INSTRUCTIONS AND WORKSHEET FOR CALIBRATING PORTABLE TEMPERATURE SENSORS

USDA - APHIS

1. DATE	2. NAME OF FACILITY	3. SIGNATURE OF PERSON CALIBRATING SENSORS	4. NAME OF PERSON CALIBRATING SENSORS *(Type or Print)*

INSTRUCTIONS

These instructions are for calibrating the portable temperature sensors that will be used in performance tests of hot water tanks.

(A) Assign each portable sensor a number. *(Write sensor numbers on pieces of duct tape or tag, and attach them near the "dry" end of each sensor.)*

(B) Submerge the "wet" end of the sensors into a circulating hot water bath in a temperature range of 115° to 120°F *(46.1° to 48.9°C)*, in close proximity to the bulb of a submersible certified glass mercury thermometer. Both must be submerged to the same depth. The mercury thermometer *(with demarcations readable to the nearest tenth of a degree)* shall be used as the standard against which the portable sensors are to be compared.

(C) Record the temperatures obtained from each portable sensor and the mercury thermometer, in succession. Compute the difference in the two temperatures, if any, and record this also.

(D) If the temperature shown by the portable sensor falls within five-tenths of a degree *(F) (or +/- 0.3°C)* of the true temperature shown on the certified mercury thermometer, then this sensor is considered to be within the tolerance, and may be used in the performance test. Any sensors reading outside of this range do not meet APHIS standards for accuracy, and should not be used. Recommend that they be destroyed.

TEMPERATURE *(Specify °C or °F)*

5. PORTABLE SENSOR NO.	6. SENSOR READING	7. MERCURY READING	8. DIFFERENCE *(Add/Subtract)*	9. REMARKS

RETURN COMPLETED FORM TO THE METHODS DEVELOPMENT CENTER THAT WILL ISSUE A CERTIFICATE.

APHIS FORM 205-R
(NOV 93)