



**U.S. DEPARTMENT OF ENERGY  
DEPARTMENT-WIDE**



<b>Candidate:</b> <b>FILL IN NAME</b>	<b>FACILITY REPRESENTATIVE FUNCTIONAL AREA QUALIFICATION CARD</b>	Date Card Issued to Candidate:	
<b>Office/Division:</b> <b>FILL IN AM ORG/DIV</b>		Standard Approval Date & Revision:	<b>DOE-STD-1151-2002 April 2002</b>

NO.	REQUIRED COMPETENCIES	EVALUATION METHOD	QUALIFYING OFFICIAL SIGNATURE	DATE	REMARKS
<b>1.0 GENERAL TECHNICAL</b>					
1.1	A Facility Representative shall demonstrate a familiarity level knowledge of principles of steam system operation including theory and component design.				
1.2	A Facility Representative shall demonstrate working level knowledge of steam system operation including startup, normal and off-normal operation, and shutdown.				
1.3	Personnel shall demonstrate familiarity level knowledge of basic pneumatic and hydraulic systems in the area of theory.				
1.4	Personnel shall demonstrate working level knowledge of pneumatic and hydraulic systems operations in the following areas.				
1.5	Personnel shall demonstrate familiarity level knowledge of heat exchanger construction, operations, and theory.				
1.6	Personnel shall demonstrate working level knowledge of heat exchanger systems operations in the following areas.				
1.7	Personnel shall demonstrate familiarity level knowledge of pump construction, operations, and theory.				
1.8	Personnel shall demonstrate familiarity level knowledge of valve construction, operations, and theory.				
1.9	Personnel shall demonstrate familiarity level knowledge of basic air compressor, strainer, and filter construction, operations, and theory.				
1.10	Personnel shall demonstrate familiarity level knowledge of basic heating, ventilation, and air conditioning system construction, operations, and theory.				

EVALUATION METHODS	EQ = Evaluation of Equivalencies, EX = Exempt, OE = Oral Evaluation, OP = Observation of Performance, WE = Written Exam
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1.11	Personnel shall demonstrate working level knowledge of heating, ventilation, and air conditioning system operations in the following areas.				
1.12	Personnel shall demonstrate familiarity level knowledge of basic electrical fundamentals in the areas of terminology and theory.				
1.13	Personnel shall demonstrate familiarity level knowledge of basic electrical fundamentals in the area of direct current (DC).				
1.14	Personnel shall demonstrate familiarity level knowledge of basic electrical fundamentals in the area of alternating current (AC).				
1.15	Personnel shall demonstrate working level knowledge of basic electrical fundamentals in the area of electrical distribution systems.				
1.16	Personnel shall demonstrate working level knowledge of electrical system and components in the area of safety.				
1.17	Personnel shall demonstrate familiarity level knowledge of process instrumentation principles of operation, purpose and uses.				
1.18	Personnel shall demonstrate familiarity level knowledge of control system principles of operation and uses.				
1.19	Personnel shall demonstrate familiarity level knowledge of chemistry fundamentals in the areas of theory and the periodic table.				
1.20	Personnel shall demonstrate familiarity level knowledge of chemistry fundamentals in the areas of chemical bonding and chemical reactions.				
1.21	Personnel shall demonstrate familiarity level knowledge of chemistry fundamentals in the areas of corrosion and water treatment.				
1.22	Personnel shall demonstrate working level knowledge of chemistry fundamentals in the area of safety.				
1.23	Personnel shall demonstrate familiarity level knowledge of basic thermodynamics concepts and theories.				
1.24	Personnel shall demonstrate familiarity level knowledge of basic heat transfer and fluid flow concepts and theories.				

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1.25	Personnel shall demonstrate familiarity level knowledge of basic material science in the areas of concepts, theories, and principles.				
1.26	Personnel shall demonstrate a working level knowledge of engineering prints and drawings.				
1.27	Personnel shall demonstrate a working level knowledge of electrical prints, diagrams and schematics.				
1.28	Personnel shall demonstrate a working level knowledge of electronic/logic block diagrams, prints, and schematics.				
1.29	Personnel shall demonstrate a working level knowledge of engineering fabrication, construction, and architectural drawings.				
1.30	Personnel shall demonstrate familiarity level knowledge of lasers in the area of safety.				
<b>2.0 REGULATORY</b>					
2.1	A Facility Representative shall demonstrate a working level knowledge of the purpose, scope, and application of applicable Federal Regulations to include:				
	10 CFR 820, <i>Procedural Rules for DOE Nuclear Activities</i>				
	10 CFR 830, <i>Nuclear Safety Management</i>				
	10 CFR 835, <i>Occupational Radiation Protection</i>				
	29 CFR 1910.120, <i>Occupational Safety and Health Standards, Hazardous Waste Operations and Emergency Response</i>				
2.2	A Facility Representative shall demonstrate a working level knowledge of the purpose, scope, and application of applicable DOE Orders to include:				
	O 151.1A, <i>Comprehensive Emergency Management Systems</i>				
	O 231.1, <i>Environment, Safety and Health Reporting</i>				
	O 232.1A, <i>Occurrence Reporting and Processing of Operations Information</i>				
	O 414.1A, <i>Quality Assurance</i>				
	O 420.1, <i>Facility Safety</i>				

