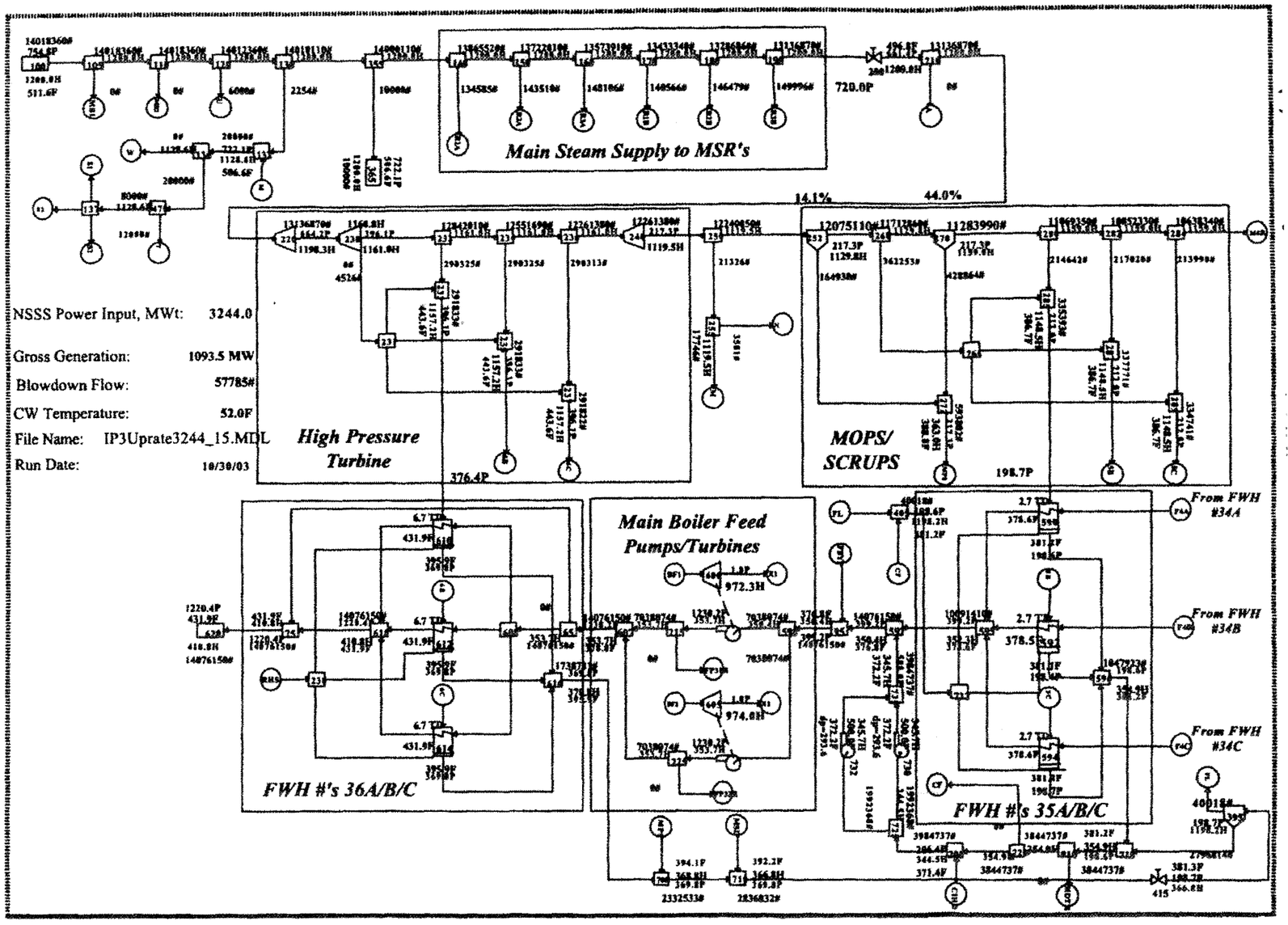
