

เอกสารประกอบรายงานฉบับสุดท้าย

ภาคผนวก ก, ง, จ

โครงการ การวิจัยประยุกต์ ประกอบการออกแบบ อาคารประหยัดพลังงาน

เสนอต่อ
กรมพัฒนาและส่งเสริมพลังงาน
กระทรวงวิทยาศาสตร์และเทคโนโลยี



โดย
สถาบันวิจัยพลังงาน
จุฬาลงกรณ์มหาวิทยาลัย



26 กรกฎาคม 2539

เล่มที่ 8

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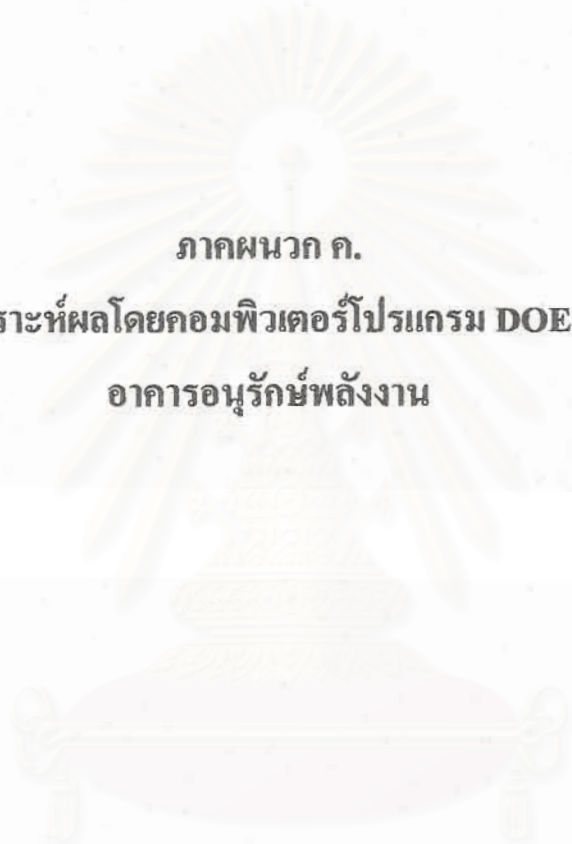
เล่มที่ 3

สารบัญ

	หน้า
ภาคผนวก ค	
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE 2.1 D	ค-1
อาคารอนุรักษ์พลังงาน	
ภาคผนวก ง	
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE 2.1 D	ง-1
อาคารมาตรฐานตาม พรบ. อนุรักษ์พลังงาน	
ภาคผนวก จ	
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE 2.1 D	จ-1
อาคารทั่วไป	

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

เลขหมู่ (ก) 15
เลขทะเบียน 009464
วัน,เดือน,ปี 8 ต.ค. 41



ภาคผนวก ก.
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE2.1 D
อาคารอนุรักษ์พลังงาน

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

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BUILDING ENERGY ANALYSIS PROGRAM

DEVELOPED BY

LAWRENCE BERKELEY LABORATORY/UNIVERSITY OF CALIFORNIA
AND
James J. Hirsch/HIRSCH & ASSOCIATES/(805) 532-1045

WITH MAJOR SUPPORT FROM

UNITED STATES DEPARTMENT OF ENERGY
ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY
OFFICE OF BUILDINGS AND COMMUNITY SYSTEMS
BUILDING SYSTEMS DIVISION



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LBL RELEASE DEC 1990 version : ITEM Systems PC 2.1D-018

This ITEM Systems PC DOE-2.1D was released in April 1994.
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LDL PROCESSOR INPUT DATA

7/30/1996 17:23: 4 LDL RUN 1

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* 2 *
* 3 * TITLE
* 4 *   LINE-1  *Energy Simulation of*
* 5 *   LINE-2  *Energy Conservation Building*
* 6 *   LINE-3  *Patumthani, Thailand*
* 7 *   LINE-4  *( DOE PLUS WITH DOE 2.1 D )*
* 8 *   LINE-5  *Daylight, 100 sf/per, Ultimate Condition*
* 9 * ..
* 10 *
* 11 * RUN-PERIOD
* 12 *   JAN 1 1995 THRU DEC 31 1995
* 13 * ..
* 14 *
* 15 * $metric$ PARAMETER
* 16 *   INPUT-UNITS      = ENGLISH          OUTPUT-UNITS      = METRIC
* 17 * ..
* 18 *
* 19 * BUILDING-LOCATION
* 20 *   $ City           = Patumthani
* 21 *   $ State/Country = Thailand
* 22 *   LATITUDE        = 13.57             LONGITUDE         = -100.6
* 23 *   ALTITUDE       = 0                 TIME-ZONE         = -7
* 24 *   AZIMUTH        = 0
* 25 *   GROUND-T       =(81,81,81,81,81,81,81,81,81,81,81,81)
* 26 *   ATM-MOISTURE    =(1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3)
* 27 *   ATM-TURBIDITY  =( .25, .25, .25, .25, .25, .25, .25, .25, .25, .25, .25, .25)
* 28 * ..
* 29 *
* 30 * WEEKDAY-LIGHTING = DAY-SCHEDULE (1,24)
* 31 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.20,0.90,1.0,1.0,1.0,0.50,
* 32 *     1.0,1.0,1.0,1.0,0.70,0.30,0.20,0.10,0.02,0.02,0.02,0.02)
* 33 * ..
* 34 *
* 35 * OCCUPY1 = DAY-SCHEDULE (1,24)
* 36 *   (0,0,0,0,0,0,0,0,1.0,1.0,1.0,0.80,
* 37 *     0.40,0.80,1.0,1.0,1.0,1.0,0.50,0.05,0.05,0,0,0)
* 38 * ..
* 39 *
* 40 * OFFICE-LIGHTING = DAY-SCHEDULE (1,24)
* 41 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.40,0.40,0.80,0.80,0.80,0.60,
* 42 *     0.80,0.80,0.80,0.80,0.80,0.80,0.40,0.40,0.02,0.02,0.02,0.02)
* 43 * ..
* 44 *
* 45 * LIGHTSHED-YEAR = SCHEDULE
* 46 *   THRU DEC 31 (WD) WEEKDAY-LIGHTING
* 47 *   (WEH) (1,8){.02} (9,17) (.05) (18,24) (.02)

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* 48 * ..
* 49 *
* 50 * INFILSCHE = SCHEDULE
* 51 *   THRU DEC 31 (WD) (1,8)(1) (9,17) (.5) (18,24) (1)
* 52 *           (WEH) (1,24) (1)
* 53 * ..
* 54 *
* 55 * OCCUPY = SCHEDULE
* 56 *   THRU DEC 31 (WD) OCCUPY1
* 57 *           (WEH) (1,8) (0.0) (9,17) (.02) (18,24) (0.0)
* 58 * ..
* 59 *
* 60 * OFFICE-LIGHTSCHE = SCHEDULE
* 61 *   THRU DEC 31 (WD) OFFICE-LIGHTING
* 62 *           (WEH) (1,8)(.02) (9,17) (.05) (18,24) (.02)
* 63 * ..
* 64 *
* 65 * SCH-HR-1 = SCHEDULE
* 66 *   THRU MAY 3 (ALL) (1,24) (0)
* 67 *   THRU MAY 4 (ALL) (1,24) (1)
* 68 *   THRU DEC 31 (ALL) (1,24) (0)
* 69 * ..
* 70 *
* 71 * SCH-HR-2 = SCHEDULE
* 72 *   THRU APR 30 (ALL) (1,24) (0)
* 73 *   THRU MAY 31 (ALL) (1,24) (1)
* 74 *   THRU DEC 31 (ALL) (1,24) (0)
* 75 * ..
* 76 *
* 77 * W-1 = LAYERS
* 78 *   MATERIAL           =(AS01,IN35,AL11,GP02)
* 79 * ..
* 80 *
* 81 * LOW-INSUL = LAYERS
* 82 *   MATERIAL           =(CB06)
* 83 * ..
* 84 *
* 85 * LAY-INT-WALLS = LAYERS
* 86 *   MATERIAL           =(CC05)
* 87 * ..
* 88 *
* 89 * F-1 = LAYERS
* 90 *   MATERIAL           =(CC04,CP02)
* 91 * ..
* 92 *
* 93 * R-1 = LAYERS
* 94 *   MATERIAL           =(AR01,CC04,AL33,IN12,AL33,GP02)
* 95 *   INSIDE-FILM-RES   = 0.92
* 96 * ..
* 97 *
* 98 * WALL-1 = CONSTRUCTION
* 99 *   LAYERS             = W-1
* 100 * ..
* 101 *

```

* 102 *	ROOF-1 = CONSTRUCTION		
* 103 *	LAYERS = R-1	ABSORPTANCE	= 0.2
* 104 *	..		
* 105 *			
* 106 *	INTERIOR-WALLS = CONSTRUCTION		
* 107 *	LAYERS = LAY-INT-WALLS		
* 108 *	..		
* 109 *			
* 110 *	WALL NON ABSORB = CONSTRUCTION		
* 111 *	\$ LIKE = WALL-1		
* 112 *	LAYERS = W-1	ABSORPTANCE	= 0
* 113 *	..		
* 114 *			
* 115 *	FLOOR = CONSTRUCTION		
* 116 *	LAYERS = F-1		
* 117 *	..		
* 118 *			
* 119 *	SELECTIVE = GLASS-TYPE		
* 120 *	PANES = 2	SHADING-COEF	= 0.31
* 121 *	GLASS-CONDUCTANCE= 0.21	VIS-TRANS	= 0.67
* 122 *	..		
* 123 *			
* 124 *	NO-DAYLIT = SPACE-CONDITIONS		
* 125 *	PEOPLE-SCHEDULE = LIGHTSHED-YEAR	AREA/PERSON	= 100
* 126 *	PEOPLE-HEAT-GAIN = 400	LIGHTING-SCHEDULE=	LIGHTSHED-YEAR
* 127 *	LIGHTING-TYPE = REC-FLUOR-NV	LIGHTING-W/SQFT	= 0.736
* 128 *	EQUIP-SCHEDULE = LIGHTSHED-YEAR	EQUIPMENT-W/SQFT	= 0.5
* 129 *	INF-SCHEDULE = INFILSCHED	INF-METHOD	= AIR-CHANGE
* 130 *	AIR-CHANGES/HR = 0.1	INF-CFM/SQFT	= 0.038
* 131 *	TEMPERATURE = (80)		
* 132 *	LIGHT-TO-SPACE = 1.0		
* 133 *	LIGHT-RAD-FRAC = (0.67,0.9)		
* 134 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR		
* 135 *	SOURCE-TYPE = ELECTRIC		
* 136 *	FLOOR-WEIGHT = 130	FURNITURE-TYPE	= LIGHT
* 137 *	..		
* 138 *			
* 139 *	ALLSPACE = SPACE-CONDITIONS		
* 140 *	PEOPLE-SCHEDULE = OCCUPY	AREA/PERSON	= 100
* 141 *	PEOPLE-HEAT-GAIN = 400	LIGHTING-SCHEDULE=	LIGHTSHED-YEAR
* 142 *	LIGHTING-TYPE = REC-FLUOR-NV	LIGHTING-W/SQFT	= 0.83
* 143 *	EQUIP-SCHEDULE = LIGHTSHED-YEAR	EQUIPMENT-W/SQFT	= 0.5
* 144 *	INF-SCHEDULE = INFILSCHED	INF-METHOD	= AIR-CHANGE
* 145 *	AIR-CHANGES/HR = 0.2	INF-CFM/SQFT	= 0.038
* 146 *	TEMPERATURE = (80)		
* 147 *	LIGHT-TO-SPACE = 1.0		
* 148 *	LIGHT-RAD-FRAC = (0.67,0.9)		
* 149 *	DAYLIGHTING = YES	MIN-LIGHT-FRAC	= 0.167
* 150 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR		
* 151 *	SOURCE-SCHEDULE = OCCUPY	SOURCE-TYPE	= ELECTRIC
* 152 *	FLOOR-WEIGHT = 130	FURNITURE-TYPE	= LIGHT
* 153 *	..		
* 154 *			
* 155 *	OFFICESPACE = SPACE-CONDITIONS		

* 156 *	PEOPLE-SCHEDULE	= OCCUPY	AREA/PERSON	= 100
* 157 *	PEOPLE-HEAT-GAIN	= 400	LIGHTING-SCHEDULE	= OFFICE-LIGHTSCHE
* 158 *	LIGHTING-TYPE	= REC-FLUOR-NV	LIGHTING-W/SQFT	= 0.736
* 159 *	EQUIP-SCHEDULE	= OFFICE-LIGHTSCHE	EQUIPMENT-W/SQFT	= 0.5
* 160 *	INF-SCHEDULE	= INFILSCHE	INF-METHOD	= AIR-CHANGE
* 161 *	AIR-CHANGES/HR	= 0.2	INF-CFM/SQFT	= 0.038
* 162 *	TEMPERATURE	=(75)		
* 163 *	LIGHT-TO-SPACE	= 1.0		
* 164 *	LIGHT-RAD-FRAC	=(0.67,0.9)		
* 165 *	DAYLIGHTING	= YES	MIN-LIGHT-FRAC	= 0.167
* 166 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 167 *	SOURCE-SCHEDULE	= OCCUPY	SOURCE-TYPE	= ELECTRIC
* 168 *	FLOOR-WEIGHT	= 130	FURNITURE-TYPE	= LIGHT
* 169 *	..			
* 170 *				
* 171 *	N-FL-1 = SPACE			
* 172 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 19202.3
* 173 *	VOLUME	= 192023.0	FLOOR-MULTIPLIER	= 1
* 174 *	INF-SCHEDULE	= INFILSCHE		
* 175 *	DAYLIGHTING	= YES		
* 176 *	LIGHT-REF-POINT1	=(169.95,31.82,2.5)		
* 177 *	LIGHT-REF-POINT2	=(242.62,-75.52,2.5)		
* 178 *	ZONE-FRACTION1	= .85	ZONE-FRACTION2	= 0.15
* 179 *	MAX-GLARE	= 22	LIGHT-CTRL-PROB	= 1
* 180 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 181 *	SOURCE-TYPE	= ELECTRIC		
* 182 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 183 *	TEMPERATURE	=(80.0)		
* 184 *	..			
* 185 *				
* 186 *	WALL3-N-FL-1 = EXTERIOR-WALL			
* 187 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 188 *	Y	= 63.33	Z	= 0
* 189 *	HEIGHT	= 26.4	WIDTH	= 86.58
* 190 *	TILT	= 90		
* 191 *	..			
* 192 *				
* 193 *	G-WALL3-N-FL-1 = WINDOW			
* 194 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 6.93
* 195 *	WIDTH	= 86.58	Y	= 0
* 196 *	..			
* 197 *				
* 198 *	WALL4-N-FL-1 = EXTERIOR-WALL			
* 199 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 200 *	Y	= -23.25	Z	= 0
* 201 *	HEIGHT	= 26.4	WIDTH	= 86.58
* 202 *	AZIMUTH	= 90	TILT	= 90
* 203 *	..			
* 204 *				
* 205 *	G-WALL4-N-FL-1 = WINDOW			
* 206 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 6.93
* 207 *	WIDTH	= 86.58	Y	= 0
* 208 *	..			
* 209 *				

วิทยาลัยการอาชีพสุพรรณบุรี
 วิทยาลัยการอาชีพสุพรรณบุรี

* 210 *	WALL5-N-FL-1 = EXTERIOR-WALL			
* 211 *	CONSTRUCTION = WALL-1	X	= 272	
* 212 *	Y = -82.06	Z	= 0	
* 213 *	HEIGHT = 26.4	WIDTH	= 83.25	
* 214 *	AZIMUTH = 45	TILT	= 90	
* 215 *	..			
* 216 *				
* 217 *	G-WALL5-N-FL-1 = WINDOW			
* 218 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 13.86	
* 219 *	WIDTH = 83.25	Y	= 0	
* 220 *	..			
* 221 *				
* 222 *	ROOF1-FL-1 = EXTERIOR-WALL			
* 223 *	CONSTRUCTION = WALL-1	X	= 126.66	
* 224 *	Y = 126.66	Z	= 13.2	
* 225 *	HEIGHT = 126.66	WIDTH	= 126.66	
* 226 *	TILT = 0			
* 227 *	..			
* 228 *				
* 229 *	G1-ROOF1-FL-1 = WINDOW			
* 230 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2	
* 231 *	WIDTH = 108.66	X	= 9	
* 232 *	Y = 9			
* 233 *	..			
* 234 *				
* 235 *	G5-ROOF1-FL-1 = WINDOW			
* 236 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2	
* 237 *	WIDTH = 108.66	X	= 9	
* 238 *	Y = 115.66			
* 239 *	..			
* 240 *				
* 241 *	G2-ROOF1-FL-1 = WINDOW			
* 242 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 36.22	
* 243 *	WIDTH = 2	X	= 9	
* 244 *	Y = 9			
* 245 *	..			
* 246 *				
* 247 *	G3-ROOF1-FL-1 = WINDOW			
* 248 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 36.22	
* 249 *	WIDTH = 2	X	= 9	
* 250 *	Y = 45.22			
* 251 *	..			
* 252 *				
* 253 *	G4-ROOF1-FL-1 = WINDOW			
* 254 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 36.22	
* 255 *	WIDTH = 2	X	= 9	
* 256 *	Y = 81.44			
* 257 *	..			
* 258 *				
* 259 *	G6-ROOF1-FL-1 = WINDOW			
* 260 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 36.22	
* 261 *	WIDTH = 2	X	= 115.66	
* 262 *	Y = 81.44			
* 263 *	..			

* 264 *				
* 265 *	G7-ROOF1-FL-1 = WINDOW			
* 266 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	36.22
* 267 *	WIDTH = 2	X	=	115.66
* 268 *	Y = 45.22			
* 269 *	..			
* 270 *				
* 271 *	G8-ROOF1-FL-1 = WINDOW			
* 272 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	36.22
* 273 *	WIDTH = 2.0	X	=	115.66
* 274 *	Y = 9			
* 275 *	..			
* 276 *				
* 277 *	WALL1-NW-FL1 = EXTERIOR-WALL			
* 278 *	CONSTRUCTION = WALL-1	X	=	126.66
* 279 *	Y = 126.66	Z	=	0
* 280 *	HEIGHT = 13.2	WIDTH	=	63.33
* 281 *	TILT = 90			
* 282 *	..			
* 283 *				
* 284 *	G-WALL1-N-FL-1 = WINDOW			
* 285 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	3.63
* 286 *	WIDTH = 63.33	Y	=	3.3
* 287 *	SETBACK = 10			
* 288 *	..			
* 289 *				
* 290 *	WALL2-NW-FL1 = EXTERIOR-WALL			
* 291 *	CONSTRUCTION = WALL-1	X	=	63.33
* 292 *	Y = 126.66	Z	=	0
* 293 *	HEIGHT = 13.2	WIDTH	=	63.33
* 294 *	TILT = 90			
* 295 *	..			
* 296 *				
* 297 *	G-WALL1-W-FL-1 = WINDOW			
* 298 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	3.63
* 299 *	WIDTH = 63.33	Y	=	3.3
* 300 *	SETBACK = 10			
* 301 *	..			
* 302 *				
* 303 *	WALL1-NE-FL1 = EXTERIOR-WALL			
* 304 *	CONSTRUCTION = WALL-1	X	=	126.66
* 305 *	Y = 63.33	Z	=	0
* 306 *	HEIGHT = 13.2	WIDTH	=	63.33
* 307 *	AZIMUTH = 90	TILT	=	90
* 308 *	..			
* 309 *				
* 310 *	G-WALL2-N-FL-1 = WINDOW			
* 311 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	3.63
* 312 *	WIDTH = 63.33	Y	=	3.3
* 313 *	SETBACK = 10			
* 314 *	..			
* 315 *				
* 316 *	ROOF2 = EXTERIOR-WALL			
* 317 *	CONSTRUCTION = ROOF-1	X	=	213.24

* 318 *	Y	= -23.25	Z	= 26.4
* 319 *	HEIGHT	= 80	WIDTH	= 88.58
* 320 *	AZIMUTH	= 90	TILT	= 0
* 321 *	..			
* 322 *				
* 323 *	ROOF-4 = EXTERIOR-WALL			
* 324 *	CONSTRUCTION	= ROOF-1	X	= 149.91
* 325 *	Y	= -86.58	Z	= 26.4
* 326 *	HEIGHT	= 65	WIDTH	= 120
* 327 *	AZIMUTH	= 180	TILT	= 0
* 328 *	..			
* 329 *				
* 330 *	FL_1_2 = EXTERIOR-WALL			
* 331 *	CONSTRUCTION	= FLOOR	X	= 213.24
* 332 *	Y	= -23.25	Z	= 0
* 333 *	HEIGHT	= 80	WIDTH	= 88.58
* 334 *	AZIMUTH	= 90	TILT	= 0
* 335 *	..			
* 336 *				
* 337 *	FL_1_4 = EXTERIOR-WALL			
* 338 *	CONSTRUCTION	= FLOOR	X	= 149.91
* 339 *	Y	= -86.58	Z	= 0
* 340 *	HEIGHT	= 65	WIDTH	= 120
* 341 *	AZIMUTH	= 180	TILT	= 0
* 342 *	..			
* 343 *				
* 344 *	W-FL-1 = SPACE			
* 345 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 27932.4
* 346 *	VOLUME	= 279324.0	FLOOR-MULTIPLIER	= 1
* 347 *	DAYLIGHTING	= YES		
* 348 *	LIGHT-REF-POINT1	=(267.59,-229.53,2.5)		
* 349 *	MIN-LIGHT-FRAC	= 0.167	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR
* 350 *	SOURCE-TYPE	= ELECTRIC		
* 351 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 352 *	TEMPERATURE	=(80.0)		
* 353 *	..			
* 354 *				
* 355 *	ROOF3A = EXTERIOR-WALL			
* 356 *	CONSTRUCTION	= ROOF-1	X	= 208.73
* 357 *	Y	= -145.4	Z	= 33.3
* 358 *	HEIGHT	= 63	WIDTH	= 148.25
* 359 *	AZIMUTH	= 270	TILT	= 0
* 360 *	..			
* 361 *				
* 362 *	ROOF3B = EXTERIOR-WALL			
* 363 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 364 *	Y	= -290.8	Z	= 33.3
* 365 *	HEIGHT	= 65	WIDTH	= 148.25
* 366 *	AZIMUTH	= 180	TILT	= 0
* 367 *	..			
* 368 *				
* 369 *	ROOF3C = EXTERIOR-WALL			
* 370 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 371 *	Y	= -82.06	Z	= 33.3

* 372 *	HEIGHT	= 65	WIDTH	= 88
* 373 *	AZIMUTH	= 0	TILT	= 0
* 374 *	..			
* 375 *				
* 376 *	ROOF3D = EXTERIOR-WALL			
* 377 *	CONSTRUCTION	= ROOF-1	X	= 417.5
* 378 *	Y	= -224.13	Z	= 33.3
* 379 *	HEIGHT	= 63	WIDTH	= 144
* 380 *	AZIMUTH	= 90	TILT	= 0
* 381 *	..			
* 382 *				
* 383 *	DOMEA = EXTERIOR-WALL			
* 384 *	CONSTRUCTION	= ROOF-1	X	= 270
* 385 *	Y	= -145.4	Z	= 33.3
* 386 *	HEIGHT	= 30	WIDTH	= 83.25
* 387 *	AZIMUTH	= 270	TILT	= 60
* 388 *	..			
* 389 *				
* 390 *	DOMEB = EXTERIOR-WALL			
* 391 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 392 *	Y	= -145.4	Z	= 33.3
* 393 *	HEIGHT	= 30	WIDTH	= 88
* 394 *	AZIMUTH	= 0	TILT	= 60
* 395 *	..			
* 396 *				
* 397 *	DOMEROOF = EXTERIOR-WALL			
* 398 *	CONSTRUCTION	= ROOF-1	X	= 270
* 399 *	Y	= -150	Z	= 60
* 400 *	HEIGHT	= 70.25	WIDTH	= 70.25
* 401 *	AZIMUTH	= 270	TILT	= 0
* 402 *	..			
* 403 *				
* 404 *	DOME-GLASS = WINDOW			
* 405 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 12
* 406 *	WIDTH	= 12	X	= 33.3
* 407 *	Y	= 33.3		
* 408 *	..			
* 409 *				
* 410 *	DOMEC = EXTERIOR-WALL			
* 411 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 412 *	Y	= -229.53	Z	= 33.3
* 413 *	HEIGHT	= 30	WIDTH	= 88
* 414 *	AZIMUTH	= 180	TILT	= 60
* 415 *	..			
* 416 *				
* 417 *	DOMED = EXTERIOR-WALL			
* 418 *	CONSTRUCTION	= ROOF-1	X	= 352
* 419 *	Y	= -224.13	Z	= 33.3
* 420 *	HEIGHT	= 30	WIDTH	= 83.25
* 421 *	AZIMUTH	= 90	TILT	= 60
* 422 *	..			
* 423 *				
* 424 *	WALL1_W_FL_1 = EXTERIOR-WALL			
* 425 *	CONSTRUCTION	= WALL-1	X	= 208.73

* 426 *	Y	= -145.4	Z	= 0
* 427 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 428 *	AZIMUTH	= 270	TILT	= 90
* 429 *	..			
* 430 *				
* 431 *	WALL2_W FL_1 = EXTERIOR-WALL			
* 432 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 433 *	Y	= -231.98	Z	= 0
* 434 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 435 *	AZIMUTH	= 225	TILT	= 90
* 436 *	..			
* 437 *				
* 438 *	WALL3_W FL_1 = EXTERIOR-WALL			
* 439 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 440 *	Y	= -290.8	Z	= 0
* 441 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 442 *	AZIMUTH	= 180	TILT	= 90
* 443 *	..			
* 444 *				
* 445 *	WALL4_W FL_1 = EXTERIOR-WALL			
* 446 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 447 *	Y	= -224.13	Z	= 0
* 448 *	HEIGHT	= 33.3	WIDTH	= 94.6
* 449 *	AZIMUTH	= 315	TILT	= 90
* 450 *	..			
* 451 *				
* 452 *	WALL5_W FL_1 = EXTERIOR-WALL			
* 453 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 454 *	Y	= -140.88	Z	= 0
* 455 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 456 *	AZIMUTH	= 270	TILT	= 90
* 457 *	..			
* 458 *				
* 459 *	WALL6_W FL_1 = EXTERIOR-WALL			
* 460 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 461 *	Y	= -82.06	Z	= 0
* 462 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 463 *	AZIMUTH	= 225	TILT	= 90
* 464 *	..			
* 465 *				
* 466 *	WALL7_W FL_1 = EXTERIOR-WALL			
* 467 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 468 *	Y	= -82.06	Z	= 0
* 469 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 470 *	AZIMUTH	= 0	TILT	= 90
* 471 *	..			
* 472 *				
* 473 *	FL_1 3A = EXTERIOR-WALL			
* 474 *	CONSTRUCTION	= FLOOR	X	= 208.73
* 475 *	Y	= -145.4	Z	= 0
* 476 *	HEIGHT	= 63	WIDTH	= 148.25
* 477 *	AZIMUTH	= 270	TILT	= 0
* 478 *	..			
* 479 *				

* 480 *	FL_1_3B = EXTERIOR-WALL		
* 481 *	CONSTRUCTION	= FLOOR	X = 267.59
* 482 *	Y	= -290.8	Z = 0
* 483 *	HEIGHT	= 65	WIDTH = 148.25
* 484 *	AZIMUTH	= 180	TILT = 0
* 485 *	..		
* 486 *			
* 487 *	FL_1_3C = EXTERIOR-WALL		
* 488 *	CONSTRUCTION	= ROOF-1	X = 358.64
* 489 *	Y	= -82.06	Z = 0
* 490 *	HEIGHT	= 65	WIDTH = 88
* 491 *	AZIMUTH	= 0	TILT = 0
* 492 *	..		
* 493 *			
* 494 *	FL_1_3D = EXTERIOR-WALL		
* 495 *	CONSTRUCTION	= FLOOR	X = 417.5
* 496 *	Y	= -224.13	Z = 0
* 497 *	HEIGHT	= 63	WIDTH = 144
* 498 *	AZIMUTH	= 90	TILT = 0
* 499 *	..		
* 500 *			
* 501 *	S-FL-1 = SPACE		
* 502 *	SPACE-CONDITIONS	= ALLSPACE	AREA = 19202.3
* 503 *	VOLUME	= 192023.0	FLOOR-MULTIPLIER = 1
* 504 *	DAYLIGHTING	= YES	
* 505 *	LIGHT-REF-POINT1	=(16.40,16.40,2.5)	
* 506 *	LIGHT-REF-POINT2	=(26.24,26.24,2.5)	
* 507 *	ZONE-FRACTION1	= 0.85	ZONE-FRACTION2 = 0.15
* 508 *	MAX-GLARE	= 22	LIGHT-CTRL-PROB = 1
* 509 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR	
* 510 *	SOURCE-TYPE	= ELECTRIC	
* 511 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE = LIGHT
* 512 *	TEMPERATURE	=(80.0)	
* 513 *	..		
* 514 *			
* 515 *	WALL1-S-FL-1 = EXTERIOR-WALL		
* 516 *	CONSTRUCTION	= WALL-1	X = 0
* 517 *	Y	= 0	Z = 0
* 518 *	HEIGHT	= 13.2	WIDTH = 63.33
* 519 *	AZIMUTH	= 180	TILT = 90
* 520 *	..		
* 521 *			
* 522 *	G-WALL1-S-FL-1 = WINDOW		
* 523 *	GLASS-TYPE	= SELECTIVE	HEIGHT = 3.63
* 524 *	WIDTH	= 63.33	Y = 3.3
* 525 *	SETBACK	= 10	
* 526 *	..		
* 527 *			
* 528 *	WALL2-S-FL-1 = EXTERIOR-WALL		
* 529 *	CONSTRUCTION	= WALL-1	X = 0
* 530 *	Y	= 63.33	Z = 0
* 531 *	HEIGHT	= 13.2	WIDTH = 63.33
* 532 *	AZIMUTH	= 270	TILT = 90
* 533 *	..		

* 534 *				
* 535 *	WALL3-S-FL-1 = EXTERIOR-WALL			
* 536 *	CONSTRUCTION = WALL-1	X	= 63.33	
* 537 *	Y = 0	Z	= 0	
* 538 *	HEIGHT = 26.4	WIDTH	= 86.58	
* 539 *	AZIMUTH = 270	TILT	= 90	
* 540 *	..			
* 541 *				
* 542 *	G-WALL3-S-FL-1 = WINDOW			
* 543 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 544 *	WIDTH = 86.58	Y	= 0	
* 545 *	..			
* 546 *				
* 547 *	WALL4-S-FL-1 = EXTERIOR-WALL			
* 548 *	CONSTRUCTION = WALL-1	X	= 63.33	
* 549 *	Y = -86.58	Z	= 0	
* 550 *	HEIGHT = 26.4	WIDTH	= 86.58	
* 551 *	AZIMUTH = 180	TILT	= 90	
* 552 *	..			
* 553 *				
* 554 *	G-WALL4-S-FL-1 = WINDOW			
* 555 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 556 *	WIDTH = 86.58	Y	= 0	
* 557 *	..			
* 558 *				
* 559 *	WALL5-S-FL-1 = EXTERIOR-WALL			
* 560 *	CONSTRUCTION = WALL-1	X	= 149.91	
* 561 *	Y = -86.58	Z	= 0	
* 562 *	HEIGHT = 26.4	WIDTH	= 83.25	
* 563 *	AZIMUTH = 225	TILT	= 90	
* 564 *	..			
* 565 *				
* 566 *	G-WALL5-S-FL-1 = WINDOW			
* 567 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 568 *	WIDTH = 83.25	Y	= 0	
* 569 *	..			
* 570 *				
* 571 *	WALL1-SW-FL1 = EXTERIOR-WALL			
* 572 *	CONSTRUCTION = WALL-1	X	= 0	
* 573 *	Y = 126.66	Z	= 0	
* 574 *	HEIGHT = 13.2	WIDTH	= 63.33	
* 575 *	AZIMUTH = 270	TILT	= 90	
* 576 *	..			
* 577 *				
* 578 *	G-WALL2-W-FL-1 = WINDOW			
* 579 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63	
* 580 *	WIDTH = 63.33	Y	= 3.3	
* 581 *	SETBACK = 10			
* 582 *	..			
* 583 *				
* 584 *	WALL2-SW-FL1 = EXTERIOR-WALL			
* 585 *	CONSTRUCTION = WALL-1	X	= 0	
* 586 *	Y = 63.33	Z	= 0	
* 587 *	HEIGHT = 13.2	WIDTH	= 63.33	

* 588 *	AZIMUTH	= 270	TILT	= 90
* 589 *	..			
* 590 *				
* 591 *	G-WALL2-S-FL-1 = WINDOW			
* 592 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 593 *	WIDTH	= 63.33	Y	= 3.3
* 594 *	SETBACK	= 10		
* 595 *	..			
* 596 *				
* 597 *	ROOF-2A = EXTERIOR-WALL			
* 598 *	CONSTRUCTION	= ROOF-1	X	= 63.33
* 599 *	Y	= -86.58	Z	= 26.4
* 600 *	HEIGHT	= 80	WIDTH	= 86.58
* 601 *	AZIMUTH	= 180	TILT	= 0
* 602 *	..			
* 603 *				
* 604 *	ROOF4A = EXTERIOR-WALL			
* 605 *	CONSTRUCTION	= ROOF-1	X	= 149.91
* 606 *	Y	= -150	Z	= 26.4
* 607 *	HEIGHT	= 65	WIDTH	= 123
* 608 *	AZIMUTH	= 180	TILT	= 0
* 609 *	..			
* 610 *				
* 611 *	FL_1_2A = EXTERIOR-WALL			
* 612 *	CONSTRUCTION	= FLOOR	X	= 63.33
* 613 *	Y	= -86.58	Z	= 0
* 614 *	HEIGHT	= 80	WIDTH	= 86.58
* 615 *	AZIMUTH	= 180	TILT	= 0
* 616 *	..			
* 617 *				
* 618 *	FL_1_4A = EXTERIOR-WALL			
* 619 *	CONSTRUCTION	= FLOOR	X	= 149.91
* 620 *	Y	= -150	Z	= 0
* 621 *	HEIGHT	= 65	WIDTH	= 123
* 622 *	AZIMUTH	= 180	TILT	= 0
* 623 *	..			
* 624 *				
* 625 *	N-FL-B = SPACE			
* 626 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 36780.3
* 627 *	VOLUME	= 367803.0	FLOOR-MULTIPLIER	= 1
* 628 *	DAYLIGHTING	= YES		
* 629 *	LIGHT-REF-POINT1	=(68.56,68.56,-11.7)		
* 630 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 631 *	SOURCE-TYPE	= ELECTRIC		
* 632 *	FLOOR-WEIGHT	= 130.0		
* 633 *	TEMPERATURE	=(80.0)		
* 634 *	..			
* 635 *				
* 636 *	WALL1-N-FL-B = EXTERIOR-WALL			
* 637 *	CONSTRUCTION	= WALL-1	X	= 138.56
* 638 *	Y	= 138.56	Z	= -14.2
* 639 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 640 *	TILT	= 90		
* 641 *	..			

* 642 *				
* 643 *	WALL2-N-FL-B = EXTERIOR-WALL			
* 644 *	CONSTRUCTION = WALL-1	X	= 138.56	
* 645 *	Y = 63.33	Z	= -14.2	
* 646 *	HEIGHT = 18.55	WIDTH	= 75.23	
* 647 *	AZIMUTH = 90	TILT	= 90	
* 648 *	..			
* 649 *				
* 650 *	UN-N-FL-B = UNDERGROUND-WALL			
* 651 *	CONSTRUCTION = WALL-1	AREA	= 2000	
* 652 *	..			
* 653 *				
* 654 *	WALL3-N-FL-B = EXTERIOR-WALL			
* 655 *	CONSTRUCTION = WALL-1	X	= 213.24	
* 656 *	Y = 63.33	Z	= -16.65	
* 657 *	HEIGHT = 16.65	WIDTH	= 86.58	
* 658 *	TILT = 90			
* 659 *	..			
* 660 *				
* 661 *	WALL4-N-FL-B = EXTERIOR-WALL			
* 662 *	CONSTRUCTION = WALL-1	X	= 213.24	
* 663 *	Y = -23.25	Z	= -16.65	
* 664 *	HEIGHT = 16.65	WIDTH	= 86.58	
* 665 *	AZIMUTH = 90	TILT	= 90	
* 666 *	..			
* 667 *				
* 668 *	WALL5-N-FL-B = EXTERIOR-WALL			
* 669 *	CONSTRUCTION = WALL-1	X	= 213.20	
* 670 *	Y = -23.25	Z	= -16.65	
* 671 *	HEIGHT = 16.65	WIDTH	= 83.25	
* 672 *	AZIMUTH = 225	TILT	= 90	
* 673 *	..			
* 674 *				
* 675 *	WALL6-N-FL-B = EXTERIOR-WALL			
* 676 *	CONSTRUCTION = WALL-1	X	= 358.64	
* 677 *	Y = -82.06	Z	= -16.65	
* 678 *	HEIGHT = 16.65	WIDTH	= 86.58	
* 679 *	AZIMUTH = 0	TILT	= 90	
* 680 *	..			
* 681 *				
* 682 *	WALL7-N-FL-B = EXTERIOR-WALL			
* 683 *	CONSTRUCTION = WALL-1	X	= 358.64	
* 684 *	Y = -82.06	Z	= -16.65	
* 685 *	HEIGHT = 16.65	WIDTH	= 83.25	
* 686 *	AZIMUTH = 225	TILT	= 90	
* 687 *	..			
* 688 *				
* 689 *	WALL8-N-FL-B = EXTERIOR-WALL			
* 690 *	CONSTRUCTION = WALL-1	X	= 417.5	
* 691 *	Y = -140.88	Z	= -16.65	
* 692 *	HEIGHT = 16.65	WIDTH	= 83.25	
* 693 *	AZIMUTH = 270	TILT	= 90	
* 694 *	..			
* 695 *				

* 696 *	WALL10 N FL B = EXTERIOR-WALL			
* 697 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 698 *	Y	= 138.56	Z	= -14.2
* 699 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 700 *	TILT	= 90		
* 701 *	..			
* 702 *				
* 703 *	WALL9 N FL B = EXTERIOR-WALL			
* 704 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 705 *	Y	= -224.13	Z	= -16.65
* 706 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 707 *	AZIMUTH	= 315	TILT	= 90
* 708 *	..			
* 709 *				
* 710 *	ROOF B FL = EXTERIOR-WALL			
* 711 *	CONSTRUCTION	= ROOF-1	X	= 138.56
* 712 *	Y	= 138.56	Z	= 0
* 713 *	HEIGHT	= 150.46	WIDTH	= 150.46
* 714 *	TILT	= 0		
* 715 *	..			
* 716 *				
* 717 *	G1-ROOF-B-FL = WINDOW			
* 718 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2
* 719 *	WIDTH	= 132.46	X	= 9
* 720 *	Y	= 9		
* 721 *	..			
* 722 *				
* 723 *	G2-ROOF-B-FL = WINDOW			
* 724 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 725 *	WIDTH	= 2	X	= 9
* 726 *	Y	= 9		
* 727 *	..			
* 728 *				
* 729 *	G3-ROOF-B-FL = WINDOW			
* 730 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 731 *	WIDTH	= 2	X	= 9
* 732 *	Y	= 49		
* 733 *	..			
* 734 *				
* 735 *	G4-ROOF-B-FL = WINDOW			
* 736 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 737 *	WIDTH	= 2	X	= 9
* 738 *	Y	= 89.0		
* 739 *	..			
* 740 *				
* 741 *	G5-ROOF-B-FL = WINDOW			
* 742 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2
* 743 *	WIDTH	= 132.46	X	= 9
* 744 *	Y	= 139.46		
* 745 *	..			
* 746 *				
* 747 *	G6-ROOF-B-FL = WINDOW			
* 748 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 749 *	WIDTH	= 2	X	= 139.46

* 750 *	Y	= 89		
* 751 *	..			
* 752 *				
* 753 *	G7-ROOF-B-FL = WINDOW			
* 754 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 755 *	WIDTH	= 2	X	= 139.46
* 756 *	Y	= 49		
* 757 *	..			
* 758 *				
* 759 *	G8-ROOF-B-FL = WINDOW			
* 760 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 761 *	WIDTH	= 2.0	X	= 139.46
* 762 *	Y	= 9		
* 763 *	..			
* 764 *				
* 765 *	S-FL-B = SPACE			
* 766 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 36780.3
* 767 *	VOLUME	= 367803.0	FLOOR-MULTIPLIER	= 1
* 768 *	LIGHT-REF-POINT1	= (60.54, 60.54, -11.7)		
* 769 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 770 *	SOURCE-TYPE	= ELECTRIC		
* 771 *	FLOOR-WEIGHT	= 130.0		
* 772 *	TEMPERATURE	= (80.0)		
* 773 *	..			
* 774 *				
* 775 *	WALL1-S-FL-B = EXTERIOR-WALL			
* 776 *	CONSTRUCTION	= WALL-1	X	= -11.90
* 777 *	Y	= -11.9	Z	= -14.2
* 778 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 779 *	AZIMUTH	= 180	TILT	= 90
* 780 *	..			
* 781 *				
* 782 *	WALL2-S-FL-B = EXTERIOR-WALL			
* 783 *	CONSTRUCTION	= WALL-1	X	= -11.9
* 784 *	Y	= 63.33	Z	= -14.2
* 785 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 786 *	AZIMUTH	= 270	TILT	= 90
* 787 *	..			
* 788 *				
* 789 *	UN-S-FL-B = UNDERGROUND-WALL			
* 790 *	CONSTRUCTION	= WALL-1	AREA	= 2000
* 791 *	..			
* 792 *				
* 793 *	WALL3-S-FL-B = EXTERIOR-WALL			
* 794 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 795 *	Y	= 0	Z	= -16.65
* 796 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 797 *	AZIMUTH	= 270	TILT	= 90
* 798 *	..			
* 799 *				
* 800 *	WALL4-S-FL-B = EXTERIOR-WALL			
* 801 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 802 *	Y	= -86.58	Z	= -16.65
* 803 *	HEIGHT	= 16.65	WIDTH	= 86.58

* 804 *	AZIMUTH	= 180	TILT	= 90
* 805 *	..			
* 806 *				
* 807 *	WALL5-S-FL-B = EXTERIOR-WALL			
* 808 *	CONSTRUCTION	= WALL-1	X	= 149.91
* 809 *	Y	= -86.58	Z	= -16.65
* 810 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 811 *	AZIMUTH	= 225	TILT	= 90
* 812 *	..			
* 813 *				
* 814 *	WALL6-S-FL-B = EXTERIOR-WALL			
* 815 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 816 *	Y	= -145.4	Z	= -16.65
* 817 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 818 *	AZIMUTH	= 270	TILT	= 90
* 819 *	..			
* 820 *				
* 821 *	WALL7-S-FL-B = EXTERIOR-WALL			
* 822 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 823 *	Y	= -231.98	Z	= -16.65
* 824 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 825 *	AZIMUTH	= 225	TILT	= 90
* 826 *	..			
* 827 *				
* 828 *	WALL8-S-FL-B = EXTERIOR-WALL			
* 829 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 830 *	Y	= -290.8	Z	= -16.65
* 831 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 832 *	AZIMUTH	= 180	TILT	= 90
* 833 *	..			
* 834 *				
* 835 *	WALL9-S-FL-B = EXTERIOR-WALL			
* 836 *	CONSTRUCTION	= WALL-1	X	= 384.05
* 837 *	Y	= -257.24	Z	= -16.65
* 838 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 839 *	AZIMUTH	= 315	TILT	= 90
* 840 *	..			
* 841 *				
* 842 *	WALL10_S_FL_B = EXTERIOR-WALL			
* 843 *	CONSTRUCTION	= WALL-1	X	= -11.9
* 844 *	Y	= 138.56	Z	= -14.2
* 845 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 846 *	AZIMUTH	= 270	TILT	= 90
* 847 *	..			
* 848 *				
* 849 *	N-FL-2 = SPACE			
* 850 *	SPACE-CONDITIONS	= OFFICESPACE	AREA	= 3982
* 851 *	VOLUME	= 39820	FLOOR-MULTIPLIER	= 1
* 852 *	DAYLIGHTING	= YES		
* 853 *	LIGHT-REF-POINT1	=(115.58,73,15.7)		
* 854 *	MAX-GLARE	= 22	MIN-LIGHT-FRAC	= 0.167
* 855 *	LIGHT-CTRL-PROB	= 1	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE
* 856 *	SOURCE-TYPE	= ELECTRIC		
* 857 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT

* 858 *	TEMPERATURE	= (75.0)		
* 859 *	..			
* 860 *				
* 861 *	WALL1-N-FL-2 = EXTERIOR-WALL			
* 862 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 863 *	Y	= 115.58	Z	= 13.2
* 864 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 865 *	TILT	= 90		
* 866 *	..			
* 867 *				
* 868 *	G-WALL1-N-FL-2 = WINDOW			
* 869 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 870 *	WIDTH	= 52.25	Y	= 3.3
* 871 *	SETBACK	= 10		
* 872 *	..			
* 873 *				
* 874 *	WALL1-W-FL-2 = EXTERIOR-WALL			
* 875 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 876 *	Y	= 115.58	Z	= 13.2
* 877 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 878 *	TILT	= 90		
* 879 *	..			
* 880 *				
* 881 *	G-WALL1-W-FL-2 = WINDOW			
* 882 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 883 *	WIDTH	= 52.25	Y	= 3.3
* 884 *	SETBACK	= 10		
* 885 *	..			
* 886 *				
* 887 *	WALL2-N-FL-2 = EXTERIOR-WALL			
* 888 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 889 *	Y	= 63.33	Z	= 13.2
* 890 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 891 *	AZIMUTH	= 90	TILT	= 90
* 892 *	..			
* 893 *				
* 894 *	G-WALL2-N-FL-2 = WINDOW			
* 895 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 896 *	WIDTH	= 52.25	Y	= 3.3
* 897 *	SETBACK	= 10		
* 898 *	..			
* 899 *				
* 900 *	WALL2-W-FL-2 = EXTERIOR-WALL			
* 901 *	CONSTRUCTION	= WALL-1	X	= 11.08
* 902 *	Y	= 115.58	Z	= 13.2
* 903 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 904 *	AZIMUTH	= 270	TILT	= 90
* 905 *	..			
* 906 *				
* 907 *	G-WALL2-W-FL-2 = WINDOW			
* 908 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 909 *	WIDTH	= 52.25	Y	= 3.3
* 910 *	SETBACK	= 10		
* 911 *	..			

* 912 *				
* 913 *	ROOF1-FL-2 = EXTERIOR-WALL			
* 914 *	CONSTRUCTION = WALL-1	X	= 115.58	
* 915 *	Y = 115.58	Z	= 26.4	
* 916 *	HEIGHT = 104.5	WIDTH	= 104.5	
* 917 *	TILT = 0			
* 918 *	..			
* 919 *				
* 920 *	G1-ROOF1-FL-2 = WINDOW			
* 921 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2	
* 922 *	WIDTH = 86.5	X	= 9	
* 923 *	Y = 9			
* 924 *	..			
* 925 *				
* 926 *	G2-ROOF1-FL-2 = WINDOW			
* 927 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 928 *	WIDTH = 2	X	= 9	
* 929 *	Y = 9			
* 930 *	..			
* 931 *				
* 932 *	G3-ROOF1-FL-2 = WINDOW			
* 933 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 934 *	WIDTH = 2	X	= 9	
* 935 *	Y = 37.83			
* 936 *	..			
* 937 *				
* 938 *	G4-ROOF1-FL-2 = WINDOW			
* 939 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 940 *	WIDTH = 2	X	= 9	
* 941 *	Y = 66.66			
* 942 *	..			
* 943 *				
* 944 *	G5-ROOF1-FL-2 = WINDOW			
* 945 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2	
* 946 *	WIDTH = 86.5	X	= 9	
* 947 *	Y = 93.5			
* 948 *	..			
* 949 *				
* 950 *	G6-ROOF1-FL-2 = WINDOW			
* 951 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 952 *	WIDTH = 2	X	= 93.5	
* 953 *	Y = 66.66			
* 954 *	..			
* 955 *				
* 956 *	G7-ROOF1-FL-2 = WINDOW			
* 957 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 958 *	WIDTH = 2	X	= 93.5	
* 959 *	Y = 37.83			
* 960 *	..			
* 961 *				
* 962 *	G8-ROOF1-FL-2 = WINDOW			
* 963 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 28.83	
* 964 *	WIDTH = 2.0	X	= 93.5	
* 965 *	Y = 9			

* 966 *	..		
* 967 *			
* 968 *	INT-WALL-N-FL-2 = INTERIOR-WALL		
* 969 *	NEXT-TO = S-FL-2	CONSTRUCTION	= INTERIOR-WALLS
* 970 *	AREA = 650		
* 971 *	..		
* 972 *			
* 973 *	S-FL-2 = SPACE		
* 974 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 3982
* 975 *	VOLUME = 39820	FLOOR-MULTIPLIER	= 1
* 976 *	DAYLIGHTING = YES		
* 977 *	LIGHT-REF-POINT1 =(11.08,73,15.7)		
* 978 *	MAX-GLARE = 22	MIN-LIGHT-FRAC	= 0.167
* 979 *	LIGHT-CTRL-STEPS = 3	LIGHT-CTRL-PROB	= 1
* 980 *	DAYLIGHT-REP-SCH = OFFICE-LIGHTSCHE		
* 981 *	SOURCE-TYPE = ELECTRIC		
* 982 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
* 983 *	TEMPERATURE =(75.0)		
* 984 *	..		
* 985 *			
* 986 *	WALL1-S-FL-2 = EXTERIOR-WALL		
* 987 *	CONSTRUCTION = WALL-1	X	= 11.08
* 988 *	Y = 11.08	Z	= 13.2
* 989 *	HEIGHT = 13.2	WIDTH	= 52.25
* 990 *	AZIMUTH = 180	TILT	= 90
* 991 *	..		
* 992 *			
* 993 *	G-WALL1-S-FL-2 = WINDOW		
* 994 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 995 *	WIDTH = 52.25	Y	= 3.3
* 996 *	SETBACK = 10		
* 997 *	..		
* 998 *			
* 999 *	WALL2-S-FL-2 = EXTERIOR-WALL		
*1000 *	CONSTRUCTION = WALL-1	X	= 11.08
*1001 *	Y = 63.33	Z	= 13.2
*1002 *	HEIGHT = 13.2	WIDTH	= 52.25
*1003 *	AZIMUTH = 270	TILT	= 90
*1004 *	..		
*1005 *			
*1006 *	G-WALL2-S-FL-2 = WINDOW		
*1007 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1008 *	WIDTH = 52.25	Y	= 3.3
*1009 *	SETBACK = 10		
*1010 *	..		
*1011 *			
*1012 *	N-FL-3 = SPACE		
*1013 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 2441.2
*1014 *	VOLUME = 24112	FLOOR-MULTIPLIER	= 1
*1015 *	DAYLIGHTING = YES		
*1016 *	LIGHT-REF-POINT1 =(104.5,73,28.9)		
*1017 *	MAX-GLARE = 22	MIN-LIGHT-FRAC	= 0.167
*1018 *	LIGHT-CTRL-PROB = 1	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE
*1019 *	SOURCE-TYPE = ELECTRIC		

*1020 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1021 *	TEMPERATURE	= (75.0)		
*1022 *	..			
*1023 *				
*1024 *	WALL1-N-FL-3 = EXTERIOR-WALL			
*1025 *	CONSTRUCTION	= WALL-1	X	= 104.5
*1026 *	Y	= 104.5	Z	= 26.4
*1027 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1028 *	TILT	= 90		
*1029 *	..			
*1030 *				
*1031 *	G-WALL1-N-FL-3 = WINDOW			
*1032 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1033 *	WIDTH	= 41.17	Y	= 3.3
*1034 *	SETBACK	= 10		
*1035 *	..			
*1036 *				
*1037 *	WALL1-W-FL-3 = EXTERIOR-WALL			
*1038 *	CONSTRUCTION	= WALL-1	X	= 63.33
*1039 *	Y	= 104.50	Z	= 26.4
*1040 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1041 *	TILT	= 90		
*1042 *	..			
*1043 *				
*1044 *	G-WALL1-W-FL-3 = WINDOW			
*1045 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1046 *	WIDTH	= 41.17	Y	= 3.3
*1047 *	SETBACK	= 10		
*1048 *	..			
*1049 *				
*1050 *	WALL2-N-FL-3 = EXTERIOR-WALL			
*1051 *	CONSTRUCTION	= WALL-1	X	= 104.50
*1052 *	Y	= 63.33	Z	= 26.4
*1053 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1054 *	AZIMUTH	= 90	TILT	= 90
*1055 *	..			
*1056 *				
*1057 *	G-WALL2-N-FL-3 = WINDOW			
*1058 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1059 *	WIDTH	= 41.17	Y	= 3.3
*1060 *	SETBACK	= 10		
*1061 *	..			
*1062 *				
*1063 *	ROOF1-FL-3 = EXTERIOR-WALL			
*1064 *	CONSTRUCTION	= WALL-1	X	= 104.5
*1065 *	Y	= 104.5	Z	= 39.6
*1066 *	HEIGHT	= 82.34	WIDTH	= 82.34
*1067 *	TILT	= 0		
*1068 *	..			
*1069 *				
*1070 *	S-FL-3 = SPACE			
*1071 *	SPACE-CONDITIONS	= OFFICESPACE	AREA	= 2441.2
*1072 *	VOLUME	= 24412	FLOOR-MULTIPLIER	= 1
*1073 *	DAYLIGHTING	= YES		

*1074 *	LIGHT-REF-POINT1	=(22.16,73,28.9)		
*1075 *	MAX-GLARE	= 22	MIN-LIGHT-FRAC	= 0.167
*1076 *	LIGHT-CTRL-PROB	= 1	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE
*1077 *	SOURCE-TYPE	= ELECTRIC		
*1078 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1079 *	TEMPERATURE	=(75.0)		
*1080 *	..			
*1081 *				
*1082 *	WALL1-S-FL-3	= EXTERIOR-WALL		
*1083 *	CONSTRUCTION	= WALL-1	X	= 22.16
*1084 *	Y	= 22.16	Z	= 26.4
*1085 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1086 *	AZIMUTH	= 180	TILT	= 90
*1087 *	..			
*1088 *				
*1089 *	G-WALL1-S-FL-3	= WINDOW		
*1090 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1091 *	WIDTH	= 41.17	Y	= 3.3
*1092 *	SETBACK	= 10		
*1093 *	..			
*1094 *				
*1095 *	WALL2-S-FL-3	= EXTERIOR-WALL		
*1096 *	CONSTRUCTION	= WALL-1	X	= 22.16
*1097 *	Y	= 63.33	Z	= 26.4
*1098 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1099 *	AZIMUTH	= 270	TILT	= 90
*1100 *	..			
*1101 *				
*1102 *	G-WALL2-S-FL-3	= WINDOW		
*1103 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1104 *	WIDTH	= 41.17	Y	= 3.3
*1105 *	SETBACK	= 10		
*1106 *	..			
*1107 *				
*1108 *	WALL2-W-FL-3	= EXTERIOR-WALL		
*1109 *	CONSTRUCTION	= WALL-1	X	= 22.16
*1110 *	Y	= 104.50	Z	= 26.4
*1111 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1112 *	AZIMUTH	= 270	TILT	= 90
*1113 *	..			
*1114 *				
*1115 *	G-WALL2-W-FL-3	= WINDOW		
*1116 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1117 *	WIDTH	= 41.17	Y	= 3.3
*1118 *	SETBACK	= 10		
*1119 *	..			
*1120 *				
*1121 *	CORE-FL-1	= SPACE		
*1122 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 2800
*1123 *	VOLUME	= 28000	FLOOR-MULTIPLIER	= 1
*1124 *	SOURCE-TYPE	= ELECTRIC		
*1125 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1126 *	TEMPERATURE	=(80.0)		
*1127 *	..			

*1128 *			
*1129 *	CORE-FL-2 = SPACE		
*1130 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 1991
*1131 *	VOLUME = 19910	FLOOR-MULTIPLIER	= 1
*1132 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR		
*1133 *	SOURCE-TYPE = ELECTRIC		
*1134 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
*1135 *	TEMPERATURE = (80.0)		
*1136 *	..		
*1137 *			
*1138 *	CORE-FL-3 = SPACE		
*1139 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 1220.6
*1140 *	VOLUME = 12206	FLOOR-MULTIPLIER	= 1
*1141 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR		
*1142 *	SOURCE-TYPE = ELECTRIC		
*1143 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
*1144 *	TEMPERATURE = (80.0)		
*1145 *	..		
*1146 *			
*1147 *	WALL3-CORE-FL-3 = EXTERIOR-WALL		
*1148 *	CONSTRUCTION = WALL-1	X	= 104.5
*1149 *	Y = 22.16	Z	= 26.4
*1150 *	HEIGHT = 13.2	WIDTH	= 41.17
*1151 *	AZIMUTH = 90	TILT	= 90
*1152 *	..		
*1153 *			
*1154 *	G-WALL3-CORE-F-3 = WINDOW		
*1155 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 7.26
*1156 *	WIDTH = 41.17	Y	= 3.3
*1157 *	..		
*1158 *			
*1159 *	WALL1-CORE-FL-3 = EXTERIOR-WALL		
*1160 *	CONSTRUCTION = WALL-1	X	= 63.33
*1161 *	Y = 22.16	Z	= 26.4
*1162 *	HEIGHT = 13.2	WIDTH	= 41.17
*1163 *	AZIMUTH = 180	TILT	= 90
*1164 *	..		
*1165 *			
*1166 *	G-WALL1-CORE-F-3 = WINDOW		
*1167 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 7.26
*1168 *	WIDTH = 41.17	Y	= 3.3
*1169 *	..		
*1170 *			
*1171 *	CORE-FL-B = SPACE		
*1172 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 2800
*1173 *	VOLUME = 28000	FLOOR-MULTIPLIER	= 1
*1174 *	SOURCE-TYPE = ELECTRIC		
*1175 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
*1176 *	TEMPERATURE = (80.0)		
*1177 *	..		
*1178 *			
*1179 *	N-FL-4 = SPACE		
*1180 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 6400
*1181 *	VOLUME = 84480		

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*1182 * SOURCE-TYPE = ELECTRIC
*1183 * FLOOR-WEIGHT = 130.0
*1184 * TEMPERATURE = (80.0)
*1185 * ..
*1186 *
*1187 * WALL-N-FL-4 = EXTERIOR-WALL
*1188 * CONSTRUCTION = WALL-1 X = 104.5
*1189 * Y = 104.5 Z = 39.6
*1190 * HEIGHT = 21 WIDTH = 82.34
*1191 * TILT = 90
*1192 * ..
*1193 *
*1194 * WALL-S-FL-4 = EXTERIOR-WALL
*1195 * CONSTRUCTION = WALL-1 X = 22.16
*1196 * Y = 22.16 Z = 39.6
*1197 * HEIGHT = 21 WIDTH = 82.34
*1198 * AZIMUTH = 180 TILT = 90
*1199 * ..
*1200 *
*1201 * WALL-W-FL-4 = EXTERIOR-WALL
*1202 * CONSTRUCTION = WALL-1 X = 22.16
*1203 * Y = 104.50 Z = 39.6
*1204 * HEIGHT = 21 WIDTH = 82.34
*1205 * AZIMUTH = 270 TILT = 90
*1206 * ..
*1207 *
*1208 * WALL-E-FL-4 = EXTERIOR-WALL
*1209 * CONSTRUCTION = WALL-1 X = 104.5
*1210 * Y = 22.16 Z = 39.6
*1211 * HEIGHT = 21 WIDTH = 82.34
*1212 * AZIMUTH = 90 TILT = 90
*1213 * ..
*1214 *
*1215 * ROOF1-FL-4 = EXTERIOR-WALL
*1216 * CONSTRUCTION = ROOF-1 X = 104.5
*1217 * Y = 104.5 Z = 60.6
*1218 * HEIGHT = 82.34 WIDTH = 82.34
*1219 * TILT = 0
*1220 * ..
*1221 *
*1222 * $BUILDING$ BUILDING-RESOURCE
*1223 * ELEC-SCHEDULE = LIGHTSHED-YEAR
*1224 * ..
*1225 *
*1226 * $REP1$ LOADS-REPORT
*1227 * VERIFICATION = (LV-A, LV-B)
*1228 * SUMMARY = (LS-A, LS-B, LS-C, LS-D, LS-E, LS-F, LS-H, LS-I)
*1229 * ..
*1230 *
*1231 * LRB-3 = REPORT-BLOCK
*1232 * VARIABLE-TYPE = N-FL-1
*1233 * VARIABLE-LIST = (16, 17, 18, 19, 20, 22, 23, 25, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38
*1234 * , 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 55, 56, 57)
*1235 * ..

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*1236 *  
*1237 * LHR-3 = HOURLY-REPORT  
*1238 *   REPORT-SCHEDULE = SCH-HR-1  
*1239 *   REPORT-BLOCK   =(LRB-3)  
*1240 * ..  
*1241 *  
*1242 * END ..  
*1243 * COMPUTE LOADS ..  
*1244 *  
*1245 * INPUT SYSTEMS ..
```



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SDL PROCESSOR INPUT DATA

7/30/1996 17:23: 4 SDL RUN 1

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*1246 *
*1247 * TITLE
*1248 *   LINE-1   *AIR-SIDE SYSTEMS OF TECHNOTHANI*
*1249 *   LINE-2   *PATUMTHANI, BANGKOK*
*1250 *   LINE-3   *USING DOEPLUS./DOE2 ANALYSIS*
*1251 *   LINE-4   *AND INFORMATION AS SPECIFIED*
*1252 *   LINE-5   *WEATHER DATA, BANGKOK, THAILAND*
*1253 * ..
*1254 *
*1255 * ABORT           = ERRORS ..
*1256 *
*1257 * DIAGNOSTIC      = CAUTIONS ..
*1258 *
*1259 * COOLSTPT = SCHEDULE
*1260 *   THRU DEC 31 (WD) (1,7)(99) (8,18)(72) (19,24)(99)
*1261 *   (WEH) (1,24)(99)
*1262 * ..
*1263 *
*1264 * FANS-ON = SCHEDULE
*1265 *   THRU DEC 31 (WD) (1,7)(0) (8,18)(1) (19,24)(0)
*1266 *   (WEH) (1,24)(0)
*1267 * ..
*1268 *
*1269 * HRLYSYSPT = SCHEDULE
*1270 *   THRU APR 1 (ALL) (1,24)(0)
*1271 *   THRU APR 5 (ALL) (1,24)(1)
*1272 *   THRU DEC 31 (ALL) (1,24)(0)
*1273 * ..
*1274 *
*1275 * HOTDECK1 = DAY-RESET-SCH
*1276 *   SUPPLY-HI       = 120           SUPPLY-LO       = 70
*1277 *   OUTSIDE-HI      = 70           OUTSIDE-LO      = 0
*1278 * ..
*1279 *
*1280 * COLDDECK1 = DAY-RESET-SCH
*1281 *   SUPPLY-HI       = 80           SUPPLY-LO       = 55
*1282 *   OUTSIDE-HI      = 100          OUTSIDE-LO      = 65
*1283 * ..
*1284 *
*1285 * COLD-RESET-1 = RESET-SCHEDULE
*1286 *   THRU DEC 31 (ALL) COLDDECK1
*1287 * ..
*1288 *
*1289 * CONTROL = ZONE-CONTROL
*1290 *   DESIGN-HEAT-T    = 0           DESIGN-COOL-T    = 74
*1291 *   COOL-TEMP-SCH   = COOLSTPT

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*1292 * ..
*1293 *
*1294 * VENTILATION = ZONE-AIR
*1295 *   OA-CFM/PER       = 12.8
*1296 *   EXHAUST-CFM     = 0.0           EXHAUST-STATIC = 0.0
*1297 * ..
*1298 *
*1299 * N-FL-1 = ZONE
*1300 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1301 * ..
*1302 *
*1303 * W-FL-1 = ZONE
*1304 *   $ LIKE           = N-FL-1
*1305 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1306 * ..
*1307 *
*1308 * S-FL-1 = ZONE
*1309 *   $ LIKE           = N-FL-1
*1310 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1311 * ..
*1312 *
*1313 * N-FL-B = ZONE
*1314 *   $ LIKE           = N-FL-1
*1315 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1316 * ..
*1317 *
*1318 * S-FL-B = ZONE
*1319 *   $ LIKE           = N-FL-1
*1320 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1321 * ..
*1322 *
*1323 * N-FL-2 = ZONE
*1324 *   $ LIKE           = N-FL-1
*1325 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1326 * ..
*1327 *
*1328 * S-FL-2 = ZONE
*1329 *   $ LIKE           = N-FL-1
*1330 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1331 * ..
*1332 *
*1333 * N-FL-3 = ZONE
*1334 *   $ LIKE           = N-FL-1
*1335 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1336 * ..
*1337 *
*1338 * S-FL-3 = ZONE
*1339 *   $ LIKE           = N-FL-1
*1340 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION
*1341 * ..
*1342 *
*1343 * CORE-FL-1 = ZONE
*1344 *   $ LIKE           = N-FL-1
*1345 *   ZONE-CONTROL     = CONTROL       ZONE-AIR       = VENTILATION

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*1346 * ..
*1347 *
*1348 * CORE-FL-2 = ZONE
*1349 *   $ LIKE           = N-FL-1
*1350 *   ZONE-CONTROL     = CONTROL      ZONE-AIR      = VENTILATION
*1351 * ..
*1352 *
*1353 * CORE-FL-3 = ZONE
*1354 *   $ LIKE           = N-FL-1
*1355 *   ZONE-CONTROL     = CONTROL      ZONE-AIR      = VENTILATION
*1356 * ..
*1357 *
*1358 * CORE-FL-B = ZONE
*1359 *   $ LIKE           = N-FL-1
*1360 *   ZONE-CONTROL     = CONTROL      ZONE-AIR      = VENTILATION
*1361 * ..
*1362 *
*1363 * N-FL-4 = ZONE
*1364 *   $ LIKE           = N-FL-1
*1365 *   ZONE-CONTROL     = CONTROL      ZONE-AIR      = VENTILATION
*1366 * ..
*1367 *
*1368 * SYSTEMCONTROLS = SYSTEM-CONTROL
*1369 *   MIN-SUPPLY-T      = 55           MAX-SUPPLY-T   = 60
*1370 *   COOL-CONTROL     = RESET        COOL-RESET-SCH = COLD-RESET-1
*1371 *   MAX-HUMIDITY     = 60
*1372 * ..
*1373 *
*1374 * SYSAIR = SYSTEM-AIR
*1375 * ..
*1376 *
*1377 * FANSON = SYSTEM-FANS
*1378 *   SUPPLY-KW         = 0.00109     SUPPLY-DELTA-T = 3.37
*1379 *   FAN-CONTROL       = INLET        FAN-SCHEDULE   = FANS-ON
*1380 *   RETURN-STATIC    = 1           NIGHT-CYCLE-CTRL = STAY-OFF
*1381 * ..
*1382 *
*1383 * SYS-EQUIP = SYSTEM-EQUIPMENT
*1384 *   COIL-BF          = 0.037
*1385 * ..
*1386 *
*1387 * ACSYSTEM = SYSTEM
*1388 *   SYSTEM-TYPE       = VAVS         SYSTEM-CONTROL = SYSTEMCONTROLS
*1389 *   SYSTEM-AIR        = SYSAIR      SYSTEM-FANS    = FANSON
*1390 *   SYSTEM-EQUIPMENT = SYS-EQUIP
*1391 *   ZONE-NAMES        = (CORE-FL-1,CORE-FL-2,CORE-FL-3,CORE-FL-B,N-FL-1,N-FL-2
*1392 *     ,N-FL-3,N-FL-4,N-FL-B,S-FL-1,S-FL-2,S-FL-3,S-FL-B,W-FL-1)
*1393 * ..
*1394 *
*1395 * $SYSTEM-REP$ SYSTEMS-REPORT
*1396 *   VERIFICATION      = (SV-A)
*1397 *   SUMMARY           = (SS-A,SS-H,SS-I)
*1398 * ..
*1399 *

```


*1400 * END ..
*1401 * COMPUTE SYSTEMS ..
*1402 *
*1403 * INPUT PLANT ..



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PDL PROCESSOR INPUT DATA

7/30/1996 17:23: 4 PDL RUN 1

```

*1404 *
*1405 * TITLE
*1406 *   LINE-1 *ENERGY SIMULATION OF*
*1407 *   LINE-2 *TECHNOTHANI BUILDING*
*1408 *   LINE-3 *COOLING TOWER SYSTEM WITH ICE STORAGE*
*1409 *   LINE-4 *USING DOEPLUS/DOE2 PROGRAM*
*1410 *   LINE-5 *AND WEATHER FILES, BANGKOK*
*1411 * ..
*1412 *
*1413 * ABORT          = ERRORS ..
*1414 *
*1415 * DIAGNOSTIC     = CAUTIONS ..
*1416 *
*1417 * CHW-CTRL = DAY-ASSIGN-SCH
*1418 *          (1,8) (TANK-CHARGE)
*1419 *          (9,21) (TANK-DISCHARGE)
*1420 *          (22,24) (TANK-CHARGE)
*1421 * ..
*1422 *
*1423 * PLANT-SCH-HR-1 = SCHEDULE
*1424 *          THRU MAY 3 (ALL) (1,24) (0)
*1425 *          THRU MAY 4 (ALL) (1,24) (1)
*1426 *          THRU DEC 31 (ALL) (1,24) (0)
*1427 * ..
*1428 *
*1429 * PLANT-SCH-HR-2 = SCHEDULE
*1430 *          THRU APR 30 (ALL) (1,24) (0)
*1431 *          THRU MAY 31 (ALL) (1,24) (1)
*1432 *          THRU DEC 31 (ALL) (1,24) (0)
*1433 * ..
*1434 *
*1435 * TANK-CHG = SCHEDULE
*1436 *          THRU DEC 31 (ALL) (1,8) (1) (9,21) (0) (22,24) (1)
*1437 * ..
*1438 *
*1439 * CHILLER-CTRL = SCHEDULE
*1440 *          THRU DEC 31 (ALL) CHW-CTRL
*1441 * ..
*1442 *
*1443 * H-CTRL = SCHEDULE
*1444 *          THRU DEC 31 (ALL) (1,24) (0)
*1445 * ..
*1446 *
*1447 * E-CTRL = SCHEDULE
*1448 *          THRU DEC 31 (ALL) (1,24) (0)
*1449 * ..

```

