CALIFORNIA ENERGY COMMISSION CONDENSER RESET CONTROLS 20222025-CEC-NRCA-MCH-

| Project Name and Address | Authority Having Jurisdiction |
|---------------------------|-------------------------------|
| Name: Project Name | Enforcement Agency: Agency |
| Address: Project Address | Permit Number: Permit Number |
| City, Zip: City, Zip Code | Permit Application Date: Date |

| Building: Er | nter Value | Floor: Enter Value | Room: Ente | er Value | Control/tag: Value |
|--------------|---|--------------------|------------|----------|--------------------|
| | | | | | |
| _ | ☐ Construction inspection and functional testing comply ☐ Does not comply ☐ Does not comply | | | | |
| | | | | | |
| Intent: | Intent: Ensure that the condenser water supply temperature is automatically reset as indicated in the control sequence(s). Reference NRCC-MCH-E for nonresidential | | | | |

PRF-E or NRCC-PRF-E for the performance path. Submit one Certificate of Acceptance for each system that must demonstrate compliance. References:

§120.5(a)16, §140.4(k)4, §160.3(d)1P, §170.2(c)4Iiv, and NA7.5.16.

(including nonresidential spaces in high-rise multifamily) building permits or LMCC-MCH-E for nonresidential spaces in low-rise multifamily building permits or LMCC-

Table A: Construction Inspection

Prior to functional testing, verify and document all of the following:

| Step | Entry | Item | Code Reference |
|------|------------------|--|-------------------|
| 1 | Pass Fail | Confirm access to required documentation. Designs, plans, schematics, and schedules as approved by the authority having jurisdiction. | N/A |
| 2 | ☐ Pass ☐ Fail | Required Documentation. Building documents, including: manufacturer specifications, calibration certificates, or tear sheets for the installed system as available. | N/A |
| 3 | Pass Fail | Verify and document that the condenser water supply system, control system, and temperature control sequence, including condenser water supply high and low limits, are available and documented in the building documents. | NA7.5.16.1(a) |
| 4 | ☐ Pass ☐ Fail | Verify and document that the cooling tower fan motors are operational, and cooling tower fan speed controls (e.g., VSDs) are installed, operational, and connected to cooling tower fan motors as specified by Original Equipment Manufacturer (OEM) start-up manuals and sequence of operation. | NA7.5.16.1(b) |
| 5 | Pass Fail | Verify and document that the cooling tower fan control sequence, including tower design wet-bulb temperature and approach, is available and documented in the building documents. | NA7.5.16.1(c) |

| Step | Entry | Item | Code Reference |
|------|------------------|---|-------------------|
| 6 | ☐ Pass ☐ Fail | Verify and document that the following temperature sensors are installed as specified by the plans: outdoor air dry-bulb, outdoor air wetbulb, entering condenser water, and leaving chilled water. Note any discrepancies. | NA7.5.16.1(d) |
| 7 | ☐ Pass ☐ Fail | Verify and document that all ambient dry—bulb temperature, relative humidity, and pressure sensors used by controller are factory calibrated within 2% of a calibrated reference sensor. | NA7.5.16.1(e) |
| 8 | Pass Fail | Check "Pass" if construction inspection complies with all requirements. Check "Fail" if construction inspection does not comply with all requirements. | N/A |

| Table B-1. Temperature Documentation prior to Functional Testing | | | |
|--|-------------|--|-------------------|
| Step | Entry | Item | Code Reference |
| 1 | Enter Value | Document the outdoor air dry—bulb temperature. (°F) | NA7.5.16.1(f) |
| 2 | Enter Value | Document the outdoor air wetbulb temperature. (°F) | NA7.5.16.1(f) |
| 3 | Enter Value | Document the entering condenser water temperature. (°F) | NA7.5.16.1(f) |
| 4 | Enter Value | Document the leaving chilled water temperature. (°F) | NA7.5.16.1(f) |
| 5 | Pass Fail | Check if all temperature recordings from Steps 1 through 4 were documented successfully. | N/A |