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	O 420.2A, <i>Safety of Accelerator Facilities</i>				
	O 425.1B, <i>Start-Up and Restart of Nuclear Facilities</i>				
	O 430.1A, <i>Life Cycle Asset Management</i>				
	O 433.1, <i>Maintenance Management Program for DOE Nuclear Facilities</i>				
	O 435.1, <i>Radioactive Waste Management</i>				
	O 440.1A, <i>Worker Protection Management For DOE Federal and Contractor Employees</i>				
	O 451.1B, <i>National Environmental Policy Act Compliance Program</i>				
	O 460.1A, <i>Packaging and Transportation Safety</i>				
	O 5480.4, <i>Environmental Protection, Safety, and Health Protection Standards</i>				
	O 5480.19, <i>Conduct of Operations Requirements for DOE Facilities</i>				
	O 5480.20A, <i>Personnel Selection, Qualification, Training, and Staffing Requirements at Department of Energy Reactor and Nonreactor Facilities</i>				
2.3	A Facility Representative shall demonstrate a working level knowledge of the purpose, scope, and application of applicable DOE Guides to include:				
	G 421.1-2, <i>Guide for the Mitigation of Natural Phenomena Hazards for DOE Nuclear Facilities and Nonnuclear Facilities</i>				
	G 423.1-1, <i>Implementation Guide for Use in Developing Technical Safety Requirements</i>				
	G 424.1-1, <i>Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements</i>				
	G 450.4-1B, <i>Volumes 1 and 2, Integrated Safety Management System Guide</i>				
2.4	A Facility Representative shall demonstrate a working level knowledge of the purpose, scope, and application of applicable DOE Standards to include:				
	DOE-STD-1063-2000, <i>Facility Representatives</i>				
	DOE-STD-1073-93, <i>Guide for Operational Configuration Management Program</i>				

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	DOE-STD-1104-96, <i>Review and Approval of Nonreactor Nuclear Facility Safety Analysis Reports</i>				
	DOE-STD-3009-94, <i>Preparation Guide for U.S. DOE Nonreactor Nuclear Facility Safety Analysis Reports</i>				

#### 3.0 ADMINISTRATIVE

3.1	A Facility Representative shall demonstrate a working level knowledge of the Department of Energy/facility contract provisions necessary to provide oversight of the operating contractor operations.				
3.2	A Facility Representative shall demonstrate a working level knowledge of the Department of Energy/facility Authorization Agreement process necessary to provide oversight of the operating contractor operations.				

#### 4.0 MANAGEMENT, ASSESSMENT, AND OVERSIGHT

4.1	A Facility Representative shall demonstrate a working level knowledge of problem analysis principles and techniques necessary to identify problems, determine potential causes of the problems, and identify corrective action(s).				
4.2	A Facility Representative shall demonstrate a working knowledge of assessment techniques such as the planning and use of observations, interviews, and document reviews to assess facility performance, report results of assessments, and follow up on actions taken as the result of assessments.				
4.3	A Facility Representative shall demonstrate a working level knowledge of the Department of Energy Emergency Management System and response practices.				
4.4	A Facility Representative shall demonstrate a working level knowledge of applicable DOE Orders sufficient to conduct independent assessment of contractor and/or Federal employee work activities.				
4.5	A Facility Representative shall demonstrate a working level knowledge of Conduct of Maintenance principles and Department of Energy requirements to ensure maintenance is performed in a safe and efficient manner.				

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4.6	A Facility Representative shall demonstrate a working level knowledge of the Occurrence Reporting and Processing System necessary to ensure that occurrences are properly reported and processed in accordance with DOE Order 232.1A, Occurrence Reporting and Processing of Operations Information.				
4.7	A Facility Representative shall demonstrate a working level knowledge of the Department's philosophy and approach to implementing Integrated Safety Management.				
4.8	A Facility Representative shall demonstrate a working level knowledge of the Department's philosophy and approach to implementing Quality Assurance programs.				
4.9	A Facility Representative shall demonstrate a working level knowledge in the area of Industrial Safety programs.				
4.10	A Facility Representative shall demonstrate a working level knowledge of the Safety Authorization Basis, including the Documented Safety Analysis, Technical Safety Requirements and Safety Evaluation Reports.				
4.11	A Facility Representative shall demonstrate a working level knowledge of the training and qualification requirements for facility operations personnel.				
4.12	A Facility Representative shall demonstrate a working level knowledge of Conduct of Operations principles and Department of Energy requirements to ensure facility operations are performed in a safe and efficient manner.				

**CERTIFICATION OF COMPLETION**

FACILITY REPRESENTATIVE FUNCTIONAL AREA QUALIFICATION CARD COMPLETE	CERTIFYING OFFICIAL SIGNATURE	DATE
Certification that this qualification card documents satisfactory completion of competencies as identified in the Facility Representative Functional Area Qualification Standard.		

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