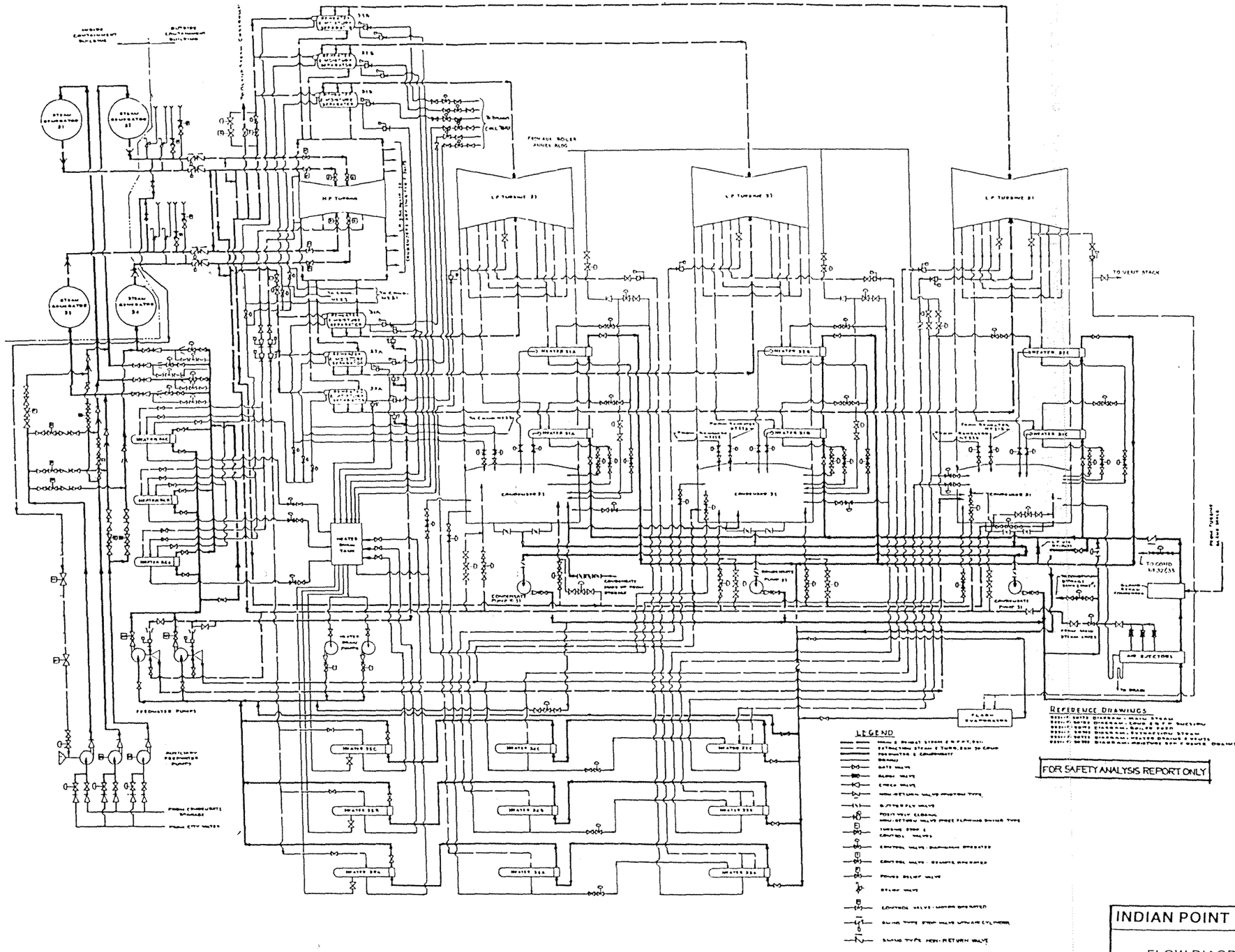
