repair costs of a system making them a financial success for the building owner or user. Status: Revise work statement for Re-bid & expand recommended bidders list, so project can rebid.

1797-TRP-C Assessment of the A/B Toxicity Classification Used in Standard 34

TC 3.1, Refrigerants and Secondary Coolants

Societal expectations and demands for refrigerants with lower global warming impact drive the industry to development new refrigerants that are both safe and functional. Understanding the impact of using acute versus chronic toxicity for setting limits based on technically sound toxicity criteria for HVAC&R products will increase the safety understanding of refrigeration-based products; facilitate the adoption of lower GWP refrigerants including natural refrigerants; further the application and understanding of refrigerants and products for the industry. Status: Conditionally Approved. Clear conditions with Research Liaison so project can bid.

1815-TRP-C Integrating Occupant Behavior Data into Building Performance Simulation

MTG.OBB Occupant Behavior in Buildings; co-sponsored by: MTG.BIM, TC 1.5

The objectives of this research are to determine and document how detailed occupant behavior data can be integrated into existing standard BIM frameworks such as the Green Building XML gbXML, 2017) and Industry Foundation Classes buildingSMART, 2018) schemas, to facilitate the standardized collection and representation of occupant behavior data, and the transfer of occupant behavior data to building simulation tools as well as other analysis tools used in the building industry. Status: Conditionally Approved WS. Clear conditions with Research Liaison so project can bid.

1831-TRP Validation of a Test Method for Applying a Standardized Frost Load on a Test Evaporator in a Test Chamber with and Operating Conditioning System

TC 10.7 (Commercial Food and Beverage Refrigeration Equipment)

Status: Project awarded to Creative Thermal Solutions but start of project is delayed until we can confirm we can fully fund it.

1865-TRP Optimizing Supply Air Temperature Control for Dedicated Outdoor Air Systems

TC 1.4, (Control Theory and Application)

The ASHRAE Advanced Energy Design Guides Series (ASHRAE.) has recommended DOASs as part of the HVAC design strategy for most climate zones and building types evaluated, including K-12 schools, hospital and healthcare facilities, small to medium offices buildings, retail buildings, etc. This project will recommend new near-optimal control sequences for DOAS systems and improve ASHRAE's *Advanced Energy Design Guides* Series. The control sequences generated from the research will be submitted to ASHRAE Guideline Project Committee 36 "High Performance Sequences of Operation for HVAC Systems". The results of the project can also improve the recently published *ASHRAE Design Guide for Dedicated Outdoor Air Systems* (ASHRAE, 2017). Status: Project awarded to Texas A&M but start of project is delayed until we can confirm we can fully fund it.

1879-TRP-C Formability Properties of LGWP Refrigerant and Oil Mixtures

TC 3.4, Occupant Behavior In Buildings; co-sponsored by: TC 8.1, Positive Displacement Compressors

Information is needed to ensure short- and long-term reliability of air-conditioning and refrigeration equipment using LGWP refrigerants and synthetic lubricants. Foaming in refrigerant systems can lead to lower efficiency or even system inoperability or failure, and there have been no studies published to date on foaming with lower GWP refrigerants compared to existing refrigerant/ lubricant pairs. Oil chemistries in use today are not expected to change significantly as refrigerant chemistries are changed; thus, it is necessary to understand the magnitude of any system foaming differences with lower GWP refrigerants. Status: Conditionally Approved. Clear conditions with Research Liaison so project can bid.