```

*1450 *
*1451 * CTW = PLANT-EQUIPMENT
*1452 *   TYPE           = COOLING-TWR           SIZE           = -999
*1453 * ..
*1454 *
*1455 * ICEM = PLANT-EQUIPMENT
*1456 *   TYPE           = HERM-CENT-CHLR        SIZE           = -999
*1457 * ..
*1458 *
*1459 * CTANK = PLANT-EQUIPMENT
*1460 *   TYPE           = CTANK-STORAGE         SIZE           = -999
*1461 * ..
*1462 *
*1463 * $PLR-ICEM$ PART-LOAD-RATIO
*1464 *   TYPE           = HERM-CENT-CHLR        MIN-RATIO      = 0.1
*1465 *   MAX-RATIO      = 1.0                   OPERATING-RATIO = 0.8
*1466 *   ELEC-INPUT-RATIO = 0.220
*1467 * ..
*1468 *
*1469 * $PLR-CTANK$ PART-LOAD-RATIO
*1470 *   TYPE           = CTANK-STORAGE         ELEC-INPUT-RATIO = 0.0
*1471 * ..
*1472 *
*1473 * $PLR-CTW$ PART-LOAD-RATIO
*1474 *   TYPE           = COOLING-TWR           ELEC-INPUT-RATIO = 0.0
*1475 * ..
*1476 *
*1477 * $DESIGNWB$ PLANT-PARAMETERS
*1478 *   CHILLER-CONTROL = STANDBY
*1479 *   TWR-FAN-CONTROL = TWO-SPEED             TWR-DESIGN-WETBU = 86.0
*1480 * ..
*1481 *
*1482 * $ICE-STOS ENERGY-STORAGE
*1483 *   COOL-STORE-SCH = TANK-CHG               CTANK-LOSS-COEF = 100.0
*1484 *   CTANK-BASE-T   = 44.0                 CTANK-ENV-T      = 65.0
*1485 * ..
*1486 *
*1487 * TANK-DISCHARGE = LOAD-ASSIGNMENT
*1488 *   TYPE           = COOLING                 LOAD-RANGE      = 100
*1489 *   PLANT-EQUIPMENT = CTANK                  NUMBER          = 1
*1490 *   LOAD-RANGE     = 0.1                    PLANT-EQUIPMENT = ICEM
*1491 *   NUMBER         = 1
*1492 * ..
*1493 *
*1494 * TANK-CHARGE = LOAD-ASSIGNMENT
*1495 *   TYPE           = COOLING                 OPERATION-MODE  = RUN-ALL
*1496 *   LOAD-RANGE     = 100                    PLANT-EQUIPMENT = ICEM
*1497 *   NUMBER         = 1                    PLANT-EQUIPMENT = CTANK
*1498 *   NUMBER         = 1
*1499 * ..
*1500 *
*1501 * $L-M$ LOAD-MANAGEMENT
*1502 *   PRED-LOAD-RANGE = 100
*1503 *   ASSIGN-SCHEDULE = (H-CTRL,CHILLER-CTRL,E-CTRL)

```

```

*1504 * ..
*1505 *
*1506 * $EGAT$ ENERGY-RESOURCE
*1507 * RESOURCE = ELECTRICITY SOURCE-SITE-EFF = 0.3333
*1508 * ..
*1509 *
*1510 * $ECONOMICS$ PLANT-REPORT
*1511 * VERIFICATION =(PV-A)
*1512 * SUMMARY =(PS-A,PS-G)
*1513 * HOURLY-DATA-SAVE = YES
*1514 * ..
*1515 *
*1516 * PRB-1 = REPORT-BLOCK
*1517 * VARIABLE-TYPE = GLOBAL
*1518 * VARIABLE-LIST =(1,2)
*1519 * ..
*1520 *
*1521 * PRB-2 = REPORT-BLOCK
*1522 * VARIABLE-TYPE = PLANT
*1523 * VARIABLE-LIST =(2,3,9,10,12)
*1524 * ..
*1525 *
*1526 * RB1 = REPORT-BLOCK
*1527 * VARIABLE-TYPE = HERM-CENT-CHLR
*1528 * VARIABLE-LIST =(1,8,10,16)
*1529 * ..
*1530 *
*1531 * RB2 = REPORT-BLOCK
*1532 * VARIABLE-TYPE = CTANK-STORAGE
*1533 * VARIABLE-LIST =(1,4,12,14)
*1534 * ..
*1535 *
*1536 * PHR-1 = HOURLY-REPORT
*1537 * REPORT-SCHEDULE = PLANT-SCH-HR-1
*1538 * REPORT-BLOCK =(PRB-1,PRB-2)
*1539 * ..
*1540 *
*1541 * PLANT-REP = HOURLY-REPORT
*1542 * REPORT-SCHEDULE = PLANT-SCH-HR-1
*1543 * REPORT-BLOCK =(RB1,RB2)
*1544 * ..
*1545 *
*1546 * END ..

```



-----CAUTION-----NO HEATING EQUIPMENT HAS BEEN DEFINED

```

*1547 * COMPUTE PLANT ..
*1548 *
*1549 * INPUT ECONOMICS ..

```

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EDL PROCESSOR INPUT DATA

7/30/1996 17:23: 4 EDL RUN 1

