# FILTER BANK SCHEDULE

| UNIT No. | SYSTEM | DESIGN FLOW CFM PER HEPA FILTER | HEPA FILTER SIZE IN. | PRESSURE DROP HEPA (CLEAN) "WG. | NUMBER OF HEPA FILTERS PER BANK | PRESSURE DROP PRE FILTER (CLEAN) "WG. | NUMBER OF PRE FILTERS PER BANK | PRESSURE DROP TEST SECTION (CLEAN) "WG. | NUMBER OF TEST SECTIONS PER BANK | FIRE SCREEN SIZE IN | FIRE SCREEN PRESSURE DROP IN WG | NUMBER OF FIRE SCREENS PER BANK | SPEC SECTION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FBP-TA-01 | PCE | 1000 | 24 X 24 X 11 1/2" | 1 | 6 | 0.5 | 3 | 0.5 | 9 | 24 X 24 | 1.5 | 3 | 15886 | FILTERS STACKED 3 HIGH. |
| FBP-TA-02 | PCE | 1000 | 24 X 24 X 11 1/2" | 1 | 6 | 0.5 | 3 | 0.5 | 9 | 24 X 24 | 1.5 | 3 | 15886 | FILTERS STACKED 3 HIGH. |
| FBP-TA-03 | PCE | 1000 | 24 X 24 X 11 1/2" | 1 | 4 | N/A | N/A | 0.5 | 8 | N/A | N/A | N/A | 15886 | FILTERS STACKED 4 HIGH. |
| FBP-TA-04 | PCE | 1000 | 24 X 24 X 11 1/2" | 1 | 3 | N/A | N/A | 0.5 | 6 | N/A | N/A | N/A | 15886 | FILTERS STACKED 3 HIGH. |
| FBH-TA-01 | HOG | 1000 | 24 X 24 X 11 1/2" | 1 | 4 | 0.5 | 2 | 0.5 | 6 | N/A | N/A | N/A | 15886 | FILTERS STACKED 2 HIGH. |
| FBS-TA-01 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 3 | 0.5 | 3 | 0.5 | 6 | N/A | N/A | N/A | 15886 | FILTERS STACKED 3 HIGH. |
| FBS-TA-02 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 3 | 0.5 | 3 | 0.5 | 6 | N/A | N/A | N/A | 15886 | FILTERS STACKED 3 HIGH. |
| FBS-TA-03 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 2 | 0.5 | 2 | 0.5 | 4 | N/A | N/A | N/A | 15886 | FILTERS STACKED 2 HIGH. |
| FBS-TA-04 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 2 | 0.5 | 2 | 0.5 | 4 | N/A | N/A | N/A | 15886 | FILTERS STACKED 2 HIGH. |
| FBS-TA-05 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 2 | 0.5 | 2 | 0.5 | 4 | N/A | N/A | N/A | 15886 | FILTERS STACKED 2 HIGH. |
| FBS-TA-06 | SCE | 1000 | 24 X 24 X 11 1/2" | 1 | 2 | 0.5 | 2 | 0.5 | 4 | N/A | N/A | N/A | 15886 | FILTERS STACKED 2 HIGH. |