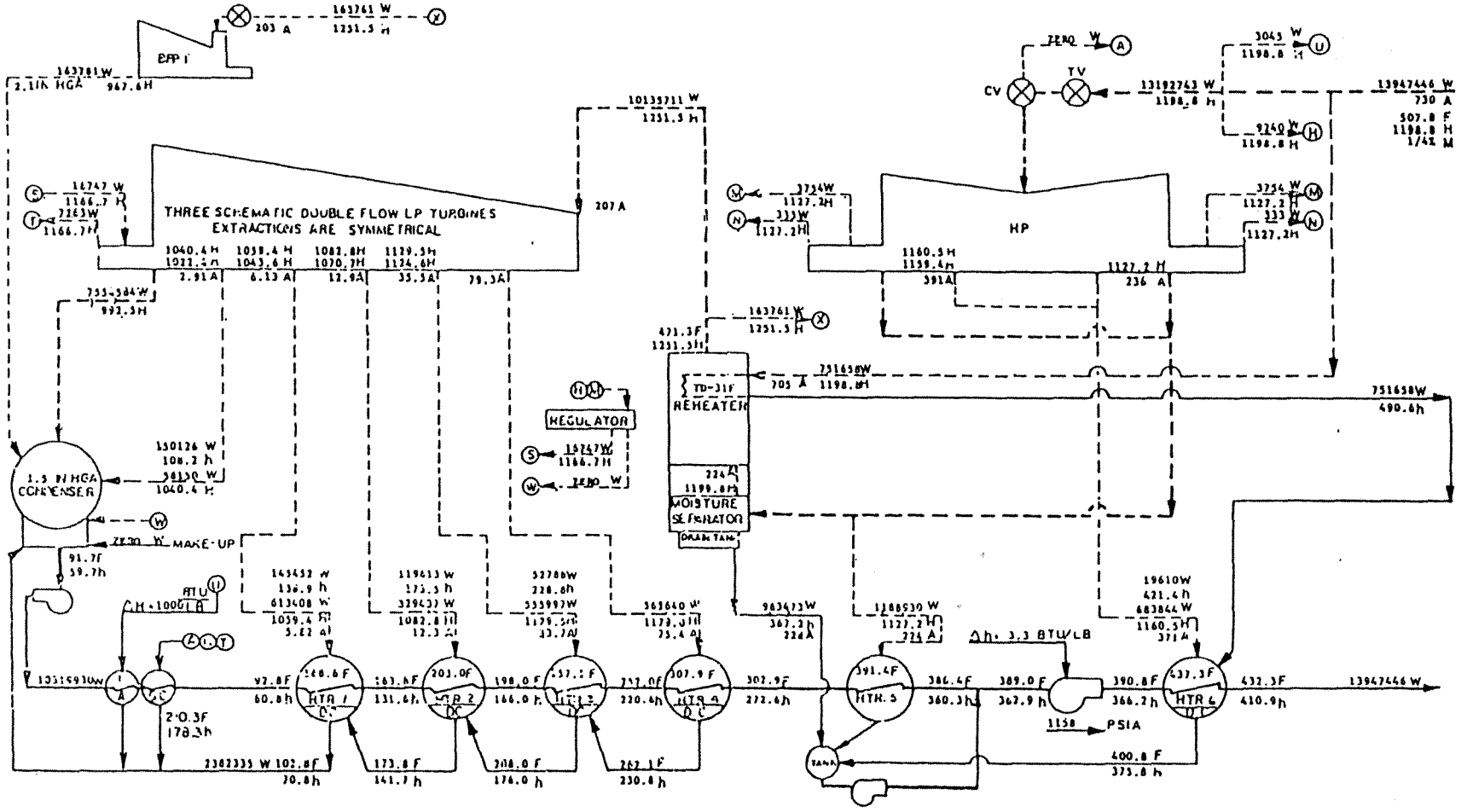



