

U.S. DEPARTMENT OF ENERGY
OFFICE/FACILITY-SPECIFIC
QUALIFICATION STANDARD

PORTSMOUTH SITE OFFICE



OAK RIDGE OPERATIONS OFFICE

DECEMBER 1996
REVISION 0

CONCURRENCE AND APPROVAL

The DOE-Oak Ridge Operations Office (ORO) Portsmouth Site Office (PORTS) Manager is the management sponsor for this PORTS Qualification Standard. As the management sponsor, the PORTS Manager is responsible for reviewing the qualification standard to ensure that the technical content is accurate and adequate for its intended application and for ensuring that the qualification standard is maintained current. Concurrence with this qualification standard by the PORTS Manager is indicated by signature below.

The Training and Development Division (TDD) Director coordinates implementation of the technical qualification program and assists line managers in the development of ORO office/facility-specific qualification standards. Concurrence with this qualification standard by the TDD Director is indicated by signature below.

The ORO Assistant Manager for Enrichment Facilities (AMEF) is the approval authority for this qualification standard. Approval of this qualification standard by the AMEF is indicated by signature below.

CONCURRENCE:

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APPROVAL:

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Date

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PORTSMOUTH SITE OFFICE

The Portsmouth Site Office (PORTS) is a Department of Energy Oak Ridge Operations Office (ORO) organization. PORTS includes technical and administrative personnel who are assigned the responsibility to ensure the protection of the health and safety of DOE and contractor employees and the public, and to ensure the protection of government and public property and the environment at the Portsmouth Gaseous Diffusion Plant (GDP). In this role, PORTS staff perform numerous tasks and activities for supporting line management's objective for: the planning, coordination, execution, and oversight of operations of the GDP to assess compliance with DOE nuclear safety, materials control and accountability, and safeguards and security requirements; environmental restoration, waste management, and capital projects; uranium enrichment facilities under the cognizance of DOE; and lease administration with the United States Enrichment Corporation (USEC).

PURPOSE

The PORTS Office/Facility-Specific Qualification Standard defines the qualification competencies required for carrying out the duties and responsibilities outlined above and detailed on pages 4 and 5. This standard is part of the Technical Qualification Program (TQP) required by DOE Order 360.1, Training, and supplements the department-wide General Technical Base and functional area qualification standards. It contains the competency requirements PORTS staff assigned to the Technical Qualification Program need (as a composite) in order to perform assigned activities. Documented satisfactory completion of the competencies contained in this qualification standard ensures that the PORTS staff are qualified to fulfill their duties and responsibilities.

QUALIFICATION STANDARD DEVELOPMENT

This qualification standard has been constructed using information from PORTS position descriptions, PORTS procedures, Regulatory Oversight Agreement (ROA) procedures, DOE and ORO orders, and interviews with PORTS staff. The format of this document follows the department-wide functional area qualification standards developed by DOE Human Resources' Office of the Technical Personnel Program Coordinator.

APPLICABILITY

This qualification standard applies to selected PORTS staff, and other Federal personnel temporarily assigned to PORTS, who provide management direction or technical oversight that could impact the safe operation of an ORO defense nuclear facility.

IMPLEMENTATION REQUIREMENTS

The competencies contained in the Standard are divided into the following categories:

1. General Technical
2. Administrative
3. Regulatory
4. Management and Assessment

Each of the categories contains one or more competency statements indicated by bold print. The competency statements define the expected capabilities that an individual must possess. Each of the competency statements is followed by a listing of supporting knowledge and/or skill statements that further amplify and describe the intent of the competency. The supporting knowledge and skill statements are not additional requirements and do not necessarily have to be fulfilled to meet the intent of the competency.

All of the competencies identify either a familiarity level, working level, or expert level of knowledge, or they require the individual to demonstrate the ability to perform a task or activity. These levels are defined as follows:

FAMILIARITY LEVEL is defined as basic knowledge of or exposure to the subject or process adequate to discuss the subject or process with individuals of greater knowledge.

WORKING LEVEL is defined as the knowledge required to monitor and assess operations/activities, to apply standards of acceptable performance, and to reference appropriate materials and/or expert advice as required to ensure the safety of Department activities.

