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: Envelope**

**ENVELOPE COMPONENTS INVESTIGATED** *(be specific)***:**

**Areas Examined:** *Example: all exterior walls, roof, conditioned and unconditioned space interaction, elevator shaft, roof access, doors and windows*

**Occupancy/Building type:** *Example: gym*

**FINDINGS, TESTS and INVESTIGATION RESULTS:**

**Working Optimally?**

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

[ ]  [ ]  [ ]  **GENERAL ENVELOPE CONDITION**: Roof, windows, doors and exterior is generally in good condition. There is no evidence of major wear or moisture damage. Windows are at least double pane and exterior doors are insulated. Exterior doors close well and there are no broken windows.

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **WEATHER-STRIPPING**: Windows, roof hatches, skylights and exterior doors are weather stripped. Doors have sweeps. All weather-stripping/sweeps are in good condition and adjusted correctly to prevent air leakage. There is no evidence of dirt or other factors indicating leakage has been happening over time.

Areas Checked:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **BUILDING PRESSURE**: Building pressure is positive during day but not keeping doors open. Building pressure is neutral at night or when unoccupied. Air is not being drawn into building. (Typical building pressure: day + 0.05”)

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **ELEVATOR SHAFTS**: Elevator shafts are not drafty due to pressure differences or stack effect. There is no evidence, like dirt, indicating there has been a lot of air movement through the shaft over time.

Areas Checked:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **CRACKS/PENTRATIONS/OPENINGS**: There are no openings/cracks for air leak out. The following places are well sealed: piping and other penetrations in walls or roof, major building component interfaces, wall transitions, utility penetrations. There are no uncontrolled openings allowing air movement between a conditioned and unconditioned space (e.g. outdoor, storage space, mechanical room, etc.).

Areas Checked:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **BACKDRAFT DAMPERS**: Backdraft dampers fully close when duct/space is not pressurized and the dampers seal when closed. Night/unoccupied walk-through did not reveal any dampers open.

Backdraft damper locations:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **WINDOW/DOOR OPERATION:** Doors and windows are not being left open for long periods of time allowing conditioned air to escape, outside air to come in or building pressure to change. Lobbies, or places with a lot of traffic, have revolving doors and they are being used. Delivery and other large doors are left closed when not in use and/or have air or strip curtains to reduce air flow into building.

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **INSULATION:** Building is adequately insulated. There are no obvious places where insulation is missing between condition and unconditioned spaces.

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

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **SHADING FROM SUN:** There is shading (examples: operable window blinds, window tinting, overhangs, and vegetation) to prevent sun from entering the building on west and south sides. The operable window treatments are being used to reduce the cooling load in the building. Other devices are effective in reducing the load.

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **THERMAL IMAGE STUDY:** A thermal image study has been done on the building and reveals no major air leakage or missing insulation.

Tests Conducted /Results/Findings:

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

[ ]  [ ]  [ ]  **WATER SEALING/DRAINAGE:** There is no evidence of water damage or accumulation throughout the facility. If there is, the issue has been addressed and the component sealed, realigned and reinsulated as needed. Water is draining away from structures and off of roof appropriately. Roof drains, valleys, downspouts and scuppers are not blocked. There is no evidence of the accumulation of water on the roof. Flashing seems to be intact and in all appropriate places to prevent water from entering structure.

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 or specific trends, explanation on DDC graphic, or signage), provided (for example: table of VAV box CFM) or done (for example: putting check in maintenance schedule) to help the operators keep the systems operating efficiently over time?