```

*1550 *
*1551 * TITLE
*1552 *   LINE-1 *ENERGY COSTS SIMULATION OF*
*1553 *   LINE-2 *TECHNOTHANI BUILDING, BANGKOK*
*1554 *   LINE-3 *USING THE DOEPLUS/DOE2 PROGRAM*
*1555 *   LINE-4 *WEATHER DATA, BANGKOK THAILAND*
*1556 *   LINE-5 *AND COSTS DATA FROM EGAT*
*1557 * ..
*1558 *
*1559 * ABORT           = ERRORS ..
*1560 *
*1561 * DIAGNOSTIC     = WARNINGS ..
*1562 *
*1563 * WEEKDAY = DAY-CHARGE-SCH
*1564 *   (1,8) (ENERGYCHARGE)
*1565 *   (9,21) (PEAK,ENERGYCHARGE)
*1566 *   (22,24) (ENERGYCHARGE)
*1567 * ..
*1568 *
*1569 * WEEKEND = DAY-CHARGE-SCH
*1570 *   (1,24) (ENERGYCHARGE)
*1571 * ..
*1572 *
*1573 * TIMEOFUSE = SCHEDULE
*1574 *   THRU DEC 31 (WD) WEEKDAY
*1575 *                   (WEH) WEEKEND
*1576 * ..
*1577 *
*1578 * $OPERATIONALCOST$ ENERGY-COST
*1579 *   RESOURCE           = ELECTRICITY           UNIT           = 3413.0
*1580 *   ASSIGN-SCHEDULE   = TIMEOFUSE
*1581 * ..
*1582 *
*1583 * PEAK = CHARGE-ASSIGNMENT
*1584 *   RESOURCE           = ELECTRICITY
*1585 *   TYPE               = DEMAND           UNIFORM-CHARGE = 309.0
*1586 * ..
*1587 *
*1588 * ENERGYCHARGE = CHARGE-ASSIGNMENT
*1589 *   RESOURCE           = ELECTRICITY
*1590 *   TYPE               = ENERGY           UNIFORM-CHARGE = 1.07
*1591 * ..
*1592 *
*1593 * $RUN-COSTS$ ECONOMICS-REPORT
*1594 *   VERIFICATION       =(ALL-VERIFICATION)
*1595 *   SUMMARY            =(ES-E,ES-D)

```

*1596 * ..
*1597 *
*1598 * END ..
*1599 * COMPUTE ECONOMICS ..
*1600 *
*1601 * STOP ..

WARNING

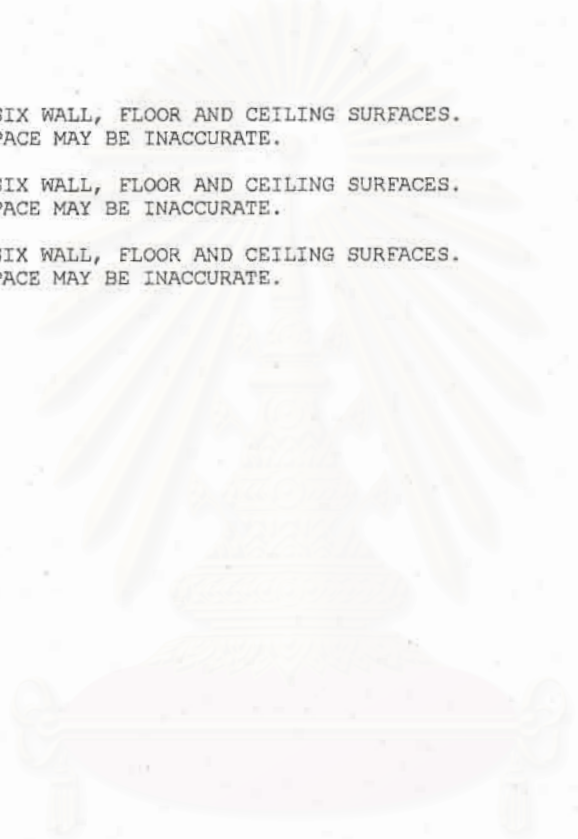
SPACE S-FL-2 HAS FEWER THAN SIX WALL, FLOOR AND CEILING SURFACES.
THE DAYLIGHTING CALCULATION FOR THIS SPACE MAY BE INACCURATE.

WARNING

SPACE N-FL-3 HAS FEWER THAN SIX WALL, FLOOR AND CEILING SURFACES.
THE DAYLIGHTING CALCULATION FOR THIS SPACE MAY BE INACCURATE.

WARNING

SPACE S-FL-3 HAS FEWER THAN SIX WALL, FLOOR AND CEILING SURFACES.
THE DAYLIGHTING CALCULATION FOR THIS SPACE MAY BE INACCURATE.



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Energy Simulation of
Patumthani, Thailand
REPORT- LV-A GENERAL PROJECT AND BUILDING INPUT

Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
Daylight, 100 sf/per, Ultimate Condition
WEATHER FILE- 1985 BANGKOK W/SOLAR

PERIOD OF STUDY

STARTING DATE	ENDING DATE	NUMBER OF DAYS
1 JAN 1995	31 DEC 1995	365

SITE CHARACTERISTIC DATA

STATION NAME	LATITUDE (DEG)	LONGITUDE (DEG)	ALTITUDE (FT)	TIME ZONE	BUILDING AZIMUTH (DEG)
1985 BANGKOK W/SOLAR	13.6	-100.6	0.	-7	0.0

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REPORT- LV-B SUMMARY OF SPACES OCCURRING IN THE PROJECT

NUMBER OF SPACES 14 EXTERIOR 11 INTERIOR 3

SPACE	SPACE MULT	SPACE TYPE	AZIMUTH	LIGHTING (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	AIR CHANGES PER HOUR	AREA (SQFT)	VOLUME (CUFT)
N-FL-1	1.0	EXT	0.0	0.83	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
W-FL-1	1.0	EXT	0.0	0.83	279.3	0.50	AIR-CHANGE	0.43	27932.40	279324.00
S-FL-1	1.0	EXT	0.0	0.83	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
N-FL-B	1.0	EXT	0.0	0.74	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
S-FL-B	1.0	EXT	0.0	0.74	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
N-FL-2	1.0	EXT	0.0	0.74	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
S-FL-2	1.0	EXT	0.0	0.74	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
N-FL-3	1.0	EXT	0.0	0.74	24.4	0.50	AIR-CHANGE	0.43	2441.20	24412.00
S-FL-3	1.0	EXT	0.0	0.74	24.4	0.50	AIR-CHANGE	0.43	2441.20	24412.00
CORE-FL-1	1.0	INT	0.0	0.74	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
CORE-FL-2	1.0	INT	0.0	0.74	19.9	0.50	AIR-CHANGE	0.33	1991.00	19910.00
CORE-FL-3	1.0	EXT	0.0	0.74	12.2	0.50	AIR-CHANGE	0.33	1220.60	12206.00
CORE-FL-B	1.0	INT	0.0	0.74	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
N-FL-4	1.0	EXT	0.0	0.74	64.0	0.50	AIR-CHANGE	0.27	6400.00	84480.00
BUILDING TOTALS					1679.6				167955.59	1699736.00

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SPACE NAME	MULTIPLIER		COOLING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB	HEATING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB
	SPACE	FLOOR								
N-FL-1	1.	1.	504.050	MAY 5 4 PM	99.F	79.F	-131.440	DEC 25 7 AM	63.F	58.F
W-FL-1	1.	1.	703.228	MAY 5 6 PM	96.F	81.F	-219.624	DEC 17 9 AM	67.F	60.F
S-FL-1	1.	1.	397.940	MAY 5 6 PM	96.F	81.F	-103.387	DEC 17 8 AM	63.F	58.F
N-FL-B	1.	1.	317.139	MAY 5 4 PM	99.F	79.F	-61.395	DEC 17 7 AM	60.F	57.F
S-FL-B	1.	1.	274.280	OCT 20 4 PM	87.F	79.F	-48.753	DEC 17 7 AM	60.F	57.F
N-FL-2	1.	1.	146.768	MAY 5 3 PM	98.F	79.F	-22.738	DEC 17 7 AM	60.F	57.F
S-FL-2	1.	1.	30.445	DEC 6 6 PM	103.F	76.F	-4.423	DEC 17 8 AM	63.F	58.F
N-FL-3	1.	1.	75.360	MAY 5 3 PM	98.F	79.F	-15.739	DEC 17 7 AM	60.F	57.F
S-FL-3	1.	1.	22.369	MAY 5 6 PM	96.F	81.F	-4.176	DEC 17 7 AM	60.F	57.F
CORE-FL-1	1.	1.	17.462	APR 14 3 PM	100.F	80.F	-1.909	DEC 24 6 AM	63.F	57.F
CORE-FL-2	1.	1.	12.417	APR 14 3 PM	100.F	80.F	-1.357	DEC 24 6 AM	63.F	57.F
CORE-FL-3	1.	1.	22.161	NOV 21 3 PM	92.F	76.F	-1.753	DEC 17 7 AM	60.F	57.F
CORE-FL-B	1.	1.	17.462	APR 14 3 PM	100.F	80.F	-1.909	DEC 24 6 AM	63.F	57.F
N-FL-4	1.	1.	60.818	MAY 5 4 PM	99.F	79.F	-22.094	DEC 17 7 AM	60.F	57.F
SUM			2601.898				-640.699			
BUILDING PEAK			2451.074	MAY 5 4 PM	99.F	79.F	-627.246	DEC 17 8 AM	63.F	58.F

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 จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 19202 SQFT 1784 M2
 VOLUME 192023 CUFT 5438 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 25	7AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	79F	26C	58F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	14.664	4.295	0.000	0.000	-10.711	-3.137		
ROOFS	315.358	92.361	0.000	0.000	-98.745	-28.920		
GLASS CONDUCTION	7.855	2.300	0.000	0.000	-16.149	-4.730		
GLASS SQLAR	74.145	21.715	0.000	0.000	10.700	3.134		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	40.635	11.901	25.021	7.328	0.096	0.028		
LIGHT TO SPACE	13.514	3.958	0.000	0.000	1.074	0.314		
EQUIPMENT TO SPACE	28.444	8.330	0.000	0.000	0.737	0.216		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	9.436	2.764	16.691	4.889	-18.442	-5.401		
TOTAL	504.050	147.624	41.712	12.216	-131.440	-38.495		
TOTAL LOAD	545.762 KBTU/H		159.840 KW		-131.440 KBTU/H		-38.495 KW	
TOTAL LOAD / AREA	28.42BTU/H.SQFT		89.599 W / M2		6.845BTU/H.SQFT		21.579 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 *

* ---- LOADS *
* 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
* *



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE W-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 27932 SQFT 2595 M2
 VOLUME 279324 CUFT 7910 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	9AM
DRY-BULB TEMP	96F	36C	67F	19C
WET-BULB TEMP	81F	27C	60F	16C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	73.824	21.621	0.000	0.000	-37.024	-10.843
ROOFS	476.771	139.634	0.000	0.000	-158.560	-46.438
GLASS CONDUCTION	0.324	0.095	0.000	0.000	-0.533	-0.156
GLASS SOLAR	5.567	1.630	0.000	0.000	1.582	0.463
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	61.058	17.882	36.396	10.659	1.451	0.425
LIGHT TO SPACE	30.524	8.940	0.000	0.000	3.438	1.007
EQUIPMENT TO SPACE	19.484	5.706	0.000	0.000	2.247	0.658
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	35.675	10.448	102.303	29.962	-32.225	-9.438
TOTAL	703.228	205.958	138.699	40.621	-219.624	-64.322
TOTAL LOAD	841.927 KBTU/H		246.579 KW		-219.624 KBTU/H	-64.322 KW
TOTAL LOAD / AREA	30.14BTU/H.SQFT		95.021 W / M2		7.863BTU/H.SQFT	24.787 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
* *



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE S-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 19202 SQFT 1784 M2
 VOLUME 192023 CUFT 5438 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	26.630	7.799	0.000	0.000	-13.985	-4.096
ROOFS	248.301	72.721	0.000	0.000	-73.267	-21.458
GLASS CONDUCTION	5.230	1.532	0.000	0.000	-10.090	-2.955
GLASS SOLAR	29.455	8.627	0.000	0.000	11.485	3.364
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	41.974	12.293	25.021	7.328	0.377	0.110
LIGHT TO SPACE	8.430	2.469	0.000	0.000	0.895	0.262
EQUIPMENT TO SPACE	13.394	3.923	0.000	0.000	0.902	0.264
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	24.525	7.183	70.329	20.598	-19.704	-5.771
TOTAL	397.940	116.547	95.349	27.925	-103.387	-30.280
TOTAL LOAD	493.290 KBTU/H		144.472 KW		-103.387 KBTU/H	-30.280 KW
TOTAL LOAD / AREA	25.69BTU/H.SQFT		80.984 W / M2		5.384BTU/H.SQFT	16.973 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
* 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 36780 SQFT 3417 M2
 VOLUME 367803 CUFT 10416 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5 4PM		DEC 17 7AM	
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	36.573	10.711	0.000	0.000	-27.658	-8.100
ROOFS	10.366	3.036	0.000	0.000	-13.318	-3.900
GLASS CONDUCTION	2.189	0.641	0.000	0.000	-5.596	-1.639
GLASS SOLAR	42.737	12.517	0.000	0.000	7.128	2.088
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.191	0.056	0.000	0.000	0.191	0.056
OCCUPANTS TO SPACE	80.517	23.582	47.925	14.036	2.623	0.768
LIGHT TO SPACE	74.114	21.706	0.000	0.000	2.947	0.863
EQUIPMENT TO SPACE	54.482	15.956	0.000	0.000	1.775	0.520
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	15.970	4.677	28.249	8.273	-29.487	-8.636
TOTAL	317.139	92.882	76.174	22.309	-61.395	-17.981
TOTAL LOAD	393.313 KBTU/H		115.192 KW		-61.395 KBTU/H -17.981 KW	
TOTAL LOAD / AREA	10.69BTU/H.SQFT		33.711 W / M2		1.669BTU/H.SQFT 5.262 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
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* IN CONSIDERATION *
* *



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE S-FL-B

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0			
FLOOR AREA	36780 SQFT	3417 M2				
VOLUME	367803 CUFT	10416 M3				
TIME	COOLING LOAD		HEATING LOAD			
	OCT 20	4PM	DEC 17	7AM		
DRY-BULB TEMP	87F	31C	60F	16C		
WET-BULB TEMP	79F	26C	57F	14C		
	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	59.245	17.351	0.000	0.000	-26.813	-7.853
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.191	0.056	0.000	0.000	0.191	0.056
OCCUPANTS TO SPACE	80.517	23.582	47.925	14.036	2.623	0.768
LIGHT TO SPACE	74.702	21.878	0.000	0.000	2.958	0.866
EQUIPMENT TO SPACE	54.482	15.956	0.000	0.000	1.775	0.520
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	5.143	1.506	34.722	10.169	-29.487	-8.636
TOTAL	274.280	80.330	82.647	24.205	-48.753	-14.279
TOTAL LOAD	356.927 KBTU/H	104.535 KW			-48.753 KBTU/H	-14.279 KW
TOTAL LOAD / AREA	9.70BTU/H.SQFT	30.593 W / M2			1.326BTU/H.SQFT	4.179 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
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* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-2

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	3982 SQFT	370 M2	
VOLUME	39820 CUFT	1128 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	3PM	DEC 17	7AM
DRY-BULB TEMP	98F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	5.852	1.714	0.000	0.000	-3.223	-0.944		
ROOFS	88.676	25.971	0.000	0.000	-17.219	-5.043		
GLASS CONDUCTION	3.433	1.005	0.000	0.000	-5.894	-1.726		
GLASS SOLAR	31.938	9.354	0.000	0.000	5.472	1.603		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	8.267	2.421	5.189	1.520	0.086	0.025		
LIGHT TO SPACE	2.063	0.604	0.000	0.000	0.240	0.070		
EQUIPMENT TO SPACE	4.722	1.383	0.000	0.000	0.194	0.057		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	1.817	0.532	2.737	0.802	-2.394	-0.701		
TOTAL	146.768	42.985	7.925	2.321	-22.738	-6.659		
TOTAL LOAD	154.693 KBTU/H		45.306 KW		-22.738 KBTU/H		-6.659 KW	
TOTAL LOAD / AREA	38.85BTU/H.SQFT		122.468 W / M2		5.710BTU/H.SQFT		18.001 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
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* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
* *



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE S-FL-2

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0			
FLOOR AREA	3982 SQFT	370 M2				
VOLUME	39820 CUFT	1128 M3				
	COOLING LOAD		HEATING LOAD			
TIME	DEC 6 6PM		DEC 17 8AM			
DRY-BULB TEMP	103F	39C	63F	17C		
WET-BULB TEMP	76F	24C	58F	14C		
	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	2.604	0.763	0.000	0.000	-1.318	-0.386
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	1.233	0.361	0.000	0.000	-1.101	-0.322
GLASS SOLAR	0.953	0.279	0.000	0.000	0.374	0.109
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	8.702	2.548	5.189	1.520	0.078	0.023
LIGHT TO SPACE	5.373	1.574	0.000	0.000	0.239	0.070
EQUIPMENT TO SPACE	4.897	1.434	0.000	0.000	0.189	0.055
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	6.685	1.958	3.909	1.145	-2.884	-0.845
TOTAL	30.445	8.917	9.097	2.664	-4.423	-1.295
TOTAL LOAD	39.543 KBTU/H	11.581 KW			-4.423 KBTU/H	-1.295 KW
TOTAL LOAD / AREA	9.93BTU/H.SQFT	31.305 W / M2			1.111BTU/H.SQFT	3.502 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
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* ---- LOADS *
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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-3

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2441 SQFT	227 M2	
VOLUME	24112 CUFT	683 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	3PM	DEC 17	7AM
DRY-BULB TEMP	98F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	3.293	0.964	0.000	0.000	-1.925	-0.564
ROOFS	58.779	17.215	0.000	0.000	-11.413	-3.343
GLASS CONDUCTION	0.987	0.289	0.000	0.000	-1.596	-0.467
GLASS SOLAR	1.894	0.555	0.000	0.000	0.335	0.098
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	5.068	1.484	3.181	0.932	0.053	0.015
LIGHT TO SPACE	1.331	0.390	0.000	0.000	0.157	0.046
EQUIPMENT TO SPACE	2.895	0.848	0.000	0.000	0.119	0.035
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.114	0.326	1.678	0.491	-1.468	-0.430
TOTAL	75.360	22.071	4.859	1.423	-15.739	-4.610
TOTAL LOAD	80.219 KBTU/H		23.494 KW		-15.739 KBTU/H	-4.610 KW
TOTAL LOAD / AREA	32.86BTU/H.SQFT		103.592 W / M2		6.447BTU/H.SQFT	20.325 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
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* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE S-FL-3

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2441 SQFT	227 M2	
VOLUME	24412 CUFT	691 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	7AM
DRY-BULB TEMP	96F	36C	60F	16C
WET-BULB TEMP	81F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	4.835	1.416	0.000	0.000	-1.819	-0.533
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	1.359	0.398	0.000	0.000	-1.596	-0.467
GLASS SOLAR	1.926	0.564	0.000	0.000	0.369	0.108
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	5.336	1.563	3.181	0.932	0.053	0.015
LIGHT TO SPACE	1.818	0.533	0.000	0.000	0.166	0.049
EQUIPMENT TO SPACE	3.003	0.879	0.000	0.000	0.119	0.035
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	4.092	1.199	8.941	2.619	-1.468	-0.430
TOTAL	22.369	6.551	12.122	3.550	-4.176	-1.223
TOTAL LOAD	34.491 KBTU/H		10.102 KW		-4.176 KBTU/H	-1.223 KW
TOTAL LOAD / AREA	14.13BTU/H.SQFT		44.541 W / M2		1.711BTU/H.SQFT	5.393 W / M2

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* ---- LOADS *
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* IN CONSIDERATION *
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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE CORE-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 2800 SQFT 260 M2
 VOLUME 28000 CUFT 793 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	6AM
DRY-BULB TEMP	100F	38C	63F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.037	1.768	3.648	1.069	0.205	0.060
LIGHT TO SPACE	5.554	1.627	0.000	0.000	0.234	0.068
EQUIPMENT TO SPACE	4.085	1.196	0.000	0.000	0.139	0.041
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.786	0.523	3.299	0.966	-2.487	-0.728
TOTAL	17.462	5.114	6.948	2.035	-1.909	-0.559
TOTAL LOAD	24.410 KBTU/H		7.149 KW		-1.909 KBTU/H	-0.559 KW
TOTAL LOAD / AREA	8.72BTU/H.SQFT		27.482 W / M2		0.682BTU/H.SQFT	2.149 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
* 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
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SPACE CORE-FL-2

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1991 SQFT 185 M2
 VOLUME 19910 CUFT 564 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	6AM
DRY-BULB TEMP	100F	38C	63F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	4.293	1.257	2.594	0.760	0.146	0.043
LIGHT TO SPACE	3.949	1.157	0.000	0.000	0.166	0.049
EQUIPMENT TO SPACE	2.905	0.851	0.000	0.000	0.099	0.029
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.270	0.372	2.346	0.687	-1.769	-0.518
TOTAL	12.417	3.637	4.940	1.447	-1.357	-0.398
TOTAL LOAD	17.357 KBTU/H		5.083 KW		-1.357 KBTU/H -0.398 KW	
TOTAL LOAD / AREA	8.72BTU/H.SQFT		27.482 W / M2		0.682BTU/H.SQFT 2.149 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
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SPACE CORE-FL-3

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1221 SQFT 113 M2
 VOLUME 12206 CUFT 346 M3

TIME	COOLING LOAD		HEATING LOAD	
	NOV 21	3PM	DEC 17	7AM
DRY-BULB TEMP	92F	33C	60F	16C
WET-BULB TEMP	76F	24C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	1.303	0.382	0.000	0.000	-0.982	-0.288
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.474	0.139	0.000	0.000	-2.973	-0.871
GLASS SOLAR	13.213	3.870	0.000	0.000	2.936	0.860
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	2.623	0.768	1.590	0.466	0.087	0.025
LIGHT TO SPACE	2.408	0.705	0.000	0.000	0.098	0.029
EQUIPMENT TO SPACE	1.775	0.520	0.000	0.000	0.059	0.017
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	0.365	0.107	0.896	0.262	-0.979	-0.287
TOTAL	22.161	6.490	2.487	0.728	-1.753	-0.513
TOTAL LOAD	24.647 KBTU/H		7.219 KW		-1.753 KBTU/H	-0.513 KW
TOTAL LOAD / AREA	20.19BTU/H.SQFT		63.657 W / M2		1.436BTU/H.SQFT	4.527 W / M2

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 * NOTE: 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
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* --- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
* *



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จุฬาลงกรณ์มหาวิทยาลัย

SPACE CORE-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 2800 SQFT 260 M2
 VOLUME 28000 CUFT 793 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	6AM
DRY-BULB TEMP	100F	38C	63F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.037	1.768	3.648	1.069	0.205	0.060
LIGHT TO SPACE	5.554	1.627	0.000	0.000	0.234	0.068
EQUIPMENT TO SPACE	4.085	1.196	0.000	0.000	0.139	0.041
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.786	0.523	3.299	0.966	-2.487	-0.728
TOTAL	17.462	5.114	6.948	2.035	-1.909	-0.559
TOTAL LOAD	24.410 KBTU/H		7.149 KW		-1.909 KBTU/H	
TOTAL LOAD / AREA	8.72BTU/H.SQFT		27.482 W / M2		0.682BTU/H.SQFT	
					2.149 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 *

* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
* IN CONSIDERATION *
* *



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SPACE N-FL-4

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 6400 SQFT 595 M2
 VOLUME 84480 CUFT 2392 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	18.183	5.325	0.000	0.000	-14.069	-4.120
ROOFS	3.250	0.952	0.000	0.000	-4.175	-1.223
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	14.011	4.103	8.339	2.442	0.456	0.134
LIGHT TO SPACE	12.999	3.807	0.000	0.000	0.515	0.151
EQUIPMENT TO SPACE	9.480	2.776	0.000	0.000	0.309	0.090
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	2.896	0.848	5.123	1.500	-5.131	-1.503
TOTAL	60.818	17.812	13.462	3.943	-22.094	-6.471
TOTAL LOAD	74.280 KBTU/H	21.755 KW			-22.094 KBTU/H	-6.471 KW
TOTAL LOAD / AREA	11.61BTU/H.SQFT	36.588 W / M2			3.452BTU/H.SQFT	10.883 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 *



* ---- LOADS *
* 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
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*** BUILDING ***

FLOOR AREA 167956 SQFT 15603 SQMT
 VOLUME 1699736 CUFT 48137 CUMT

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	79F	26C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	218.136	63.887	0.000	0.000	-138.812	-40.654
ROOFS	1061.551	310.902	0.000	0.000	-368.527	-107.932
GLASS CONDUCTION	24.528	7.184	0.000	0.000	-40.149	-11.759
GLASS SOLAR	191.990	56.229	0.000	0.000	45.361	13.285
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.382	0.112	0.000	0.000	0.382	0.112
OCCUPANTS TO SPACE	361.898	105.991	218.846	64.095	7.633	2.236
LIGHT TO SPACE	268.159	78.537	0.000	0.000	11.496	3.367
EQUIPMENT TO SPACE	245.201	71.813	0.000	0.000	7.840	2.296
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	79.228	23.204	137.212	40.186	-152.470	-44.655
TOTAL	2451.074	717.858	356.059	104.281	-627.246	-183.705
TOTAL LOAD	2807.133 KBTU/H		822.139 KW		-627.246 KBTU/H	-183.705 KW
TOTAL LOAD / AREA	16.71BTU/H.SQFT		52.689 W /SQMT		3.735BTU/H.SQFT	11.773 W /SQMT

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *

* ---- LOADS *
* 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
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----- COOLING -----											----- HEATING -----				----- ELEC -----	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)		
JAN	449.58154	4	16	91.F	73.F	1853.078	-9.756	1	7	68.F	64.F	-276.066	40863.	196.600		
FEB	510.00949	6	15	93.F	76.F	2045.274	-0.508	1	7	71.F	66.F	-65.041	36911.	187.576		
MAR	659.74939	1	16	94.F	76.F	2194.694	-0.117	5	6	75.F	71.F	-12.908	44190.	205.334		
APR	648.76746	13	15	102.F	80.F	2326.241	-0.587	18	5	75.F	73.F	-109.854	39149.	210.565		
MAY	606.89026	5	15	99.F	79.F	2451.074	-0.290	13	6	76.F	75.F	-18.704	42690.	210.565		
JUN	525.20758	1	15	92.F	81.F	1989.363	-0.025	25	6	77.F	75.F	-6.665	42428.	194.607		
JUL	508.65228	21	15	89.F	78.F	2233.327	-0.362	13	5	75.F	73.F	-64.369	39328.	210.565		
AUG	580.11804	18	15	93.F	79.F	2229.564	-0.262	27	7	78.F	75.F	-41.873	44186.	194.607		
SEP	499.10703	21	15	88.F	80.F	2189.571	-0.971	17	7	75.F	74.F	-128.824	39170.	210.565		
OCT	478.87430	20	15	87.F	79.F	2266.257	-2.466	15	6	76.F	75.F	-137.219	41226.	199.450		
NOV	476.32712	21	16	91.F	76.F	2077.911	-2.092	24	6	70.F	67.F	-163.878	39304.	210.565		
DEC	406.69244	8	16	90.F	72.F	1937.504	-38.177	17	8	63.F	58.F	-627.246	39208.	186.776		
TOTAL	6349.977						-55.612						488653.			
MAX						2451.074						-627.246		210.565		

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 N-FL-1

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.547	-1.861	0.000	0.000	-0.605	-0.945	1.278	0.192	0.293	0.312	0.000	-1.883
	SEN CL	0.632	40.864	0.000	0.000	0.548	-2.448	19.395	9.592	4.069	6.845	0.000	79.496
	LAT CL					16.527			5.087		0.000	0.000	21.614
FEB	HEATING	-0.061	-0.209	0.000	0.000	-0.059	-0.105	0.141	0.041	0.049	0.059	0.000	-0.144
	SEN CL	1.528	52.500	0.000	0.000	2.041	-0.675	21.178	8.871	3.873	6.450	0.000	95.766
	LAT CL					27.304			4.604		0.000	0.000	31.909
MAR	HEATING	-0.006	-0.001	0.000	0.000	-0.006	-0.010	0.014	0.003	0.003	0.003	0.000	0.000
	SEN CL	2.730	72.197	0.000	0.000	3.327	0.374	26.194	10.758	4.659	7.806	0.000	128.043
	LAT CL					30.692			5.561		0.000	0.000	36.253
APR	HEATING	-0.043	-0.187	0.000	0.000	-0.034	-0.068	0.075	0.037	0.039	0.032	0.000	-0.149
	SEN CL	3.145	77.257	0.000	0.000	3.797	0.653	25.676	9.415	4.461	6.872	0.000	131.277
	LAT CL					31.080			4.849		0.000	0.000	35.929
MAY	HEATING	-0.004	-0.011	0.000	0.000	-0.003	-0.007	0.007	0.003	0.003	0.003	0.000	-0.007
	SEN CL	2.760	67.438	0.000	0.000	2.623	-0.403	26.142	10.244	4.696	7.464	0.000	120.965
	LAT CL					32.524			5.325		0.000	0.000	37.849
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.061	49.036	0.000	0.000	2.367	-0.236	23.307	10.297	4.715	7.477	0.000	99.024
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATING	-0.036	-0.114	0.000	0.000	-0.024	-0.060	0.077	0.032	0.033	0.029	0.000	-0.062
	SEN CL	1.915	54.456	0.000	0.000	1.196	-1.638	25.032	9.368	4.490	6.864	0.000	101.682
	LAT CL					27.966			4.853		0.000	0.000	32.820
AUG	HEATING	-0.006	-0.019	0.000	0.000	-0.005	-0.010	0.021	0.001	0.002	0.002	0.000	-0.014
	SEN CL	1.993	60.935	0.000	0.000	1.764	-0.906	26.743	10.756	4.921	7.803	0.000	114.008
	LAT CL					29.929			5.561		0.000	0.000	35.489
SEP	HEATING	-0.027	-0.091	0.000	0.000	-0.022	-0.046	0.055	0.003	0.007	0.006	0.000	-0.115
	SEN CL	1.260	54.429	0.000	0.000	0.739	-1.975	21.490	9.437	4.563	6.891	0.000	96.833
	LAT CL					26.232			4.848		0.000	0.000	31.080
OCT	HEATING	-0.154	-0.460	0.000	0.000	-0.120	-0.259	0.309	0.063	0.095	0.083	0.000	-0.442
	SEN CL	0.830	51.447	0.000	0.000	0.244	-2.668	18.072	9.728	4.658	7.077	0.000	89.388
	LAT CL					23.000			5.088		0.000	0.000	28.087
NOV	HEATING	-0.139	-0.436	0.000	0.000	-0.124	-0.224	0.274	0.061	0.106	0.101	0.000	-0.382
	SEN CL	0.910	49.774	0.000	0.000	0.671	-2.181	18.010	9.324	4.343	6.764	0.000	87.615
	LAT CL					21.941			4.849		0.000	0.000	26.790
DEC	HEATING	-1.185	-6.987	0.000	0.000	-1.771	-2.039	2.622	0.408	0.484	0.596	0.000	-7.873
	SEN CL	0.198	36.820	0.000	0.000	0.002	-2.883	17.798	9.053	3.780	6.333	0.000	71.100

	LAT CL				11.167			4.794		0.000	0.000	15.962	
TOT	HEATNG	-2.208	-10.376	0.000	0.000	-2.773	-3.772	4.872	0.845	1.115	1.226	0.000	-11.071
	SEN CL	19.960	667.154	0.000	0.000	19.317	-14.988	269.037	116.840	53.229	84.647	0.000	1215.198
	LAT CL					310.499			60.739		0.000	0.000	371.239



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DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-1.914	-2.110	0.000	0.000	-0.768	-0.035	0.111	0.309	0.736	0.435	0.000	-3.237
	SEN CL	3.553	60.790	0.000	0.000	0.684	-0.092	1.562	13.924	14.450	9.975	0.000	104.846
	LAT CL					23.796			7.390		0.000	0.000	31.186
FEB	HEATNG	-0.165	-0.156	0.000	0.000	-0.061	-0.003	0.008	0.048	0.089	0.049	0.000	-0.191
	SEN CL	6.926	80.172	0.000	0.000	2.944	-0.021	1.785	12.916	13.564	9.420	0.000	127.705
	LAT CL					39.744			6.697		0.000	0.000	46.441
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	10.467	111.249	0.000	0.000	4.831	0.021	2.066	15.655	16.045	11.358	0.000	171.692
	LAT CL					44.677			8.089		0.000	0.000	52.765
APR	HEATNG	-0.180	-0.235	0.000	0.000	-0.049	-0.003	0.008	0.057	0.102	0.053	0.000	-0.246
	SEN CL	11.078	118.222	0.000	0.000	5.522	0.037	1.967	13.691	14.129	9.991	0.000	174.637
	LAT CL					45.058			7.052		0.000	0.000	52.110
MAY	HEATNG	-0.043	-0.032	0.000	0.000	-0.011	-0.001	0.003	0.015	0.026	0.013	0.000	-0.029
	SEN CL	7.864	103.417	0.000	0.000	3.822	0.003	1.820	14.890	15.149	10.848	0.000	157.813
	LAT CL					47.149			7.745		0.000	0.000	54.895
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.100	75.824	0.000	0.000	3.443	0.004	1.561	14.979	14.827	10.877	0.000	127.614
	LAT CL					46.745			7.739		0.000	0.000	54.484
JUL	HEATNG	-0.179	-0.138	0.000	0.000	-0.049	-0.003	0.009	0.062	0.119	0.067	0.000	-0.112
	SEN CL	4.295	81.740	0.000	0.000	1.754	-0.045	1.715	13.612	13.898	9.960	0.000	126.929
	LAT CL					40.557			7.059		0.000	0.000	47.617
AUG	HEATNG	-0.056	-0.041	0.000	0.000	-0.008	-0.001	0.006	0.009	0.021	0.012	0.000	-0.058
	SEN CL	5.773	93.037	0.000	0.000	2.568	-0.018	1.926	15.637	15.314	11.341	0.000	145.580
	LAT CL					43.272			8.087		0.000	0.000	51.359
SEP	HEATNG	-0.106	-0.151	0.000	0.000	-0.028	-0.002	0.008	0.008	0.022	0.014	0.000	-0.235
	SEN CL	4.176	81.593	0.000	0.000	1.070	-0.054	1.595	13.724	14.042	10.020	0.000	126.167
	LAT CL					38.056			7.051		0.000	0.000	45.107
OCT	HEATNG	-0.579	-0.551	0.000	0.000	-0.169	-0.009	0.026	0.102	0.232	0.135	0.000	-0.813
	SEN CL	3.254	76.400	0.000	0.000	0.349	-0.078	1.362	14.140	14.767	10.281	0.000	120.475
	LAT CL					33.184			7.397		0.000	0.000	40.581
NOV	HEATNG	-0.464	-0.376	0.000	0.000	-0.176	-0.008	0.022	0.089	0.209	0.118	0.000	-0.585
	SEN CL	4.065	74.579	0.000	0.000	0.972	-0.068	1.450	13.562	14.475	9.867	0.000	118.902
	LAT CL					31.888			7.052		0.000	0.000	38.940
DEC	HEATNG	-4.695	-10.439	0.000	0.000	-2.596	-0.088	0.278	0.777	1.618	1.020	0.000	-14.125
	SEN CL	2.860	52.963	0.000	0.000	0.023	-0.107	1.457	12.984	13.320	9.059	0.000	92.559

	LAT CL				15.881			6.850		0.000	0.000	22.732	
TOT	HEATNG	-8.381	-14.228	0.000	0.000	-3.915	-0.151	0.479	1.476	3.174	1.917	0.000	-19.630
	SEN CL	70.412	1009.988	0.000	0.000	27.981	-0.417	20.267	169.714	173.979	122.997	0.000	1594.920
	LAT CL					450.005			88.208		0.000	0.000	538.213



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 Daylight, 100 sf/per, Ultimate Condition
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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.402	-0.897	0.000	0.000	-0.352	-0.374	0.595	0.114	0.158	0.154	0.000	-1.005
	SEN CL	2.148	32.431	0.000	0.000	0.295	-1.719	14.470	9.670	4.397	7.003	0.000	68.695
	LAT CL					17.283			5.084		0.000	0.000	22.367
FEB	HEATNG	-0.050	-0.070	0.000	0.000	-0.038	-0.045	0.065	0.028	0.033	0.031	0.000	-0.046
	SEN CL	2.991	41.857	0.000	0.000	2.019	-0.452	14.008	8.883	4.121	6.479	0.000	79.906
	LAT CL					27.357			4.604		0.000	0.000	31.961
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.832	57.598	0.000	0.000	3.321	0.192	13.289	10.762	4.978	7.808	0.000	101.780
	LAT CL					30.713			5.561		0.000	0.000	36.274
APR	HEATNG	-0.051	-0.111	0.000	0.000	-0.032	-0.043	0.032	0.034	0.043	0.031	0.000	-0.098
	SEN CL	3.713	61.122	0.000	0.000	3.794	0.335	10.288	9.417	4.978	6.874	0.000	100.522
	LAT CL					31.077			4.849		0.000	0.000	35.926
MAY	HEATNG	-0.009	-0.010	0.000	0.000	-0.006	-0.008	0.008	0.007	0.007	0.005	0.000	-0.006
	SEN CL	2.500	53.691	0.000	0.000	2.626	-0.371	9.386	10.240	5.322	7.462	0.000	90.856
	LAT CL					32.485			5.325		0.000	0.000	37.810
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.918	39.345	0.000	0.000	2.367	-0.237	8.579	10.297	5.302	7.477	0.000	75.048
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATNG	-0.029	-0.041	0.000	0.000	-0.017	-0.025	0.021	0.019	0.022	0.019	0.000	-0.030
	SEN CL	1.381	42.854	0.000	0.000	1.189	-1.150	8.763	9.381	5.063	6.875	0.000	74.356
	LAT CL					28.108			4.853		0.000	0.000	32.962
AUG	HEATNG	-0.014	-0.012	0.000	0.000	-0.007	-0.012	0.017	0.002	0.006	0.004	0.000	-0.017
	SEN CL	1.935	48.501	0.000	0.000	1.767	-0.664	10.067	10.754	5.408	7.801	0.000	85.570
	LAT CL					29.843			5.560		0.000	0.000	35.403
SEP	HEATNG	-0.034	-0.062	0.000	0.000	-0.022	-0.034	0.037	0.004	0.009	0.008	0.000	-0.094
	SEN CL	1.782	42.874	0.000	0.000	0.739	-1.344	9.665	9.436	4.940	6.890	0.000	74.981
	LAT CL					26.201			4.848		0.000	0.000	31.049
OCT	HEATNG	-0.136	-0.234	0.000	0.000	-0.081	-0.128	0.124	0.048	0.070	0.058	0.000	-0.280
	SEN CL	1.767	40.415	0.000	0.000	0.205	-1.818	9.610	9.743	5.038	7.103	0.000	72.064
	LAT CL					23.270			5.087		0.000	0.000	28.357
NOV	HEATNG	-0.115	-0.164	0.000	0.000	-0.088	-0.099	0.122	0.040	0.071	0.059	0.000	-0.174
	SEN CL	2.244	39.383	0.000	0.000	0.634	-1.466	11.653	9.344	4.540	6.806	0.000	73.139
	LAT CL					22.209			4.848		0.000	0.000	27.058
DEC	HEATNG	-1.196	-4.685	0.000	0.000	-1.565	-1.100	1.717	0.344	0.417	0.515	0.000	-5.554
	SEN CL	2.147	28.447	0.000	0.000	-0.204	-1.883	13.495	9.116	3.899	6.414	0.000	61.432

LAT CL						11.495				4.790	0.000	0.000	16.285
TOT	HEATNG	-2.035	-6.288	0.000	0.000	-2.209	-1.867	2.738	0.641	0.834	0.882	0.000	-7.303
	SEN CL	28.359	528.518	0.000	0.000	18.753	-10.577	133.273	117.044	57.988	84.991	0.000	958.349
	LAT CL					312.178				60.729	0.000	0.000	372.906



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Energy Simulation of
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Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
Daylight, 100 sf/per, Ultimate Condition
WEATHER FILE- 1985 BANGKOK W/SOLAR

REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

N-FL-B

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.972	-0.206	0.000	0.015	-0.887	-0.205	0.620	0.254	0.298	0.172	0.000	-0.911
	SEN CL	1.537	-0.585	0.000	0.127	4.465	-0.686	11.111	20.004	19.652	13.536	0.000	65.162
	LAT CL					29.066			10.447		0.000	0.000	39.513
FEB	HEATING	-0.015	-0.003	0.000	0.000	-0.013	-0.003	0.009	0.008	0.011	0.006	0.000	0.000
	SEN CL	3.457	1.961	0.000	0.128	2.854	-0.163	12.567	18.418	18.201	12.463	0.000	69.886
	LAT CL					43.657			9.519		0.000	0.000	53.176
MAR	HEATING	-0.016	0.002	0.000	0.000	-0.015	-0.003	0.015	0.005	0.006	0.004	0.000	-0.002
	SEN CL	5.777	3.971	0.000	0.142	4.977	0.153	14.471	22.098	21.862	14.953	0.000	88.404
	LAT CL					48.071			11.419		0.000	0.000	59.489
APR	HEATING	-0.016	-0.001	0.000	0.000	-0.009	-0.003	0.012	0.005	0.006	0.004	0.000	-0.002
	SEN CL	6.352	4.403	0.000	0.137	5.773	0.241	13.839	19.540	19.399	13.222	0.000	82.905
	LAT CL					50.341			10.038		0.000	0.000	60.379
MAY	HEATING	-0.017	0.000	0.000	0.000	-0.012	-0.003	0.016	0.005	0.005	0.003	0.000	-0.003
	SEN CL	5.206	3.304	0.000	0.142	4.021	0.021	12.768	21.132	20.875	14.299	0.000	81.769
	LAT CL					53.407			10.970		0.000	0.000	64.378
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.996	2.488	0.000	0.137	3.504	0.031	10.948	21.167	20.959	14.322	0.000	77.553
	LAT CL					50.337			10.936		0.000	0.000	61.273
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.314	1.502	0.000	0.142	1.691	-0.336	12.086	19.513	19.341	13.204	0.000	70.457
	LAT CL					46.500			10.076		0.000	0.000	56.576
AUG	HEATING	-0.014	-0.002	0.000	0.000	-0.008	-0.002	0.010	0.005	0.006	0.004	0.000	-0.002
	SEN CL	3.773	2.468	0.000	0.142	2.588	-0.128	13.539	22.089	21.873	14.946	0.000	81.290
	LAT CL					48.322			11.419		0.000	0.000	59.741
SEP	HEATING	-0.155	-0.035	0.000	0.003	-0.119	-0.029	0.111	0.048	0.053	0.032	0.000	-0.091
	SEN CL	2.678	1.326	0.000	0.134	1.142	-0.362	11.132	19.477	19.338	13.179	0.000	68.045
	LAT CL					44.112			10.022		0.000	0.000	54.133
OCT	HEATING	-0.319	-0.075	0.000	0.007	-0.214	-0.060	0.177	0.089	0.098	0.060	0.000	-0.237
	SEN CL	1.874	0.502	0.000	0.135	0.362	-0.553	9.559	20.180	19.947	13.655	0.000	65.661
	LAT CL					41.401			10.489		0.000	0.000	51.890
NOV	HEATING	-0.271	-0.042	0.000	0.005	-0.221	-0.054	0.209	0.068	0.075	0.046	0.000	-0.185
	SEN CL	2.103	0.684	0.000	0.132	1.036	-0.477	10.119	19.364	19.177	13.103	0.000	65.242
	LAT CL					38.739			10.014		0.000	0.000	48.754
DEC	HEATING	-2.368	-1.187	0.000	0.029	-2.753	-0.514	1.459	0.725	0.880	0.491	0.000	-3.239
	SEN CL	0.897	-1.666	0.000	0.113	-0.381	-0.849	10.705	18.889	18.569	12.781	0.000	59.058

	LAT CL				19.743			9.889		0.000	0.000	29.632	
TOT	HEATNG	-4.163	-1.551	0.000	0.061	-4.250	-0.877	2.637	1.213	1.438	0.821	0.000	-4.671
	SEN CL	40.965	20.359	0.000	1.611	28.032	-3.106	142.846	241.872	239.194	163.662	0.000	875.435
	LAT CL					513.696			125.246		0.000	0.000	638.942



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S-FL-B

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
Daylight, 100 sf/per, Ultimate Condition
WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-1.053	0.000	0.000	0.020	-1.054	0.000	0.000	0.321	0.374	0.217	0.000	-1.175
	SEN CL	4.025	0.000	0.000	0.122	0.632	0.000	0.000	19.937	19.754	13.491	0.000	57.962
	LAT CL					27.919			10.420		0.000	0.000	38.339
FEB	HEATNG	-0.050	0.000	0.000	0.002	-0.040	0.000	0.000	0.026	0.031	0.017	0.000	-0.015
	SEN CL	5.132	0.000	0.000	0.127	2.880	0.000	0.000	18.401	18.323	12.451	0.000	57.313
	LAT CL					43.164			9.513		0.000	0.000	52.677
MAR	HEATNG	-0.091	0.000	0.000	0.003	-0.090	0.000	0.000	0.041	0.048	0.028	0.000	-0.062
	SEN CL	6.741	0.000	0.000	0.139	5.053	0.000	0.000	22.062	21.967	14.928	0.000	70.892
	LAT CL					47.419			11.407		0.000	0.000	58.826
APR	HEATNG	-0.084	0.000	0.000	0.003	-0.057	0.000	0.000	0.037	0.041	0.025	0.000	-0.035
	SEN CL	6.449	0.000	0.000	0.135	5.822	0.000	0.000	19.508	19.476	13.200	0.000	64.590
	LAT CL					49.620			10.027		0.000	0.000	59.647
MAY	HEATNG	-0.211	0.000	0.000	0.007	-0.229	0.000	0.000	0.095	0.105	0.064	0.000	-0.167
	SEN CL	4.556	0.000	0.000	0.135	4.238	0.000	0.000	21.042	20.903	14.238	0.000	65.111
	LAT CL					50.768			10.935		0.000	0.000	61.703
JUN	HEATNG	-0.030	0.000	0.000	0.001	-0.020	0.000	0.000	0.015	0.017	0.010	0.000	-0.006
	SEN CL	3.395	0.000	0.000	0.136	3.525	0.000	0.000	21.151	21.065	14.312	0.000	63.584
	LAT CL					49.924			10.931		0.000	0.000	60.855
JUL	HEATNG	-0.151	0.000	0.000	0.005	-0.097	0.000	0.000	0.063	0.070	0.043	0.000	-0.067
	SEN CL	2.506	0.000	0.000	0.137	1.788	0.000	0.000	19.450	19.370	13.161	0.000	56.413
	LAT CL					45.024			10.052		0.000	0.000	55.076
AUG	HEATNG	-0.201	0.000	0.000	0.006	-0.145	0.000	0.000	0.086	0.096	0.058	0.000	-0.100
	SEN CL	3.535	0.000	0.000	0.136	2.726	0.000	0.000	22.008	21.906	14.892	0.000	65.203
	LAT CL					46.242			11.388		0.000	0.000	57.630
SEP	HEATNG	-0.317	0.000	0.000	0.010	-0.296	0.000	0.000	0.127	0.140	0.086	0.000	-0.249
	SEN CL	3.315	0.000	0.000	0.128	1.319	0.000	0.000	19.398	19.348	13.125	0.000	56.634
	LAT CL					41.846			9.990		0.000	0.000	51.836
OCT	HEATNG	-0.439	0.000	0.000	0.012	-0.335	0.000	0.000	0.157	0.172	0.106	0.000	-0.327
	SEN CL	3.230	0.000	0.000	0.130	0.483	0.000	0.000	20.112	19.971	13.609	0.000	57.535
	LAT CL					39.617			10.461		0.000	0.000	50.078
NOV	HEATNG	-0.477	0.000	0.000	0.013	-0.382	0.000	0.000	0.165	0.184	0.112	0.000	-0.386
	SEN CL	4.157	0.000	0.000	0.125	1.197	0.000	0.000	19.267	19.170	13.037	0.000	56.953
	LAT CL					36.265			9.977		0.000	0.000	46.242
DEC	HEATNG	-2.239	0.000	0.000	0.031	-2.810	0.000	0.000	0.732	0.892	0.495	0.000	-2.898
	SEN CL	3.807	0.000	0.000	0.111	-0.324	0.000	0.000	18.882	18.694	12.777	0.000	53.946

	LAT CL				19.037			9.886		0.000	0.000	28.923	
TOT	HEATNG	-5.342	0.000	0.000	0.112	-5.557	0.000	0.000	1.865	2.170	1.262	0.000	-5.489
	SEN CL	50.848	0.000	0.000	1.560	29.338	0.000	0.000	241.220	239.949	163.221	0.000	726.136
	LAT CL					496.846			124.993		0.000	0.000	621.840



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Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 N-FL-2

DOE-2.1D 7/30/1996 17:23:4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.067	-0.304	0.000	0.000	-0.033	-0.145	0.305	0.017	0.028	0.025	0.000	-0.174
	SEN CL	0.768	8.892	0.000	0.000	0.668	-0.080	8.802	2.012	0.842	1.387	0.000	23.290
	LAT CL					3.644			1.055		0.000	0.000	4.699
FEB	HEATING	-0.005	-0.027	0.000	0.000	-0.002	-0.011	0.025	0.003	0.006	0.006	0.000	-0.006
	SEN CL	1.097	10.363	0.000	0.000	1.120	0.672	9.703	1.845	0.774	1.279	0.000	26.854
	LAT CL					5.699			0.955		0.000	0.000	6.654
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.531	13.469	0.000	0.000	1.479	1.189	11.267	2.232	0.923	1.541	0.000	33.631
	LAT CL					6.369			1.153		0.000	0.000	7.522
APR	HEATING	-0.001	-0.002	0.000	0.000	0.000	-0.002	0.002	0.001	0.001	0.001	0.000	-0.001
	SEN CL	1.620	14.338	0.000	0.000	1.514	1.228	10.723	1.959	0.817	1.364	0.000	33.562
	LAT CL					6.498			1.006		0.000	0.000	7.503
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.498	12.869	0.000	0.000	1.258	0.875	9.975	2.125	0.871	1.473	0.000	30.943
	LAT CL					6.752			1.104		0.000	0.000	7.856
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.291	10.020	0.000	0.000	1.267	0.925	8.613	2.135	0.858	1.476	0.000	26.585
	LAT CL					6.664			1.103		0.000	0.000	7.767
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.222	11.355	0.000	0.000	0.970	0.397	9.428	1.949	0.812	1.362	0.000	27.496
	LAT CL					5.860			1.006		0.000	0.000	6.867
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.271	11.980	0.000	0.000	1.106	0.698	10.538	2.231	0.897	1.540	0.000	30.260
	LAT CL					6.223			1.153		0.000	0.000	7.376
SEP	HEATING	-0.001	-0.001	0.000	0.000	0.000	-0.002	0.003	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.034	11.229	0.000	0.000	0.789	0.239	8.758	1.957	0.835	1.362	0.000	26.203
	LAT CL					5.472			1.006		0.000	0.000	6.478
OCT	HEATING	-0.002	-0.005	0.000	0.000	0.000	-0.005	0.008	0.000	0.001	0.001	0.000	-0.002
	SEN CL	0.885	10.836	0.000	0.000	0.615	-0.075	7.578	2.030	0.871	1.413	0.000	24.153
	LAT CL					5.019			1.055		0.000	0.000	6.074
NOV	HEATING	-0.005	-0.019	0.000	0.000	-0.002	-0.010	0.025	0.001	0.001	0.001	0.000	-0.008
	SEN CL	0.889	10.286	0.000	0.000	0.724	0.106	7.969	1.945	0.914	1.354	0.000	24.186
	LAT CL					4.727			1.006		0.000	0.000	5.733
DEC	HEATING	-0.219	-1.070	0.000	0.000	-0.181	-0.443	0.794	0.054	0.084	0.086	0.000	-0.894
	SEN CL	0.594	8.703	0.000	0.000	0.466	-0.340	8.586	1.908	0.799	1.284	0.000	21.999

	LAT CL					2.406			1.006		0.000	0.000	3.412
TOT	HEATNG	-0.299	-1.430	0.000	0.000	-0.218	-0.617	1.163	0.076	0.122	0.119	0.000	-1.084
	SEN CL	13.699	134.339	0.000	0.000	11.976	5.833	111.938	24.329	10.213	16.835	0.000	329.161
	LAT CL					65.332			12.609		0.000	0.000	77.941



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DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
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(UNITS=MBTU)	WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL	
JAN	HEATNG	-0.021	0.000	0.000	0.000	-0.025	-0.026	0.017	0.002	0.010	0.007	0.000	-0.035
	SEN CL	0.629	0.000	0.000	0.000	0.660	-0.025	0.554	2.027	1.344	1.405	0.000	6.593
	LAT CL					3.702			1.055	0.000	0.000	0.000	4.758
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.711	0.000	0.000	0.000	1.117	0.162	0.581	1.848	1.286	1.285	0.000	6.991
	LAT CL					5.714			0.955	0.000	0.000	0.000	6.669
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.845	0.000	0.000	0.000	1.479	0.292	0.685	2.232	1.574	1.541	0.000	8.648
	LAT CL					6.369			1.153	0.000	0.000	0.000	7.522
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.792	0.000	0.000	0.000	1.514	0.290	0.617	1.960	1.468	1.364	0.000	8.004
	LAT CL					6.504			1.006	0.000	0.000	0.000	7.509
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.654	0.000	0.000	0.000	1.258	0.184	0.595	2.125	1.590	1.473	0.000	7.878
	LAT CL					6.752			1.104	0.000	0.000	0.000	7.856
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.579	0.000	0.000	0.000	1.267	0.208	0.534	2.135	1.575	1.476	0.000	7.775
	LAT CL					6.664			1.103	0.000	0.000	0.000	7.767
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.508	0.000	0.000	0.000	0.970	0.066	0.562	1.949	1.524	1.362	0.000	6.941
	LAT CL					5.860			1.006	0.000	0.000	0.000	6.867
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.581	0.000	0.000	0.000	1.106	0.145	0.630	2.231	1.617	1.540	0.000	7.850
	LAT CL					6.223			1.153	0.000	0.000	0.000	7.376
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.551	0.000	0.000	0.000	0.789	0.017	0.554	1.957	1.501	1.362	0.000	6.732
	LAT CL					5.472			1.006	0.000	0.000	0.000	6.478
OCT	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.003	0.001	0.000	0.001	0.001	0.000	-0.001
	SEN CL	0.568	0.000	0.000	0.000	0.616	-0.068	0.481	2.030	1.559	1.412	0.000	6.598
	LAT CL					5.007			1.055	0.000	0.000	0.000	6.063
NOV	HEATNG	-0.003	0.000	0.000	0.000	-0.005	-0.005	0.004	0.001	0.002	0.002	0.000	-0.004
	SEN CL	0.648	0.000	0.000	0.000	0.727	-0.001	0.486	1.945	1.501	1.354	0.000	6.659
	LAT CL					4.707			1.006	0.000	0.000	0.000	5.713
DEC	HEATNG	-0.072	0.000	0.000	0.000	-0.149	-0.082	0.047	0.023	0.040	0.030	0.000	-0.163
	SEN CL	0.586	0.000	0.000	0.000	0.434	-0.087	0.507	1.938	1.375	1.340	0.000	6.093

	LAT CL				2.500			1.006		0.000	0.000	3.506	
TOT	HEATING	-0.097	0.000	0.000	0.000	-0.179	-0.116	0.070	0.027	0.054	0.040	0.000	-0.202
	SEN CL	7.650	0.000	0.000	0.000	11.937	1.183	6.787	24.378	17.912	16.915	0.000	86.762
	LAT CL					65.475			12.608		0.000	0.000	78.083



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Energy Simulation of
 Patumthani, Thailand
 REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 N-FL-3

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.084	-0.371	0.000	0.000	-0.039	-0.096	0.063	0.043	0.073	0.060	0.000	-0.351
	SEN CL	0.467	6.063	0.000	0.000	0.427	0.035	0.549	1.201	0.621	0.806	0.000	10.168
	LAT CL					1.941			0.647		0.000	0.000	2.588
FEB	HEATNG	-0.010	-0.048	0.000	0.000	-0.004	-0.011	0.008	0.009	0.013	0.011	0.000	-0.031
	SEN CL	0.622	6.899	0.000	0.000	0.685	0.202	0.623	1.124	0.597	0.777	0.000	11.529
	LAT CL					3.443			0.585		0.000	0.000	4.028
MAR	HEATNG	-0.003	-0.009	0.000	0.000	-0.002	-0.003	0.002	0.002	0.003	0.003	0.000	-0.006
	SEN CL	0.878	8.937	0.000	0.000	0.904	0.348	0.753	1.366	0.700	0.942	0.000	14.828
	LAT CL					3.876			0.707		0.000	0.000	4.582
APR	HEATNG	-0.002	-0.005	0.000	0.000	0.000	-0.002	0.001	0.002	0.003	0.002	0.000	-0.002
	SEN CL	0.934	9.508	0.000	0.000	0.924	0.345	0.708	1.200	0.633	0.835	0.000	15.086
	LAT CL					3.955			0.616		0.000	0.000	4.572
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.891	8.530	0.000	0.000	0.768	0.218	0.699	1.303	0.708	0.903	0.000	14.019
	LAT CL					4.120			0.677		0.000	0.000	4.797
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.772	6.642	0.000	0.000	0.773	0.246	0.650	1.309	0.747	0.905	0.000	12.044
	LAT CL					4.067			0.676		0.000	0.000	4.743
JUL	HEATNG	-0.001	-0.002	0.000	0.000	0.000	-0.001	0.001	0.001	0.001	0.001	0.000	-0.001
	SEN CL	0.735	7.529	0.000	0.000	0.592	0.080	0.666	1.194	0.675	0.834	0.000	12.304
	LAT CL					3.573			0.617		0.000	0.000	4.190
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.746	7.941	0.000	0.000	0.675	0.171	0.724	1.367	0.704	0.944	0.000	13.273
	LAT CL					3.800			0.707		0.000	0.000	4.507
SEP	HEATNG	-0.002	-0.003	0.000	0.000	0.000	-0.003	0.002	0.000	0.001	0.001	0.000	-0.005
	SEN CL	0.587	7.445	0.000	0.000	0.482	0.022	0.602	1.200	0.694	0.835	0.000	11.867
	LAT CL					3.326			0.616		0.000	0.000	3.942
OCT	HEATNG	-0.008	-0.016	0.000	0.000	0.001	-0.011	0.006	0.004	0.006	0.004	0.000	-0.015
	SEN CL	0.504	7.196	0.000	0.000	0.375	-0.072	0.520	1.241	0.747	0.862	0.000	11.373
	LAT CL					2.995			0.647		0.000	0.000	3.642
NOV	HEATNG	-0.011	-0.033	0.000	0.000	-0.003	-0.013	0.009	0.002	0.006	0.004	0.000	-0.038
	SEN CL	0.514	6.838	0.000	0.000	0.445	0.006	0.514	1.191	0.732	0.827	0.000	11.066
	LAT CL					2.828			0.616		0.000	0.000	3.444
DEC	HEATNG	-0.176	-0.876	0.000	0.000	-0.140	-0.174	0.100	0.065	0.099	0.085	0.000	-1.018
	SEN CL	0.360	5.935	0.000	0.000	0.314	-0.026	0.498	1.138	0.576	0.755	0.000	9.550

	LAT CL				1.310			0.617		0.000	0.000	1.926	
TOT	HEATNG	-0.296	-1.363	0.000	0.000	-0.186	-0.315	0.191	0.128	0.204	0.171	0.000	-1.466
	SEN CL	8.010	89.463	0.000	0.000	7.364	1.574	7.506	14.834	8.133	10.223	0.000	147.107
	LAT CL					39.233			7.730		0.000	0.000	46.963



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Energy Simulation of
Patumthani, Thailand

Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
Daylight, 100 sf/per, Ultimate Condition
WEATHER FILE- 1985 BANGKOK W/SOLAR

REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

S-FL-3

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.034	0.000	0.000	0.000	-0.019	-0.042	0.027	0.005	0.011	0.009	0.000	-0.042
	SEN CL	0.682	0.000	0.000	0.000	0.408	-0.019	0.642	1.239	0.772	0.857	0.000	4.581
	LAT CL					2.221			0.647		0.000	0.000	2.868
FEB	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.809	0.000	0.000	0.000	0.685	0.192	0.690	1.132	0.743	0.788	0.000	5.039
	LAT CL					3.501			0.585		0.000	0.000	4.087
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.997	0.000	0.000	0.000	0.907	0.345	0.828	1.368	0.902	0.945	0.000	6.292
	LAT CL					3.905			0.707		0.000	0.000	4.612
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.967	0.000	0.000	0.000	0.928	0.343	0.737	1.202	0.841	0.836	0.000	5.854
	LAT CL					3.987			0.616		0.000	0.000	4.604
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.805	0.000	0.000	0.000	0.771	0.217	0.711	1.303	0.894	0.903	0.000	5.604
	LAT CL					4.139			0.677		0.000	0.000	4.816
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.701	0.000	0.000	0.000	0.777	0.246	0.636	1.309	0.878	0.905	0.000	5.452
	LAT CL					4.085			0.676		0.000	0.000	4.762
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.629	0.000	0.000	0.000	0.595	0.078	0.669	1.195	0.867	0.835	0.000	4.868
	LAT CL					3.593			0.617		0.000	0.000	4.210
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.713	0.000	0.000	0.000	0.678	0.171	0.747	1.367	0.902	0.944	0.000	5.523
	LAT CL					3.815			0.707		0.000	0.000	4.522
SEP	HEATNG	-0.002	0.000	0.000	0.000	0.000	-0.003	0.002	0.000	0.001	0.001	0.000	-0.001
	SEN CL	0.664	0.000	0.000	0.000	0.484	0.022	0.653	1.200	0.850	0.835	0.000	4.708
	LAT CL					3.339			0.616		0.000	0.000	3.955
OCT	HEATNG	-0.004	0.000	0.000	0.000	0.000	-0.007	0.004	0.000	0.002	0.001	0.000	-0.003
	SEN CL	0.648	0.000	0.000	0.000	0.377	-0.076	0.562	1.244	0.892	0.865	0.000	4.513
	LAT CL					3.036			0.647		0.000	0.000	3.683
NOV	HEATNG	-0.005	0.000	0.000	0.000	-0.003	-0.007	0.006	0.001	0.002	0.001	0.000	-0.005
	SEN CL	0.706	0.000	0.000	0.000	0.446	0.000	0.570	1.192	0.874	0.830	0.000	4.618
	LAT CL					2.875			0.616		0.000	0.000	3.491
DEC	HEATNG	-0.107	0.000	0.000	0.000	-0.106	-0.115	0.064	0.023	0.038	0.030	0.000	-0.174
	SEN CL	0.625	0.000	0.000	0.000	0.281	-0.084	0.587	1.179	0.802	0.810	0.000	4.199

	LAT CL				1.499			0.617		0.000	0.000	2.115	
TOT	HEATNG	-0.152	0.000	0.000	0.000	-0.128	-0.175	0.103	0.030	0.055	0.042	0.000	-0.225
	SEN CL	8.946	0.000	0.000	0.000	7.336	1.436	8.031	14.931	10.217	10.352	0.000	61.250
	LAT CL					39.994			7.730		0.000	0.000	47.723



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Energy Simulation of
Patumthani, Thailand

Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
Daylight, 100 sf/per, Ultimate Condition
WEATHER FILE- 1985 BANGKOK W/SOLAR

REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR CORE-FL-1

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.056	0.000	0.000	0.012	0.013	0.008	0.000	-0.024
	SEN CL	0.000	0.000	0.000	0.000	0.024	0.000	0.000	1.530	1.519	1.036	0.000	4.110
	LAT CL					2.256			0.796		0.000	0.000	3.052
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.216	0.000	0.000	1.403	1.397	0.949	0.000	3.965
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATNG	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.380	0.000	0.000	1.682	1.675	1.138	0.000	4.875
	LAT CL					3.655			0.869		0.000	0.000	4.524
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.439	0.000	0.000	1.488	1.486	1.007	0.000	4.419
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATNG	0.000	0.000	0.000	0.000	-0.006	0.000	0.000	0.001	0.001	0.001	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.311	0.000	0.000	1.608	1.598	1.088	0.000	4.605
	LAT CL					4.028			0.835		0.000	0.000	4.862
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.267	0.000	0.000	1.611	1.605	1.090	0.000	4.573
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.129	0.000	0.000	1.486	1.480	1.005	0.000	4.099
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATNG	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.198	0.000	0.000	1.681	1.674	1.138	0.000	4.692
	LAT CL					3.677			0.869		0.000	0.000	4.546
SEP	HEATNG	0.000	0.000	0.000	0.000	-0.007	0.000	0.000	0.002	0.002	0.001	0.000	-0.001
	SEN CL	0.000	0.000	0.000	0.000	0.084	0.000	0.000	1.484	1.481	1.004	0.000	4.055
	LAT CL					3.389			0.764		0.000	0.000	4.153
OCT	HEATNG	0.000	0.000	0.000	0.000	-0.009	0.000	0.000	0.003	0.003	0.002	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.021	0.000	0.000	1.540	1.530	1.042	0.000	4.134
	LAT CL					3.260			0.800		0.000	0.000	4.060
NOV	HEATNG	0.000	0.000	0.000	0.000	-0.013	0.000	0.000	0.003	0.004	0.002	0.000	-0.004
	SEN CL	0.000	0.000	0.000	0.000	0.075	0.000	0.000	1.476	1.470	0.999	0.000	4.020
	LAT CL					2.996			0.763		0.000	0.000	3.759
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.143	0.000	0.000	0.022	0.025	0.015	0.000	-0.081
	SEN CL	0.000	0.000	0.000	0.000	-0.095	0.000	0.000	1.471	1.466	0.995	0.000	3.837

	LAT CL					1.595			0.759		0.000	0.000	2.354
TOT	HEATNG	0.000	0.000	0.000	0.000	-0.238	0.000	0.000	0.044	0.049	0.030	0.000	-0.114
	SEN CL	0.000	0.000	0.000	0.000	2.048	0.000	0.000	18.461	18.383	12.492	0.000	51.384
	LAT CL					39.394			9.544		0.000	0.000	48.938



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Energy Simulation of
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Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 CORE-FL-2

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.040	0.000	0.000	0.008	0.009	0.006	0.000	-0.017
	SEN CL	0.000	0.000	0.000	0.000	0.017	0.000	0.000	1.088	1.080	0.736	0.000	2.922
	LAT CL					1.604			0.566		0.000	0.000	2.170
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.154	0.000	0.000	0.997	0.994	0.675	0.000	2.820
	LAT CL					2.365			0.515		0.000	0.000	2.880
MAR	HEATNG	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.270	0.000	0.000	1.196	1.191	0.809	0.000	3.467
	LAT CL					2.599			0.618		0.000	0.000	3.217
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.312	0.000	0.000	1.058	1.057	0.716	0.000	3.143
	LAT CL					2.732			0.543		0.000	0.000	3.275
MAY	HEATNG	0.000	0.000	0.000	0.000	-0.004	0.000	0.000	0.001	0.001	0.001	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.221	0.000	0.000	1.143	1.136	0.774	0.000	3.274
	LAT CL					2.864			0.594		0.000	0.000	3.458
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.190	0.000	0.000	1.146	1.141	0.775	0.000	3.252
	LAT CL					2.725			0.592		0.000	0.000	3.317
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.092	0.000	0.000	1.056	1.052	0.715	0.000	2.915
	LAT CL					2.517			0.545		0.000	0.000	3.063
AUG	HEATNG	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.141	0.000	0.000	1.196	1.191	0.809	0.000	3.336
	LAT CL					2.614			0.618		0.000	0.000	3.232
SEP	HEATNG	0.000	0.000	0.000	0.000	-0.005	0.000	0.000	0.001	0.002	0.001	0.000	-0.001
	SEN CL	0.000	0.000	0.000	0.000	0.060	0.000	0.000	1.056	1.053	0.714	0.000	2.883
	LAT CL					2.410			0.543		0.000	0.000	2.953
OCT	HEATNG	0.000	0.000	0.000	0.000	-0.007	0.000	0.000	0.002	0.002	0.001	0.000	-0.001
	SEN CL	0.000	0.000	0.000	0.000	0.015	0.000	0.000	1.095	1.088	0.741	0.000	2.939
	LAT CL					2.318			0.569		0.000	0.000	2.887
NOV	HEATNG	0.000	0.000	0.000	0.000	-0.009	0.000	0.000	0.002	0.003	0.002	0.000	-0.003
	SEN CL	0.000	0.000	0.000	0.000	0.053	0.000	0.000	1.050	1.045	0.710	0.000	2.858
	LAT CL					2.130			0.543		0.000	0.000	2.673
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.102	0.000	0.000	0.016	0.018	0.011	0.000	-0.057
	SEN CL	0.000	0.000	0.000	0.000	-0.068	0.000	0.000	1.046	1.042	0.708	0.000	2.728

	LAT CL					1.134			0.540		0.000	0.000	1.674
TOT	HEATNG	0.000	0.000	0.000	0.000	-0.169	0.000	0.000	0.032	0.035	0.021	0.000	-0.081
	SEN CL	0.000	0.000	0.000	0.000	1.457	0.000	0.000	13.127	13.071	8.882	0.000	36.537
	LAT CL					28.012			6.787		0.000	0.000	34.799



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Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 CORE-FL-3

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.002	0.000	0.000	0.000	-0.001	-0.005	0.007	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.175	0.000	0.000	0.000	-0.013	-0.499	5.102	0.672	0.667	0.455	0.000	6.559
	LAT CL					1.072			0.349		0.000	0.000	1.421
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.221	0.000	0.000	0.000	0.094	-0.113	4.345	0.612	0.609	0.414	0.000	6.182
	LAT CL					1.450			0.316		0.000	0.000	1.766
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.279	0.000	0.000	0.000	0.165	0.057	4.049	0.734	0.731	0.496	0.000	6.510
	LAT CL					1.599			0.379		0.000	0.000	1.978
APR	HEATING	-0.001	0.000	0.000	0.000	0.000	-0.002	0.002	0.001	0.001	0.000	0.000	0.000
	SEN CL	0.252	0.000	0.000	0.000	0.192	0.086	3.141	0.648	0.647	0.439	0.000	5.406
	LAT CL					1.671			0.333		0.000	0.000	2.004
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.187	0.000	0.000	0.000	0.133	-0.072	3.046	0.701	0.697	0.475	0.000	5.168
	LAT CL					1.777			0.364		0.000	0.000	2.141
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.137	0.000	0.000	0.000	0.116	-0.043	2.751	0.702	0.700	0.475	0.000	4.839
	LAT CL					1.670			0.363		0.000	0.000	2.033
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.111	0.000	0.000	0.000	0.056	-0.268	2.899	0.648	0.645	0.438	0.000	4.529
	LAT CL					1.543			0.334		0.000	0.000	1.878
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.145	0.000	0.000	0.000	0.086	-0.147	3.262	0.733	0.730	0.496	0.000	5.305
	LAT CL					1.608			0.379		0.000	0.000	1.987
SEP	HEATING	-0.001	0.000	0.000	0.000	-0.001	-0.005	0.005	0.000	0.000	0.000	0.000	-0.001
	SEN CL	0.132	0.000	0.000	0.000	0.035	-0.309	3.009	0.648	0.646	0.438	0.000	4.599
	LAT CL					1.494			0.333		0.000	0.000	1.827
OCT	HEATING	-0.006	0.000	0.000	0.000	-0.003	-0.019	0.019	0.001	0.001	0.001	0.000	-0.005
	SEN CL	0.145	0.000	0.000	0.000	0.008	-0.429	3.243	0.671	0.667	0.454	0.000	4.760
	LAT CL					1.416			0.349		0.000	0.000	1.764
NOV	HEATING	0.000	0.000	0.000	0.000	0.000	-0.001	0.001	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.199	0.000	0.000	0.000	0.027	-0.360	4.121	0.645	0.642	0.436	0.000	5.711
	LAT CL					1.328			0.333		0.000	0.000	1.661
DEC	HEATING	-0.018	0.000	0.000	0.000	-0.020	-0.055	0.069	0.003	0.003	0.002	0.000	-0.016
	SEN CL	0.142	0.000	0.000	0.000	-0.084	-0.677	5.358	0.648	0.647	0.438	0.000	6.472

	LAT CL					0.747		0.333		0.000	0.000	1.080	
TOT	HEATNG	-0.028	0.000	0.000	0.000	-0.026	-0.088	0.103	0.006	0.007	0.004	0.000	-0.023
	SEN CL	2.126	0.000	0.000	0.000	0.816	-2.774	44.327	8.061	8.028	5.455	0.000	66.039
	LAT CL					17.374			4.166		0.000	0.000	21.539



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 (DOE PLUS WITH DOE 2.1 D)
 CORE-FL-B

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	0.000	0.000	0.000	0.000	-0.056	0.000	0.000	0.012	0.013	0.008	0.000	-0.024
	SEN CL	0.000	0.000	0.000	0.000	0.024	0.000	0.000	1.530	1.519	1.036	0.000	4.110
	LAT CL					2.256			0.796		0.000	0.000	3.052
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.216	0.000	0.000	1.403	1.397	0.949	0.000	3.965
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATING	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.390	0.000	0.000	1.682	1.675	1.138	0.000	4.875
	LAT CL					3.655			0.869		0.000	0.000	4.524
APR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.439	0.000	0.000	1.488	1.486	1.007	0.000	4.419
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATING	0.000	0.000	0.000	0.000	-0.006	0.000	0.000	0.001	0.001	0.001	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.311	0.000	0.000	1.608	1.598	1.088	0.000	4.605
	LAT CL					4.028			0.835		0.000	0.000	4.862
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.267	0.000	0.000	1.611	1.605	1.090	0.000	4.573
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.129	0.000	0.000	1.486	1.480	1.005	0.000	4.099
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATING	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.198	0.000	0.000	1.681	1.674	1.138	0.000	4.692
	LAT CL					3.677			0.869		0.000	0.000	4.546
SEP	HEATING	0.000	0.000	0.000	0.000	-0.007	0.000	0.000	0.002	0.002	0.001	0.000	-0.001
	SEN CL	0.000	0.000	0.000	0.000	0.084	0.000	0.000	1.484	1.481	1.004	0.000	4.055
	LAT CL					3.389			0.764		0.000	0.000	4.153
OCT	HEATING	0.000	0.000	0.000	0.000	-0.009	0.000	0.000	0.003	0.003	0.002	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.021	0.000	0.000	1.540	1.530	1.042	0.000	4.134
	LAT CL					3.260			0.800		0.000	0.000	4.060
NOV	HEATING	0.000	0.000	0.000	0.000	-0.013	0.000	0.000	0.003	0.004	0.002	0.000	-0.004
	SEN CL	0.000	0.000	0.000	0.000	0.075	0.000	0.000	1.476	1.470	0.999	0.000	4.020
	LAT CL					2.996			0.763		0.000	0.000	3.759
DEC	HEATING	0.000	0.000	0.000	0.000	-0.143	0.000	0.000	0.022	0.025	0.015	0.000	-0.081
	SEN CL	0.000	0.000	0.000	0.000	-0.095	0.000	0.000	1.471	1.466	0.995	0.000	3.837

	LAT CL					1.595			0.759		0.000	0.000	2.354
TOT	HEATNG	0.000	0.000	0.000	0.000	-0.238	0.000	0.000	0.044	0.049	0.030	0.000	-0.114
	SEN CL	0.000	0.000	0.000	0.000	2.048	0.000	0.000	18.461	18.383	12.492	0.000	51.384
	LAT CL					39.394			9.544		0.000	0.000	48.938



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 (DOE PLUS WITH DOE 2.1 D)
 N-FL-4

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-1.075	-0.113	0.000	0.000	-0.360	0.000	0.000	0.230	0.285	0.155	0.000	-0.878
	SEN CL	2.174	-0.135	0.000	0.000	0.303	0.000	0.000	3.295	3.218	2.230	0.000	11.086
	LAT CL					4.219			1.777		0.000	0.000	5.996
FEB	HEATNG	-0.174	-0.003	0.000	0.000	-0.050	0.000	0.000	0.051	0.066	0.035	0.000	-0.075
	SEN CL	2.455	0.616	0.000	0.000	0.598	0.000	0.000	3.155	3.128	2.135	0.000	12.087
	LAT CL					7.704			1.647		0.000	0.000	9.351
MAR	HEATNG	-0.090	0.012	0.000	0.000	-0.033	0.000	0.000	0.022	0.028	0.015	0.000	-0.046
	SEN CL	3.391	1.233	0.000	0.000	0.974	0.000	0.000	3.824	3.803	2.587	0.000	15.813
	LAT CL					8.784			1.982		0.000	0.000	10.766
APR	HEATNG	-0.115	0.003	0.000	0.000	-0.026	0.000	0.000	0.029	0.037	0.019	0.000	-0.054
	SEN CL	3.442	1.377	0.000	0.000	1.109	0.000	0.000	3.372	3.360	2.282	0.000	14.942
	LAT CL					8.996			1.742		0.000	0.000	10.737
MAY	HEATNG	-0.128	0.026	0.000	0.000	-0.033	0.000	0.000	0.023	0.026	0.015	0.000	-0.071
	SEN CL	2.727	1.010	0.000	0.000	0.787	0.000	0.000	3.655	3.630	2.473	0.000	14.282
	LAT CL					9.301			1.901		0.000	0.000	11.202
JUN	HEATNG	-0.047	0.008	0.000	0.000	-0.008	0.000	0.000	0.010	0.012	0.007	0.000	-0.019
	SEN CL	2.027	0.772	0.000	0.000	0.675	0.000	0.000	3.673	3.657	2.485	0.000	13.290
	LAT CL					9.136			1.900		0.000	0.000	11.036
JUL	HEATNG	-0.223	0.008	0.000	0.000	-0.050	0.000	0.000	0.059	0.076	0.040	0.000	-0.091
	SEN CL	1.824	0.463	0.000	0.000	0.376	0.000	0.000	3.336	3.307	2.257	0.000	11.564
	LAT CL					7.798			1.742		0.000	0.000	9.541
AUG	HEATNG	-0.135	0.023	0.000	0.000	-0.032	0.000	0.000	0.025	0.030	0.017	0.000	-0.071
	SEN CL	2.061	0.750	0.000	0.000	0.525	0.000	0.000	3.819	3.798	2.584	0.000	13.537
	LAT CL					8.391			1.980		0.000	0.000	10.371
SEP	HEATNG	-0.257	0.003	0.000	0.000	-0.074	0.000	0.000	0.053	0.062	0.036	0.000	-0.177
	SEN CL	1.736	0.402	0.000	0.000	0.271	0.000	0.000	3.345	3.329	2.263	0.000	11.346
	LAT CL					7.263			1.730		0.000	0.000	8.993
OCT	HEATNG	-0.510	-0.041	0.000	0.000	-0.116	0.000	0.000	0.113	0.140	0.077	0.000	-0.336
	SEN CL	1.740	0.175	0.000	0.000	0.147	0.000	0.000	3.413	3.365	2.310	0.000	11.149
	LAT CL					6.246			1.804		0.000	0.000	8.051
NOV	HEATNG	-0.461	-0.011	0.000	0.000	-0.127	0.000	0.000	0.098	0.119	0.066	0.000	-0.315
	SEN CL	2.091	0.212	0.000	0.000	0.281	0.000	0.000	3.283	3.248	2.222	0.000	11.338
	LAT CL					5.902			1.722		0.000	0.000	7.624
DEC	HEATNG	-1.713	-0.518	0.000	0.000	-0.728	0.000	0.000	0.326	0.407	0.221	0.000	-2.006
	SEN CL	1.914	-0.376	0.000	0.000	0.169	0.000	0.000	3.087	3.002	2.089	0.000	9.883

	LAT CL				2.808			1.679		0.000	0.000	4.487	
TOT	HEATNG	-4.928	-0.603	0.000	0.000	-1.637	0.000	0.000	1.040	1.286	0.704	0.000	-4.138
	SEN CL	27.581	6.499	0.000	0.000	6.216	0.000	0.000	41.258	40.844	27.917	0.000	150.316
	LAT CL					86.550			21.605		0.000	0.000	108.155



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-6.171	-5.862	0.000	0.035	-4.296	-1.873	3.022	1.520	2.301	1.569	0.000	-9.756
	SEN CL	16.790	148.319	0.000	0.249	5.145	-5.533	62.188	87.722	73.905	60.796	0.000	449.581
	LAT CL					137.505			46.117		0.000	0.000	183.622
FEB	HEATNG	-0.532	-0.516	0.000	0.002	-0.267	-0.178	0.257	0.214	0.298	0.215	0.000	-0.508
	SEN CL	25.949	194.369	0.000	0.255	17.623	-0.196	65.479	81.009	69.009	56.513	0.000	510.010
	LAT CL					217.754			41.944		0.000	0.000	259.698
MAR	HEATNG	-0.206	0.003	0.000	0.003	-0.151	-0.016	0.031	0.076	0.089	0.053	0.000	-0.117
	SEN CL	37.467	268.655	0.000	0.281	28.447	2.971	73.601	97.651	82.685	67.991	0.000	659.750
	LAT CL					242.381			50.472		0.000	0.000	292.853
APR	HEATNG	-0.493	-0.539	0.000	0.003	-0.208	-0.123	0.132	0.202	0.272	0.166	0.000	-0.587
	SEN CL	38.745	286.228	0.000	0.272	32.078	3.559	67.694	85.947	74.237	60.008	0.000	648.768
	LAT CL					249.202			44.206		0.000	0.000	293.408
MAY	HEATNG	-0.411	-0.027	0.000	0.008	-0.309	-0.019	0.035	0.152	0.176	0.107	0.000	-0.290
	SEN CL	29.648	250.259	0.000	0.276	23.147	0.672	65.141	93.119	79.667	64.961	0.000	606.890
	LAT CL					260.093			48.390		0.000	0.000	308.483
JUN	HEATNG	-0.077	0.008	0.000	0.001	-0.029	0.000	0.000	0.026	0.029	0.017	0.000	-0.025
	SEN CL	22.976	184.126	0.000	0.274	20.805	1.146	57.581	93.524	79.632	65.144	0.000	525.207
	LAT CL					253.951			48.326		0.000	0.000	302.277
JUL	HEATNG	-0.618	-0.287	0.000	0.005	-0.237	-0.089	0.108	0.237	0.321	0.198	0.000	-0.362
	SEN CL	18.440	199.899	0.000	0.279	11.526	-2.816	61.819	85.624	74.005	59.876	0.000	508.651
	LAT CL					225.982			44.297		0.000	0.000	270.279
AUG	HEATNG	-0.425	-0.051	0.000	0.007	-0.210	-0.025	0.052	0.130	0.162	0.098	0.000	-0.262
	SEN CL	22.526	225.611	0.000	0.277	16.124	-0.676	68.177	97.552	82.609	67.918	0.000	580.118
	LAT CL					237.635			50.449		0.000	0.000	288.084
SEP	HEATNG	-0.901	-0.340	0.000	0.013	-0.580	-0.124	0.222	0.250	0.302	0.188	0.000	-0.971
	SEN CL	17.916	199.297	0.000	0.262	8.087	-3.745	57.459	85.802	74.105	59.924	0.000	499.107
	LAT CL					212.001			44.136		0.000	0.000	256.137
OCT	HEATNG	-2.158	-1.383	0.000	0.019	-1.062	-0.500	0.675	0.585	0.826	0.532	0.000	-2.466
	SEN CL	15.445	186.972	0.000	0.265	3.837	-5.838	50.988	88.708	76.631	61.865	0.000	478.874
	LAT CL					193.031			46.248		0.000	0.000	239.278
NOV	HEATNG	-1.950	-1.081	0.000	0.018	-1.166	-0.420	0.671	0.535	0.786	0.516	0.000	-2.092
	SEN CL	18.526	181.756	0.000	0.257	7.363	-4.440	54.893	85.065	73.601	59.307	0.000	476.326
	LAT CL					181.532			44.108		0.000	0.000	225.640
DEC	HEATNG	-13.988	-25.763	0.000	0.060	-13.206	-4.610	7.149	3.541	5.031	3.610	0.000	-38.177
	SEN CL	14.131	130.826	0.000	0.224	0.436	-6.936	58.990	82.810	69.434	56.777	0.000	406.692

	LAT CL				92.918			43.524		0.000	0.000	136.442	
	HEATNG	-27.930	-35.838	0.000	0.174	-21.722	-7.979	12.354	7.467	10.593	7.269	0.000	-55.612
TOT	SEN CL	278.559	2456.313	0.000	3.171	174.618	-21.834	744.014	1064.490	909.518	741.135	0.000	6349.982
	LAT CL					2503.966			552.256		0.000	0.000	3056.222



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-1

MONTH	HOUR OF DAY																								ALL HOURS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
JAN	0	0	0	0	0	0	3	67	69	70	70	70	70	70	69	68	45	0	0	0	0	0	0	0	63
FEB	0	0	0	0	0	0	2	64	70	70	70	70	70	70	70	70	61	0	0	0	0	0	0	0	64
MAR	0	0	0	0	0	0	11	69	70	70	70	70	68	68	70	70	58	0	0	0	0	0	0	0	64
APR	0	0	0	0	0	0	39	63	66	67	68	70	70	70	66	68	70	61	0	0	0	0	0	0	61
MAY	0	0	0	0	0	0	52	60	65	66	70	69	70	70	70	69	64	56	3	0	0	0	0	0	62
JUN	0	0	0	0	0	0	36	66	70	70	70	70	70	70	70	62	43	7	0	0	0	0	0	0	62
JUL	0	0	0	0	0	0	34	63	66	67	67	70	70	70	70	67	65	53	10	0	0	0	0	0	61
AUG	0	0	0	0	0	0	31	69	70	70	70	70	70	70	70	69	69	49	3	0	0	0	0	0	62
SEP	0	0	0	0	0	0	26	63	70	70	70	70	70	70	70	68	60	36	0	0	0	0	0	0	60
OCT	0	0	0	0	0	0	25	68	68	69	70	70	70	70	68	64	60	21	0	0	0	0	0	0	60
NOV	0	0	0	0	0	0	19	66	69	67	67	67	70	70	70	68	61	12	0	0	0	0	0	0	61
DEC	0	0	0	0	0	0	1	69	70	70	70	70	70	70	70	70	70	26	0	0	0	0	0	0	63
ANNUAL	0	0	0	0	0	0	31	66	69	69	69	70	70	70	69	69	66	43	1	0	0	0	0	0	62

NOTE- THE ENTRIES IN THIS REPORT ARE NOT
 SUBJECT TO THE DAYLIGHTING REPORT SCHEDULE

สถาบันวิทยบริการ
 จุฬาลงกรณ์มหาวิทยาลัย

Energy Simulation of
 Patumthani, Thailand
 REPORT- LS-I PERCENT LIGHTING ENERGY REDUCTION BY DAYLIGHT

Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)

DOE-2.1D 7/30/1996 17:23: 4 LDL RUN 1
 Daylight, 100 sf/per, Ultimate Condition
 WEATHER FILE- 1985 BANGKOK W/SOLAR

*** BUILDING ***

MONTH	HOUR OF DAY																								ALL HOURS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
JAN	0	0	0	0	0	0	1	17	21	22	23	25	24	25	24	24	23	20	0	0	0	0	0	0	21
FEB	0	0	0	0	0	0	1	15	21	22	23	25	25	25	25	24	24	24	0	0	0	0	0	0	21
MAR	0	0	0	0	0	0	3	17	21	23	24	25	25	24	24	24	24	23	0	0	0	0	0	0	21
APR	0	0	0	0	0	0	8	16	20	22	24	25	25	25	24	25	27	21	0	0	0	0	0	0	20
MAY	0	0	0	0	0	0	12	16	20	21	24	24	25	26	25	24	25	19	1	0	0	0	0	0	21
JUN	0	0	0	0	0	0	8	18	23	24	26	27	26	25	25	24	22	14	2	0	0	0	0	0	21
JUL	0	0	0	0	0	0	7	16	20	22	24	26	26	25	24	23	24	18	4	0	0	0	0	0	20
AUG	0	0	0	0	0	0	7	18	22	24	26	26	27	26	25	25	27	16	1	0	0	0	0	0	21
SEP	0	0	0	0	0	0	6	17	22	24	25	25	25	26	24	23	22	12	0	0	0	0	0	0	20
OCT	0	0	0	0	0	0	5	19	21	23	25	25	25	24	23	21	21	7	0	0	0	0	0	0	20
NOV	0	0	0	0	0	0	4	18	21	21	22	23	24	24	24	22	20	5	0	0	0	0	0	0	20
DEC	0	0	0	0	0	0	0	19	21	22	22	24	24	25	24	24	24	11	0	0	0	0	0	0	20
ANNUAL	0	0	0	0	0	0	7	17	21	23	24	25	25	25	24	24	23	16	1	0	0	0	0	0	20

NOTE- THE ENTRIES IN THIS REPORT ARE NOT
 SUBJECT TO THE DAYLIGHTING REPORT SCHEDULE

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	QUICK WL LOAD BTU/HR	QUICK RF LOAD BTU/HR	GLS COND LOAD BTU/HR	DELAY WL LOAD BTU/HR	DELAY RF LOAD BTU/HR	UG FLOOR LOAD BTU/HR	UG WALL LOAD BTU/HR	ELEC-EQP SENS LD BTU/HR
	----(16)	----(17)	----(18)	----(19)	----(20)	----(22)	----(23)	----(25)
5 4 1	0.00	0.00	-364.57	1143.59	76367.55	0.00	0.00	4009.29
5 4 2	0.00	0.00	-775.05	779.43	68109.30	0.00	0.00	3707.44
5 4 3	0.00	0.00	-611.34	593.74	60975.70	0.00	0.00	3432.75
5 4 4	0.00	0.00	-608.34	535.10	54606.56	0.00	0.00	3182.79
5 4 5	0.00	0.00	-1970.39	75.05	47512.18	0.00	0.00	2955.32
5 4 6	0.00	0.00	-2516.50	-610.07	39909.52	0.00	0.00	6735.63
5 4 7	0.00	0.00	-2748.31	567.49	33992.44	0.00	0.00	22225.42
5 4 8	0.00	0.00	-624.26	5109.48	36135.99	0.00	0.00	25094.56
5 4 9	0.00	0.00	893.64	8469.96	47451.46	0.00	0.00	25785.24
5 410	0.00	0.00	2633.70	8598.10	61284.95	0.00	0.00	26413.75
5 411	0.00	0.00	4367.18	9113.64	82522.31	0.00	0.00	15909.87
5 412	0.00	0.00	5505.68	9715.02	109570.72	0.00	0.00	27028.40
5 413	0.00	0.00	7056.73	9552.18	135507.06	0.00	0.00	27545.03
5 414	0.00	0.00	7577.83	9719.27	158259.84	0.00	0.00	28015.16
5 415	0.00	0.00	7051.59	10582.66	180307.38	0.00	0.00	28442.98
5 416	0.00	0.00	7790.88	10545.33	193572.22	0.00	0.00	22186.80
5 417	0.00	0.00	6477.30	9514.22	191052.00	0.00	0.00	13393.76
5 418	0.00	0.00	4474.46	8159.21	184277.63	0.00	0.00	10857.91
5 419	0.00	0.00	4223.72	6266.28	170720.95	0.00	0.00	8255.37
5 420	0.00	0.00	2118.90	4445.95	153913.36	0.00	0.00	6035.17
5 421	0.00	0.00	2897.89	3580.50	139001.89	0.00	0.00	5550.99
5 422	0.00	0.00	2561.58	3423.83	126072.04	0.00	0.00	5110.38
5 423	0.00	0.00	2002.02	3054.48	113338.01	0.00	0.00	4709.43
5 424	0.00	0.00	1760.45	2674.70	101895.91	0.00	0.00	4344.57
DAILY SUMMARY (MAY 4)								
MN	0.00	0.00	-2748.31	-610.07	33992.44	0.00	0.00	2955.32
MX	0.00	0.00	7790.88	10582.66	193572.22	0.00	0.00	28442.98
SM	0.00	0.00	59174.80	125609.11	2566357.25	0.00	0.00	330928.00
AV	0.00	0.00	2465.62	5233.71	106931.55	0.00	0.00	13788.67
MONTHLY SUMMARY (MAY)								
MN	0.00	0.00	-2748.31	-610.07	33992.44	0.00	0.00	2955.32
MX	0.00	0.00	7790.88	10582.66	193572.22	0.00	0.00	28442.98
SM	0.00	0.00	59174.80	125609.11	2566357.25	0.00	0.00	330928.00
AV	0.00	0.00	2465.62	5233.71	106931.55	0.00	0.00	13788.67
YEARLY SUMMARY								
MN	0.00	0.00	-2748.31	-610.07	33992.44	0.00	0.00	2955.32
MX	0.00	0.00	7790.88	10582.66	193572.22	0.00	0.00	28442.98
SM	0.00	0.00	59174.80	125609.11	2566357.25	0.00	0.00	330928.00
AV	0.00	0.00	2465.62	5233.71	106931.55	0.00	0.00	13788.67

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SOURCE SENS LD BTU/HR	PEOPLE SENS LD BTU/HR	PEOPLE LAT GN BTU/HR	ELEC-EQP LAT GN BTU/HR	SOURCE LAT GN BTU/HR	INFILTRN LATENT BTU/HR	GLS SOL LOAD BTU/HR	LIGHT GAIN BTU/HR
	----(26)	----(27)	----(28)	----(29)	----(30)	----(31)	----(33)	----(35)
5 4 1	0.00	5560.91	0.00	0.00	0.00	47984.39	26831.57	1087.92
5 4 2	0.00	5060.42	0.00	0.00	0.00	44260.49	24416.73	1087.92
5 4 3	0.00	4604.99	0.00	0.00	0.00	47984.39	22219.22	1087.92
5 4 4	0.00	4190.54	0.00	0.00	0.00	55593.59	20219.49	1087.92
5 4 5	0.00	3813.39	0.00	0.00	0.00	42205.00	18399.74	1087.92
5 4 6	0.00	3470.18	0.00	0.00	0.00	43660.77	16743.76	10879.22
5 4 7	0.00	3157.87	0.00	0.00	0.00	38191.95	23391.55	19892.63
5 4 8	0.00	35611.13	25020.61	0.00	0.00	20758.05	37017.30	16318.83
5 4 9	0.00	36764.66	25020.61	0.00	0.00	23263.83	40432.66	16318.83
5 410	0.00	37814.38	25020.61	0.00	0.00	26132.34	48519.23	16318.83
5 411	0.00	32222.13	20016.49	0.00	0.00	26451.85	58088.15	8159.41
5 412	0.00	19713.98	10008.24	0.00	0.00	24870.52	60463.45	16318.83
5 413	0.00	32778.13	20016.49	0.00	0.00	28866.47	65404.73	16318.83
5 414	0.00	39862.42	25020.61	0.00	0.00	25105.21	65165.49	16318.83
5 415	0.00	40633.34	25020.61	0.00	0.00	21302.76	67348.83	16318.83
5 416	0.00	41334.88	25020.61	0.00	0.00	36247.08	64854.37	11423.18
5 417	0.00	41973.28	25020.61	0.00	0.00	62079.48	61427.19	4895.65
5 418	0.00	26185.49	12510.30	0.00	0.00	51189.95	55332.98	3263.77
5 419	0.00	11276.20	1251.03	0.00	0.00	58794.84	49098.77	4876.68
5 420	0.00	10479.27	1251.03	0.00	0.00	44486.14	44264.20	1087.92
5 421	0.00	8117.19	0.00	0.00	0.00	61748.18	40280.43	1087.92
5 422	0.00	7386.65	0.00	0.00	0.00	70229.01	36655.19	1087.92
5 423	0.00	6721.85	0.00	0.00	0.00	56102.36	33356.22	1087.92
5 424	0.00	6116.88	0.00	0.00	0.00	70614.85	30354.16	1087.92
DAILY SUMMARY (MAY 4)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	16743.76	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	67348.83	19892.63
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1010285.44	188501.58
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	42095.23	7854.23
MONTHLY SUMMARY (MAY)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	16743.76	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	67348.83	19892.63
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1010285.44	188501.58
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	42095.23	7854.23
YEARLY SUMMARY								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	16743.76	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	67348.83	19892.63
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1010285.44	188501.58
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	42095.23	7854.23

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	LIGHT LOAD BTU/HR	INFILTRN SENS GN BTU/HR	ELECTRIC LOAD BTU/HR	INFILTRN FLOWRT CUFT/MIN	SUM LOAD BTU/HR	SPACE CONDUCT BTU/HR-F	SPACE SENS LD BTU/HR	SPACE LAT LD BTU/HR
	----(36)	----(37)	----(38)	----(39)	----(40)	----(41)	----(42)	----(43)
5 4 1	3794.37	2979.76	1743.30	951.13	117342.70	8564.55	120322.45	0.00
5 4 2	3550.79	2748.51	1743.30	877.31	104849.05	8463.74	107597.56	0.00
5 4 3	3329.13	2979.76	1743.30	951.13	94544.20	8564.55	97523.96	0.00
5 4 4	3127.42	2449.00	1743.30	1172.57	85253.56	8765.11	87702.56	0.00
5 4 5	2943.87	993.25	1743.30	951.13	73729.15	8564.55	74722.40	0.00
5 4 6	7966.22	0.00	17432.96	951.13	71698.74	8564.55	71698.74	0.00
5 4 7	13005.50	-1151.29	49384.49	1098.76	93591.95	8710.55	92440.66	0.00
5 4 8	11731.23	1726.94	49087.55	549.38	150075.44	8710.55	151802.38	25020.61
5 4 9	12144.11	3453.88	49087.55	549.38	171941.72	8710.55	175395.59	25020.61
5 410	12519.83	6152.04	49087.55	733.91	197783.94	8914.64	203935.97	25020.61
5 411	8537.25	8459.05	24543.78	733.91	210760.53	8914.64	219219.58	20016.49
5 412	12827.74	9997.06	49087.55	733.91	244825.00	8914.64	254822.06	10008.24
5 413	13141.94	12652.47	49087.55	807.73	290985.78	8964.32	303638.25	20016.49
5 414	13427.86	12262.65	49087.55	733.91	322027.88	8914.64	334290.53	25020.61
5 415	13688.04	9179.34	49087.55	549.38	348054.81	8710.55	357234.16	25020.61
5 416	11330.12	12652.47	34361.29	807.73	351614.63	8964.32	364267.09	25020.61
5 417	7878.90	17922.65	14726.27	1320.20	331716.66	8850.65	349639.31	25020.61
5 418	6745.51	11474.17	9817.51	1098.76	296033.19	8710.55	307507.38	12510.30
5 419	7287.00	12262.65	8153.56	1467.82	257128.30	8914.64	269390.94	1251.03
5 420	5062.03	5959.51	1743.30	951.13	226318.89	8564.55	232278.41	1251.03
5 421	4704.36	8271.99	1743.30	1320.20	204133.23	8850.65	212405.23	0.00
5 422	4378.88	7664.15	1743.30	1467.82	185588.55	8914.64	193252.70	0.00
5 423	4082.70	6122.50	1743.30	1172.57	167264.70	8765.11	173387.20	0.00
5 424	3813.17	5514.66	1743.30	1320.20	150959.84	8850.65	156474.50	0.00
DAILY SUMMARY (MAY 4)								
MN	2943.87	-1151.29	1743.30	549.38	71698.74	8463.74	71698.74	0.00
MX	13688.04	17922.65	49384.49	1467.82	351614.63	8964.32	364267.09	25020.61
SM	191017.98	162727.17	519465.66	23271.08	4748222.50	210337.92	4910949.00	240197.84
AV	7959.08	6780.30	21644.40	969.63	197842.61	8764.08	204622.88	10008.24
MONTHLY SUMMARY (MAY)								
MN	2943.87	-1151.29	1743.30	549.38	71698.74	8463.74	71698.74	0.00
MX	13688.04	17922.65	49384.49	1467.82	351614.63	8964.32	364267.09	25020.61
SM	191017.98	162727.17	519465.66	23271.08	4748222.50	210337.92	4910949.00	240197.84
AV	7959.08	6780.30	21644.40	969.63	197842.61	8764.08	204622.88	10008.24
YEARLY SUMMARY								
MN	2943.87	-1151.29	1743.30	549.38	71698.74	8463.74	71698.74	0.00
MX	13688.04	17922.65	49384.49	1467.82	351614.63	8964.32	364267.09	25020.61
SM	191017.98	162727.17	519465.66	23271.08	4748222.50	210337.92	4910949.00	240197.84
AV	7959.08	6780.30	21644.40	969.63	197842.61	8764.08	204622.88	10008.24

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SPACE LOAD TOT BTU/HR	SPACE LT ELEC BTU/HR	SPACE EQ ELEC BTU/HR	DAYL ILL REF PT 1 FOOTCAND LES	DAYL ILL REF PT 2 FOOTCAND LES	LTPW MUL REF PT 1	LTPW MUL REF PT 2	LTPW MUL TOTAL
	----(44)	----(45)	----(46)	----(49)	----(50)	----(55)	----(56)	----(57)
5 4 1	120322.45	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 2	107597.56	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 3	97523.96	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 4	87702.56	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 5	74722.40	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 6	71698.74	10879.22	6553.75	0.0	0.0	1.00	1.00	1.00
5 4 7	92440.66	19892.63	29491.86	34.2	124.4	0.43	0.30	0.41
5 4 8	176822.98	16318.83	32768.73	161.2	675.9	0.30	0.30	0.30
5 4 9	200416.20	16318.83	32768.73	150.0	299.1	0.30	0.30	0.30
5 410	228956.58	16318.83	32768.73	194.4	321.8	0.30	0.30	0.30
5 411	239236.08	8159.41	16384.36	230.0	327.5	0.30	0.30	0.30
5 412	264830.31	16318.83	32768.73	227.4	361.1	0.30	0.30	0.30
5 413	323654.75	16318.83	32768.73	226.4	338.6	0.30	0.30	0.30
5 414	359311.13	16318.83	32768.73	185.7	305.3	0.30	0.30	0.30
5 415	382254.75	16318.83	32768.73	188.4	309.2	0.30	0.30	0.30
5 416	389287.72	11423.18	22938.11	138.3	231.8	0.30	0.30	0.30
5 417	374659.91	4895.65	9830.62	112.6	198.3	0.30	0.30	0.30
5 418	320017.66	3263.77	6553.75	57.5	105.5	0.30	0.30	0.30
5 419	270641.97	4876.68	3276.87	11.0	21.3	0.91	0.82	0.90
5 420	233529.44	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 421	212405.23	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 422	193252.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 423	173387.20	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 424	156474.50	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
DAILY SUMMARY (MAY 4)								
MN	71698.74	1087.92	655.37	0.0	0.0	0.30	0.30	0.30
MX	389287.72	19892.63	32768.73	230.0	675.9	1.00	1.00	1.00
SM	5151147.00	188501.58	330964.13	1916.9	3619.9	15.63	15.42	15.60
AV	214631.13	7854.23	13790.17	79.9	150.8	0.65	0.64	0.65
MONTHLY SUMMARY (MAY)								
MN	71698.74	1087.92	655.37	0.0	0.0	0.30	0.30	0.30
MX	389287.72	19892.63	32768.73	230.0	675.9	1.00	1.00	1.00
SM	5151147.00	188501.58	330964.13	1916.9	3619.9	15.63	15.42	15.60
AV	214631.13	7854.23	13790.17	79.9	150.8	0.65	0.64	0.65
YEARLY SUMMARY								
MN	71698.74	1087.92	655.37	0.0	0.0	0.30	0.30	0.30
MX	389287.72	19892.63	32768.73	230.0	675.9	1.00	1.00	1.00
SM	5151147.00	188501.58	330964.13	1916.9	3619.9	15.63	15.42	15.60
AV	214631.13	7854.23	13790.17	79.9	150.8	0.65	0.64	0.65

SYSTEM NAME	ALTITUDE MULTIPLIER												
ACSYSTEM	1.000												
SUPPLY FAN (CFM)	ELEC (KW)	DELTA-T (F)	RETURN FAN (CFM)	ELEC (KW)	DELTA-T (F)	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)		
126890.	138.310	3.4	0.	0.000	0.0	0.170	5566.769	0.656	0.000	0.00	0.00		
ZONE NAME	SUPPLY FLOW	EXHAUST FLOW	FAN (KW)	MINIMUM FLOW RATIO	OUTSIDE AIR FLOW	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	MULTIPLIER		
CORE-FL-1	860.	0.	0.000	0.419	360.	0.00	0.00	17.65	0.00	-23.33	1.0		
CORE-FL-2	610.	0.	0.000	0.426	260.	0.00	0.00	12.52	0.00	-16.85	1.0		
CORE-FL-3	1080.	0.	0.000	0.148	160.	0.00	0.00	22.16	0.00	-10.37	1.0		
CORE-FL-B	860.	0.	0.000	0.419	360.	0.00	0.00	17.65	0.00	-23.33	1.0		
N-FL-1	24570.	0.	0.000	0.100	2460.	0.00	0.00	504.18	0.00	-159.41	1.0		
N-FL-2	7160.	0.	0.000	0.071	510.	0.00	0.00	146.92	0.00	-33.05	1.0		
N-FL-3	3680.	0.	0.000	0.087	320.	0.00	0.00	75.51	0.00	-20.74	1.0		
N-FL-4	2970.	0.	0.000	0.276	820.	0.00	0.00	60.94	0.00	-53.14	1.0		
N-FL-B	15460.	0.	0.000	0.305	4710.	0.00	0.00	317.24	0.00	-305.21	1.0		
S-FL-1	19400.	0.	0.000	0.127	2460.	0.00	0.00	398.09	0.00	-159.41	1.0		
S-FL-2	1490.	0.	0.000	0.342	510.	0.00	0.00	30.57	0.00	-33.05	1.0		
S-FL-3	1100.	0.	0.000	0.291	320.	0.00	0.00	22.57	0.00	-20.74	1.0		
S-FL-B	13370.	0.	0.000	0.352	4710.	0.00	0.00	274.35	0.00	-305.21	1.0		
W-FL-1	34280.	0.	0.000	0.104	3580.	0.00	0.00	703.43	0.00	-231.98	1.0		

MONTH	C O O L I N G						H E A T I N G						E L E C	
	COOLING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC- TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)		
JAN	742.43799	23 15	92.F	79.F	4330.615	0.000			0.000	72334.	333.441			
FEB	755.16852	28 16	93.F	80.F	4622.607	0.000			0.000	65510.	324.417			
MAR	992.67218	30 15	96.F	81.F	4957.301	0.000			0.000	78811.	342.176			
APR	905.61737	12 15	100.F	80.F	5194.107	0.000			0.000	69254.	347.406			
MAY	927.55310	5 18	96.F	81.F	5122.255	0.000			0.000	75802.	347.406			
JUN	883.23901	19 16	103.F	77.F	4916.541	0.000			0.000	75542.	331.448			
JUL	761.75751	25 15	89.F	80.F	4392.639	0.000			0.000	69433.	347.406			
AUG	925.07855	18 15	93.F	80.F	4549.640	0.000			0.000	78806.	331.448			
SEP	775.41107	11 16	89.F	79.F	4296.970	0.000			0.000	69275.	347.406			
OCT	784.83057	2 16	88.F	79.F	4313.362	0.000			0.000	72836.	336.291			
NOV	761.43237	7 13	91.F	79.F	4188.507	0.000			0.000	69409.	347.406			
DEC	638.65564	6 18	103.F	76.F	4672.829	-0.134	18 8	66.F 61.F	-82.194	68888.	323.443			
TOTAL	9853.854					-0.134				865879.				
MAX					5194.107				-82.194		347.406			

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MONTH	-- FAN ELEC --		-- FUEL HEAT --		-- FUEL COOL --		-ELEC HEAT-		-ELEC COOL-	
	FAN ENERGY (KWH)	MAXIMUM FAN LOAD (KW)	GAS OIL ENERGY (MBTU)	MAXIMUM GAS OIL LOAD (KBTU/HR)	GAS OIL ENERGY (MBTU)	MAXIMUM GAS OIL LOAD (KBTU/HR)	ELECTRIC ENERGY (KWH)	MAXIMUM ELECTRIC LOAD (KW)	ELECTRIC ENERGY (KWH)	MAXIMUM ELECTRIC LOAD (KW)
JAN	31470.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
FEB	28599.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
MAR	34621.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
APR	30105.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
MAY	33113.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
JUN	33114.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
JUL	30105.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
AUG	34621.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
SEP	30105.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
OCT	31610.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
NOV	30105.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
DEC	29680.	136.841	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
TOTAL	377255.		0.000		0.000		0.		0.	
MAX		136.841		0.000		0.000		0.000		0.000

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MONTH	SENSIBLE COOLING ENERGY (MBTU)	LATENT COOLING ENERGY (MBTU)	MAX TOTAL COOLING ENERGY (KBTU/HR)	SENSIBLE HEAT RATIO AT MAX	TIME OF MAX DY HR	SENSIBLE HEATING ENERGY (MBTU)	LATENT HEATING ENERGY (MBTU)	MAX TOTAL HEATING ENERGY (KBTU/HR)
JAN	532.82172	209.61632	4330.615	0.396	23 15	0.00000	0.00000	0.000
FEB	544.36835	210.80020	4622.607	0.702	28 16	0.00000	0.00000	0.000
MAR	716.61377	276.05847	4957.301	0.707	30 15	0.00000	0.00000	0.000
APR	638.24091	267.37643	5194.107	0.649	12 15	0.00000	0.00000	0.000
MAY	626.50012	301.05295	5122.255	0.682	5 18	0.00000	0.00000	0.000
JUN	589.91821	293.32086	4916.541	0.705	19 16	0.00000	0.00000	0.000
JUL	516.52002	245.23749	4392.639	0.670	25 15	0.00000	0.00000	0.000
AUG	628.66943	296.40909	4549.640	0.682	18 15	0.00000	0.00000	0.000
SEP	518.17383	257.23724	4296.970	0.666	11 16	0.00000	0.00000	0.000
OCT	529.91644	254.91417	4313.362	0.671	2 16	0.00000	0.00000	0.000
NOV	525.30157	236.13078	4188.507	0.674	7 13	0.00000	0.00000	0.000
DEC	480.53265	158.12297	4672.829	0.730	6 18	-0.13414	0.00000	-82.194
TOTAL	6847.578	3006.277				-0.134	0.000	
MAX			5194.107	0.497				-82.194



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EQUIPMENT	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD
	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL
HERM-CENT-CHLR	5.298	1								
COOLING-TWR	1.616	4								
CTANK-STORAGE	*****	1								

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S I T E E N E R G Y													*	14
	2	3	4	5	6	7	8	9	10	11	12	13	*	14
MONTH	TOTAL HEAT LOAD	TOTAL COOLING LOAD	TOTAL ELECTR LOAD	RCVRED ENERGY	WASTED RCVRABL ENERGY	FUEL INPUT COOLING	ELEC INPUT COOLING	FUEL INPUT HEATING	ELEC INPUT HEATING	FUEL INPUT ELECT	TOTAL FUEL INPUT	TOTAL SITE ENERGY	*	TOTAL SOURCE ENERGY
JAN	0.0	819.8	423.1 123.9E	0.0	0.0	0.0	176.2 51.6E	0.0	0.0 0.0E	0.0	0.0	423.1	*	1269.5
FEB	0.0	825.0	384.9 112.7E	0.0	0.0	0.0	161.2 47.2E	0.0	0.0 0.0E	0.0	0.0	384.9	*	1154.8
MAR	0.0	1070.0	456.7 133.7E	0.0	0.0	0.0	187.6 54.9E	0.0	0.0 0.0E	0.0	0.0	456.7	*	1370.1
APR	0.0	980.5	433.6 127.0E	0.0	0.0	0.0	197.1 57.7E	0.0	0.0 0.0E	0.0	0.0	433.6	*	1300.9
MAY	0.0	1004.9	468.3 137.1E	0.0	0.0	0.0	209.4 61.3E	0.0	0.0 0.0E	0.0	0.0	468.3	*	1404.9
JUN	0.0	958.1	464.5 136.0E	0.0	0.0	0.0	206.6 60.5E	0.0	0.0 0.0E	0.0	0.0	464.5	*	1393.6
JUL	0.0	839.1	436.3 127.8E	0.0	0.0	0.0	199.2 58.3E	0.0	0.0 0.0E	0.0	0.0	436.3	*	1308.9
AUG	0.0	1002.4	483.2 141.5E	0.0	0.0	0.0	214.1 62.7E	0.0	0.0 0.0E	0.0	0.0	483.2	*	1449.7
SEP	0.0	850.3	432.2 126.6E	0.0	0.0	0.0	195.6 57.3E	0.0	0.0 0.0E	0.0	0.0	432.2	*	1296.6
OCT	0.0	862.2	450.1 131.8E	0.0	0.0	0.0	201.5 59.0E	0.0	0.0 0.0E	0.0	0.0	450.1	*	1350.6
NOV	0.0	836.3	408.9 119.8E	0.0	0.0	0.0	171.9 50.3E	0.0	0.0 0.0E	0.0	0.0	408.9	*	1226.8
DEC	0.1	716.0	409.8 120.0E	0.0	0.0	0.0	174.6 51.1E	0.0	0.0 0.0E	0.0	0.0	409.8	*	1229.6
	0.1	10764.4	5251.5	0.0	0.0	0.0	2294.9	0.0	0.0	0.0	0.0	5251.5	*	15756.0

1538.0E

672.1E

0.0E

NOTE-- ALL ENTRIES ARE IN MBTU EXCEPT
ENTRIES FOLLOWED BY E ARE IN MWH (THOUSANDS OF KWH)



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HEATING LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD		
-----	-----	-----	-----	-----
LOAD SATISFIED	0.0	0.0		
TOTAL LOAD ON PLANT	0.1			
COOLING LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD		
-----	-----	-----	-----	-----
HERM-CENT-CHLR	5483.0	50.9		
LOAD SATISFIED	5483.0	50.9		
TOTAL LOAD ON PLANT	10764.7			
ELECTRICAL LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD		
-----	-----	-----	-----	-----
ELECTRICITY	5251.5	100.0		
LOAD SATISFIED	5251.5	100.0		
TOTAL LOAD ON PLANT	5251.5			
STORAGE TANK USE	MBTU STORED	MBTU RETURNED	MBTU LOST	MBTU RESIDUAL
-----	-----	-----	-----	-----
CTANK-STORAGE	0.0	0.0	0.00	0.00

TOWER ABOVE DESIGN TEMPERATURE OF 96.F 0 HOURS

SUMMARY OF LOADS MET

TYPE OF LOAD	TOTAL LOAD (MBTU)	LOAD SATISFIED (MBTU)	TOTAL OVERLOAD (MBTU)	PEAK OVERLOAD (MBTU)	HOURS OVERLOADED
HEATING LOADS	0.1	0.0	0.270	0.083	34
COOLING LOADS	10764.7	5483.0	14984.098	33.152	5644
ELECTRICAL LOADS	5251.5	5251.5	0.000	0.000	0

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TOTAL HOURS AT HOURLY DEMAND AND TIME OF DAY

HOURLY DEMAND	1AM	2	3	4	5	6	7	8	9	10	11	12	1PM	2	3	4	5	6	7	8	9	10	11	12	TOTAL
751	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
693	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
635	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
578	0	0	0	0	0	0	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178
D 520	0	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
E 462	146	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	7	229	244	635
M K 404	0	0	0	0	0	0	0	7	23	8	5	0	1	1	1	4	0	0	0	0	0	235	22	7	314
A W 346	0	0	0	0	0	0	0	2	228	243	246	0	250	250	250	247	16	0	0	0	0	9	0	0	1741
N 289	0	0	0	0	0	0	0	0	0	0	0	0	251	0	0	0	0	235	0	0	0	0	0	0	486
D 231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251	0	0	0	46	0	0	297
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	0	0	68
115	219	365	365	365	365	365	365	114	0	0	0	0	0	0	0	0	0	0	184	0	0	0	114	114	2935
57	0	0	0	0	0	0	0	0	114	114	114	114	114	114	114	114	114	114	181	365	365	0	0	0	2051

PERCENT
TOTAL
DEMAND

4.8	1.5	1.5	1.5	1.5	1.5	1.5	2.2	9.1	5.7	5.7	5.7	4.2	5.6	5.6	5.6	5.6	4.8	3.7	1.1	0.9	0.5	7.4	7.1	7.2
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PEAK ELECTRICAL LOAD BREAKDOWN

SOURCE	KW	PCT
SYSTEMS LOAD	313.385	51.7
CIRCULATION PUMPS	16.924	2.8
HERM-CENT-CHLR	230.635	38.0
COOLING-TWR	45.762	7.5

TOTAL 606.705

MMDDHH	GLOBAL AMBIENT DRYBULB F	GLOBAL AMBIENT WETBULB F	PLANT SYS COOL LOAD BTU/HR	PLANT SYS ELEC LOAD BTU/HR	PLANT TOTAL COOLING BTU/HR	PLANT TOTAL ELECTRIC BTU/HR	PLANT TOTAL FUEL BTU/HR
	----(1)	----(2)	----(2)	----(3)	----(9)	----(10)	----(12)
5 4 1	83.0	78.000	0.	14596.	103948.	222403.	0.
5 4 2	83.0	78.000	0.	14596.	103948.	212936.	0.
5 4 3	83.0	78.000	0.	14596.	103948.	212936.	0.
5 4 4	82.0	77.000	0.	14596.	103948.	213375.	0.
5 4 5	81.0	76.000	0.	14596.	103948.	212834.	0.
5 4 6	80.0	76.000	0.	156798.	103948.	354315.	0.
5 4 7	79.0	73.000	2602733.	1054443.	2706681.	1827008.	0.
5 4 8	83.0	75.000	3316699.	1114739.	0.	1172525.	0.
5 4 9	86.0	77.000	3689755.	1086929.	0.	1144715.	0.
5 410	88.0	76.000	3761190.	1079628.	0.	1137414.	0.
5 411	91.0	77.000	4031971.	778674.	0.	836460.	0.
5 412	93.0	77.000	4162673.	1069661.	0.	1127447.	0.
5 413	95.0	78.000	4482287.	1069966.	0.	1127752.	0.
5 414	96.0	78.000	4549128.	1073293.	0.	1131079.	0.
5 415	96.0	79.000	4635000.	1072680.	0.	1130466.	0.
5 416	95.0	80.000	4700473.	903226.	0.	961012.	0.
5 417	93.0	80.000	4616626.	669680.	0.	727466.	0.
5 418	90.0	79.000	0.	132448.	0.	190234.	0.
5 419	88.0	77.000	0.	87011.	0.	144797.	0.
5 420	86.0	78.000	0.	14596.	0.	72382.	0.
5 421	86.0	78.000	0.	14596.	3292400.	1228539.	0.
5 422	85.0	78.000	0.	14596.	5391472.	1401597.	0.
5 423	85.0	78.000	0.	14596.	5210272.	1418630.	0.
5 424	84.0	79.000	0.	14596.	29818772.	1417981.	0.
DAILY SUMMARY (MAY 4)							
MN	79.0	73.000	0.	14596.	0.	72382.	0.
MX	96.0	80.000	4700473.	1114739.	29818772.	1827008.	0.
SM	2091.0	1860.000	44548532.	11495134.	47043288.	19626302.	0.
AV	87.1	77.500	1856189.	478964.	1960137.	817763.	0.
MONTHLY SUMMARY (MAY)							
MN	79.0	73.000	0.	14596.	0.	72382.	0.
MX	96.0	80.000	4700473.	1114739.	29818772.	1827008.	0.
SM	2091.0	1860.000	44548532.	11495134.	47043288.	19626302.	0.
AV	87.1	77.500	1856189.	478964.	1960137.	817763.	0.
YEARLY SUMMARY							
MN	79.0	73.000	0.	14596.	0.	72382.	0.
MX	96.0	80.000	4700473.	1114739.	29818772.	1827008.	0.
SM	2091.0	1860.000	44548532.	11495134.	47043288.	19626302.	0.
AV	87.1	77.500	1856189.	478964.	1960137.	817763.	0.

MDDHH	HERM-CEN T-CHLR LOAD BTU/HR	HERM-CEN T-CHLR AVAL CAP RATIO FRAC.OR MULT.	HERM-CEN T-CHLR OPER PT LD RATIO FRAC.OR MULT.	HERM-CEN T-CHLR ADJUSTED EIR FRAC.OR MULT.	CTANK-ST ORAGE ENERGY RELEASED BTU/HR	CTANK-ST ORAGE ENERGY STORED BTU/HR	CTANK-ST ORAGE ENERGY LOSS BTU/HR	CTANK-ST ORAGE TOTAL IN STORAGE BTU/HR
	----(1)	----(8)	----(10)	----(16)	----(1)	----(4)	----(12)	----(14)
5 4 1	103948.	0.906	0.100	0.066	0.	0.	-2106.	0.
5 4 2	103948.	0.996	0.100	0.057	0.	0.	-2106.	0.
5 4 3	103948.	0.996	0.100	0.057	0.	0.	-2106.	0.
5 4 4	103948.	0.996	0.100	0.057	0.	0.	-2106.	0.
5 4 5	103948.	1.001	0.100	0.056	0.	0.	-2106.	0.
5 4 6	103948.	1.005	0.100	0.055	0.	0.	-2106.	0.
5 4 7	2706681.	1.023	0.511	0.105	0.	0.	-2106.	0.
5 4 8	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 4 9	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 410	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 411	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 412	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 413	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 414	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 415	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 416	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 417	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 418	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 419	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 420	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
5 421	3292402.	0.621	0.621	0.189	0.	0.	-2106.	0.
5 422	5391472.	1.018	1.018	0.221	0.	0.	-2106.	0.
5 423	5210272.	0.983	0.983	0.225	0.	0.	-2106.	0.
5 424	5223513.	0.986	0.986	0.224	0.	0.	-2106.	0.
DAILY SUMMARY (MAY 4)								
MN	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
MX	5391472.	1.023	1.018	0.225	0.	0.	-2106.	0.
SM	22448032.	10.532	4.719	1.313	0.	0.	-50546.	0.
AV	935335.	0.439	0.197	0.055	0.	0.	-2106.	0.
MONTHLY SUMMARY (MAY)								
MN	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
MX	5391472.	1.023	1.018	0.225	0.	0.	-2106.	0.
SM	22448032.	10.532	4.719	1.313	0.	0.	-50546.	0.
AV	935335.	0.439	0.197	0.055	0.	0.	-2106.	0.
YEARLY SUMMARY								
MN	0.	0.000	0.000	0.000	0.	0.	-2106.	0.
MX	5391472.	1.023	1.018	0.225	0.	0.	-2106.	0.
SM	22448032.	10.532	4.719	1.313	0.	0.	-50546.	0.
AV	935335.	0.439	0.197	0.055	0.	0.	-2106.	0.

LIFE-CYCLE COSTING PARAMETERS

DISCOUNT RATE (PERCENT)	LABOR INFLATION RATE (PERCENT)	MATERIALS INFLATION RATE (PERCENT)	PROJECT LIFE (YRS)
10.0	0.0	0.0	25.0

BUILDING COMPONENT COST INPUT DATA (CURRENT DOLLARS)

COST NAME	NUMBER OF UNITS	UNIT NAME	LIFE (YRS)	UNIT FIRST COST (\$)	UNIT INSTALL -ATION COST (\$)	UNIT ANNUAL MAINT COST (\$)	UNIT MINOR OVERHAUL COST (\$)	MINOR OVERHAUL INTERVAL (YRS)	UNIT MAJOR OVERHAUL COST (\$)	MAJOR OVERHAUL INTERVAL (YRS)
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NO BUILDING COMPONENT COSTS SPECIFIED

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ENERGY COSTS SIMULATION OF
 USING THE DOEPLUS/DOE2 PROGRAM
 REPORT- EV-B COST OF FUELS AND UTILITIES

TECHNOTHANI BUILDING, BANGKOK
 WEATHER DATA, BANGKOK THAILAND

DOE-2.1D 7/30/1996 17:23: 4 EDL RUN 1
 AND COSTS DATA FROM EGAT

ENERGY SOURCE	ENERGY UNIT (BTU)	UNIFORM COST /UNIT (\$)	COST ESCLA- ATION RATE	MIN MNTHLY CHARGE (\$)	RATE LIMIT /UNIT (\$)	FIXED MNTHLY CHARG1 (\$)	FIXED MNTHLY CHARG2 (\$)	ASSIGN- SCHEDULE (U-NAME)	ASSIGN- CHARGE1 (U-NAME)	ASSIGN- CHARGE2 (U-NAME)
ELECTRIC	3413.00	0.0000	5.000	0.00	1000000.000	0.00	0.00	TIMEOFUSE		

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MONTH	ELECTRIC UNIT= 3413.00

JAN	
ENERGY CONSUMPTION (UNIT/MO)	123976.
PEAK DEMAND (UNIT/HR)	525.
TOTAL COST (\$)	240962.59
FEB	
ENERGY CONSUMPTION (UNIT/MO)	112772.
PEAK DEMAND (UNIT/HR)	577.
TOTAL COST (\$)	226184.31
MAR	
ENERGY CONSUMPTION (UNIT/MO)	133799.
PEAK DEMAND (UNIT/HR)	601.
TOTAL COST (\$)	254172.69
APR	
ENERGY CONSUMPTION (UNIT/MO)	127036.
PEAK DEMAND (UNIT/HR)	607.
TOTAL COST (\$)	248553.50
MAY	
ENERGY CONSUMPTION (UNIT/MO)	137197.
PEAK DEMAND (UNIT/HR)	592.
TOTAL COST (\$)	259425.63
JUN	
ENERGY CONSUMPTION (UNIT/MO)	136094.
PEAK DEMAND (UNIT/HR)	578.
TOTAL COST (\$)	253312.25
JUL	
ENERGY CONSUMPTION (UNIT/MO)	127826.
PEAK DEMAND (UNIT/HR)	561.
TOTAL COST (\$)	249398.84
AUG	
ENERGY CONSUMPTION (UNIT/MO)	141576.
PEAK DEMAND (UNIT/HR)	586.
TOTAL COST (\$)	259178.78
SEP	
ENERGY CONSUMPTION (UNIT/MO)	126620.
PEAK DEMAND (UNIT/HR)	567.
TOTAL COST (\$)	248108.58
OCT	
ENERGY CONSUMPTION (UNIT/MO)	131891.
PEAK DEMAND (UNIT/HR)	562.
TOTAL COST (\$)	250312.88
NOV	
ENERGY CONSUMPTION (UNIT/MO)	119801.
PEAK DEMAND (UNIT/HR)	551.
TOTAL COST (\$)	240811.69
DEC	
ENERGY CONSUMPTION (UNIT/MO)	120077.



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 อสงครณ์มหาวิทยาลัย

PEAK DEMAND (UNIT/HR)	522.
TOTAL COST (\$)	233700.13

TOTAL	
ENERGY CONSUMPTION (UNIT/YR)	1538665.
PEAK DEMAND (UNIT/HR)	607.
TOTAL COST (\$)	2964122.00



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จุฬาลงกรณ์มหาวิทยาลัย

MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
JAN	ENERGYCHARGE PEAK	744 273	123976. 67499.	132654.39 0.00	525. 351.	525. 351.	0.00 108308.20	240962.59
FEB	ENERGYCHARGE PEAK	672 247	112772. 61029.	120665.86 0.00	577. 341.	577. 341.	0.00 105518.45	226184.31
MAR	ENERGYCHARGE PEAK	744 299	133799. 73861.	143164.55 0.00	601. 359.	601. 359.	0.00 111008.15	254172.69
APR	ENERGYCHARGE PEAK	720 260	127036. 64308.	135928.39 0.00	607. 364.	607. 364.	0.00 112625.12	248553.50
MAY	ENERGYCHARGE PEAK	744 286	137197. 70749.	146800.50 0.00	592. 364.	592. 364.	0.00 112625.13	259425.63
JUN	ENERGYCHARGE PEAK	720 286	136094. 70520.	145620.27 0.00	578. 349.	578. 349.	0.00 107691.98	253312.25
JUL	ENERGYCHARGE PEAK	744 260	127826. 64316.	136773.70 0.00	561. 364.	561. 364.	0.00 112625.13	249398.84
AUG	ENERGYCHARGE PEAK	744 299	141576. 73578.	151486.80 0.00	586. 349.	586. 349.	0.00 107691.98	259178.78
SEP	ENERGYCHARGE PEAK	720 260	126620. 64260.	135483.47 0.00	567. 364.	567. 364.	0.00 112625.11	248108.58
OCT	ENERGYCHARGE PEAK	744 273	131891. 67665.	141123.83 0.00	562. 353.	562. 353.	0.00 109189.05	250312.88
NOV	ENERGYCHARGE PEAK	720 260	119801. 64685.	128186.56 0.00	551. 364.	551. 364.	0.00 112625.13	240811.69

DEC

ENERGYCHARGE
PEAK

744
260

120077.
64296.

128482.88
0.00

522.
341.

522.
341.

0.00
105217.25

233700.13



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จุฬาลงกรณ์มหาวิทยาลัย

ENERGY COSTS SIMULATION OF
 USING THE DOEPLUS/DOE2 PROGRAM
 REPORT- ES-E SUMMARY OF ELECTRICITY CHARGES

TECHNOTHANI BUILDING, BANGKOK
 WEATHER DATA, BANGKOK THAILAND

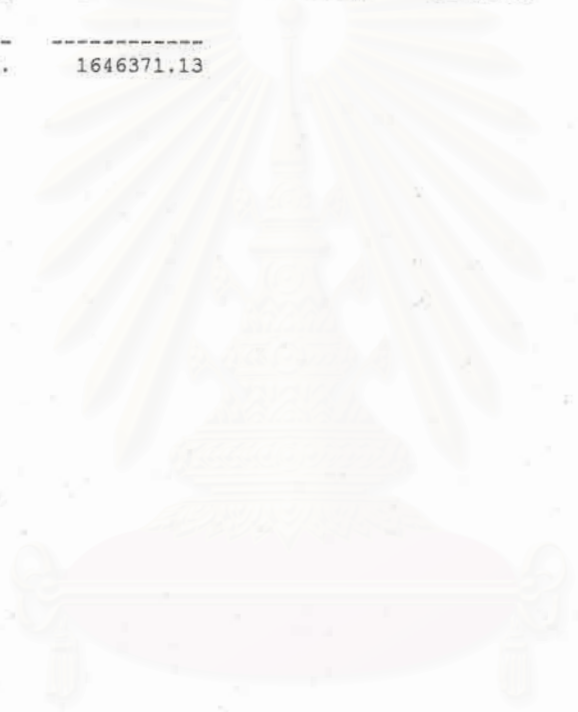
DOE-2.1D 7/30/1996
 AND COSTS DATA FROM EGAT

17:23: 4 EDL RUN 1

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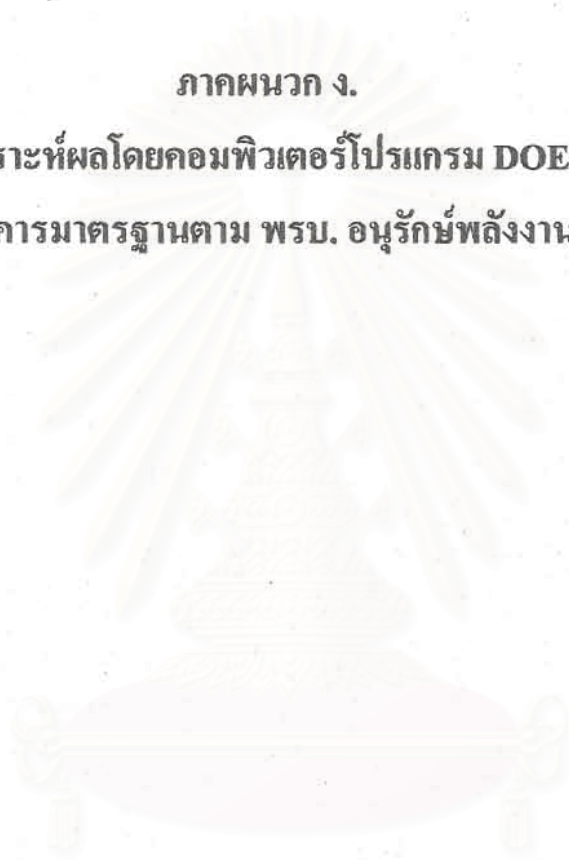
MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
-----			-----	-----	-----	-----	-----	-----
TOTAL			1538665.	1646371.13			1317750.75	2964122.00

□



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 จุฬาลงกรณ์มหาวิทยาลัย

ภาคผนวก ง.
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE2.1 D
อาคารมาตรฐานตาม พรบ. อนุรักษ์พลังงาน



สถาบันวิจัยบริการ
จุฬาลงกรณ์มหาวิทยาลัย


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BUILDING ENERGY ANALYSIS PROGRAM

DEVELOPED BY

LAWRENCE BERKELEY LABORATORY/UNIVERSITY OF CALIFORNIA
 AND
 James J. Hirsch/HIRSCH & ASSOCIATES/(805) 532-1045

WITH MAJOR SUPPORT FROM

UNITED STATES DEPARTMENT OF ENERGY
 ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY
 OFFICE OF BUILDINGS AND COMMUNITY SYSTEMS
 BUILDING SYSTEMS DIVISION

***** LEGAL NOTICE *****

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 LBL RELEASE DEC 1990 version : ITEM Systems PC 2.1D-018

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LDL PROCESSOR INPUT DATA

7/30/1996 17:43: 8 LDL RUN 1

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* 2 *
* 3 * TITLE
* 4 *   LINE-1   *Energy Simulation of*
* 5 *   LINE-2   *Energy Conservation Building*
* 6 *   LINE-3   *Patumthani, Thailand*
* 7 *   LINE-4   *{ DOE PLUS WITH DOE 2.1 D }*
* 8 *   LINE-5   *OTTV. CONDITION*
* 9 *   ..
* 10 *
* 11 * RUN-PERIOD
* 12 *   JAN 1 1995 THRU DEC 31 1995
* 13 *   ..
* 14 *
* 15 * $metric$ PARAMETER
* 16 *   INPUT-UNITS   = ENGLISH           OUTPUT-UNITS   = METRIC
* 17 *   ..
* 18 *
* 19 * BUILDING-LOCATION
* 20 *   $ City         = Patumthani
* 21 *   $ State/Country = Thailand
* 22 *   LATITUDE       = 13.57             LONGITUDE      = -100.6
* 23 *   ALTITUDE       = 0                 TIME-ZONE      = -7
* 24 *   AZIMUTH        = 0
* 25 *   GROUND-T        = (85,85,85,85,85,85,85,85,85,85,85)
* 26 *   ATM-MOISTURE    = (1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3)
* 27 *   ATM-TURBIDITY  = (.25,.25,.25,.25,.25,.25,.25,.25,.25,.25,.25)
* 28 *   ..
* 29 *
* 30 * WEEKDAY-LIGHTING = DAY-SCHEDULE (1,24)
* 31 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.20,0.90,1.0,1.0,1.0,0.50,
* 32 *     1.0,1.0,1.0,1.0,0.70,0.30,0.20,0.10,0.02,0.02,0.02,0.02)
* 33 *   ..
* 34 *
* 35 * OCCUPY1 = DAY-SCHEDULE (1,24)
* 36 *   (0,0,0,0,0,0,0,1.0,1.0,1.0,0.80,
* 37 *     0.40,0.80,1.0,1.0,1.0,1.0,0.50,0.05,0,0,0)
* 38 *   ..
* 39 *
* 40 * OFFICE-LIGHTING = DAY-SCHEDULE (1,24)
* 41 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.40,0.40,0.80,0.80,0.80,0.60,
* 42 *     0.80,0.80,0.80,0.80,0.80,0.80,0.40,0.40,0.02,0.02,0.02,0.02)
* 43 *   ..
* 44 *
* 45 * LIGHTSHED-YEAR = SCHEDULE
* 46 *   THRU DEC 31 (WD) WEEKDAY-LIGHTING
* 47 *     (WEH) (1,8){.02} (9,17) (.05) (18,24) (.02)
* 48 *   ..

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* 49 *
* 50 * INFILSCHE = SCHEDULE
* 51 *   THRU DEC 31 (WD) (1,8)(1) (9,17) (.5) (18,24) (1)
* 52 *           (WEH) (1,24) (1)
* 53 * ..
* 54 *
* 55 * OCCUPY = SCHEDULE
* 56 *   THRU DEC 31 (WD) OCCUPY1
* 57 *           (WEH) (1,8) (0.0) (9,17) (.02) (18,24) (0.0)
* 58 * ..
* 59 *
* 60 * OFFICE-LIGHTSCHE = SCHEDULE
* 61 *   THRU DEC 31 (WD) OFFICE-LIGHTING
* 62 *           (WEH) (1,8)(.02) (9,17) (.05) (18,24) (.02)
* 63 * ..
* 64 *
* 65 * SCH-HR-1 = SCHEDULE
* 66 *   THRU MAY 3 (ALL) (1,24) (0)
* 67 *   THRU MAY 4 (ALL) (1,24) (1)
* 68 *   THRU DEC 31 (ALL) (1,24) (0)
* 69 * ..
* 70 *
* 71 * SCH-HR-2 = SCHEDULE
* 72 *   THRU APR 30 (ALL) (1,24) (0)
* 73 *   THRU MAY 31 (ALL) (1,24) (1)
* 74 *   THRU DEC 31 (ALL) (1,24) (0)
* 75 * ..
* 76 *
* 77 * W-1 = LAYERS
* 78 *   MATERIAL           =(AS01,IN35,AL11,GP02)
* 79 * ..
* 80 *
* 81 * LOW-INSUL = LAYERS
* 82 *   MATERIAL           =(CB06)
* 83 * ..
* 84 *
* 85 * LAY-INT-WALLS = LAYERS
* 86 *   MATERIAL           =(CC05)
* 87 * ..
* 88 *
* 89 * F-1 = LAYERS
* 90 *   MATERIAL           =(CC04,CP02)
* 91 * ..
* 92 *
* 93 * R-1 = LAYERS
* 94 *   MATERIAL           =(AR01,CC04,IN12,AL33,GP02)
* 95 *   INSIDE-FILM-RES   = 0.92
* 96 * ..
* 97 *
* 98 * WALL-1 = CONSTRUCTION
* 99 *   LAYERS             = W-1
* 100 * ..
* 101 *
* 102 * ROOF-1 = CONSTRUCTION
* 103 *   LAYERS             = R-1
*           ABSORPTANCE           = 0.2

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* 104 * ..
* 105 *
* 106 * INTERIOR-WALLS = CONSTRUCTION
* 107 *   LAYERS           = LAY-INT-WALLS
* 108 * ..
* 109 *
* 110 * WALL_NON_ABSORB = CONSTRUCTION
* 111 *   $ LIKE           = WALL-1
* 112 *   LAYERS           = W-1           ABSORPTANCE = 0
* 113 * ..
* 114 *
* 115 * FLOOR = CONSTRUCTION
* 116 *   LAYERS           = F-1
* 117 * ..
* 118 *
* 119 * SELECTIVE = GLASS-TYPE
* 120 *   SHADING-COEF     = 0.6           GLASS-CONDUCTANCE= 1.42
* 121 *   VIS-TRANS        = 0.67
* 122 * ..
* 123 *
* 124 * NO-DAYLIT = SPACE-CONDITIONS
* 125 *   PEOPLE-SCHEDULE  = LIGHTSHED-YEAR  AREA/PERSON = 100
* 126 *   PEOPLE-HEAT-GAIN = 400             LIGHTING-SCHEDULE= LIGHTSHED-YEAR
* 127 *   LIGHTING-W/SQFT  = 0.736           EQUIP-SCHEDULE = LIGHTSHED-YEAR
* 128 *   EQUIPMENT-W/SQFT = 0.5             INF-SCHEDULE   = INFILSCHED
* 129 *   INF-METHOD       = AIR-CHANGE     AIR-CHANGES/HR = 0.1
* 130 *   INF-CFM/SQFT     = 0.038          TEMPERATURE    = (75)
* 131 *   LIGHT-TO-SPACE   = 1.0
* 132 *   LIGHT-RAD-FRAC   = (0.67,0.9)
* 133 *   DAYLIGHT-REP-SCH = LIGHTSHED-YEAR
* 134 *   SOURCE-TYPE      = ELECTRIC
* 135 *   FLOOR-WEIGHT     = 130           FURNITURE-TYPE = LIGHT
* 136 * ..
* 137 *
* 138 * ALLSPACE = SPACE-CONDITIONS
* 139 *   PEOPLE-SCHEDULE  = OCCUPY           AREA/PERSON = 100
* 140 *   PEOPLE-HEAT-GAIN = 400             LIGHTING-SCHEDULE= LIGHTSHED-YEAR
* 141 *   LIGHTING-W/SQFT  = 0.83           EQUIP-SCHEDULE = LIGHTSHED-YEAR
* 142 *   EQUIPMENT-W/SQFT = 0.5             INF-SCHEDULE   = INFILSCHED
* 143 *   INF-METHOD       = AIR-CHANGE     AIR-CHANGES/HR = 0.2
* 144 *   INF-CFM/SQFT     = 0.038          TEMPERATURE    = (75)
* 145 *   LIGHT-TO-SPACE   = 1.0
* 146 *   LIGHT-RAD-FRAC   = (0.67,1.0)
* 147 *   MIN-LIGHT-FRAC   = 0.167          DAYLIGHT-REP-SCH = LIGHTSHED-YEAR
* 148 *   SOURCE-SCHEDULE  = OCCUPY           SOURCE-TYPE    = ELECTRIC
* 149 *   FLOOR-WEIGHT     = 130           FURNITURE-TYPE = LIGHT
* 150 * ..
* 151 *
* 152 * OFFICESPACE = SPACE-CONDITIONS
* 153 *   PEOPLE-SCHEDULE  = OCCUPY           AREA/PERSON = 100
* 154 *   PEOPLE-HEAT-GAIN = 400             LIGHTING-SCHEDULE= OFFICE-LIGHTSCHE
* 155 *   LIGHTING-W/SQFT  = 0.736           EQUIP-SCHEDULE = OFFICE-LIGHTSCHE
* 156 *   EQUIPMENT-W/SQFT = 0.5             INF-SCHEDULE   = INFILSCHED
* 157 *   INF-METHOD       = AIR-CHANGE     AIR-CHANGES/HR = 0.2
* 158 *   INF-CFM/SQFT     = 0.038          TEMPERATURE    = (75)