EXPERT LEVEL is defined as a comprehensive, intensive knowledge of the subject or process sufficient to provide advice in the absence of procedural guidance.

DEMONSTRATE THE ABILITY is defined as the actual performance of a task or activity in accordance with policy, procedures, guidelines, and/or accepted industry or Department practices.

This qualification standard contains a composite of all the competencies applicable to the PORTS staff as a group who are enrolled in the TQP. No one individual is expected to be

qualified on all the competencies. The PORTS Manager assigns to each participating PORTS member the specific competencies from this qualification standard that the participant is required to complete.

Exemptions are not used in this phase of the qualification program. Only those competencies assigned by management are required to be completed. The AMEF reviews the competencies selected for the PORTS Manager to complete.

Equivalencies may be granted for individual competencies based upon an objective evaluation of the employee's prior education, training, and/or experience. Documentation of equivalencies shall indicate how the competency requirements have been met. The supporting knowledge and skill statements should be considered when evaluating an employee's ability with respect to each competency requirement.

Competencies can be achieved in numerous ways including on-the-job training; formal training and education courses, on and off the job; self-study; rotational assignments; mentoring; etc. Classroom instruction, computer-based training, interactive television broadcasts, and self-study guides are available to individuals preparing to meet competencies in their qualification standards. Training courses used to acquire needed competencies should be selected with care so as to best satisfy the competencies.

DOE orders are frequently referenced as standards for competencies. Individuals assigned such competencies and those evaluating the performance must be aware that many DOE orders in the directive system are being deleted, consolidated, or phased out. When DOE orders and other documents are referenced in the qualification standard, the most recent approved revision should be used for study and evaluation.

TQP participants use this qualification standard in conjunction with their Technical Qualification Records to document implementation and completion of the office/facility-specific qualification requirements. Documented completion of the requirements of this qualification standard will be included in the employee's training record.

DUTIES AND RESPONSIBILITIES

The following duties and responsibilities may be assigned to PORTS staff whose position requires them to provide management direction or oversight that could impact the safe operation of a defense nuclear facility and who provide technical support to line management for review and assessment of management and operating (M&O) contractor programs.

1. Assure that United States Enrichment Corporation (USEC) maintains leased facilities in accordance with the most current approved lease between DOE and USEC and that operating contractor programs are consistent with DOE requirements.
2. Plan, direct, and conduct inspections at the GDP to ascertain whether the contractor is complying with the provisions of the Regulatory Oversight Agreement (ROA) and other applicable regulations.
3. Facilitate safe and efficient transition of Portsmouth GDP from DOE contractor to USEC with Nuclear Regulatory Commission (NRC) oversight.
4. Oversee all assigned program activities and serve as the Contracting Officer's Representative (COR), Contracting Officer's Technical Representative (COTR), and/or Contract Technical Monitor (CTM) for technical direction to the contractor(s) providing mission support and support services to the Portsmouth Gaseous Diffusion Plant (GDP).
5. Evaluate contractor performance and provide comprehensive input to performance evaluation committees for contractors operating in accordance with cost plus award fee (CPAF) contracts.
6. Review/assess changes and additions to regulatory requirements; evaluate and report potential impact of changes/additions on Portsmouth Site Office activities and projects.
7. Conduct self-assessments of Portsmouth Site Office processes, procedures, and practices. Identify and report accomplishments, strengths, weaknesses, and improvement areas.
8. Keep abreast of state-of-the-art technologies in assigned technical areas such as environmental restoration, uranium enrichment technology, safe industrial practices, and applicable codes and standards.
9. Evaluate Portsmouth GDP environmental compliance activities and contractor performance to ensure the adequacy and effectiveness of:
 - Technical performance
 - Plans, policies, and procedures
 - Management controls

