed oral and written communications skills.
- Comprehensive understanding of business management, including finance, administration, technology, staff development, and operations.
- Articulate, calm under pressure, and ability to influence others and manage change.
- Skilled in conducting research, gathering a variety of internal and external information, and synthesizing this information into a cohesive, concise analysis.
- Skilled with common office software and relevant specialty software, and relevant writing skills.





## JOB DESCRIPTION

**Job Title: Lean Six Sigma Black Belt**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Integrates a broad knowledge of engineering, business, and Lean Six Sigma (LSS) disciplines to drive continuous improvement across Sandia National Laboratories. Helps organization leaders use LSS to promote continuous improvement and effectively achieve Sandia's mission. Uses engineering and business knowledge of products, services, and processes, along with LSS principles and tools, to design, develop and deploy robust products and processes, and execute data-driven decisions that achieve or surpass customers' schedule and quality goals. Relies on judgment and extensive experience with LSS to plan and accomplish goals. Performs a variety of tasks, both tactical and strategic. Leads and directs the work of Green Belts and members of the workforce not trained in LSS principles. Uses statistics, problem solving, and problem prevention tools to improve customer satisfaction. Uses LSS methodologies, tools and processes and applies that knowledge to Black Belt Projects. Provides managerial, statistical, and problem-solving methods to enable the organization to achieve business process improvement capabilities. Exercises a wide degree of creativity and latitude.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Drives implementation of the "Plan-Do-Check-Act" cycle at all levels and functions of the organization.
- Optimizes processes for all functions and all levels of Sandia using LSS principles and tools, focuses on improving processes from end-to-end, and extends improvements to suppliers and customers.
- Leads and directs cross-functional teams empowered to execute the LSS methodology and directs them towards data-driven decisions and solutions.
- Uses product, service, and process knowledge to develop principle-based systems for performing work at Sandia.
- Uses LSS tools and the scientific method to solve technical and nontechnical problems.
- Coaches and mentors Sandia's leadership team and members of the workforce on LSS principles, systems, and tools and how to become better Lean Leaders.
- Collects and analyzes data to identify, prioritize, and systematically address continuous improvement opportunities for products and processes.
- Assesses the current state of LSS at Sandia by measuring and reporting on continuous improvement involvement and maturity metrics; analyzes data to identify gaps and countermeasures; and works with leaders to set expectations and goals.
- Conducts benchmarking activities to learn from best-in-class companies and uses LSS tools and processes, applying that knowledge to internal processes.
- Uses statistics, problem-solving, and problem-prevention tools to improve processes and customer satisfaction.
- Delivers Lockheed Martin's LM21 Green Belt and Black Belt training and Sandia's LSS Overview classes to Sandia's workforce.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Strong holistic, systematic, and closed-loop thinking abilities; strong quantitative and analytical skills; and a strong understanding of and experience with LSS principles, systems, and tools.
- Demonstrated ability to create change in an organization.

- Demonstrated strong interpersonal, team facilitation, communication, training, coaching, mentoring, and presentation skills, and the ability to interface with a variety of customers and levels of management.
- Experience in manufacturing, engineering, business process improvement, and planning and execution of projects.
- Experience in strategic planning or developing and implementing strategic plans.
- Ability to effectively communicate and articulate continuous improvement principles to the engineering and science community.
- High level of energy and enthusiasm and the ability to motivate others.
- Experience with common office software and applicable statistical tools.
- Broad understanding of Sandia's organization, policies, and procedures.
- Broad understanding of the technical products, services, processes, and business systems used at Sandia.