```

* 159 *	LIGHT-TO-SPACE	= 1.0		
* 160 *	LIGHT-RAD-FRAC	= (0.67,1.0)		
* 161 *	MIN-LIGHT-FRAC	= 0.167	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR
* 162 *	SOURCE-SCHEDULE	= OCCUPY	SOURCE-TYPE	= ELECTRIC
* 163 *	FLOOR-WEIGHT	= 130	FURNITURE-TYPE	= LIGHT
* 164 *	..			
* 165 *				
* 166 *	N-FL-1 = SPACE			
* 167 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 19202.3
* 168 *	VOLUME	= 192023.0	FLOOR-MULTIPLIER	= 1
* 169 *	INF-SCHEDULE	= INFILSCHED		
* 170 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 171 *	SOURCE-TYPE	= ELECTRIC		
* 172 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 173 *	TEMPERATURE	= (75.0)		
* 174 *	..			
* 175 *				
* 176 *	WALL3-N-FL-1 = EXTERIOR-WALL			
* 177 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 178 *	Y	= 63.33	Z	= 0
* 179 *	HEIGHT	= 26.4	WIDTH	= 86.58
* 180 *	TILT	= 90		
* 181 *	..			
* 182 *				
* 183 *	G-WALL3-N-FL-1 = WINDOW			
* 184 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 6.93
* 185 *	WIDTH	= 86.58	Y	= 0
* 186 *	..			
* 187 *				
* 188 *	WALL4-N-FL-1 = EXTERIOR-WALL			
* 189 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 190 *	Y	= -23.25	Z	= 0
* 191 *	HEIGHT	= 26.4	WIDTH	= 86.58
* 192 *	AZIMUTH	= 90	TILT	= 90
* 193 *	..			
* 194 *				
* 195 *	G-WALL4-N-FL-1 = WINDOW			
* 196 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 6.93
* 197 *	WIDTH	= 86.58	Y	= 0
* 198 *	..			
* 199 *				
* 200 *	WALL5-N-FL-1 = EXTERIOR-WALL			
* 201 *	CONSTRUCTION	= WALL-1	X	= 272
* 202 *	Y	= -82.06	Z	= 0
* 203 *	HEIGHT	= 26.4	WIDTH	= 83.25
* 204 *	AZIMUTH	= 45	TILT	= 90
* 205 *	..			
* 206 *				
* 207 *	G-WALL5-N-FL-1 = WINDOW			
* 208 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 13.86
* 209 *	WIDTH	= 83.25	Y	= 0
* 210 *	..			
* 211 *				
* 212 *	ROOF1-FL-1 = EXTERIOR-WALL			
* 213 *	CONSTRUCTION	= WALL-1	X	= 126.66

* 214 *	Y	= 126.66	Z	= 13.2
* 215 *	HEIGHT	= 126.66	WIDTH	= 126.66
* 216 *	TILT	= 0		
* 217 *	..			
* 218 *				
* 219 *	G1-ROOF1-FL-1 = WINDOW			
* 220 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 221 *	WIDTH	= 108.66	X	= 9.0
* 222 *	Y	= 9.0		
* 223 *	..			
* 224 *				
* 225 *	G5-ROOF1-FL-1 = WINDOW			
* 226 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 227 *	WIDTH	= 108.66	X	= 9.0
* 228 *	Y	= 115.66		
* 229 *	..			
* 230 *				
* 231 *	G2-ROOF1-FL-1 = WINDOW			
* 232 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 233 *	WIDTH	= 2	X	= 9.0
* 234 *	Y	= 9.0		
* 235 *	..			
* 236 *				
* 237 *	G3-ROOF1-FL-1 = WINDOW			
* 238 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 239 *	WIDTH	= 2	X	= 9.0
* 240 *	Y	= 45.22		
* 241 *	..			
* 242 *				
* 243 *	G4-ROOF1-FL-1 = WINDOW			
* 244 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 245 *	WIDTH	= 2	X	= 9.0
* 246 *	Y	= 81.44		
* 247 *	..			
* 248 *				
* 249 *	G6-ROOF1-FL-1 = WINDOW			
* 250 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 251 *	WIDTH	= 2	X	= 115.66
* 252 *	Y	= 81.44		
* 253 *	..			
* 254 *				
* 255 *	G7-ROOF1-FL-1 = WINDOW			
* 256 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 257 *	WIDTH	= 2	X	= 115.66
* 258 *	Y	= 45.22		
* 259 *	..			
* 260 *				
* 261 *	G8-ROOF1-FL-1 = WINDOW			
* 262 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 263 *	WIDTH	= 2	X	= 115.66
* 264 *	Y	= 9		
* 265 *	..			
* 266 *				
* 267 *	WALL1-NW-FL1 = EXTERIOR-WALL			
* 268 *	CONSTRUCTION	= WALL-1	X	= 126.66

* 269 *	Y	= 126.66	Z	= 0
* 270 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 271 *	TILT	= 90		
* 272 *	..			
* 273 *				
* 274 *	G-WALL1-N-FL-1 = WINDOW			
* 275 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 276 *	WIDTH	= 63.33	Y	= 3.3
* 277 *	SETBACK	= 10		
* 278 *	..			
* 279 *				
* 280 *	WALL2-NW-FL1 = EXTERIOR-WALL			
* 281 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 282 *	Y	= 126.66	Z	= 0
* 283 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 284 *	TILT	= 90		
* 285 *	..			
* 286 *				
* 287 *	G-WALL1-W-FL-1 = WINDOW			
* 288 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 289 *	WIDTH	= 63.33	Y	= 3.3
* 290 *	SETBACK	= 10		
* 291 *	..			
* 292 *				
* 293 *	WALL1-NE-FL1 = EXTERIOR-WALL			
* 294 *	CONSTRUCTION	= WALL-1	X	= 126.66
* 295 *	Y	= 63.33	Z	= 0
* 296 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 297 *	AZIMUTH	= 90	TILT	= 90
* 298 *	..			
* 299 *				
* 300 *	G-WALL2-N-FL-1 = WINDOW			
* 301 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 302 *	WIDTH	= 63.33	Y	= 3.3
* 303 *	SETBACK	= 10		
* 304 *	..			
* 305 *				
* 306 *	ROOF2 = EXTERIOR-WALL			
* 307 *	CONSTRUCTION	= ROOF-1	X	= 213.24
* 308 *	Y	= -23.25	Z	= 26.4
* 309 *	HEIGHT	= 80	WIDTH	= 88.58
* 310 *	AZIMUTH	= 90	TILT	= 0
* 311 *	..			
* 312 *				
* 313 *	ROOF-4 = EXTERIOR-WALL			
* 314 *	CONSTRUCTION	= ROOF-1	X	= 149.91
* 315 *	Y	= -86.58	Z	= 26.4
* 316 *	HEIGHT	= 65	WIDTH	= 120
* 317 *	AZIMUTH	= 180	TILT	= 0
* 318 *	..			
* 319 *				
* 320 *	FL_1_2 = EXTERIOR-WALL			
* 321 *	CONSTRUCTION	= FLOOR	X	= 213.24
* 322 *	Y	= -23.25	Z	= 0
* 323 *	HEIGHT	= 80	WIDTH	= 88.58

* 324 *	AZIMUTH	= 90	TILT	= 0
* 325 *	..			
* 326 *				
* 327 *	FL_1_4 = EXTERIOR-WALL			
* 328 *	CONSTRUCTION	= FLOOR	X	= 149.91
* 329 *	Y	= -86.58	Z	= 0
* 330 *	HEIGHT	= 65	WIDTH	= 120
* 331 *	AZIMUTH	= 180	TILT	= 0
* 332 *	..			
* 333 *				
* 334 *	W-FL-1 = SPACE			
* 335 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 27932.4
* 336 *	VOLUME	= 279324.0	FLOOR-MULTIPLIER	= 1
* 337 *	INF-SCHEDULE	= INFILSCHED		
* 338 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 339 *	SOURCE-TYPE	= ELECTRIC		
* 340 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 341 *	TEMPERATURE	= (75.0)		
* 342 *	..			
* 343 *				
* 344 *	ROOF3A = EXTERIOR-WALL			
* 345 *	CONSTRUCTION	= ROOF-1	X	= 208.73
* 346 *	Y	= -145.4	Z	= 33.3
* 347 *	HEIGHT	= 63	WIDTH	= 148.25
* 348 *	AZIMUTH	= 270	TILT	= 0
* 349 *	..			
* 350 *				
* 351 *	ROOF3B = EXTERIOR-WALL			
* 352 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 353 *	Y	= -290.8	Z	= 33.3
* 354 *	HEIGHT	= 65	WIDTH	= 148.25
* 355 *	AZIMUTH	= 180	TILT	= 0
* 356 *	..			
* 357 *				
* 358 *	ROOF3C = EXTERIOR-WALL			
* 359 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 360 *	Y	= -82.06	Z	= 33.3
* 361 *	HEIGHT	= 65	WIDTH	= 88
* 362 *	AZIMUTH	= 0	TILT	= 0
* 363 *	..			
* 364 *				
* 365 *	ROOF3D = EXTERIOR-WALL			
* 366 *	CONSTRUCTION	= ROOF-1	X	= 417.5
* 367 *	Y	= -224.13	Z	= 33.3
* 368 *	HEIGHT	= 63	WIDTH	= 144
* 369 *	AZIMUTH	= 90	TILT	= 0
* 370 *	..			
* 371 *				
* 372 *	DOMEA = EXTERIOR-WALL			
* 373 *	CONSTRUCTION	= ROOF-1	X	= 270
* 374 *	Y	= -145.4	Z	= 33.3
* 375 *	HEIGHT	= 30	WIDTH	= 83.25
* 376 *	AZIMUTH	= 270	TILT	= 60
* 377 *	..			
* 378 *				

* 379 *	DOME = EXTERIOR-WALL			
* 380 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 381 *	Y	= -145.4	Z	= 33.3
* 382 *	HEIGHT	= 30	WIDTH	= 88
* 383 *	AZIMUTH	= 0	TILT	= 60
* 384 *	..			
* 385 *				
* 386 *	DOMEROOF = EXTERIOR-WALL			
* 387 *	CONSTRUCTION	= ROOF-1	X	= 270
* 388 *	Y	= -150	Z	= 60
* 389 *	HEIGHT	= 70.25	WIDTH	= 70.25
* 390 *	AZIMUTH	= 270	TILT	= 0
* 391 *	..			
* 392 *				
* 393 *	DOME-GLASS = WINDOW			
* 394 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 12
* 395 *	WIDTH	= 12	X	= 33.3
* 396 *	Y	= 33.3		
* 397 *	..			
* 398 *				
* 399 *	DOMEC = EXTERIOR-WALL			
* 400 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 401 *	Y	= -229.53	Z	= 33.3
* 402 *	HEIGHT	= 30	WIDTH	= 88
* 403 *	AZIMUTH	= 180	TILT	= 60
* 404 *	..			
* 405 *				
* 406 *	DOMED = EXTERIOR-WALL			
* 407 *	CONSTRUCTION	= ROOF-1	X	= 352
* 408 *	Y	= -224.13	Z	= 33.3
* 409 *	HEIGHT	= 30	WIDTH	= 83.25
* 410 *	AZIMUTH	= 90	TILT	= 60
* 411 *	..			
* 412 *				
* 413 *	WALL1 W FL 1 = EXTERIOR-WALL			
* 414 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 415 *	Y	= -145.4	Z	= 0
* 416 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 417 *	AZIMUTH	= 270	TILT	= 90
* 418 *	..			
* 419 *				
* 420 *	WALL2 W FL 1 = EXTERIOR-WALL			
* 421 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 422 *	Y	= -231.98	Z	= 0
* 423 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 424 *	AZIMUTH	= 225	TILT	= 90
* 425 *	..			
* 426 *				
* 427 *	WALL3 W FL 1 = EXTERIOR-WALL			
* 428 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 429 *	Y	= -290.8	Z	= 0
* 430 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 431 *	AZIMUTH	= 180	TILT	= 90
* 432 *	..			
* 433 *				

* 434 *	WALL4 W FL 1 = EXTERIOR-WALL			
* 435 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 436 *	Y	= -224.13	Z	= 0
* 437 *	HEIGHT	= 33.3	WIDTH	= 94.6
* 438 *	AZIMUTH	= 315	TILT	= 90
* 439 *	..			
* 440 *				
* 441 *	WALL5 W FL 1 = EXTERIOR-WALL			
* 442 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 443 *	Y	= -140.88	Z	= 0
* 444 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 445 *	AZIMUTH	= 270	TILT	= 90
* 446 *	..			
* 447 *				
* 448 *	WALL6 W FL 1 = EXTERIOR-WALL			
* 449 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 450 *	Y	= -82.06	Z	= 0
* 451 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 452 *	AZIMUTH	= 225	TILT	= 90
* 453 *	..			
* 454 *				
* 455 *	WALL7 W FL 1 = EXTERIOR-WALL			
* 456 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 457 *	Y	= -82.06	Z	= 0
* 458 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 459 *	AZIMUTH	= 0	TILT	= 90
* 460 *	..			
* 461 *				
* 462 *	FL 1 3A = EXTERIOR-WALL			
* 463 *	CONSTRUCTION	= FLOOR	X	= 208.73
* 464 *	Y	= -145.4	Z	= 0
* 465 *	HEIGHT	= 63	WIDTH	= 148.25
* 466 *	AZIMUTH	= 270	TILT	= 0
* 467 *	..			
* 468 *				
* 469 *	FL 1 3B = EXTERIOR-WALL			
* 470 *	CONSTRUCTION	= FLOOR	X	= 267.59
* 471 *	Y	= -290.8	Z	= 0
* 472 *	HEIGHT	= 65	WIDTH	= 148.25
* 473 *	AZIMUTH	= 180	TILT	= 0
* 474 *	..			
* 475 *				
* 476 *	FL 1 3C = EXTERIOR-WALL			
* 477 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 478 *	Y	= -82.06	Z	= 0
* 479 *	HEIGHT	= 65	WIDTH	= 88
* 480 *	AZIMUTH	= 0	TILT	= 0
* 481 *	..			
* 482 *				
* 483 *	FL 1 3D = EXTERIOR-WALL			
* 484 *	CONSTRUCTION	= FLOOR	X	= 417.5
* 485 *	Y	= -224.13	Z	= 0
* 486 *	HEIGHT	= 63	WIDTH	= 144
* 487 *	AZIMUTH	= 90	TILT	= 0
* 488 *	..			

```

* 489 *
* 490 * S-FL-1 = SPACE
* 491 * SPACE-CONDITIONS = ALLSPACE
* 492 * VOLUME = 192023.0
* 493 * DAYLIGHT-REP-SCH = LIGHTSHED-YEAR
* 494 * SOURCE-TYPE = ELECTRIC
* 495 * FLOOR-WEIGHT = 130.0
* 496 * TEMPERATURE = (75.0)
* 497 * ..
* 498 *
* 499 * WALL1-S-FL-1 = EXTERIOR-WALL
* 500 * CONSTRUCTION = WALL-1
* 501 * Y = 0
* 502 * HEIGHT = 13.2
* 503 * AZIMUTH = 180
* 504 * ..
* 505 *
* 506 * G-WALL1-S-FL-1 = WINDOW
* 507 * GLASS-TYPE = SELECTIVE
* 508 * WIDTH = 63.33
* 509 * SETBACK = 10
* 510 * ..
* 511 *
* 512 * WALL2-S-FL-1 = EXTERIOR-WALL
* 513 * CONSTRUCTION = WALL-1
* 514 * Y = 63.33
* 515 * HEIGHT = 13.2
* 516 * AZIMUTH = 270
* 517 * ..
* 518 *
* 519 * WALL3-S-FL-1 = EXTERIOR-WALL
* 520 * CONSTRUCTION = WALL-1
* 521 * Y = 0
* 522 * HEIGHT = 26.4
* 523 * AZIMUTH = 270
* 524 * ..
* 525 *
* 526 * G-WALL3-S-FL-1 = WINDOW
* 527 * GLASS-TYPE = SELECTIVE
* 528 * WIDTH = 86.58
* 529 * ..
* 530 *
* 531 * WALL4-S-FL-1 = EXTERIOR-WALL
* 532 * CONSTRUCTION = WALL-1
* 533 * Y = -86.58
* 534 * HEIGHT = 26.4
* 535 * AZIMUTH = 180
* 536 * ..
* 537 *
* 538 * G-WALL4-S-FL-1 = WINDOW
* 539 * GLASS-TYPE = SELECTIVE
* 540 * WIDTH = 86.58
* 541 * ..
* 542 *
* 543 * WALL5-S-FL-1 = EXTERIOR-WALL

```

```

AREA = 19202.3
FLOOR-MULTIPLIER = 1

```

```

FURNITURE-TYPE = LIGHT

```

```

X = 0
Z = 0
WIDTH = 63.33
TILT = 90

```

```

HEIGHT = 3.63
Y = 3.3

```

```

X = 0
Z = 0
WIDTH = 63.33
TILT = 90

```

```

X = 63.33
Z = 0
WIDTH = 86.58
TILT = 90

```

```

HEIGHT = 6.93
Y = 0

```

```

X = 63.33
Z = 0
WIDTH = 86.58
TILT = 90

```

```

HEIGHT = 6.93
Y = 0

```

* 544 *	CONSTRUCTION	= WALL-1	X	= 149.91
* 545 *	Y	= -86.58	Z	= 0
* 546 *	HEIGHT	= 26.4	WIDTH	= 83.25
* 547 *	AZIMUTH	= 225	TILT	= 90
* 548 *	..			
* 549 *				
* 550 *	G-WALL5-S-FL-1	= WINDOW		
* 551 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 6.93
* 552 *	WIDTH	= 83.25	Y	= 0
* 553 *	..			
* 554 *				
* 555 *	WALL1-SW-FL1	= EXTERIOR-WALL		
* 556 *	CONSTRUCTION	= WALL-1	X	= 0
* 557 *	Y	= 126.66	Z	= 0
* 558 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 559 *	AZIMUTH	= 270	TILT	= 90
* 560 *	..			
* 561 *				
* 562 *	G-WALL2-W-FL-1	= WINDOW		
* 563 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 564 *	WIDTH	= 63.33	Y	= 3.3
* 565 *	SETBACK	= 10		
* 566 *	..			
* 567 *				
* 568 *	WALL2-SW-FL1	= EXTERIOR-WALL		
* 569 *	CONSTRUCTION	= WALL-1	X	= 0
* 570 *	Y	= 63.33	Z	= 0
* 571 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 572 *	AZIMUTH	= 270	TILT	= 90
* 573 *	..			
* 574 *				
* 575 *	G-WALL2-S-FL-1	= WINDOW		
* 576 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 577 *	WIDTH	= 63.33	Y	= 3.3
* 578 *	SETBACK	= 10		
* 579 *	..			
* 580 *				
* 581 *	ROOF-2A	= EXTERIOR-WALL		
* 582 *	CONSTRUCTION	= ROOF-1	X	= 63.33
* 583 *	Y	= -86.58	Z	= 26.4
* 584 *	HEIGHT	= 80	WIDTH	= 86.58
* 585 *	AZIMUTH	= 180	TILT	= Q
* 586 *	..			
* 587 *				
* 588 *	ROOF4A	= EXTERIOR-WALL		
* 589 *	CONSTRUCTION	= ROOF-1	X	= 149.91
* 590 *	Y	= -150	Z	= 26.4
* 591 *	HEIGHT	= 65	WIDTH	= 123
* 592 *	AZIMUTH	= 180	TILT	= 0
* 593 *	..			
* 594 *				
* 595 *	FL_1_2A	= EXTERIOR-WALL		
* 596 *	CONSTRUCTION	= FLOOR	X	= 63.33
* 597 *	Y	= -86.58	Z	= 0
* 598 *	HEIGHT	= 80	WIDTH	= 86.58

* 599 *	AZIMUTH	= 180	TILT	= 0
* 600 *	..			
* 601 *				
* 602 *	FL_1_4A = EXTERIOR-WALL			
* 603 *	CONSTRUCTION	= FLOOR	X	= 149.91
* 604 *	Y	= -150	Z	= 0
* 605 *	HEIGHT	= 65	WIDTH	= 123
* 606 *	AZIMUTH	= 180	TILT	= 0
* 607 *	..			
* 608 *				
* 609 *	N-FL-B = SPACE			
* 610 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 36780.3
* 611 *	VOLUME	= 367803.0	FLOOR-MULTIPLIER	= 1
* 612 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 613 *	SOURCE-TYPE	= ELECTRIC		
* 614 *	FLOOR-WEIGHT	= 130.0		
* 615 *	TEMPERATURE	= (75.0)		
* 616 *	..			
* 617 *				
* 618 *	WALL1-N-FL-B = EXTERIOR-WALL			
* 619 *	CONSTRUCTION	= WALL-1	X	= 138.56
* 620 *	Y	= 138.56	Z	= -14.2
* 621 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 622 *	TILT	= 90		
* 623 *	..			
* 624 *				
* 625 *	WALL2-N-FL-B = EXTERIOR-WALL			
* 626 *	CONSTRUCTION	= WALL-1	X	= 138.56
* 627 *	Y	= 63.33	Z	= -14.2
* 628 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 629 *	AZIMUTH	= 90	TILT	= 90
* 630 *	..			
* 631 *				
* 632 *	UN-N-FL-B = UNDERGROUND-WALL			
* 633 *	CONSTRUCTION	= WALL-1	AREA	= 2000
* 634 *	..			
* 635 *				
* 636 *	WALL3-N-FL-B = EXTERIOR-WALL			
* 637 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 638 *	Y	= 63.33	Z	= -16.65
* 639 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 640 *	TILT	= 90		
* 641 *	..			
* 642 *				
* 643 *	WALL4-N-FL-B = EXTERIOR-WALL			
* 644 *	CONSTRUCTION	= WALL-1	X	= 213.24
* 645 *	Y	= -23.25	Z	= -16.65
* 646 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 647 *	AZIMUTH	= 90	TILT	= 90
* 648 *	..			
* 649 *				
* 650 *	WALL5-N-FL-B = EXTERIOR-WALL			
* 651 *	CONSTRUCTION	= WALL-1	X	= 213.20
* 652 *	Y	= -23.25	Z	= -16.65
* 653 *	HEIGHT	= 16.65	WIDTH	= 83.25

* 654 *	AZIMUTH	= 225	TILT	= 90
* 655 *	..			
* 656 *				
* 657 *	WALL6-N-FL-B = EXTERIOR-WALL			
* 658 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 659 *	Y	= -82.06	Z	= -16.65
* 660 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 661 *	AZIMUTH	= 0	TILT	= 90
* 662 *	..			
* 663 *				
* 664 *	WALL7-N-FL-B = EXTERIOR-WALL			
* 665 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 666 *	Y	= -82.06	Z	= -16.65
* 667 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 668 *	AZIMUTH	= 225	TILT	= 90
* 669 *	..			
* 670 *				
* 671 *	WALL8-N-FL-B = EXTERIOR-WALL			
* 672 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 673 *	Y	= -140.88	Z	= -16.65
* 674 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 675 *	AZIMUTH	= 270	TILT	= 90
* 676 *	..			
* 677 *				
* 678 *	WALL10 N FL B = EXTERIOR-WALL			
* 679 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 680 *	Y	= 138.56	Z	= -14.2
* 681 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 682 *	TILT	= 90		
* 683 *	..			
* 684 *				
* 685 *	WALL9 N FL B = EXTERIOR-WALL			
* 686 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 687 *	Y	= -224.13	Z	= -16.65
* 688 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 689 *	AZIMUTH	= 315	TILT	= 90
* 690 *	..			
* 691 *				
* 692 *	ROOF B FL = EXTERIOR-WALL			
* 693 *	CONSTRUCTION	= ROOF-1	X	= 138.56
* 694 *	Y	= 138.56	Z	= 0
* 695 *	HEIGHT	= 150.46	WIDTH	= 150.46
* 696 *	TILT	= 0		
* 697 *	..			
* 698 *				
* 699 *	G1-ROOF-B-FL = WINDOW			
* 700 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2
* 701 *	WIDTH	= 132.46	X	= 9
* 702 *	Y	= 9		
* 703 *	..			
* 704 *				
* 705 *	G2-ROOF-B-FL = WINDOW			
* 706 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 707 *	WIDTH	= 2.0	X	= 9
* 708 *	Y	= 9		

* 709 *	..			
* 710 *				
* 711 *	G3-ROOF-B-FL = WINDOW			
* 712 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 713 *	WIDTH = 2.0	X	= 9	
* 714 *	Y = 49			
* 715 *	..			
* 716 *				
* 717 *	G4-ROOF-B-FL = WINDOW			
* 718 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 719 *	WIDTH = 2.0	X	= 9	
* 720 *	Y = 89.0			
* 721 *	..			
* 722 *				
* 723 *	G5-ROOF-B-FL = WINDOW			
* 724 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2.0	
* 725 *	WIDTH = 132.46	X	= 9	
* 726 *	Y = 139.46			
* 727 *	..			
* 728 *				
* 729 *	G6-ROOF-B-FL = WINDOW			
* 730 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 731 *	WIDTH = 2.0	X	= 139.46	
* 732 *	Y = 89.0			
* 733 *	..			
* 734 *				
* 735 *	G7-ROOF-B-FL = WINDOW			
* 736 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 737 *	WIDTH = 2.0	X	= 139.46	
* 738 *	Y = 49.0			
* 739 *	..			
* 740 *				
* 741 *	G8-ROOF-B-FL = WINDOW			
* 742 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 743 *	WIDTH = 2.0	X	= 139.46	
* 744 *	Y = 9.0			
* 745 *	..			
* 746 *				
* 747 *	S-FL-B = SPACE			
* 748 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 36780.3	
* 749 *	VOLUME = 367803.0	FLOOR-MULTIPLIER	= 1	
* 750 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR			
* 751 *	SOURCE-TYPE = ELECTRIC			
* 752 *	FLOOR-WEIGHT = 130.0			
* 753 *	TEMPERATURE =(75.0)			
* 754 *	..			
* 755 *				
* 756 *	WALL1-S-FL-B = EXTERIOR-WALL			
* 757 *	CONSTRUCTION = WALL-1	X	= -11.90	
* 758 *	Y = -11.9	Z	= -14.2	
* 759 *	HEIGHT = 18.55	WIDTH	= 75.23	
* 760 *	AZIMUTH = 180	TILT	= 90	
* 761 *	..			
* 762 *				
* 763 *	WALL2-S-FL-B = EXTERIOR-WALL			

* 764 *	CONSTRUCTION	= WALL-1	X	= -11.9
* 765 *	Y	= 63.33	Z	= -14.2
* 766 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 767 *	AZIMUTH	= 270	TILT	= 90
* 768 *	..			
* 769 *				
* 770 *	UN-S-FL-B = UNDERGROUND-WALL			
* 771 *	CONSTRUCTION	= WALL-1	AREA	= 2000
* 772 *	..			
* 773 *				
* 774 *	WALL3-S-FL-B = EXTERIOR-WALL			
* 775 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 776 *	Y	= 0	Z	= -16.65
* 777 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 778 *	AZIMUTH	= 270	TILT	= 90
* 779 *	..			
* 780 *				
* 781 *	WALL4-S-FL-B = EXTERIOR-WALL			
* 782 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 783 *	Y	= -86.58	Z	= -16.65
* 784 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 785 *	AZIMUTH	= 180	TILT	= 90
* 786 *	..			
* 787 *				
* 788 *	WALL5-S-FL-B = EXTERIOR-WALL			
* 789 *	CONSTRUCTION	= WALL-1	X	= 149.91
* 790 *	Y	= -86.58	Z	= -16.65
* 791 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 792 *	AZIMUTH	= 225	TILT	= 90
* 793 *	..			
* 794 *				
* 795 *	WALL6-S-FL-B = EXTERIOR-WALL			
* 796 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 797 *	Y	= -145.4	Z	= -16.65
* 798 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 799 *	AZIMUTH	= 270	TILT	= 90
* 800 *	..			
* 801 *				
* 802 *	WALL7-S-FL-B = EXTERIOR-WALL			
* 803 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 804 *	Y	= -231.98	Z	= -16.65
* 805 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 806 *	AZIMUTH	= 225	TILT	= 90
* 807 *	..			
* 808 *				
* 809 *	WALL8-S-FL-B = EXTERIOR-WALL			
* 810 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 811 *	Y	= -290.8	Z	= -16.65
* 812 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 813 *	AZIMUTH	= 180	TILT	= 90
* 814 *	..			
* 815 *				
* 816 *	WALL9-S-FL-B = EXTERIOR-WALL			
* 817 *	CONSTRUCTION	= WALL-1	X	= 384.05
* 818 *	Y	= -257.24	Z	= -16.65

* 819 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 820 *	AZIMUTH	= 315	TILT	= 90
* 821 *	..			
* 822 *				
* 823 *	WALL10 S_FL B = EXTERIOR-WALL			
* 824 *	CONSTRUCTION	= WALL-1	X	= -11.9
* 825 *	Y	= 138.56	Z	= -14.2
* 826 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 827 *	AZIMUTH	= 270	TILT	= 90
* 828 *	..			
* 829 *				
* 830 *	N-FL-2 = SPACE			
* 831 *	SPACE-CONDITIONS	= OFFICESPACE	AREA	= 3982
* 832 *	VOLUME	= 39820	FLOOR-MULTIPLIER	= 1
* 833 *	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE		
* 834 *	SOURCE-TYPE	= ELECTRIC		
* 835 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 836 *	TEMPERATURE	=(75.0)		
* 837 *	..			
* 838 *				
* 839 *	WALL1-N-FL-2 = EXTERIOR-WALL			
* 840 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 841 *	Y	= 115.58	Z	= 13.2
* 842 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 843 *	TILT	= 90		
* 844 *	..			
* 845 *				
* 846 *	G-WALL1-N-FL-2 = WINDOW			
* 847 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 848 *	WIDTH	= 52.25	Y	= 3.3
* 849 *	SETBACK	= 10		
* 850 *	..			
* 851 *				
* 852 *	WALL1-W-FL-2 = EXTERIOR-WALL			
* 853 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 854 *	Y	= 115.58	Z	= 13.2
* 855 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 856 *	TILT	= 90		
* 857 *	..			
* 858 *				
* 859 *	G-WALL1-W-FL-2 = WINDOW			
* 860 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 861 *	WIDTH	= 52.25	Y	= 3.3
* 862 *	SETBACK	= 10		
* 863 *	..			
* 864 *				
* 865 *	WALL2-N-FL-2 = EXTERIOR-WALL			
* 866 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 867 *	Y	= 63.33	Z	= 13.2
* 868 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 869 *	AZIMUTH	= 90	TILT	= 90
* 870 *	..			
* 871 *				
* 872 *	G-WALL2-N-FL-2 = WINDOW			
* 873 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63

* 874 *	WIDTH	= 52.25	Y	= 3.3
* 875 *	SETBACK	= 10		
* 876 *	..			
* 877 *				
* 878 *	WALL2-W-FL-2 = EXTERIOR-WALL			
* 879 *	CONSTRUCTION	= WALL-1	X	= 11.08
* 880 *	Y	= 115.58	Z	= 13.2
* 881 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 882 *	AZIMUTH	= 270	TILT	= 90
* 883 *	..			
* 884 *				
* 885 *	G-WALL2-W-FL-2 = WINDOW			
* 886 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 887 *	WIDTH	= 52.25	Y	= 3.3
* 888 *	SETBACK	= 10		
* 889 *	..			
* 890 *				
* 891 *	ROOF1-FL-2 = EXTERIOR-WALL			
* 892 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 893 *	Y	= 115.58	Z	= 26.4
* 894 *	HEIGHT	= 104.5	WIDTH	= 104.5
* 895 *	TILT	= 0		
* 896 *	..			
* 897 *				
* 898 *	G1-ROOF1-FL-2 = WINDOW			
* 899 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 900 *	WIDTH	= 86.5	X	= 9.0
* 901 *	Y	= 9.0		
* 902 *	..			
* 903 *				
* 904 *	G2-ROOF1-FL-2 = WINDOW			
* 905 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 906 *	WIDTH	= 2.0	X	= 9.0
* 907 *	Y	= 9.0		
* 908 *	..			
* 909 *				
* 910 *	G3-ROOF1-FL-2 = WINDOW			
* 911 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 912 *	WIDTH	= 2.0	X	= 9.0
* 913 *	Y	= 37.83		
* 914 *	..			
* 915 *				
* 916 *	G4-ROOF1-FL-2 = WINDOW			
* 917 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 918 *	WIDTH	= 2.0	X	= 9.0
* 919 *	Y	= 66.66		
* 920 *	..			
* 921 *				
* 922 *	G5-ROOF1-FL-2 = WINDOW			
* 923 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 924 *	WIDTH	= 86.5	X	= 9.0
* 925 *	Y	= 93.5		
* 926 *	..			
* 927 *				
* 928 *	G6-ROOF1-FL-2 = WINDOW			

* 929 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 930 *	WIDTH	= 2.0	X	= 93.5
* 931 *	Y	= 66.66		
* 932 *	..			
* 933 *				
* 934 *	G7-ROOF1-FL-2	= WINDOW		
* 935 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 936 *	WIDTH	= 2.0	X	= 93.5
* 937 *	Y	= 37.83		
* 938 *	..			
* 939 *				
* 940 *	G8-ROOF1-FL-2	= WINDOW		
* 941 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 942 *	WIDTH	= 2.0	X	= 93.5
* 943 *	Y	= 9.0		
* 944 *	..			
* 945 *				
* 946 *	INT-WALL-N-FL-2	= INTERIOR-WALL		
* 947 *	NEXT-TO	= S-FL-2	CONSTRUCTION	= INTERIOR-WALLS
* 948 *	AREA	= 650		
* 949 *	..			
* 950 *				
* 951 *	S-FL-2	= SPACE		
* 952 *	SPACE-CONDITIONS	= OFFICESPACE	AREA	= 3982
* 953 *	VOLUME	= 39820	FLOOR-MULTIPLIER	= 1
* 954 *	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE		
* 955 *	SOURCE-TYPE	= ELECTRIC		
* 956 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 957 *	TEMPERATURE	=(75.0)		
* 958 *	..			
* 959 *				
* 960 *	WALL1-S-FL-2	= EXTERIOR-WALL		
* 961 *	CONSTRUCTION	= WALL-1	X	= 11.08
* 962 *	Y	= 11.08	Z	= 13.2
* 963 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 964 *	AZIMUTH	= 180	TILT	= 90
* 965 *	..			
* 966 *				
* 967 *	G-WALL1-S-FL-2	= WINDOW		
* 968 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 969 *	WIDTH	= 52.25	Y	= 3.3
* 970 *	SETBACK	= 10		
* 971 *	..			
* 972 *				
* 973 *	WALL2-S-FL-2	= EXTERIOR-WALL		
* 974 *	CONSTRUCTION	= WALL-1	X	= 11.08
* 975 *	Y	= 63.33	Z	= 13.2
* 976 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 977 *	AZIMUTH	= 270	TILT	= 90
* 978 *	..			
* 979 *				
* 980 *	G-WALL2-S-FL-2	= WINDOW		
* 981 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 982 *	WIDTH	= 52.25	Y	= 3.3
* 983 *	SETBACK	= 10		

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* 984 * ..
* 985 *
* 986 * N-FL-3 = SPACE
* 987 * SPACE-CONDITIONS = OFFICESPACE AREA = 2441.2
* 988 * VOLUME = 24112 FLOOR-MULTIPLIER = 1
* 989 * DAYLIGHT-REP-SCH = OFFICE-LIGHTSCHE
* 990 * SOURCE-TYPE = ELECTRIC
* 991 * FLOOR-WEIGHT = 130.0 FURNITURE-TYPE = LIGHT
* 992 * TEMPERATURE = (75.0)
* 993 * ..
* 994 *
* 995 * WALL1-N-FL-3 = EXTERIOR-WALL
* 996 * CONSTRUCTION = WALL-1 X = 104.5
* 997 * Y = 104.5 Z = 26.4
* 998 * HEIGHT = 13.2 WIDTH = 41.17
* 999 * TILT = 90
*1000 * ..
*1001 *
*1002 * G-WALL1-N-FL-3 = WINDOW
*1003 * GLASS-TYPE = SELECTIVE HEIGHT = 3.63
*1004 * WIDTH = 41.17 Y = 3.3
*1005 * SETBACK = 10
*1006 * ..
*1007 *
*1008 * WALL1-W-FL-3 = EXTERIOR-WALL
*1009 * CONSTRUCTION = WALL-1 X = 63.33
*1010 * Y = 104.50 Z = 26.4
*1011 * HEIGHT = 13.2 WIDTH = 41.17
*1012 * TILT = 90
*1013 * ..
*1014 *
*1015 * G-WALL1-W-FL-3 = WINDOW
*1016 * GLASS-TYPE = SELECTIVE HEIGHT = 3.63
*1017 * WIDTH = 41.17 Y = 3.3
*1018 * SETBACK = 10
*1019 * ..
*1020 *
*1021 * WALL2-N-FL-3 = EXTERIOR-WALL
*1022 * CONSTRUCTION = WALL-1 X = 104.50
*1023 * Y = 63.33 Z = 26.4
*1024 * HEIGHT = 13.2 WIDTH = 41.17
*1025 * AZIMUTH = 90 TILT = 90
*1026 * ..
*1027 *
*1028 * G-WALL2-N-FL-3 = WINDOW
*1029 * GLASS-TYPE = SELECTIVE HEIGHT = 3.63
*1030 * WIDTH = 41.17 Y = 3.3
*1031 * SETBACK = 10
*1032 * ..
*1033 *
*1034 * ROOF1-FL-3 = EXTERIOR-WALL
*1035 * CONSTRUCTION = WALL-1 X = 104.5
*1036 * Y = 104.5 Z = 39.6
*1037 * HEIGHT = 82.34 WIDTH = 82.34
*1038 * TILT = 0

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*1039 *	..		
*1040 *			
*1041 *	S-FL-3 = SPACE		
*1042 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 2441.2
*1043 *	VOLUME = 24412	FLOOR-MULTIPLIER	= 1
*1044 *	DAYLIGHT-REP-SCH = OFFICE-LIGHTSCHE		
*1045 *	SOURCE-TYPE = ELECTRIC		
*1046 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
*1047 *	TEMPERATURE = (75.0)		
*1048 *	..		
*1049 *			
*1050 *	WALL1-S-FL-3 = EXTERIOR-WALL		
*1051 *	CONSTRUCTION = WALL-1	X	= 22.16
*1052 *	Y = 22.16	Z	= 26.4
*1053 *	HEIGHT = 13.2	WIDTH	= 41.17
*1054 *	AZIMUTH = 180	TILT	= 90
*1055 *	..		
*1056 *			
*1057 *	G-WALL1-S-FL-3 = WINDOW		
*1058 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1059 *	WIDTH = 41.17	Y	= 3.3
*1060 *	SETBACK = 10		
*1061 *	..		
*1062 *			
*1063 *	WALL2-S-FL-3 = EXTERIOR-WALL		
*1064 *	CONSTRUCTION = WALL-1	X	= 22.16
*1065 *	Y = 63.33	Z	= 26.4
*1066 *	HEIGHT = 13.2	WIDTH	= 41.17
*1067 *	AZIMUTH = 270	TILT	= 90
*1068 *	..		
*1069 *			
*1070 *	G-WALL2-S-FL-3 = WINDOW		
*1071 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1072 *	WIDTH = 41.17	Y	= 3.3
*1073 *	SETBACK = 10		
*1074 *	..		
*1075 *			
*1076 *	WALL2-W-FL-3 = EXTERIOR-WALL		
*1077 *	CONSTRUCTION = WALL-1	X	= 22.16
*1078 *	Y = 104.50	Z	= 26.4
*1079 *	HEIGHT = 13.2	WIDTH	= 41.17
*1080 *	AZIMUTH = 270	TILT	= 90
*1081 *	..		
*1082 *			
*1083 *	G-WALL2-W-FL-3 = WINDOW		
*1084 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1085 *	WIDTH = 41.17	Y	= 3.3
*1086 *	SETBACK = 10		
*1087 *	..		
*1088 *			
*1089 *	CORE-FL-1 = SPACE		
*1090 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 2800
*1091 *	VOLUME = 28000	FLOOR-MULTIPLIER	= 1
*1092 *	SOURCE-TYPE = ELECTRIC		
*1093 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT

*1094 *	TEMPERATURE	=(75.0)		
*1095 *	..			
*1096 *				
*1097 *	CORE-FL-2 = SPACE			
*1098 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 1991
*1099 *	VOLUME	= 19910	FLOOR-MULTIPLIER	= 1
*1100 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
*1101 *	SOURCE-TYPE	= ELECTRIC		
*1102 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1103 *	TEMPERATURE	=(75.0)		
*1104 *	..			
*1105 *				
*1106 *	CORE-FL-3 = SPACE			
*1107 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 1220.6
*1108 *	VOLUME	= 12206	FLOOR-MULTIPLIER	= 1
*1109 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
*1110 *	SOURCE-TYPE	= ELECTRIC		
*1111 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1112 *	TEMPERATURE	=(75.0)		
*1113 *	..			
*1114 *				
*1115 *	WALL3-CORE-FL-3 = EXTERIOR-WALL			
*1116 *	CONSTRUCTION	= WALL-1	X	= 104.5
*1117 *	Y	= 22.16	Z	= 26.4
*1118 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1119 *	AZIMUTH	= 90	TILT	= 90
*1120 *	..			
*1121 *				
*1122 *	G-WALL3-CORE-F-3 = WINDOW			
*1123 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 7.26
*1124 *	WIDTH	= 41.17	Y	= 3.3
*1125 *	..			
*1126 *				
*1127 *	WALL1-CORE-FL-3 = EXTERIOR-WALL			
*1128 *	CONSTRUCTION	= WALL-1	X	= 63.33
*1129 *	Y	= 22.16	Z	= 26.4
*1130 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1131 *	AZIMUTH	= 180	TILT	= 90
*1132 *	..			
*1133 *				
*1134 *	G-WALL1-CORE-F-3 = WINDOW			
*1135 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 7.26
*1136 *	WIDTH	= 41.17	Y	= 3.3
*1137 *	..			
*1138 *				
*1139 *	CORE-FL-B = SPACE			
*1140 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 2800
*1141 *	VOLUME	= 28000	FLOOR-MULTIPLIER	= 1
*1142 *	SOURCE-TYPE	= ELECTRIC		
*1143 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1144 *	TEMPERATURE	=(75.0)		
*1145 *	..			
*1146 *				
*1147 *	N-FL-4 = SPACE			
*1148 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 6400

```

*1149 * VOLUME = 84480
*1150 * SOURCE-TYPE = ELECTRIC
*1151 * FLOOR-WEIGHT = 130.0 FURNITURE-TYPE = LIGHT
*1152 * TEMPERATURE = (75.0)
*1153 * ..
*1154 *
*1155 * WALL-N-FL-4 = EXTERIOR-WALL
*1156 * CONSTRUCTION = WALL-1 X = 104.5
*1157 * Y = 104.5 Z = 39.6
*1158 * HEIGHT = 21 WIDTH = 82.34
*1159 * TILT = 90
*1160 * ..
*1161 *
*1162 * WALL-S-FL-4 = EXTERIOR-WALL
*1163 * CONSTRUCTION = WALL-1 X = 22.16
*1164 * Y = 22.16 Z = 39.6
*1165 * HEIGHT = 21 WIDTH = 82.34
*1166 * AZIMUTH = 180 TILT = 90
*1167 * ..
*1168 *
*1169 * WALL-W-FL-4 = EXTERIOR-WALL
*1170 * CONSTRUCTION = WALL-1 X = 22.16
*1171 * Y = 104.50 Z = 39.6
*1172 * HEIGHT = 21 WIDTH = 82.34
*1173 * AZIMUTH = 270 TILT = 90
*1174 * ..
*1175 *
*1176 * WALL-E-FL-4 = EXTERIOR-WALL
*1177 * CONSTRUCTION = WALL-1 X = 104.5
*1178 * Y = 22.16 Z = 39.6
*1179 * HEIGHT = 21 WIDTH = 82.34
*1180 * AZIMUTH = 90 TILT = 90
*1181 * ..
*1182 *
*1183 * ROOF1-FL-4 = EXTERIOR-WALL
*1184 * CONSTRUCTION = ROOF-1 X = 104.5
*1185 * Y = 104.5 Z = 60.6
*1186 * HEIGHT = 82.34 WIDTH = 82.34
*1187 * TILT = 0
*1188 * ..
*1189 *
*1190 * $BUILDINGS BUILDING-RESOURCE
*1191 * ELEC-SCHEDULE = LIGHTSHED-YEAR
*1192 * ..
*1193 *
*1194 * $REPL$ LOADS-REPORT
*1195 * VERIFICATION = (LV-A, LV-B)
*1196 * SUMMARY = {LS-A, LS-B, LS-C, LS-D, LS-E, LS-F, LS-H, LS-I}
*1197 * ..
*1198 *
*1199 * LRB-3 = REPORT-BLOCK
*1200 * VARIABLE-TYPE = N-FL-1
*1201 * VARIABLE-LIST = {16, 17, 18, 19, 20, 22, 23, 25, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38
*1202 * , 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 55, 56, 57}
*1203 * ..

```

```
*1204 *  
*1205 * LHR-3 = HOURLY-REPORT  
*1206 * REPORT-SCHEDULE = SCH-HR-1  
*1207 * REPORT-BLOCK   =(LRB-3)  
*1208 * ..  
*1209 *  
*1210 * END ..  
*1211 * COMPUTE LOADS ..  
*1212 *  
*1213 * INPUT SYSTEMS ..
```



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SDL PROCESSOR INPUT DATA

7/30/1996 17:43: 8 SDL RUN 1

```

*1214 *
*1215 * TITLE
*1216 *   LINE-1  *AIR-SIDE SYSTEMS OF TECHNOHANI*
*1217 *   LINE-2  *PATUMTHANI, BANGKOK*
*1218 *   LINE-3  *USING DOEPLUS./DOE2 ANALYSIS*
*1219 *   LINE-4  *AND INFORMATION AS SPECIFIED*
*1220 *   LINE-5  *WEATHER DATA, BANGKOK, THAILAND*
*1221 * ..
*1222 *
*1223 * ABORT          = ERRORS ..
*1224 *
*1225 * DIAGNOSTIC     = CAUTIONS ..
*1226 *
*1227 * COOLSTPT = SCHEDULE
*1228 *   THRU DEC 31 (WD) (1,7)(99) (8,18)(72) (19,24)(99)
*1229 *   (WEH) (1,24)(99)
*1230 * ..
*1231 *
*1232 * FANS-ON = SCHEDULE
*1233 *   THRU DEC 31 (WD) (1,7)(0) (8,18)(1) (19,24)(0)
*1234 *   (WEH) (1,24)(0)
*1235 * ..
*1236 *
*1237 * HRLYSYSPT = SCHEDULE
*1238 *   THRU APR 1 (ALL) (1,24)(0)
*1239 *   THRU APR 5 (ALL) (1,24)(1)
*1240 *   THRU DEC 31 (ALL) (1,24)(0)
*1241 * ...
*1242 *
*1243 * HOTDECK1 = DAY-RESET-SCH
*1244 *   SUPPLY-HI      = 120          SUPPLY-LO      = 70
*1245 *   OUTSIDE-HI    = 70          OUTSIDE-LO    = 0
*1246 * ..
*1247 *
*1248 * COLDDECK1 = DAY-RESET-SCH
*1249 *   SUPPLY-HI      = 80          SUPPLY-LO      = 55
*1250 *   OUTSIDE-HI    = 100         OUTSIDE-LO    = 65
*1251 * ..
*1252 *
*1253 * COLD-RESET-1 = RESET-SCHEDULE
*1254 *   THRU DEC 31 (ALL) COLDDECK1
*1255 * ..
*1256 *
*1257 * CONTROL = ZONE-CONTROL
*1258 *   DESIGN-HEAT-T  = 0          DESIGN-COOL-T  = 74
*1259 *   COOL-TEMP-SCH = COOLSTPT   THERMOSTAT-TYPE = REVERSE-ACTION
*1260 * ..

```

```

*1261 *
*1262 * VENTILATION = ZONE-AIR
*1263 *   OA-CFM/PER   = 12.8
*1264 * ..
*1265 *
*1266 * N-FL-1 = ZONE
*1267 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1268 * ..
*1269 *
*1270 * W-FL-1 = ZONE
*1271 *   $ LIKE           = N-FL-1
*1272 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1273 * ..
*1274 *
*1275 * S-FL-1 = ZONE
*1276 *   $ LIKE           = N-FL-1
*1277 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1278 * ..
*1279 *
*1280 * N-FL-B = ZONE
*1281 *   $ LIKE           = N-FL-1
*1282 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1283 * ..
*1284 *
*1285 * S-FL-B = ZONE
*1286 *   $ LIKE           = N-FL-1
*1287 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1288 * ..
*1289 *
*1290 * N-FL-2 = ZONE
*1291 *   $ LIKE           = N-FL-1
*1292 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1293 * ..
*1294 *
*1295 * S-FL-2 = ZONE
*1296 *   $ LIKE           = N-FL-1
*1297 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1298 * ..
*1299 *
*1300 * N-FL-3 = ZONE
*1301 *   $ LIKE           = N-FL-1
*1302 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1303 * ..
*1304 *
*1305 * S-FL-3 = ZONE
*1306 *   $ LIKE           = N-FL-1
*1307 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1308 * ..
*1309 *
*1310 * CORE-FL-1 = ZONE
*1311 *   $ LIKE           = N-FL-1
*1312 *   ZONE-CONTROL   = CONTROL           ZONE-AIR           = VENTILATION
*1313 * ..
*1314 *
*1315 * CORE-FL-2 = ZONE

```

```

*1316 * $ LIKE = N-FL-1
*1317 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1318 * ..
*1319 *
*1320 * CORE-FL-3 = ZONE
*1321 * $ LIKE = N-FL-1
*1322 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1323 * ..
*1324 *
*1325 * CORE-FL-B = ZONE
*1326 * $ LIKE = N-FL-1
*1327 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1328 * ..
*1329 *
*1330 * N-FL-4 = ZONE
*1331 * $ LIKE = N-FL-1
*1332 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1333 * ..
*1334 *
*1335 * SYSTEMCONTROLS = SYSTEM-CONTROL
*1336 * MIN-SUPPLY-T = 55 MAX-SUPPLY-T = 60
*1337 * COOL-CONTROL = RESET COOL-RESET-SCH = COLD-RESET-1
*1338 * MAX-HUMIDITY = 60
*1339 * ..
*1340 *
*1341 * SYSAIR = SYSTEM-AIR
*1342 * ..
*1343 *
*1344 * FANSON = SYSTEM-FANS
*1345 * SUPPLY-STATIC = .55 FAN-CONTROL = INLET
*1346 * FAN-SCHEDULE = FANS-ON RETURN-STATIC = 1
*1347 * NIGHT-CYCLE-CTRL = CYCLE-ON-ANY
*1348 * ..
*1349 *
*1350 * ACSYSTEM = SYSTEM
*1351 * SYSTEM-TYPE = VAVS SYSTEM-CONTROL = SYSTEMCONTROLS
*1352 * SYSTEM-AIR = SYSAIR SYSTEM-FANS = FANSON
*1353 * ZONE-NAMES = (CORE-FL-1,CORE-FL-2,CORE-FL-3,CORE-FL-B,N-FL-1,N-FL-2
*1354 * ,N-FL-3,N-FL-4,N-FL-B,S-FL-1,S-FL-2,S-FL-3,S-FL-B,W-FL-1)
*1355 * ..
*1356 *
*1357 * $SYSTEM-REP$ SYSTEMS-REPORT
*1358 * VERIFICATION = (SV-A)
*1359 * SUMMARY = (SS-A,SS-H,SS-I)
*1360 * ..
*1361 *
*1362 * END ..
*1363 * COMPUTE SYSTEMS ..
*1364 *
*1365 * INPUT PLANT ..

```

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PDL PROCESSOR INPUT DATA

7/30/1996 17:43: 8 PDL RUN 1

```

*1366 *
*1367 * TITLE
*1368 *   LINE-1  *ENERGY SIMULATION OF*
*1369 *   LINE-2  *TECHNOTHANI BUILDING*
*1370 *   LINE-3  *COOLING TOWER SYSTEM WITH ICE STORAGE*
*1371 *   LINE-4  *USING DOEPLUS/DOEZ PROGRAM*
*1372 *   LINE-5  *AND WEATHER FILES, BANGKOK*
*1373 * ..
*1374 *
*1375 * ABORT      = ERRORS ..
*1376 *
*1377 * DIAGNOSTIC = CAUTIONS ..
*1378 *
*1379 * PLANT-SCH-HR-1 = SCHEDULE
*1380 *   THRU MAY 3 (ALL) (1,24) (0)
*1381 *   THRU MAY 4 (ALL) (1,24) (1)
*1382 *   THRU DEC 31 (ALL) (1,24) (0)
*1383 * ..
*1384 *
*1385 * PLANT-SCH-HR-2 = SCHEDULE
*1386 *   THRU APR 30 (ALL) (1,24) (0)
*1387 *   THRU MAY 31 (ALL) (1,24) (1)
*1388 *   THRU DEC 31 (ALL) (1,24) (0)
*1389 * ..
*1390 *
*1391 * CHILLER-CTRL = SCHEDULE
*1392 *   THRU DEC 31 (ALL) (1,7) (0) (8,19) (1) (20,24) (0)
*1393 * ..
*1394 *
*1395 * H-CTRL = SCHEDULE
*1396 *   THRU DEC 31 (ALL) (1,24) (0)
*1397 * ..
*1398 *
*1399 * E-CTRL = SCHEDULE
*1400 *   THRU DEC 31 (ALL) (1,24) (0)
*1401 * ..
*1402 *
*1403 * CTW = PLANT-EQUIPMENT
*1404 *   TYPE      = COOLING-TWR      SIZE      = -999
*1405 * ..
*1406 *
*1407 * ICEM = PLANT-EQUIPMENT
*1408 *   TYPE      = HERM-CENT-CHLR    SIZE      = -999
*1409 * ..
*1410 *
*1411 * $PLR-ICEMS PART-LOAD-RATIO
*1412 *   TYPE      = HERM-CENT-CHLR    MIN-RATIO = 0.1

```

```

*1413 *   MAX-RATIO           = 1.0           OPERATING-RATIO = 0.8
*1414 *   ELEC-INPUT-RATIO = 0.220
*1415 *   ..
*1416 *
*1417 * $PLR-CTW$ PART-LOAD-RATIO
*1418 *   TYPE                 = COOLING-TWR           ELEC-INPUT-RATIO = 0.0
*1419 *   ..
*1420 *
*1421 * $DESIGNWBS PLANT-PARAMETERS
*1422 *   CHILLER-CONTROL = STANDBY
*1423 *   TWR-FAN-CONTROL = TWO-SPEED           TWR-DESIGN-WETBU = 83.0
*1424 *   ..
*1425 *
*1426 * $L-M$ LOAD-MANAGEMENT
*1427 *   PRED-LOAD-RANGE = 99
*1428 *   ASSIGN-SCHEDULE = (H-CTRL,CHILLER-CTRL,E-CTRL)
*1429 *   ..
*1430 *
*1431 * $EGAT$ ENERGY-RESOURCE
*1432 *   RESOURCE             = ELECTRICITY           SOURCE-SITE-EFF = 0.3333
*1433 *   ..
*1434 *
*1435 * $ECONOMICS$ PLANT-REPORT
*1436 *   VERIFICATION         = (PV-A)
*1437 *   SUMMARY               = (PS-A,PS-G)
*1438 *   HOURLY-DATA-SAVE = YES
*1439 *   ..
*1440 *
*1441 * PRB-1 = REPORT-BLOCK
*1442 *   VARIABLE-TYPE        = GLOBAL
*1443 *   VARIABLE-LIST        = (1,2)
*1444 *   ..
*1445 *
*1446 * PRB-2 = REPORT-BLOCK
*1447 *   VARIABLE-TYPE        = PLANT
*1448 *   VARIABLE-LIST        = (2,3,9,10,12)
*1449 *   ..
*1450 *
*1451 * RB1 = REPORT-BLOCK
*1452 *   VARIABLE-TYPE        = HERM-CENT-CHLR
*1453 *   VARIABLE-LIST        = (1,8,10,16)
*1454 *   ..
*1455 *
*1456 * RB2 = REPORT-BLOCK
*1457 *   VARIABLE-TYPE        = CTANK-STORAGE
*1458 *   VARIABLE-LIST        = (1,4,12,14)
*1459 *   ..
*1460 *
*1461 * PHR-1 = HOURLY-REPORT
*1462 *   REPORT-SCHEDULE      = PLANT-SCH-HR-1
*1463 *   REPORT-BLOCK        = {PRB-1,PRB-2}
*1464 *   ..
*1465 *
*1466 * PLANT-REP = HOURLY-REPORT
*1467 *   REPORT-SCHEDULE      = PLANT-SCH-HR-1

```

*1468 * REPORT-BLOCK =(RB1,RB2)
*1469 * ..
*1470 *
*1471 * END ..

-----CAUTION-----NO HEATING EQUIPMENT HAS BEEN DEFINED

*1472 * COMPUTE PLANT ..
*1473 *
*1474 * INPUT ECONOMICS ..



