**Facility:**

**Commissioning Provider: Date:**

DIRECTIONS: Address each item listed or note why it was not tested/investigated. Add other items that were tested/investigated. Note what testing/investigation was done, how these were conducted and results of the testing/investigation. Indicate any operating parameters found. Put in EEI# for improvements to resolve items that are not optimal or explain why no improvements are recommended. Complete full EEI description and information in PSE NC Post Occ EEI Details form. Include other capital improvements that may be cost effective. Expand to fit information or note specific location of information. (Handwritten legible notes are acceptable.)

**SYSTEM TYPE: Exhaust Fan (ID#:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**

**EQUIPMENT & SEQUENCES INVESTIGATED** *(be specific)***:**

**Equip ID#s:** *Example: EF-1 & 2*

**Describe System:** *Example: Linked with AHU-1*

**Area Serves/occupancy type:** *Example: Restrooms, for general public in school*

**Sequences:** *Example: On/Off Schedule, building pressure*

**FINDINGS, TESTS and INVESTIGATION RESULTS:**

**Working Optimally?**

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**GENERAL SYSTEM CONDITION**: Equipment is generally in good shape and does not exhibit any abnormal nose or vibration. System is not in need of over-all replacement in the near future. Safety guards are in place. Working on and around equipment can be done safely.

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**SENSOR CALIBRATION & PT-to-PT**: Key controlling sensors are calibrated and in appropriate locations. Points are mapped correctly to the DDC front-end. Other sensor outputs seem reasonable.

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PT-to-PT OTHER**: Other critical points (fan, CO) are mapped correctly to the DDC front-end and reflect actual system condition. Points Checked: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**AIR CIRCULATION**: Exhaust air is not mixing with inlet air or affecting outside air sensor.

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**SCHEDULING**: Operating schedule matches occupancy schedule including holiday scheduling. Equipment shuts down when unoccupied as evidenced by EIS data or walk-through (night typically).

Schedule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**OPTIMUM START/STOP – WARM-UP COOL DOWN**: Exhaust fan(s), not in equipment rooms, are off during warm-up/cool down if it is not needed. If needed, explain why.

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**SPACE TEMPERATURES**: Typically only for equipment rooms. Space temperature setpoints are as high as possible (85°F typical). Setpoints have proper deadband to prevent simultaneous heating and cooling. There are no equipment issues with setpoints. Mechanical cooling or heating is only used if absolutely necessary.

Room Temperature setpoints: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**ROOM THERMOSTATS**: Room thermostats are in appropriate locations and not influenced by non-room temperature heating or cooling elements (example: stat is right above a light) or blocked.

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**BUILDING PRESSURE**: Building/space pressure is controlled adequately to maintain intended pressure differential. (Typical building pressure: day + 0.05” day and neutral at night).

Pressure Setpoint(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**FAN VFD**: Fans with VFD are ramping up and down efficiently and maintain minimum efficiency levels and setpoints. All fans that might be able to variable flow are on VFDS (example: kitchen exhaust DCV)

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DCV & FAN FOR GARAGES**: Demand control ventilation systems are functioning properly and reduce fan use as much as allowed to match car occupancy levels. Sensors (CO or occupancy sensors) are calibrated and a regular calibration schedule is in place. There are no garage spaces where DCV could be added to save fan energy. CO setpoint: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DCV & FAN FOR LARGE KITCHEN HOODS**: Demand control ventilation systems are functioning properly and reduce fan use as much as allowed to match cooking needs. Sensors (particle, heat or occupancy sensors) are calibrated and a regular calibration schedule is in place. There are no large kitchen hoods where DCV could be added to save fan energy. Sensor setpoints: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**OVERRIDES**: Controls, setpoints and equipment that can be easily overridden or circumvented are in normal/automatic operating mode. Examples –fan speed, temperature setpoints,

Tests Conducted /Results/Findings:

**Yes No N/A EEI# \_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LOOP TUNING**: Loops are adequately tuned to prevent equipment breakdown and poor control.

Tests Conducted /Results/Findings:

**Yes No EEI#\_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***OTHER****: Describe other things tested/investigated.*

Tests Conducted /Results/Findings:

**Yes No EEI#\_\_\_\_\_\_\_ Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***OTHER:*** *Describe other things tested/investigated*

Tests Conducted /Results/Findings:

**CAPITAL EE IMPROVEMENTS**

**EEI# \_\_\_\_**  *Brief Description of Capital Improvement*

Notes/Comments:

**EEI# \_\_\_\_** *Brief Description of Capital Improvement*

Notes/Comments:

**TRAINING**

**Yes No Date(s)/time(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Staff (occupants and O&M) fully understands how the system works.**

**Staff (occupants and O&M) fully understands how to run the systems efficiently.**

Specific Staff evaluated:

Comments:

**Specific Training needs of staff (occupants and O&M):**

**Ideas for Facility Guide/Operational Aides/Persistence:** What needs to be added (for example: sensors, specific trends, explanation on DDC graphic, or signage), provided (for example: table of setpoints) or done (for example: putting check in maintenance schedule) to help the operators keep the systems operating efficiently over time?