

## Compliance Forms

Compliance forms are provided in the User's Manual to assist in understanding and documenting compliance with the service water heating requirements. Copies of the compliance forms are provided both in printed and electronic form. Modifiable electronic versions are provided on the CD accompanying this Manual, and are also posted on the ASHRAE website for free download.

The service water heating form is organized on one page and in four sections, beginning with header information and mandatory measures and concluding with worksheets for equipment efficiency and combined space and water heaters.

### Header Information

*Project Name:* Enter the name of the project. This should agree with the name that is used on the plans and specifications or the common name used to refer to the project.

*Project Address:* Enter the street address of the project, for instance "345 Jefferson Street."

*Date:* Enter the date when the compliance documentation was completed.

*Designer of Record/Telephone:* Enter the name and the telephone number of the designer of record for the project. This will generally be an architecture firm.

*Contact Person/Telephone:* Enter the name and telephone number of the person who should be contacted if there are questions about the compliance documentation.

*City:* The name of the city where the project is located.

### Mandatory Provisions Checklist

This section of the compliance form summarizes the Mandatory Provisions for the design of the service water heating system. The mandatory measures are organized on this form in the same order

as they are in the Standard. Check the box to indicate that the mandatory requirement applies to the building and that the building complies with the requirement. If the requirement is not applicable, then leave the box unchecked.

### Equipment Efficiency Worksheet

Complete a row in this table for each water heater that is to be installed in the building. This list should have the same number of items as the water heater schedule on the plans. For each water heater, enter the system tag. This is the code that is used to identify the equipment on the plans and specifications.

In the second column, enter the equipment type; this should be a choice from Table 7.8 of the Standard. In the third column, enter the subcategory or rating condition from Table 7.8. In the fourth column, enter the input rating for the equipment. Enter the tank volume in the fifth column.

Column six compares the rated efficiency of the equipment with the requirement from the Standard. For small water heaters (those covered by NAECA), the energy factor (*EF*) will be entered. Otherwise, the thermal efficiency (*E<sub>t</sub>*) should be entered. The efficiency of the equipment must be greater than or equal to the required efficiency in order to comply. The required energy factor or thermal efficiency is taken from Table 7.8 of the Standard.

Column seven compares the standby loss of the equipment to its requirement. This is used only for large water heaters that are not covered by NAECA. The required standby loss is taken from Table 7.8 of the Standard. The proposed standby loss is taken from test data for the water heater.

### Combination Space and Water Heating Worksheet

This section only needs to be completed if the project is complying through the Prescriptive Method.

Complete a row in this table for each combination space and water heating system that is to be installed in the building. This list should be a subset of the boilers that are scheduled on the plans. For each combination system, enter the boiler tag. This is the code that is used to identify the equipment on the plans and specifications. For each system the user must demonstrate compliance by filling in the data for either column two, three, or four.

Column two compares the rated stand-by loss of the equipment with the requirement from the Standard. The required stand-by loss must be computed from the probable mean demand (*pmd*) and the fraction of the year when the outdoor daily mean temperature is greater than 64.9°F using the formula in § 7.5.2 of the Standard.

Column three compares the annual energy usage of the combined equipment to the annual energy usage of separate space and water heaters. For each entry in this column, the user must provide supporting calculations demonstrating how the annual energy usage numbers were derived.

Column four demonstrates the input rating of the space heating boiler is less than 150,000 Btu/h. The input rating entered here should match the input rating specified for that boiler in the mechanical schedules.