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EDL PROCESSOR INPUT DATA

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```

*1475 *
*1476 * TITLE
*1477 *   LINE-1  *ENERGY COSTS SIMULATION OF*
*1478 *   LINE-2  *TECHNOTHANI BUILDING, BANGKOK*
*1479 *   LINE-3  *USING THE DOEPLUS/DOE2 PROGRAM*
*1480 *   LINE-4  *WEATHER DATA, BANGKOK THAILAND*
*1481 *   LINE-5  *AND COSTS DATA FROM EGAT*
*1482 * ..
*1483 *
*1484 * ABORT          = ERRORS ..
*1485 *
*1486 * DIAGNOSTIC     = WARNINGS ...
*1487 *
*1488 * WEEKDAY = DAY-CHARGE-SCH
*1489 *   (1,8) (ENERGYCHARGE)
*1490 *   (9,21) (PEAK,ENERGYCHARGE)
*1491 *   (22,24) (ENERGYCHARGE)
*1492 * ..
*1493 *
*1494 * WEEKEND = DAY-CHARGE-SCH
*1495 *   (1,24) (ENERGYCHARGE)
*1496 * ..
*1497 *
*1498 * TIMEOFUSE = SCHEDULE
*1499 *   THRU DEC 31 (WD) WEEKDAY
*1500 *                               (WEH) WEEKEND
*1501 * ..
*1502 *
*1503 * $OPERATIONALCOST$ ENERGY-COST
*1504 *   RESOURCE      = ELECTRICITY      UNIT          = 3413.0
*1505 *   ASSIGN-SCHEDULE = TIMEOFUSE
*1506 * ..
*1507 *
*1508 * PEAK = CHARGE-ASSIGNMENT
*1509 *   RESOURCE      = ELECTRICITY
*1510 *   TYPE          = DEMAND            UNIFORM-CHARGE = 309.0
*1511 * ..
*1512 *
*1513 * ENERGYCHARGE = CHARGE-ASSIGNMENT
*1514 *   RESOURCE      = ELECTRICITY
*1515 *   TYPE          = ENERGY          UNIFORM-CHARGE = 1.07
*1516 * ..
*1517 *
*1518 * $RUN-COSTS$ ECONOMICS-REPORT
*1519 *   VERIFICATION  = (ALL-VERIFICATION)
*1520 *   SUMMARY      = (ES-E,ES-D)
*1521 * ..

```

*1522 *
*1523 * END ..
*1524 * COMPUTE ECONOMICS ..
*1525 *
*1526 * STOP ..



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PERIOD OF STUDY

STARTING DATE	ENDING DATE	NUMBER OF DAYS
1 JAN 1995	31 DEC 1995	365

SITE CHARACTERISTIC DATA

STATION NAME	LATITUDE (DEG)	LONGITUDE (DEG)	ALTITUDE (FT)	TIME ZONE	BUILDING AZIMUTH (DEG)
1985 BANGKOK W/SOLAR	13.6	-100.6	0.	-7	0.0

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REPORT- LV-B SUMMARY OF SPACES OCCURRING IN THE PROJECT

NUMBER OF SPACES 14 EXTERIOR 11 INTERIOR 3

SPACE	SPACE MULT	SPACE TYPE	AZIMUTH	LIGHTING (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	AIR CHANGES PER HOUR	AREA (SQFT)	VOLUME (CUFT)
N-FL-1	1.0	EXT	0.0	0.83	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
W-FL-1	1.0	EXT	0.0	0.83	279.3	0.50	AIR-CHANGE	0.43	27932.40	279324.00
S-FL-1	1.0	EXT	0.0	0.83	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
N-FL-B	1.0	EXT	0.0	0.74	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
S-FL-B	1.0	EXT	0.0	0.74	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
N-FL-2	1.0	EXT	0.0	0.74	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
S-FL-2	1.0	EXT	0.0	0.74	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
N-FL-3	1.0	EXT	0.0	0.74	24.4	0.50	AIR-CHANGE	0.43	2441.20	24112.00
S-FL-3	1.0	EXT	0.0	0.74	24.4	0.50	AIR-CHANGE	0.43	2441.20	24412.00
CORE-FL-1	1.0	INT	0.0	0.74	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
CORE-FL-2	1.0	INT	0.0	0.74	19.9	0.50	AIR-CHANGE	0.33	1991.00	19910.00
CORE-FL-3	1.0	EXT	0.0	0.74	12.2	0.50	AIR-CHANGE	0.33	1220.60	12206.00
CORE-FL-B	1.0	INT	0.0	0.74	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
N-FL-4	1.0	EXT	0.0	0.74	64.0	0.50	AIR-CHANGE	0.27	6400.00	84480.00
BUILDING TOTALS					1679.6				167955.59	1699736.00

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SPACE NAME	MULTIPLIER SPACE FLOOR	COOLING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB	HEATING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB
N-FL-1	1. 1.	693.326	MAY 5 4 PM	99.F	79.F	-122.655	DEC 17 7 AM	60.F	57.F
W-FL-1	1. 1.	799.747	MAY 5 6 PM	96.F	81.F	-141.163	DEC 17 8 AM	63.F	58.F
S-FL-1	1. 1.	518.046	MAY 5 6 PM	96.F	81.F	-80.855	DEC 25 7 AM	63.F	58.F
N-FL-B	1. 1.	390.638	APR 14 4 PM	99.F	80.F	-47.767	DEC 17 7 AM	60.F	57.F
S-FL-B	1. 1.	285.789	OCT 20 4 PM	87.F	79.F	-33.491	DEC 17 7 AM	60.F	57.F
N-FL-2	1. 1.	192.959	MAY 5 3 PM	98.F	79.F	-35.124	DEC 17 7 AM	60.F	57.F
S-FL-2	1. 1.	40.587	APR 14 6 PM	99.F	78.F	-8.100	DEC 17 7 AM	60.F	57.F
N-FL-3	1. 1.	82.909	MAY 5 3 PM	98.F	79.F	-20.156	DEC 17 7 AM	60.F	57.F
S-FL-3	1. 1.	32.835	APR 14 6 PM	99.F	78.F	-8.570	DEC 17 7 AM	60.F	57.F
CORE-FL-1	1. 1.	17.908	APR 14 3 PM	100.F	80.F	-1.200	DEC 24 7 AM	62.F	57.F
CORE-FL-2	1. 1.	12.734	APR 14 3 PM	100.F	80.F	-0.853	DEC 24 7 AM	62.F	57.F
CORE-FL-3	1. 1.	40.006	FEB 21 3 PM	91.F	78.F	-5.193	DEC 17 7 AM	60.F	57.F
CORE-FL-B	1. 1.	17.908	APR 14 3 PM	100.F	80.F	-1.200	DEC 24 7 AM	62.F	57.F
N-FL-4	1. 1.	66.571	MAY 5 4 PM	99.F	79.F	-16.186	DEC 17 7 AM	60.F	57.F
SUM		3191.963				-522.512			
BUILDING PEAK		3036.443	MAY 5 4 PM	99.F	79.F	-499.178	DEC 17 7 AM	60.F	57.F

สถาบันวิทยบริการ
 จุฬาลงกรณ์มหาวิทยาลัย

SPACE N-FL-1.

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 19202 SQFT 1784 M2
 VOLUME 192023 CUFT 5438 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	17.528	5.133	0.000	0.000	-10.137	-2.969
ROOFS	352.050	103.107	0.000	0.000	-61.752	-18.086
GLASS CONDUCTION	55.264	16.185	0.000	0.000	-63.804	-18.687
GLASS SOLAR	143.506	42.029	0.000	0.000	21.502	6.298
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	40.635	11.901	25.021	7.328	0.414	0.121
LIGHT TO SPACE	43.982	12.881	0.000	0.000	1.741	0.510
EQUIPMENT TO SPACE	28.444	8.330	0.000	0.000	0.927	0.271
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	11.919	3.491	16.691	4.889	-11.546	-3.382
TOTAL	693.327	203.058	41.712	12.216	-122.655	-35.922
TOTAL LOAD	735.039 KBTU/H	215.274 KW	-122.655 KBTU/H	-35.922 KW		
TOTAL LOAD / AREA	38.28BTU/H.SQFT	120.673 W / M2	6.387BTU/H.SQFT	20.136 W / M2		

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE W-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 27932 SQFT 2595 M2
 VOLUME 279324 CUFT 7910 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	85.796	25.127	0.000	0.000	-33.298	-9.752		
ROOFS	537.095	157.302	0.000	0.000	-91.656	-26.844		
GLASS CONDUCTION	2.495	0.731	0.000	0.000	-2.399	-0.703		
GLASS SOLAR	10.775	3.156	0.000	0.000	2.113	0.619		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	61.058	17.882	36.396	10.659	0.548	0.160		
LIGHT TO SPACE	36.221	10.608	0.000	0.000	2.447	0.717		
EQUIPMENT TO SPACE	19.484	5.706	0.000	0.000	1.313	0.384		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	46.824	13.714	102.303	29.962	-20.232	-5.925		
TOTAL	799.747	234.226	138.699	40.621	-141.163	-41.343		
TOTAL LOAD	938.446 KBTU/H		274.847 KW		-141.163 KBTU/H		-41.343 KW	
TOTAL LOAD / AREA	33.60BTU/H.SQFT		105.914 W / M2		5.054BTU/H.SQFT		15.932 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 * ---- LOADS
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION
 * IN CONSIDERATION
 *

SPACE S-FL-1

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	19202 SQFT	1784 M2	
VOLUME	192023 CUFT	5438 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 25	7AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	30.160	8.833	0.000	0.000	-8.978	-2.630		
ROOFS	278.032	81.429	0.000	0.000	-43.291	-12.679		
GLASS CONDUCTION	40.385	11.828	0.000	0.000	-35.411	-10.371		
GLASS SOLAR	57.009	16.697	0.000	0.000	17.726	5.192		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	41.974	12.293	25.021	7.328	0.096	0.028		
LIGHT TO SPACE	24.901	7.293	0.000	0.000	1.285	0.376		
EQUIPMENT TO SPACE	13.394	3.923	0.000	0.000	0.737	0.216		
PROCEGS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	32.189	9.427	70.329	20.598	-13.018	-3.813		
TOTAL	518.046	151.723	95.349	27.925	-80.855	-23.680		
TOTAL LOAD	613.395 KBTU/H		179.648 KW		-80.855 KBTU/H		-23.680 KW	
TOTAL LOAD / AREA	31.94BTU/H.SQFT		100.702 W / M2		4.211BTU/H.SQFT		13.274 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 36780 SQFT 3417 M2
 VOLUME 367803 CUFT 10416 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	34.242	10.029	0.000	0.000	-21.485	-6.293
ROOFS	16.455	4.819	0.000	0.000	-8.681	-2.542
GLASS CONDUCTION	19.366	5.672	0.000	0.000	-18.545	-5.431
GLASS SOLAR	84.364	24.708	0.000	0.000	13.795	4.040
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	1.909	0.559	0.000	0.000	1.909	0.559
OCCUPANTS TO SPACE	80.517	23.582	47.925	14.036	2.623	0.768
LIGHT TO SPACE	74.702	21.878	0.000	0.000	2.958	0.866
EQUIPMENT TO SPACE	54.482	15.956	0.000	0.000	1.775	0.520
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	24.602	7.205	38.937	11.404	-22.115	-6.477
TOTAL	390.638	114.408	86.862	25.440	-47.767	-13.990
TOTAL LOAD	477.500 KBTU/H	139.848 KW			-47.767 KBTU/H	-13.990 KW
TOTAL LOAD / AREA	12.98BTU/H.SQFT	40.927 W / M2			1.299BTU/H.SQFT	4.094 W / M2

 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *

SPACE S-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 36780 SQFT 3417 M2
 VOLUME 367803 CUFT 10416 M3

TIME	COOLING LOAD		HEATING LOAD	
	OCT 20	4PM	DEC 17	7AM
DRY-BULB TEMP	87F	31C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	65.363	19.143	0.000	0.000	-20.641	-6.045		
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000		
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000		
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	1.909	0.559	0.000	0.000	1.909	0.559		
OCCUPANTS TO SPACE	80.517	23.582	47.925	14.036	2.623	0.768		
LIGHT TO SPACE	74.702	21.878	0.000	0.000	2.958	0.866		
EQUIPMENT TO SPACE	54.482	15.956	0.000	0.000	1.775	0.520		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	8.816	2.582	34.722	10.169	-22.115	-6.477		
TOTAL	285.789	83.700	82.647	24.205	-33.491	-9.809		
TOTAL LOAD	362.436 KBTU/H		107.906 KW		-33.491 KBTU/H		-9.809 KW	
TOTAL LOAD / AREA	10.02BTU/H.SQFT		31.579 W / M2		0.911BTU/H.SQFT		2.871 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-2

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	3982 SQFT	370 M2	
VOLUME	39820 CUFT	1128 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	3PM	DEC 17	7AM
DRY-BULB TEMP	98F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	5.852	1.714	0.000	0.000	-3.223	-0.944
ROOFS	88.676	25.971	0.000	0.000	-17.219	-5.043
GLASS CONDUCTION	15.332	4.490	0.000	0.000	-23.483	-6.878
GLASS SOLAR	61.815	18.104	0.000	0.000	10.591	3.102
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	8.267	2.421	5.189	1.520	0.086	0.025
LIGHT TO SPACE	6.478	1.897	0.000	0.000	0.324	0.095
EQUIPMENT TO SPACE	4.722	1.383	0.000	0.000	0.194	0.057
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.817	0.532	2.737	0.802	-2.394	-0.701
TOTAL	192.959	56.513	7.925	2.321	-35.124	-10.287
TOTAL LOAD	200.884 KBTU/H	58.834 KW			-35.124 KBTU/H	-10.287 KW
TOTAL LOAD / AREA	50.45BTU/H.SQFT	159.036 W / M2			8.821BTU/H.SQFT	27.807 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-2

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 3982 SQFT 370 M2
 VOLUME 39820 CUFT 1128 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	6PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	78F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	3.223	0.944	0.000	0.000	-1.530	-0.448
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	6.919	2.026	0.000	0.000	-5.387	-1.578
GLASS SOLAR	3.150	0.923	0.000	0.000	0.608	0.178
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	8.704	2.549	5.189	1.520	0.086	0.025
LIGHT TO SPACE	6.853	2.007	0.000	0.000	0.324	0.095
EQUIPMENT TO SPACE	4.898	1.435	0.000	0.000	0.194	0.057
PROCESS TO SPACE	0.060	0.000	0.000	0.000	0.000	0.000
INFILTRATION	6.838	2.003	8.454	2.476	-2.394	-0.701
TOTAL	40.587	11.887	13.643	3.996	-8.100	-2.372
TOTAL LOAD	54.230 KBTU/H	15.883 KW	-8.100 KBTU/H	-2.372 KW		
TOTAL LOAD / AREA	13.62BTU/H.SQFT	42.933 W / M2	2.034BTU/H.SQFT	6.412 W / M2		

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-3

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 2441 SQFT 227 M2
 VOLUME 24112 CUFT 683 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	3PM	DEC 17	7AM
DRY-BULB TEMP	98F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	3.293	0.964	0.000	0.000	-1.925	-0.564		
ROOFS	58.779	17.215	0.000	0.000	-11.413	-3.343		
GLASS CONDUCTION	4.123	1.208	0.000	0.000	-6.368	-1.865		
GLASS SOLAR	3.666	1.074	0.000	0.000	0.648	0.190		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	5.068	1.484	3.181	0.932	0.053	0.015		
LIGHT TO SPACE	3.971	1.163	0.000	0.000	0.199	0.058		
EQUIPMENT TO SPACE	2.895	0.848	0.000	0.000	0.119	0.035		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	1.114	0.326	1.678	0.491	-1.468	-0.430		
TOTAL	82.909	24.282	4.859	1.423	-20.156	-5.903		
TOTAL LOAD	87.768 KBTU/H		25.705 KW		-20.156 KBTU/H		-5.903 KW	
TOTAL LOAD / AREA	35.95BTU/H.SQFT		113.340 W / M2		8.257BTU/H.SQFT		26.029 W / M2	

 *
 * NOTE 1) THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2) TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-3

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2441 SQFT	227 M2	
VOLUME	24412 CUFT	691 M3	

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	6PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	78F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	4.160	1.218	0.000	0.000	-1.819	-0.533
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	8.180	2.396	0.000	0.000	-6.367	-1.865
GLASS SOLAR	3.762	1.102	0.000	0.000	0.715	0.209
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	5.336	1.563	3.181	0.932	0.053	0.015
LIGHT TO SPACE	4.202	1.231	0.000	0.000	0.199	0.058
EQUIPMENT TO SPACE	3.003	0.879	0.000	0.000	0.119	0.035
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	4.192	1.228	5.183	1.518	-1.468	-0.430
TOTAL	32.835	9.617	8.364	2.450	-8.570	-2.510
TOTAL LOAD	41.199 KBTU/H	12.066 KW			-8.570 KBTU/H	-2.510 KW
TOTAL LOAD / AREA	16.88BTU/H.SQFT	53.203 W / M2			3.510BTU/H.SQFT	11.066 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE CORE-FL-1

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2800 SQFT	260 M2	
VOLUME	28000 CUFT	793 M3	

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	7AM
DRY-BULB TEMP	100F	38C	62F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.037	1.768	3.648	1.069	0.200	0.058
LIGHT TO SPACE	5.554	1.627	0.000	0.000	0.225	0.066
EQUIPMENT TO SPACE	4.085	1.196	0.000	0.000	0.135	0.040
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	2.232	0.654	3.299	0.966	-1.760	-0.516
TOTAL	17.908	5.245	6.948	2.035	-1.200	-0.351
TOTAL LOAD	24.856 KBTU/H		7.280 KW		-1.200 KBTU/H -0.351 KW	
TOTAL LOAD / AREA	8.88BTU/H.SQFT		27.985 W / M2		0.429BTU/H.SQFT 1.351 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 * ---- LOADS
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION
 * IN CONSIDERATION
 *

SPACE CORE-FL-2

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1991 SQFT 185 M2
 VOLUME 19910 CUFT 564 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	7AM
DRY-BULB TEMP	100F	38C	62F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	4.293	1.257	2.594	0.760	0.142	0.042
LIGHT TO SPACE	3.949	1.157	0.000	0.000	0.160	0.047
EQUIPMENT TO SPACE	2.905	0.851	0.000	0.000	0.096	0.028
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.587	0.465	2.346	0.687	-1.252	-0.367
TOTAL	12.734	3.729	4.940	1.447	-0.853	-0.250
TOTAL LOAD	17.674 KBTU/H		5.176 KW		-0.853 KBTU/H -0.250 KW	
TOTAL LOAD / AREA	8.88BTU/H.SQFT		27.985 W / M2		0.429BTU/H.SQFT 1.351 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE CORE-FL-3

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1221 SQFT 113 M2
 VOLUME 12206 CUFT 346 M3

TIME	COOLING LOAD		HEATING LOAD	
	FEB 21	3PM	DEC 17	7AM
DRY-BULB TEMP	91F	33C	60F	16C
WET-BULB TEMP	78F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	1.136	0.333	0.000	0.000	-0.758	-0.222
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	7.220	2.115	0.000	0.000	-9.628	-2.820
GLASS SOLAR	24.510	7.178	0.000	0.000	5.683	1.664
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	2.542	0.745	1.590	0.466	0.087	0.025
LIGHT TO SPACE	2.291	0.671	0.000	0.000	0.098	0.029
EQUIPMENT TO SPACE	1.720	0.504	0.000	0.000	0.059	0.017
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	0.585	0.171	1.419	0.416	-0.734	-0.215
TOTAL	40.006	11.717	3.009	0.881	-5.193	-1.521
TOTAL LOAD	43.015 KBTU/H	12.598 KW			-5.193 KBTU/H	-1.521 KW
TOTAL LOAD / AREA	35.24BTU/H.SQFT	111.096 W / M2			4.254BTU/H.SQFT	13.412 W / M2



 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE CORE-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 2800 SQFT 260 M2
 VOLUME 28000 CUFT 793 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	3PM	DEC 24	7AM
DRY-BULB TEMP	100F	38C	62F	17C
WET-BULB TEMP	80F	27C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.037	1.768	3.648	1.069	0.200	0.058
LIGHT TO SPACE	5.554	1.627	0.000	0.000	0.225	0.066
EQUIPMENT TO SPACE	4.085	1.196	0.000	0.000	0.135	0.040
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	2.232	0.654	3.299	0.966	-1.760	-0.516
TOTAL	17.908	5.245	6.948	2.035	-1.200	-0.351
TOTAL LOAD	24.856 KBTU/H		7.280 KW		-1.200 KBTU/H -0.351 KW	
TOTAL LOAD / AREA	8.88BTU/H.SQFT		27.985 W / M2		0.429BTU/H.SQFT 1.351 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-4

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	6400 SQFT	595 M2	
VOLUME	84480 CUFT	2392 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	21.360	6.256	0.000	0.000	-10.896	-3.191
ROOFS	5.064	1.483	0.000	0.000	-2.721	-0.797
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	14.011	4.103	8.339	2.442	0.456	0.134
LIGHT TO SPACE	12.999	3.807	0.000	0.000	0.515	0.151
EQUIPMENT TO SPACE	9.480	2.776	0.000	0.000	0.309	0.090
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	3.658	1.071	5.123	1.500	-3.848	-1.127
TOTAL	66.571	19.497	13.462	3.943	-16.186	-4.740
TOTAL LOAD	80.033 KBTU/H		23.440 KW		-16.186 KBTU/H	-4.740 KW
TOTAL LOAD / AREA	12.51BTU/H.SQFT		39.422 W / M2		2.529BTU/H.SQFT	7.973 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

*** BUILDING ***

FLOOR AREA 167956 SQFT 15603 SQMT
 VOLUME 1699736 CUFT 48137 CUMT

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	7AM
DRY-BULB TEMP	99F	37C	60F	16C
WET-BULB TEMP	79F	26C	57F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	252.158	73.851	0.000	0.000	-119.452	-34.985
ROOFS	1195.977	350.272	0.000	0.000	-212.816	-62.329
GLASS CONDUCTION	154.234	45.171	0.000	0.000	-174.639	-51.147
GLASS SOLAR	371.594	108.831	0.000	0.000	74.550	21.834
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	3.818	1.118	0.000	0.000	3.818	1.118
OCCUPANTS TO SPACE	361.898	105.991	218.846	64.095	8.039	2.354
LIGHT TO SPACE	353.582	103.555	0.000	0.000	14.200	4.159
EQUIPMENT TO SPACE	245.201	71.813	0.000	0.000	8.112	2.376
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	97.981	28.696	137.212	40.186	-100.988	-29.577
TOTAL	3036.443	889.298	356.059	104.281	-499.178	-146.197
TOTAL LOAD	3392.502 KBTU/H	993.579 KW	-499.178 KBTU/H	-146.197 KW		
TOTAL LOAD / AREA	20.20BTU/H.SQFT	63.676 W /SQMT	2.972BTU/H.SQFT	9.369 W /SQMT		

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 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

----- COOLING -----						----- HEATING -----						----- ELEC -----		
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	676.72107	23	16	90.F	78.F	2320.519	-1.869	27	6	70.F	68.F	-114.843	46770.	210.565
FEB	758.51923	6	15	93.F	76.F	2603.660	-0.069	1	6	71.F	66.F	-11.895	42308.	210.565
MAR	952.00586	1	16	94.F	76.F	2767.913	-0.014	4	7	72.F	69.F	-4.649	50751.	210.565
APR	924.77582	13	16	101.F	79.F	2935.418	-0.015	18	5	75.F	73.F	-6.203	44620.	210.565
MAY	874.79395	5	15	99.F	79.F	3036.443	-0.004	14	6	76.F	75.F	-1.698	48761.	210.565
JUN	787.59637	1	15	92.F	81.F	2546.007	0.000					0.000	48601.	210.565
JUL	757.96057	21	15	89.F	78.F	2717.628	-0.006	13	5	75.F	73.F	-2.251	44780.	210.565
AUG	849.39709	18	15	93.F	79.F	2734.590	-0.002	7	5	77.F	75.F	-0.785	50751.	210.565
SEP	731.00104	21	15	88.F	80.F	2697.666	-0.047	17	6	75.F	74.F	-8.135	44620.	210.565
OCT	695.70148	20	15	87.F	79.F	2750.890	-0.137	30	6	74.F	73.F	-10.951	46770.	210.565
NOV	698.74823	21	16	91.F	76.F	2599.471	-0.176	24	6	70.F	67.F	-32.494	44619.	210.565
DEC	604.66479	8	16	90.F	72.F	2428.650	-17.270	17	7	60.F	57.F	-499.178	44780.	210.565
TOTAL	9311.886						-19.609						558131.	
MAX						3036.443						-499.178		210.565

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Energy Simulation of
 Patumthani, Thailand
 REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 N-FL-1

DOE-2.1D 7/30/1996 17:43: 8 LDL RUN 1
 OTTV. CONDITION
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS-MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.061	-0.087	0.000	0.000	-0.051	-0.426	0.310	0.026	0.059	0.029	0.000	-0.200
	SEN CL	2.280	65.825	0.000	0.000	3.115	-0.424	39.700	9.758	11.792	7.127	0.000	139.174
	LAT CL					18.502			5.089		0.000	0.000	23.591
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.410	77.069	0.000	0.000	5.388	10.151	41.263	8.912	10.806	6.510	0.000	163.508
	LAT CL					27.555			4.604		0.000	0.000	32.159
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.879	99.820	0.000	0.000	7.132	17.165	50.724	10.762	12.962	7.808	0.000	211.253
	LAT CL					30.713			5.561		0.000	0.000	36.274
APR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.182	103.614	0.000	0.000	7.300	17.421	49.841	9.452	11.491	6.905	0.000	211.206
	LAT CL					31.363			4.849		0.000	0.000	36.212
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.900	94.625	0.000	0.000	6.065	12.839	50.612	10.247	12.369	7.467	0.000	199.122
	LAT CL					32.558			5.325		0.000	0.000	37.883
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.149	75.748	0.000	0.000	6.111	13.599	45.111	10.297	12.412	7.477	0.000	174.906
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.021	81.446	0.000	0.000	4.679	6.697	48.597	9.400	11.446	6.893	0.000	173.180
	LAT CL					28.260			4.853		0.000	0.000	33.113
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.135	88.260	0.000	0.000	5.332	10.645	51.800	10.756	12.954	7.805	0.000	191.687
	LAT CL					30.007			5.561		0.000	0.000	35.568
SEP	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.299	80.282	0.000	0.000	3.805	4.419	41.700	9.440	11.474	6.898	0.000	161.317
	LAT CL					26.420			4.849		0.000	0.000	31.269
OCT	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.798	77.326	0.000	0.000	2.968	0.281	35.577	9.790	11.859	7.160	0.000	147.760
	LAT CL					24.301			5.089		0.000	0.000	29.390
NOV	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.833	75.100	0.000	0.000	3.482	2.364	35.388	9.385	11.395	6.865	0.000	146.811
	LAT CL					22.878			4.849		0.000	0.000	27.727
DEC	HEATING	-0.502	-2.061	0.000	0.000	-0.719	-3.904	2.490	0.148	0.427	0.237	0.000	-3.884
	SEN CL	1.650	58.560	0.000	0.000	2.094	-4.336	37.033	9.313	11.105	6.692	0.000	122.111
	LAT CL					12.309			4.850		0.000	0.000	17.159

TOT	HEATNG	-0.562	-2.148	0.000	0.000	-0.770	-4.330	2.801	0.174	0.486	0.266	0.000	-4.084
	SEN CL	43.537	977.676	0.000	0.000	57.472	90.821	527.346	117.511	142.063	85.607	0.000	2042.034
	LAT CL					317.001			60.799		0.000	0.000	377.800



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.128	-0.067	0.000	0.000	-0.038	-0.010	0.015	0.025	0.059	0.030	0.000	-0.114
	SEN CL	10.448	102.243	0.000	0.000	4.495	-0.011	3.223	14.207	17.180	10.380	0.000	162.164
	LAT CL					27.054			7.402		0.000	0.000	34.456
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.712	120.517	0.000	0.000	7.837	0.416	3.471	12.963	15.719	9.469	0.000	185.103
	LAT CL					40.083			6.698		0.000	0.000	46.780
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	19.321	156.495	0.000	0.000	10.375	0.690	3.998	15.655	18.854	11.358	0.000	236.746
	LAT CL					44.677			8.089		0.000	0.000	52.765
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	19.453	161.459	0.000	0.000	10.619	0.716	3.823	13.749	16.716	10.044	0.000	236.578
	LAT CL					45.622			7.054		0.000	0.000	52.676
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	16.612	147.851	0.000	0.000	8.822	0.567	3.528	14.906	17.992	10.862	0.000	221.139
	LAT CL					47.360			7.746		0.000	0.000	55.106
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.644	119.523	0.000	0.000	8.890	0.574	3.022	14.979	18.055	10.877	0.000	190.564
	LAT CL					46.745			7.739		0.000	0.000	54.484
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	12.865	125.839	0.000	0.000	6.807	0.326	3.336	13.674	16.649	10.027	0.000	189.524
	LAT CL					41.108			7.060		0.000	0.000	48.168
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.510	137.691	0.000	0.000	7.756	0.477	3.739	15.647	18.843	11.354	0.000	210.017
	LAT CL					43.649			8.089		0.000	0.000	51.738
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	12.504	123.738	0.000	0.000	5.535	0.259	3.103	13.732	16.691	10.033	0.000	185.595
	LAT CL					38.431			7.054		0.000	0.000	45.485
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	11.325	118.682	0.000	0.000	4.317	0.111	2.687	14.242	17.251	10.416	0.000	179.031
	LAT CL					35.349			7.403		0.000	0.000	42.751
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	12.010	116.145	0.000	0.000	5.065	0.159	2.850	13.651	16.576	9.986	0.000	176.443
	LAT CL					33.279			7.054		0.000	0.000	40.333
DEC	HEATNG	-1.619	-2.927	0.000	0.000	-0.890	-0.144	0.218	0.180	0.561	0.324	0.000	-4.296
	SEN CL	8.422	88.744	0.000	0.000	2.890	-0.194	3.139	13.581	16.213	9.755	0.000	142.550
	LAT CL					18.042			7.046		0.000	0.000	25.088

HEATING	-1.747	-2.994	0.000	0.000	-0.927	-0.154	0.233	0.205	0.620	0.355	0.000	-4.411
TOT SEN CL	166.827	1518.927	0.000	0.000	83.406	4.089	39.919	170.985	206.739	124.559	0.000	2315.452
LAT CL					461.397			88.430		0.000	0.000	549.826



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Energy Simulation of
 Patumthani, Thailand
 REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 S-FL-1

DOE-2.1D 7/30/1996 17:43: 8 LDL RUN 1
 OTTV. CONDITION
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.043	-0.021	0.000	0.000	-0.028	-0.152	0.103	0.017	0.039	0.020	0.000	-0.067
	SEN CL	4.407	53.146	0.000	0.000	3.093	-0.133	29.056	9.767	11.812	7.137	0.000	118.284
	LAT CL					18.615			5.089		0.000	0.000	23.704
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.325	61.880	0.000	0.000	5.388	6.391	27.238	8.912	10.806	6.510	0.000	132.450
	LAT CL					27.555			4.604		0.000	0.000	32.159
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.477	80.027	0.000	0.000	7.132	10.586	25.720	10.762	12.962	7.808	0.000	161.474
	LAT CL					30.713			5.561		0.000	0.000	36.274
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.214	82.541	0.000	0.000	7.300	10.516	19.973	9.452	11.491	6.905	0.000	154.391
	LAT CL					31.363			4.849		0.000	0.000	36.212
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.121	75.712	0.000	0.000	6.065	7.405	18.182	10.247	12.369	7.467	0.000	142.567
	LAT CL					32.558			5.325		0.000	0.000	37.883
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.478	61.028	0.000	0.000	6.111	8.045	16.604	10.297	12.412	7.477	0.000	126.453
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.980	64.753	0.000	0.000	4.679	3.608	17.002	9.400	11.446	6.893	0.000	121.762
	LAT CL					28.260			4.853		0.000	0.000	33.113
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.557	70.654	0.000	0.000	5.332	6.127	19.516	10.756	12.954	7.805	0.000	137.702
	LAT CL					30.007			5.561		0.000	0.000	35.568
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.283	63.777	0.000	0.000	3.805	2.264	18.778	9.440	11.474	6.898	0.000	120.718
	LAT CL					26.420			4.849		0.000	0.000	31.269
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.235	61.403	0.000	0.000	2.968	-0.270	18.840	9.790	11.859	7.160	0.000	115.987
	LAT CL					24.301			5.089		0.000	0.000	29.390
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.658	60.010	0.000	0.000	3.482	1.304	22.791	9.385	11.395	6.865	0.000	119.890
	LAT CL					22.878			4.849		0.000	0.000	27.727
DEC	HEATNG	-0.460	-1.232	0.000	0.000	-0.587	-1.916	1.517	0.096	0.306	0.175	0.000	-2.102
	SEN CL	4.030	46.514	0.000	0.000	1.962	-2.688	27.926	9.364	11.226	6.754	0.000	105.088
	LAT CL					12.528			4.848		0.000	0.000	17.376

TOT	HEATNG	-0.504	-1.254	0.000	0.000	-0.615	-2.068	1.620	0.113	0.345	0.195	0.000	-2.168
	SEN CL	57.766	781.445	0.000	0.000	57.317	53.155	261.626	117.572	142.204	85.678	0.000	1556.763
	LAT CL					317.334			60.797		0.000	0.000	378.130



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.098	0.002	0.000	0.019	-0.073	-0.088	0.139	0.022	0.024	0.015	0.000	-0.038
	SEN CL	5.271	3.085	0.000	1.401	5.030	-0.059	22.567	20.236	20.104	13.693	0.000	91.328
	LAT CL					32.037			10.515		0.000	0.000	42.552
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.638	5.596	0.000	1.283	8.248	2.914	24.340	18.427	18.353	12.468	0.000	99.267
	LAT CL					43.684			9.520		0.000	0.000	53.205
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	10.415	8.085	0.000	1.420	10.962	4.836	28.038	22.103	22.015	14.956	0.000	122.832
	LAT CL					48.173			11.420		0.000	0.000	59.594
APR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	10.827	8.402	0.000	1.374	11.457	5.019	26.807	19.545	19.518	13.225	0.000	116.174
	LAT CL					50.462			10.040		0.000	0.000	60.502
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	9.817	7.375	0.000	1.420	9.666	3.974	24.743	21.137	21.008	14.302	0.000	113.442
	LAT CL					53.532			10.972		0.000	0.000	64.505
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	8.502	6.407	0.000	1.374	9.360	4.024	21.190	21.167	21.082	14.322	0.000	107.429
	LAT CL					50.337			10.936		0.000	0.000	61.273
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.939	5.492	0.000	1.420	7.444	2.288	23.393	19.513	19.440	13.204	0.000	100.133
	LAT CL					46.500			10.076		0.000	0.000	56.576
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	8.398	6.504	0.000	1.420	8.342	3.348	26.224	22.094	22.002	14.950	0.000	113.281
	LAT CL					48.459			11.420		0.000	0.000	59.880
SEP	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.983	5.137	0.000	1.374	6.287	1.817	21.760	19.525	19.489	13.212	0.000	95.585
	LAT CL					45.265			10.040		0.000	0.000	55.306
OCT	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.137	4.348	0.000	1.420	5.253	0.779	18.845	20.269	20.143	13.715	0.000	90.909
	LAT CL					43.758			10.524		0.000	0.000	54.283
NOV	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.283	4.455	0.000	1.374	5.939	1.117	19.989	19.432	19.354	13.149	0.000	91.092
	LAT CL					40.069			10.040		0.000	0.000	50.109
DEC	HEATING	-0.792	-0.327	0.000	0.115	-0.907	-0.797	0.962	0.227	0.259	0.153	0.000	-1.107
	SEN CL	3.930	1.259	0.000	1.306	3.189	-1.577	22.582	19.388	19.327	13.119	0.000	82.523
	LAT CL					22.049			9.997		0.000	0.000	32.046

TOT	HEATNG	-0.891	-0.324	0.000	0.134	-0.980	-0.885	1.101	0.249	0.282	0.168	0.000	-1.145
	SEN CL	92.141	66.145	0.000	16.589	91.176	28.480	280.478	242.836	241.837	164.315	0.000	1223.996
	LAT CL					524.328			125.510		0.000	0.000	649.838



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.235	0.000	0.000	0.063	-0.197	0.000	0.000	0.073	0.078	0.049	0.000	-0.169
	SEN CL	7.816	0.000	0.000	1.357	5.153	0.000	0.000	20.186	20.050	13.658	0.000	68.219
	LAT CL					31.174			10.493		0.000	0.000	41.667
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	9.277	0.000	0.000	1.283	8.248	0.000	0.000	18.427	18.353	12.468	0.000	68.056
	LAT CL					43.684			9.520		0.000	0.000	53.205
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	11.304	0.000	0.000	1.420	10.962	0.000	0.000	22.103	22.015	14.956	0.000	82.762
	LAT CL					48.173			11.420		0.000	0.000	59.594
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	10.856	0.000	0.000	1.374	11.457	0.000	0.000	19.545	19.518	13.225	0.000	75.975
	LAT CL					50.462			10.040		0.000	0.000	60.502
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	8.973	0.000	0.000	1.420	9.666	0.000	0.000	21.137	21.008	14.302	0.000	76.506
	LAT CL					53.532			10.972		0.000	0.000	64.505
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.870	0.000	0.000	1.374	9.360	0.000	0.000	21.167	21.082	14.322	0.000	75.176
	LAT CL					50.337			10.936		0.000	0.000	61.273
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	6.980	0.000	0.000	1.420	7.444	0.000	0.000	19.513	19.440	13.204	0.000	68.001
	LAT CL					46.500			10.076		0.000	0.000	56.576
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.974	0.000	0.000	1.420	8.342	0.000	0.000	22.094	22.002	14.950	0.000	76.781
	LAT CL					48.459			11.420		0.000	0.000	59.880
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.459	0.000	0.000	1.374	6.287	0.000	0.000	19.525	19.489	13.212	0.000	67.345
	LAT CL					45.265			10.040		0.000	0.000	55.306
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	7.374	0.000	0.000	1.420	5.253	0.000	0.000	20.269	20.143	13.715	0.000	68.174
	LAT CL					43.758			10.524		0.000	0.000	54.283
NOV	HEATNG	-0.033	0.000	0.000	0.010	-0.032	0.000	0.000	0.014	0.017	0.010	0.000	-0.015
	SEN CL	8.165	0.000	0.000	1.365	5.971	0.000	0.000	19.418	19.338	13.139	0.000	67.394
	LAT CL					39.882			10.035		0.000	0.000	49.918
DEC	HEATNG	-0.791	0.000	0.000	0.143	-0.983	0.000	0.000	0.232	0.267	0.157	0.000	-0.974
	SEN CL	6.967	0.000	0.000	1.277	3.266	0.000	0.000	19.382	19.319	13.115	0.000	63.325
	LAT CL					21.791			9.997		0.000	0.000	31.788

TOT	HEATNG	-1.059	0.000	0.000	0.216	-1.212	0.000	0.000	0.320	0.362	0.216	0.000	-1.157
	SEN CL	101.014	0.000	0.000	16.507	91.407	0.000	0.000	242.765	241.757	164.267	0.000	857.717
	LAT CL					523.020			125.483		0.000	0.000	648.504



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.075	-0.339	0.000	0.000	-0.038	-0.641	0.671	0.022	0.060	0.037	0.000	-0.303
	SEN CL	0.776	8.926	0.000	0.000	0.673	0.384	16.955	2.007	2.014	1.375	0.000	33.110
	LAT CL					3.604			1.055		0.000	0.000	4.659
FEB	HEATNG	-0.006	-0.029	0.000	0.000	-0.002	-0.050	0.055	0.004	0.010	0.007	0.000	-0.012
	SEN CL	1.097	10.365	0.000	0.000	1.120	3.857	18.773	1.844	1.882	1.279	0.000	40.218
	LAT CL					5.693			0.955		0.000	0.000	6.648
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.531	13.469	0.000	0.000	1.479	6.388	21.807	2.232	2.268	1.541	0.000	50.716
	LAT CL					6.369			1.153		0.000	0.000	7.522
APR	HEATNG	-0.001	-0.004	0.000	0.000	0.000	-0.013	0.010	0.001	0.002	0.001	0.000	-0.003
	SEN CL	1.621	14.340	0.000	0.000	1.514	6.474	20.749	1.959	2.011	1.363	0.000	50.030
	LAT CL					6.491			1.006		0.000	0.000	7.497
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.498	12.869	0.000	0.000	1.258	4.708	19.306	2.125	2.164	1.473	0.000	45.401
	LAT CL					6.752			1.104		0.000	0.000	7.856
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.291	10.020	0.000	0.000	1.267	4.999	16.670	2.135	2.172	1.476	0.000	40.031
	LAT CL					6.664			1.103		0.000	0.000	7.767
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.222	11.355	0.000	0.000	0.970	2.435	18.249	1.949	2.005	1.362	0.000	39.547
	LAT CL					5.860			1.006		0.000	0.000	6.867
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.271	11.980	0.000	0.000	1.106	3.923	20.397	2.231	2.267	1.540	0.000	44.714
	LAT CL					6.223			1.153		0.000	0.000	7.376
SEP	HEATNG	-0.002	-0.004	0.000	0.000	0.000	-0.019	0.019	0.000	0.001	0.001	0.000	-0.004
	SEN CL	1.035	11.231	0.000	0.000	0.789	1.645	16.937	1.957	2.010	1.362	0.000	36.966
	LAT CL					5.459			1.006		0.000	0.000	6.464
OCT	HEATNG	-0.005	-0.012	0.000	0.000	0.001	-0.053	0.052	0.001	0.003	0.002	0.000	-0.013
	SEN CL	0.888	10.843	0.000	0.000	0.615	0.154	14.631	2.030	2.073	1.412	0.000	32.645
	LAT CL					4.977			1.055		0.000	0.000	6.032
NOV	HEATNG	-0.007	-0.028	0.000	0.000	-0.003	-0.061	0.071	0.002	0.006	0.004	0.000	-0.015
	SEN CL	0.891	10.294	0.000	0.000	0.725	0.962	15.400	1.944	1.989	1.352	0.000	33.557
	LAT CL					4.707			1.006		0.000	0.000	5.713
DEC	HEATNG	-0.227	-1.104	0.000	0.000	-0.190	-1.993	1.644	0.061	0.153	0.095	0.000	-1.561
	SEN CL	0.603	8.737	0.000	0.000	0.475	-0.952	16.511	1.901	1.868	1.275	0.000	30.417
	LAT CL					2.377			1.006		0.000	0.000	3.384

TOT	HEATNG	-0.324	-1.519	0.000	0.000	-0.232	-2.828	2.521	0.091	0.235	0.146	0.000	-1.910
	SEN CL	13.724	134.428	0.000	0.000	11.990	34.980	216.385	24.313	24.722	16.809	0.000	477.351
	LAT CL					65.176			12.609		0.000	0.000	77.784



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.031	0.000	0.000	0.000	-0.035	-0.173	0.061	0.014	0.035	0.020	0.000	-0.110
	SEN CL	0.639	0.000	0.000	0.000	0.670	0.096	1.046	2.015	2.039	1.393	0.000	7.899
	LAT CL					3.529			1.055		0.000	0.000	4.584
FEB	HEATNG	-0.001	0.000	0.000	0.000	-0.001	-0.003	0.001	0.001	0.001	0.001	0.000	0.000
	SEN CL	0.712	0.000	0.000	0.000	1.118	0.909	1.124	1.847	1.891	1.285	0.000	8.885
	LAT CL					5.711			0.955		0.000	0.000	6.666
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.845	0.000	0.000	0.000	1.479	1.537	1.327	2.232	2.268	1.541	0.000	11.229
	LAT CL					6.369			1.153		0.000	0.000	7.522
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.792	0.000	0.000	0.000	1.514	1.510	1.193	1.960	2.014	1.364	0.000	10.347
	LAT CL					6.504			1.006		0.000	0.000	7.509
MAY	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.004	0.002	0.000	0.001	0.001	0.000	0.000
	SEN CL	0.654	0.000	0.000	0.000	1.257	0.996	1.149	2.125	2.163	1.473	0.000	9.817
	LAT CL					6.731			1.104		0.000	0.000	7.835
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.579	0.000	0.000	0.000	1.267	1.120	1.034	2.135	2.172	1.476	0.000	9.784
	LAT CL					6.664			1.103		0.000	0.000	7.767
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.508	0.000	0.000	0.000	0.970	0.433	1.087	1.949	2.005	1.362	0.000	8.314
	LAT CL					5.860			1.006		0.000	0.000	6.867
AUG	HEATNG	0.000	0.000	0.000	0.000	0.001	-0.003	0.001	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.581	0.000	0.000	0.000	1.105	0.818	1.219	2.231	2.266	1.540	0.000	9.760
	LAT CL					6.209			1.153		0.000	0.000	7.362
SEP	HEATNG	-0.003	0.000	0.000	0.000	0.001	-0.028	0.012	0.001	0.005	0.003	0.000	-0.008
	SEN CL	0.553	0.000	0.000	0.000	0.788	0.221	1.061	1.956	2.005	1.359	0.000	7.944
	LAT CL					5.363			1.005		0.000	0.000	6.368
OCT	HEATNG	-0.005	0.000	0.000	0.000	0.004	-0.058	0.020	0.002	0.010	0.006	0.000	-0.022
	SEN CL	0.571	0.000	0.000	0.000	0.612	-0.157	0.913	2.028	2.065	1.407	0.000	7.441
	LAT CL					4.799			1.055		0.000	0.000	5.855
NOV	HEATNG	-0.006	0.000	0.000	0.000	-0.003	-0.047	0.020	0.002	0.008	0.005	0.000	-0.021
	SEN CL	0.651	0.000	0.000	0.000	0.725	0.117	0.928	1.944	1.987	1.350	0.000	7.702
	LAT CL					4.597			1.006		0.000	0.000	5.603
DEC	HEATNG	-0.094	0.000	0.000	0.000	-0.192	-0.495	0.136	0.052	0.112	0.063	0.000	-0.419
	SEN CL	0.609	0.000	0.000	0.000	0.477	-0.162	0.936	1.910	1.909	1.306	0.000	6.985
	LAT CL					2.346			1.005		0.000	0.000	3.352

TOT	HEATNG	-0.141	0.000	0.000	0.000	-0.225	-0.812	0.254	0.072	0.173	0.099	0.000	-0.581
	SEN CL	7.694	0.000	0.000	0.000	11.983	7.439	13.017	24.333	24.785	16.856	0.000	106.107
	LAT CL					64.682			12.608		0.000	0.000	77.290



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.092	-0.391	0.000	0.000	-0.042	-0.438	0.150	0.053	0.125	0.075	0.000	-0.561
	SEN CL	0.475	6.083	0.000	0.000	0.430	0.345	1.034	1.191	1.146	0.791	0.000	11.495
	LAT CL					1.845			0.647		0.000	0.000	2.492
FEB	HEATNG	-0.012	-0.055	0.000	0.000	-0.004	-0.054	0.019	0.012	0.026	0.016	0.000	-0.051
	SEN CL	0.624	6.906	0.000	0.000	0.686	1.123	1.201	1.121	1.134	0.772	0.000	13.567
	LAT CL					3.420			0.585		0.000	0.000	4.006
MAR	HEATNG	-0.003	-0.009	0.000	0.000	-0.002	-0.015	0.006	0.003	0.005	0.003	0.000	-0.012
	SEN CL	0.878	8.937	0.000	0.000	0.904	1.831	1.456	1.366	1.385	0.942	0.000	17.699
	LAT CL					3.869			0.707		0.000	0.000	4.576
APR	HEATNG	-0.004	-0.010	0.000	0.000	0.001	-0.021	0.006	0.005	0.009	0.005	0.000	-0.009
	SEN CL	0.936	9.512	0.000	0.000	0.923	1.807	1.367	1.197	1.226	0.831	0.000	17.799
	LAT CL					3.928			0.616		0.000	0.000	4.544
MAY	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.007	0.003	0.001	0.001	0.001	0.000	-0.001
	SEN CL	0.891	8.530	0.000	0.000	0.767	1.180	1.350	1.302	1.325	0.903	0.000	16.248
	LAT CL					4.108			0.677		0.000	0.000	4.785
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.772	6.642	0.000	0.000	0.773	1.325	1.259	1.309	1.332	0.905	0.000	14.316
	LAT CL					4.067			0.676		0.000	0.000	4.743
JUL	HEATNG	-0.002	-0.005	0.000	0.000	0.000	-0.011	0.003	0.003	0.004	0.002	0.000	-0.005
	SEN CL	0.736	7.531	0.000	0.000	0.592	0.523	1.286	1.192	1.225	0.833	0.000	13.919
	LAT CL					3.562			0.617		0.000	0.000	4.179
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.746	7.941	0.000	0.000	0.675	0.962	1.401	1.367	1.390	0.944	0.000	15.427
	LAT CL					3.800			0.707		0.000	0.000	4.507
SEP	HEATNG	-0.005	0.000	0.000	0.000	0.001	-0.032	0.011	0.001	0.005	0.003	0.000	-0.016
	SEN CL	0.589	7.442	0.000	0.000	0.481	0.257	1.159	1.199	1.228	0.832	0.000	13.187
	LAT CL					3.284			0.616		0.000	0.000	3.900
OCT	HEATNG	-0.016	-0.020	0.000	0.000	0.003	-0.099	0.028	0.010	0.023	0.014	0.000	-0.057
	SEN CL	0.512	7.199	0.000	0.000	0.374	-0.158	0.990	1.235	1.249	0.853	0.000	12.254
	LAT CL					2.885			0.647		0.000	0.000	3.532
NOV	HEATNG	-0.016	-0.038	0.000	0.000	-0.003	-0.086	0.031	0.007	0.018	0.011	0.000	-0.076
	SEN CL	0.520	6.843	0.000	0.000	0.444	0.166	0.982	1.186	1.205	0.821	0.000	12.165
	LAT CL					2.750			0.616		0.000	0.000	3.366
DEC	HEATNG	-0.183	-0.885	0.000	0.000	-0.145	-0.795	0.214	0.074	0.161	0.094	0.000	-1.464
	SEN CL	0.367	5.944	0.000	0.000	0.319	0.015	0.942	1.129	1.078	0.745	0.000	10.540
	LAT CL					1.258			0.617		0.000	0.000	1.874

TOT	HEATNG	-0.332	-1.411	0.000	0.000	-0.191	-1.558	0.471	0.167	0.378	0.224	0.000	-2.252
	SEN CL	8.047	89.510	0.000	0.000	7.369	9.376	14.426	14.794	14.922	10.170	0.000	168.616
	LAT CL					38.775			7.729		0.000	0.000	46.504



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.059	0.000	0.000	0.000	-0.032	-0.320	0.114	0.028	0.060	0.034	0.000	-0.176
	SEN CL	0.707	0.000	0.000	0.000	0.421	0.230	1.182	1.216	1.211	0.832	0.000	5.799
	LAT CL					2.016			0.647		0.000	0.000	2.663
FEB	HEATNG	-0.004	0.000	0.000	0.000	-0.002	-0.022	0.008	0.005	0.007	0.004	0.000	-0.005
	SEN CL	0.812	0.000	0.000	0.000	0.687	1.093	1.329	1.128	1.153	0.784	0.000	6.987
	LAT CL					3.478			0.585		0.000	0.000	4.063
MAR	HEATNG	-0.001	0.000	0.000	0.000	-0.001	-0.009	0.004	0.001	0.002	0.001	0.000	-0.002
	SEN CL	0.999	0.000	0.000	0.000	0.908	1.826	1.598	1.367	1.388	0.944	0.000	9.029
	LAT CL					3.894			0.707		0.000	0.000	4.600
APR	HEATNG	-0.002	0.000	0.000	0.000	0.001	-0.015	0.005	0.003	0.005	0.002	0.000	-0.002
	SEN CL	0.970	0.000	0.000	0.000	0.927	1.800	1.421	1.199	1.230	0.834	0.000	8.381
	LAT CL					3.955			0.616		0.000	0.000	4.572
MAY	HEATNG	-0.001	0.000	0.000	0.000	0.001	-0.011	0.007	0.000	0.001	0.001	0.000	-0.002
	SEN CL	0.806	0.000	0.000	0.000	0.770	1.184	1.369	1.302	1.325	0.902	0.000	7.659
	LAT CL					4.109			0.677		0.000	0.000	4.786
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.701	0.000	0.000	0.000	0.777	1.324	1.230	1.309	1.332	0.905	0.000	7.578
	LAT CL					4.085			0.676		0.000	0.000	4.762
JUL	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.008	0.003	0.001	0.002	0.001	0.000	-0.001
	SEN CL	0.630	0.000	0.000	0.000	0.595	0.520	1.291	1.194	1.227	0.834	0.000	6.290
	LAT CL					3.577			0.617		0.000	0.000	4.194
AUG	HEATNG	-0.001	0.000	0.000	0.000	0.001	-0.008	0.004	0.000	0.001	0.001	0.000	-0.002
	SEN CL	0.714	0.000	0.000	0.000	0.677	0.971	1.442	1.367	1.389	0.944	0.000	7.504
	LAT CL					3.793			0.707		0.000	0.000	4.500
SEP	HEATNG	-0.003	0.000	0.000	0.000	0.002	-0.048	0.022	0.001	0.005	0.003	0.000	-0.018
	SEN CL	0.666	0.000	0.000	0.000	0.482	0.276	1.245	1.199	1.227	0.832	0.000	5.927
	LAT CL					3.246			0.616		0.000	0.000	3.862
OCT	HEATNG	-0.008	0.000	0.000	0.000	0.005	-0.102	0.038	0.005	0.014	0.008	0.000	-0.041
	SEN CL	0.653	0.000	0.000	0.000	0.372	-0.152	1.058	1.240	1.258	0.859	0.000	5.288
	LAT CL					2.863			0.647		0.000	0.000	3.510
NOV	HEATNG	-0.010	0.000	0.000	0.000	-0.001	-0.076	0.033	0.003	0.010	0.006	0.000	-0.035
	SEN CL	0.711	0.000	0.000	0.000	0.444	0.158	1.081	1.190	1.213	0.825	0.000	5.622
	LAT CL					2.776			0.616		0.000	0.000	3.392
DEC	HEATNG	-0.143	0.000	0.000	0.000	-0.138	-0.725	0.206	0.055	0.121	0.071	0.000	-0.552
	SEN CL	0.660	0.000	0.000	0.000	0.312	-0.052	1.053	1.147	1.118	0.769	0.000	5.007
	LAT CL					1.332			0.616		0.000	0.000	1.948

TOT	HEATNG	-0.234	0.000	0.000	0.000	-0.164	-1.344	0.444	0.103	0.228	0.131	0.000	-0.835
	SEN CL	9.028	0.000	0.000	0.000	7.372	9.178	15.299	14.859	15.072	10.263	0.000	81.070
	LAT CL					39.123			7.729		0.000	0.000	46.852



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.009	0.000	0.000	0.003	0.003	0.002	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.386	0.000	0.000	1.540	1.530	1.042	0.000	4.497
	LAT CL					2.428			0.800		0.000	0.000	3.228
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.628	0.000	0.000	1.403	1.397	0.949	0.000	4.377
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.835	0.000	0.000	1.683	1.676	1.139	0.000	5.332
	LAT CL					3.667			0.869		0.000	0.000	4.537
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.872	0.000	0.000	1.488	1.486	1.007	0.000	4.853
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.736	0.000	0.000	1.609	1.599	1.089	0.000	5.033
	LAT CL					4.075			0.835		0.000	0.000	4.911
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.713	0.000	0.000	1.611	1.605	1.090	0.000	5.019
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.567	0.000	0.000	1.486	1.480	1.005	0.000	4.537
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.635	0.000	0.000	1.682	1.675	1.138	0.000	5.130
	LAT CL					3.689			0.869		0.000	0.000	4.558
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.479	0.000	0.000	1.486	1.484	1.006	0.000	4.454
	LAT CL					3.446			0.764		0.000	0.000	4.210
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.400	0.000	0.000	1.543	1.533	1.044	0.000	4.520
	LAT CL					3.331			0.801		0.000	0.000	4.132
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.479	1.473	1.001	0.000	4.406
	LAT CL					3.050			0.764		0.000	0.000	3.815
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.059	0.000	0.000	0.010	0.011	0.007	0.000	-0.031
	SEN CL	0.000	0.000	0.000	0.000	0.233	0.000	0.000	1.483	1.480	1.004	0.000	4.200
	LAT CL					1.705			0.763		0.000	0.000	2.468

TOT	HEATING	0.000	0.000	0.000	0.000	-0.068	0.000	0.000	0.013	0.014	0.009	0.000	-0.033
	SEN CL	0.000	0.000	0.000	0.000	6.934	0.000	0.000	18.493	18.418	12.513	0.000	56.359
	LAT CL					39.930			9.556		0.000	0.000	49.486



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP
JAN	HEATING	0.000	0.000	0.000	0.000	-0.006	0.000	0.000	0.002	0.002	0.001
	SEN CL	0.000	0.000	0.000	0.000	0.275	0.000	0.000	1.095	1.088	0.741
	LAT CL					1.726			0.569		0.000
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.446	0.000	0.000	0.997	0.994	0.675
	LAT CL					2.365			0.515		0.000
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.593	0.000	0.000	1.197	1.192	0.810
	LAT CL					2.608			0.618		0.000
APR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.620	0.000	0.000	1.058	1.057	0.716
	LAT CL					2.732			0.543		0.000
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.523	0.000	0.000	1.144	1.137	0.774
	LAT CL					2.898			0.594		0.000
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.507	0.000	0.000	1.146	1.141	0.775
	LAT CL					2.725			0.592		0.000
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.403	0.000	0.000	1.056	1.052	0.715
	LAT CL					2.517			0.545		0.000
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.196	1.191	0.809
	LAT CL					2.623			0.618		0.000
SEP	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.340	0.000	0.000	1.057	1.055	0.715
	LAT CL					2.450			0.543		0.000
OCT	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.284	0.000	0.000	1.097	1.090	0.742
	LAT CL					2.369			0.570		0.000
NOV	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.321	0.000	0.000	1.052	1.048	0.712
	LAT CL					2.169			0.543		0.000
DEC	HEATING	0.000	0.000	0.000	0.000	-0.042	0.000	0.000	0.007	0.008	0.005
	SEN CL	0.000	0.000	0.000	0.000	0.166	0.000	0.000	1.055	1.052	0.714
	LAT CL					1.212			0.543		0.000

TOT	HEATNG	0.000	0.000	0.000	0.000	-0.048	0.000	0.000	0.009	0.010	0.006	0.000	-0.024
	SEN CL	0.000	0.000	0.000	0.000	4.931	0.000	0.000	13.150	13.097	8.898	0.000	40.075
	LAT CL					28.393			6.795		0.000	0.000	35.189



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.001	0.000	0.000	0.000	-0.001	-0.015	0.013	0.001	0.001	0.000	0.000	-0.002
	SEN CL	0.342	0.000	0.000	0.000	0.165	-0.005	9.875	0.672	0.667	0.454	0.000	12.170
	LAT CL					1.072			0.349		0.000	0.000	1.421
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.374	0.000	0.000	0.000	0.274	1.608	8.409	0.612	0.609	0.414	0.000	12.299
	LAT CL					1.450			0.316		0.000	0.000	1.766
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.448	0.000	0.000	0.000	0.364	2.637	7.837	0.734	0.731	0.496	0.000	13.246
	LAT CL					1.599			0.379		0.000	0.000	1.978
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	-0.003	0.002	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.415	0.000	0.000	0.000	0.380	2.625	6.082	0.648	0.647	0.439	0.000	11.237
	LAT CL					1.673			0.333		0.000	0.000	2.006
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.356	0.000	0.000	0.000	0.321	1.901	5.896	0.701	0.697	0.475	0.000	10.347
	LAT CL					1.777			0.364		0.000	0.000	2.141
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.301	0.000	0.000	0.000	0.311	2.031	5.325	0.702	0.700	0.475	0.000	9.845
	LAT CL					1.670			0.363		0.000	0.000	2.033
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.279	0.000	0.000	0.000	0.247	0.965	5.610	0.648	0.645	0.438	0.000	8.833
	LAT CL					1.543			0.334		0.000	0.000	1.878
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.314	0.000	0.000	0.000	0.277	1.577	6.313	0.733	0.730	0.496	0.000	10.440
	LAT CL					1.608			0.379		0.000	0.000	1.987
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	-0.008	0.007	0.000	0.000	0.000	0.000	-0.001
	SEN CL	0.293	0.000	0.000	0.000	0.209	0.660	5.827	0.648	0.646	0.438	0.000	8.721
	LAT CL					1.496			0.333		0.000	0.000	1.829
OCT	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.014	0.012	0.000	0.001	0.000	0.000	-0.001
	SEN CL	0.306	0.000	0.000	0.000	0.174	0.072	6.302	0.672	0.668	0.455	0.000	8.649
	LAT CL					1.439			0.349		0.000	0.000	1.788
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.361	0.000	0.000	0.000	0.197	0.427	7.979	0.645	0.642	0.436	0.000	10.686
	LAT CL					1.330			0.333		0.000	0.000	1.663
DEC	HEATNG	-0.022	0.000	0.000	0.000	-0.023	-0.317	0.259	0.009	0.010	0.006	0.000	-0.077
	SEN CL	0.313	0.000	0.000	0.000	0.098	-0.797	10.244	0.642	0.640	0.434	0.000	11.575
	LAT CL					0.734			0.331		0.000	0.000	1.065

TOT	HEATNG	-0.024	0.000	0.000	0.000	-0.023	-0.357	0.293	0.011	0.012	0.007	0.000	-0.081
	SEN CL	4.101	0.000	0.000	0.000	3.016	13.702	85.700	8.056	8.023	5.451	0.000	128.050
	LAT CL					17.391			4.164		0.000	0.000	21.555



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(UNITS-MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.009	0.000	0.000	0.003	0.003	0.002	0.000	-0.002
	SEN CL	0.000	0.000	0.000	0.000	0.386	0.000	0.000	1.540	1.530	1.042	0.000	4.497
	LAT CL					2.428			0.800		0.000	0.000	3.228
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.628	0.000	0.000	1.403	1.397	0.949	0.000	4.377
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.835	0.000	0.000	1.683	1.676	1.139	0.000	5.332
	LAT CL					3.667			0.869		0.000	0.000	4.537
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.872	0.000	0.000	1.488	1.486	1.007	0.000	4.853
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.736	0.000	0.000	1.609	1.599	1.089	0.000	5.033
	LAT CL					4.075			0.835		0.000	0.000	4.911
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.713	0.000	0.000	1.611	1.605	1.090	0.000	5.019
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.567	0.000	0.000	1.486	1.480	1.005	0.000	4.537
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.635	0.000	0.000	1.682	1.675	1.138	0.000	5.130
	LAT CL					3.689			0.869		0.000	0.000	4.558
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.479	0.000	0.000	1.486	1.484	1.006	0.000	4.454
	LAT CL					3.446			0.764		0.000	0.000	4.210
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.400	0.000	0.000	1.543	1.533	1.044	0.000	4.520
	LAT CL					3.331			0.801		0.000	0.000	4.132
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.479	1.473	1.001	0.000	4.406
	LAT CL					3.050			0.764		0.000	0.000	3.815
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.059	0.000	0.000	0.010	0.011	0.007	0.000	-0.031
	SEN CL	0.000	0.000	0.000	0.000	0.233	0.000	0.000	1.483	1.480	1.004	0.000	4.200
	LAT CL					1.705			0.763		0.000	0.000	2.468

TOT	HEATNG	0.000	0.000	0.000	0.000	-0.068	0.000	0.000	0.013	0.014	0.009	0.000	-0.033
	SEN CL	0.000	0.000	0.000	0.000	6.934	0.000	0.000	18.493	18.418	12.513	0.000	56.359
	LAT CL					39.930			9.556		0.000	0.000	49.486



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.194	0.030	0.000	0.000	-0.047	0.000	0.000	0.030	0.036	0.020	0.000	-0.125
	SEN CL	3.661	0.938	0.000	0.000	0.960	0.000	0.000	3.495	3.467	2.365	0.000	14.886
	LAT CL					5.479			1.823		0.000	0.000	7.302
FEB	HEATNG	-0.004	0.001	0.000	0.000	-0.001	0.000	0.000	0.001	0.002	0.001	0.000	0.000
	SEN CL	4.442	1.754	0.000	0.000	1.552	0.000	0.000	3.205	3.192	2.169	0.000	16.312
	LAT CL					8.103			1.656		0.000	0.000	9.759
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.693	2.535	0.000	0.000	2.058	0.000	0.000	3.846	3.831	2.602	0.000	20.565
	LAT CL					8.976			1.987		0.000	0.000	10.963
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.635	2.634	0.000	0.000	2.134	0.000	0.000	3.401	3.396	2.301	0.000	19.502
	LAT CL					9.316			1.747		0.000	0.000	11.063
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.977	2.312	0.000	0.000	1.791	0.000	0.000	3.678	3.656	2.489	0.000	18.902
	LAT CL					9.807			1.909		0.000	0.000	11.716
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.296	2.009	0.000	0.000	1.759	0.000	0.000	3.683	3.668	2.492	0.000	17.908
	LAT CL					9.383			1.903		0.000	0.000	11.286
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.979	1.721	0.000	0.000	1.380	0.000	0.000	3.395	3.383	2.298	0.000	16.156
	LAT CL					8.516			1.753		0.000	0.000	10.269
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.310	2.039	0.000	0.000	1.556	0.000	0.000	3.845	3.828	2.601	0.000	18.178
	LAT CL					8.934			1.987		0.000	0.000	10.921
SEP	HEATNG	-0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.000	-0.001
	SEN CL	3.778	1.609	0.000	0.000	1.150	0.000	0.000	3.396	3.390	2.298	0.000	15.620
	LAT CL					8.142			1.747		0.000	0.000	9.888
OCT	HEATNG	-0.013	0.004	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.002	0.000	-0.003
	SEN CL	3.599	1.359	0.000	0.000	0.938	0.000	0.000	3.525	3.502	2.385	0.000	15.308
	LAT CL					7.705			1.830		0.000	0.000	9.536
NOV	HEATNG	-0.025	0.007	0.000	0.000	-0.008	0.000	0.000	0.004	0.004	0.002	0.000	-0.015
	SEN CL	3.942	1.390	0.000	0.000	1.082	0.000	0.000	3.378	3.363	2.285	0.000	15.440
	LAT CL					7.134			1.746		0.000	0.000	8.880
DEC	HEATNG	-0.697	-0.152	0.000	0.000	-0.271	0.000	0.000	0.128	0.155	0.086	0.000	-0.750
	SEN CL	3.266	0.444	0.000	0.000	0.688	0.000	0.000	3.285	3.253	2.223	0.000	13.159
	LAT CL					3.654			1.720		0.000	0.000	5.374

	HEATING	-0.939	-0.109	0.000	0.000	-0.327	0.000	0.000	0.167	0.201	0.113	0.000	-0.894
TOT	SEN CL	51.579	20.742	0.000	0.000	17.046	0.000	0.000	42.132	41.929	28.508	0.000	201.936
	LAT CL					95.150			21.808		0.000	0.000	116.959



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-1.019	-0.873	0.000	0.082	-0.605	-2.263	1.576	0.317	0.581	0.334	0.000	-1.869
	SEN CL	36.822	240.246	0.000	2.758	25.252	0.423	124.637	88.925	95.628	62.031	0.000	676.721
	LAT CL					151.507			46.333		0.000	0.000	197.840
FEB	HEATNG	-0.027	-0.083	0.000	0.000	-0.010	-0.128	0.083	0.022	0.047	0.028	0.000	-0.069
	SEN CL	48.424	284.088	0.000	2.565	42.246	28.462	127.148	81.201	87.685	56.700	0.000	758.520
	LAT CL					219.434			41.963		0.000	0.000	261.397
MAR	HEATNG	-0.004	-0.009	0.000	0.000	-0.003	-0.024	0.010	0.004	0.008	0.004	0.000	-0.014
	SEN CL	62.791	369.368	0.000	2.840	56.019	47.497	142.505	97.723	105.223	68.040	0.000	952.005
	LAT CL					243.467			50.493		0.000	0.000	293.961
APR	HEATNG	-0.008	-0.014	0.000	0.000	0.001	-0.051	0.022	0.009	0.016	0.009	0.000	-0.015
	SEN CL	62.901	382.502	0.000	2.749	57.890	47.888	131.255	86.140	93.286	60.165	0.000	924.776
	LAT CL					251.553			44.228		0.000	0.000	295.781
MAY	HEATNG	-0.002	0.000	0.000	0.000	0.002	-0.022	0.012	0.001	0.004	0.002	0.000	-0.004
	SEN CL	54.605	349.273	0.000	2.840	48.442	34.753	126.134	93.270	100.410	65.066	0.000	874.794
	LAT CL					263.873			48.440		0.000	0.000	312.313
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	47.583	281.377	0.000	2.749	47.920	37.041	111.447	93.549	100.771	65.161	0.000	787.597
	LAT CL					254.611			48.335		0.000	0.000	302.946
JUL	HEATNG	-0.003	-0.005	0.000	0.000	0.000	-0.018	0.006	0.004	0.006	0.003	0.000	-0.006
	SEN CL	43.139	298.138	0.000	2.840	37.344	17.795	119.852	85.857	92.923	60.071	0.000	757.960
	LAT CL					229.144			44.333		0.000	0.000	273.477
AUG	HEATNG	-0.001	0.000	0.000	0.000	0.002	-0.010	0.006	0.000	0.001	0.001	0.000	-0.002
	SEN CL	47.508	325.068	0.000	2.840	42.220	28.848	132.052	97.681	105.164	68.015	0.000	849.398
	LAT CL					241.151			50.493		0.000	0.000	291.644
SEP	HEATNG	-0.020	-0.002	0.000	0.000	0.004	-0.135	0.071	0.006	0.018	0.011	0.000	-0.047
	SEN CL	41.442	293.216	0.000	2.749	30.914	11.818	111.571	86.046	93.145	60.100	0.000	731.002
	LAT CL					218.133			44.227		0.000	0.000	262.360
OCT	HEATNG	-0.049	-0.027	0.000	0.000	0.012	-0.327	0.150	0.020	0.052	0.031	0.000	-0.137
	SEN CL	38.401	281.160	0.000	2.840	24.929	0.662	99.843	89.273	96.228	62.366	0.000	695.702
	LAT CL					205.167			46.385		0.000	0.000	251.553
NOV	HEATNG	-0.097	-0.058	0.000	0.010	-0.050	-0.270	0.155	0.033	0.064	0.038	0.000	-0.176
	SEN CL	41.025	274.237	0.000	2.739	28.781	6.775	107.388	85.567	92.451	59.785	0.000	698.748
	LAT CL					190.550			44.222		0.000	0.000	234.772
DEC	HEATNG	-5.530	-8.688	0.000	0.258	-5.204	-11.087	7.646	1.289	2.563	1.482	0.000	-17.270
	SEN CL	30.817	210.204	0.000	2.583	16.402	-10.742	120.366	85.062	91.068	58.906	0.000	604.665
	LAT CL					103.043			44.101		0.000	0.000	147.144

TOT	HEATNG	-6.758	-9.759	0.000	0.349	-5.850	-14.336	9.737	1.706	3.360	1.943	0.000	-19.609
	SEN CL	555.455	3588.887	0.000	33.087	458.376	251.219	1454.203	1070.257	1153.960	746.457	0.000	9311.902
	LAT CL					2571.606			553.591		0.000	0.000	3125.197



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	QUICK WL LOAD BTU/HR	QUICK RF LOAD BTU/HR	GLS COND LOAD BTU/HR	DELAY WL LOAD BTU/HR	DELAY RF LOAD BTU/HR	UG FLOOR LOAD BTU/HR	UG WALL LOAD BTU/HR	ELEC-EQP SENS LD BTU/HR
	----(16)	----(17)	----(18)	----(19)	----(20)	----(22)	----(23)	----(25)
5 4 1	0.00	0.00	16814.07	4035.50	113626.88	0.00	0.00	4009.29
5 4 2	0.00	0.00	14432.45	3665.76	105279.30	0.00	0.00	3707.44
5 4 3	0.00	0.00	15460.11	3478.58	98046.95	0.00	0.00	3432.75
5 4 4	0.00	0.00	16373.76	3429.41	91620.20	0.00	0.00	3182.79
5 4 5	0.00	0.00	9102.36	2971.16	84503.90	0.00	0.00	2955.32
5 4 6	0.00	0.00	6521.37	2279.56	76853.22	0.00	0.00	6735.63
5 4 7	0.00	0.00	6136.65	3460.49	70893.45	0.00	0.00	22225.42
5 4 8	0.00	0.00	17385.73	8008.00	73025.08	0.00	0.00	25094.56
5 4 9	0.00	0.00	24630.52	11369.60	84343.65	0.00	0.00	25785.24
5 410	0.00	0.00	35786.02	11504.91	98217.23	0.00	0.00	26413.75
5 411	0.00	0.00	45365.23	12028.81	119562.48	0.00	0.00	15909.87
5 412	0.00	0.00	51250.91	12632.19	146744.47	0.00	0.00	27028.40
5 413	0.00	0.00	60619.62	12471.87	172823.77	0.00	0.00	27545.03
5 414	0.00	0.00	62197.18	12639.97	195722.63	0.00	0.00	28015.16
5 415	0.00	0.00	55456.15	13495.75	217874.08	0.00	0.00	28442.98
5 416	0.00	0.00	64191.17	13459.13	231200.98	0.00	0.00	22186.80
5 417	0.00	0.00	54728.42	12432.91	228767.03	0.00	0.00	13393.76
5 418	0.00	0.00	42136.33	11070.71	222033.98	0.00	0.00	10857.91
5 419	0.00	0.00	43315.47	9178.75	208483.44	0.00	0.00	8255.37
5 420	0.00	0.00	29085.99	7353.88	191670.47	0.00	0.00	6035.17
5 421	0.00	0.00	35367.79	6485.54	176709.83	0.00	0.00	5550.99
5 422	0.00	0.00	34294.84	6339.62	163775.97	0.00	0.00	5110.38
5 423	0.00	0.00	29947.87	5969.58	151052.34	0.00	0.00	4709.43
5 424	0.00	0.00	29421.11	5587.71	139599.88	0.00	0.00	4344.57
DAILY SUMMARY (MAY 4)								
MN	0.00	0.00	6136.65	2279.56	70893.45	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	13495.75	231200.98	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	195349.38	3462431.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	8139.56	144267.95	0.00	0.00	13788.67
MONTHLY SUMMARY (MAY)								
MN	0.00	0.00	6136.65	2279.56	70893.45	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	13495.75	231200.98	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	195349.38	3462431.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	8139.56	144267.95	0.00	0.00	13788.67
YEARLY SUMMARY								
MN	0.00	0.00	6136.65	2279.56	70893.45	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	13495.75	231200.98	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	195349.38	3462431.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	8139.56	144267.95	0.00	0.00	13788.67

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SOURCE SENS LD BTU/HR	PEOPLE SENS LD BTU/HR	PEOPLE LAT GN BTU/HR	ELEC-EQP LAT GN BTU/HR	SOURCE LAT GN BTU/HR	INFILTRN LATENT BTU/HR	GLS SOL LOAD BTU/HR	LIGHT GAIN BTU/HR
	----(26)	----(27)	----(28)	----(29)	----(30)	----(31)	----(33)	----(35)
5 4 1	0.00	5560.91	0.00	0.00	0.00	47984.39	51932.07	1087.92
5 4 2	0.00	5060.42	0.00	0.00	0.00	44260.49	47258.18	1087.92
5 4 3	0.00	4604.99	0.00	0.00	0.00	47984.39	43004.95	1087.92
5 4 4	0.00	4190.54	0.00	0.00	0.00	55593.59	39134.50	1087.92
5 4 5	0.00	3813.39	0.00	0.00	0.00	42205.00	35612.40	1087.92
5 4 6	0.00	3470.18	0.00	0.00	0.00	43660.77	32407.28	10879.22
5 4 7	0.00	3157.87	0.00	0.00	0.00	38191.95	45273.97	48956.48
5 4 8	0.00	35611.13	25020.61	0.00	0.00	20758.05	71646.38	54396.09
5 4 9	0.00	36764.66	25020.61	0.00	0.00	23263.83	78256.77	54396.09
5 410	0.00	37814.38	25020.61	0.00	0.00	26132.34	93908.19	54396.09
5 411	0.00	32222.13	20016.49	0.00	0.00	26451.85	112428.68	27198.04
5 412	0.00	19713.98	10008.24	0.00	0.00	24870.52	117026.05	54396.09
5 413	0.00	32778.13	20016.49	0.00	0.00	28866.47	126589.83	54396.09
5 414	0.00	39862.42	25020.61	0.00	0.00	25105.21	126126.77	54396.09
5 415	0.00	40633.34	25020.61	0.00	0.00	21302.76	130352.58	54396.09
5 416	0.00	41334.88	25020.61	0.00	0.00	36247.08	125524.59	38077.26
5 417	0.00	41973.28	25020.61	0.00	0.00	62079.48	118891.33	16318.83
5 418	0.00	26185.49	12510.30	0.00	0.00	51189.95	107096.09	10879.22
5 419	0.00	11276.20	1251.03	0.00	0.00	58794.84	95029.88	5439.61
5 420	0.00	10479.27	1251.03	0.00	0.00	44486.14	85672.66	1087.92
5 421	0.00	8117.19	0.00	0.00	0.00	61748.18	77962.12	1087.92
5 422	0.00	7386.65	0.00	0.00	0.00	70229.01	70945.53	1087.92
5 423	0.00	6721.85	0.00	0.00	0.00	56102.36	64560.43	1087.92
5 424	0.00	6116.88	0.00	0.00	0.00	70614.85	58750.00	1087.92