- Regulatory compliance
 - Worker and public health/safety programs
 - Environmental monitoring
 - Quality assurance programs
 - Pollution prevention
 - Waste minimization
10. Ensure fulfillment of ORO obligations with respect to implementation of the National Contingency Plan (regarding unplanned releases of hazardous materials).
 11. Communicate with DOE-ORO and state and local governments to exchange information concerning Portsmouth GDP environmental restoration programs.
 12. Perform as liaison between DOE-ORO Portsmouth Site Office and the Federal Bureau of Investigation (FBI).
 13. Evaluate security programs at Portsmouth engaged in such activities as Highly Enriched Uranium (HEU) Refeed, special nuclear material (SNM) processing, uranium enrichment, nuclear material control and accountability (MC&A), security lease management, international security protocol, non-proliferation, and counterintelligence investigations.
 14. Coordinate with the Site, Field, and Headquarters in the overall administration, cultural assistance, permanent presence, security issues, procedures and notifications/reports, and overall logical efforts related to Russian Transparency and the International Atomic Energy Agency (IAEA) at Portsmouth.
 15. Conduct counterintelligence inquiries and investigations in accordance with the FBI.
 16. Serve as the Site Safeguards and Security Representative during activation of the Emergency Operation Center.
 17. Serve as a member of the Site Emergency Cadre.
 18. Oversee real properties and all security related areas for on-site tenants (e.g., Defense Logistic Agency and the Ohio Army National Guard).

REQUIRED COMPETENCIES

The competencies contained in this qualification standard are distinct from those competencies contained in the General Technical Base Qualification Standard and the series of department-wide functional area qualification standards. Participating individuals must complete the competency requirements of the General Technical Base Qualification Standard and a primary functional area qualification standard prior to or in parallel with the completion of assigned competency requirements in this qualification standard.

Selected PORTS staff should complete training associated with the topics listed below as co-requisites to the requirements of this qualification standard. Most ORO sites have training requirements on these topics in order to access facilities to work. The specific training courses required for PORTS staff should be identified in Individual Development Plans.

- General Employee Training
- Radiation Worker I (or II) Training
- Nuclear Criticality Safety Training
- HAZWOPER Training

EVALUATION REQUIREMENTS

The evaluation process identified below serves as a measurement tool for assessing whether or not the participants have acquired the technical competencies in this qualification standard. The following requirements apply to the completion of this qualification standard.

Verifying and documenting that the competencies have been met may be accomplished by the PORTS Manager, or by a subject matter expert (SME) designated by the PORTS Manager. Any of the following methods may be used to evaluate incumbent competency. Each evaluation method is required to be documented.

- Formal education (college courses and academic degrees)
- Training (DOE, DOE contractor, other agency, vendor)
- DOE experience/on-the-job training
- Equivalencies for prior experience, education, and training
- Documented oral evaluation
- Documented observation of performance
- Written examination (including test out)

The PORTS Manager or SME performing the verification must provide some level of evaluation to confirm the participant's level of understanding when self study of DOE orders, Federal and state/local regulations, procedures, or required reading is used to satisfy a competency. In all cases the evaluation is documented by signature on the participant's Technical Qualification Record.

CONTINUING TRAINING AND PROFICIENCY REQUIREMENTS

Requalification on the competencies contained in this qualification standard is not required. PORTS staff should participate in continuing learning activities in order to maintain and improve previously acquired knowledge and skills and to acquire new knowledge and skills where necessary. Continuing training and education to maintain technical proficiency includes the following elements:

1. Technical education and/or training on topics directly related to PORTS duties and responsibilities.
2. Training on topics that address an individual's knowledge and/or skill deficiencies.
3. Training in areas added to the qualification standard since initial qualification.

Competencies added to the qualification standard are documented in the Technical Qualification Record and are addressed like other qualification standard competencies. Specific continuing training or education needs should be documented in Individual Development Plans.

1.0 GENERAL TECHNICAL COMPETENCIES

- 1.1 Portsmouth Site Office personnel shall demonstrate a familiarity level knowledge of the basic operations and processes for DOE-Oak Ridge Operations (ORO) defense nuclear facilities.

Supporting Knowledge and/or Skills

- a. Discuss the primary mission(s) of ORO defense nuclear facilities (e.g., Y-12, ORNL Building 3019, and K-25), most specifically, Portsmouth and Paducah gaseous diffusion plants.
- b. Describe some of the key operations processes performed at ORO defense nuclear facilities.
- c. Interpret the major nuclear safety risks to workers and the public resulting from operations at ORO defense nuclear facilities.
- d. Identify the major non-nuclear hazards associated with ORO defense nuclear facility operations.
- e. Discuss the primary safety systems and features at ORO defense nuclear facilities for preventing or mitigating operational accidents.