## **JOB DESCRIPTION**

**Job Title: Manager, Quality Engineering**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Oversees and manages members of the workforce within the department. Coordinates subordinate employee recruitment, selection, training, performance assessment, work assignments, salary, and recognition and disciplinary actions. Ensures that customer needs are satisfied by managing and coordinating specific deliverables, overall program and project plans, budgets, structures, schedules, and staffing requirements. Balances the acquisition and development of staff resources, capabilities, and existing and future projects or programs.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Guides the work of the department.
- Understands the work of the organization and connects the work and expertise of the organization with potential beneficiaries, collaborators, and customers.
- Promotes excellence by managing and coordinating specific deliverables, overall program and project plans, budgets, structures, schedules, and staffing requirements.
- Ensures that customer needs are satisfied through the creation of trust-based relationships.
- Applies organization knowledge and experience to independently judge work quality, performance, and alignment of results with customer expectations.
- Oversees and manages members of the workforce, within the organization, including hiring, professional development, and assessment and performance management, consistent with mission of the organization.
- Counsels and assists employees and management on government legislation, U.S. Department of Energy contract compliance, and Sandia National Laboratories' policies or procedures to ensure compliance.
- Manages the response to customer requirements and applies judgment based on these requirements to define and establish metrics to ensure delivery of products on time and within budget.
- Manages the synthesis and understanding of requirements and devises methods to ensure that requirements are met.
- Investigates relevant industrial standards and benchmarks continual improvement of processes and products.
- Manages audits, assessments, and evaluations of system elements and determines proper corrective and preventive actions.
- Manages the analysis of failures and performs cause analysis to address process- and product-related concerns.
- Applies quality concepts to the design and implementation of processes, procedures, metrics, tools, and techniques throughout the quality management system.
- Provides quality engineering expertise for system sustainment and improvement.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Ability to model behaviors that reflect Sandia's core values.
- Expertise and competencies appropriate to the organization.
- Demonstrated knowledge in department roles.

- Knowledge and demonstrated characteristics of Sandia's Leadership model.
- Demonstrated ability to successfully manage and complete multiple programs and projects.
- Knowledge of company policies and procedures and the ability to recommend modifications to Sandia's Corporate Policy System operating policies.
- Excellent oral and written communication skills and customer service skills.
- Ability to interact effectively with all levels of internal and external customers, including the ability to build and manage effective working relationships.
- Demonstrated ability to deliver results, effectively manage people, and guide multidisciplinary teams.
- Ability to mentor and lead the organization on department tasks and organizational goals and objects.
- Knowledge of technical business development (may only apply to certain organizations).
- Knowledge of Sandia's safety and security rules and guidelines.
- Ability to organize, prioritize, and follow through to completion on multiple tasks.
- Ability to work with sensitive information and classified matter.





## **JOB DESCRIPTION**

**Job Title: Product Acceptance Inspection Technologist**

**Job Family: Quality**

**FLSA Status: Non-Exempt**

### **JOB SUMMARY:**

Independently verifies that all nuclear weapon components for which Sandia National Laboratories has the production assignment meet design specifications and product quality requirements. Serves as the primary point of contact with the National Nuclear Security Administration (NNSA) Sandia Site Office (SSO) for all product acceptance activities. Exercises authority delegated from NNSA/SSO to accept products or apply NNSA stamps to specific product lines on NNSA's behalf.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Analyzes component design drawings, mechanical and electrical drawings, and engineering authorizations to determine product quality attributes that need to be verified during the product acceptance review. Confirms that applicable engineering authorizations are listed in the procurement contract.
- Prepares the component verification plan for each product acceptance.
- Communicates with line organizations and external suppliers to schedule product acceptance.
- Examines product fabrication records and test results to ensure that design and product quality requirements are met.
- Performs dimensional measurements of materials and components and mechanical and electrical testing to ensure that design and product quality requirements are met.
- Communicates product quality issues to line organizations or external suppliers for timely resolution.
- Prepares quality verification reports to document inspection results and any identified discrepancies.
- Accepts or rejects products based on the results of records examination and product inspections.
- Submits quality verification reports to NNSA for use in their product quality inspections.
- Provides product acceptance-related assistance and counsel to NNSA as requested.
- Trains external suppliers and product realization teams to use a standard, preventive approach, including how to identify and verify quality attributes, to ensure defect-free product acceptance.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Ability to read, analyze, and understand component design drawings, mechanical and electrical drawings, and engineering authorizations.
- Ability to use Sandia's engineering systems to retrieve drawings and engineering authorizations.
- Ability to perform material and component dimensional measurements and mechanical and electrical testing, including product test data analysis.
- Knowledge of the nuclear weapons complex's product realization, design, production, and product qualification processes.
- Knowledge of NNSA's product acceptance process and quality standards.
- Knowledge of general production concepts, processes, and systems.
- Excellent interpersonal skills and experience interfacing with a wide variety of internal and external contacts.
- Ability to work independently or collaboratively as part of a team.