DAILY SUMMARY (MAY 4)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	54396.09
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	549400.56
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	22891.69
MONTHLY SUMMARY (MAY)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	54396.09
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	549400.56
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	22891.69
YEARLY SUMMARY								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	1087.92
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	54396.09
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	549400.56
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	22891.69

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	LIGHT LOAD BTU/HR	INFILTRN SENS GN BTU/HR	ELECTRIC LOAD BTU/HR	INFILTRN FLOWRT CUFT/MIN	SUM LOAD BTU/HR	SPACE CONDUCT BTU/HR-F	SPACE SENS LD BTU/HR	SPACE LAT LD BTU/HR
	----(36)	----(37)	----(38)	----(39)	----(40)	----(41)	----(42)	----(43)
5 4 1	9164.24	7946.02	1743.30	951.13	205142.97	11300.06	213088.98	0.00
5 4 2	8437.37	7329.35	1743.30	877.31	187840.92	11030.22	195170.28	0.00
5 4 3	7775.92	7946.02	1743.30	951.13	175804.23	11300.06	183750.25	0.00
5 4 4	7174.00	8571.50	1743.30	1172.57	165105.20	11874.64	173676.70	0.00
5 4 5	6626.25	5959.51	1743.30	951.13	145584.78	11300.06	151544.30	0.00
5 4 6	11317.19	4966.26	17432.96	951.13	139584.44	11300.06	144550.70	0.00
5 4 7	31458.72	4605.18	78448.34	1098.76	182606.58	11712.97	187211.75	0.00
5 4 8	35916.51	4605.18	87164.81	549.38	266687.38	11712.97	271292.56	25020.61
5 4 9	37579.67	6332.12	87164.81	549.38	298730.09	11712.97	305062.22	25020.61
5 410	39093.14	9997.06	87164.81	733.91	342737.63	12340.56	352734.69	25020.61
5 411	26055.45	12304.08	43582.41	733.91	363572.63	12340.56	375876.69	20016.49
5 412	40573.24	13842.08	87164.81	733.91	414969.25	12340.56	428811.34	10008.24
5 413	41817.30	16869.96	87164.81	807.73	474645.53	12503.28	491515.50	20016.49
5 414	42949.39	16094.73	87164.81	733.91	507513.50	12340.56	523608.22	25020.61
5 415	43979.59	12047.88	87164.81	549.38	530234.50	11712.97	542282.38	25020.61
5 416	36268.10	16869.96	61015.37	807.73	534165.69	12503.28	551035.63	25020.61
5 417	24898.95	24815.98	26149.45	1320.20	495085.69	12136.91	519901.66	25020.61
5 418	21243.75	17211.26	17432.96	1098.76	440624.25	11712.97	457835.50	12510.30
5 419	17427.95	19926.80	8716.48	1467.82	392967.06	12340.56	412893.88	1251.03
5 420	14042.60	10925.77	1743.30	951.13	344340.03	11300.06	355265.81	1251.03
5 421	12876.68	15165.32	1743.30	1320.20	323070.13	12136.91	338235.44	0.00
5 422	11815.70	15328.31	1743.30	1467.82	299668.69	12340.56	314997.00	0.00
5 423	10850.20	12245.00	1743.30	1172.57	273811.72	11874.64	286056.72	0.00
5 424	9971.59	12407.99	1743.30	1320.20	253791.72	12136.91	266199.72	0.00
DAILY SUMMARY (MAY 4)								
MN	6626.25	4605.18	1743.30	549.38	139584.44	11030.22	144550.70	0.00
MX	43979.59	24815.98	87164.81	1467.82	534165.69	12503.28	551035.63	25020.61
SM	549313.44	284313.34	880364.69	23271.08	7758283.50	285305.28	8042597.50	240197.84
AV	22888.06	11846.39	36681.86	969.63	323261.81	11887.72	335108.22	10008.24
MONTHLY SUMMARY (MAY)								
MN	6626.25	4605.18	1743.30	549.38	139584.44	11030.22	144550.70	0.00
MX	43979.59	24815.98	87164.81	1467.82	534165.69	12503.28	551035.63	25020.61
SM	549313.44	284313.34	880364.69	23271.08	7758283.50	285305.28	8042597.50	240197.84
AV	22888.06	11846.39	36681.86	969.63	323261.81	11887.72	335108.22	10008.24
YEARLY SUMMARY								
MN	6626.25	4605.18	1743.30	549.38	139584.44	11030.22	144550.70	0.00
MX	43979.59	24815.98	87164.81	1467.82	534165.69	12503.28	551035.63	25020.61
SM	549313.44	284313.34	880364.69	23271.08	7758283.50	285305.28	8042597.50	240197.84
AV	22888.06	11846.39	36681.86	969.63	323261.81	11887.72	335108.22	10008.24

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SPACE LOAD TOT BTU/HR	SPACE LT ELEC BTU/HR	SPACE EQ ELEC BTU/HR	DAYL ILL REF PT 1 FOOTCAND LES	DAYL ILL REF PT 2 FOOTCAND LES	LTPW MUL REF PT 1	LTPW MUL REF PT 2	LTPW MUL TOTAL
	----(44)	----(45)	----(46)	----(49)	----(50)	----(55)	----(56)	----(57)
5 4 1	213088.98	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 2	195170.28	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 3	183750.25	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 4	173676.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 5	151544.30	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 6	144550.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 4 7	187211.75	48956.48	29491.86	0.0	0.0	1.00	1.00	1.00
5 4 8	296313.16	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 4 9	330082.81	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 410	377755.28	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 411	395893.19	27198.04	16384.36	0.0	0.0	1.00	1.00	1.00
5 412	438819.59	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 413	511531.97	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 414	548628.81	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 415	567303.00	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
5 416	576056.25	38077.26	22938.11	0.0	0.0	1.00	1.00	1.00
5 417	544922.25	16318.83	9830.62	0.0	0.0	1.00	1.00	1.00
5 418	470345.81	10879.22	6553.75	0.0	0.0	1.00	1.00	1.00
5 419	414144.91	5439.61	3276.87	0.0	0.0	1.00	1.00	1.00
5 420	356516.84	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 421	338235.44	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 422	314997.00	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 423	286056.72	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
5 424	266199.72	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
DAILY SUMMARY (MAY 4)								
MN	144550.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
MX	576056.25	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
SM	8282795.50	549400.56	330964.13	0.0	0.0	24.00	24.00	24.00
AV	345116.47	22891.69	13790.17	0.0	0.0	1.00	1.00	1.00
MONTHLY SUMMARY (MAY)								
MN	144550.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
MX	576056.25	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
SM	8282795.50	549400.56	330964.13	0.0	0.0	24.00	24.00	24.00
AV	345116.47	22891.69	13790.17	0.0	0.0	1.00	1.00	1.00
YEARLY SUMMARY								
MN	144550.70	1087.92	655.37	0.0	0.0	1.00	1.00	1.00
MX	576056.25	54396.09	32768.73	0.0	0.0	1.00	1.00	1.00
SM	8282795.50	549400.56	330964.13	0.0	0.0	24.00	24.00	24.00
AV	345116.47	22891.69	13790.17	0.0	0.0	1.00	1.00	1.00

MESSAGE LIST FROM SYSTEMS PROGRAM

WARNING***
SYSTEM ACSYSTEM MAY HAVE INADEQUATE HEATING CAPABILITY
(CHECK HEATING-CAPACITY, HEAT-SET-T, PRE-HEAT-T AND MAX-SUPPLY-T FOR CONSISTENCY)



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SYSTEM NAME	ALTITUDE MULTIPLIER												
ACSYSTEM	1.000												
SUPPLY FAN (CFM)	ELEC (KW)	DELTA-T (F)	RETURN FAN (CFM)	ELEC (KW)	DELTA-T (F)	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)		
155630.	169.637	3.4	0.	0.000	0.0	0.138	6688.158	0.659	0.000	0.00	0.00		
ZONE NAME	SUPPLY FLOW	EXHAUST FLOW	FAN (KW)	MINIMUM FLOW RATIO	OUTSIDE AIR FLOW	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	MULTIPLIER		
CORE-FL-1	880.	0.	0.000	0.409	360.	0.00	0.00	18.06	0.00	-57.02	1.0		
CORE-FL-2	630.	0.	0.000	0.413	260.	0.00	0.00	12.93	0.00	-40.82	1.0		
CORE-FL-3	1950.	0.	0.000	0.082	160.	0.00	0.00	40.01	0.00	-126.36	1.0		
CORE-FL-B	880.	0.	0.000	0.409	360.	0.00	0.00	18.06	0.00	-57.02	1.0		
N-FL-1	33790.	0.	0.000	0.073	2460.	0.00	0.00	693.37	0.00	-2189.59	1.0		
N-FL-2	9410.	0.	0.000	0.054	510.	0.00	0.00	193.09	0.00	-609.77	1.0		
N-FL-3	4050.	0.	0.000	0.079	320.	0.00	0.00	83.11	0.00	-262.44	1.0		
N-FL-4	3250.	0.	0.000	0.252	820.	0.00	0.00	66.69	0.00	-210.60	1.0		
N-FL-B	19040.	0.	0.000	0.247	4710.	0.00	0.00	390.70	0.00	-1233.79	1.0		
S-FL-1	25250.	0.	0.000	0.097	2460.	0.00	0.00	518.13	0.00	-1636.20	1.0		
S-FL-2	1980.	0.	0.000	0.258	510.	0.00	0.00	40.63	0.00	-128.30	1.0		
S-FL-3	1610.	0.	0.000	0.199	320.	0.00	0.00	33.04	0.00	-104.33	1.0		
S-FL-B	13930.	0.	0.000	0.338	4710.	0.00	0.00	285.84	0.00	-902.66	1.0		
W-EL-1	38980.	0.	0.000	0.092	3580.	0.00	0.00	799.87	0.00	-2525.90	1.0		

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MONTH	COOLING					MAXIMUM COOLING LOAD (KBTU/HR)	HEATING					MAXIMUM HEATING LOAD (KBTU/HR)	ELEC	
	COOLING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP			HEATING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP			ELEC- TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	855.69556	26 18	73.F	72.F		5580.475	0.000				0.000	85831.	378.400	
FEB	860.03058	28 16	93.F	80.F		5215.730	0.000				0.000	77582.	378.400	
MAR	1124.95776	30 15	96.F	81.F		5595.648	0.000				0.000	93213.	378.400	
APR	1024.99683	12 15	100.F	80.F		5872.375	0.000				0.000	81756.	378.400	
MAY	1048.81189	5 18	96.F	81.F		5747.910	0.000				0.000	89515.	378.400	
JUN	998.17126	19 16	103.F	77.F		5629.397	0.000				0.000	89215.	378.400	
JUL	865.26605	17 16	90.F	79.F		4941.051	0.000				0.000	81682.	378.400	
AUG	1045.36890	18 15	93.F	80.F		5118.267	0.000				0.000	93284.	378.400	
SEP	877.24963	11 16	89.F	79.F		4856.345	0.000				0.000	81541.	378.400	
OCT	889.83826	2 16	88.F	79.F		4834.977	0.000				0.000	85512.	378.400	
NOV	861.25098	21 15	92.F	76.F		4714.295	0.000				0.000	81530.	378.400	
DEC	736.20758	6 18	103.F	76.F		5299.740	-0.025	18 8	66.F 61.F		-14.958	80197.	378.400	
TOTAL	11187.835						-0.025					1020809.		
MAX						5872.375					-14.958		378.400	

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MONTH	- FAN ENERGY (KWH)	- FAN MAXIMUM LOAD (KW)	- FUEL GAS OIL ENERGY (MBTU)	- FUEL GAS OIL MAXIMUM LOAD (KBTU/HR)	- FUEL GAS OIL ENERGY (MBTU)	- FUEL GAS OIL MAXIMUM LOAD (KBTU/HR)	- ELEC ELECTRIC ENERGY (KWH)	- ELEC ELECTRIC MAXIMUM LOAD (KW)	- ELEC ELECTRIC ENERGY (KWH)	- ELEC ELECTRIC MAXIMUM LOAD (KW)
JAN	39061.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
FEB	35274.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
MAR	42462.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
APR	37136.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
MAY	40754.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
JUN	40615.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
JUL	36902.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
AUG	42533.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
SEP	36922.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
OCT	38742.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
NOV	36911.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
DEC	35418.	167.835	0.000	0.000	0.000	0.000	0.	0.000	0.	0.000
TOTAL	462734.		0.000		0.000		0.		0.	
MAX		167.835		0.000		0.000		0.000		0.000

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MONTH	SENSIBLE COOLING ENERGY (MBTU)	LATENT COOLING ENERGY (MBTU)	MAX TOTAL COOLING ENERGY (KBTU/HR)	SENSIBLE HEAT RATIO AT MAX	TIME OF MAX DY HR	SENSIBLE HEATING ENERGY (MBTU)	LATENT HEATING ENERGY (MBTU)	MAX TOTAL HEATING ENERGY (KBTU/HR)
JAN	633.53705	222.15854	5580.475	0.357	26 18	0.00000	0.00000	0.000
FEB	642.09863	217.93195	5215.730	0.729	28 16	0.00000	0.00000	0.000
MAR	841.30914	283.64871	5595.648	0.733	30 15	0.00000	0.00000	0.000
APR	749.88495	275.11194	5872.375	0.681	12 15	0.00000	0.00000	0.000
MAY	737.97693	310.83490	5747.910	0.710	5 18	0.00000	0.00000	0.000
JUN	695.24243	302.92883	5629.397	0.731	19 16	0.00000	0.00000	0.000
JUL	610.98199	254.28403	4941.051	0.680	17 16	0.00000	0.00000	0.000
AUG	739.60059	305.76837	5118.267	0.708	18 15	0.00000	0.00000	0.000
SEP	610.96179	266.28784	4856.345	0.697	11 16	0.00000	0.00000	0.000
OCT	625.26770	264.57056	4834.977	0.700	2 16	0.00000	0.00000	0.000
NOV	617.00458	244.24640	4714.295	0.726	21 15	0.00000	0.00000	0.000
DEC	570.17719	166.03032	5299.740	0.683	6 18	-0.02492	0.00000	-14.958
TOTAL	8074.034	3113.801				-0.025	0.000	
MAX			5872.375	0.389				-14.958

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EQUIPMENT	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD
	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL
HERM-CENT-CHLR	5.990	1										
COOLING-TWR	1.827	4										

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S I T E E N E R G Y													* SOURCE
MONTH	2	3	4	5	6	7	8	9	10	11	12	13	* 14
	TOTAL HEAT LOAD	TOTAL COOLING LOAD	TOTAL ELECTR LOAD	RCVRED ENERGY	WASTED RCVVRBL ENERGY	FUEL INPUT COOLING	ELEC INPUT COOLING	FUEL INPUT HEATING	ELEC INPUT HEATING	FUEL INPUT ELECT	TOTAL FUEL INPUT	TOTAL SITE ENERGY	* TOTAL SOURCE ENERGY
JAN	0.0	943.1	642.4 188.1E	0.0	0.0	0.0	349.4 102.3E	0.0	0.0 0.0E	0.0	0.0	642.4	* 1927.5
FEB	0.0	939.0	602.5 176.5E	0.0	0.0	0.0	337.6 98.9E	0.0	0.0 0.0E	0.0	0.0	602.5	* 1807.8
MAR	0.0	1212.4	734.7 215.2E	0.0	0.0	0.0	416.5 122.0E	0.0	0.0 0.0E	0.0	0.0	734.7	* 2204.4
APR	0.0	1109.6	672.5 197.0E	0.0	0.0	0.0	393.3 115.2E	0.0	0.0 0.0E	0.0	0.0	672.5	* 2017.6
MAY	0.0	1136.2	706.7 207.0E	0.0	0.0	0.0	401.1 117.5E	0.0	0.0 0.0E	0.0	0.0	706.7	* 2120.4
JUN	0.0	1082.8	685.3 200.7E	0.0	0.0	0.0	380.7 111.5E	0.0	0.0 0.0E	0.0	0.0	685.3	* 2056.2
JUL	0.0	952.7	633.2 185.4E	0.0	0.0	0.0	354.3 103.8E	0.0	0.0 0.0E	0.0	0.0	633.2	* 1899.7
AUG	0.0	1132.8	713.9 209.1E	0.0	0.0	0.0	395.4 115.8E	0.0	0.0 0.0E	0.0	0.0	713.9	* 2142.0
SEP	0.0	961.9	631.4 184.9E	0.0	0.0	0.0	352.9 103.4E	0.0	0.0 0.0E	0.0	0.0	631.4	* 1894.2
OCT	0.0	977.3	652.0 191.0E	0.0	0.0	0.0	360.1 105.5E	0.0	0.0 0.0E	0.0	0.0	652.0	* 1956.3
NOV	0.0	945.9	625.8 183.3E	0.0	0.0	0.0	347.4 101.7E	0.0	0.0 0.0E	0.0	0.0	625.8	* 1877.5
DEC	0.0	823.6	601.1 176.1E	0.0	0.0	0.0	327.3 95.9E	0.0	0.0 0.0E	0.0	0.0	601.1	* 1803.5
	0.0	12217.3	7901.6 2314.2E	0.0	0.0	0.0	4416.0 1293.3E	0.0	0.0 0.0E	0.0	0.0	7901.6	* 23707.2

NOTE-- ALL ENTRIES ARE IN MBTU EXCEPT
 ENTRIES FOLLOWED BY E ARE IN MWH (THOUSANDS OF KWH)

HEATING LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD
-----	-----	-----
LOAD SATISFIED	0.0	0.0
TOTAL LOAD ON PLANT	0.0	

COOLING LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD
-----	-----	-----
HERM-CENT-CHLR	12218.3	100.0
LOAD SATISFIED	12218.3	100.0
TOTAL LOAD ON PLANT	12218.3	

ELECTRICAL LOADS	MBTU SUPPLIED	PCT OF TOTAL LOAD
-----	-----	-----
ELECTRICITY	7901.6	100.0
LOAD SATISFIED	7901.6	100.0
TOTAL LOAD ON PLANT	7901.5	

TOWER ABOVE DESIGN TEMPERATURE OF 93.F 1 HOURS
 MAXIMUM TOWER EXIT TEMPERATURE = 93.F

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SUMMARY OF LOADS MET

TYPE OF LOAD	TOTAL LOAD (MBTU)	LOAD SATISFIED (MBTU)	TOTAL OVERLOAD (MBTU)	PEAK OVERLOAD (MBTU)	HOURS OVERLOADED
HEATING LOADS	0.0	0.0	0.050	0.015	34
COOLING LOADS	12218.3	12218.3	1.241	0.264	22
ELECTRICAL LOADS	7901.5	7901.6	0.000	0.000	0

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TOTAL HOURS AT HOURLY DEMAND AND TIME OF DAY

HOUR	1AM	2	3	4	5	6	7	8	9	10	11	12	1PM	2	3	4	5	6	7	8	9	10	11	12	TOTAL
835	0	0	0	0	0	0	0	0	0	2	12	0	27	34	41	42	8	0	0	0	0	0	0	0	166
771	0	0	0	0	0	0	0	0	23	55	90	0	121	137	134	133	29	0	0	0	0	0	0	0	722
707	0	0	0	0	0	0	0	31	197	173	132	37	94	74	69	69	121	17	0	0	0	0	0	0	1014
643	0	0	0	0	0	0	0	190	24	16	17	161	9	6	7	7	88	84	0	0	0	0	0	0	609
D 578	0	0	0	0	0	0	0	16	7	5	0	47	0	0	0	0	5	132	0	0	0	0	0	0	212
E 514	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	18	0	0	0	0	0	0	30
M K 450	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
A W 385	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
N 321	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3
D 257	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	2	2	2	2	0	0	0	0	0	15
192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
128	365	365	365	365	365	365	365	114	114	114	113	113	113	112	110	112	111	112	362	365	365	365	365	365	5980
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENT TOTAL DEMAND	1.1	1.1	1.1	1.1	1.1	1.1	1.6	6.9	7.6	7.8	8.0	6.9	8.1	8.3	8.3	8.3	7.6	6.6	1.6	1.3	1.1	1.1	1.1	1.1	

PEAK ELECTRICAL LOAD BREAKDOWN

SOURCE	KW	PCT
SYSTEMS LOAD	378.400	44.8
CIRCULATION PUMPS	19.134	2.3
HERM-CENT-CHLR	395.035	46.7
COOLING-TWR	52.467	6.2

TOTAL 845.037

MMDDHH	GLOBAL	GLOBAL	PLANT	PLANT	PLANT	PLANT	PLANT
	AMBIENT DRYBULB F	AMBIENT WETBULB F	SYS COOL LOAD BTU/HR	SYS ELEC LOAD BTU/HR	TOTAL COOLING BTU/HR	TOTAL ELECTRIC BTU/HR	TOTAL FUEL BTU/HR
	----(1)	----(2)	----(2)	----(3)	----(9)	----(10)	----(12)
5 4 1	83.0	78.000	0.	14596.	117522.	243354.	0.
5 4 2	83.0	78.000	0.	14596.	117522.	238877.	0.
5 4 3	83.0	78.000	0.	14596.	117522.	238877.	0.
5 4 4	82.0	77.000	0.	14596.	117522.	239006.	0.
5 4 5	81.0	76.000	0.	14596.	117522.	238305.	0.
5 4 6	80.0	76.000	0.	156798.	117522.	379692.	0.
5 4 7	79.0	73.000	2977976.	1202782.	3095498.	2084394.	0.
5 4 8	83.0	75.000	3726869.	1292020.	3844391.	2285544.	0.
5 4 9	86.0	77.000	4139803.	1292020.	4257326.	2393390.	0.
5 410	88.0	76.000	4240647.	1292020.	4358169.	2442202.	0.
5 411	91.0	77.000	4553942.	943378.	4671464.	2153271.	0.
5 412	93.0	77.000	4709607.	1292020.	4827129.	2554914.	0.
5 413	95.0	78.000	5075850.	1292020.	5193372.	2644506.	0.
5 414	96.0	78.000	5154030.	1292020.	5271553.	2686849.	0.
5 415	96.0	79.000	5238109.	1292020.	5355632.	2710603.	0.
5 416	95.0	80.000	5293807.	1089338.	5411330.	2537722.	0.
5 417	93.0	80.000	5184048.	819096.	5301570.	2255437.	0.
5 418	90.0	79.000	0.	156798.	117522.	387110.	0.
5 419	88.0	77.000	0.	89237.	117522.	314502.	0.
5 420	86.0	78.000	0.	14596.	117522.	238041.	0.
5 421	86.0	78.000	0.	14596.	117522.	238877.	0.
5 422	85.0	78.000	0.	14596.	117522.	238877.	0.
5 423	85.0	78.000	0.	14596.	117522.	238877.	0.
5 424	84.0	79.000	0.	14596.	117522.	238753.	0.
DAILY SUMMARY (MAY 4)							
MN	79.0	73.000	0.	14596.	117522.	238041.	0.
MX	96.0	80.000	5293807.	1292020.	5411330.	2710603.	0.
SM	2091.0	1860.000	50294684.	13647525.	53115236.	30221978.	0.
AV	87.1	77.500	2095612.	568647.	2213135.	1259249.	0.
MONTHLY SUMMARY (MAY)							
MN	79.0	73.000	0.	14596.	117522.	238041.	0.
MX	96.0	80.000	5293807.	1292020.	5411330.	2710603.	0.
SM	2091.0	1860.000	50294684.	13647525.	53115236.	30221978.	0.
AV	87.1	77.500	2095612.	568647.	2213135.	1259249.	0.
YEARLY SUMMARY							
MN	79.0	73.000	0.	14596.	117522.	238041.	0.
MX	96.0	80.000	5293807.	1292020.	5411330.	2710603.	0.
SM	2091.0	1860.000	50294684.	13647525.	53115236.	30221978.	0.
AV	87.1	77.500	2095612.	568647.	2213135.	1259249.	0.

MMDDHH	HERM-CEN T-CHLR LOAD BTU/HR	HERM-CEN T-CHLR AVAL CAP RATIO FRAC.OR MULT.	HERM-CEN T-CHLR OPER PT LD RATIO FRAC.OR MULT.	HERM-CEN T-CHLR ADJUSTED EIR FRAC.OR MULT.	CTANK-ST ORAGE ENERGY RELEASED BTU/HR	CTANK-ST ORAGE ENERGY STORED BTU/HR	CTANK-ST ORAGE ENERGY LOSS BTU/HR	CTANK-ST ORAGE TOTAL IN STORAGE BTU/HR
	----(1)	----(8)	----(10)	----(16)	----(1)	----(4)	----(12)	----(14)
5 4 1	117522.	0.965	0.100	0.061	0.	0.	0.	0.
5 4 2	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 4 3	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 4 4	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 4 5	117522.	1.001	0.100	0.056	0.	0.	0.	0.
5 4 6	117522.	1.005	0.100	0.055	0.	0.	0.	0.
5 4 7	3095498.	1.023	0.517	0.106	0.	0.	0.	0.
5 4 8	3844391.	1.034	0.642	0.125	0.	0.	0.	0.
5 4 9	4257326.	1.026	0.711	0.143	0.	0.	0.	0.
5 410	4358169.	1.013	0.728	0.151	0.	0.	0.	0.
5 411	4671464.	1.018	0.780	0.161	0.	0.	0.	0.
5 412	4827129.	1.010	0.806	0.170	0.	0.	0.	0.
5 413	5193372.	1.009	0.867	0.185	0.	0.	0.	0.
5 414	5271553.	0.998	0.880	0.192	0.	0.	0.	0.
5 415	5355632.	0.997	0.894	0.196	0.	0.	0.	0.
5 416	5411330.	0.989	0.903	0.201	0.	0.	0.	0.
5 417	5301570.	0.980	0.885	0.199	0.	0.	0.	0.
5 418	117522.	0.951	0.100	0.062	0.	0.	0.	0.
5 419	117522.	0.991	0.100	0.058	0.	0.	0.	0.
5 420	117522.	1.001	0.100	0.056	0.	0.	0.	0.
5 421	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 422	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 423	117522.	0.996	0.100	0.057	0.	0.	0.	0.
5 424	117522.	0.996	0.100	0.057	0.	0.	0.	0.
DAILY SUMMARY (MAY 4)								
MN	117522.	0.951	0.100	0.055	0.	0.	0.	0.
MX	5411330.	1.034	0.903	0.201	0.	0.	0.	0.
SM	53115236.	23.982	9.912	2.577	0.	0.	0.	0.
AV	2213135.	0.999	0.413	0.107	0.	0.	0.	0.
MONTHLY SUMMARY (MAY)								
MN	117522.	0.951	0.100	0.055	0.	0.	0.	0.
MX	5411330.	1.034	0.903	0.201	0.	0.	0.	0.
SM	53115236.	23.982	9.912	2.577	0.	0.	0.	0.
AV	2213135.	0.999	0.413	0.107	0.	0.	0.	0.
YEARLY SUMMARY								
MN	117522.	0.951	0.100	0.055	0.	0.	0.	0.
MX	5411330.	1.034	0.903	0.201	0.	0.	0.	0.
SM	53115236.	23.982	9.912	2.577	0.	0.	0.	0.
AV	2213135.	0.999	0.413	0.107	0.	0.	0.	0.

LIFE-CYCLE COSTING PARAMETERS

DISCOUNT RATE (PERCENT)	LABOR INFLATION RATE (PERCENT)	MATERIALS INFLATION RATE (PERCENT)	PROJECT LIFE (YRS)
10.0	0.0	0.0	25.0

BUILDING COMPONENT COST INPUT DATA (CURRENT DOLLARS)

COST NAME	NUMBER OF UNITS	UNIT NAME	LIFE (YRS)	UNIT FIRST COST (\$)	UNIT INSTALL -ATION COST (\$)	UNIT ANNUAL MAINT COST (\$)	UNIT MINOR OVERHAUL COST (\$)	MINOR OVERHAUL INTERVAL (YRS)	UNIT MAJOR OVERHAUL COST (\$)	MAJOR OVERHAUL INTERVAL (YRS)
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NO BUILDING COMPONENT COSTS SPECIFIED

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ENERGY SOURCE	ENERGY UNIT (BTU)	UNIFORM COST /UNIT (\$)	COST ESCLA- ATION RATE	MIN MNTHLY CHARGE (\$)	RATE LIMIT /UNIT (\$)	FIXED MNTHLY CHARG1 (\$)	FIXED MNTHLY CHARG2 (\$)	ASSIGN- SCHEDULE (U-NAME)	ASSIGN- CHARGE1 (U-NAME)	ASSIGN- CHARGE2 (U-NAME)
ELECTRIC	3413.00	0.0000	5.000	0.00	1000000.000	0.00	0.00	TIMEOFUSE		

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MONTH	ELECTRIC UNIT= 3413.00

JAN	
ENERGY CONSUMPTION (UNIT/MO)	188228.
PEAK DEMAND (UNIT/HR)	760.
TOTAL COST (\$)	436215.97
FEB	
ENERGY CONSUMPTION (UNIT/MO)	176542.
PEAK DEMAND (UNIT/HR)	792.
TOTAL COST (\$)	433755.03
MAR	
ENERGY CONSUMPTION (UNIT/MO)	215276.
PEAK DEMAND (UNIT/HR)	831.
TOTAL COST (\$)	487175.00
APR	
ENERGY CONSUMPTION (UNIT/MO)	197033.
PEAK DEMAND (UNIT/HR)	845.
TOTAL COST (\$)	472050.75
MAY	
ENERGY CONSUMPTION (UNIT/MO)	207069.
PEAK DEMAND (UNIT/HR)	830.
TOTAL COST (\$)	478084.06
JUN	
ENERGY CONSUMPTION (UNIT/MO)	200797.
PEAK DEMAND (UNIT/HR)	809.
TOTAL COST (\$)	464812.44
JUL	
ENERGY CONSUMPTION (UNIT/MO)	185519.
PEAK DEMAND (UNIT/HR)	779.
TOTAL COST (\$)	439219.38
AUG	
ENERGY CONSUMPTION (UNIT/MO)	209179.
PEAK DEMAND (UNIT/HR)	788.
TOTAL COST (\$)	467180.81
SEP	
ENERGY CONSUMPTION (UNIT/MO)	184984.
PEAK DEMAND (UNIT/HR)	762.
TOTAL COST (\$)	433303.50
OCT	
ENERGY CONSUMPTION (UNIT/MO)	191046.
PEAK DEMAND (UNIT/HR)	761.
TOTAL COST (\$)	439451.84
NOV	
ENERGY CONSUMPTION (UNIT/MO)	183351.
PEAK DEMAND (UNIT/HR)	750.
TOTAL COST (\$)	427810.91
DEC	
ENERGY CONSUMPTION (UNIT/MO)	176126.
PEAK DEMAND (UNIT/HR)	740.



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 ภาลงกรรมมหาวิทยาลัย

TOTAL COST (\$)	417252.47
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TOTAL	
ENERGY CONSUMPTION (UNIT/YR)	2315151.
PEAK DEMAND (UNIT/HR)	845.
TOTAL COST (\$)	5396312.00



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
JAN	ENERGYCHARGE	744	188228.	201403.48	760.	760.	0.00	
	PEAK	273	142339.	0.00	760.	760.	234812.48	
FEB	ENERGYCHARGE	672	176542.	188899.56	792.	792.	0.00	433755.03
	PEAK	247	135000.	0.00	792.	792.	244855.47	
MAR	ENERGYCHARGE	744	215276.	230345.53	831.	831.	0.00	487175.00
	PEAK	299	169867.	0.00	831.	831.	256829.48	
APR	ENERGYCHARGE	720	197033.	210825.25	845.	845.	0.00	472050.75
	PEAK	260	151567.	0.00	845.	845.	261225.50	
MAY	ENERGYCHARGE	744	207069.	221564.34	830.	830.	0.00	478084.06
	PEAK	286	161052.	0.00	830.	830.	256519.73	
JUN	ENERGYCHARGE	720	200797.	214853.14	809.	809.	0.00	464812.44
	PEAK	286	156887.	0.00	809.	809.	249959.30	
JUL	ENERGYCHARGE	744	185519.	198505.00	779.	779.	0.00	439219.38
	PEAK	260	139560.	0.00	779.	779.	240714.36	
AUG	ENERGYCHARGE	744	209179.	223821.84	788.	788.	0.00	467180.81
	PEAK	299	163969.	0.00	788.	788.	243358.97	
SEP	ENERGYCHARGE	720	184984.	197932.45	762.	762.	0.00	433303.50
	PEAK	260	140713.	0.00	762.	762.	235371.03	
OCT	ENERGYCHARGE	744	191046.	204419.61	761.	761.	0.00	439451.84
	PEAK	273	145447.	0.00	761.	761.	235032.23	
NOV	ENERGYCHARGE	720	183351.	196185.98	750.	750.	0.00	427810.91
	PEAK	260	139105.	0.00	750.	750.	231624.92	
DEC	ENERGYCHARGE	744	176126.	188454.91	740.	740.	0.00	417252.47
	PEAK	260	130493.	0.00	740.	740.	228797.56	

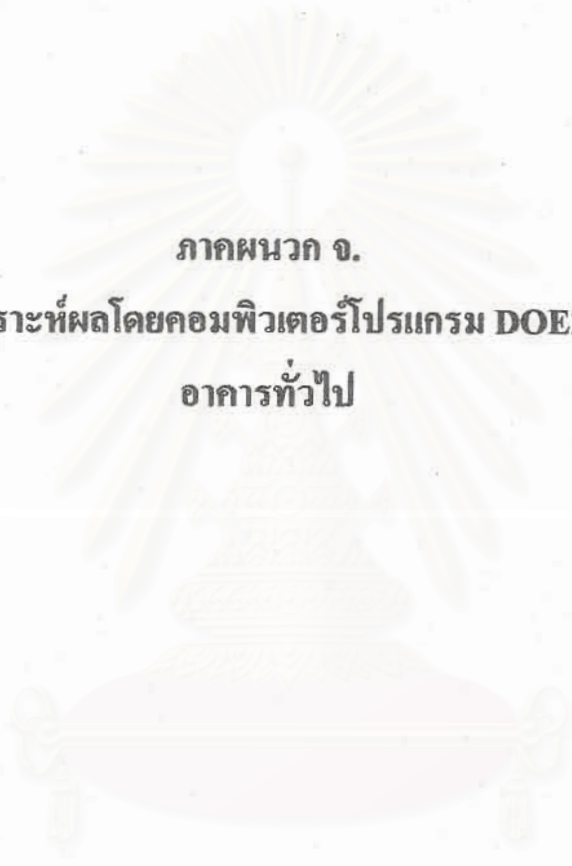
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MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
-----	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL			2315151.	2477211.25			2919101.00	5396312.00

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 จุฬาลงกรณ์มหาวิทยาลัย



ภาคผนวก จ.
การวิเคราะห์ผลโดยคอมพิวเตอร์โปรแกรม DOE2.1 D
อาคารทั่วไป

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย


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BUILDING ENERGY ANALYSIS PROGRAM

DEVELOPED BY

LAWRENCE BERKELEY LABORATORY/UNIVERSITY OF CALIFORNIA
AND
James J. Hirsch/HIRSCH & ASSOCIATES/(805) 532-1045

WITH MAJOR SUPPORT FROM

UNITED STATES DEPARTMENT OF ENERGY
ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY
OFFICE OF BUILDINGS AND COMMUNITY SYSTEMS
BUILDING SYSTEMS DIVISION

***** L E G A L N O T I C E *****

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LBL RELEASE DEC 1990 version : ITEM Systems PC 2.1D-018

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LDL PROCESSOR INPUT DATA

7/30/1996 18:40:49 LDL RUN 1

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* 2 *
* 3 * TITLE
* 4 *   LINE-1   *Energy Simulation of*
* 5 *   LINE-2   *Energy Conservation Building*
* 6 *   LINE-3   *Patumthani, Thailand*
* 7 *   LINE-4   *( DOE PLUS WITH DOE 2.1 D )*
* 8 *   LINE-5   *OTTV. CONDITION*
* 9 *   ..
* 10 *
* 11 * RUN-PERIOD
* 12 *   JAN 1 1995 THRU DEC 31 1995
* 13 *   ..
* 14 *
* 15 * $metric$ PARAMETER
* 16 *   INPUT-UNITS   = ENGLISH           OUTPUT-UNITS   = METRIC
* 17 *   ..
* 18 *
* 19 * BUILDING-LOCATION
* 20 *   $ City         = Patumthani
* 21 *   $ State/Country = Thailand
* 22 *   LATITUDE       = 13.57             LONGITUDE       = -100.6
* 23 *   ALTITUDE       = 0                 TIME-ZONE       = -7
* 24 *   AZIMUTH        = 0
* 25 *   GROUND-T        = (85,85,85,85,85,85,85,85,85,85)
* 26 *   ATM-MOISTURE    = (1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3,1.3)
* 27 *   ATM-TURBIDITY  = (.25,.25,.25,.25,.25,.25,.25,.25,.25,.25)
* 28 *   ..
* 29 *
* 30 * WEEKDAY-LIGHTING = DAY-SCHEDULE (1,24)
* 31 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.20,0.90,1.0,1.0,1.0,0.50,
* 32 *     1.0,1.0,1.0,1.0,0.70,0.30,0.20,0.10,0.02,0.02,0.02,0.02)
* 33 *   ..
* 34 *
* 35 * OCCUPY1 = DAY-SCHEDULE (1,24)
* 36 *   (0,0,0,0,0,0,0,0,1.0,1.0,1.0,0.80,
* 37 *     0.40,0.80,1.0,1.0,1.0,1.0,0.50,0.05,0.05,0,0,0)
* 38 *   ..
* 39 *
* 40 * OFFICE-LIGHTING = DAY-SCHEDULE (1,24)
* 41 *   (0.02,0.02,0.02,0.02,0.02,0.02,0.40,0.40,0.80,0.80,0.80,0.60,
* 42 *     0.80,0.80,0.80,0.80,0.80,0.80,0.40,0.40,0.02,0.02,0.02,0.02)
* 43 *   ..
* 44 *
* 45 * LIGHTSHED-YEAR = SCHEDULE
* 46 *   THRU DEC 31 (WD) WEEKDAY-LIGHTING
* 47 *     (WEH) (1,8){.02} (9,17) (.05) (18,24) (.02)
* 48 *   ..
* 49 *

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* 50 * INFILSCHED = SCHEDULE
* 51 *   THRU DEC 31 (WD) (1,8)(1) (9,17) (.5) (18,24) (1)
* 52 *   (WEH) (1,24) (1)
* 53 * ..
* 54 *
* 55 * OCCUPY = SCHEDULE
* 56 *   THRU DEC 31 (WD) OCCUPY1
* 57 *   (WEH) (1,8) (0.0) (9,17) (.02) (18,24) (0.0)
* 58 * ..
* 59 *
* 60 * OFFICE-LIGHTSCHE = SCHEDULE
* 61 *   THRU DEC 31 (WD) OFFICE-LIGHTING
* 62 *   (WEH) (1,8)(.02) (9,17) (.05) (18,24) (.02)
* 63 * ..
* 64 *
* 65 * SCH-HR-1 = SCHEDULE
* 66 *   THRU MAY 3 (ALL) (1,24) (0)
* 67 *   THRU MAY 4 (ALL) (1,24) (1)
* 68 *   THRU DEC 31 (ALL) (1,24) (0)
* 69 * ..
* 70 *
* 71 * SCH-HR-2 = SCHEDULE
* 72 *   THRU APR 30 (ALL) (1,24) (0)
* 73 *   THRU MAY 31 (ALL) (1,24) (1)
* 74 *   THRU DEC 31 (ALL) (1,24) (0)
* 75 * ..
* 76 *
* 77 * W-1 = LAYERS
* 78 *   MATERIAL           =(AS01,BK01,AL11,GP01)
* 79 * ..
* 80 *
* 81 * LOW-INSUL = LAYERS
* 82 *   MATERIAL           =(CB06)
* 83 * ..
* 84 *
* 85 * LAY-INT-WALLS = LAYERS
* 86 *   MATERIAL           =(CC05)
* 87 * ..
* 88 *
* 89 * F-1 = LAYERS
* 90 *   MATERIAL           =(CC04,CP02)
* 91 * ..
* 92 *
* 93 * R-1 = LAYERS
* 94 *   MATERIAL           =(AR01,CC04,AL33,GP02)
* 95 *   INSIDE-FILM-RES    = 0.92
* 96 * ..
* 97 *
* 98 * WALL-1 = CONSTRUCTION
* 99 *   LAYERS             = W-1
* 100 * ..
* 101 *
* 102 * ROOF-1 = CONSTRUCTION
* 103 *   LAYERS             = R-1
* 104 * ..
* 105 *

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ABSORPTANCE = 0.2

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* 106 * INTERIOR-WALLS = CONSTRUCTION
* 107 *   LAYERS           = LAY-INT-WALLS
* 108 * ..
* 109 *
* 110 * WALL_NON_ABSORB = CONSTRUCTION
* 111 *   $ LIKE           = WALL-1
* 112 *   LAYERS           = W-1           ABSORPTANCE = 0
* 113 * ..
* 114 *
* 115 * FLOOR = CONSTRUCTION
* 116 *   LAYERS           = F-1
* 117 * ..
* 118 *
* 119 * SELECTIVE = GLASS-TYPE
* 120 *   SHADING-COEF     = 0.60         GLASS-CONDUCTANCE= 1.42
* 121 *   VIS-TRANS       = 0.88
* 122 * ..
* 123 *
* 124 * NO-DAYLIT = SPACE-CONDITIONS
* 125 *   PEOPLE-SCHEDULE  = LIGHTSHED-YEAR  AREA/PERSON = 100
* 126 *   PEOPLE-HEAT-GAIN = 400            LIGHTING-SCHEDULE= LIGHTSHED-YEAR
* 127 *   LIGHTING-W/SQFT  = 2.3           EQUIP-SCHEDULE = LIGHTSHED-YEAR
* 128 *   EQUIPMENT-W/SQFT = 0.5           INF-SCHEDULE   = INFILSCHE
* 129 *   INF-METHOD     = AIR-CHANGE     AIR-CHANGES/HR = 0.1
* 130 *   INF-CFM/SQFT    = 0.038         TEMPERATURE    = (75)
* 131 *   LIGHT-TO-SPACE  = 1.0
* 132 *   LIGHT-RAD-FRAC  = (0.67,0.9)
* 133 *   DAYLIGHT-REP-SCH = LIGHTSHED-YEAR
* 134 *   SOURCE-TYPE     = ELECTRIC
* 135 *   FLOOR-WEIGHT    = 130           FURNITURE-TYPE = LIGHT
* 136 * ..
* 137 *
* 138 * ALLSPACE = SPACE-CONDITIONS
* 139 *   PEOPLE-SCHEDULE  = OCCUPY         AREA/PERSON = 100
* 140 *   PEOPLE-HEAT-GAIN = 400            LIGHTING-SCHEDULE= LIGHTSHED-YEAR
* 141 *   LIGHTING-W/SQFT  = 2.3           EQUIP-SCHEDULE = LIGHTSHED-YEAR
* 142 *   EQUIPMENT-W/SQFT = 0.5           INF-SCHEDULE   = INFILSCHE
* 143 *   INF-METHOD     = AIR-CHANGE     AIR-CHANGES/HR = 0.2
* 144 *   INF-CFM/SQFT    = 0.038         TEMPERATURE    = (75)
* 145 *   LIGHT-TO-SPACE  = 1.0
* 146 *   LIGHT-RAD-FRAC  = (0.67,1.0)
* 147 *   MIN-LIGHT-FRAC  = 0.167         DAYLIGHT-REP-SCH = LIGHTSHED-YEAR
* 148 *   SOURCE-SCHEDULE = OCCUPY         SOURCE-TYPE     = ELECTRIC
* 149 *   FLOOR-WEIGHT    = 130           FURNITURE-TYPE = LIGHT
* 150 * ..
* 151 *
* 152 * OFFICESPACE = SPACE-CONDITIONS
* 153 *   PEOPLE-SCHEDULE  = OCCUPY         AREA/PERSON = 100
* 154 *   PEOPLE-HEAT-GAIN = 400            LIGHTING-SCHEDULE= OFFICE-LIGHTSCHE
* 155 *   LIGHTING-W/SQFT  = 2.3           EQUIP-SCHEDULE = OFFICE-LIGHTSCHE
* 156 *   EQUIPMENT-W/SQFT = 0.5           INF-SCHEDULE   = INFILSCHE
* 157 *   INF-METHOD     = AIR-CHANGE     AIR-CHANGES/HR = 0.2
* 158 *   INF-CFM/SQFT    = 0.038         TEMPERATURE    = (75)
* 159 *   LIGHT-TO-SPACE  = 1.0
* 160 *   LIGHT-RAD-FRAC  = (0.67,1.0)
* 161 *   MIN-LIGHT-FRAC  = 0.167         DAYLIGHT-REP-SCH = LIGHTSHED-YEAR

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* 162 *	SOURCE-SCHEDULE = OCCUPY	SOURCE-TYPE = ELECTRIC
* 163 *	FLOOR-WEIGHT = 130	FURNITURE-TYPE = LIGHT
* 164 *	..	
* 165 *	..	
* 166 *	N-FL-1 = SPACE	
* 167 *	SPACE-CONDITIONS = ALLSPACE	AREA = 19202.3
* 168 *	VOLUME = 192023.0	FLOOR-MULTIPLIER = 1
* 169 *	INF-SCHEDULE = INFILSCHED	
* 170 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR	
* 171 *	SOURCE-TYPE = ELECTRIC	
* 172 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE = LIGHT
* 173 *	TEMPERATURE = (75.0)	
* 174 *	..	
* 175 *	..	
* 176 *	WALL3-N-FL-1 = EXTERIOR-WALL	
* 177 *	CONSTRUCTION = WALL-1	X = 213.24
* 178 *	Y = 63.33	Z = 0
* 179 *	HEIGHT = 26.4	WIDTH = 86.58
* 180 *	TILT = 90	
* 181 *	..	
* 182 *	..	
* 183 *	G-WALL3-N-FL-1 = WINDOW	
* 184 *	GLASS-TYPE = SELECTIVE	HEIGHT = 6.93
* 185 *	WIDTH = 86.58	Y = 0
* 186 *	..	
* 187 *	..	
* 188 *	WALL4-N-FL-1 = EXTERIOR-WALL	
* 189 *	CONSTRUCTION = WALL-1	X = 213.24
* 190 *	Y = -23.25	Z = 0
* 191 *	HEIGHT = 26.4	WIDTH = 86.58
* 192 *	AZIMUTH = 90	TILT = 90
* 193 *	..	
* 194 *	..	
* 195 *	G-WALL4-N-FL-1 = WINDOW	
* 196 *	GLASS-TYPE = SELECTIVE	HEIGHT = 6.93
* 197 *	WIDTH = 86.58	Y = 0
* 198 *	..	
* 199 *	..	
* 200 *	WALL5-N-FL-1 = EXTERIOR-WALL	
* 201 *	CONSTRUCTION = WALL-1	X = 272
* 202 *	Y = -82.06	Z = 0
* 203 *	HEIGHT = 26.4	WIDTH = 83.25
* 204 *	AZIMUTH = 45	TILT = 90
* 205 *	..	
* 206 *	..	
* 207 *	G-WALL5-N-FL-1 = WINDOW	
* 208 *	GLASS-TYPE = SELECTIVE	HEIGHT = 13.86
* 209 *	WIDTH = 83.25	Y = 0
* 210 *	..	
* 211 *	..	
* 212 *	ROOF1-FL-1 = EXTERIOR-WALL	
* 213 *	CONSTRUCTION = WALL-1	X = 126.66
* 214 *	Y = 126.66	Z = 13.2
* 215 *	HEIGHT = 126.66	WIDTH = 126.66
* 216 *	TILT = 0	
* 217 *	..	

* 218 *				
* 219 *	G1-ROOF1-FL-1 = WINDOW			
* 220 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 221 *	WIDTH	= 108.66	X	= 9.0
* 222 *	Y	= 9.0		
* 223 *	..			
* 224 *				
* 225 *	G5-ROOF1-FL-1 = WINDOW			
* 226 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 227 *	WIDTH	= 108.66	X	= 9.0
* 228 *	Y	= 115.66		
* 229 *	..			
* 230 *				
* 231 *	G2-ROOF1-FL-1 = WINDOW			
* 232 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 233 *	WIDTH	= 2.0	X	= 9.0
* 234 *	Y	= 9.0		
* 235 *	..			
* 236 *				
* 237 *	G3-ROOF1-FL-1 = WINDOW			
* 238 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 239 *	WIDTH	= 2.0	X	= 9.0
* 240 *	Y	= 45.22		
* 241 *	..			
* 242 *				
* 243 *	G4-ROOF1-FL-1 = WINDOW			
* 244 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 245 *	WIDTH	= 2.0	X	= 9.0
* 246 *	Y	= 81.44		
* 247 *	..			
* 248 *				
* 249 *	G6-ROOF1-FL-1 = WINDOW			
* 250 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 251 *	WIDTH	= 2.0	X	= 115.66
* 252 *	Y	= 81.44		
* 253 *	..			
* 254 *				
* 255 *	G7-ROOF1-FL-1 = WINDOW			
* 256 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 257 *	WIDTH	= 2.0	X	= 115.66
* 258 *	Y	= 45.22		
* 259 *	..			
* 260 *				
* 261 *	G8-ROOF1-FL-1 = WINDOW			
* 262 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 36.22
* 263 *	WIDTH	= 2.0	X	= 115.66
* 264 *	Y	= 9.0		
* 265 *	..			
* 266 *				
* 267 *	WALL1-NW-FL1 = EXTERIOR-WALL			
* 268 *	CONSTRUCTION	= WALL-1	X	= 126.66
* 269 *	Y	= 126.66	Z	= 0
* 270 *	HEIGHT	= 13.2	WIDTH	= 63.33
* 271 *	TILT	= 90		
* 272 *	..			
* 273 *				

* 274 *	G-WALL1-N-FL-1 = WINDOW		
* 275 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 276 *	WIDTH = 63.33	Y	= 3.3
* 277 *	SETBACK = 10		
* 278 *	..		
* 279 *			
* 280 *	WALL2-NW-FL1 = EXTERIOR-WALL		
* 281 *	CONSTRUCTION = WALL-1	X	= 63.33
* 282 *	Y = 126.66	Z	= 0
* 283 *	HEIGHT = 13.2	WIDTH	= 63.33
* 284 *	TILT = 90		
* 285 *	..		
* 286 *			
* 287 *	G-WALL1-W-FL-1 = WINDOW		
* 288 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 289 *	WIDTH = 63.33	Y	= 3.3
* 290 *	SETBACK = 10		
* 291 *	..		
* 292 *			
* 293 *	WALL1-NE-FL1 = EXTERIOR-WALL		
* 294 *	CONSTRUCTION = WALL-1	X	= 126.66
* 295 *	Y = 63.33	Z	= 0
* 296 *	HEIGHT = 13.2	WIDTH	= 63.33
* 297 *	AZIMUTH = 90	TILT	= 90
* 298 *	..		
* 299 *			
* 300 *	G-WALL2-N-FL-1 = WINDOW		
* 301 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 302 *	WIDTH = 63.33	Y	= 3.3
* 303 *	SETBACK = 10		
* 304 *	..		
* 305 *			
* 306 *	ROOF2 = EXTERIOR-WALL		
* 307 *	CONSTRUCTION = ROOF-1	X	= 213.24
* 308 *	Y = -23.25	Z	= 26.4
* 309 *	HEIGHT = 80	WIDTH	= 88.58
* 310 *	AZIMUTH = 90	TILT	= 0
* 311 *	..		
* 312 *			
* 313 *	ROOF-4 = EXTERIOR-WALL		
* 314 *	CONSTRUCTION = ROOF-1	X	= 149.91
* 315 *	Y = -86.58	Z	= 26.4
* 316 *	HEIGHT = 65	WIDTH	= 120
* 317 *	AZIMUTH = 180	TILT	= 0
* 318 *	..		
* 319 *			
* 320 *	FL_1 2 = EXTERIOR-WALL		
* 321 *	CONSTRUCTION = FLOOR	X	= 213.24
* 322 *	Y = -23.25	Z	= 0
* 323 *	HEIGHT = 80	WIDTH	= 88.58
* 324 *	AZIMUTH = 90	TILT	= 0
* 325 *	..		
* 326 *			
* 327 *	FL_1 4 = EXTERIOR-WALL		
* 328 *	CONSTRUCTION = FLOOR	X	= 149.91
* 329 *	Y = -86.58	Z	= 0

* 330 *	HEIGHT	= 65	WIDTH	= 120
* 331 *	AZIMUTH	= 180	TILT	= 0
* 332 *	..			
* 333 *				
* 334 *	W-FL-1 = SPACE			
* 335 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 27932.4
* 336 *	VOLUME	= 279324.0	FLOOR-MULTIPLIER	= 1
* 337 *	INF-SCHEDULE	= INFILSCHD		
* 338 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 339 *	SOURCE-TYPE	= ELECTRIC		
* 340 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 341 *	TEMPERATURE	=(75.0)		
* 342 *	..			
* 343 *				
* 344 *	ROOF3A = EXTERIOR-WALL			
* 345 *	CONSTRUCTION	= ROOF-1	X	= 208.73
* 346 *	Y	= -145.4	Z	= 33.3
* 347 *	HEIGHT	= 63	WIDTH	= 148.25
* 348 *	AZIMUTH	= 270	TILT	= 0
* 349 *	..			
* 350 *				
* 351 *	ROOF3B = EXTERIOR-WALL			
* 352 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 353 *	Y	= -290.8	Z	= 33.3
* 354 *	HEIGHT	= 65	WIDTH	= 148.25
* 355 *	AZIMUTH	= 180	TILT	= 0
* 356 *	..			
* 357 *				
* 358 *	ROOF3C = EXTERIOR-WALL			
* 359 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 360 *	Y	= -82.06	Z	= 33.3
* 361 *	HEIGHT	= 65	WIDTH	= 88
* 362 *	AZIMUTH	= 0	TILT	= 0
* 363 *	..			
* 364 *				
* 365 *	ROOF3D = EXTERIOR-WALL			
* 366 *	CONSTRUCTION	= ROOF-1	X	= 417.5
* 367 *	Y	= -224.13	Z	= 33.3
* 368 *	HEIGHT	= 63	WIDTH	= 144
* 369 *	AZIMUTH	= 90	TILT	= 0
* 370 *	..			
* 371 *				
* 372 *	DOMEA = EXTERIOR-WALL			
* 373 *	CONSTRUCTION	= ROOF-1	X	= 270
* 374 *	Y	= -145.4	Z	= 33.3
* 375 *	HEIGHT	= 30	WIDTH	= 83.25
* 376 *	AZIMUTH	= 270	TILT	= 60
* 377 *	..			
* 378 *				
* 379 *	DOMEB = EXTERIOR-WALL			
* 380 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 381 *	Y	= -145.4	Z	= 33.3
* 382 *	HEIGHT	= 30	WIDTH	= 88
* 383 *	AZIMUTH	= 0	TILT	= 60
* 384 *	..			
* 385 *				

* 386 *	DOMEROOF = EXTERIOR-WALL			
* 387 *	CONSTRUCTION	= ROOF-1	X	= 270
* 388 *	Y	= -150	Z	= 60
* 389 *	HEIGHT	= 70.25	WIDTH	= 70.25
* 390 *	AZIMUTH	= 270	TILT	= 0
* 391 *	..			
* 392 *				
* 393 *	DOME-GLASS = WINDOW			
* 394 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 12
* 395 *	WIDTH	= 12	X	= 33.3
* 396 *	Y	= 33.3		
* 397 *	..			
* 398 *				
* 399 *	DOMEC = EXTERIOR-WALL			
* 400 *	CONSTRUCTION	= ROOF-1	X	= 267.59
* 401 *	Y	= -229.53	Z	= 33.3
* 402 *	HEIGHT	= 30	WIDTH	= 88
* 403 *	AZIMUTH	= 180	TILT	= 60
* 404 *	..			
* 405 *				
* 406 *	DOMED = EXTERIOR-WALL			
* 407 *	CONSTRUCTION	= ROOF-1	X	= 352
* 408 *	Y	= -224.13	Z	= 33.3
* 409 *	HEIGHT	= 30	WIDTH	= 83.25
* 410 *	AZIMUTH	= 90	TILT	= 60
* 411 *	..			
* 412 *				
* 413 *	WALL1_W_FL_1 = EXTERIOR-WALL			
* 414 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 415 *	Y	= -145.4	Z	= 0
* 416 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 417 *	AZIMUTH	= 270	TILT	= 90
* 418 *	..			
* 419 *				
* 420 *	WALL2_W_FL_1 = EXTERIOR-WALL			
* 421 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 422 *	Y	= -231.98	Z	= 0
* 423 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 424 *	AZIMUTH	= 225	TILT	= 90
* 425 *	..			
* 426 *				
* 427 *	WALL3_W_FL_1 = EXTERIOR-WALL			
* 428 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 429 *	Y	= -290.8	Z	= 0
* 430 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 431 *	AZIMUTH	= 180	TILT	= 90
* 432 *	..			
* 433 *				
* 434 *	WALL4_W_FL_1 = EXTERIOR-WALL			
* 435 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 436 *	Y	= -224.13	Z	= 0
* 437 *	HEIGHT	= 33.3	WIDTH	= 94.6
* 438 *	AZIMUTH	= 315	TILT	= 90
* 439 *	..			
* 440 *				
* 441 *	WALL5_W_FL_1 = EXTERIOR-WALL			

* 442 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 443 *	Y	= -140.88	Z	= 0
* 444 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 445 *	AZIMUTH	= 270	TILT	= 90
* 446 *	..			
* 447 *				
* 448 *	WALL6 W FL 1 = EXTERIOR-WALL			
* 449 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 450 *	Y	= -82.06	Z	= 0
* 451 *	HEIGHT	= 33.3	WIDTH	= 83.25
* 452 *	AZIMUTH	= 225	TILT	= 90
* 453 *	..			
* 454 *				
* 455 *	WALL7 W FL 1 = EXTERIOR-WALL			
* 456 *	CONSTRUCTION	= WALL-1	X	= 358.64
* 457 *	Y	= -82.06	Z	= 0
* 458 *	HEIGHT	= 33.3	WIDTH	= 86.58
* 459 *	AZIMUTH	= 0	TILT	= 90
* 460 *	..			
* 461 *				
* 462 *	FL 1 3A = EXTERIOR-WALL			
* 463 *	CONSTRUCTION	= FLOOR	X	= 208.73
* 464 *	Y	= -145.4	Z	= 0
* 465 *	HEIGHT	= 63	WIDTH	= 148.25
* 466 *	AZIMUTH	= 270	TILT	= 0
* 467 *	..			
* 468 *				
* 469 *	FL 1 3B = EXTERIOR-WALL			
* 470 *	CONSTRUCTION	= FLOOR	X	= 267.59
* 471 *	Y	= -290.8	Z	= 0
* 472 *	HEIGHT	= 65	WIDTH	= 148.25
* 473 *	AZIMUTH	= 180	TILT	= 0
* 474 *	..			
* 475 *				
* 476 *	FL 1 3C = EXTERIOR-WALL			
* 477 *	CONSTRUCTION	= ROOF-1	X	= 358.64
* 478 *	Y	= -82.06	Z	= 0
* 479 *	HEIGHT	= 65	WIDTH	= 88
* 480 *	AZIMUTH	= 0	TILT	= 0
* 481 *	..			
* 482 *				
* 483 *	FL 1 3D = EXTERIOR-WALL			
* 484 *	CONSTRUCTION	= FLOOR	X	= 417.5
* 485 *	Y	= -224.13	Z	= 0
* 486 *	HEIGHT	= 63	WIDTH	= 144
* 487 *	AZIMUTH	= 90	TILT	= 0
* 488 *	..			
* 489 *				
* 490 *	S-FL-1 = SPACE			
* 491 *	SPACE-CONDITIONS	= ALLSPACE	AREA	= 19202.3
* 492 *	VOLUME	= 192023.0	FLOOR-MULTIPLIER	= 1
* 493 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
* 494 *	SOURCE-TYPE	= ELECTRIC		
* 495 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 496 *	TEMPERATURE	= (75.0)		
* 497 *	..			

* 498 *				
* 499 *	WALL1-S-FL-1 = EXTERIOR-WALL			
* 500 *	CONSTRUCTION = WALL-1	X	= 0	
* 501 *	Y = 0	Z	= 0	
* 502 *	HEIGHT = 13.2	WIDTH	= 63.33	
* 503 *	AZIMUTH = 180	TILT	= 90	
* 504 *	..			
* 505 *				
* 506 *	G-WALL1-S-FL-1 = WINDOW			
* 507 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63	
* 508 *	WIDTH = 63.33	Y	= 3.3	
* 509 *	SETBACK = 10			
* 510 *	..			
* 511 *				
* 512 *	WALL2-S-FL-1 = EXTERIOR-WALL			
* 513 *	CONSTRUCTION = WALL-1	X	= 0	
* 514 *	Y = 63.33	Z	= 0	
* 515 *	HEIGHT = 13.2	WIDTH	= 63.33	
* 516 *	AZIMUTH = 270	TILT	= 90	
* 517 *	..			
* 518 *				
* 519 *	WALL3-S-FL-1 = EXTERIOR-WALL			
* 520 *	CONSTRUCTION = WALL-1	X	= 63.33	
* 521 *	Y = 0	Z	= 0	
* 522 *	HEIGHT = 26.4	WIDTH	= 86.58	
* 523 *	AZIMUTH = 270	TILT	= 90	
* 524 *	..			
* 525 *				
* 526 *	G-WALL3-S-FL-1 = WINDOW			
* 527 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 528 *	WIDTH = 86.58	Y	= 0	
* 529 *	..			
* 530 *				
* 531 *	WALL4-S-FL-1 = EXTERIOR-WALL			
* 532 *	CONSTRUCTION = WALL-1	X	= 63.33	
* 533 *	Y = -86.58	Z	= 0	
* 534 *	HEIGHT = 26.4	WIDTH	= 86.58	
* 535 *	AZIMUTH = 180	TILT	= 90	
* 536 *	..			
* 537 *				
* 538 *	G-WALL4-S-FL-1 = WINDOW			
* 539 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 540 *	WIDTH = 86.58	Y	= 0	
* 541 *	..			
* 542 *				
* 543 *	WALL5-S-FL-1 = EXTERIOR-WALL			
* 544 *	CONSTRUCTION = WALL-1	X	= 149.91	
* 545 *	Y = -86.58	Z	= 0	
* 546 *	HEIGHT = 26.4	WIDTH	= 83.25	
* 547 *	AZIMUTH = 225	TILT	= 90	
* 548 *	..			
* 549 *				
* 550 *	G-WALL5-S-FL-1 = WINDOW			
* 551 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 6.93	
* 552 *	WIDTH = 83.25	Y	= 0	
* 553 *	..			

* 554 *				
* 555 *	WALL1-SW-FL1 = EXTERIOR-WALL			
* 556 *	CONSTRUCTION = WALL-1	X	= 0	
* 557 *	Y = 126.66	Z	= 0	
* 558 *	HEIGHT = 13.2	WIDTH	= 63.33	
* 559 *	AZIMUTH = 270	TILT	= 90	
* 560 *	..			
* 561 *				
* 562 *	G-WALL2-W-FL-1 = WINDOW			
* 563 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63	
* 564 *	WIDTH = 63.33	Y	= 3.3	
* 565 *	SETBACK = 10			
* 566 *	..			
* 567 *				
* 568 *	WALL2-SW-FL1 = EXTERIOR-WALL			
* 569 *	CONSTRUCTION = WALL-1	X	= 0	
* 570 *	Y = 63.33	Z	= 0	
* 571 *	HEIGHT = 13.2	WIDTH	= 63.33	
* 572 *	AZIMUTH = 270	TILT	= 90	
* 573 *	..			
* 574 *				
* 575 *	G-WALL2-S-FL-1 = WINDOW			
* 576 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63	
* 577 *	WIDTH = 63.33	Y	= 3.3	
* 578 *	SETBACK = 10			
* 579 *	..			
* 580 *				
* 581 *	ROOF-2A = EXTERIOR-WALL			
* 582 *	CONSTRUCTION = ROOF-1	X	= 63.33	
* 583 *	Y = -86.58	Z	= 26.4	
* 584 *	HEIGHT = 80	WIDTH	= 86.58	
* 585 *	AZIMUTH = 180	TILT	= 0	
* 586 *	..			
* 587 *				
* 588 *	ROOF4A = EXTERIOR-WALL			
* 589 *	CONSTRUCTION = ROOF-1	X	= 149.91	
* 590 *	Y = -150	Z	= 26.4	
* 591 *	HEIGHT = 65	WIDTH	= 123	
* 592 *	AZIMUTH = 180	TILT	= 0	
* 593 *	..			
* 594 *				
* 595 *	FL_1_2A = EXTERIOR-WALL			
* 596 *	CONSTRUCTION = FLOOR	X	= 63.33	
* 597 *	Y = -86.58	Z	= 0	
* 598 *	HEIGHT = 80	WIDTH	= 86.58	
* 599 *	AZIMUTH = 180	TILT	= 0	
* 600 *	..			
* 601 *				
* 602 *	FL_1_4A = EXTERIOR-WALL			
* 603 *	CONSTRUCTION = FLOOR	X	= 149.91	
* 604 *	Y = -150	Z	= 0	
* 605 *	HEIGHT = 65	WIDTH	= 123	
* 606 *	AZIMUTH = 180	TILT	= 0	
* 607 *	..			
* 608 *				
* 609 *	N-FL-B = SPACE			

* 610 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 36780.3
* 611 *	VOLUME = 367803.0	FLOOR-MULTIPLIER	= 1
* 612 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR		
* 613 *	SOURCE-TYPE = ELECTRIC		
* 614 *	FLOOR-WEIGHT = 130.0		
* 615 *	TEMPERATURE = (75.0)		
* 616 *	..		
* 617 *			
* 618 *	WALL1-N-FL-B = EXTERIOR-WALL		
* 619 *	CONSTRUCTION = WALL-1	X	= 138.56
* 620 *	Y = 138.56	Z	= -14.2
* 621 *	HEIGHT = 18.55	WIDTH	= 75.23
* 622 *	TILT = 90		
* 623 *	..		
* 624 *			
* 625 *	WALL2-N-FL-B = EXTERIOR-WALL		
* 626 *	CONSTRUCTION = WALL-1	X	= 138.56
* 627 *	Y = 63.33	Z	= -14.2
* 628 *	HEIGHT = 18.55	WIDTH	= 75.23
* 629 *	AZIMUTH = 90	TILT	= 90
* 630 *	..		
* 631 *			
* 632 *	UN-N-FL-B = UNDERGROUND-WALL		
* 633 *	CONSTRUCTION = WALL-1	AREA	= 2000
* 634 *	..		
* 635 *			
* 636 *	WALL3-N-FL-B = EXTERIOR-WALL		
* 637 *	CONSTRUCTION = WALL-1	X	= 213.24
* 638 *	Y = 63.33	Z	= -16.65
* 639 *	HEIGHT = 16.65	WIDTH	= 86.58
* 640 *	TILT = 90		
* 641 *	..		
* 642 *			
* 643 *	WALL4-N-FL-B = EXTERIOR-WALL		
* 644 *	CONSTRUCTION = WALL-1	X	= 213.24
* 645 *	Y = -23.25	Z	= -16.65
* 646 *	HEIGHT = 16.65	WIDTH	= 86.58
* 647 *	AZIMUTH = 90	TILT	= 90
* 648 *	..		
* 649 *			
* 650 *	WALL5-N-FL-B = EXTERIOR-WALL		
* 651 *	CONSTRUCTION = WALL-1	X	= 213.20
* 652 *	Y = -23.25	Z	= -16.65
* 653 *	HEIGHT = 16.65	WIDTH	= 83.25
* 654 *	AZIMUTH = 225	TILT	= 90
* 655 *	..		
* 656 *			
* 657 *	WALL6-N-FL-B = EXTERIOR-WALL		
* 658 *	CONSTRUCTION = WALL-1	X	= 358.64
* 659 *	Y = -82.06	Z	= -16.65
* 660 *	HEIGHT = 16.65	WIDTH	= 86.58
* 661 *	AZIMUTH = 0	TILT	= 90
* 662 *	..		
* 663 *			
* 664 *	WALL7-N-FL-B = EXTERIOR-WALL		
* 665 *	CONSTRUCTION = WALL-1	X	= 358.64

* 666 *	Y	= -82.06	Z	= -16.65
* 667 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 668 *	AZIMUTH	= 225	TILT	= 90
* 669 *	..			
* 670 *				
* 671 *	WALL8-N-FL-B = EXTERIOR-WALL			
* 672 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 673 *	Y	= -140.88	Z	= -16.65
* 674 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 675 *	AZIMUTH	= 270	TILT	= 90
* 676 *	..			
* 677 *				
* 678 *	WALL10 N FL B = EXTERIOR-WALL			
* 679 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 680 *	Y	= 138.56	Z	= -14.2
* 681 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 682 *	TILT	= 90		
* 683 *	..			
* 684 *				
* 685 *	WALL9 N FL B = EXTERIOR-WALL			
* 686 *	CONSTRUCTION	= WALL-1	X	= 417.5
* 687 *	Y	= -224.13	Z	= -16.65
* 688 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 689 *	AZIMUTH	= 315	TILT	= 90
* 690 *	..			
* 691 *				
* 692 *	ROOF B FL = EXTERIOR-WALL			
* 693 *	CONSTRUCTION	= ROOF-1	X	= 138.56
* 694 *	Y	= 138.56	Z	= 0
* 695 *	HEIGHT	= 150.46	WIDTH	= 150.46
* 696 *	TILT	= 0		
* 697 *	..			
* 698 *				
* 699 *	G1-ROOF-B-FL = WINDOW			
* 700 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 701 *	WIDTH	= 132.46	X	= 9.0
* 702 *	Y	= 9.0		
* 703 *	..			
* 704 *				
* 705 *	G2-ROOF-B-FL = WINDOW			
* 706 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 707 *	WIDTH	= 2.0	X	= 9.0
* 708 *	Y	= 9.0		
* 709 *	..			
* 710 *				
* 711 *	G3-ROOF-B-FL = WINDOW			
* 712 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 713 *	WIDTH	= 2.0	X	= 9.0
* 714 *	Y	= 49.0		
* 715 *	..			
* 716 *				
* 717 *	G4-ROOF-B-FL = WINDOW			
* 718 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 40.0
* 719 *	WIDTH	= 2.0	X	= 9.0
* 720 *	Y	= 89.0		
* 721 *	..			

* 722 *				
* 723 *	G5-ROOF-B-FL = WINDOW			
* 724 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 2.0	
* 725 *	WIDTH = 132.46	X	= 9.0	
* 726 *	Y = 139.46			
* 727 *	..			
* 728 *				
* 729 *	G6-ROOF-B-FL = WINDOW			
* 730 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 731 *	WIDTH = 2.0	X	= 139.46	
* 732 *	Y = 89.0			
* 733 *	..			
* 734 *				
* 735 *	G7-ROOF-B-FL = WINDOW			
* 736 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 737 *	WIDTH = 2.0	X	= 139.46	
* 738 *	Y = 49.0			
* 739 *	..			
* 740 *				
* 741 *	G8-ROOF-B-FL = WINDOW			
* 742 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 40.0	
* 743 *	WIDTH = 2.0	X	= 139.46	
* 744 *	Y = 9.0			
* 745 *	..			
* 746 *				
* 747 *	S-FL-B = SPACE			
* 748 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	= 36780.3	
* 749 *	VOLUME = 367803.0	FLOOR-MULTIPLIER	= 1	
* 750 *	DAYLIGHT-REP-SCH = LIGHTSHED-YEAR			
* 751 *	SOURCE-TYPE = ELECTRIC			
* 752 *	FLOOR-WEIGHT = 130.0			
* 753 *	TEMPERATURE = (75.0)			
* 754 *	..			
* 755 *				
* 756 *	WALL1-S-FL-B = EXTERIOR-WALL			
* 757 *	CONSTRUCTION = WALL-1	X	= -11.90	
* 758 *	Y = -11.9	Z	= -14.2	
* 759 *	HEIGHT = 18.55	WIDTH	= 75.23	
* 760 *	AZIMUTH = 180	TILT	= 90	
* 761 *	..			
* 762 *				
* 763 *	WALL2-S-FL-B = EXTERIOR-WALL			
* 764 *	CONSTRUCTION = WALL-1	X	= -11.9	
* 765 *	Y = 63.33	Z	= -14.2	
* 766 *	HEIGHT = 18.55	WIDTH	= 75.23	
* 767 *	AZIMUTH = 270	TILT	= 90	
* 768 *	..			
* 769 *				
* 770 *	UN-S-FL-B = UNDERGROUND-WALL			
* 771 *	CONSTRUCTION = WALL-1	AREA	= 2000	
* 772 *	..			
* 773 *				
* 774 *	WALL3-S-FL-B = EXTERIOR-WALL			
* 775 *	CONSTRUCTION = WALL-1	X	= 63.33	
* 776 *	Y = 0	Z	= -16.65	
* 777 *	HEIGHT = 16.65	WIDTH	= 86.58	

* 778 *	AZIMUTH	= 270	TILT	= 90
* 779 *	..			
* 780 *				
* 781 *	WALL4-S-FL-B = EXTERIOR-WALL			
* 782 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 783 *	Y	= -86.58	Z	= -16.65
* 784 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 785 *	AZIMUTH	= 180	TILT	= 90
* 786 *	..			
* 787 *				
* 788 *	WALL5-S-FL-B = EXTERIOR-WALL			
* 789 *	CONSTRUCTION	= WALL-1	X	= 149.91
* 790 *	Y	= -86.58	Z	= -16.65
* 791 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 792 *	AZIMUTH	= 225	TILT	= 90
* 793 *	..			
* 794 *				
* 795 *	WALL6-S-FL-B = EXTERIOR-WALL			
* 796 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 797 *	Y	= -145.4	Z	= -16.65
* 798 *	HEIGHT	= 16.65	WIDTH	= 86.58
* 799 *	AZIMUTH	= 270	TILT	= 90
* 800 *	..			
* 801 *				
* 802 *	WALL7-S-FL-B = EXTERIOR-WALL			
* 803 *	CONSTRUCTION	= WALL-1	X	= 208.73
* 804 *	Y	= -231.98	Z	= -16.65
* 805 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 806 *	AZIMUTH	= 225	TILT	= 90
* 807 *	..			
* 808 *				
* 809 *	WALL8-S-FL-B = EXTERIOR-WALL			
* 810 *	CONSTRUCTION	= WALL-1	X	= 267.59
* 811 *	Y	= -290.8	Z	= -16.65
* 812 *	HEIGHT	= 16.65	WIDTH	= 83.25
* 813 *	AZIMUTH	= 180	TILT	= 90
* 814 *	..			
* 815 *				
* 816 *	WALL9-S-FL-B = EXTERIOR-WALL			
* 817 *	CONSTRUCTION	= WALL-1	X	= 384.05
* 818 *	Y	= -257.24	Z	= -16.65
* 819 *	HEIGHT	= 16.65	WIDTH	= 47.3
* 820 *	AZIMUTH	= 315	TILT	= 90
* 821 *	..			
* 822 *				
* 823 *	WALL10 S FL B = EXTERIOR-WALL			
* 824 *	CONSTRUCTION	= WALL-1	X	= -11.9
* 825 *	Y	= 138.56	Z	= -14.2
* 826 *	HEIGHT	= 18.55	WIDTH	= 75.23
* 827 *	AZIMUTH	= 270	TILT	= 90
* 828 *	..			
* 829 *				
* 830 *	N-FL-2 = SPACE			
* 831 *	SPACE-CONDITIONS	= OFFICESPACE	AREA	= 3982
* 832 *	VOLUME	= 39820	FLOOR-MULTIPLIER	= 1
* 833 *	DAYLIGHT-REP-SCH	= OFFICE-LIGHTSCHE		

* 834 *	SOURCE-TYPE	= ELECTRIC		
* 835 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
* 836 *	TEMPERATURE	=(75.0)		
* 837 *	..			
* 838 *				
* 839 *	WALL1-N-FL-2 = EXTERIOR-WALL			
* 840 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 841 *	Y	= 115.58	Z	= 13.2
* 842 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 843 *	TILT	= 90		
* 844 *	..			
* 845 *				
* 846 *	G-WALL1-N-FL-2 = WINDOW			
* 847 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 848 *	WIDTH	= 52.25	Y	= 3.3
* 849 *	SETBACK	= 10		
* 850 *	..			
* 851 *				
* 852 *	WALL1-W-FL-2 = EXTERIOR-WALL			
* 853 *	CONSTRUCTION	= WALL-1	X	= 63.33
* 854 *	Y	= 115.58	Z	= 13.2
* 855 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 856 *	TILT	= 90		
* 857 *	..			
* 858 *				
* 859 *	G-WALL1-W-FL-2 = WINDOW			
* 860 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 861 *	WIDTH	= 52.25	Y	= 3.3
* 862 *	SETBACK	= 10		
* 863 *	..			
* 864 *				
* 865 *	WALL2-N-FL-2 = EXTERIOR-WALL			
* 866 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 867 *	Y	= 63.33	Z	= 13.2
* 868 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 869 *	AZIMUTH	= 90	TILT	= 90
* 870 *	..			
* 871 *				
* 872 *	G-WALL2-N-FL-2 = WINDOW			
* 873 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 874 *	WIDTH	= 52.25	Y	= 3.3
* 875 *	SETBACK	= 10		
* 876 *	..			
* 877 *				
* 878 *	WALL2-W-FL-2 = EXTERIOR-WALL			
* 879 *	CONSTRUCTION	= WALL-1	X	= 11.08
* 880 *	Y	= 115.58	Z	= 13.2
* 881 *	HEIGHT	= 13.2	WIDTH	= 52.25
* 882 *	AZIMUTH	= 270	TILT	= 90
* 883 *	..			
* 884 *				
* 885 *	G-WALL2-W-FL-2 = WINDOW			
* 886 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
* 887 *	WIDTH	= 52.25	Y	= 3.3
* 888 *	SETBACK	= 10		
* 889 *	..			

* 890 *				
* 891 *	ROOF1-FL-2 = EXTERIOR-WALL			
* 892 *	CONSTRUCTION	= WALL-1	X	= 115.58
* 893 *	Y	= 115.58	Z	= 26.4
* 894 *	HEIGHT	= 104.5	WIDTH	= 104.5
* 895 *	TILT	= 0		
* 896 *	..			
* 897 *				
* 898 *	G1-ROOF1-FL-2 = WINDOW			
* 899 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 900 *	WIDTH	= 86.5	X	= 9.0
* 901 *	Y	= 9.0		
* 902 *	..			
* 903 *				
* 904 *	G2-ROOF1-FL-2 = WINDOW			
* 905 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 906 *	WIDTH	= 2.0	X	= 9.0
* 907 *	Y	= 9.0		
* 908 *	..			
* 909 *				
* 910 *	G3-ROOF1-FL-2 = WINDOW			
* 911 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 912 *	WIDTH	= 2.0	X	= 9.0
* 913 *	Y	= 37.83		
* 914 *	..			
* 915 *				
* 916 *	G4-ROOF1-FL-2 = WINDOW			
* 917 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 918 *	WIDTH	= 2.0	X	= 9.0
* 919 *	Y	= 66.66		
* 920 *	..			
* 921 *				
* 922 *	G5-ROOF1-FL-2 = WINDOW			
* 923 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 2.0
* 924 *	WIDTH	= 86.5	X	= 9.0
* 925 *	Y	= 93.5		
* 926 *	..			
* 927 *				
* 928 *	G6-ROOF1-FL-2 = WINDOW			
* 929 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 930 *	WIDTH	= 2.0	X	= 93.5
* 931 *	Y	= 66.66		
* 932 *	..			
* 933 *				
* 934 *	G7-ROOF1-FL-2 = WINDOW			
* 935 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 936 *	WIDTH	= 2.0	X	= 93.5
* 937 *	Y	= 37.83		
* 938 *	..			
* 939 *				
* 940 *	G8-ROOF1-FL-2 = WINDOW			
* 941 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 28.83
* 942 *	WIDTH	= 2.0	X	= 93.5
* 943 *	Y	= 9.0		
* 944 *	..			
* 945 *				

* 946 *	INT-WALL-N-FL-2 = INTERIOR-WALL		
* 947 *	NEXT-TO = S-FL-2	CONSTRUCTION	= INTERIOR-WALLS
* 948 *	AREA = 650		
* 949 *	..		
* 950 *			
* 951 *	S-FL-2 = SPACE		
* 952 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 3982
* 953 *	VOLUME = 39820	FLOOR-MULTIPLIER	= 1
* 954 *	DAYLIGHT-REF-SCH = OFFICE-LIGHTSCHE		
* 955 *	SOURCE-TYPE = ELECTRIC		
* 956 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
* 957 *	TEMPERATURE = (75.0)		
* 958 *	..		
* 959 *			
* 960 *	WALL1-S-FL-2 = EXTERIOR-WALL		
* 961 *	CONSTRUCTION = WALL-1	X	= 11.08
* 962 *	Y = 11.08	Z	= 13.2
* 963 *	HEIGHT = 13.2	WIDTH	= 52.25
* 964 *	AZIMUTH = 180	TILT	= 90
* 965 *	..		
* 966 *			
* 967 *	G-WALL1-S-FL-2 = WINDOW		
* 968 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 969 *	WIDTH = 52.25	Y	= 3.3
* 970 *	SETBACK = 10		
* 971 *	..		
* 972 *			
* 973 *	WALL2-S-FL-2 = EXTERIOR-WALL		
* 974 *	CONSTRUCTION = WALL-1	X	= 11.08
* 975 *	Y = 63.33	Z	= 13.2
* 976 *	HEIGHT = 13.2	WIDTH	= 52.25
* 977 *	AZIMUTH = 270	TILT	= 90
* 978 *	..		
* 979 *			
* 980 *	G-WALL2-S-FL-2 = WINDOW		
* 981 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
* 982 *	WIDTH = 52.25	Y	= 3.3
* 983 *	SETBACK = 10		
* 984 *	..		
* 985 *			
* 986 *	N-FL-3 = SPACE		
* 987 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 2441.2
* 988 *	VOLUME = 24112	FLOOR-MULTIPLIER	= 1
* 989 *	DAYLIGHT-REP-SCH = OFFICE-LIGHTSCHE		
* 990 *	SOURCE-TYPE = ELECTRIC		
* 991 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
* 992 *	TEMPERATURE = (75.0)		
* 993 *	..		
* 994 *			
* 995 *	WALL1-N-FL-3 = EXTERIOR-WALL		
* 996 *	CONSTRUCTION = WALL-1	X	= 104.5
* 997 *	Y = 104.5	Z	= 26.4
* 998 *	HEIGHT = 13.2	WIDTH	= 41.17
* 999 *	TILT = 90		
*1000 *	..		
*1001 *			

*1002 *	G-WALL1-N-FL-3 = WINDOW		
*1003 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1004 *	WIDTH = 41.17	Y	= 3.3
*1005 *	SETBACK = 10		
*1006 *	..		
*1007 *			
*1008 *	WALL1-W-FL-3 = EXTERIOR-WALL		
*1009 *	CONSTRUCTION = WALL-1	X	= 63.33
*1010 *	Y = 104.50	Z	= 26.4
*1011 *	HEIGHT = 13.2	WIDTH	= 41.17
*1012 *	TILT = 90		
*1013 *	..		
*1014 *			
*1015 *	G-WALL1-W-FL-3 = WINDOW		
*1016 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1017 *	WIDTH = 41.17	Y	= 3.3
*1018 *	SETBACK = 10		
*1019 *	..		
*1020 *			
*1021 *	WALL2-N-FL-3 = EXTERIOR-WALL		
*1022 *	CONSTRUCTION = WALL-1	X	= 104.50
*1023 *	Y = 63.33	Z	= 26.4
*1024 *	HEIGHT = 13.2	WIDTH	= 41.17
*1025 *	AZIMUTH = 90	TILT	= 90
*1026 *	..		
*1027 *			
*1028 *	G-WALL2-N-FL-3 = WINDOW		
*1029 *	GLASS-TYPE = SELECTIVE	HEIGHT	= 3.63
*1030 *	WIDTH = 41.17	Y	= 3.3
*1031 *	SETBACK = 10		
*1032 *	..		
*1033 *			
*1034 *	ROOF1-FL-3 = EXTERIOR-WALL		
*1035 *	CONSTRUCTION = WALL-1	X	= 104.5
*1036 *	Y = 104.5	Z	= 39.6
*1037 *	HEIGHT = 82.34	WIDTH	= 82.34
*1038 *	TILT = 0		
*1039 *	..		
*1040 *			
*1041 *	S-FL-3 = SPACE		
*1042 *	SPACE-CONDITIONS = OFFICESPACE	AREA	= 2441.2
*1043 *	VOLUME = 24412	FLOOR-MULTIPLIER	= 1
*1044 *	DAYLIGHT-REP-SCH = OFFICE-LIGHTSCHE		
*1045 *	SOURCE-TYPE = ELECTRIC		
*1046 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	= LIGHT
*1047 *	TEMPERATURE = (75.0)		
*1048 *	..		
*1049 *			
*1050 *	WALL1-S-FL-3 = EXTERIOR-WALL		
*1051 *	CONSTRUCTION = WALL-1	X	= 22.16
*1052 *	Y = 22.16	Z	= 26.4
*1053 *	HEIGHT = 13.2	WIDTH	= 41.17
*1054 *	AZIMUTH = 180	TILT	= 90
*1055 *	..		
*1056 *			
*1057 *	G-WALL1-S-FL-3 = WINDOW		

*1058 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1059 *	WIDTH	= 41.17	Y	= 3.3
*1060 *	SETBACK	= 10		
*1061 *	..			
*1062 *				
*1063 *	WALL2-S-FL-3 = EXTERIOR-WALL			
*1064 *	CONSTRUCTION	= WALL-1	X	= 22.16
*1065 *	Y	= 63.33	Z	= 26.4
*1066 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1067 *	AZIMUTH	= 270	TILT	= 90
*1068 *	..			
*1069 *				
*1070 *	G-WALL2-S-FL-3 = WINDOW			
*1071 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1072 *	WIDTH	= 41.17	Y	= 3.3
*1073 *	SETBACK	= 10		
*1074 *	..			
*1075 *				
*1076 *	WALL2-W-FL-3 = EXTERIOR-WALL			
*1077 *	CONSTRUCTION	= WALL-1	X	= 22.16
*1078 *	Y	= 104.50	Z	= 26.4
*1079 *	HEIGHT	= 13.2	WIDTH	= 41.17
*1080 *	AZIMUTH	= 270	TILT	= 90
*1081 *	..			
*1082 *				
*1083 *	G-WALL2-W-FL-3 = WINDOW			
*1084 *	GLASS-TYPE	= SELECTIVE	HEIGHT	= 3.63
*1085 *	WIDTH	= 41.17	Y	= 3.3
*1086 *	SETBACK	= 10		
*1087 *	..			
*1088 *				
*1089 *	CORE-FL-1 = SPACE			
*1090 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 2800
*1091 *	VOLUME	= 28000	FLOOR-MULTIPLIER	= 1
*1092 *	SOURCE-TYPE	= ELECTRIC		
*1093 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1094 *	TEMPERATURE	=(75.0)		
*1095 *	..			
*1096 *				
*1097 *	CORE-FL-2 = SPACE			
*1098 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 1991
*1099 *	VOLUME	= 19910	FLOOR-MULTIPLIER	= 1
*1100 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
*1101 *	SOURCE-TYPE	= ELECTRIC		
*1102 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1103 *	TEMPERATURE	=(75.0)		
*1104 *	..			
*1105 *				
*1106 *	CORE-FL-3 = SPACE			
*1107 *	SPACE-CONDITIONS	= NO-DAYLIT	AREA	= 1220.6
*1108 *	VOLUME	= 12206	FLOOR-MULTIPLIER	= 1
*1109 *	DAYLIGHT-REP-SCH	= LIGHTSHED-YEAR		
*1110 *	SOURCE-TYPE	= ELECTRIC		
*1111 *	FLOOR-WEIGHT	= 130.0	FURNITURE-TYPE	= LIGHT
*1112 *	TEMPERATURE	=(75.0)		
*1113 *	..			

*1114 *				
*1115 *	WALL3-CORE-FL-3 = EXTERIOR-WALL			
*1116 *	CONSTRUCTION = WALL-1	X	=	104.5
*1117 *	Y = 22.16	Z	=	26.4
*1118 *	HEIGHT = 13.2	WIDTH	=	41.17
*1119 *	AZIMUTH = 90	TILT	=	90
*1120 *	..			
*1121 *				
*1122 *	G-WALL3-CORE-F-3 = WINDOW			
*1123 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	7.26
*1124 *	WIDTH = 41.17	Y	=	3.3
*1125 *	..			
*1126 *				
*1127 *	WALL1-CORE-FL-3 = EXTERIOR-WALL			
*1128 *	CONSTRUCTION = WALL-1	X	=	63.33
*1129 *	Y = 22.16	Z	=	26.4
*1130 *	HEIGHT = 13.2	WIDTH	=	41.17
*1131 *	AZIMUTH = 180	TILT	=	90
*1132 *	..			
*1133 *				
*1134 *	G-WALL1-CORE-F-3 = WINDOW			
*1135 *	GLASS-TYPE = SELECTIVE	HEIGHT	=	7.26
*1136 *	WIDTH = 41.17	Y	=	3.3
*1137 *	..			
*1138 *				
*1139 *	CORE-FL-B = SPACE			
*1140 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	=	2800
*1141 *	VOLUME = 28000	FLOOR-MULTIPLIER	=	1
*1142 *	SOURCE-TYPE = ELECTRIC			
*1143 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	=	LIGHT
*1144 *	TEMPERATURE = (75.0)			
*1145 *	..			
*1146 *				
*1147 *	N-FL-4 = SPACE			
*1148 *	SPACE-CONDITIONS = NO-DAYLIT	AREA	=	6400
*1149 *	VOLUME = 84480			
*1150 *	SOURCE-TYPE = ELECTRIC			
*1151 *	FLOOR-WEIGHT = 130.0	FURNITURE-TYPE	=	LIGHT
*1152 *	TEMPERATURE = (75.0)			
*1153 *	..			
*1154 *				
*1155 *	WALL-N-FL-4 = EXTERIOR-WALL			
*1156 *	CONSTRUCTION = WALL-1	X	=	104.5
*1157 *	Y = 104.5	Z	=	39.6
*1158 *	HEIGHT = 21	WIDTH	=	82.34
*1159 *	TILT = 90			
*1160 *	..			
*1161 *				
*1162 *	WALL-S-FL-4 = EXTERIOR-WALL			
*1163 *	CONSTRUCTION = WALL-1	X	=	22.16
*1164 *	Y = 22.16	Z	=	39.6
*1165 *	HEIGHT = 21	WIDTH	=	82.34
*1166 *	AZIMUTH = 180	TILT	=	90
*1167 *	..			
*1168 *				
*1169 *	WALL-W-FL-4 = EXTERIOR-WALL			

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*1170 * CONSTRUCTION = WALL-1 X = 22.16
*1171 * Y = 104.50 Z = 39.6
*1172 * HEIGHT = 21 WIDTH = 82.34
*1173 * AZIMUTH = 270 TILT = 90
*1174 * ..
*1175 *
*1176 * WALL-E-FL-4 = EXTERIOR-WALL
*1177 * CONSTRUCTION = WALL-1 X = 104.5
*1178 * Y = 22.16 Z = 39.6
*1179 * HEIGHT = 21 WIDTH = 82.34
*1180 * AZIMUTH = 90 TILT = 90
*1181 * ..
*1182 *
*1183 * ROOF1-FL-4 = EXTERIOR-WALL
*1184 * CONSTRUCTION = ROOF-1 X = 104.5
*1185 * Y = 104.5 Z = 60.6
*1186 * HEIGHT = 82.34 WIDTH = 82.34
*1187 * TILT = 0
*1188 * ..
*1189 *
*1190 * $BUILDING$ BUILDING-RESOURCE
*1191 * ELEC-SCHEDULE = LIGHTSHED-YEAR
*1192 * ..
*1193 *
*1194 * $REPI$ LOADS-REPORT
*1195 * VERIFICATION =(LV-A, LV-B)
*1196 * SUMMARY =(LS-A, LS-B, LS-C, LS-D, LS-E, LS-F, LS-H, LS-I)
*1197 * ..
*1198 *
*1199 * LRB-3 = REPORT-BLOCK
*1200 * VARIABLE-TYPE = N-FL-1
*1201 * VARIABLE-LIST =(16, 17, 18, 19, 20, 22, 23, 25, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38
*1202 * , 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 55, 56, 57)
*1203 * ..
*1204 *
*1205 * LHR-3 = HOURLY-REPORT
*1206 * REPORT-SCHEDULE = SCH-HR-1
*1207 * REPORT-BLOCK =(LRB-3)
*1208 * ..
*1209 *
*1210 * END ..
*1211 * COMPUTE LOADS ..
*1212 *
*1213 * INPUT SYSTEMS ..