# HOT WATER HEATING COILS

| UNIT No. | LOCATION/ SERVICE | MAX. FACE VELOCITY FPM | CAPACITY BTUH | CFM | AIRSIDE EAT DEG. F | LAT DEG. F | MAX. P.D. IN. WG. | GPM | EWT DEG. F | LWT DEG. F | WATERSIDE NUMBER OF ROW | FPI | MAX. P.D. FT. WTR. | Cv | BASIS OF DESIGN | SPEC SECTION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-TA-01 | DUCT / WOMENS LOCKER | 500 | 14,112 | 1926 | 65 | 72 | 0.08 | 0.7 | 180 | 140 | 1 | 8 | 2.68 | 0.6 | PACE COIL SELECTION | 15501 | |
| HC-TA-02 | DUCT / MENS LOCKER | 500 | 14,655 | 2328 | 65 | 72 | 0.09 | 0.9 | 180 | 140 | 1 | 8 | 3.27 | 0.8 | PACE COIL SELECTION | 15501 | |
| HC-TA-03 | DUCT / NORTH STAIR | 500 | 1,547 | 100 | 65 | 80 | 0.01 | 0.1 | 180 | 140 | 1 | 8 | 0.01 | 1.5 | PACE COIL SELECTION | 15501 | |
| HC-TA-04 | DUCT / SOUTH STAIR | 500 | 1,547 | 100 | 65 | 80 | 0.01 | 0.1 | 180 | 140 | 1 | 8 | 0.01 | 1.5 | PACE COIL SELECTION | 15501 | |
| HC-TA-07 | DUCT / FORKLIFT (COLD) | 500 | 5,569 | 760 | 65 | 72 | 0.07 | 0.3 | 180 | 140 | 1 | 8 | 0.04 | 2.3 | PACE COIL SELECTION | 15501 | |
| HC-TA-08 | UTILITY TUNNEL | 500 | 3,664 | 500 | 65 | 72 | 0.15 | 0.2 | 180 | 140 | 2 | 8 | 0.03 | 1.8 | PACE COIL SELECTION | 15501 | |
| HC-TA-09 | COUNTING LAB | 500 | 7,620 | 1,040 | 65 | 72 | 0.08 | 0.4 | 180 | 140 | 1 | 8 | 0.55 | 0.8 | PACE COIL SELECTION | 15501 | |
| HC-TA-10 | STAIRWELL 7 | 500 | 10,312 | 400 | 55 | 80 | 0.14 | 0.5 | 180 | 140 | 2 | 8 | 0.34 | 1.3 | PACE COIL SELECTION | 15501 | |
| HC-TA-12 | CENTER STAIRWELL 2 | 500 | 7,734 | 300 | 55 | 80 | 0.1 | 0.4 | 180 | 140 | 2 | 8 | 0.22 | 1.3 | PACE COIL SELECTION | 15501 | |
| HC-TA-13 | STAIRWELL 7 | 500 | 5,156 | 200 | 55 | 80 | 0.05 | 0.3 | 180 | 140 | 2 | 8 | 0.14 | 1.2 | PACE COIL SELECTION | 15501 | |
| HC-TA-14 | TELECOM/SWITCH GEAR ROOM | 500 | 9,522 | 320 | 55 | 72 | 0.11 | 0.5 | 180 | 140 | 1 | 8 | 0.1 | 1.2 | PACE COIL SELECTION | 15501 | |
| HC-TA-15 | PRIMARY CONFINEMENT | 500 | 6,653 | 908 | 65 | 72 | 0.08 | 0.3 | 180 | 140 | 1 | 8 | 0.23 | 1.0 | PACE COIL SELECTION | 15501 | |
| HC-TA-16 | PERSON DECON | 500 | 3,664 | 500 | 65 | 72 | 0.15 | 0.2 | 180 | 140 | 2 | 8 | 0.03 | 1.8 | PACE COIL SELECTION | 15501 | |
| HC-TA-20 | H.P. OFFICE INSTRUMENT FLOOR | 500 | 7,972 | 448 | 55 | 72 | 0.07 | 0.4 | 180 | 140 | 1 | 8 | 0.05 | 2.7 | PACE COIL SELECTION | 15501 | |
| HC-TA-21 | BREAK/TELECOM/LOBBY/STAIRWELL | 500 | 11,673 | 656 | 55 | 72 | 0.08 | 0.6 | 180 | 140 | 1 | 8 | 0.13 | 2.5 | PACE COIL SELECTION | 15501 | |
| HC-TA-22 | RESTROOMS ON LEVEL 1 | 500 | 10,722 | 584 | 55 | 72 | 0.08 | 0.7 | 180 | 140 | 1 | 8 | 0.11 | 3.2 | PACE COIL SELECTION | 15501 | |
| HC-TA-23 | HEATING COIL FOR 2TU | 600 | 192,184 | 10,800 | 55 | 72 | 0.13 | 9.6 | 180 | 140 | 1 | 8 | 7.46 | 5.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 18" |
| HC-TA-24 | HEATING COIL FOR STAIRS | 500 | 80,000 | 4,200 | 55 | 72 | 0.13 | 4.0 | 180 | 140 | 1 | 8 | 7 | 2.2 | PACE COIL SELECTION | 15501 | |
| HC-TA-25 | 11TU HEATING COIL | 575 | 212241.6 | 11,560 | 55 | 72 | 0.13 | 11 | 180 | 140 | 1 | 6 | 9 | 5.6 | PACE COIL SELECTION | 15501 | |
| HC-TA-26 | HIGH BAY MUA REHEAT COIL | 500 | 100980 | 5500 | 55 | 72 | 0.1 | 6 | 180 | 140 | 1 | 8 | 3 | 5.3 | PACE COIL SELECTION | 15501 | |
| HC-TA-30 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-31 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-32 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-33 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-34 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-35 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-36 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |
| HC-TA-37 | INSTRUMENT FLOOR REHEAT | 575 | 271755 | 10,065 | 55 | 80 | 0.15 | 14 | 180 | 140 | 1 | 8 | 8 | 7.3 | PACE COIL SELECTION | 15501 | MAX HEIGHT 21" |