## **JOB DESCRIPTION**

**Job Title: Production Process Control Technologist**

**Job Family: Quality**

**FLSA Status: Non-Exempt**

### **JOB SUMMARY:**

Inspects and audits purchased parts, materials, equipment, and quality control programs. Interprets manufacturing documents to approve or reject units or systems for in-process or final assemblies. Performs sampling and testing of incoming components and raw materials. Determines or assists in determining methods and procedures necessary for inspection.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Ensures that products meet defined quality standards.
- Maintains identity control in raw materials, packaging, product manufacturing, and finishing areas.
- Audits manufacturing documents and results of analytical tests to determine if product specifications, including strength, quality, purity, and fill-weight, are met.
- Ensures that established sampling procedures are followed.
- May write or assist in writing product specifications and quality control procedures.
- Acts as final control checkpoint, authorizing in-process release.
- May determine the acceptability, quality, and integrity of products manufactured or packaged by outside contractors. May verify contractor inspection systems and sampling techniques.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Knowledge of quality control methods and practices in a single discipline or multiple disciplines.
- Ability to conceptualize and communicate major elements of process sampling.
- Skill with frequent use and application of technical standards, principles, theories, concepts, and techniques.
- Knowledge of Sandia National Laboratories' test and measurement and inspection policies, practices, and procedures.
- Knowledge and experience with electrical design, assembly, repair, and installation processes.
- Knowledge of electrical components and ability to determine value, polarity, and proper orientation.
- Knowledge of machining and mechanical assembly practices.

## JOB DESCRIPTION

**Job Title: Quality Assurance Specialist**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Facilitates organizations to achieve successful outcomes and to employ work practices that are compliant with regulatory and contract requirements. Using Plan-Do-Check-Act and defect prevention principles and methodologies, enables a broad range of continuous performance improvement activities. Uses systems and process methodologies to provide input for optimizing programs, policy, and enterprise functions. Develops and recommends processes for decision making, policy construction and program design and execution. Performs analyses, conducts investigations, formulates and recommends corrective and preventive actions for specific issues. Develops and monitors performance metrics.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Determines whole-system quality-related requirements, including program functions, customer needs, supplier input, and system controls.
- Establishes, maintains, and improves quality policies, processes, procedures, and tools.
- Develops and manages performance metrics and conducts data analysis to evaluate the success of end-to-end processes and quality improvement initiatives. Tracks, trends, monitors, and reports on performance results.
- Develops business cases and recommends priorities and actions for improvement.
- Assesses processes and systems and conducts risk analysis, root cause analysis, corrective or preventive actions, lessons learned, and benchmarking. Tracks corrective and preventive actions to completion.
- Provides guidance to achieve or retain external certification (e.g., ISO 9001, AS9100) of the quality management system.
- Executes performance assurance processes in compliance with contractual and regulatory requirements.
- Coordinates and communicates feedback to owners of performance assurance policies.
- Contributes to strategic planning activities and facilitates management reviews.
- Ensures operation and continuous improvement of document control and records management processes.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Expertise in the analysis, design, development, and implementation of technical, performance-based, and/or quality assurance systems.
- Expertise in the development and implementation of operating policies, processes and procedures.
- Proficiency in manufacturing, business process improvement, planning and implementing projects.
- Experience in applying Quality Tools (e.g., RCA, Statistics, Lean methodology, Six Sigma).
- Experience in auditing and assessing processes and systems.

- Experience and demonstrated skill in conducting benchmarking, investigating alternative solutions, and recommending solutions for problems that affect performance results.
- Strong writing, communication, facilitation, critical thinking and organizational skills.
- Ability to work in a team-focused environment, exercise discretion, and maintain confidentiality of information.
- Ability to conceptualize and communicate major elements of performance assurance to both technical and non-technical personnel.
- Ability to develop, implement, verify and validate processes to meet requirements.
- Ability to exercise judgment in selecting methods, techniques, and evaluation criteria for achieving results (e.g. Strategic planning, decision-making models).