```

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

SDL PROCESSOR INPUT DATA

7/30/1996 18:40:49 SDL RUN 1

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*1214 *
*1215 * TITLE
*1216 *   LINE-1  *AIR-SIDE SYSTEMS OF TECHNOETHANI*
*1217 *   LINE-2  *PATUMTHANI, BANGKOK*
*1218 *   LINE-3  *USING DOEPLUS./DOE2 ANALYSIS*
*1219 *   LINE-4  *RESYS-SYSTEM*
*1220 *   LINE-5  *WEATHER DATA, BANGKOK, THAILAND*
*1221 *   ..
*1222 *
*1223 * ABORT          = ERRORS ..
*1224 *
*1225 * DIAGNOSTIC     = CAUTIONS ..
*1226 *
*1227 * COOLSTPT = SCHEDULE
*1228 *   THRU DEC 31 (WD) (1,7)(99) (8,18)(72) (19,24)(99)
*1229 *   (WEH) (1,24)(99)
*1230 *   ..
*1231 *
*1232 * FANS-ON = SCHEDULE
*1233 *   THRU DEC 31 (WD) (1,7)(0) (8,18)(1) (19,24)(0)
*1234 *   (WEH) (1,24)(0)
*1235 *   ..
*1236 *
*1237 * HRLYSYSPT = SCHEDULE
*1238 *   THRU APR 1 (ALL) (1,24)(0)
*1239 *   THRU APR 5 (ALL) (1,24)(1)
*1240 *   THRU DEC 31 (ALL) (1,24)(0)
*1241 *   ..
*1242 *
*1243 * HOTDECK1 = DAY-RESET-SCH
*1244 *   SUPPLY-HI      = 120          SUPPLY-LO      = 70
*1245 *   OUTSIDE-HI     = 70          OUTSIDE-LO     = 0
*1246 *   ..
*1247 *
*1248 * COLDDECK1 = DAY-RESET-SCH
*1249 *   SUPPLY-HI      = 80          SUPPLY-LO      = 55
*1250 *   OUTSIDE-HI     = 100         OUTSIDE-LO     = 65
*1251 *   ..
*1252 *
*1253 * COLD-RESET-1 = RESET-SCHEDULE
*1254 *   THRU DEC 31 (ALL) COLDDECK1
*1255 *   ..
*1256 *
*1257 * CONTROL = ZONE-CONTROL
*1258 *   DESIGN-HEAT-T  = 0          DESIGN-COOL-T  = 74
*1259 *   COOL-TEMP-SCH = COOLSTPT
*1260 *   ..
*1261 *

```



```

*1262 * VENTILATION = ZONE-AIR
*1263 * ..
*1264 *
*1265 * N-FL-1 = ZONE
*1266 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1267 * ..
*1268 *
*1269 * W-FL-1 = ZONE
*1270 *   $ LIKE           = N-FL-1
*1271 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1272 * ..
*1273 *
*1274 * S-FL-1 = ZONE
*1275 *   $ LIKE           = N-FL-1
*1276 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1277 * ..
*1278 *
*1279 * N-FL-B = ZONE
*1280 *   $ LIKE           = N-FL-1
*1281 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1282 * ..
*1283 *
*1284 * S-FL-B = ZONE
*1285 *   $ LIKE           = N-FL-1
*1286 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1287 * ..
*1288 *
*1289 * N-FL-2 = ZONE
*1290 *   $ LIKE           = N-FL-1
*1291 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1292 * ..
*1293 *
*1294 * S-FL-2 = ZONE
*1295 *   $ LIKE           = N-FL-1
*1296 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1297 * ..
*1298 *
*1299 * N-FL-3 = ZONE
*1300 *   $ LIKE           = N-FL-1
*1301 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1302 * ..
*1303 *
*1304 * S-FL-3 = ZONE
*1305 *   $ LIKE           = N-FL-1
*1306 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1307 * ..
*1308 *
*1309 * CORE-FL-1 = ZONE
*1310 *   $ LIKE           = N-FL-1
*1311 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1312 * ..
*1313 *
*1314 * CORE-FL-2 = ZONE
*1315 *   $ LIKE           = N-FL-1
*1316 *   ZONE-CONTROL   = CONTROL   ZONE-AIR   = VENTILATION
*1317 * ..

```



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```

*1318 *
*1319 * CORE-FL-3 = ZONE
*1320 * $ LIKE = N-FL-1
*1321 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1322 * ..
*1323 *
*1324 * CORE-FL-B = ZONE
*1325 * $ LIKE = N-FL-1
*1326 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1327 * ..
*1328 *
*1329 * N-FL-4 = ZONE
*1330 * $ LIKE = N-FL-1
*1331 * ZONE-CONTROL = CONTROL ZONE-AIR = VENTILATION
*1332 * ..
*1333 *
*1334 * SYS-CON = SYSTEM-CONTROL
*1335 * MIN-SUPPLY-T = 65 MAX-SUPPLY-T = 72
*1336 * ..
*1337 *
*1338 * SYS-AIR = SYSTEM-AIR
*1339 * ..
*1340 *
*1341 * SYS-FAN = SYSTEM-FANS
*1342 * SUPPLY-KW = 0.000128 SUPPLY-DELTA-T = 0.396
*1343 * FAN-SCHEDULE = FANS-ON
*1344 * ..
*1345 *
*1346 * SYS-EQUIP = SYSTEM-EQUIPMENT
*1347 * COOLING-EIR = 0.460 COIL-BF = 0.241
*1348 * CRANKCASE-MAX-T = 65 MIN-HP-T = 10.0
*1349 * ..
*1350 *
*1351 * ACSYSTEM = SYSTEM
*1352 * SYSTEM-TYPE = RESYS SYSTEM-CONTROL = SYS-CON
*1353 * SYSTEM-AIR = SYS-AIR SYSTEM-FANS = SYS-FAN
*1354 * SYSTEM-EQUIPMENT = SYS-EQUIP BASEBOARD-SOURCE = ELECTRIC
*1355 * ZONE-NAMES = (CORE-FL-1,CORE-FL-2,CORE-FL-3,CORE-FL-B,N-FL-1,N-FL-2
*1356 * ,N-FL-3,N-FL-4,N-FL-B,S-FL-1,S-FL-2,S-FL-3,S-FL-B,W-FL-1)
*1357 * ..
*1358 *
*1359 * $SYSTEM-REP$ SYSTEMS-REPORT
*1360 * VERIFICATION = (SV-A)
*1361 * SUMMARY = (SS-A,SS-H,SS-I)
*1362 * ..
*1363 *
*1364 * END ..
*1365 * COMPUTE SYSTEMS ..
*1366 *
*1367 * INPUT PLANT ..

```

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จุฬาลงกรณ์มหาวิทยาลัย

PDL PROCESSOR INPUT DATA

7/30/1996 18:40:49 PDL RUN 1

```

*1368 *
*1369 * TITLE
*1370 * LINE-1 *ENERGY SIMULATION OF*
*1371 * LINE-2 *TECHNOTHANI BUILDING*
*1372 * LINE-3 *COOLING TOWER SYSTEM WITH ICE STORAGE*
*1373 * LINE-4 *USING DOEPLUS/DOE2 PROGRAM*
*1374 * LINE-5 *AND WEATHER FILES, BANGKOK*
*1375 * ..
*1376 *
*1377 * ABORT = ERRORS ..
*1378 *
*1379 * DIAGNOSTIC = CAUTIONS ..
*1380 *
*1381 * PLANT-SCH-HR-1 = SCHEDULE
*1382 * THRU MAY 3 (ALL) (1,24) (0)
*1383 * THRU MAY 4 (ALL) (1,24) (1)
*1384 * THRU DEC 31 (ALL) (1,24) (0)
*1385 * ..
*1386 *
*1387 * PLANT-SCH-HR-2 = SCHEDULE
*1388 * THRU APR 30 (ALL) (1,24) (0)
*1389 * THRU MAY 31 (ALL) (1,24) (1)
*1390 * THRU DEC 31 (ALL) (1,24) (0)
*1391 * ..
*1392 *
*1393 * CHILLER-CTRL = SCHEDULE
*1394 * THRU DEC 31 (ALL) (1,7) (0) (8,19) (1) (20,24) (0)
*1395 * ..
*1396 *
*1397 * H-CTRL = SCHEDULE
*1398 * THRU DEC 31 (ALL) (1,24) (0)
*1399 * ..
*1400 *
*1401 * E-CTRL = SCHEDULE
*1402 * THRU DEC 31 (ALL) (1,24) (0)
*1403 * ..
*1404 *
*1405 * CTW = PLANT-EQUIPMENT
*1406 * TYPE = COOLING-TWR SIZE = -999
*1407 * ..
*1408 *
*1409 * ICEM = PLANT-EQUIPMENT
*1410 * TYPE = HERM-CENT-CHLR SIZE = -999
*1411 * ..
*1412 *
*1413 * $PLR-ICEM$ PART-LOAD-RATIO
*1414 * TYPE = HERM-CENT-CHLR MIN-RATIO = 0.1
*1415 * MAX-RATIO = 1.0 OPERATING-RATIO = 0.8

```

```

*1416 *   ELEC-INPUT-RATIO = 0.220
*1417 * ..
*1418 *
*1419 * $PLR-CTW$ PART-LOAD-RATIO
*1420 *   TYPE           = COOLING-TWR           ELEC-INPUT-RATIO = 0.0
*1421 * ..
*1422 *
*1423 * $DESIGNWBS PLANT-PARAMETERS
*1424 *   CHILLER-CONTROL = STANDBY
*1425 *   TWR-FAN-CONTROL = TWO-SPEED           TWR-DESIGN-WETBU = 83.0
*1426 * ..
*1427 *
*1428 * $L-MS LOAD-MANAGEMENT
*1429 *   PRED-LOAD-RANGE = 99
*1430 *   ASSIGN-SCHEDULE = (H-CTRL,CHILLER-CTRL,E-CTRL)
*1431 * ..
*1432 *
*1433 * $EGAT$ ENERGY-RESOURCE
*1434 *   RESOURCE        = ELECTRICITY           SOURCE-SITE-EFF = 0.3333
*1435 * ..
*1436 *
*1437 * $ECONOMICS$ PLANT-REPORT
*1438 *   VERIFICATION    = (PV-A)
*1439 *   SUMMARY          = (PS-A,PS-G)
*1440 *   HOURLY-DATA-SAVE = YES
*1441 * ..
*1442 *
*1443 * PRB-1 = REPORT-BLOCK
*1444 *   VARIABLE-TYPE   = GLOBAL
*1445 *   VARIABLE-LIST   = (1,2)
*1446 * ..
*1447 *
*1448 * PRB-2 = REPORT-BLOCK
*1449 *   VARIABLE-TYPE   = PLANT
*1450 *   VARIABLE-LIST   = (2,3,9,10,12)
*1451 * ..
*1452 *
*1453 * RB1 = REPORT-BLOCK
*1454 *   VARIABLE-TYPE   = HERM-CENT-CHLR
*1455 *   VARIABLE-LIST   = (1,8,10,16)
*1456 * ..
*1457 *
*1458 * RB2 = REPORT-BLOCK
*1459 *   VARIABLE-TYPE   = CTANK-STORAGE
*1460 *   VARIABLE-LIST   = (1,4,12,14)
*1461 * ..
*1462 *
*1463 * PHR-1 = HOURLY-REPORT
*1464 *   REPORT-SCHEDULE = PLANT-SCH-HR-1
*1465 *   REPORT-BLOCK    = (PRB-1,PRB-2)
*1466 * ..
*1467 *
*1468 * PLANT-REP = HOURLY-REPORT
*1469 *   REPORT-SCHEDULE = PLANT-SCH-HR-1
*1470 *   REPORT-BLOCK    = (RB1,RB2)
*1471 * ..

```

*1472 *

*1473 * END ..

-CAUTION-

*1474 * COMPUTE PLANT ..

*1475 *

*1476 * INPUT ECONOMICS ..

-----NO HEATING EQUIPMENT HAS BEEN DEFINED



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EDL PROCESSOR INPUT DATA

7/30/1996 18:40:49 EDL RUN 1

```

*1477 *
*1478 * TITLE
*1479 *   LINE-1 *ENERGY COSTS SIMULATION OF*
*1480 *   LINE-2 *TECHNOTHANI BUILDING, BANGKOK*
*1481 *   LINE-3 *USING THE DOEPLUS/DOE2 PROGRAM*
*1482 *   LINE-4 *WEATHER DATA, BANGKOK THAILAND*
*1483 *   LINE-5 *AND COSTS DATA FROM EGAT*
*1484 * ..
*1485 *
*1486 * ABORT           = ERRORS ..
*1487 *
*1488 * DIAGNOSTIC      = WARNINGS ..
*1489 *
*1490 * WEEKDAY = DAY-CHARGE-SCH
*1491 *   (1,8) (ENERGYCHARGE)
*1492 *   (9,21) (PEAK,ENERGYCHARGE)
*1493 *   (22,24) (ENERGYCHARGE)
*1494 * ..
*1495 *
*1496 * WEEKEND = DAY-CHARGE-SCH
*1497 *   (1,24) (ENERGYCHARGE)
*1498 * ..
*1499 *
*1500 * TIMEOFUSE = SCHEDULE
*1501 *   THRU DEC 31 (WD) WEEKDAY
*1502 *                               (WEH) WEEKEND
*1503 * ..
*1504 *
*1505 * $OPERATIONALCOST$ ENERGY-COST
*1506 *   RESOURCE           = ELECTRICITY           UNIT           = 3413.0
*1507 *   ASSIGN-SCHEDULE    = TIMEOFUSE
*1508 * ..
*1509 *
*1510 * PEAK = CHARGE-ASSIGNMENT
*1511 *   RESOURCE           = ELECTRICITY
*1512 *   TYPE               = DEMAND               UNIFORM-CHARGE = 309.0
*1513 * ..
*1514 *
*1515 * ENERGYCHARGE = CHARGE-ASSIGNMENT
*1516 *   RESOURCE           = ELECTRICITY
*1517 *   TYPE               = ENERGY              UNIFORM-CHARGE = 1.07
*1518 * ..
*1519 *
*1520 * $RUN-COSTS$ ECONOMICS-REPORT
*1521 *   VERIFICATION       =(ALL-VERIFICATION)
*1522 *   SUMMARY            =(ES-E,ES-D)
*1523 * ..
*1524 *

```



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*1525 * END ..
*1526 * COMPUTE ECONOMICS ..
*1527 *
*1528 * STOP ..



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จุฬาลงกรณ์มหาวิทยาลัย

PERIOD OF STUDY

STARTING DATE	ENDING DATE	NUMBER OF DAYS
1 JAN 1995	31 DEC 1995	365

SITE CHARACTERISTIC DATA

STATION NAME	LATITUDE (DEG)	LONGITUDE (DEG)	ALTITUDE (FT)	TIME ZONE	BUILDING AZIMUTH (DEG)
1985 BANGKOK W/SOLAR	13.6	-100.6	0.	-7	0.0



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จุฬาลงกรณ์มหาวิทยาลัย

NUMBER OF SPACES 14 EXTERIOR 11 INTERIOR 3

SPACE	SPACE MULT	SPACE TYPE	AZIMUTH	LIGHTING (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	AIR CHANGES PER HOUR	AREA (SQFT)	VOLUME (CUFT)
N-FL-1	1.0	EXT	0.0	2.30	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
W-FL-1	1.0	EXT	0.0	2.30	279.3	0.50	AIR-CHANGE	0.43	27932.40	279324.00
S-FL-1	1.0	EXT	0.0	2.30	192.0	0.50	AIR-CHANGE	0.43	19202.30	192023.00
N-FL-B	1.0	EXT	0.0	2.30	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
S-FL-B	1.0	EXT	0.0	2.30	367.8	0.50	AIR-CHANGE	0.33	36780.30	367803.00
N-FL-2	1.0	EXT	0.0	2.30	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
S-FL-2	1.0	EXT	0.0	2.30	39.8	0.50	AIR-CHANGE	0.43	3982.00	39820.00
N-FL-3	1.0	EXT	0.0	2.30	24.4	0.50	AIR-CHANGE	0.43	2441.20	24112.00
S-FL-3	1.0	EXT	0.0	2.30	24.4	0.50	AIR-CHANGE	0.43	2441.20	24412.00
CORE-FL-1	1.0	INT	0.0	2.30	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
CORE-FL-2	1.0	INT	0.0	2.30	19.9	0.50	AIR-CHANGE	0.33	1991.00	19910.00
CORE-FL-3	1.0	EXT	0.0	2.30	12.2	0.50	AIR-CHANGE	0.33	1220.60	12206.00
CORE-FL-B	1.0	INT	0.0	2.30	28.0	0.50	AIR-CHANGE	0.33	2800.00	28000.00
N-FL-4	1.0	EXT	0.0	2.30	64.0	0.50	AIR-CHANGE	0.27	6400.00	84480.00
BUILDING TOTALS					1679.6				167955.59	1699736.00

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SPACE NAME	MULTIPLIER SPACE FLOOR	COOLING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB	HEATING LOAD (KBTU/HR)	TIME OF PEAK	DRY- BULB	WET- BULB
N-FL-1	1. 1.	1056.073	MAY 5 6 PM	96.F	81.F	-197.923	DEC 17 8 AM	63.F	58.F
W-FL-1	1. 1.	1219.320	MAY 5 6 PM	96.F	81.F	-339.081	DEC 17 9 AM	67.F	60.F
S-FL-1	1. 1.	672.178	MAY 5 6 PM	96.F	81.F	-131.449	DEC 17 8 AM	63.F	58.F
N-FL-B	1. 1.	701.217	APR 14 4 PM	99.F	80.F	-122.101	DEC 17 8 AM	63.F	58.F
S-FL-B	1. 1.	497.060	NOV 21 4 PM	91.F	76.F	-48.069	DEC 17 8 AM	63.F	58.F
N-FL-2	1. 1.	342.108	MAY 5 6 PM	96.F	81.F	-57.502	DEC 17 8 AM	63.F	58.F
S-FL-2	1. 1.	60.357	APR 14 6 PM	99.F	78.F	-9.486	DEC 17 8 AM	63.F	58.F
N-FL-3	1. 1.	179.157	MAY 5 6 PM	96.F	81.F	-36.020	DEC 17 8 AM	63.F	58.F
S-FL-3	1. 1.	48.022	APR 14 6 PM	99.F	78.F	-10.369	DEC 17 8 AM	63.F	58.F
CORE-FL-1	1. 1.	29.922	APR 14 4 PM	99.F	80.F	-0.839	DEC 25 7 AM	63.F	58.F
CORE-FL-2	1. 1.	21.276	APR 14 4 PM	99.F	80.F	-0.597	DEC 25 7 AM	63.F	58.F
CORE-FL-3	1. 1.	48.167	NOV 21 3 PM	92.F	76.F	-5.787	DEC 17 7 AM	60.F	57.F
CORE-FL-B	1. 1.	29.922	APR 14 4 PM	99.F	80.F	-0.839	DEC 25 7 AM	63.F	58.F
N-FL-4	1. 1.	150.519	APR 14 4 PM	99.F	80.F	-48.292	DEC 17 8 AM	63.F	58.F
SUM		5055.299				-1008.354			
BUILDING PEAK		4767.823	MAY 5 4 PM	99.F	79.F	-985.494	DEC 17 8 AM	63.F	58.F

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SPACE N-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 19202 SQFT 1784 M2
 VOLUME 192023 CUFT 5438 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	54.814	16.054	0.000	0.000	-25.539	-7.480
ROOFS	647.769	189.715	0.000	0.000	-139.864	-40.963
GLASS CONDUCTION	64.139	18.785	0.000	0.000	-58.639	-17.174
GLASS SOLAR	132.791	38.891	0.000	0.000	34.085	9.983
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	41.974	12.293	25.021	7.328	0.377	0.110
LIGHT TO SPACE	69.002	20.209	0.000	0.000	4.662	1.366
EQUIPMENT TO SPACE	13.394	3.923	0.000	0.000	0.902	0.264
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	32.189	9.427	70.329	20.593	-13.909	-4.073
TOTAL	1056.073	309.297	95.349	27.925	-197.923	-57.967
TOTAL LOAD	1151.422 KBTU/H		337.223 KW		-197.923 KBTU/H -57.967 KW	
TOTAL LOAD / AREA	59.96BTU/H.SQFT		189.031 W / M2		10.307BTU/H.SQFT 32.493 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE W-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 27932 SQFT 2595 M2
 VOLUME 279324 CUFT 7910 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	9AM
DRY-BULB TEMP	96F	36C	67F	19C
WET-BULB TEMP	81F	27C	60F	16C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	224.765	65.828	0.000	0.000	-108.092	-31.658
ROOFS	753.547	220.695	0.000	0.000	-226.062	-66.208
GLASS CONDUCTION	2.495	0.731	0.000	0.000	-1.907	-0.559
GLASS SOLAR	10.775	3.156	0.000	0.000	3.061	0.897
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	61.058	17.882	36.396	10.659	1.451	0.425
LIGHT TO SPACE	100.373	29.397	0.000	0.000	10.053	2.944
EQUIPMENT TO SPACE	19.484	5.706	0.000	0.000	2.247	0.658
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	46.824	13.714	102.303	29.962	-19.831	-5.808
TOTAL	1219.320	357.108	138.699	40.621	-339.081	-99.308
TOTAL LOAD	1358.019 KBTU/H	397.730 KW			-339.081 KBTU/H	-99.308 KW
TOTAL LOAD / AREA	48.62BTU/H.SQFT	153.268 W / M2			12.139BTU/H.SQFT	38.269 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-1

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 19202 SQFT 1784 M2
 VOLUME 192023 CUFT 5438 M3

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	67.249	19.696	0.000	0.000	-26.033	-7.624
ROOFS	350.974	102.791	0.000	0.000	-83.772	-24.535
GLASS CONDUCTION	40.385	11.828	0.000	0.000	-35.906	-10.516
GLASS SOLAR	57.009	16.697	0.000	0.000	22.229	6.510
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	41.974	12.293	25.021	7.328	0.377	0.110
LIGHT TO SPACE	69.002	20.209	0.000	0.000	4.662	1.366
EQUIPMENT TO SPACE	13.394	3.923	0.000	0.000	0.902	0.264
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	32.189	9.427	70.329	20.598	-13.909	-4.073
TOTAL	672.178	196.864	95.349	27.925	-131.449	-38.498
TOTAL LOAD	767.527 KBTU/H	224.789 KW	-131.449 KBTU/H	-38.498 KW		
TOTAL LOAD / AREA	39.97BTU/H.SQFT	126.007 W / M2	6.845BTU/H.SQFT	21.580 W / M2		

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 * ---- LOADS
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION
 * IN CONSIDERATION
 *

SPACE N-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 36780 SQFT 3417 M2
 VOLUME 367803 CUFT 10416 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	80F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	91.990	26.941	0.000	0.000	-52.268	-15.308
ROOFS	105.386	30.865	0.000	0.000	-65.943	-19.313
GLASS CONDUCTION	19.366	5.672	0.000	0.000	-16.823	-4.927
GLASS SOLAR	84.364	24.708	0.000	0.000	14.820	4.340
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	7.066	2.070	0.000	0.000	7.066	2.070
OCCUPANTS TO SPACE	80.517	23.582	47.925	14.036	2.554	0.748
LIGHT TO SPACE	233.444	68.370	0.000	0.000	8.930	2.616
EQUIPMENT TO SPACE	54.482	15.956	0.000	0.000	1.728	0.506
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	24.602	7.205	38.937	11.404	-22.166	-6.492
TOTAL	701.217	205.369	86.862	25.440	-122.101	-35.760
TOTAL LOAD	788.078 KBTU/H		230.808 KW		-122.101 KBTU/H	-35.760 KW
TOTAL LOAD / AREA	21.43BTU/H.SQFT		67.547 W / M2		3.320BTU/H.SQFT	10.465 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 36780 SQFT 3417 M2
 VOLUME 367803 CUFT 10416 M3

TIME	COOLING LOAD		HEATING LOAD	
	NOV 21	4PM	DEC 17	8AM
DRY-BULB TEMP	91F	33C	63F	17C
WET-BULB TEMP	76F	24C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	107.848	31.586	0.000	0.000	-46.181	-13.525
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	7.066	2.070	0.000	0.000	7.066	2.070
OCCUPANTS TO SPACE	80.264	23.507	47.925	14.036	2.554	0.748
LIGHT TO SPACE	232.301	68.035	0.000	0.000	8.930	2.616
EQUIPMENT TO SPACE	54.310	15.906	0.000	0.000	1.728	0.506
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	15.271	4.473	29.073	8.515	-22.166	-6.492
TOTAL	497.060	145.577	76.998	22.551	-48.069	-14.078
TOTAL LOAD	574.058 KBTU/H		168.127 KW		-48.069 KBTU/H	-14.078 KW
TOTAL LOAD / AREA	15.61BTU/H.SQFT		49.203 W / M2		1.307BTU/H.SQFT	4.120 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-2

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	3982 SQFT	370 M2	
VOLUME	39820 CUFT	1128 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	17.819	5.219	0.000	0.000	-7.978	-2.337
ROOFS	200.622	58.757	0.000	0.000	-37.943	-11.113
GLASS CONDUCTION	23.926	7.007	0.000	0.000	-21.837	-6.396
GLASS SOLAR	58.046	17.000	0.000	0.000	11.897	3.484
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	8.704	2.549	5.189	1.520	0.078	0.023
LIGHT TO SPACE	21.417	6.273	0.000	0.000	0.978	0.286
EQUIPMENT TO SPACE	4.898	1.435	0.000	0.000	0.189	0.055
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	6.675	1.955	14.584	4.271	-2.884	-0.845
TOTAL	342.108	100.195	19.773	5.791	-57.502	-16.841
TOTAL LOAD	361.881 KBTU/H		105.986 KW		-57.502 KBTU/H	-16.841 KW
TOTAL LOAD / AREA	90.88BTU/H.SQFT		286.495 W / M2		14.440BTU/H.SQFT	45.523 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-2

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 3982 SQFT 370 M2
 VOLUME 39820 CUFT 1128 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	6PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	78F	26C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	8.429	2.469	0.000	0.000	-3.402	-0.996
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	6.919	2.026	0.000	0.000	-5.167	-1.513
GLASS SOLAR	3.150	0.923	0.000	0.000	0.723	0.212
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	8.704	2.549	5.189	1.520	0.078	0.023
LIGHT TO SPACE	21.417	6.273	0.000	0.000	0.978	0.286
EQUIPMENT TO SPACE	4.898	1.435	0.000	0.000	0.189	0.055
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	6.838	2.003	8.454	2.476	-2.884	-0.845
TOTAL	60.357	17.677	13.643	3.996	-9.486	-2.778
TOTAL LOAD	74.000 KBTU/H	21.673 KW			-9.486 KBTU/H	-2.778 KW
TOTAL LOAD / AREA	18.58BTU/H.SQFT	58.584 W / M2			2.382BTU/H.SQFT	7.510 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE N-FL-3

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2441 SQFT	227 M2	
VOLUME	24112 CUFT	683 M3	

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	6PM	DEC 17	8AM
DRY-BULB TEMP	96F	36C	63F	17C
WET-BULB TEMP	81F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	9.997	2.928	0.000	0.000	-4.868	-1.426
ROOFS	132.983	38.947	0.000	0.000	-25.151	-7.366
GLASS CONDUCTION	7.051	2.065	0.000	0.000	-6.088	-1.783
GLASS SOLAR	3.590	1.051	0.000	0.000	1.085	0.318
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	5.336	1.563	3.181	0.932	0.048	0.014
LIGHT TO SPACE	13.130	3.845	0.000	0.000	0.599	0.176
EQUIPMENT TO SPACE	3.003	0.879	0.000	0.000	0.116	0.034
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	4.067	1.191	8.886	2.602	-1.761	-0.516
TOTAL	179.157	52.471	12.067	3.534	-36.020	-10.549
TOTAL LOAD	191.224 KBTU/H	56.005 KW			-36.020 KBTU/H	-10.549 KW
TOTAL LOAD / AREA	78.33BTU/H.SQFT	246.940 W / M2			14.755BTU/H.SQFT	46.515 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

SPACE S-FL-3

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2441 SQFT	227 M2	
VOLUME	24412 CUFT	691 M3	

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	6PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	78F	26C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	10.419	3.052	0.000	0.000	-4.099	-1.200
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	8.180	2.396	0.000	0.000	-6.108	-1.789
GLASS SOLAR	3.762	1.102	0.000	0.000	0.843	0.247
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	5.336	1.563	3.181	0.932	0.048	0.014
LIGHT TO SPACE	13.130	3.845	0.000	0.000	0.599	0.176
EQUIPMENT TO SPACE	3.003	0.879	0.000	0.000	0.116	0.034
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	4.192	1.228	5.183	1.518	-1.768	-0.518
TOTAL	48.022	14.065	8.364	2.450	-10.369	-3.037
TOTAL LOAD	56.386 KBTU/H	16.514 KW			-10.369 KBTU/H	-3.037 KW
TOTAL LOAD / AREA	23.10BTU/H.SQFT	72.815 W / M2			4.248BTU/H.SQFT	13.391 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 * ---- LOADS
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION
 * IN CONSIDERATION
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SPACE CORE-FL-1

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	2800 SQFT	260 M2	
VOLUME	28000 CUFT	793 M3	

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 25	7AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	80F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.130	1.795	3.648	1.069	0.159	0.047
LIGHT TO SPACE	17.772	5.205	0.000	0.000	0.519	0.152
EQUIPMENT TO SPACE	4.148	1.215	0.000	0.000	0.107	0.031
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.873	0.549	2.964	0.868	-1.625	-0.476
TOTAL	29.922	8.763	6.613	1.937	-0.839	-0.246
TOTAL LOAD	36.534 KBTU/H		10.700 KW		-0.839 KBTU/H	-0.246 KW
TOTAL LOAD / AREA	13.05BTU/H.SQFT		41.133 W / M2		0.300BTU/H.SQFT	0.945 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
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SPACE CORE-FL-2

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1991 SQFT 185 M2
 VOLUME 19910 CUFT 564 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 25	7AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	80F	27C	58F	14C

	SENSIBLE (KBTU/H) (KW)		LATENT (KBTU/H) (KW)		SENSIBLE (KBTU/H) (KW)	
	-----	-----	-----	-----	-----	-----
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	4.359	1.277	2.594	0.760	0.113	0.033
LIGHT TO SPACE	12.637	3.701	0.000	0.000	0.369	0.108
EQUIPMENT TO SPACE	2.949	0.864	0.000	0.000	0.076	0.022
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.332	0.390	2.108	0.617	-1.155	-0.338
TOTAL	21.276	6.231	4.702	1.377	-0.597	-0.175
TOTAL LOAD	25.978 KBTU/H		7.608 KW		-0.597 KBTU/H	-0.175 KW
TOTAL LOAD / AREA	13.05BTU/H.SQFT		41.133 W / M2		0.300BTU/H.SQFT	0.945 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
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SPACE CORE-FL-3

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 1221 SQFT 113 M2
 VOLUME 12206 CUFT 346 M3

TIME	COOLING LOAD		HEATING LOAD	
	NOV 21	3PM	DEC 17	7AM
DRY-BULB TEMP	92F	33C	60F	16C
WET-BULB TEMP	76F	24C	57F	14C

	SENSIBLE		LATENT		SENSIBLE			
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)		
WALLS	4.614	1.351	0.000	0.000	-1.560	-0.457		
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000		
GLASS CONDUCTION	5.540	1.623	0.000	0.000	-9.628	-2.820		
GLASS SOLAR	25.574	7.490	0.000	0.000	5.683	1.664		
DOOR	0.000	0.000	0.000	0.000	0.000	0.000		
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000		
OCCUPANTS TO SPACE	2.623	0.768	1.590	0.466	0.087	0.025		
LIGHT TO SPACE	7.524	2.204	0.000	0.000	0.307	0.090		
EQUIPMENT TO SPACE	1.775	0.520	0.000	0.000	0.059	0.017		
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000		
INFILTRATION	0.518	0.152	0.896	0.262	-0.734	-0.215		
TOTAL	48.167	14.107	2.487	0.728	-5.787	-1.695		
TOTAL LOAD	50.654 KBTU/H		14.835 KW		-5.787 KBTU/H		-1.695 KW	
TOTAL LOAD / AREA	41.50BTU/H.SQFT		130.826 W / M2		4.741BTU/H.SQFT		14.946 W / M2	

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
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SPACE CORE-FL-B

MULTIPLIER 1.0 FLOOR MULTIPLIER 1.0
 FLOOR AREA 2800 SQFT 260 M2
 VOLUME 28000 CUFT 793 M3

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 25	7AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	80F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	0.000	0.000	0.000	0.000	0.000	0.000
ROOFS	0.000	0.000	0.000	0.000	0.000	0.000
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	6.130	1.795	3.648	1.069	0.159	0.047
LIGHT TO SPACE	17.772	5.205	0.000	0.000	0.519	0.152
EQUIPMENT TO SPACE	4.148	1.215	0.000	0.000	0.107	0.031
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	1.873	0.549	2.964	0.868	-1.625	-0.476
TOTAL	29.922	8.763	6.613	1.937	-0.839	-0.246
TOTAL LOAD	36.534 KBTU/H		10.700 KW		-0.839 KBTU/H	-0.246 KW
TOTAL LOAD / AREA	13.05BTU/H.SQFT		41.133 W / M2		0.300BTU/H.SQFT	0.945 W / M2

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 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
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SPACE N-FL-4

MULTIPLIER	1.0	FLOOR MULTIPLIER	1.0
FLOOR AREA	6400 SQFT	595 M2	
VOLUME	84480 CUFT	2392 M3	

TIME	COOLING LOAD		HEATING LOAD	
	APR 14	4PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	80F	27C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	48.696	14.262	0.000	0.000	-25.813	-7.560
ROOFS	33.036	9.675	0.000	0.000	-20.671	-6.054
GLASS CONDUCTION	0.000	0.000	0.000	0.000	0.000	0.000
GLASS SOLAR	0.000	0.000	0.000	0.000	0.000	0.000
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
OCCUPANTS TO SPACE	14.011	4.103	8.339	2.442	0.444	0.130
LIGHT TO SPACE	40.621	11.897	0.000	0.000	1.554	0.455
EQUIPMENT TO SPACE	9.480	2.776	0.000	0.000	0.301	0.088
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	4.675	1.369	7.400	2.167	-4.106	-1.203
TOTAL	150.519	44.083	15.739	4.610	-48.292	-14.143
TOTAL LOAD	166.258 KBTU/H		48.693 KW		-48.292 KBTU/H	-14.143 KW
TOTAL LOAD / AREA	25.98BTU/H.SQFT		81.895 W / M2		7.546BTU/H.SQFT	23.787 W / M2

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR
 * ---- LOADS
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION
 * IN CONSIDERATION
 *

*** BUILDING ***

FLOOR AREA 167956 SQFT 15603 SQMT
 VOLUME 1699736 CUFT 48137 CUMT

TIME	COOLING LOAD		HEATING LOAD	
	MAY 5	4PM	DEC 17	8AM
DRY-BULB TEMP	99F	37C	63F	17C
WET-BULB TEMP	79F	26C	58F	14C

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALLS	531.800	155.751	0.000	0.000	-301.014	-88.159
ROOFS	1939.814	569.123	0.000	0.000	-580.300	-169.955
GLASS CONDUCTION	154.234	45.171	0.000	0.000	-161.632	-47.338
GLASS SOLAR	371.594	108.831	0.000	0.000	97.984	28.697
DOOR	0.000	0.000	0.000	0.000	0.000	0.000
INTERNAL SURFACES	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURFACES	14.132	4.139	0.000	0.000	14.132	4.139
OCCUPANTS TO SPACE	361.898	105.991	218.846	64.095	7.718	2.260
LIGHT TO SPACE	1051.168	307.861	0.000	0.000	40.816	11.954
EQUIPMENT TO SPACE	245.201	71.813	0.000	0.000	7.897	2.313
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	97.981	28.696	137.212	40.186	-111.096	-32.537
TOTAL	4767.822	1396.376	356.059	104.281	-985.494	-288.627
TOTAL LOAD	5123.881 KBTU/H	1500.656 KW	-985.494 KBTU/H	-288.627 KW		
TOTAL LOAD / AREA	30.51BTU/H.SQFT	96.174 W /SQMT	5.868BTU/H.SQFT	18.497 W /SQMT		

 *
 * NOTE 1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR *
 * ---- LOADS *
 * 2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION *
 * IN CONSIDERATION *
 *

MONTH	C O O L I N G					H E A T I N G					E L E C	
	COOLING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY HR	DRY- BULB TEMP	WET- BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC- TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	1114.29846	25 16	88.F	77.F	3745.296	-1.973	27 6	70.F	68.F	-217.241	102852.	462.888
FEB	1277.06482	28 16	93.F	80.F	4248.608	0.000				0.000	93040.	462.888
MAR	1623.32800	30 16	95.F	80.F	4498.611	0.000				0.000	111606.	462.888
APR	1577.46802	13 16	101.F	79.F	4696.748	-0.001	18 5	75.F	73.F	-0.722	98122.	462.888
MAY	1489.08606	5 15	99.F	79.F	4767.822	0.000				0.000	107229.	462.888
JUN	1347.81079	8 15	91.F	79.F	4094.765	0.000				0.000	106877.	462.888
JUL	1267.61560	21 16	87.F	77.F	4124.782	0.000				0.000	98475.	462.888
AUG	1430.82654	4 15	89.F	78.F	4236.680	0.000				0.000	111606.	462.888
SEP	1225.43115	21 15	88.F	80.F	4098.062	-0.010	17 7	75.F	74.F	-4.068	98122.	462.888
OCT	1165.99146	20 15	87.F	79.F	4128.236	-0.015	15 7	77.F	75.F	-3.038	102852.	462.888
NOV	1173.95959	21 16	91.F	76.F	4170.999	-0.032	24 6	70.F	67.F	-16.930	98122.	462.888
DEC	967.52618	7 16	91.F	77.F	3858.156	-35.951	17 8	63.F	58.F	-985.494	98475.	462.888
TOTAL	15660.405					-37.983					1227377.	
MAX					4767.822					-985.494		462.888

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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.115	-0.259	0.000	0.000	-0.048	-0.394	0.304	0.022	0.145	0.026	0.000	-0.319
	SEN CL	8.190	109.232	0.000	0.000	3.112	-0.456	39.707	9.762	32.694	7.130	0.000	209.372
	LAT CL					18.523			5.089		0.000	0.000	23.612
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	11.803	133.792	0.000	0.000	5.388	10.151	41.263	8.912	29.944	6.510	0.000	247.761
	LAT CL					27.555			4.604		0.000	0.000	32.159
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	16.848	175.622	0.000	0.000	7.132	17.165	50.724	10.762	35.918	7.808	0.000	321.979
	LAT CL					30.713			5.561		0.000	0.000	36.274
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	17.563	181.671	0.000	0.000	7.300	17.421	49.841	9.452	31.843	6.905	0.000	321.994
	LAT CL					31.363			4.849		0.000	0.000	36.212
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	16.710	164.950	0.000	0.000	6.065	12.839	50.612	10.247	34.274	7.467	0.000	303.163
	LAT CL					32.558			5.325		0.000	0.000	37.883
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.452	134.257	0.000	0.000	6.111	13.599	45.111	10.297	34.395	7.477	0.000	265.701
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	13.476	139.059	0.000	0.000	4.679	6.697	48.597	9.400	31.717	6.893	0.000	260.519
	LAT CL					28.260			4.853		0.000	0.000	33.113
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.289	152.874	0.000	0.000	5.332	10.645	51.800	10.756	35.896	7.805	0.000	289.397
	LAT CL					30.007			5.561		0.000	0.000	35.568
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	11.132	135.963	0.000	0.000	3.805	4.419	41.700	9.440	31.796	6.898	0.000	245.152
	LAT CL					26.420			4.849		0.000	0.000	31.269
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	9.517	129.113	0.000	0.000	2.968	0.281	35.577	9.790	32.863	7.160	0.000	227.270
	LAT CL					24.301			5.089		0.000	0.000	29.390
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	9.794	126.717	0.000	0.000	3.482	2.364	35.388	9.385	31.576	6.865	0.000	225.570
	LAT CL					22.878			4.849		0.000	0.000	27.727
DEC	HEATNG	-1.308	-5.492	0.000	0.000	-0.688	-3.974	2.912	0.181	1.281	0.265	0.000	-6.824
	SEN CL	5.731	94.261	0.000	0.000	2.063	-4.266	36.612	9.279	30.674	6.664	0.000	181.019
	LAT CL					12.305			4.821		0.000	0.000	17.126

	HEATNG	-1.423	-5.752	0.000	0.000	-0.736	-4.368	3.216	0.203	1.426	0.291	0.000	-7.143
TOT	SEN CL	149.505	1677.510	0.000	0.000	57.438	90.859	526.931	117.482	393.591	85.582	0.000	3098.897
	LAT CL					317.018			60.770		0.000	0.000	377.788



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.646	-0.560	0.000	0.000	-0.015	-0.017	0.043	0.049	0.302	0.057	0.000	-0.787
	SEN CL	42.183	132.592	0.000	0.000	4.472	-0.004	3.195	14.183	47.467	10.354	0.000	254.441
	LAT CL					26.731			7.398		0.000	0.000	34.129
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	58.019	176.405	0.000	0.000	7.837	0.416	3.471	12.963	43.557	9.469	0.000	312.137
	LAT CL					40.083			6.698		0.000	0.000	46.780
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	76.342	237.131	0.000	0.000	10.375	0.690	3.998	15.655	52.247	11.358	0.000	407.796
	LAT CL					44.677			8.089		0.000	0.000	52.765
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	75.610	244.881	0.000	0.000	10.619	0.716	3.823	13.749	46.320	10.044	0.000	405.761
	LAT CL					45.622			7.054		0.000	0.000	52.676
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	65.303	220.419	0.000	0.000	8.822	0.567	3.528	14.906	49.857	10.862	0.000	374.263
	LAT CL					47.360			7.746		0.000	0.000	55.106
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	58.388	183.472	0.000	0.000	8.890	0.574	3.022	14.979	50.033	10.877	0.000	330.234
	LAT CL					46.745			7.739		0.000	0.000	54.484
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	49.506	179.642	0.000	0.000	6.807	0.326	3.336	13.674	46.137	10.027	0.000	309.455
	LAT CL					41.108			7.060		0.000	0.000	48.168
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	57.424	202.024	0.000	0.000	7.756	0.477	3.739	15.647	52.215	11.354	0.000	350.635
	LAT CL					43.649			8.089		0.000	0.000	51.738
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	47.578	173.573	0.000	0.000	5.535	0.259	3.103	13.732	46.252	10.033	0.000	300.064
	LAT CL					38.431			7.054		0.000	0.000	45.485
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	42.381	159.996	0.000	0.000	4.317	0.111	2.687	14.242	47.804	10.416	0.000	281.954
	LAT CL					35.349			7.403		0.000	0.000	42.751
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	46.355	159.084	0.000	0.000	5.065	0.159	2.850	13.651	45.932	9.986	0.000	283.082
	LAT CL					33.279			7.054		0.000	0.000	40.333
DEC	HEATNG	-6.518	-11.135	0.000	0.000	-0.932	-0.186	0.368	0.557	3.016	0.665	0.000	-14.164
	SEN CL	32.456	105.682	0.000	0.000	2.932	-0.153	2.990	13.204	43.467	9.414	0.000	209.992
	LAT CL					17.507			6.825		0.000	0.000	24.332

TOT	HEATING	-7.164	-11.695	0.000	0.000	-0.948	-0.202	0.411	0.606	3.318	0.722	0.000	-14.951
	SEN CL	651.544	2174.900	0.000	0.000	83.426	4.137	39.741	170.584	571.282	124.191	0.000	3819.805
	LAT CL					460.538			88.205		0.000	0.000	548.743



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Energy Simulation of
Patumthani, Thailand
REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR

Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)
S-FL-1

DOE-2.1D 7/30/1996 18:40:49 LDL RUN 1
OTTV. CONDITION
WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.100	-0.116	0.000	0.000	-0.030	-0.180	0.145	0.018	0.118	0.022	0.000	-0.124
	SEN CL	16.377	63.301	0.000	0.000	3.095	-0.105	29.014	9.766	32.721	7.135	0.000	161.304
	LAT CL					18.568			5.089		0.000	0.000	23.657
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	18.984	80.714	0.000	0.000	5.388	6.391	27.238	8.912	29.944	6.510	0.000	184.080
	LAT CL					27.555			4.604		0.000	0.000	32.159
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	22.882	107.200	0.000	0.000	7.132	10.586	25.720	10.762	35.918	7.808	0.000	228.009
	LAT CL					30.713			5.561		0.000	0.000	36.274
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	21.490	110.653	0.000	0.000	7.300	10.516	19.973	9.452	31.843	6.905	0.000	218.131
	LAT CL					31.363			4.849		0.000	0.000	36.212
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	18.067	100.166	0.000	0.000	6.065	7.405	18.182	10.247	34.274	7.467	0.000	201.873
	LAT CL					32.558			5.325		0.000	0.000	37.883
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	15.989	82.578	0.000	0.000	6.111	8.045	16.604	10.297	34.395	7.477	0.000	181.497
	LAT CL					32.135			5.320		0.000	0.000	37.455
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	13.852	82.884	0.000	0.000	4.679	3.608	17.002	9.400	31.717	6.893	0.000	170.035
	LAT CL					28.260			4.853		0.000	0.000	33.113
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	16.211	92.333	0.000	0.000	5.332	6.127	19.516	10.756	35.896	7.805	0.000	193.977
	LAT CL					30.007			5.561		0.000	0.000	35.568
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.763	80.571	0.000	0.000	3.805	2.264	18.778	9.440	31.796	6.898	0.000	168.313
	LAT CL					26.420			4.849		0.000	0.000	31.269
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	14.544	75.325	0.000	0.000	2.968	-0.270	18.840	9.790	32.863	7.160	0.000	161.221
	LAT CL					24.301			5.089		0.000	0.000	29.390
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	16.471	74.480	0.000	0.000	3.482	1.304	22.791	9.385	31.576	6.865	0.000	166.354
	LAT CL					22.878			4.849		0.000	0.000	27.727
DEC	HEATNG	-1.093	-3.256	0.000	0.000	-0.605	-2.135	1.929	0.119	0.909	0.181	0.000	-3.951
	SEN CL	14.151	51.480	0.000	0.000	1.980	-2.468	27.513	9.341	31.046	6.748	0.000	139.791
	LAT CL					12.391			4.843		0.000	0.000	17.235

TOT	HEATNG	-1.193	-3.372	0.000	0.000	-0.636	-2.316	2.075	0.137	1.027	0.203	0.000	-4.075
	SEN CL	203.780	1001.684	0.000	0.000	57.337	53.403	261.171	117.548	393.990	85.670	0.000	2174.583
	LAT CL					317.150			60.792		0.000	0.000	377.941



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.115	-0.072	0.000	0.049	-0.047	-0.062	0.096	0.015	0.051	0.010	0.000	-0.075
	SEN CL	19.587	17.743	0.000	5.208	5.003	-0.084	22.610	20.243	62.849	13.698	0.000	166.857
	LAT CL					32.159			10.518		0.000	0.000	42.676
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	27.008	32.895	0.000	4.748	8.248	2.914	24.340	18.427	57.355	12.468	0.000	188.403
	LAT CL					43.684			9.520		0.000	0.000	53.205
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	36.495	47.472	0.000	5.257	10.962	4.836	28.038	22.103	68.797	14.956	0.000	238.918
	LAT CL					48.173			11.420		0.000	0.000	59.594
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	37.103	49.150	0.000	5.088	11.457	5.019	26.807	19.545	60.993	13.225	0.000	228.387
	LAT CL					50.462			10.040		0.000	0.000	60.502
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	34.013	42.822	0.000	5.257	9.666	3.974	24.743	21.137	65.650	14.302	0.000	221.563
	LAT CL					53.532			10.972		0.000	0.000	64.505
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	29.955	37.644	0.000	5.088	9.360	4.024	21.190	21.167	65.881	14.322	0.000	208.632
	LAT CL					50.337			10.936		0.000	0.000	61.273
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	27.056	31.772	0.000	5.257	7.444	2.288	23.393	19.513	60.751	13.204	0.000	190.679
	LAT CL					46.500			10.076		0.000	0.000	56.576
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	29.433	37.927	0.000	5.257	8.342	3.348	26.224	22.094	68.755	14.950	0.000	216.330
	LAT CL					48.459			11.420		0.000	0.000	59.880
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	23.907	29.480	0.000	5.088	6.287	1.817	21.760	19.525	60.902	13.212	0.000	181.977
	LAT CL					45.265			10.040		0.000	0.000	55.306
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	21.094	24.527	0.000	5.257	5.253	0.779	18.845	20.269	62.946	13.715	0.000	172.687
	LAT CL					43.758			10.524		0.000	0.000	54.283
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	22.148	25.429	0.000	5.088	5.939	1.117	19.989	19.432	60.482	13.149	0.000	172.772
	LAT CL					40.069			10.040		0.000	0.000	50.109
DEC	HEATNG	-2.160	-3.117	0.000	0.523	-0.978	-0.932	1.414	0.326	1.150	0.221	0.000	-3.553
	SEN CL	14.253	8.314	0.000	4.734	3.261	-1.442	22.129	19.288	60.057	13.051	0.000	143.646
	LAT CL					21.879			9.958		0.000	0.000	31.836

TOT	HEATNG	-2.276	-3.189	0.000	0.572	-1.024	-0.994	1.510	0.341	1.201	0.231	0.000	-3.628
	SEN CL	322.054	385.175	0.000	61.334	91.220	28.589	280.068	242.744	755.417	164.252	0.000	2330.853
	LAT CL					524.279			125.474		0.000	0.000	649.753



