FORM FOR SCORING OF TRAINING RESOURCE TO FULFILL FEDERAL BUILDING PERSONNEL TRAINING ACT (FBPTA) CORE COMPETENCIES

The FBPTA requires Federal building personnel to demonstrate compliance with a set of Core Competencies. The General Services Administration (GSA) accepts submissions for courses, certificates, certifications, accreditations, registrations, licenses, and other qualifications that demonstrate alignment with the FBPTA Core Competencies. GSA will post resources that sufficiently map to FBPTA Core Competency requirements on the FMI webpage (www.fmi.gov) and may incorporate them into the Core Competency Web Tool. The Web Tool allows Federal buildings personnel to immediately claim credit for competencies met by completing approved training. FMI and the Core Competency Web Tool help Federal employees identify appropriate training, and allow Federal agencies to share information on training sources. To qualify for consideration, submitters complete this form describing how a specific training resource, certification / accreditation, license or other resource aligns with FBPTA core competencies through AskFMI@gsa.gov.

Initial Review Conducted By: Maria Fara

Initial Review Submission Completion Date: August 30, 2013

Technical Review Conducted By: Doug Yon

Technical Review Submission Completion Date: January 10, 2014

Alignment of Competency with Functional Roles

Often Aligned with Facility Management roles (24/43 Core Competencies)

Often Aligned with Building Operations Professional roles (6/43 Core Competencies)

Often Aligned with Energy Management Role (7/43 Core Competencies)

Often Aligned with more than one role (6/43 Core Competencies)

1. Please complete the following for each training course submitted for consideration:

Training provider: BOMI International

Provider address information (primary physical location, including address, city, state, zip code): One Park Place Suite 475, Annapolis, MD 21401

Provider's primary point of contact for this learning resource (name, primary physical location (if different from provider address information), phone, and email): Ron Bishop, (410) 974-1410 x1259, rbishop@bomi.org

Title of this training resource: Boilers, Heating Systems, and Applied Mathematics

Type of training course: Property and Facilities Management

Does this course provide CEUs (Continuing Education Units) and if so, how many and for what occupation or field? Yes, 24 CE hours towards LEED Credential Maintenance Program.

Learning objective(s) associated with this training course: Understand the different boiler types, their components and control systems, and their operation and maintenance, Recognize, set up, and maintain a reliable and effective heating system, Calculate ratios, proportions, and percentages, Convert units of measure.

Delivery method and learning methods (delivery methods may include online instruction, classroom instruction, or other means, and learning methods could include lecture, group work, essay work, quizzes, or other learning activities): Instructor Led Online, Self-Study, Live Classroom/Accelerated Review. Learning Methods, lecture, group work, quizzes, practice exam, 3rd Party proctored final exam.

Length of training (in hours): 24 Hours

URL link to information about the training course, content, and/or syllabus: http://www.bomi.org/Courses/Boilers,-Heating-Systems,-and-Applied-Mathematics/

2. Review the course objective(s) that have been submitted as being aligned with required FBPTA performance criteria. Review the learning methods in the course that will support that learning objective(s).

FBPTA Core Competency Area	FBPTA Core Competency	Required FBPTA performance criteria	Based on technical review of learning objectives and skills, does this resource map to the performance criteria?	Initial Review: Are all submission requirements included?	Initial Review: Are descriptions clear and logical?	Initial Review: Are all materials referenced included with the	Technical Review: Learning Objectives Reviewed	Technical Review: Skills Reviewed	Technical Review: Are there any clarifications requested?	If clarification requested, note here	Clarification Response From Provider	Technical Review: Identify other materials submitted	Technical Review: Other Materials Reviewed