## **JOB DESCRIPTION**

**Job Title: Quality Assurance Technologist**

**Job Family: Quality**

**FLSA Status: Non-Exempt**

### **JOB SUMMARY:**

Works with engineers to implement quality assurance programs, procedures, and controls. Conducts continuing inspections and audits and enforces specifications and regulatory agency requirements. Establishes and executes inspections before systems are processed or installed. Monitors work practices and ensures that corrective actions are implemented.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Implements quality assurance programs, procedures, and controls to ensure that the performance and quality of products and services conform to standards.
- Works directly with programs and projects to conduct continuing inspections and audits and to enforce specifications and regulatory agency requirements.
- Establishes and executes inspections before systems are processed or installed.
- Monitors work practices and ensures that corrective actions are implemented.
- Works with engineering and development during new product or facility start-ups and implements key checkpoints for new products and processes.
- May deal with the acceptability of labeling and packaging materials and maintain an inspection and approval system.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Skill in the preparation and presentation of test and measurement results.
- Skill with frequent use and application of technical standards, principles, theories, concepts, and techniques.
- Knowledge of Sandia National Laboratories test and measurement and inspection policies, practices, and procedures.
- Knowledge and experience with electrical design, assembly, repair, and installation processes.
- Knowledge of electrical components to determine value, polarity, and proper orientation.
- Knowledge of machining and mechanical assembly practices.

## JOB DESCRIPTION

**Job Title:** Quality Engineer

**Job Family:** Quality

**FLSA Status:** Exempt

### **JOB SUMMARY:**

Applies technical, engineering, or science expertise to define, understand, and resolve complex problems. Designs, installs, and evaluates quality assurance process sampling systems, procedures, and statistical techniques; designs or specifies inspection and testing mechanisms and equipment; analyzes production limitations and standards; recommends revision of specifications when indicated; formulates or helps formulate quality assurance policies and procedures. May conduct training and audits on quality assurance concepts and tools. Interfaces with all other engineering components within the organization and with customers and suppliers on quality related issues. Uses formal quality and analysis tools, such as statistical process control theory, Plan-Do-Check-Act, Lean Six Sigma, Casual Analysis Techniques, and Defect Prevention to reduce operational, management, and production risks and prevent recurrence of problems.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Applies technical judgment in determining optimal application of engineering and technical practices to ensure the delivery of high-quality product.
- Applies engineering methods, tools and techniques to design, maintain and improve product and processes.
- Develops and operates quality control systems, understands the application and analysis of testing and inspection procedures, uses metrology and statistical methods to diagnose and correct improper quality control practices.
- Interprets technical drawings, product specifications and requirements in relation to product and process characteristics throughout the life cycle.
- Defines, selects, and applies various techniques including supplier qualification, certification, evaluation, ratings, performance improvement, etc.
- Identifies sources of design inputs such as customer requirements, regulatory requirements and how they translate into manufacturing.
- Identifies and applies various evaluations and tests to verify and validate the design of products and processes.
- Defines, identifies, and applies product and process control methods such as developing control plans, identifying critical control points, developing and validating work instructions, inspection equipment and instructions.
- Leads quality assurance, causal analysis, corrective action and preventive action analysis, and measurement related activities based on a defect prevention methodology implemented through Plan-Do-Check-Act.
- Defines, describes, and interprets the basic elements of a quality system, including design, planning, control, and improvement, documentation, quality standards from product and process design through quality cost systems, audit programs, etc.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Ability to solve complex problems in the absence of clear direction and initial understanding, and satisfy U.S. Department of Energy and Sandia National Laboratories quality related requirements and expectations.
- Understanding of quantitative methods such as statistical, mathematical or computational techniques and their application.
- Ability to implement tools and methodologies to improve product design and manufacturing processes and prevent defects.
- Ability to track, analyze, and identify trends in data to detect areas of risk and systemic issues, and provide effective solutions.
- Knowledge of human factors and motivation, familiarity with quality concepts and techniques, and the knowledge and ability to develop and implement management systems, audit and assess quality systems for deficiency identification and correction.
- Demonstrated knowledge in performance-based management or a quality discipline.
- Knowledge of quality principles including project and configuration management processes and methodologies.
- Ability to facilitate uncompromising, high-quality standards while maintaining effective working relationships.
- Ability to interact effectively with all levels of internal and external personnel, including the ability to build effective working relationships and build and lead diverse teams across the laboratories.
- Ability to identify and implement process improvements while adhering to standards and raising expectations.
- Ability to model behaviors that reflect Sandia's core values.
- Strong oral and written communication skills and interpersonal skills.



