A-201046

INDIAN POINT UNIT NO. 2

PRESSURIZER RELIEF TANK

PRESSURIZER

STEAM GENERATOR Nº 23

STEAM GENERATOR Nº 24

STEAM GENERATOR Nº 21

STEAM GENERATOR Nº 22

R.C. PUMP Nº 23

R.C. PUMP Nº 24

R.C. PUMP Nº 21

R.C. PUMP Nº 22

RECIRCULATION EQUIPMENT AREA

CONTROL ROD DRIVE VENT. FANS

REACTOR

CONTROL ROD DRIVE

Nº 24

Nº 23

Nº 22

Nº 21

IODINE FILTER & FAN UNIT Nº 22

IODINE FILTER & FAN UNIT Nº 21

INCORE INSTRUMENTATION CONTROL ROOM

RECIRC. FAN UNIT NO. 23

RECIRC. FAN UNIT NO. 24

RECIRC. FAN UNIT NO. 21

RECIRC. FAN UNIT NO. 22

16,000 C.F.M.

8,000 C.F.M.

32,000 C.F.M.

9,000 C.F.M.

65,000 C.F.M.

PRESSURE RELIEF

SEE NOTE 1

SEE NOTE 2

SEE DETAIL 3

SEE DETAIL 4

TWO 1/2 ϕ HOLES, ONE ON EACHSIDE OF DEMISTER. HOLES SHALL BE LOCATED A MINIMUM OF 12" FROM DEMISTER.

FAN #21

FAN #22

DPT 1160 21 FC 1104 (S)

DPT 1161 22 FC 1105 (S)

DPT 1162 23 FC 1106 (S)

DPT 1163 24 FC 1107 (S)

DPT 1164 25 FC 1108 (S)

FC 1109 (S) FC 1110 (S) FC 1111 (S) FC 1112 (S) FC 1113 (S)

VALVES SUPPLIED WITH INST.

NORMAL FLOW

INCIDENT FLOW

COOLING WATER OUT

VALVE 'E' SEE SCH.

VALVE 'B' SEE SCH.

VALVE 'A' SEE SCH.

48ϕ N.O.

48ϕ N.C.

ROUGHING FILTER

COOLING COIL

DEMISTER

ABSOLUTE FILTER

FAN

CHARCOAL FILTER

COOLING WATER IN

BORATED WATER SPRAY SYSTEM

6 HIGH TEMPERATURE DETECTORS

DIAGRAM FAN COOLER-FILTER UNIT (5 REQUIRED)

INSTRUMENT LEGEND

(DP) - DIFFERENTIAL PRESS. INDICATOR

(FC) - FLOW CONTROL SWITCH

PURGE AIR SYSTEM

FAN ROOM

LOUVER 40,000 CFM

VC PURGE MAKE-UP AIR

FILTER SECTION

HEATING COIL

C.B. PURGE & /OR P.A. BLDG. EXHAUST FAN 33,500 CFM EACH (ONE OPERATING ONE STAND-BY)

FROM PUMP & HEAT EXCHANGER ROOM 3,000 C.F.M.

* LOCATE IN FAN ROOM

** VALVES FURNISHED WITH DPDT LIMIT SWITCHES IN OPEN AND CLOSED POSITIONS

Δ CONNECT TO C.B PRESSURIZATION SYSTEM. SEE DWG 9321-F-7052.

O INTERLOCK FOR PURGE VENT VALVES AND FANS

A CONNECT TO INSTRUMENT AIR SUPPLY - SEE DWG. 9321-F-7009

IL PA

PI 1291 FC 1294 (S) FC 1295 (S)

SOV 1290 SOV 1291 SOV 1292 SOV 1293

FCV 1170 FCV 1171 FCV 1172 FCV 1173

PENETRATION #6

PENETRATION #7

36" OUTSIDE OF V.C. BLDG.

LINE #49

LINE #50

TEST CONN.

PURGE SUPPLY DETAIL NO. 1

PURGE EXHAUST DETAIL NO. 2

POOL SURFACE EXH. AIR REGISTERS (3) @ 8250 CFM EACH 24,750 CFM

CEILING EXHAUST AIR REGISTER 8250 C.F.M.

48" X 84" PLANT DISCHARGE DUCT

23,000 CFM

FUEL STORAGE BLDG

PRESS RELIEF FAN 1500 CFM

PRESS RELIEF CARBON FILTER UNIT

FUEL HANDLING BLDG. EXH. FAN 36,000 CFM

CARBON FILTER FACE DAMPER

ABSOLUTE FILTER

ROUGHING FILTER

INFILTRATION 2,000 CFM

TEMPERED FILTERED FRESH AIR SUPPLY UNITS EACH UNIT 17,000 CFM (INTERLOCKED WITH EXHAUST FAN)

BY PASS DAMPER

CARBON FILTER

FACE DAMPER

ELEV. 86'-0"

ELEV. 72'-0"

55,000 CFM

5100 CFM

PIPE TUNNEL

47,300 CFM

11,000 CFM

17,000 CFM

TEMPERING AIR UNITS

2,000 CFM INFILTRATION - (NORMAL OPERATION)

20,000 CFM INFILTRATION - (EMERGENCY OPERATION)

TO DISCHARGE DUCT

FUEL STORAGE BLDG.