# VOLUME DAMPER SCHEDULE

| UNIT No. | SYSTEM | DESIGN PRESSURE INCHES WG (NEGATIVE) | PIPE / DUCT SIZE IN. | BASIS OF DESIGN | REMARKS |
|---|---|---|---|---|---|
| VDP-TA-01 THRU-36 | PCE | -60 | SEE PLANS | BUTTERFLY VALVE - BODY 316 S/S, DISC 316 S/S, STEM 316 S/S, SEAT EPDM | SPEC SECTION 15895 / 15100 / V-6489 |
| VDH-TA-01 THRU 39 | HOG | -60 | SEE PLANS | STAINLESS STEEL BALL VALVES - VALVE SEAL UHMWPE | SPEC SECTION 15100 - V-1181 |
| VDH-TA-40 THRU 45 | HOG | -60 | SEE PLANS | BUTTERFLY VALVE - BODY 316 S/S, DISC 316 S/S, STEM 316 S/S, SEAT EPDM | SPEC SECTION 15895 / 15100 - V-6489 |
| VDS-TA-01 THRU 28 | SCE | -15 | SEE PLANS | BUTTERFLY VALVE - BODY 316 S/S, DISC 316 S/S, STEM 316 S/S, SEAT EPDM | SPEC SECTION 15100 - V-6489 |
| VDS-TA-40 THRU 83 | SCE | -15 | SEE PLANS | HEAVY DUTY CONTROL DAMPER. FRAME 304 S/S, BLADE 304 S/S, AXLE 304 S/S | MANUAL ACTUATOR |
| VDM-TA-01 | MUA | POSITIVE 2.5" | SEE PLANS | HEAVY DUTY CONTROL DAMPER. FRAME 304 S/S, BLADE 304 S/S, AXLE 304 S/S | MANUAL ACTUATOR |
| VDM-TA-02 | MUA-IN SCE AREAS | -15 | SEE PLANS | HEAVY DUTY CONTROL DAMPER. FRAME 304 S/S, BLADE 304 S/S, AXLE 304 S/S | MANUAL ACTUATOR |

# AIR FLOW MEASURING STATION

| UNIT No. | SYSTEM | DESIGN PRESSURE INCHES WG (NEGATIVE) | PIPE / DUCT SIZE IN. | CFM RANGE | BASIS OF DESIGN | REMARKS |
|---|---|---|---|---|---|---|
| AMSP-TA-01 | PCE | -60 | SEE PLANS | SEE H8.40.03 | N/A | 4-20ma CONNECTION |
| AMSH-TA-01 | HOG | -60 | SEE PLANS | SEE H8.40.05 | N/A | 4-20ma CONNECTION |
| AMSS-TA-01 | SCE | -15 | SEE PLANS | SEE H8.40.04 | N/A | 4-20ma CONNECTION |

