APPENDIX E: NEW CONSTRUCTION COMPONENT ISOLATION PROJECT TECHNICAL REQUIREMENTS

I. Application Submission

Component isolation projects that are new construction projects must ***achieve a 15% energy savings above the current energy efficiency standards*** adopted by the Ohio Board of Building Standards in rules 4101:1-13-01 and 4101:1-35-01 of the Ohio Administrative Code***.*** The process includes: (1) an analysis of the base-case component that complies with the current energy efficiency standards for the state and federal equipment standards; (2) an analysis of the proposed energy efficient component (i.e., above-code component) that exceeds the current energy efficiency standards; and a Monitoring and Verification (M&V) plan describing how the project will be inspected and commissioned, and how the energy savings from the project will be measured and reported once the project is built.

II. Project Review

The project review process for component-isolation – new construction projects also begins with a code compliance review of the proposed project, to ensure that each new component(s) is more stringent than the current building code and the federal equipment standards and the existing component is more stringent than the current building code and the federal equipment standards. In the case that there is no existing component, then the model parameters for the existing component must be more stringent than the current building code and the federal equipment standards. The total combined energy savings for all energy components must exceed 15% above baseline, or current energy efficiency standards in the State of Ohio.

Once a project successfully completes this stage of the review an agreement of a metering or monitoring plan will be reached and a review of other applicable plans such as construction and commissioning plans may be conducted. Successful completion of all these plans is then followed by the project construction and project commissioning report. Satisfactory review of the commissioning report is then followed by an occupancy permit. Once the occupancy permit is issued the metered data collection begins or annual monitoring plan is initiated for review of monthly utility usage/bills.

III. Measurement & Verification

In general, the measurement and verification process for projects consists of three stages: (1) the Application Submittal and Review stage as described in Section II, A; (2) the M&V Plan Submittal and Review stage as described in Section II, B; and (3) the Project M&V Process stage as described below.

All projects need to comply with each stage in sequence to qualify as an Air Quality Facility and OAQDA will work with the applicant to ascertain if and where meters are to be placed in the building (or project), or if whole-building gas and/or electric meters are appropriate for measuring savings, and what end-use energy use quantities are to be measured before construction begins. OAQDA may also request the use of ENERGY STAR Portfolio Manager as a free industry-standard tool to assist in benchmarking the project's impact on the building's performance.

Project M&V Process. Data collection efforts and required information is submitted by the applicant and must comply with the agreed upon M&V Plan reviewed by OAQDA. The review begins before the new construction is complete and proceeds throughout the project period. At the discretion of OAQDA and after a sufficient period of data is collected, a calibrated component isolation model,

which may be a building simulation or detailed data calculation/analysis, may be developed and compared to data from the existing component, or the simulated, code-compliant component. The model is a useful tool to determine whether the measured savings agree with the estimated savings predictions.

In addition, adherence to the recommendations in ASHRAE Guideline 14-2014 (ASHRAE 2014, including July 2019 errata) and/or the Uniform Performance Measurement (UMP) guidelines (UMP 2020) is important to ensure accurate measurement and reporting.