REFRENCES:

1 ASHRAE HANDBOOK - APPLICATION 2011 - CHAPTER 53, FIRE AND SMOKE MANAGEMENT
2 NFPA 92 - 2012 - STANDARD FOR SMOKE CONTROL SYSTEMS
3 Chemical Industries Association Guidance for location and design of occupied buildings on chemical manufacturing sites

TABLE CALCULATING TOTAL BUILDING LEAKAGE AREA

	QTY.	SIZE	TOTAL AREA	LEAKAGE RATIO*	DOOR/WINDOW LEAKAGE AREA**	LEAKAGE AREA
		SQ. FT.	SQ. FT.		SQ. FT.	SQ. FT.
BUILDING FLOOR	1		17250	0.000052		0.897
BUILDING WALL	1		8977.5	0.00017		1.526175
BUILDING ROOF	1		17250	0.00005		0.8625
SINGLE DOORS ON ENVELOPE	4	21			0.21	0.84
DOUBLE DOORS ON ENVELOPE	4	42			0.31	1.24
					TOTAL LEAKAGE AREA	**5.365675**

*NFPA 92 - 2012 - TABLE A.4.4.4.3
** ASHRAE HANDBOOK - APPLICATION 2011 - CHAPTER 53 - PAGE 53.6

CALCULATING PRESSURIZATION AIRFLOW:

Q VOLUMETRIC AORFLOW RATE, CFM
A FLOW AREA (LEAKAGE AREA), SQ. FT.
• p PRESSURE DIFFERENCE ACROSS FLOW PATH, IN. OF W.C.
0.2" w.c (Chemical Industries Association Guidance for location and design of occupied buildings on chemical manufacturing sites - page 35, section A4.17

$$Q = 2610 \bullet \bullet \bullet \bullet (\bullet\bullet)$$

AHSRAE HANDBOOK - APPLICATIONS 2011 - CHAPTER 53, EQUATION 9

AIRFLOW (Q) **6,262.96** **CFM**

FACTOR OF SAFETY **0.05**

DESIGN AIRFLOW **6,576.11** **CFM**