TC2.3 Research Roadmap –January 2017						
Rank	**Topic/Title**	**Related Past or Ongoing ASHRAE projects**	**Research Gap Identifications**	**ASHRAE Strategic Plan Fit**	**Champion(s)**	**Status**
1	1720-WS: Validation of gas-phase air-cleaner performance test method (Standard 145.2) by laboratory testing of commercially available filtration devices.	1. Std 145.2	*Removal of gaseous contaminants:* Validation of Std 145.2	Adapt Goal: Work to translate science and technology into practical tools and resources that drive effective building design, operations and management	Gemma Kerr	Chair approved for potential RFP Posting
2	1579-WS: Testing and Evaluation of Ozone Filters for Improving IAQ		*Removal of gaseous contaminants*		Matt Middlebrooks	Too similar to 1720 – need to change
3	1755 WS: Impact of gaseous contamination and high humidity on the reliable operation of information technology equipment in data centers		*Nature of gaseous pollutants*: Determination of critical humidity range in data centers		Chris Muller	TC9.9 Co-sponsoring In Progress
4	Determination of the Exhaust air Contaminant Transfer Ratios (ECTR) for selected typical exhaust airborne contaminants while using commercially available air-to-air energy recovery ventilation (ERV) devices or systems in HVAC systems		*Removal of gaseous contaminants:*		Nick Agopian	RTAR submitted by TC5.5 with TC2.3 co-sponsor

	applications					
	1780 Test Method to Evaluate Cross Contamination of within total energy recovery devices				Chris, Nick Gemma	TC9.10 2.3 co-sponsor WS being written
	Demand-based air-cleaner operation to save energy		*Removal of gaseous contaminants:*		Brian Krafthefer	RTAR in progress
	Using specially treated textiles to reduce odors		*Removal of gaseous contaminants:*		Arsen Melikov	No Champion consider removing
	Bipolar Ionization (process uses needlepoint technology to produce both positive and negative ions) performance test method for VOC removal and testing a variety of commercially-available ionization devices	Std 145.2	*Removal of gaseous contaminants:*		Scott Sherwood	RTAR needs to be written – in progress SSPC145 has RTAR started by Kevin Kwong
	IAQP field studies	ASHRAE 62.1	*Removal of gaseous contaminants:*		Marwa Zaatari	RTAR needs to be written – not started
	The effects of filtration on health	EHC Position Paper	*Removal of gaseous contaminants; & Effect on living things*		Dean Tompkins	RTAR needs to be written – not started

Needs to be discussed – not started	In room air-cleaners		*Removal of gaseous contaminants; & Effect on living things*		Kathleen Owen	RTAR needs to be written – not started
Needs to be discussed – not started	Gas phase filtration and energy usage – with GPC35		*Removal of gaseous contaminants; & Effect on living things*		Brian Krafthefer	RTAR needs to be written – not started
Needs to be discussed – not started	How should the IAQP be applied when the IAQ/CoCs are not well defined		*Removal of gaseous contaminants; & Effect on living things*		Marwa Zaatari	RTAR needs to be written – not started
Needs to be discussed – not started	Controlling CO2 levels when applying the IAQP – what ventilation rate should be used with the IAQP?		*Removal of gaseous contaminants; & Effect on living things*		Charlene Bayer	RTAR needs to be written – not started
Needs to be discussed – not started	IAQP in residences		*Removal of gaseous contaminants; & Effect on living things*			RTAR needs to be written – not started
Needs to be discussed – not started	Gas phase filtration and CoCs for residences		*Removal of gaseous contaminants; & Effect on living things*			RTAR needs to be written – not started
	SVOCs		*Nature of gaseous pollutants:* How SVOC emissions change with temperature		Jensen Zhang	RTAR proposed in Atlanta—needs to written
	Bio-effluent emission rates to		*Nature of gaseous*		Chang-Seo Lee	RTAR needs to

	assist IAQP calculations		*pollutants:*			be written
	Gas Phase emissions from 3D printers		*Nature of gaseous pollutants:*		Barney Burroughs	RTAR needs to be written.