## **JOB DESCRIPTION**

**Job Title: Quality Systems Professional**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Establishes and oversees key aspects of the institution's quality program improvement efforts, such as developing and administering elements of the program, training and coaching employees, and driving change throughout the organization. Is a champion and change agent for high quality results institution-wide. Responsible for establishing and deploying strategic plans, policies, processes, procedures, and tools at the institutional level so quality improvement efforts will meet or exceed internal and external customers' needs and expectations.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Leads team efforts to establish and monitor quality program deployment initiatives and provides input and criteria for development of measurement systems to determine organizational performance improvement.
- Obtains information on the attitudes and practices of quality throughout the institution to aid in formulating and implementing an environment of continual improvement in achieving performance results.
- Establishes and deploys strategic plans, policies, processes, procedures, and tools at the institutional level that drive quality improvement efforts to meet or exceed internal and external customers' needs and expectations.
- Applies professional judgment in determining optimal application of quality management practices in the design, development, deployment, and execution of innovative quality related systems.
- Provides innovative approaches to solve complex problems by developing quality related plans and strategies for areas such as requirements infrastructure, work planning, and documentation.
- Uses various means to understand customers' requirements, such as design reviews and outreach learning and mentoring.
- Translates requirements (including contractual, regulatory, customer and external industry benchmark/certification) into quality management system related processes, tools, and practices.
- Designs and deploys processes and tools to meet customer requirements.
- Leads efforts to develop and document verification and validation methods for measuring effectiveness throughout all phases of operations and production.
- Leads quality assurance, causal analysis and resolution, preventive action analysis, measurement, and data analysis and trending related activities for systemic issues based on a defect prevention methodology implemented through Plan-Do-Check-Act.
- Provides expertise in quality related practices that detect and prevent defects in all phases of work.
- Based on requirements defines and establishes effectiveness measures and metrics to ensure consistent and predictable delivery of work related products and services.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Ability to solve complex problems in the absence of clear direction and initial understanding, and satisfy U.S. Department of Energy and Sandia National Laboratories quality related requirements and expectations.
- Knowledge of quality principles including change management, project management and configuration management processes and methodologies.
- Experience in applying Quality Tools (e.g., RCA, Statistics, Lean methodology, Six Sigma).
- Diverse experience in technical, management, or operational support functions, often external to Sandia.
- Demonstrated knowledge in performance-based management or a quality discipline.
- Ability to facilitate uncompromising, high-quality standards while maintaining effective working relationships.
- Ability to interact effectively with all levels of internal and external personnel, including the ability to build effective working relationships and build and lead diverse teams across the laboratories.
- Experience auditing, assessing, and improving quality processes and systems including the use of appreciative inquiry.
- Ability to track, analyze, and identify trends in data to detect areas of risk and systemic issues, and provide effective solutions.
- Ability to identify and implement process improvements while adhering to standards and raising expectations.
- Ability to write and maintain master project schedules.
- Strong oral and written communication skills and interpersonal skills.



## JOB DESCRIPTION

**Job Title:** Senior Manager, Quality & Performance Assurance

**Job Family:** Quality

**FLSA Status:** Exempt

### JOB SUMMARY:

Oversees and manages managers and members of the workforce within the group. Coordinates subordinate employee recruitment, selection, training, performance assessment, work assignments, salary, and recognition and disciplinary actions. Contributes to multiple aspects of Sandia's long-term quality and performance assurance policies, objectives and initiatives. Guides the organization and ensures meeting the group's objectives and deliverables. Manages the group's staff, facilities and capabilities to ensure compliance with applicable regulations and Sandia's policies and procedures. Assures adequacy of corporate policy that addresses Sandia's quality and performance assurance requirements and monitors implementation across Sandia to demonstrate corporate improvement. Oversees corporate quality management assurance and performance assurance system efforts, programs, systems, processes and procedures.