1.Management of Facilities O&M	1.1 Management of Building Systems	1.1.1.Demonstrate familiarity with Building Systems.	Partial. Based on the review of the learning objectives and the skills/materials covered, this course only covers boiler systems which is a Mechanical and HVAC sub-system.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to familiarity with boiler systems and does not necessarily address the broader knowledge of Building Systems as required by the performance criteria. Please confirm if the course includes information about non-boiler HVAC systems, electrical (and standby generators, lighting, mechanical/plumbing, fire protection, vertical transportation, structural, roofing and/or building envelop systems.	These topics are covered in other BOMI courses, including Design I, Design II, Air Handling, Electrical Systems, Energy Management, Refrigeration, and Building Design and Maintenance.		
		1.1.6.Demonstrate ability to monitor and evaluate how well building systems perform.	Partial. Based on the review of the learning objectives and the skills/materials covered, this course addresses the ability to monitor and evaluate how boiler systems perform.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to familiarity with boiler systems. Is a broader knowledge of other building systems monitoring and evaluation addressed as required by the performance criteria?	Other building systems are covered in other BOMI courses, including Design I and Design II, Energy Management and Controls, and Refrigeration.		
		1.1.7.Demonstrate ability to manage corrective, preventive and predictive maintenance.	Partial. Based on the review of the learning objectives and the skills/materials covered, this course addresses the ability to manage corrective, preventive and predictive maintenance for boiler systems.	Yes	Yes	Yes	Yes	Yes	Yes	It is not clear that the course addresses the management of various types of maintenance. Is predictive maintenance methodologies addressed? Is a full range of corrective and preventive maintenance techniques covered along with those that are boiler-specific? Please clarify if the course addresses all three maintenance strategies. corrective, preventive, and predictive maintenance. Also please clarify if these are addressed only as it relates to boilers.	The course addresses boiler maintenance, not maintenance of other building systems. Corrective maintenance covered. Preventive maintenance is covered. In most BOMI courses, the elements of predictive maintenance are included in our discussion of preventive maintenance.		
2. Performance of Facilities O&M	2.1. Operating and Maintaining HVAC Systems	2.1.1.Demonstrate ability to collect Operating Data on system.	Partial. This course received credit because the course provides specific knowledge for the ability to collect operating data on boiler systems.	Yes	Yes	Yes	Yes	Yes	Yes	It is not clear that the course addresses the collection of Operating Data on HVAC Systems other than boiler-specific systems. Is the use of computer systems addressed? Is operating data collection provided on a full range of HVAC System types covered along with those that are boiler-specific?	The course covers boiler-specific systems. Collection of operating data for other systems are addressed in other BOMI courses: Refrigeration Systems and Accessories; Air Handling, Water Treatment, and Plumbing Systems; Electrical Systems and Illumination; Energy Management and Controls; Building Design and Maintenance.		
	2.2. Operating and Maintaining Electrical and Mechanical Systems	2.2.6.Demonstrate knowledge and ability to all drains and backflow preventers.	Partial. This course received credit because the course provides specific knowledge and ability about boiler system related drains and backflow preventers.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to the identification of boiler system drain and backflow preventer piping. Is a broader knowledge of other drainage and backflow prevention systems addressed as required by the performance criteria?	The course is limited to drains and backflow preventers as they pertain to boilers. Refrigeration Systems and Accessories and Air Handling, Water Treatment, and Plumbing Systems provide learning on other appropriate systems.		
		2.2.7.Demonstrate knowledge and ability to maintain pressure-reducing valves.	Partial. This course received credit because the course provides general knowledge of pressure-reducing valves. However, as the performance criteria is intended primarily for building operators, it does not sufficiently provide information about the ability to maintain the pressure reducing valves.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to the identification of low pressure boiler system pressure-reducing valves. Is a broader knowledge of high pressure boilers and other pressure-reducing valve systems addressed as required by the performance criteria?	Students are advised that they need to be aware of valve systems prescribed for their specific boiler.		

4. Energy Management	4.1. Systems and Demand Reduction	4.1.1.Demonstrate knowledge of building systems and how they affect energy use	Partial. Based on the review of the learning objectives and the skills/materials covered, this course addresses boiler systems and how they affect energy use only. The course does not address knowledge of other building systems and how they affect energy use. The course is limited to boiler systems which is a Mechanical and HVAC sub-system.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to heating systems and possibly some electrical systems. Please confirm if the course includes information about how non-heating systems, motors and drives, lighting, building envelope and fuel systems affect energy use.	The effect that specific systems have on energy use are addressed in Energy Management and Controls.		
5. Safety	5.2. Infrastructure	5.2.3.Demonstrate knowledge of ventilation systems and prevention of contaminant introduction and cross contamination.	No, based on the review of the learning objectives and the skills/materials covered, this course does not address knowledge of ventilation systems or the prevention of contaminant introduction and cross contamination.	Yes	Yes	Yes	Yes	Yes	No				
6. Design	6.2. Infrastructure Systems	6.2.1.Demonstrate knowledge and understanding of the design basis of all applicable Architectural and Engineering Systems.	Partial. Based on the review of the learning objectives and the skills/materials covered, this course does not address knowledge and understanding of the design basis of all applicable Architectural and Engineering Systems. The course is limited to boiler systems.	Yes	Yes	Yes	Yes	Yes	Yes	Based on the review of the learning objectives and the skills/materials covered, this course is limited to familiarity with boiler systems and does not necessarily address the broader knowledge of other Architectural and Engineering Systems as required by the performance criteria. Please confirm if the course includes information about. o Roofing Systems o Building Envelope Systems o Window Systems o HVAC Systems (Heating, Cooling, and Ventilation) o Electrical Systems o Telecommunication Systems o All Lighting Systems o Fire Protection Systems o BAS o IT Systems – installation arrangement and energy requirements o Interior Design o Landscape Architectural Systems o Plumbing Systems o Occupant needs and requirements/controls o Resource flows (e.g., energy, water and waste)	This course is specific to boilers and other heating systems. For a broader course covering all building systems, refer to The Design, Operation, and Maintenance of Building Systems, Part I and Part 2, and Building Design and Maintenance.		