- 1.2 Portsmouth Site Office personnel shall demonstrate a familiarity level knowledge of the construction, operation, and basic theory of uranium enrichment as performed in the gaseous diffusion process.

Supporting Knowledge and/or Skills

- a. Given a one-line diagram of a typical "000" gaseous diffusion cell or on a facility walkthrough, identify the following components and describe their interrelation and purpose:
 - Compressor
 - Electric motor
 - Converter
 - Gas cooler
 - Stage control valve
 - Stage
 - Cells
 - Cascade
- b. Discuss the similarities and differences in production capabilities between the Portsmouth Gaseous Diffusion Plant and the Paducah Gaseous Diffusion Plant.

- c. Discuss the differences in flow paths between the diffused gas stream and the undiffused gas stream.
 - d. Describe the operating parameters maximum cascade power level and ^{235}U assay and why these two parameters are controlled.
 - e. Describe the safety concerns associated with the process fluids, gases, and byproducts.
 - f. Explain the technical safety requirements, operating limits, and other controls employed to protect workers, environment, and the public.
 - g. Describe the Cascade Improvement Program and the Cascade Upgrading Programs and the products of these efforts.
 - h. Discuss the storage and handling requirements for the products of the enrichment process.
- 1.3 Portsmouth Site Office personnel shall demonstrate a working level knowledge of DOE Order 5480.24, Nuclear Criticality Safety, with respect to Portsmouth plant nuclear safety.

Supporting Knowledge and/or Skills

- a. Explain the purpose, scope, and applicability of DOE Order 5480.24, Nuclear Criticality Safety.
- b. Define the following terms associated with criticality safety and locate examples of their use in the facility:
 - Criticality incident
 - Double contingency principle
 - Geometry control
 - Nuclear criticality safety
 - Significant quantity of fissionable material
 - Temporary exemption

- c. Distinguish the operating contractor responsibilities for the following in relation to criticality safety activities.
 - Criticality safety evaluations
 - Monitoring
 - Surveillance
 - Transportation
 - Storage
 - d. Describe the Portsmouth Site Office personnel responsibilities with respect to the implementation of the requirements of DOE Order 5480.24, Nuclear Criticality Safety.
 - e. Locate and assess on-site examples of control measures taken to prevent nuclear criticality.
 - f. Discuss the scope and function of Portsmouth Nuclear Criticality Safety Agreements (NCSAs).
- 1.4 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the basic requirements of material control and accountability.

Supporting Knowledge and/or Skills

- a. Explain the purpose, scope, and applicability of DOE Order 5633.3B, Control and Accountability of Nuclear Materials, to PORTS facilities.
- b. Explain the following nuclear material control and accountability requirements for PORTS facilities using the site Material Control and Accountability Plan:
 - Measurements and measurement control
 - Threat considerations
 - Physical inventories
 - Control limits
 - Loss of detection elements
 - Nuclear material alarms
 - Nuclear material access control
 - Containment
 - Surveillance
- c. Discuss defense-in-depth as it relates to material control and accountability at PORTS.
- d. Explain the material control and accountability components of the PORTS facility(ies) emergency plans.

- e. Locate the approved material control and accountability storage locations on site.
 - f. Review and assess the PORTS administrative controls designed to prevent and detect material losses and diversions (include reviews and assessments).
- 1.5 Portsmouth Site Office personnel shall demonstrate a familiarity level knowledge of the integration/interface of the following types of emergency plans:
- Site emergency plans
 - Facility emergency plans
 - Building emergency plans
 - Security emergency plans
 - Spill prevention, containment, and countermeasures
 - Fire prevention/suppression plans
 - Local, state, and tribal emergency plans
 - Other environmental emergency plans

Supporting Knowledge and/or Skills

- a. Describe the typical content and applicability of each of the emergency plans listed above.
- b. Describe the integration/interface of the listed plans.
- c. Describe the roles and responsibilities of the on-site and off-site emergency response organizations identified in the above emergency plans.