| INDIAN POINT UNIT No. 3 | |
|---|---|
| UPRATE 3216 CORE POWER W/ 0.5% MARGIN<br>HIGH PRESSURE TURBINE EXPANSION | |
| UFSAR FIGURE 10.1–1 | REV. No. 01 |




| INDIAN POINT 3 | FSAR UPDATE |
|---|---|
| FLOW DIAGRAM COMPOSITE (SIMPLIFIED)<br>STEAM CONDENSATE - DRAINS SYSTEMS | |
| REV. 0 JULY, 1982 | FIGURE NO. 10.2-1 |

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT




| | |
|---|---|
| NET HEAT RATE = 13947446 (115P, 8-4P, 9) / 1068701 = 10283 BTU/KW HR | TEP = 922.3 BTU/LB<br>ELEP = 973.4 BTU/LB<br>MECH LOSS = 3648 KW<br>ELECT LOSS = 11940 KW<br>0.95PF 75 $^{H_2}$<br>FWP POWER = 13624 KW<br>FWP EFF = 85% |
| 1021793 KW TURB-GEN. UNIT TC6F-44 IN.<br>730 PSIA - 507.8 F 1.5 IN. HGA<br>1125600 KVA 0.90 PF 22000 VOLTS 75 $^{H_2}$ | LESTER, PENNA.<br>ENGR. VJH<br>LCO-2099<br>DATE: 2/13/68<br>CT-21369<br>REV. A 5/1/68 |

CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK.
AUXILIARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS

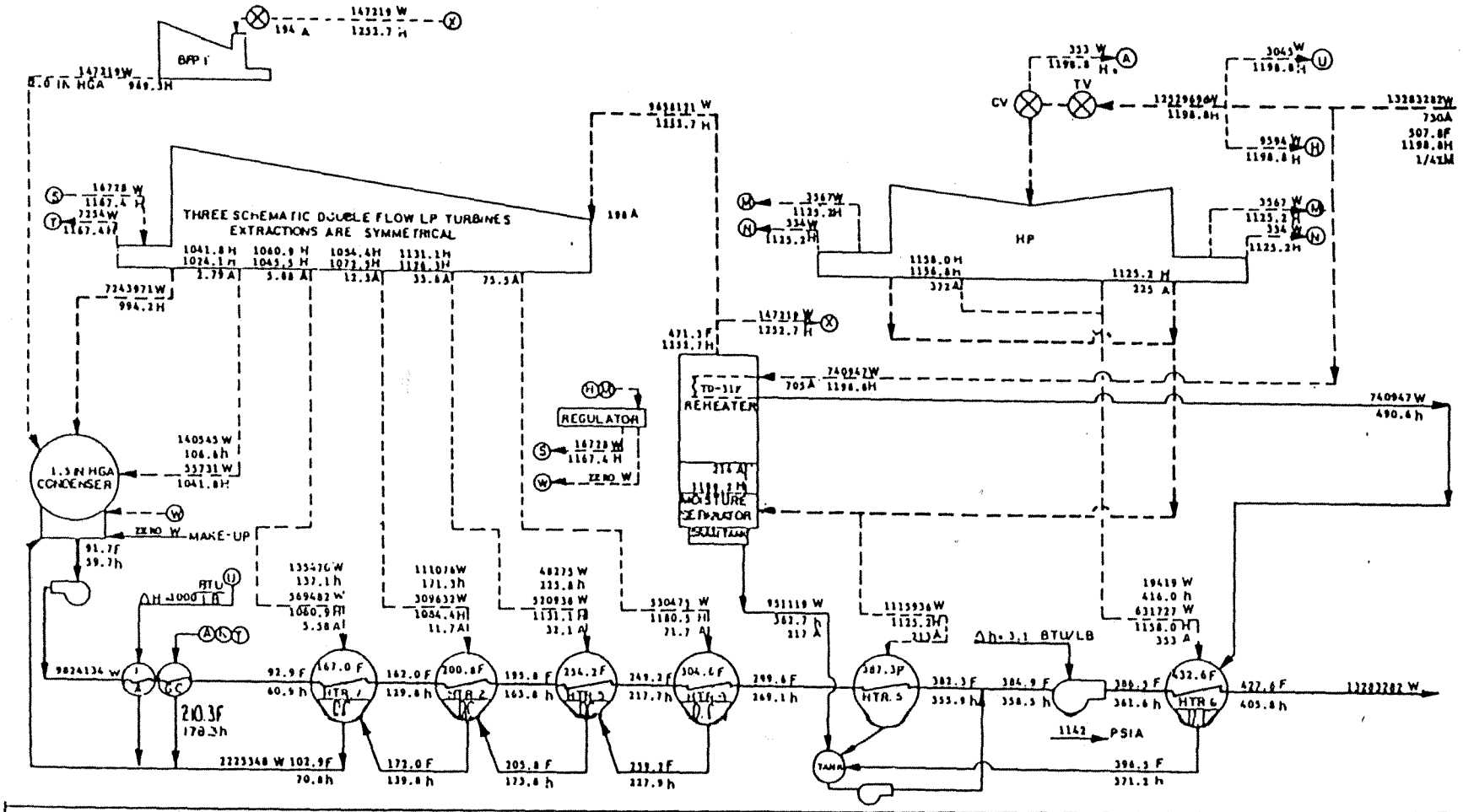
STEAM GEN FLOW AT MAX CALC IS NOT GUARANTEED.
MAX GUAR SG. FLOW = 13283283 LB/HR. MAX. CALC. SG. FLOW = 13947446 LB/HR.