20,000 CFM

36,000 CFM

FAN HOUSE

FAN ENCLOSURE

AIR FLOW DIAGRAM FUEL STORAGE BUILDING EMERGENCY EXHAUST SYSTEM

10,000 C.F.M.

22"ϕ 5,000 C.F.M.

5000 CFM

30"ϕ

14,000 C.F.M.

36"ϕ

48"ϕ

64"ϕ

STEAM GENERATOR Nº 23

STEAM GENERATOR Nº 24

PRESSURIZER

FAN UNIT Nº 25

CONTROL ROD DRIVE VENTILATING FANS 4 FANS; NUMBERS 21, 22, 23, 24 EACH 15,000 CFM

FAN UNIT Nº 24

R.C. PUMP Nº 24

R.C. PUMP Nº 23

CONTROL ROD DRIVE

REACTOR

RECIRC. FAN UNIT Nº 23

ROUGHING FILTER

COOLING COIL

DEMISTER

ABSOLUTE FILTER

FAN

CHARCOAL FILTER

R.C. PUMP Nº 21

STEAM GENERATOR Nº 22

STEAM GENERATOR Nº 21

FAN UNIT Nº 21

12,000 CFM

CHARCOAL FILTER

ABSOLUTE FILTER

ROUGHING FILTER

IODINE FILTER AND FAN UNITS Nº 21 & Nº 22 8,000 CFM EACH

FAN UNIT Nº 22

FAN-COOLER-FILTER UNIT (TYPICAL)

DIAGRAM OF CONTAINMENT AIR RECIRCULATION SYSTEM PURGE SYSTEM NOT SHOWN

FAN COOLER FILTER UNIT VALVE SCHEDULE

FAN COOLER UNIT SCHEDULE	VALVE 'A' (OUTLET) BUTTERFLY	VALVE 'A' (OUTLET) SOLENOID	VALVE 'B' (INLET) BUTTERFLY	VALVE 'B' (INLET) SOLENOID	VALVE 'C' BUTTERFLY	VALVE 'C' SOLENOID
21	F.C.V.-21-1-N.C.	SOV-1293 SOV-1293-A	F.C.V. 21-2-N.O.	SOV-1294 SOV-1294-A	F.C.V.-21-3 N.O.	SOV-1295 SOV-1295-A
22	F.C.V.-22-4-N.C.	SOV-1296 SOV-1296-A	F.C.V.-22-5 N.C.	SOV-1297 SOV-1297-A	F.C.V.-22-6 N.O.	SOV-1298 SOV-1298-A
23	F.C.V.-23-7 N.C.	SOV-1299 SOV-1299-A	F.C.V.-23-8 N.C.	SOV-1300 SOV-1300-A	F.C.V.-23-9 N.O.	SOV-1301 SOV-1301-A
24	F.C.V.-24-10 NC	SOV-1302 SOV-1302-A	F.C.V.-24-11 N.C.	SOV-1303 SOV-1303-A	F.C.V.-24-12 N.O.	SOV 1304 SOV-1304-A
25	F.C.V.-25-13 N.C.	SOV-1305 SOV-1305-A	F.C.V. 25-14 N.C.	SOV-1306 SOV-1306-A	F.C.V.-25-15 N.O.	SOV-1307 SOV-1307-A

AIR DISTRIBUTION SCHEDULE

- (A)+(A1) = 58,675 CFM TO R.C. PUMP, STM. GEN. & PRESSURIZER AREA
- (B) = 2,000 CFM TO PRESS. RELIEF TANK AREA
- (C)+(C1) = 60,000 CFM TO DOME AREA
- (D)+(D1) = 51,275 CFM TO R.C. PUMP & STM. GEN. AREA
- (E) = 17,500 CFM ACROSS REFUELING POOL AREA.
- (F) = 10,000 CFM TO RECIRCULATION EQUIPMENT AREA
- (G) = 5,000 CFM TO PASSAGE AREA
- (H)+(H1) = 51,275 CFM TO R.C. PUMP & STM. GEN. AREA
- (I) = 12,000 CFM TO AREA UNDER REACTOR
- (J) = 5,000 CFM TO INCORE INSTRUMENTATION CONTROL ROOM
- (K)+(K1) = 32,275 CFM TO R.C. PUMPS & STM. GEN. AREA.