2.0 ADMINISTRATIVE COMPETENCIES

2.1 Portsmouth Site Office personnel shall demonstrate a working level knowledge of assessments of Portsmouth contractor and Federal employee safety and health related activities in accordance with identified requirements, including DOE Orders.

Supporting Knowledge and/or Skills

- a. Compose or review and comment on the criteria to be used as the basis for conducting an assessment.
- b. Participate in a contractor assessment in a role that performs the following activities:
 - Interview personnel
 - Observe activities
 - Review records
 - Document findings, observations, improvement areas
- c. Evaluate the results of the review phase (assessment) against the established criteria used for an assessment and determine if deficiencies exist. Communicate findings to the assessed organization point-of-contact.
- d. Document results of an assessment in a formal written report that describes the status of meeting established criteria, identifies deficiencies and good practices and suggest recommendations for improvement.
- e. Describe how assessment team evaluations resolve conflicting or inclusive observations.
- f. Describe tasks performed by a DOE assessment team to close out an assessment.

2.2 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the Price-Anderson Amendment Act of 1988 and its impact on Department of Energy Portsmouth activities.

Supporting Knowledge and/or Skills

- a. Discuss the purpose and scope of the Price-Anderson Amendment Act.
- b. Interpret the Act's applicability to the ORO management activities.
- c. Summarize the civil and criminal penalties imposed on the Department, management and operating contractors, and subcontractors as the result of a

violation of applicable rules and regulations related to ORO environmental restoration.

- d. Interpret the requirements associated with the topics below, as they are affected by the rule-making aspect of the Price-Anderson Amendment Act:
 - Safety Analysis Reports
 - Unreviewed Safety Questions
 - Quality Assurance Requirements
 - Defect Identification and Reporting
 - Conduct of Operations at DOE Nuclear Facilities
 - Technical Safety Requirements
 - Training and Certification
 - Maintenance Management
 - Categorization, Notification, Reporting, and Processing of Operational Occurrences at DOE Nuclear Facilities
- e. Translate the role of Portsmouth Site Office personnel with respect to implementing the requirements of the Price-Anderson Amendment Act.

2.3 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the Russian Transparency agreement between the governments of the United States and the Russian Federation.

Supporting Knowledge and/or Skills

- a. Explain the scope and purpose of the agreement.
- b. Outline the duties and responsibilities of Portsmouth Site Office personnel in administering the agreement.
- c. Compare the requirements against the actual implementation process for the agreement annexes to demonstrate how the requirements are being satisfied.
- d. Review and assess the reports generated from Transparency monitoring activities.

- 2.4 Portsmouth Site Office personnel shall demonstrate the ability to conduct counterintelligence inquiries and investigations in accordance with FBI direction.

Supporting Knowledge and/or Skills

- a. Differentiate the duties and responsibilities of the FBI and the DOE Counterintelligence Division (PORTS) for performing counterintelligence inquiries and investigations.
 - b. Coordinate the services of the FBI, DOE Counterintelligence Division, and local law enforcement agencies for site security needs.
 - c. Review intelligence and counterintelligence reports, assess PORTS security vulnerability, and design security systems based on FBI analysis of the intent and operating techniques of hostile intelligence and security services.
 - d. Conduct surveys and/or investigations of specific security incidents and identify actual or potential security deficiencies. Include suggestions of practical options for correcting deficiencies.
- 2.5 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the PORTS Final Safety Analysis Report (FSAR) and Operational Safety Requirements (OSRs).

Supporting Knowledge and/or Skills

- a. Discuss the scope and function of the above listed documents.
- b. Describe the accident scenarios that present the highest risks (worse case scenario) for the facility and the resulting safety concerns.
- c. Describe the natural phenomena that were analyzed for safety of the plant and the results of the evaluations.
- d. Describe the plausible significant chemical releases for the plant and the associated safety concerns.
- e. Describe the gaseous diffusion plant (GDP) safety envelop and the controls implemented to ensure that the plant remains in a stable safe configuration.
- f. Review the Limiting Conditions of Operation (LCOs) and describe the required actions for having entered an LCO.
- g. Identify the plant safety systems and justify why each system falls into this category.

