

# Summary of Modifications/Changes in this Update

This Summary of Changes is for information only.  
It is not a part of the referenced document, and should not be used for project documentation.

U.S. Department of Veterans Affairs ♦ Office of Construction & Facilities Management

**DATE OF THIS VERSION (new)**

May 1, 2024

**TITLE OF DOCUMENT (new title if applicable)**

Volume 2 WATER BOILERS (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

April 1, 2024

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Volume 2 WATER BOILERS (Hot Water Generating Systems)

**SUMMARY OF CHANGES IN THIS VERSION:**

1. 3.9 Revised sub-paragraphs to require written approval for use of propane as a main or secondary fuel source.

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## **DATE OF THIS VERSION (new)**

April 1, 2024

## **TITLE OF DOCUMENT (new title if applicable)**

Volume 2 WATER BOILERS (Hot Water Generating Systems)

## **DATE OF VERSION BEING SUPERSEDED (old):**

October 1, 2022

## **DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Volume 2 WATER BOILERS (Hot Water Generating Systems)

## **SUMMARY OF CHANGES IN THIS VERSION:**

1. 2.1.2 added isometric drawings.
2. 2.1.15 added show tube pull area.
3. 2.1.16 added show equipment rigging routes.
4. 2.1.17 added show access routes for operation and maintenance.
5. 2.2.4 changed HEFP to OHE.
6. 2.2.7 added directive 1810 deleted engineering standard.
7. 3.2.7.6 added trench drains.
8. 3.5 clarified personal facilities to central plants.
9. 3.7.1 stairs not to exceed 45 degrees.
10. 4.1 clarified when a control room is needed.
11. 4.7 defined clearances around the boilers.
12. 4.9 removed floor mounted.
13. 5.1.1.1 Added secondary combustion air to the plant.
14. 6.1.4 added 250 degrees F.
15. 6.2.3 added the preferred type of boiler is Firetubes.
16. 6.4.2 simplified wording and required compliance to the safety device testing manual.
17. 6.4.4 Removed condensing boiler design.

18. 6.5.1 Changed HEFP to OHE.
19. 6.6.4 Removed Dealkalizers.
20. 7.1.6 Change location of propane tanks.
21. 7.1.8.2 added use of propane as backup fuel requires OHE prior approval.
22. 9.3 combustion air fan sizing.
23. 9.5 added fixed openings.
24. 9.6 added motorized dampeners & combustion air fans interlocked with the boilers.
25. 9.7 added secondary combustion air source and means of proving.
26. 9.8.4 added automated shutdown.
27. 11.1.4 added levels of password protection for controllers.
28. 11.2.1 clarified safety device requirements.
29. 11.2.2 clarified emergency cutoff switches and locations.
30. 15.0 added "National Board of Boiler Inspectors Code Part 1".

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**DATE OF THIS VERSION:**

December 1, 2023

**TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

September 1, 2023

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Delete Engineering Standard ES-2018-001
2. Add VHA Directive 1810 2023-01-04

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**DATE OF THIS VERSION:**

September 1, 2023

**TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

October 1, 2022

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Replaced OCAMES with HEFP.
2. Removed condensing boilers.
3. Replaced atmospheric-type with power-type burners.
4. Removed seasonal restarts.

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**DATE OF THIS VERSION:**

October 1, 2022

**TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

August 1, 2022

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Added to paragraph 2.4.3.1 Life Cycle period, a new line iii) indicating Hot water/condensing boilers to have a useful life expectancy of 15 years. Existing line iii) becomes iv), and existing line iv) becomes line v).

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**DATE OF THIS VERSION:**

August 1, 2022

**TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

August 1, 2021

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Added paragraph 1.1.5 Emergency Temporary Rental Boiler Connections.

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**DATE OF THIS VERSION:**

August 1, 2021

**TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

June 1, 2021

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Removed section on Warranties.



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## **DATE OF THIS VERSION:**

June 1, 2021

## **TITLE OF DOCUMENT:**

Revisions to Volume 2 – Water Boilers (Hot Water Generating Systems)

## **DATE OF VERSION BEING SUPERSEDED (old):**

September 1, 2016

## **DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

## **SUMMARY OF CHANGES IN THIS VERSION:**

1. Changed OCAMES to new Title of Healthcare Environment & Facilities Programs (HEFP)
2. Combustion Air Opening calculations clarified.
3. Changed NFC to NFPA
4. Limit the directional changes of safety valve vent pipes to 90 degrees.
5. Water treatment arrangement for the chemical pumps and access
6. Additional Combustible gas detectors location if propane is the secondary fuel.
7. Remove natural gas compressors and piping for gas turbine co-gen.
8. Added a lift table for loading bags of salt into the brim tank.
9. Changed chemical feed pump arrangement doing away with the mixing tank.
10. Changed the firing mode from a 4 stage control to fully modulating with manual/auto control operations.

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**DATE OF THIS VERSION:**

September 1, 2016

**TITLE OF DOCUMENT:**

Steam, Heating Hot Water, and Outside Distribution System Design Manual

**DATE OF VERSION BEING SUPERSEDED (old):**

various

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

OUTSIDE STEAM DISTRIBUTION SYSTEMS DESIGN MANUAL, May 2006  
STEAM GENERATION SYSTEMS DESIGN MANUAL, August 2012

**SUMMARY OF CHANGES IN THIS VERSION:**

1. The Steam, Heating Hot Water, and Outside Distribution System Design Manual is a consolidation and update of the existing OUTSIDE STEAM DISTRIBUTION SYSTEMS DESIGN MANUAL, May 2006 and STEAM GENERATION SYSTEMS DESIGN MANUAL, August 2012 into a new and comprehensive DM.