Table B-2: Functional Testing

| Step | Entry | Functional Test | Code Reference |
|------|-----------|--|-------------------|
| 1.0 | Pass Fail | If the actual control sequence differs significantly from that implied by the tests and/or has already been tested during the building commissioning process, attach a description of the control sequence, a description of the tests that were done to verify the system operates according to the sequence, the test results, and a plot of associated trend data. Skip to Step 19. | NA7.5.16.2(c) |

| Step | Entry | Functional Test | Code Reference |
|------|------------------|---|-------------------------|
| 2.0 | Pass Fail | Pre-Functional Test Requirement. The system cooling load must be sufficiently high to run the test. If necessary, artificially increase the evaporator load to perform the functional tests or wait until a time of stable chiller operation. If necessary, reverse the series of Steps from 6 through 10 and the series of Steps from 11 through 15 in the test based on atmospheric conditions and buildings loads. | NA7.5.16.2(a) |
| 3.0 | Pass Fail | Pre-Functional Test Requirement. If testing in cold ambient conditions, ensure that freeze protection controls are installed and functional to prevent equipment damage. | NA7.5.16.2(b) |
| 4.0 | WB, L, C, O | Identifiedy the reset control parameter: WB - Outside air wet-bulb temperature L - Load signal from chiller C - Condenser water and chilled temperatures O - Other | NA7.5.16.2(d) |
| 5.0 | Pass Fail | Adjust the reset control parameter to decrease the condenser water supply temperature toward the lower supply temperature limit. Allow time for the system to stabilize. Maintain this status for Steps 76 through 109. | NA7.5.16.2 Step 1 |
| 6.0 | Pass Fail | Verify and document that the condenser water supply temperature controls modulate as intended. | NA7.5.16.2 Step 1(a) |
| 7.0 | Pass Fail | Verify and document that the actual condenser water supply temperature decreases to meet the new setpoint within plus or minus ±2 degrees Fahrenheit. | NA7.5.16.2 Step 1(b) |
| 8.0 | ☐ Pass ☐ Fail | Verify and document that the cooling tower fan(s) stage properly and/or adjust speed accordingly to meet higher setpoint. | NA7.5.16.2 Step 1(c) |
| 9.0 | Pass Fail | Verify and document that the chiller load amperage decreases. | NA7.5.16.2 Step 1(d) |
| 10.0 | Pass Fail | Adjust the reset control parameter to increase the condenser water supply temperature toward the upper supply temperature limit. Maintain this status for Steps 1211 through 154. | NA7.5.16.2 Step 2 |
| 11.0 | Pass Fail | Verify and document that the condenser water supply temperature controls modulate as intended. | NA7.5.16.2 Step 2(e) |
| 12.0 | Pass Fail | Verify and document that the actual condenser water supply temperature increases to meet the new setpoint within plus or minus±-2-degrees Fahrenheit. | NA7.5.16.2 Step 2(f) |

| Step | Entry | Functional Test | Code Reference |
|------|-----------|--|-------------------------|
| 13.0 | Pass Fail | Verify and document that the cooling tower fan(s) stage properly and/or adjust speed accordingly to meet the lower setpoint. | NA7.5.16.2 Step 2(g) |
| 14.0 | Pass Fail | Verify and document that the chiller load amperage increases. | NA7.5.16.2 Step 2(h) |
| 15.0 | Pass Fail | Restore reset control parameter to automatic control. Maintain this status for Steps 176 through 198. | NA7.5.16.2 Step 3 |
| 16.0 | Pass Fail | Verify and document that the condenser water supply temperature controls modulate as intended. | NA7.5.16.2 Step 3(i) |
| 17.0 | Pass Fail | Verify and document that the actual condenser water supply temperature changes to meet the new setpoint. | NA7.5.16.2 Step 3(j) |
| 18.0 | Pass Fail | Verify and document that the cooling tower fan(s) and chiller(s) stage properly and/or adjust speed accordingly to return to normal operation and meet the setpoint. | NA7.5.16.2 Step 3(k) |
| 19.0 | Pass Fail | Verify that the Functional Testing is complete and passes ALL requirements. | N/A |

| Declaration Statement | Signatory |
|---|---|
| Document Author | Name |
| I assert that this Certificate of Acceptance documentation is accurate and complete. | Company Name |
| | Author Signature |
| | Date Signed |
| Acceptance Test Technician I assert the following under penalty of perjury, under the laws of the State of California: The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The | Name Company Name |
| construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or | ATT No.: ATT Cert. No. Title Phone Signature |
| installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building. | Date Signed |
| Responsible Person I assert the following under penalty of perjury, under the laws of the State of California: I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I understand that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to ensure this requirement is accomplished. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished. | Name Company Name Lic. No.: License No. Title Phone Signature Date Signed |