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REPORT- LS-E SPACE MONTHLY LOAD COMPONENTS IN MBTU FOR S-FL-B

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.054	0.000	0.000	0.028	-0.026	0.000	0.000	0.009	0.028	0.006	0.000	-0.009
	SEN CL	28.310	0.000	0.000	5.229	4.982	0.000	0.000	20.250	62.871	13.702	0.000	135.344
	LAT CL					32.259			10.520		0.000	0.000	42.779
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	33.047	0.000	0.000	4.748	8.248	0.000	0.000	18.427	57.355	12.468	0.000	134.294
	LAT CL					43.684			9.520		0.000	0.000	53.205
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	39.923	0.000	0.000	5.257	10.962	0.000	0.000	22.103	68.797	14.956	0.000	161.999
	LAT CL					48.173			11.420		0.000	0.000	59.594
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	37.542	0.000	0.000	5.088	11.457	0.000	0.000	19.545	60.993	13.225	0.000	147.849
	LAT CL					50.462			10.040		0.000	0.000	60.502
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	31.654	0.000	0.000	5.257	9.666	0.000	0.000	21.137	65.650	14.302	0.000	147.666
	LAT CL					53.532			10.972		0.000	0.000	64.505
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	28.100	0.000	0.000	5.088	9.360	0.000	0.000	21.167	65.881	14.322	0.000	143.918
	LAT CL					50.337			10.936		0.000	0.000	61.273
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	24.293	0.000	0.000	5.257	7.444	0.000	0.000	19.513	60.751	13.204	0.000	130.462
	LAT CL					46.500			10.076		0.000	0.000	56.576
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	28.364	0.000	0.000	5.257	8.342	0.000	0.000	22.094	68.755	14.950	0.000	147.762
	LAT CL					48.459			11.420		0.000	0.000	59.880
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	25.711	0.000	0.000	5.088	6.287	0.000	0.000	19.525	60.902	13.212	0.000	130.724
	LAT CL					45.265			10.040		0.000	0.000	55.306
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	25.324	0.000	0.000	5.257	5.253	0.000	0.000	20.269	62.946	13.715	0.000	132.765
	LAT CL					43.758			10.524		0.000	0.000	54.283
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	28.731	0.000	0.000	5.088	5.939	0.000	0.000	19.432	60.482	13.149	0.000	132.820
	LAT CL					40.069			10.040		0.000	0.000	50.109
DEC	HEATNG	-1.127	0.000	0.000	0.283	-0.623	0.000	0.000	0.112	0.369	0.076	0.000	-0.911
	SEN CL	23.740	0.000	0.000	4.975	2.906	0.000	0.000	19.502	60.838	13.196	0.000	125.157
	LAT CL					22.532			10.025		0.000	0.000	32.557

TOT	HEATNG	-1.181	0.000	0.000	0.311	-0.649	0.000	0.000	0.121	0.397	0.082	0.000	-0.919
	SEN CL	354.740	0.000	0.000	61.595	90.845	0.000	0.000	242.964	756.221	164.401	0.000	1670.766
	LAT CL				525.033				125.544		0.000	0.000	650.577



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Energy Conservation Building
(DOE PLUS WITH DOE 2.1 D)
N-FL-2

DOE-2.1D 7/30/1996 18:40:49 LDL RUN 1
OTTV. CONDITION
WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.062	-0.196	0.000	0.000	-0.013	-0.242	0.240	0.009	0.067	0.013	0.000	-0.184
	SEN CL	2.691	31.160	0.000	0.000	0.648	-0.015	17.386	2.020	6.412	1.400	0.000	61.702
	LAT CL					3.789			1.055		0.000	0.000	4.844
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.845	35.907	0.000	0.000	1.117	3.808	18.828	1.848	5.913	1.285	0.000	72.551
	LAT CL					5.714			0.955		0.000	0.000	6.669
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.355	46.292	0.000	0.000	1.479	6.388	21.807	2.232	7.089	1.541	0.000	92.183
	LAT CL					6.369			1.153		0.000	0.000	7.522
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.540	48.047	0.000	0.000	1.514	6.462	20.758	1.960	6.293	1.364	0.000	91.938
	LAT CL					6.504			1.006		0.000	0.000	7.509
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	5.176	43.828	0.000	0.000	1.258	4.708	19.306	2.125	6.762	1.473	0.000	84.636
	LAT CL					6.752			1.104		0.000	0.000	7.856
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.539	34.967	0.000	0.000	1.267	4.999	16.670	2.135	6.789	1.476	0.000	72.843
	LAT CL					6.664			1.103		0.000	0.000	7.767
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.152	37.998	0.000	0.000	0.970	2.435	18.249	1.949	6.265	1.362	0.000	73.380
	LAT CL					5.860			1.006		0.000	0.000	6.867
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	4.442	40.956	0.000	0.000	1.106	3.923	20.397	2.231	7.084	1.540	0.000	81.679
	LAT CL					6.223			1.153		0.000	0.000	7.376
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.529	37.467	0.000	0.000	0.789	1.626	16.956	1.958	6.283	1.363	0.000	69.971
	LAT CL					5.479			1.006		0.000	0.000	6.484
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.031	36.377	0.000	0.000	0.615	0.101	14.683	2.030	6.485	1.413	0.000	64.736
	LAT CL					5.039			1.055		0.000	0.000	6.095
NOV	HEATNG	-0.002	-0.001	0.000	0.000	-0.001	-0.011	0.013	0.000	0.001	0.000	0.000	-0.001
	SEN CL	3.109	35.331	0.000	0.000	0.723	0.913	15.458	1.946	6.234	1.355	0.000	65.070
	LAT CL					4.741			1.006		0.000	0.000	5.746
DEC	HEATNG	-0.428	-1.619	0.000	0.000	-0.145	-1.520	1.235	0.048	0.324	0.068	0.000	-2.037
	SEN CL	1.899	29.026	0.000	0.000	0.430	-1.425	16.920	1.914	5.992	1.301	0.000	56.058
	LAT CL					2.529			0.995		0.000	0.000	3.523

TOT	HEATNG	-0.492	-1.816	0.000	0.000	-0.159	-1.774	1.488	0.057	0.392	0.081	0.000	-2.223
	SEN CL	47.306	457.359	0.000	0.000	11.917	33.925	217.418	24.348	77.601	16.874	0.000	886.748
	LAT CL					65.661			12.597		0.000	0.000	78.258



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Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 S-FL-2

DOE-2.1D 7/30/1996 18:40:49 LDL RUN 1
 OTTV. CONDITION WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.003	0.000	0.000	0.000	-0.017	-0.069	0.019	0.001	0.024	0.005	0.000	-0.039
	SEN CL	2.239	0.000	0.000	0.000	0.652	-0.008	1.087	2.028	6.455	1.408	0.000	13.862
	LAT CL					3.772			1.055		0.000	0.000	4.827
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.519	0.000	0.000	0.000	1.117	0.906	1.125	1.848	5.913	1.285	0.000	14.712
	LAT CL					5.714			0.955		0.000	0.000	6.669
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.974	0.000	0.000	0.000	1.479	1.537	1.327	2.232	7.089	1.541	0.000	18.179
	LAT CL					6.369			1.153		0.000	0.000	7.522
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.737	0.000	0.000	0.000	1.514	1.510	1.193	1.960	6.293	1.364	0.000	16.571
	LAT CL					6.504			1.006		0.000	0.000	7.509
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.305	0.000	0.000	0.000	1.258	0.992	1.152	2.125	6.762	1.473	0.000	16.066
	LAT CL					6.752			1.104		0.000	0.000	7.856
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.066	0.000	0.000	0.000	1.267	1.120	1.034	2.135	6.789	1.476	0.000	15.888
	LAT CL					6.664			1.103		0.000	0.000	7.767
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.767	0.000	0.000	0.000	0.970	0.433	1.087	1.949	6.265	1.362	0.000	13.834
	LAT CL					5.860			1.006		0.000	0.000	6.867
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.066	0.000	0.000	0.000	1.106	0.815	1.220	2.231	7.084	1.540	0.000	16.062
	LAT CL					6.223			1.153		0.000	0.000	7.376
SEP	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.006	0.001	0.000	0.003	0.001	0.000	-0.001
	SEN CL	1.895	0.000	0.000	0.000	0.789	0.198	1.072	1.957	6.280	1.362	0.000	13.553
	LAT CL					5.459			1.006		0.000	0.000	6.464
OCT	HEATNG	0.000	0.000	0.000	0.000	0.001	-0.016	0.004	0.000	0.008	0.002	0.000	-0.002
	SEN CL	1.937	0.000	0.000	0.000	0.615	-0.199	0.930	2.030	6.477	1.412	0.000	13.202
	LAT CL					4.977			1.055		0.000	0.000	6.033
NOV	HEATNG	0.000	0.000	0.000	0.000	-0.002	-0.009	0.003	0.000	0.004	0.001	0.000	-0.004
	SEN CL	2.260	0.000	0.000	0.000	0.724	0.079	0.945	1.946	6.231	1.355	0.000	13.541
	LAT CL					4.726			1.006		0.000	0.000	5.732
DEC	HEATNG	-0.096	0.000	0.000	0.000	-0.130	-0.303	0.070	0.017	0.125	0.023	0.000	-0.295
	SEN CL	1.959	0.000	0.000	0.000	0.415	-0.355	1.001	1.945	6.192	1.346	0.000	12.503
	LAT CL					2.560			1.005		0.000	0.000	3.566

TOT	HEATNG	-0.100	0.000	0.000	0.000	-0.148	-0.403	0.097	0.019	0.163	0.031	0.000	-0.341
	SEN CL	26.724	0.000	0.000	0.000	11.906	7.030	13.173	24.385	77.829	16.924	0.000	177.972
	LAT CL					65.580			12.608		0.000	0.000	78.188



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Energy Conservation Building
 (DOE PLUS WITH DOE 2.1 D)
 N-FL-3

DOE-2.1D 7/30/1996 18:40:49 LDL RUN 1
 OTTV. CONDITION
 WEATHER FILE- 1985 BANGKOK W/SOLAR

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.055	-0.145	0.000	0.000	-0.011	-0.112	0.035	0.008	0.070	0.014	0.000	-0.195
	SEN CL	1.473	20.670	0.000	0.000	0.399	0.019	1.149	1.236	3.902	0.852	0.000	29.699
	LAT CL					2.269			0.647		0.000	0.000	2.916
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.136	23.801	0.000	0.000	0.682	1.069	1.221	1.133	3.625	0.788	0.000	34.454
	LAT CL					3.488			0.585		0.000	0.000	4.074
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.040	30.685	0.000	0.000	0.902	1.816	1.462	1.368	4.346	0.945	0.000	44.564
	LAT CL					3.887			0.707		0.000	0.000	4.594
APR	HEATNG	-0.001	-0.001	0.000	0.000	0.000	-0.002	0.000	0.000	0.002	0.000	0.000	-0.001
	SEN CL	3.177	31.849	0.000	0.000	0.924	1.788	1.372	1.201	3.856	0.836	0.000	45.003
	LAT CL					3.968			0.616		0.000	0.000	4.584
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.055	29.052	0.000	0.000	0.768	1.173	1.353	1.303	4.145	0.903	0.000	41.752
	LAT CL					4.125			0.677		0.000	0.000	4.802
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.701	23.178	0.000	0.000	0.773	1.325	1.259	1.309	4.162	0.905	0.000	35.611
	LAT CL					4.067			0.676		0.000	0.000	4.743
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.475	25.187	0.000	0.000	0.592	0.512	1.290	1.195	3.841	0.835	0.000	35.927
	LAT CL					3.580			0.617		0.000	0.000	4.197
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.592	27.148	0.000	0.000	0.675	0.962	1.401	1.367	4.343	0.944	0.000	39.433
	LAT CL					3.800			0.707		0.000	0.000	4.507
SEP	HEATNG	-0.002	0.002	0.000	0.000	0.000	-0.004	0.001	0.000	0.001	0.000	0.000	-0.001
	SEN CL	1.990	24.833	0.000	0.000	0.482	0.229	1.169	1.200	3.850	0.835	0.000	34.588
	LAT CL					3.342			0.616		0.000	0.000	3.958
OCT	HEATNG	-0.001	0.001	0.000	0.000	0.000	-0.002	0.000	0.000	0.001	0.000	0.000	-0.001
	SEN CL	1.701	24.112	0.000	0.000	0.376	-0.255	1.017	1.245	3.975	0.866	0.000	33.038
	LAT CL					3.081			0.647		0.000	0.000	3.728
NOV	HEATNG	-0.007	-0.006	0.000	0.000	-0.001	-0.012	0.004	0.000	0.011	0.003	0.000	-0.009
	SEN CL	1.759	23.425	0.000	0.000	0.443	0.091	1.009	1.193	3.812	0.828	0.000	32.561
	LAT CL					2.891			0.616		0.000	0.000	3.508
DEC	HEATNG	-0.306	-1.143	0.000	0.000	-0.098	-0.494	0.114	0.049	0.271	0.057	0.000	-1.550
	SEN CL	1.039	19.310	0.000	0.000	0.272	-0.286	1.042	1.154	3.601	0.782	0.000	26.915
	LAT CL					1.511			0.600		0.000	0.000	2.111

TOT	HEATNG	-0.371	-1.292	0.000	0.000	-0.111	-0.626	0.154	0.058	0.356	0.075	0.000	-1.757
	SEN CL	27.138	303.251	0.000	0.000	7.289	8.444	14.743	14.904	47.458	10.319	0.000	433.545
	LAT CL					40.010			7.712		0.000	0.000	47.722



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.013	0.000	0.000	0.000	-0.015	-0.134	0.039	0.005	0.042	0.008	0.000	-0.068
	SEN CL	2.429	0.000	0.000	0.000	0.404	0.043	1.256	1.238	3.931	0.858	0.000	10.160
	LAT CL					2.255			0.647		0.000	0.000	2.901
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.878	0.000	0.000	0.000	0.685	1.071	1.337	1.133	3.625	0.788	0.000	11.517
	LAT CL					3.503			0.585		0.000	0.000	4.088
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.523	0.000	0.000	0.000	0.907	1.818	1.602	1.368	4.346	0.945	0.000	14.508
	LAT CL					3.905			0.707		0.000	0.000	4.612
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	3.345	0.000	0.000	0.000	0.928	1.785	1.426	1.202	3.858	0.836	0.000	13.380
	LAT CL					3.987			0.616		0.000	0.000	4.604
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.840	0.000	0.000	0.000	0.771	1.173	1.376	1.303	4.145	0.903	0.000	12.510
	LAT CL					4.139			0.677		0.000	0.000	4.816
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.504	0.000	0.000	0.000	0.777	1.324	1.230	1.309	4.162	0.905	0.000	12.211
	LAT CL					4.085			0.676		0.000	0.000	4.762
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.189	0.000	0.000	0.000	0.595	0.512	1.294	1.195	3.841	0.835	0.000	10.460
	LAT CL					3.593			0.617		0.000	0.000	4.210
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	2.535	0.000	0.000	0.000	0.678	0.963	1.447	1.367	4.343	0.944	0.000	12.278
	LAT CL					3.815			0.707		0.000	0.000	4.522
SEP	HEATNG	-0.001	0.000	0.000	0.000	0.000	-0.015	0.005	0.000	0.005	0.001	0.000	-0.005
	SEN CL	2.285	0.000	0.000	0.000	0.484	0.243	1.263	1.200	3.847	0.834	0.000	10.155
	LAT CL					3.331			0.616		0.000	0.000	3.947
OCT	HEATNG	0.001	0.000	0.000	0.000	0.001	-0.032	0.008	0.001	0.009	0.002	0.000	-0.010
	SEN CL	2.213	0.000	0.000	0.000	0.376	-0.223	1.088	1.244	3.967	0.865	0.000	9.530
	LAT CL					3.020			0.647		0.000	0.000	3.667
NOV	HEATNG	0.002	0.000	0.000	0.000	-0.001	-0.025	0.008	0.000	0.006	0.001	0.000	-0.008
	SEN CL	2.473	0.000	0.000	0.000	0.444	0.107	1.106	1.193	3.817	0.830	0.000	9.969
	LAT CL					2.873			0.616		0.000	0.000	3.490
DEC	HEATNG	-0.164	0.000	0.000	0.000	-0.098	-0.464	0.112	0.021	0.150	0.029	0.000	-0.415
	SEN CL	2.057	0.000	0.000	0.000	0.273	-0.313	1.147	1.182	3.722	0.811	0.000	8.879
	LAT CL					1.523			0.616		0.000	0.000	2.139

(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.379	0.000	0.000	1.542	4.787	1.043	0.000	7.752
	LAT CL					2.462			0.801		0.000	0.000	3.263
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.628	0.000	0.000	1.403	4.366	0.949	0.000	7.346
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.835	0.000	0.000	1.683	5.237	1.139	0.000	8.893
	LAT CL					3.667			0.869		0.000	0.000	4.537
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.872	0.000	0.000	1.488	4.643	1.007	0.000	8.010
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.736	0.000	0.000	1.609	4.998	1.089	0.000	8.432
	LAT CL					4.075			0.835		0.000	0.000	4.911
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.713	0.000	0.000	1.611	5.015	1.090	0.000	8.430
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.567	0.000	0.000	1.486	4.625	1.005	0.000	7.682
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.635	0.000	0.000	1.682	5.234	1.138	0.000	8.689
	LAT CL					3.689			0.869		0.000	0.000	4.558
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.479	0.000	0.000	1.486	4.636	1.006	0.000	7.607
	LAT CL					3.446			0.764		0.000	0.000	4.210
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.400	0.000	0.000	1.543	4.792	1.044	0.000	7.779
	LAT CL					3.331			0.801		0.000	0.000	4.132
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.479	4.604	1.001	0.000	7.537
	LAT CL					3.050			0.764		0.000	0.000	3.815
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.043	0.000	0.000	0.006	0.020	0.004	0.000	-0.013
	SEN CL	0.000	0.000	0.000	0.000	0.217	0.000	0.000	1.487	4.640	1.006	0.000	7.350
	LAT CL					1.722			0.765		0.000	0.000	2.487

TOT	HEATNG	0.000	0.000	0.000	0.000	-0.044	0.000	0.000	0.006	0.021	0.004	0.000	-0.013
	SEN CL	0.000	0.000	0.000	0.000	6.911	0.000	0.000	18.499	57.579	12.518	0.000	95.507
	LAT CL					39.982			9.559		0.000	0.000	49.541



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.269	0.000	0.000	1.096	3.404	0.742	0.000	5.512
	LAT CL					1.750			0.570		0.000	0.000	2.320
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.446	0.000	0.000	0.997	3.105	0.675	0.000	5.224
	LAT CL					2.365			0.515		0.000	0.000	2.880
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.593	0.000	0.000	1.197	3.724	0.810	0.000	6.324
	LAT CL					2.608			0.618		0.000	0.000	3.226
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.620	0.000	0.000	1.058	3.302	0.716	0.000	5.696
	LAT CL					2.732			0.543		0.000	0.000	3.275
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.523	0.000	0.000	1.144	3.554	0.774	0.000	5.995
	LAT CL					2.898			0.594		0.000	0.000	3.492
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.507	0.000	0.000	1.146	3.566	0.775	0.000	5.994
	LAT CL					2.725			0.592		0.000	0.000	3.317
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.403	0.000	0.000	1.056	3.289	0.715	0.000	5.463
	LAT CL					2.517			0.545		0.000	0.000	3.063
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.196	3.722	0.809	0.000	6.179
	LAT CL					2.623			0.618		0.000	0.000	3.241
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.340	0.000	0.000	1.057	3.297	0.715	0.000	5.409
	LAT CL					2.450			0.543		0.000	0.000	2.994
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.284	0.000	0.000	1.097	3.407	0.742	0.000	5.531
	LAT CL					2.369			0.570		0.000	0.000	2.938
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.321	0.000	0.000	1.052	3.274	0.712	0.000	5.359
	LAT CL					2.169			0.543		0.000	0.000	2.713
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.031	0.000	0.000	0.004	0.014	0.003	0.000	-0.009
	SEN CL	0.000	0.000	0.000	0.000	0.154	0.000	0.000	1.058	3.299	0.716	0.000	5.227
	LAT CL					1.225			0.544		0.000	0.000	1.769

TOT	HEATNG	0.000	0.000	0.000	0.000	-0.032	0.000	0.000	0.004	0.015	0.003	0.000	-0.009
	SEN CL	0.000	0.000	0.000	0.000	4.914	0.000	0.000	13.154	40.943	8.901	0.000	67.912
	LAT CL					28.430			6.797		0.000	0.000	35.228



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATING	-0.001	0.000	0.000	0.000	-0.001	-0.011	0.009	0.000	0.001	0.000	0.000	-0.001
	SEN CL	1.192	0.000	0.000	0.000	0.165	-0.009	9.879	0.672	2.086	0.455	0.000	14.439
	LAT CL					1.073			0.349		0.000	0.000	1.422
FEB	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.279	0.000	0.000	0.000	0.274	1.608	8.409	0.612	1.903	0.414	0.000	14.499
	LAT CL					1.450			0.316		0.000	0.000	1.766
MAR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.537	0.000	0.000	0.000	0.364	2.637	7.837	0.734	2.283	0.496	0.000	15.888
	LAT CL					1.599			0.379		0.000	0.000	1.978
APR	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.405	0.000	0.000	0.000	0.380	2.623	6.084	0.649	2.024	0.439	0.000	13.603
	LAT CL					1.675			0.333		0.000	0.000	2.008
MAY	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.218	0.000	0.000	0.000	0.321	1.901	5.896	0.701	2.179	0.475	0.000	12.691
	LAT CL					1.777			0.364		0.000	0.000	2.141
JUN	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.053	0.000	0.000	0.000	0.311	2.031	5.325	0.702	2.186	0.475	0.000	12.084
	LAT CL					1.670			0.363		0.000	0.000	2.033
JUL	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.942	0.000	0.000	0.000	0.247	0.965	5.610	0.648	2.016	0.438	0.000	10.867
	LAT CL					1.543			0.334		0.000	0.000	1.878
AUG	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.087	0.000	0.000	0.000	0.277	1.577	6.313	0.733	2.282	0.496	0.000	12.765
	LAT CL					1.608			0.379		0.000	0.000	1.987
SEP	HEATING	0.000	0.000	0.000	0.000	0.000	-0.005	0.004	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.980	0.000	0.000	0.000	0.209	0.658	5.830	0.648	2.021	0.438	0.000	10.783
	LAT CL					1.498			0.333		0.000	0.000	1.831
OCT	HEATING	0.000	0.000	0.000	0.000	0.000	-0.006	0.005	0.000	0.001	0.000	0.000	0.000
	SEN CL	1.026	0.000	0.000	0.000	0.174	0.064	6.309	0.672	2.088	0.455	0.000	10.789
	LAT CL					1.445			0.349		0.000	0.000	1.795
NOV	HEATING	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	1.228	0.000	0.000	0.000	0.197	0.427	7.979	0.645	2.007	0.436	0.000	12.919
	LAT CL					1.330			0.333		0.000	0.000	1.663
DEC	HEATING	-0.037	0.000	0.000	0.000	-0.021	-0.285	0.236	0.006	0.020	0.004	0.000	-0.077
	SEN CL	1.063	0.000	0.000	0.000	0.097	-0.829	10.267	0.645	2.011	0.437	0.000	13.691
	LAT CL					0.741			0.332		0.000	0.000	1.073

TOT	HEATNG	-0.039	0.000	0.000	0.000	-0.021	-0.307	0.255	0.006	0.023	0.004	0.000	-0.078
	SEN CL	14.010	0.000	0.000	0.000	3.015	13.652	85.738	8.061	25.086	5.454	0.000	155.017
	LAT CL					17.408			4.165		0.000	0.000	21.574



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.001	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.379	0.000	0.000	1.542	4.787	1.043	0.000	7.752
	LAT CL					2.462			0.801		0.000	0.000	3.263
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.628	0.000	0.000	1.403	4.366	0.949	0.000	7.346
	LAT CL					3.326			0.725		0.000	0.000	4.050
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.835	0.000	0.000	1.683	5.237	1.139	0.000	8.893
	LAT CL					3.667			0.869		0.000	0.000	4.537
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.872	0.000	0.000	1.488	4.643	1.007	0.000	8.010
	LAT CL					3.842			0.764		0.000	0.000	4.606
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.736	0.000	0.000	1.609	4.998	1.089	0.000	8.432
	LAT CL					4.075			0.835		0.000	0.000	4.911
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.713	0.000	0.000	1.611	5.015	1.090	0.000	8.430
	LAT CL					3.832			0.833		0.000	0.000	4.665
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.567	0.000	0.000	1.486	4.625	1.005	0.000	7.682
	LAT CL					3.540			0.767		0.000	0.000	4.307
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.635	0.000	0.000	1.682	5.234	1.138	0.000	8.689
	LAT CL					3.689			0.869		0.000	0.000	4.558
SEP	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.479	0.000	0.000	1.486	4.636	1.006	0.000	7.607
	LAT CL					3.446			0.764		0.000	0.000	4.210
OCT	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.400	0.000	0.000	1.543	4.792	1.044	0.000	7.779
	LAT CL					3.331			0.801		0.000	0.000	4.132
NOV	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	0.000	0.000	0.000	0.000	0.452	0.000	0.000	1.479	4.604	1.001	0.000	7.537
	LAT CL					3.050			0.764		0.000	0.000	3.815
DEC	HEATNG	0.000	0.000	0.000	0.000	-0.043	0.000	0.000	0.006	0.020	0.004	0.000	-0.013
	SEN CL	0.000	0.000	0.000	0.000	0.217	0.000	0.000	1.487	4.640	1.006	0.000	7.350
	LAT CL					1.722			0.765		0.000	0.000	2.487

TOT	HEATNG	0.000	0.000	0.000	0.000	-0.044	0.000	0.000	0.006	0.021	0.004	0.000	-0.013
	SEN CL	0.000	0.000	0.000	0.000	6.911	0.000	0.000	18.499	57.579	12.518	0.000	95.507
	LAT CL					39.982			9.559		0.000	0.000	49.541



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-0.186	-0.103	0.000	0.000	-0.016	0.000	0.000	0.025	0.090	0.017	0.000	-0.173
	SEN CL	12.809	5.642	0.000	0.000	0.929	0.000	0.000	3.500	10.855	2.368	0.000	36.104
	LAT CL					5.634			1.823		0.000	0.000	7.457
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	15.523	10.312	0.000	0.000	1.551	0.000	0.000	3.206	9.980	2.170	0.000	42.741
	LAT CL					8.108			1.657		0.000	0.000	9.764
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	19.836	14.881	0.000	0.000	2.058	0.000	0.000	3.846	11.971	2.602	0.000	55.195
	LAT CL					8.976			1.987		0.000	0.000	10.963
APR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	19.277	15.407	0.000	0.000	2.134	0.000	0.000	3.401	10.613	2.301	0.000	53.134
	LAT CL					9.316			1.747		0.000	0.000	11.063
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	17.240	13.423	0.000	0.000	1.791	0.000	0.000	3.678	11.423	2.489	0.000	50.044
	LAT CL					9.807			1.909		0.000	0.000	11.716
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	15.142	11.800	0.000	0.000	1.759	0.000	0.000	3.683	11.464	2.492	0.000	46.340
	LAT CL					9.383			1.903		0.000	0.000	11.286
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	13.566	9.960	0.000	0.000	1.380	0.000	0.000	3.395	10.571	2.298	0.000	41.170
	LAT CL					8.516			1.753		0.000	0.000	10.269
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	15.096	11.889	0.000	0.000	1.556	0.000	0.000	3.845	11.964	2.601	0.000	46.951
	LAT CL					8.934			1.987		0.000	0.000	10.921
SEP	HEATNG	-0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.001	0.000	-0.002
	SEN CL	12.848	9.241	0.000	0.000	1.149	0.000	0.000	3.396	10.594	2.298	0.000	39.527
	LAT CL					8.153			1.746		0.000	0.000	9.899
OCT	HEATNG	-0.007	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.003	0.001	0.000	-0.001
	SEN CL	12.223	7.689	0.000	0.000	0.937	0.000	0.000	3.526	10.950	2.386	0.000	37.711
	LAT CL					7.747			1.831		0.000	0.000	9.578
NOV	HEATNG	-0.016	-0.006	0.000	0.000	-0.004	0.000	0.000	0.003	0.010	0.002	0.000	-0.010
	SEN CL	13.636	7.977	0.000	0.000	1.078	0.000	0.000	3.378	10.514	2.286	0.000	38.869
	LAT CL					7.161			1.745		0.000	0.000	8.906
DEC	HEATNG	-1.206	-1.406	0.000	0.000	-0.211	0.000	0.000	0.131	0.464	0.089	0.000	-2.139
	SEN CL	10.597	3.035	0.000	0.000	0.628	0.000	0.000	3.282	10.186	2.221	0.000	29.948
	LAT CL					3.735			1.706		0.000	0.000	5.441

TOT	HEATNG	-1.423	-1.515	0.000	0.000	-0.230	0.000	0.000	0.162	0.571	0.109	0.000	-2.325
	SEN CL	177.793	121.257	0.000	0.000	16.950	0.000	0.000	42.137	131.085	28.512	0.000	517.733
	LAT CL					95.470			21.795		0.000	0.000	117.265



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(UNITS=MBTU)		WALLS	ROOFS	INT SUR	UND SUR	INFIL	GL CON	GL SOL	OCCUP	LIGHTS	EQUIP	SOURCE	TOTAL
JAN	HEATNG	-1.350	-1.451	0.000	0.078	-0.243	-1.221	0.931	0.164	0.941	0.178	0.000	-1.973
	SEN CL	137.480	380.343	0.000	10.437	24.890	-0.619	125.282	89.079	285.222	62.187	0.000	1114.299
	LAT CL					153.705			46.361	0.000	0.000	0.000	200.066
FEB	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	177.040	493.825	0.000	9.497	42.236	28.335	127.231	81.223	260.949	56.728	0.000	1277.064
	LAT CL					219.555			41.964	0.000	0.000	0.000	261.519
MAR	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	228.756	659.282	0.000	10.514	56.016	47.473	142.515	97.727	312.999	68.045	0.000	1623.327
	LAT CL					243.496			50.493	0.000	0.000	0.000	293.990
APR	HEATNG	-0.001	-0.001	0.000	0.000	0.000	-0.002	0.000	0.000	0.002	0.000	0.000	-0.001
	SEN CL	224.787	681.658	0.000	10.175	57.892	47.839	131.277	86.149	277.517	60.173	0.000	1577.466
	LAT CL					251.640			44.228	0.000	0.000	0.000	295.868
MAY	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	197.581	614.661	0.000	10.514	48.444	34.731	126.146	93.271	298.671	65.068	0.000	1489.087
	LAT CL					263.940			48.440	0.000	0.000	0.000	312.380
JUN	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	174.887	507.896	0.000	10.175	47.920	37.041	111.447	93.549	299.735	65.161	0.000	1347.811
	LAT CL					254.611			48.335	0.000	0.000	0.000	302.946
JUL	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	153.275	506.502	0.000	10.514	37.345	17.777	119.858	85.861	276.411	60.075	0.000	1267.615
	LAT CL					229.179			44.333	0.000	0.000	0.000	273.512
AUG	HEATNG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEN CL	173.540	565.152	0.000	10.514	42.222	28.838	132.058	97.682	312.806	68.016	0.000	1430.827
	LAT CL					241.186			50.493	0.000	0.000	0.000	291.679
SEP	HEATNG	-0.012	0.002	0.000	0.000	0.000	-0.030	0.011	0.002	0.014	0.003	0.000	-0.010
	SEN CL	146.619	491.127	0.000	10.175	30.918	11.713	111.631	86.050	277.091	60.109	0.000	1225.432
	LAT CL					218.406			44.227	0.000	0.000	0.000	262.632
OCT	HEATNG	-0.007	0.000	0.000	0.000	0.003	-0.056	0.017	0.002	0.021	0.004	0.000	-0.015
	SEN CL	134.992	457.139	0.000	10.514	24.938	0.391	99.976	89.290	286.357	62.393	0.000	1165.991
	LAT CL					205.809			46.386	0.000	0.000	0.000	252.195
NOV	HEATNG	-0.023	-0.013	0.000	0.000	-0.009	-0.058	0.028	0.004	0.032	0.007	0.000	-0.032
	SEN CL	147.965	452.442	0.000	10.175	28.740	6.562	107.516	85.595	275.147	59.816	0.000	1173.959
	LAT CL					191.165			44.226	0.000	0.000	0.000	235.390
DEC	HEATNG	-14.444	-27.168	0.000	0.806	-4.647	-10.293	8.391	1.583	8.133	1.688	0.000	-35.951
	SEN CL	108.945	311.109	0.000	9.709	15.845	-11.537	119.621	84.768	270.366	58.699	0.000	967.526
	LAT CL					103.882			43.799	0.000	0.000	0.000	147.681

TOT	HEATNG	-15.836	-28.631	0.000	0.883	-4.895	-11.660	9.377	1.755	9.142	1.881	0.000	-37.983
	SEN CL	2005.850	6121.146	0.000	122.907	457.420	248.543	1454.562	1070.204	3433.071	746.522	0.000	15660.226
	LAT CL					2576.548			553.322		0.000	0.000	3129.871



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MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	QUICK WL LOAD BTU/HR	QUICK RF LOAD BTU/HR	GLS COND LOAD BTU/HR	DELAY WL LOAD BTU/HR	DELAY RF LOAD BTU/HR	UG FLOOR LOAD BTU/HR	UG WALL LOAD BTU/HR	ELEC-EQP SENS LD BTU/HR
	----(16)	----(17)	----(18)	----(19)	----(20)	----(22)	----(23)	----(25)
5 4 1	0.00	0.00	16814.07	19662.78	209354.97	0.00	0.00	4009.29
5 4 2	0.00	0.00	14432.45	18230.98	194688.14	0.00	0.00	3707.44
5 4 3	0.00	0.00	15460.11	16881.89	181147.94	0.00	0.00	3432.75
5 4 4	0.00	0.00	16373.76	15735.93	168897.91	0.00	0.00	3182.79
5 4 5	0.00	0.00	9102.36	14743.54	157449.50	0.00	0.00	2955.32
5 4 6	0.00	0.00	6521.37	13522.66	145351.00	0.00	0.00	6735.63
5 4 7	0.00	0.00	6136.65	12300.09	132832.34	0.00	0.00	22225.42
5 4 8	0.00	0.00	17385.73	13146.17	123421.93	0.00	0.00	25094.56
5 4 9	0.00	0.00	24630.52	17887.22	128207.78	0.00	0.00	25785.24
5 410	0.00	0.00	35786.02	23429.45	147708.27	0.00	0.00	26413.75
5 411	0.00	0.00	45365.23	28074.20	178622.31	0.00	0.00	15909.87
5 412	0.00	0.00	51250.91	32435.85	224097.33	0.00	0.00	27028.40
5 413	0.00	0.00	60619.62	35909.59	274787.84	0.00	0.00	27545.03
5 414	0.00	0.00	62197.18	38328.17	325095.34	0.00	0.00	28015.16
5 415	0.00	0.00	55456.15	40368.32	366150.22	0.00	0.00	28442.98
5 416	0.00	0.00	64191.17	42398.68	402800.63	0.00	0.00	22186.80
5 417	0.00	0.00	54728.42	43457.66	419342.47	0.00	0.00	13393.76
5 418	0.00	0.00	42136.33	43323.45	417303.84	0.00	0.00	10857.91
5 419	0.00	0.00	43315.47	41759.17	401331.50	0.00	0.00	8255.37
5 420	0.00	0.00	29085.99	38741.09	373007.31	0.00	0.00	6035.17
5 421	0.00	0.00	35367.79	35165.75	341888.22	0.00	0.00	5550.99
5 422	0.00	0.00	34294.84	31943.21	312668.78	0.00	0.00	5110.38
5 423	0.00	0.00	29947.87	29200.96	286233.38	0.00	0.00	4709.43
5 424	0.00	0.00	29421.11	26857.83	263375.31	0.00	0.00	4344.57
DAILY SUMMARY (MAY 4)								
MN	0.00	0.00	6136.65	12300.09	123421.93	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	43457.66	419342.47	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	673504.56	6175765.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	28062.69	257323.55	0.00	0.00	13788.67
MONTHLY SUMMARY (MAY)								
MN	0.00	0.00	6136.65	12300.09	123421.93	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	43457.66	419342.47	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	673504.56	6175765.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	28062.69	257323.55	0.00	0.00	13788.67
YEARLY SUMMARY								
MN	0.00	0.00	6136.65	12300.09	123421.93	0.00	0.00	2955.32
MX	0.00	0.00	64191.17	43457.66	419342.47	0.00	0.00	28442.98
SM	0.00	0.00	800021.13	673504.56	6175765.00	0.00	0.00	330928.00
AV	0.00	0.00	33334.21	28062.69	257323.55	0.00	0.00	13788.67

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SOURCE SENS LD BTU/HR	PEOPLE SENS LD BTU/HR	PEOPLE LAT GN BTU/HR	ELEC-EQP LAT GN BTU/HR	SOURCE LAT GN BTU/HR	INFILTRN LATENT BTU/HR	GLS SOL LOAD BTU/HR	LIGHT GAIN BTU/HR
	----(26)	----(27)	----(28)	----(29)	----(30)	----(31)	----(33)	----(35)
5 4 1	0.00	5560.91	0.00	0.00	0.00	47984.39	51932.07	3014.72
5 4 2	0.00	5060.42	0.00	0.00	0.00	44260.49	47258.18	3014.72
5 4 3	0.00	4604.99	0.00	0.00	0.00	47984.39	43004.95	3014.72
5 4 4	0.00	4190.54	0.00	0.00	0.00	55593.59	39134.50	3014.72
5 4 5	0.00	3813.39	0.00	0.00	0.00	42205.00	35612.40	3014.72
5 4 6	0.00	3470.18	0.00	0.00	0.00	43660.77	32407.28	30147.23
5 4 7	0.00	3157.87	0.00	0.00	0.00	38191.95	45273.97	135662.53
5 4 8	0.00	35611.13	25020.61	0.00	0.00	20758.05	71646.38	150736.14
5 4 9	0.00	36764.66	25020.61	0.00	0.00	23263.83	78256.77	150736.14
5 410	0.00	37814.38	25020.61	0.00	0.00	26132.34	93908.19	150736.14
5 411	0.00	32222.13	20016.49	0.00	0.00	26451.85	112428.68	75368.07
5 412	0.00	19713.98	10008.24	0.00	0.00	24870.52	117026.05	150736.14
5 413	0.00	32778.13	20016.49	0.00	0.00	28866.47	126589.83	150736.14
5 414	0.00	39862.42	25020.61	0.00	0.00	25105.21	126126.77	150736.14
5 415	0.00	40633.34	25020.61	0.00	0.00	21302.76	130352.58	150736.14
5 416	0.00	41334.88	25020.61	0.00	0.00	36247.08	125524.59	105515.30
5 417	0.00	41973.28	25020.61	0.00	0.00	62079.48	118891.33	45220.84
5 418	0.00	26185.49	12510.30	0.00	0.00	51189.95	107096.09	30147.23
5 419	0.00	11276.20	1251.03	0.00	0.00	58794.84	95029.88	15073.61
5 420	0.00	10479.27	1251.03	0.00	0.00	44486.14	85672.66	3014.72
5 421	0.00	8117.19	0.00	0.00	0.00	61748.18	77962.12	3014.72
5 422	0.00	7386.65	0.00	0.00	0.00	70229.01	70945.53	3014.72
5 423	0.00	6721.85	0.00	0.00	0.00	56102.36	64560.43	3014.72
5 424	0.00	6116.88	0.00	0.00	0.00	70614.85	58750.00	3014.72
DAILY SUMMARY (MAY 4)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	3014.72
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	150736.14
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	1522435.13
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	63434.80
MONTHLY SUMMARY (MAY)								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	3014.72
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	150736.14
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	1522435.13
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	63434.80
YEARLY SUMMARY								
MN	0.00	3157.87	0.00	0.00	0.00	20758.05	32407.28	3014.72
MX	0.00	41973.28	25020.61	0.00	0.00	70614.85	130352.58	150736.14
SM	0.00	464850.16	240197.84	0.00	0.00	1028123.56	1955391.25	1522435.13
AV	0.00	19368.76	10008.24	0.00	0.00	42838.48	81474.63	63434.80

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	LIGHT LOAD BTU/HR	INFILTRN SENS GN BTU/HR	ELECTRIC LOAD BTU/HR	INFILTRN FLOWRT CUFT/MIN	SUM LOAD BTU/HR	SPACE CONDUCT BTU/HR-F	SPACE SENS LD BTU/HR	SPACE LAT LD BTU/HR
	----(36)	----(37)	----(38)	----(39)	----(40)	----(41)	----(42)	----(43)
5 4 1	25394.86	7946.02	3670.10	951.13	332728.94	19572.73	340674.97	0.00
5 4 2	23380.65	7329.35	3670.10	877.31	306758.28	19158.79	314087.63	0.00
5 4 3	21547.71	7946.02	3670.10	951.13	286080.34	19572.73	294026.38	0.00
5 4 4	19879.75	8571.50	3670.10	1172.57	267395.16	20434.84	275966.66	0.00
5 4 5	18361.89	5959.51	3670.10	951.13	242038.41	19572.73	247997.92	0.00
5 4 6	31360.88	4966.26	3670.97	951.13	239368.98	19572.73	244335.25	0.00
5 4 7	87174.76	4605.18	165154.39	1098.76	309101.09	20194.84	313706.28	0.00
5 4 8	99527.67	4605.18	183504.88	549.38	385833.56	20194.84	390438.75	25020.61
5 4 9	104136.43	6332.12	183504.88	549.38	415668.63	20194.84	422000.75	25020.61
5 410	108330.41	9997.06	183504.88	733.91	473390.47	21115.72	483387.53	25020.61
5 411	72201.84	12304.08	91752.44	733.91	484824.25	21115.72	497128.31	20016.49
5 412	112431.88	13842.08	183504.88	733.91	583984.38	21115.72	597826.44	10008.24
5 413	115879.27	16869.96	183504.88	807.73	674109.31	21349.97	690979.25	20016.49
5 414	119016.38	16094.73	183504.88	733.91	738641.38	21115.72	754736.13	25020.61
5 415	121871.16	12047.88	183504.88	549.38	783274.75	20194.84	795322.63	25020.61
5 416	100501.97	16869.96	128453.41	807.73	798938.69	21349.97	815808.63	25020.61
5 417	68997.11	24815.98	55051.46	1320.20	760784.00	20820.02	785600.00	25020.61
5 418	58868.23	17211.26	36700.97	1098.76	705771.31	20194.84	722982.56	12510.30
5 419	48294.32	19926.80	18350.49	1467.82	649261.94	21115.72	669188.75	1251.03
5 420	38913.25	10925.77	3670.10	951.13	581934.75	19572.73	592860.50	1251.03
5 421	35682.38	15165.32	3670.10	1320.20	539734.44	20820.02	554899.75	0.00
5 422	32742.29	15328.31	3670.10	1467.82	495091.66	21115.72	510419.97	0.00
5 423	30066.81	12245.00	3670.10	1172.57	451440.75	20434.84	463685.75	0.00
5 424	27632.13	12407.99	3670.10	1320.20	416497.81	20820.02	428905.81	0.00
DAILY SUMMARY (MAY 4)								
MN	18361.89	4605.18	3670.10	549.38	239368.98	19158.79	244335.25	0.00
MX	121871.16	24815.98	183504.88	1467.82	798938.69	21349.97	815808.63	25020.61
SM	1522194.13	284313.34	1853399.50	23271.08	11922654.00	490720.69	12206968.00	240197.84
AV	63424.75	11846.39	77224.98	969.63	496777.25	20446.70	508623.66	10008.24
MONTHLY SUMMARY (MAY)								
MN	18361.89	4605.18	3670.10	549.38	239368.98	19158.79	244335.25	0.00
MX	121871.16	24815.98	183504.88	1467.82	798938.69	21349.97	815808.63	25020.61
SM	1522194.13	284313.34	1853399.50	23271.08	11922654.00	490720.69	12206968.00	240197.84
AV	63424.75	11846.39	77224.98	969.63	496777.25	20446.70	508623.66	10008.24
YEARLY SUMMARY								
MN	18361.89	4605.18	3670.10	549.38	239368.98	19158.79	244335.25	0.00
MX	121871.16	24815.98	183504.88	1467.82	798938.69	21349.97	815808.63	25020.61
SM	1522194.13	284313.34	1853399.50	23271.08	11922654.00	490720.69	12206968.00	240197.84
AV	63424.75	11846.39	77224.98	969.63	496777.25	20446.70	508623.66	10008.24

MMDDHH	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1	N-FL-1
	SPACE LOAD TOT BTU/HR	SPACE LT ELEC BTU/HR	SPACE EQ ELEC BTU/HR	DAYL ILL REF PT 1 FOOTCAND LES	DAYL ILL REF PT 2 FOOTCAND LES	LTPW MUL REF PT 1	LTPW MUL REF PT 2	LTPW MUL TOTAL
	----(44)	----(45)	----(46)	----(49)	----(50)	----(55)	----(56)	----(57)
5 4 1	340674.97	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 4 2	314087.63	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 4 3	294026.38	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 4 4	275966.66	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 4 5	247997.92	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 4 6	244335.25	30147.23	6553.75	0.0	0.0	1.00	1.00	1.00
5 4 7	313706.28	135662.53	29491.86	0.0	0.0	1.00	1.00	1.00
5 4 8	415459.34	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 4 9	447021.34	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 410	508408.13	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 411	517144.81	75368.07	16384.36	0.0	0.0	1.00	1.00	1.00
5 412	607834.69	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 413	710995.75	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 414	779756.69	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 415	820343.25	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
5 416	840829.25	105515.30	22938.11	0.0	0.0	1.00	1.00	1.00
5 417	810620.56	45220.84	9830.62	0.0	0.0	1.00	1.00	1.00
5 418	735492.88	30147.23	6553.75	0.0	0.0	1.00	1.00	1.00
5 419	670439.75	15073.61	3276.87	0.0	0.0	1.00	1.00	1.00
5 420	594111.56	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 421	554899.75	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 422	510419.97	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 423	463685.75	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
5 424	428905.81	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
DAILY SUMMARY (MAY 4)								
MN	244335.25	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
MX	840829.25	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
SM	12447166.00	1522435.13	330964.13	0.0	0.0	24.00	24.00	24.00
AV	518631.91	63434.80	13790.17	0.0	0.0	1.00	1.00	1.00
MONTHLY SUMMARY (MAY)								
MN	244335.25	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
MX	840829.25	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
SM	12447166.00	1522435.13	330964.13	0.0	0.0	24.00	24.00	24.00
AV	518631.91	63434.80	13790.17	0.0	0.0	1.00	1.00	1.00
YEARLY SUMMARY								
MN	244335.25	3014.72	655.37	0.0	0.0	1.00	1.00	1.00
MX	840829.25	150736.14	32768.73	0.0	0.0	1.00	1.00	1.00
SM	12447166.00	1522435.13	330964.13	0.0	0.0	24.00	24.00	24.00
AV	518631.91	63434.80	13790.17	0.0	0.0	1.00	1.00	1.00

SYSTEM NAME		ALTITUDE MULTIPLIER											
ACSYSTEM		1.000											
SUPPLY FAN (CFM)	ELEC (KW)	DELTA-T (F)	RETURN FAN (CFM)	ELEC (KW)	DELTA-T (F)	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)		
520150.	66.579	0.4	0.	0.000	0.0	0.000	5807.563	0.882	46296.066	0.46	0.37		
ZONE NAME	SUPPLY FLOW	EXHAUST FLOW	FAN (KW)	MINIMUM FLOW RATIO	OUTSIDE AIR FLOW	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	MULTIPLIER		
CORE-FL-1	3080.	0.	0.000	1.000	0.	0.00	0.00	29.94	0.00	-239.50	1.0		
CORE-FL-2	2190.	0.	0.000	1.000	0.	0.00	0.00	21.29	0.00	-170.29	1.0		
CORE-FL-3	4960.	0.	0.000	1.000	0.	0.00	0.00	48.21	0.00	-385.69	1.0		
CORE-FL-B	3080.	0.	0.000	1.000	0.	0.00	0.00	29.94	0.00	-239.50	1.0		
N-FL-1	108650.	0.	0.000	1.000	0.	0.00	0.00	1056.08	0.00	-8448.62	1.0		
N-FL-2	35200.	0.	0.000	1.000	0.	0.00	0.00	342.14	0.00	-2737.15	1.0		
N-FL-3	18440.	0.	0.000	1.000	0.	0.00	0.00	179.24	0.00	-1433.89	1.0		
N-FL-4	15490.	0.	0.000	1.000	0.	0.00	0.00	150.56	0.00	-1204.50	1.0		
N-FL-B	72150.	0.	0.000	1.000	0.	0.00	0.00	701.30	0.00	-5610.38	1.0		
S-FL-1	69160.	0.	0.000	1.000	0.	0.00	0.00	672.24	0.00	-5377.88	1.0		
S-FL-2	6210.	0.	0.000	1.000	0.	0.00	0.00	60.36	0.00	-482.89	1.0		
S-FL-3	4950.	0.	0.000	1.000	0.	0.00	0.00	48.11	0.00	-384.91	1.0		
S-FL-B	51140.	0.	0.000	1.000	0.	0.00	0.00	497.08	0.00	-3976.65	1.0		
W-FL-1	125450.	0.	0.000	1.000	0.	0.00	0.00	1219.37	0.00	-9754.99	1.0		

จุฬาลงกรณ์มหาวิทยาลัย

MONTH	COOLING						HEATING						ELEC	
	COOLING ENERGY (MBTU)	TIME OF MAX DY HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)		
JAN	1224.50623	25 8	77.F	75.F	6686.094	0.000				0.000	262464.	1239.221		
FEB	1192.63843	22 8	81.F	77.F	6815.451	0.000				0.000	248229.	1308.434		
MAR	1474.09009	28 8	85.F	79.F	6850.945	0.000				0.000	305280.	1313.234		
APR	1304.12085	7 8	82.F	79.F	6866.328	0.000				0.000	267796.	1300.315		
MAY	1420.20935	24 8	81.F	79.F	6981.606	0.000				0.000	288572.	1300.696		
JUN	1414.86426	2 8	80.F	78.F	6828.710	0.000				0.000	286486.	1298.263		
JUL	1267.14685	24 8	77.F	76.F	6783.934	0.000				0.000	258392.	1225.916		
AUG	1463.09875	10 8	80.F	76.F	6849.878	0.000				0.000	298068.	1228.773		
SEP	1265.31982	7 8	78.F	76.F	6800.586	0.000				0.000	258137.	1222.667		
OCT	1320.88342	27 8	77.F	77.F	6753.019	0.000				0.000	269741.	1273.272		
NOV	1260.82397	13 8	79.F	76.F	6836.716	0.000				0.000	258649.	1250.147		
DEC	1214.97693	6 8	78.F	74.F	6730.521	0.000				0.000	255370.	1287.883		
TOTAL	15822.649					0.000					3257291.			
MAX					6981.606					0.000		1313.234		

สถาบันวิทยบริการ
 จุฬาลงกรณ์มหาวิทยาลัย

MONTH	--FAN ELEC--		--FUEL HEAT--		--FUEL COOL--		-ELEC HEAT-		-ELEC COOL-	
	FAN ENERGY (KWH)	MAXIMUM FAN LOAD (KW)	GAS OIL ENERGY (MBTU)	MAXIMUM GAS OIL LOAD (KBTU/HR)	GAS OIL ENERGY (MBTU)	MAXIMUM GAS OIL LOAD (KBTU/HR)	ELECTRIC ENERGY (KWH)	MAXIMUM ELECTRIC LOAD (KW)	ELECTRIC ENERGY (KWH)	MAXIMUM ELECTRIC LOAD (KW)
JAN	15379.	66.577	0.595	0.800	0.000	0.000	0.	0.000	144232.	727.122
FEB	13915.	66.577	0.538	0.800	0.000	0.000	0.	0.000	141274.	778.968
MAR	16844.	66.577	0.595	0.800	0.000	0.000	0.	0.000	176829.	783.768
APR	14647.	66.577	0.576	0.800	0.000	0.000	0.	0.000	155027.	770.850
MAY	16112.	66.577	0.595	0.800	0.000	0.000	0.	0.000	165230.	771.231
JUN	16112.	66.577	0.576	0.800	0.000	0.000	0.	0.000	163497.	768.798
JUL	14647.	66.577	0.595	0.800	0.000	0.000	0.	0.000	145270.	734.229
AUG	16844.	66.577	0.595	0.800	0.000	0.000	0.	0.000	169617.	746.246
SEP	14647.	66.577	0.576	0.800	0.000	0.000	0.	0.000	145367.	732.844
OCT	15379.	66.577	0.595	0.800	0.000	0.000	0.	0.000	151509.	743.806
NOV	14647.	66.577	0.576	0.800	0.000	0.000	0.	0.000	145879.	741.094
DEC	14647.	66.577	0.595	0.800	0.000	0.000	0.	0.000	142247.	758.418
TOTAL	183821.		7.008		0.000		0.		1845981.	
MAX		66.577		0.800		0.000		0.000		783.768

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MONTH	SENSIBLE COOLING ENERGY (MBTU)	LATENT COOLING ENERGY (MBTU)	MAX TOTAL COOLING ENERGY (KBTU/HR)	SENSIBLE HEAT RATIO AT MAX	TIME OF MAX DY HR	SENSIBLE HEATING ENERGY (MBTU)	LATENT HEATING ENERGY (MBTU)	MAX TOTAL HEATING ENERGY (KBTU/HR)
JAN	1189.67041	34.83587	6686.094	0.952	25 8	0.00000	0.00000	0.000
FEB	1150.76379	41.87466	6815.451	0.950	22 8	0.00000	0.00000	0.000
MAR	1419.68628	54.40379	6850.945	0.947	28 8	0.00000	0.00000	0.000
APR	1247.64294	56.47785	6866.328	0.935	7 8	0.00000	0.00000	0.000
MAY	1353.46594	66.74338	6981.606	0.936	24 8	0.00000	0.00000	0.000
JUN	1347.25928	67.60494	6828.710	0.940	2 8	0.00000	0.00000	0.000
JUL	1211.03613	56.11068	6783.934	0.951	24 8	0.00000	0.00000	0.000
AUG	1395.91040	67.18832	6849.878	0.947	10 8	0.00000	0.00000	0.000
SEP	1207.46338	57.85641	6800.586	0.950	7 8	0.00000	0.00000	0.000
OCT	1265.52783	55.35567	6753.019	0.955	27 8	0.00000	0.00000	0.000
NOV	1210.68213	50.14185	6836.716	0.948	13 8	0.00000	0.00000	0.000
DEC	1196.47888	18.49806	6730.521	0.958	6 8	0.00000	0.00000	0.000
TOTAL	15195.558	627.091				0.000	0.000	
MAX			6981.606	0.936				0.000

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EQUIPMENT	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD	SIZE	INSTD
	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL	(MBTU/H)	AVAIL
HERM-CENT-CHLR	0.012	1	1									
COOLING-TWR	0.015	1	1									



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S I T E E N E R G Y													*	SOURCE
MONTH	2	3	4	5	6	7	8	9	10	11	12	13	*	14
	TOTAL HEAT LOAD	TOTAL COOLING LOAD	TOTAL ELECTR LOAD	RCVRED ENERGY	WASTED RCVRABL ENERGY	FUEL INPUT COOLING	ELEC INPUT COOLING	FUEL INPUT HEATING	ELEC INPUT HEATING	FUEL INPUT ELECT	TOTAL FUEL INPUT	TOTAL SITE ENERGY	*	TOTAL SOURCE ENERGY
JAN	0.0	0.0	896.2 262.5E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	896.8	*	2689.4
FEB	0.0	0.0	847.6 248.2E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.5	848.1	*	2543.5
MAR	0.0	0.0	1042.4 305.3E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	1043.0	*	3128.0
APR	0.0	0.0	914.4 267.8E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	914.9	*	2744.0
MAY	0.0	0.0	985.3 288.6E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	985.9	*	2956.8
JUN	0.0	0.0	978.2 286.5E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	978.8	*	2935.4
JUL	0.0	0.0	882.3 258.4E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	882.9	*	2647.6
AUG	0.0	0.0	1017.7 298.1E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	1018.3	*	3054.1
SEP	0.0	0.0	881.4 258.1E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	882.0	*	2645.0
OCT	0.0	0.0	921.0 269.7E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	921.6	*	2763.9
NOV	0.0	0.0	883.1 258.6E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	883.7	*	2650.3
DEC	0.0	0.0	871.9 255.4E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	0.6	872.5	*	2616.7
	0.0	0.0	11121.4 3257.2E	0.0	0.0	0.0	0.0 0.0E	0.0	0.0 0.0E	0.0	7.0	11128.4	*	33374.6

NOTE-- ALL ENTRIES ARE IN MBTU EXCEPT
 ENTRIES FOLLOWED BY E ARE IN MWH (THOUSANDS OF KWH)

<u>ELECTRICAL LOADS</u>	<u>MBTU SUPPLIED</u>	<u>PCT OF TOTAL LOAD</u>
ELECTRICITY	11121.4	100.0
LOAD SATISFIED	11121.4	100.0
TOTAL LOAD ON PLANT	11121.1	

TOWER ABOVE DESIGN TEMPERATURE OF 93.F 0 HOURS

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SUMMARY OF LOADS MET

TYPE OF LOAD	TOTAL LOAD (MBTU)	LOAD SATISFIED (MBTU)	TOTAL OVERLOAD (MBTU)	PEAK OVERLOAD (MBTU)	HOURS OVERLOADED
ELECTRICAL LOADS	11121.1	11121.4	0.000	0.000	0

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TOTAL HOURS AT HOURLY DEMAND AND TIME OF DAY

HOUR	1AM	2	3	4	5	6	7	8	9	10	11	12	1PM	2	3	4	5	6	7	8	9	10	11	12	TOTAL
1314	0	0	0	0	0	0	0	21	1	62	70	0	8	139	107	122	0	0	0	0	0	0	0	0	530
1212	0	0	0	0	0	0	0	216	234	185	177	0	230	110	142	128	32	0	0	0	0	0	0	0	1454
1111	0	0	0	0	0	0	0	13	14	4	4	29	13	2	2	1	216	0	0	0	0	0	0	0	298
1010	0	0	0	0	0	0	0	1	2	0	0	215	0	0	0	0	3	15	0	0	0	0	0	0	236
D 909	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	222	0	0	0	0	0	0	228
E 808	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	14	0	0	0	0	0	0	15
M K 707	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A W 606	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N 505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D 404	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
202	0	0	0	0	0	0	251	0	0	0	0	0	0	0	0	0	0	0	251	0	0	0	0	0	502
101	365	365	365	365	365	365	114	114	114	114	114	114	114	114	114	114	114	114	114	365	365	365	365	365	5497
PERCENT TOTAL DEMAND	0.1	0.1	0.1	0.1	0.1	0.1	0.8	9.2	9.0	9.3	9.3	7.6	9.0	9.5	9.4	9.5	8.4	6.7	0.8	0.5	0.1	0.1	0.1	0.1	

PEAK ELECTRICAL LOAD BREAKDOWN

SOURCE	KW	PCT
SYSTEMS LOAD	1313.234	100.0
TOTAL	1313.234	

MMDDHH	GLOBAL	GLOBAL	PLANT	PLANT	PLANT	PLANT	PLANT
	AMBIENT DRYBULB F	AMBIENT WETBULB F	SYS COOL LOAD BTU/HR	SYS ELEC LOAD BTU/HR	TOTAL COOLING BTU/HR	TOTAL ELECTRIC BTU/HR	TOTAL FUEL BTU/HR
	----(1)	----(2)	----(2)	----(3)	----(9)	----(10)	----(12)
5 4 1	83.0	78.000	0.	32101.	0.	32101.	0.
5 4 2	83.0	78.000	0.	32101.	0.	32101.	0.
5 4 3	83.0	78.000	0.	32101.	0.	32101.	0.
5 4 4	82.0	77.000	0.	32101.	0.	32101.	0.
5 4 5	81.0	76.000	0.	32101.	0.	32101.	0.
5 4 6	80.0	76.000	0.	345563.	0.	345563.	0.
5 4 7	79.0	73.000	0.	4085258.	0.	4085258.	0.
5 4 8	83.0	75.000	0.	4020614.	0.	4020614.	0.
5 4 9	86.0	77.000	0.	4144872.	0.	4144872.	0.
5 410	88.0	76.000	0.	4148755.	0.	4148755.	0.
5 411	91.0	77.000	0.	3414623.	0.	3414623.	0.
5 412	93.0	77.000	0.	4006864.	0.	4006864.	0.
5 413	95.0	78.000	0.	4274750.	0.	4274750.	0.
5 414	96.0	78.000	0.	4257104.	0.	4257104.	0.
5 415	96.0	79.000	0.	4269834.	0.	4269834.	0.
5 416	95.0	80.000	0.	3812655.	0.	3812655.	0.
5 417	93.0	80.000	0.	3083851.	0.	3083851.	0.
5 418	90.0	79.000	0.	345563.	0.	345563.	0.
5 419	88.0	77.000	0.	197335.	0.	197335.	0.
5 420	86.0	78.000	0.	32101.	0.	32101.	0.
5 421	86.0	78.000	0.	32101.	0.	32101.	0.
5 422	85.0	78.000	0.	32101.	0.	32101.	0.
5 423	85.0	78.000	0.	32101.	0.	32101.	0.
5 424	84.0	79.000	0.	32101.	0.	32101.	0.
DAILY SUMMARY (MAY 4)							
MN	79.0	73.000	0.	32101.	0.	32101.	0.
MX	96.0	80.000	0.	4274750.	0.	4274750.	0.
SM	2091.0	1860.000	0.	44728648.	0.	44728648.	0.
AV	87.1	77.500	0.	1863694.	0.	1863694.	0.
MONTHLY SUMMARY (MAY)							
MN	79.0	73.000	0.	32101.	0.	32101.	0.
MX	96.0	80.000	0.	4274750.	0.	4274750.	0.
SM	2091.0	1860.000	0.	44728648.	0.	44728648.	0.
AV	87.1	77.500	0.	1863694.	0.	1863694.	0.
YEARLY SUMMARY							
MN	79.0	73.000	0.	32101.	0.	32101.	0.
MX	96.0	80.000	0.	4274750.	0.	4274750.	0.
SM	2091.0	1860.000	0.	44728648.	0.	44728648.	0.
AV	87.1	77.500	0.	1863694.	0.	1863694.	0.

MMDDHH	HERM-CEN T-CHLR LOAD BTU/HR ----(1)	HERM-CEN T-CHLR AVAL CAP RATIO FRAC.OR MULT. ----(8)	HERM-CEN T-CHLR OPER PT LD RATIO FRAC.OR MULT. ----(10)	HERM-CEN T-CHLR ADJUSTED EIR FRAC.OR MULT. ----(16)	CTANK-ST ORAGE ENERGY RELEASED BTU/HR ----(1)	CTANK-ST ORAGE ENERGY STORED BTU/HR ----(4)	CTANK-ST ORAGE ENERGY LOSS BTU/HR ----(12)	CTANK-ST ORAGE TOTAL IN STORAGE BTU/HR ----(14)
5 4 1	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 2	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 3	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 4	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 5	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 6	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 7	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 8	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 4 9	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 410	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 411	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 412	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 413	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 414	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 415	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 416	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 417	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 418	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 419	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 420	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 421	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 422	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 423	0.	0.000	0.000	0.000	0.	0.	0.	0.
5 424	0.	0.000	0.000	0.000	0.	0.	0.	0.
DAILY SUMMARY (MAY 4)								
MN	0.	0.000	0.000	0.000	0.	0.	0.	0.
MX	0.	0.000	0.000	0.000	0.	0.	0.	0.
SM	0.	0.000	0.000	0.000	0.	0.	0.	0.
AV	0.	0.000	0.000	0.000	0.	0.	0.	0.
MONTHLY SUMMARY (MAY)								
MN	0.	0.000	0.000	0.000	0.	0.	0.	0.
MX	0.	0.000	0.000	0.000	0.	0.	0.	0.
SM	0.	0.000	0.000	0.000	0.	0.	0.	0.
AV	0.	0.000	0.000	0.000	0.	0.	0.	0.
YEARLY SUMMARY								
MN	0.	0.000	0.000	0.000	0.	0.	0.	0.
MX	0.	0.000	0.000	0.000	0.	0.	0.	0.
SM	0.	0.000	0.000	0.000	0.	0.	0.	0.
AV	0.	0.000	0.000	0.000	0.	0.	0.	0.

MESSAGE LIST FROM ECONOMICS PROGRAM

WARNING***
 PLANT UTILITY NTRL-GAS NOT ENTERED - DEFAULTS ASSUMED

LIFE-CYCLE COSTING PARAMETERS

DISCOUNT RATE (PERCENT)	LABOR INFLATION RATE (PERCENT)	MATERIALS INFLATION RATE (PERCENT)	PROJECT LIFE (YRS)
10.0	0.0	0.0	25.0

BUILDING COMPONENT COST INPUT DATA (CURRENT DOLLARS)

COST NAME	NUMBER OF UNITS	UNIT NAME	LIFE (YRS)	UNIT	UNIT	UNIT	UNIT	UNIT	UNIT	UNIT
				FIRST COST (\$)	INSTALL -ATION COST (\$)	ANNUAL MAINT COST (\$)	MINOR OVERHAUL COST (\$)	MINOR OVERHAUL INTERVAL (YRS)	MAJOR OVERHAUL COST (\$)	MAJOR OVERHAUL INTERVAL (YRS)

NO BUILDING COMPONENT COSTS SPECIFIED

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ENERGY SOURCE	ENERGY UNIT (BTU)	UNIFORM COST /UNIT (\$)	COST ESCLA- TION RATE	MIN MNTHLY CHARGE (\$)	RATE LIMIT /UNIT (\$)	FIXED MNTHLY CHARG1 (\$)	FIXED MNTHLY CHARG2 (\$)	ASSIGN- SCHEDULE (U-NAME)	ASSIGN- CHARGE1 (U-NAME)	ASSIGN- CHARGE2 (U-NAME)
ELECTRIC	3413.00	0.0000	5.000	0.00	1000000.000	0.00	0.00	TIMEOFUSE		
NTRL-GAS	1031000.00	5.5300	5.000	0.00	*****	0.00	0.00			

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MONTH	ELECTRIC UNIT= 3413.00	NTRL-GAS UNIT= 1031000.00

JAN		
ENERGY CONSUMPTION (UNIT/MO)	262574.	1.
PEAK DEMAND (UNIT/HR)	1240.	0.
TOTAL COST (\$)	664033.13	3.19
FEB		
ENERGY CONSUMPTION (UNIT/MO)	248333.	1.
PEAK DEMAND (UNIT/HR)	1309.	0.
TOTAL COST (\$)	670191.13	2.88
MAR		
ENERGY CONSUMPTION (UNIT/MO)	305407.	1.
PEAK DEMAND (UNIT/HR)	1314.	0.
TOTAL COST (\$)	732744.75	3.19
APR		
ENERGY CONSUMPTION (UNIT/MO)	267908.	1.
PEAK DEMAND (UNIT/HR)	1301.	0.
TOTAL COST (\$)	688626.94	3.09
MAY		
ENERGY CONSUMPTION (UNIT/MO)	288692.	1.
PEAK DEMAND (UNIT/HR)	1301.	0.
TOTAL COST (\$)	710983.25	3.19
JUN		
ENERGY CONSUMPTION (UNIT/MO)	286606.	1.
PEAK DEMAND (UNIT/HR)	1299.	0.
TOTAL COST (\$)	707999.00	3.09
JUL		
ENERGY CONSUMPTION (UNIT/MO)	258500.	1.
PEAK DEMAND (UNIT/HR)	1226.	0.
TOTAL COST (\$)	655560.88	3.19
AUG		
ENERGY CONSUMPTION (UNIT/MO)	298193.	1.
PEAK DEMAND (UNIT/HR)	1229.	0.
TOTAL COST (\$)	698915.38	3.19
SEP		
ENERGY CONSUMPTION (UNIT/MO)	258244.	1.
PEAK DEMAND (UNIT/HR)	1223.	0.
TOTAL COST (\$)	654283.31	3.09
OCT		
ENERGY CONSUMPTION (UNIT/MO)	269854.	1.
PEAK DEMAND (UNIT/HR)	1274.	0.
TOTAL COST (\$)	682348.63	3.19
NOV		
ENERGY CONSUMPTION (UNIT/MO)	258757.	1.
PEAK DEMAND (UNIT/HR)	1251.	0.
TOTAL COST (\$)	663326.75	3.09
DEC		
ENERGY CONSUMPTION (UNIT/MO)	255476.	1.
PEAK DEMAND (UNIT/HR)	1288.	0.
TOTAL COST (\$)	671481.63	3.19

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TOTAL		
ENERGY CONSUMPTION (UNIT/YR)	3258542.	7.
PEAK DEMAND (UNIT/HR)	1314.	0.
TOTAL COST (\$)	8200494.50	37.59



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MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
JAN	ENERGYCHARGE	744	262574.	280953.81	1240.	1240.	0.00	664033.13
	PEAK	273	231466.	0.00	1240.	1240.	383079.31	
FEB	ENERGYCHARGE	672	248333.	265716.16	1309.	1309.	0.00	670191.13
	PEAK	247	219012.	0.00	1309.	1309.	404474.97	
MAR	ENERGYCHARGE	744	305407.	326785.97	1314.	1314.	0.00	732744.75
	PEAK	299	270571.	0.00	1314.	1314.	405958.75	
APR	ENERGYCHARGE	720	267908.	286661.59	1301.	1301.	0.00	688626.94
	PEAK	260	236517.	0.00	1301.	1301.	401965.34	
MAY	ENERGYCHARGE	744	288692.	308900.09	1301.	1301.	0.00	710983.25
	PEAK	286	254940.	0.00	1301.	1301.	402083.13	
JUN	ENERGYCHARGE	720	286606.	306667.97	1299.	1299.	0.00	707999.00
	PEAK	286	253134.	0.00	1299.	1299.	401331.03	
JUL	ENERGYCHARGE	744	258500.	276594.50	1226.	1226.	0.00	655560.88
	PEAK	260	227024.	0.00	1226.	1226.	378966.34	
AUG	ENERGYCHARGE	744	298193.	319066.00	1229.	1229.	0.00	698915.38
	PEAK	299	263406.	0.00	1229.	1229.	379849.38	
SEP	ENERGYCHARGE	720	258244.	276321.44	1223.	1223.	0.00	654283.31
	PEAK	260	227081.	0.00	1223.	1223.	377961.88	
OCT	ENERGYCHARGE	744	269854.	288743.28	1274.	1274.	0.00	682348.63
	PEAK	273	237340.	0.00	1274.	1274.	393605.38	
NOV	ENERGYCHARGE	720	258757.	276869.78	1251.	1251.	0.00	663326.75
	PEAK	260	227550.	0.00	1251.	1251.	386456.94	
DEC	ENERGYCHARGE	744	255476.	273359.41	1288.	1288.	0.00	671481.63
	PEAK	260	225072.	0.00	1288.	1288.	398122.22	

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MONTH	CHARGE- ASSIGNMENT (U-NAME)	LENGTH (HR/MO)	CONSUMPTION BY C-A (KWH)	ENERGY CHARGE (\$)	MEASURED DEMAND (KW)	BILLING DEMAND (KW)	DEMAND CHARGE (\$)	TOTAL CHARGES (\$)
-----			3258542.	3486640.25			4713854.50	8200494.50
TOTAL								

□



สถาบันวิทยบริการ
 จุฬาลงกรณ์มหาวิทยาลัย