### PRIMARY DUTIES AND RESPONSIBILITIES:

- Teams with Center Level leadership to develop and implement the Corporate Level Quality Management and Performance Assurance System philosophy and strategies.
- Drives the implementation of the Corporate Quality Management and Performance Assurance System including the performance scorecard, measurement strategies, training and communication.
- Lead corporate level improvement efforts to improve consistency and efficiency across Sandia.
- Ensures that budgets, schedules, and performance standards are realistically set and attained and that objectives for Sandia and U.S. Department of Energy (DOE) requirements are effectively met.
- Interacts regularly with senior management. Interactions frequently involve special skills, such as negotiating with customers or management regarding matters of significance to the organization.
- Successfully integrates Corporate quality programs and influences Sandia leaders on matters of significance to the organization and Sandia.
- Directs the development of internal policies, procedures, and practices dealing with the quality and performance assurance, based on requirement, consensus standards, risk management, and benchmarks with relevant external organizations.
- Serves as interface to the Sandia Field Office, National Nuclear Security Agency, and DOE on implementation of Sandia's corporate quality and performance assurance system.

### KNOWLEDGE, SKILLS, AND ABILITIES:

- Ability to model behaviors that reflect Sandia National Laboratories' core values.
- Expertise and competencies appropriate to the organizations.



- Ability to develop and apply quantitative analysis approaches to support data driven decisions in the areas of quality and performance assurance.
- Ability to act with latitude to establish objectives and long-term goals, and measure and monitor results to track improvement over time.
- Demonstrated ability to successfully manage and complete multiple programs and projects.
- Demonstrated ability to deliver results, effectively manage people, and guide multidisciplinary teams.
- Ability to mentor management team and senior-level exempt professionals on future needs of the group.
- Understands Sandia's organizations, missions, and programs and represents the work group in all internal and external activities.
- Excellent communication skills, both oral and written.
- History of building relationships that are customer-oriented and effective in contributing to institutional, organizational, and team goals.



## **JOB DESCRIPTION**

**Job Title: Software Quality Engineer**

**Job Family: Quality**

**FLSA Status: Exempt**

### **JOB SUMMARY:**

Defines appropriate measures to ensure the quality and serviceability of new features and releases of deliverable software. Uses a multidisciplinary approach to software system engineering, modeling the interactions between all components and subsystems to verify and validate system functions. Formally defines problems and solution requirements. Identifies, grades, and documents potential risks and issues. Applies analytical methods from mathematics, science, and engineering, combined with independent assessments, to a variety of verification and validation activities. Verifies and validates systems and their interfaces with external systems. Evaluates defined system-level performance requirements and develops acceptance criteria for the system and sub-systems. Interfaces with customers and those responsible for developing, testing, and implementing the system and its elements.

### **PRIMARY DUTIES AND RESPONSIBILITIES:**

- Develops overall operating criteria to ensure the implementation of the software quality program according to project requirements and objectives.
- Reviews software systems design, change specifications, and plans against project or process requirements.
- Develops, modifies, and executes software test plans and analyzes and writes test standards and procedures.
- Uses systematic tests to identify software defects, analyzes test results to ensure existing functionality, and recommends corrective action, including isolating, reproducing, tracking, and fixing bugs.
- Consults with development engineers to resolve problems and provides feedback for use in technical appraisals of programming languages, systems, and computation software.
- Maintains and modifies test environments and configurations as needed and creates new test environments and configurations to meet test cases or problem recreation requirements.
- Documents test results to assist in debugging and modifying software.
- Represents the organization on project teams and may take a technical leadership role in the project.

### **KNOWLEDGE, SKILLS, AND ABILITIES:**

- Fundamental understanding of quality principles, methods, tools, and standards and experience in quality engineering processes.
- Knowledge and demonstrated application of engineering principles, theories, and concepts.
- Understanding of software system architecture and the ability to implement software development and maintenance processes.
- Ability to apply project management principles and techniques to software project planning, implementation, and tracking.
- Ability to define and apply product and process metrics and analytical techniques and to evaluate and manage risk.
- Thorough understanding of verification and validation processes, including detecting and removing defects.
- Basic understanding of configuration management processes.
- Experience with test automation and automation frameworks.

- Demonstrated ability to develop appropriate test methodologies.
- Proficiency in hardware, software, or operating systems environments.
- Proficiency in Java programming and experience with C, C++, and C#.
- General understanding of the business environment and the ability to evaluate the impact of software quality management principles on business objectives.
- Ability to foster teamwork and collaboration within and across work groups.
- Ability to communicate effectively, both verbally and in writing.