# HEPA FILTER SCHEDULE

| UNIT No. | SYSTEM | DESIGN FLOW CFM PER HEPA FILTER | HEPA FILTER SIZE IN. | PRESSURE DROP HEPA (CLEAN) "WG. | NUMBER OF HEPA FILTERS PER BANK | REMARKS |
|---|---|---|---|---|---|---|
| HH-TA-01 | HOG | 265 | 24 X 24 X 11 1/2" | 1 | 1 | NONE |
| HH-TA-02 | HOG | 265 | 24 X 24 X 11 1/2" | 1 | 1 | NONE |

# HYDROGEN ROOM COOLING COIL, HEATING COIL, AND AIR FILTER ASSEMBLY

| UNIT NO. | SERVICE | SUPPLY FAN CFM | SUPPLY FAN TOTAL MBH | COOLING COIL SENSIBLE MBH | EAT (DB) DEG. F 66.5 | EAT (WB) DEG. F | LAT (DB) DEG. F | LAT (WB) DEG. F | PD AIR IN WG. | FACE AREA . SQ. FT | WATER GPM | PD WATER (FT) | EWT DEG. F | VALVE Cv | HEATING COIL VALVE Cv | TOTAL MBH | FACE AREA SQ. FT. | EAT DEG. F | LAT DEG. F | EWT DEG. F | WATER GPM | DP WATER (FT) | FILTER SECTION FLAT FILTERS SURFACE AREA SQ.FT | TYPE | EFF.% | MIXING BOX WITH ANGLE FILTER | NOMINAL OPERATING WEIGHT LBS | BASIS OF DESIGN MANUF. | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TA-AC-01 | H2 ROOM | 8,000 | 172 | 130 | 92 | 74 | 75 | 68 | 0.1 | - | 20 | 1 | 44 | 28 | 25 | 290 | - | 13 | 40 | 180 | 8 | 0.14 | | | 0.65 | N/A | 800 | TRANE | MCC-14 | DUCTED INLET TO FILTER, DUCTED DISCHARGE FROM COOLING COIL. |

NOTE: THIS ASSEMBLY IS SIMILAR TO AN AIR HANDLER UNIT BUT WITHOUT THE FAN MODULE. SEE DWG. H2.04.43 FOR EQUIPMENT LAYOUT.

# VERTICAL FAN COIL UNITS

| UNIT No. | SERVICE | CFM | TOTAL ESP IN. WG. | FAN DATA FAN TYPE | COOLING COIL TOTAL COOLING, MBH | GPM | EAT F | LAT F | MAX. P.D. IN WG | EWT F | LWT F | MAX. P.D. FT. WTR. | Cv | HEATING COIL TOTAL HEATING, MBH | GPM | EAT | LAT | MAX. P.D. IN. WG. | EWT | LWT | MAX. P.D. FT. WTR. | Cv | ELECTRICAL DATA BHP | HP | VOLTS | PH | HZ | MFG. | MODEL | SPEC SECTION | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCV-TA-01 | STAIR WELL, LEVEL 1 | 200 | FREE | BLOW THRU | 4.8 | 1.04 | 75 | 55 | - | 55 | 71 | 6.1 | NOTE 2 | 8 | 0.5 | 75 | 110 | - | 180 | - | 0.7 | NOTE 2 | 0.03 | - | 120 | 1 | 60 | TRANE | NOTE 1 | 15501 | NOTE 1 |
| FCV-TA-02 | STAIR WELL, LEVEL 2 | 200 | FREE | BLOW THRU | 4.8 | 1.04 | 75 | 55 | - | 55 | 71 | 6.1 | NOTE 2 | 8 | 0.5 | 75 | 110 | - | 180 | - | 0.7 | NOTE 2 | 0.03 | - | 120 | 1 | 60 | TRANE | NOTE 1 | 15501 | NOTE 1 |
| FCV-TA-03 | STAIR WELL, LEVEL 3 | 200 | FREE | BLOW THRU | 4.8 | 1.04 | 75 | 55 | - | 55 | 71 | 6.1 | NOTE 2 | 8 | 0.5 | 75 | 110 | - | 180 | - | 0.7 | NOTE 2 | 0.03 | - | 120 | 1 | 60 | TRANE | NOTE 1 | 15501 | NOTE 1 |
| FCV-TA-04 | STAIR WELL, LEVEL 4 | 200 | FREE | BLOW THRU | 4.8 | 1.04 | 75 | 55 | - | 55 | 71 | 6.1 | NOTE 2 | 8 | 0.5 | 75 | 110 | - | 180 | - | 0.7 | NOTE 2 | 0.03 | - | 120 | 1 | 60 | TRANE | NOTE 1 | 15501 | NOTE 1 |