- h. Describe the response to having identified a plausible scenario that has not been previously analyzed for in the FSARs.

- 2.6 Portsmouth Site Office personnel shall demonstrate a working level knowledge of problem-solving and decision-making in order to manage safety/health and environmental activities and ensure safety issues are identified and appropriate actions are taken to resolve and close them.

Supporting Knowledge and/or Skills

- a. Explain the importance of problem identification and the use of occurrence reports, trending, and lessons learned for preventive and predictive actions.
- b. Explain the necessity of root cause determination in problem solving.
- c. Demonstrate methods of root cause determination.
- d. Correlate problem solutions and weighing of risks.
- e. Simulate progress monitoring and verification methods for closure of safety/health and environmental activities.

- 2.7 Portsmouth Site Office personnel shall demonstrate a working level knowledge of DOE Order 151.1, Comprehensive Emergency Management System.

Supporting Knowledge and/or Skills

- a. Describe the purpose of the orders listed above.
- b. Discuss the roles and responsibilities of the PORTS elements for management of the ORO/PORTS emergency management system.
- c. Define operational emergencies and the circumstances to which they apply at PORTS.
- d. Discuss the classes of hazards contained in DOE Order 151.1, Comprehensive Emergency Management System.
- e. Review and comment on appropriate PORTS plans and procedures for timely and accurate determination of emergency class, notification, and reporting of emergency events.

- f. Using DOE Order 151.1, Comprehensive Emergency Management System, discuss the stated policy as it is applied at PORTS.

- g. Discuss the purpose and function of the following required PORTS program elements:
 - Emergency response organization
 - Off-site response interface(s)
 - Operational Emergency Event Classes
 - Notification
 - Consequence assessment
 - Protective actions
 - Medical support
 - Recovery and reentry
 - Public information
 - Emergency facilities and equipment
 - Training
 - Drills and exercises
 - Program administration

- h. Discuss the purpose and content of the PORTS Emergency Readiness Assurance Plan.

3.0 REGULATORY COMPETENCIES

3.1 Portsmouth Site Office personnel shall demonstrate a familiarity level knowledge of regulatory issues within DOE.

Supporting Knowledge and/or Skills

- a. Describe safety management initiatives resulting from DNFSB Recommendation 95-2, Integrated Safety Management.
- b. Explain the impact of rule making on DOE and its contractors and the basic process of implementing rules.
- c. Discuss the Work Smart Standards approach as it relates to compliance.
- d. Discuss ORO's use of the Standards/Requirements Identification Documents.

3.2 Portsmouth Site Office personnel shall demonstrate an expert level knowledge of the Regulatory Oversight Agreement (ROA) between the United States Department of Energy and the United States Enrichment Corporation (USEC).

Supporting Knowledge and/or Skills

- a. Describe in detail the scope and intent of the ROA.
- b. Explain the hierarchy of requirements established by the ROA and the Price-Anderson Amendments of 1988.
- c. Critique the following areas for each of the 19 operational requirements identified in the ROA:
 - Basic objective
 - Implementation requirements
 - How the requirements are met
 - Status of conformance
- d. Outline the programs for DOE oversight of turnover and operation of the Portsmouth GDP as identified in Appendix A, Chapter 4 of the ROA.
- e. Participate in an assessment of the plant nuclear safety and safeguards and security requirements as identified in the ROA.
- f. Review the most recent issue(s) of DOE Occurrence Reports and determine which lessons learned may be applied to PORTS.

g. Document and notify USEC of nonconformances with the ROA.

3.3 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the following DOE orders:

- DOE Order 471.2, Technical Surveillance Countermeasures (TSCM) Program
- DOE Order 5670.1A, Management and Control of Foreign Intelligence
- DOE Order 5670.3, Counterintelligence Program

Supporting Knowledge and/or Skills

- a. Explain the purpose and policy of the listed orders.
- b. Identify the policies and procedures in place at PORTS to address these orders.
- c. Review an assessment of each of the above programs and suggest additional methods for improving the efficiency of the programs.
- d. Describe the PORTS records program standards for protection of intelligence information.
- e. Evaluate the PORTS Counterintelligence Program and the steps that ensure all PORTS DOE office personnel, contractors, and subcontractors are trained on the program.
- f. Summarize the current PORTS counterintelligence goals that support National Security Decision Directive 47, Counterintelligence and Security Countermeasures.
- g. List the requirements of Directive 47 and show how they are addressed in the administration of the Russian Transparency.