INDIAN POINT 3 FSAR UPDATE

1068701 KW NET LOAD HEAT
BALANCE MAXIMUM
CALCULATED-NOT GUARANTEED

REV. 1 NOV 2001 | FIG. NO. 10.2-14

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT




| | | |
|---|---|---|
| NET HEAT RATE = 13283282 (1198.8-405.8) / 1021793 = 10309 BTU/KW HR | TEP = 994.0 BTU/LB<br>ELEP = 976.7 BTU/LB<br>MECH LOSS = 3648 KW<br>ELECT LOSS = 13661. KW<br>0.90 PF 75 $^{H_2}$<br>FWP POWER = 13226 KW<br>FWP EFF = 86% | 1021793KW TURB-GEN. UNIT TC6F-44 IN.<br>730PSIA - 507.8F 1.5IN. HGA<br>1135600 KVA 0.90 PF 22000 VOLTS 75 $^{H_2}$ |

(1) CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK.
(2) PRIMARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS.

STEAM GEN FLOW AT MAX CALC. IS NOT GUARANTEED.
VAN GUAR. SG. FLOW = 13283282 LB/HR. MAX. CALC. SG. FLOW = 13947446 LB/HR.

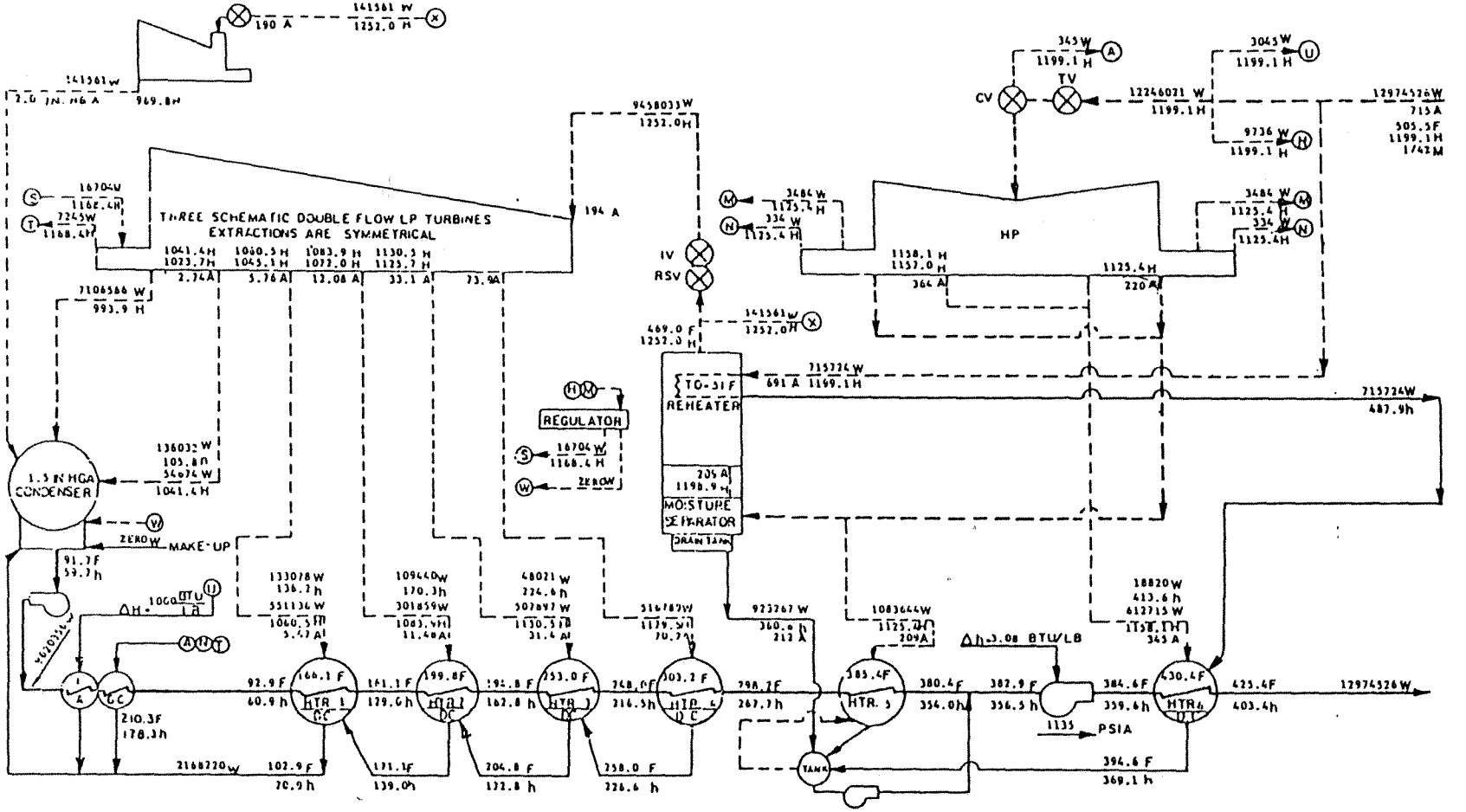
LESTER, PENNA.
ENGR. VJH-JLF
LCD-2099
DATE: 2/13/68
CT-21370
REV. A 4/1/68

INDIAN POINT 3 FSAR UPDATE