NOTE 1: BASIS OF DESIGN IS UNITRANE FAN COIL SIZE 02, MODEL B (VERTICAL CABINET). PROVIDE 4-PIPE SYSTEM CONFIGURATION. 2-ROW COOLING COIL / 1 ROW HEATING COIL. INLET STYLE:FRONT TOE SPACE. OUTLET STYLE: TOP QUAD GRILLE. MOTOR FLA = 0.6

NOTE 2: ALL FOUR FAN COIL UNITS WILL BE CONTROLLED FROM ONE CONTROL VALVE IN BOTH THE HOT WATER AND CHILLED WATER MAINS. THE CV OF THE CHILLED WATER MAIN CONTROL VALVE SHALL BE 3. THE CV OF THE HOT WATER MAIN CONTROL VALVE SHALL BE 2.

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CHANGE CONTROL SYSTEM 3
ENGINEERING PROCEDURE SNS-ENG-G001

| REV | CHANGE TYPE | CHANGE CONTROL SYSTEM | CHANGE REQUEST NUMBER | DESCRIPTION | DSN | CHK | DEPT | DATE | PE | DATE | PJ | DATE | REQ | DATE | UTB | DATE | RPE | RPE NO | DATE | ST | CV | EC | EE | EM | IE | M | PD | SE | AR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | CERTIFIED FOR CONSTRUCTION - 11/13/01 | MMK | BWJ | | | RJD | 11/15/01 | RAD | 11/14/01 | | | JRS | 11/14/01 | BWJ | 105869 | 11/13/01 | REW | - | WRS | AK | WRS | BWJ | - | MP | - | ED |

REVISION OR ISSUE PURPOSE / REVISION APPROVALS / SQUAD CHECK

RPE: BRUCE W. JOHNSON, REGISTERED ENGINEER, No. 00105869, STATE OF TENNESSEE — REV. 0, DATE 11/13/01

| | | |
|---|---|---|
| DSN | M.KEHOE | 11/13/01 |
| DRW | J.STEIN | 11/13/01 |
| CHK | B.JOHNSON | 11/13/01 |
| DEPT | | |
| PE | RJ Jansen | 11/15/01 |
| PJ | RA Dean | 11/14/01 |
| REQ | | |
| UTB | JR Sawm | 11/14/01 |

DRAWING APPROVALS

108030700-H8E-8700-A086

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UT-BATTELLE
Oak Ridge National Laboratory
managed for the DEPARTMENT OF ENERGY under
U.S. GOVERNMENT contract DE-AC05-00OR22725
UT-BATTELLE, LLC, Oak Ridge, Tennessee

PROJECT NAME:
SPALLATION NEUTRON SOURCE

TARGET BUILDING
HVAC SCHEDULES

| 1 | 48 | 49 | 50 | PLANT | BLDG | FL | SH. | OF | TYPE | CLASS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | H | X | X | 8 | 8700 | | 1 | 1 | D | U |

| 51 | 52 | 53 | WBS | DWG | REV |
|---|---|---|---|---|---|
| NC | NA | | 1.8.3.7 | H9.10.32 | 0 |

Date: 11/13/2001 Time: 10:07:43
Username: THAWM
KGSFO_VOL2:PROJECTS\7000\700_CADD\TASK_5A\740_PLOT\H9-10-32.DWG

AutoCAD