4.0 MANAGEMENT AND ASSESSMENT COMPETENCIES

- 4.1 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the requirements for startup and restart of nuclear facilities and the conduct of Operational Readiness Reviews (ORRs).

Supporting Knowledge and/or Skills

- a. Discuss the criteria and process of facility categorization.
- b. Discuss the purpose of ORRs as outlined in DOE Order 5480.31, Startup and Restart of Nuclear Facilities.
- c. List the conditions that require performance of ORRs and circumstances when only readiness assessments would be allowable.
- d. For an actual or simulated ORR, perform the following:
 - Formulate the personnel qualification requirements and any limitations for serving on the team
 - Resolve the minimum core requirements for developing the depth and breadth of the review
- e. Outline the responsibilities of ORR team members.
- f. Participate on an ORR team, conduct work in preparation for an ORR, or complete an ORR training course.
- g. Review ORR reports and discuss the relevant findings.

- 4.2 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the Department of Energy Oak Ridge Office Self-Assessment Program.

Supporting Knowledge and/or Skills

- a. Evaluate the purpose, scope, and applicability of self assessments within the Portsmouth Site Office.
- b. Explain how Quality Assurance principles and practices are applied in the conduct of self assessments.
- c. Justify how self assessments improve safety and provide examples of improvements.
- d. Conduct a self assessment of an activity to determine status or acceptability.

- e. Document strengths, weaknesses, and improvement areas identified during self assessment activities.
- f. Describe how PORTS uses feedback from self assessments to plan work process improvements or take other actions to eliminate non-conformances.
- g. Discuss the purpose/value of using prescribed measures of performance.
- h. Participate in data gathering, analysis, measurement, and assessment of the information used to measure performance.
- i. Describe the results and significance of performance measures.
- j. Describe the PORTS implementation of DOE Order 5630.12A, Safeguards and Security Inspection and Assessment Program and critique the results of the most recent inspection/assessment.

4.3 Portsmouth Site Office personnel shall demonstrate a working level knowledge of the management process to monitor contractor project activities.

Supporting Knowledge and/or Skills

- a. Act as the principle liaison between contractor and DOE identifying contractor deliverables, objectives, timeliness, assumptions, constraints, and priorities.
- b. Read, interpret, and evaluate the following project control measures/tools.
 - Gantt (bar) charts
 - Critical path networking techniques
 - Labor schedules
 - Material equipment schedules
 - Finance schedules
- c. Discuss stop work authority and responsibility for site safety.
- d. Describe Portsmouth Site Office responsibilities for monitoring the M&O Contractor to ensure compliance with the technical, safety, and administrative requirements of the contract.
- e. Formulate, analyze, and approve or disapprove plans and schedules.
- f. Describe Portsmouth Site Office responsibility to ensure continuity in performance and information exchange among project team participants.

- g. Discuss how DOE project managers ensure project costs, schedule and scope requirements are met.

4.4 Portsmouth Site Office personnel shall demonstrate a working level knowledge of managing the ORO condition of physical assets in accordance with DOE Order 430.1, Life Cycle Asset Management.

Supporting Knowledge and/or Skills

- a. Describe the role and responsibilities of the PORTS Contracting Officer Representative for site contracts and financial assistance agreements executed by ORO.
- b. Describe the process and conditions for acquiring approvals for projects from the sponsoring program office.
- c. Discuss the various categories of performance measures and expectations and how they are used by PORTS and the contractor to evaluate against project performance objectives.
- d. Define the following terms related to life cycle asset management and provide examples of their application within PORTS.
 - Disposition
 - Asset management systems
 - Commencement of execution
 - Infrastructure
- e. Outline the systems, controls, and processes used at ORO in the management of incentive and surplus facilities.
- f. Describe how PORTS uses the Facilities Information Management System (FIMS) in carrying out management and oversight functions.