LEGEND

- N.O. NORMALLY OPEN - (FAIL CLOSED)
- N.C. NORMALLY CLOSED - (FAIL OPEN)
- LOUVER
- FILTER
- DAMPER
- BUTTERFLY VALVE - BUBBLE TIGHT
- (R) RADIATION
- (RC) RADIATION CONTROLLER
- (FI) FLOW INDICATOR
- (M) MOTOR OPERATOR
- CARBON FILTER
- AIR FOIL DAMPER

NOTES

1. 3" FROM POST ACCIDENT CONTAINMENT VENTING SYSTEM
2. 2"-131 FROM GAS DECAY TANKS

Docket # 50-247/286
Control # 77-7300 X
Date 6-15-77
of Documents
R. GUTHRIEY DOCKET FILE

PRC APERTURE CARD

THIS DRAWING CONTAINS "CLASS A" ITEMS AS DEFINED BY CORPORATE INSTRUCTION CI - 240 - 1

INSTRUMENT LEGEND

- (IL) - INDICATING LIGHT
- (HC) - HAND CONTROLLER
- (PA) - PRESSURE ALARM
- (PI) - PRESSURE INDICATOR
- (PC) - PRESSURE CONTROLLER
- (PCV) - PRESSURE CONTROL VALVE
- (SOV) - SOLENOID VALVE
- (FCV) - FLOW CONTROL VALVE

PRESSURE RELIEF DETAIL "3"

INTERLOCK FOR PRESS. RELIEF VENT VALVES & FANS

SOV 290 SOV 280 SOV 291 SOV 279 SOV 292

PCV 190 PCV 191 PCV 192

PENETRATION #5

10" LINE #58

TEST CONN.

* LOCATE IN FAN ROOM

** VALVES FURNISHED WITH DPDT LIMIT SWITCHES IN OPEN AND CLOSED POSITION

Δ CONNECT TO C.B PRESSURIZATION SYSTEM SEE DWG 9321-F-7052

A CONNECT TO INSTRUMENT AIR SUPPLY SEE DWG. 9321-F-7009

33'00 C.F.M.

ROOF EL. 114'-0"

6700 CFM

MAKE-UP AIR TEMPERING UNIT

50,400 CFM OUTSIDE AIR

3300 CFM OUTSIDE AIR

ROUGHING FILTER ABSOLUTE FILTER CARBON FILTER

EXH. FAN ENCLOSURE 33300 CFM

FL. EL. 91'-8"

STAIR WELL

BORIC ACID EVAPORATOR BUILDING

5100 CFM OUTSIDE AIR

FL EL 98'-0

FL EL 80'-0"

FL EL 68'-0

FL EL 58'-0

FL EL 42'-0"

FL EL 15'-0"

PRIMARY AUXILIARY BLDG

WASTE HOLDUP TANK PIT

FL EL 56'-0"

5500 CFM

7417 CFM

3050 CFM

2300 CFM

2049 CFM

3100 CFM TO TUNNEL

1100 CFM WALL OPS.

GRATING

10,600 CFM

9500 CFM

1,700 CFM

1700 CFM

5150 CFM

5150 CFM

47,300 CFM

22,700 CFM

1275 CFM

1275 CFM

1275 CFM

1275 CFM

5100 CFM SUPPLY

REV	DATE	DESCRIPTION	DSGR	SUP'DSN	APP'D
10	9/10/73	THIS REVISION CONTAINS CLASS "A" ITEMS AS PER CI-240-1 ADDED CARBON FILTER TO C.B PURGE - P.A. B EXHAUST, C.B. PRESS RELIEF SYS. & BORIC ACID BLDG. EXHAUST MOD. PROCEDURE CPH-75-G-02 (PROJ. 1231)	J.M		
9	11/1/73	FINAL ISSUE	J.M		
8	6/14/71	ADDED PIPE, DUCTS, EQUIPMENT, EXPANSION JOINTS & TRANSITION PIECES FOR VENT DIAGRAM	J.M		
7	10/10/70	ADDED TWO 1/2 ϕ PRESS. TAPS	FAK	J.M	
6	10/4/70	REVISED AIR SUPPLY & ADDED 2 FAN COOLER UNITS	FAK	J.M	
5	4/7/70	ADDED PIPING VIBRATION FC 1104 & THRU 1115 & REVISED TEMP. NOTE	FAK	J.M	
4	3/5/70	REVISED AIR QUANTITIES	FAK	J.M	
3	1/16/70	RELOCATED DEMISTER & ROUGHING FILTER	FAK	J.M	
2	7/16/69	ADDED PIPING, EQUIPMENT, VALVE SCHEDULE & VALVE SCHEDULE NOTES 1 & 2	FAK	J.M	
1	5/23/69	ADDED C.B. PURGE INSTRUMENTATION REMOVED PIPE FROM PRIMARY AUXILIARY BLDG.	FAK	J.M	
A	9/16/68	FIRST ISSUE	FAK	J.M	
B	DATE	DESCRIPTION	DSGR	SUP'DSN	APP'D

TRACING REPRODUCED FROM MICRO-FILM

UNITED ENGINEERS & CONSTRUCTORS INC.

WESTINGHOUSE ELECTRIC CORPORATION

FLOW DIAGRAM VENTILATION SYSTEM FOR CONTAINMENT, PRIMARY AUXILIARY & FUEL STORAGE BLDGS.

FOR CONSOLIDATED EDISON COMPANY

INDIAN POINT GENERATING STATION UNIT NO. 2

U.E.&C. DWG. NO. 9321-F-4022-10

CON. ED. DWG. NO. A-201046

8111110285