1021793 KW NET LOAD HEAT BALANCE MAXIMUM GUARANTEED

REV. 1 NOV 2001 | FIG. NO. 10.2-15

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT




| | |
|---|---|
| NET HEAT RATE = 12974526 (1199.1 - 402.4) / 1000630 = 10317 BTU/KWHR | TEP = 993.2 BTU/LB<br>CLCP = 977.2 BTU/LB<br>MECH LOSS = 3646 KW<br>ELECT LOSS = 12500 KW<br>0.90PF 75# $H_2$<br>BFP POWER = 11705 KW<br>BFP EFF = 86% |
| (1) CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK.<br>(2) PRIMARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS.<br>STEAM GEN FLOW AT MAX CALC. IS NOT GUARANTEED.<br>MAX GUAR. S.G. FLOW = 13383283 LB/HR. MAX.CALC. S.G. FLOW = 13547446 LB/HR. | 1021293 KW TURB-GEN. UNIT TC6F-44 IN.<br>730 PSIA - 507.8 F 1.5 IN. HGA<br>1125630 KVA 0.90 PF 22000 VOLTS 75 # $H_2$ |

LESTER, PENNA.
ENGR. [illegible] JAK
LCO 2099
DATE: 12/15/[illegible]
AB935-0[illegible]
REV.

INDIAN POINT 3 FSAR UPDATE

1000630 KW NET LOAD HEAT
BALANCE-INITIAL
GUARANTEE AT 715A INLET

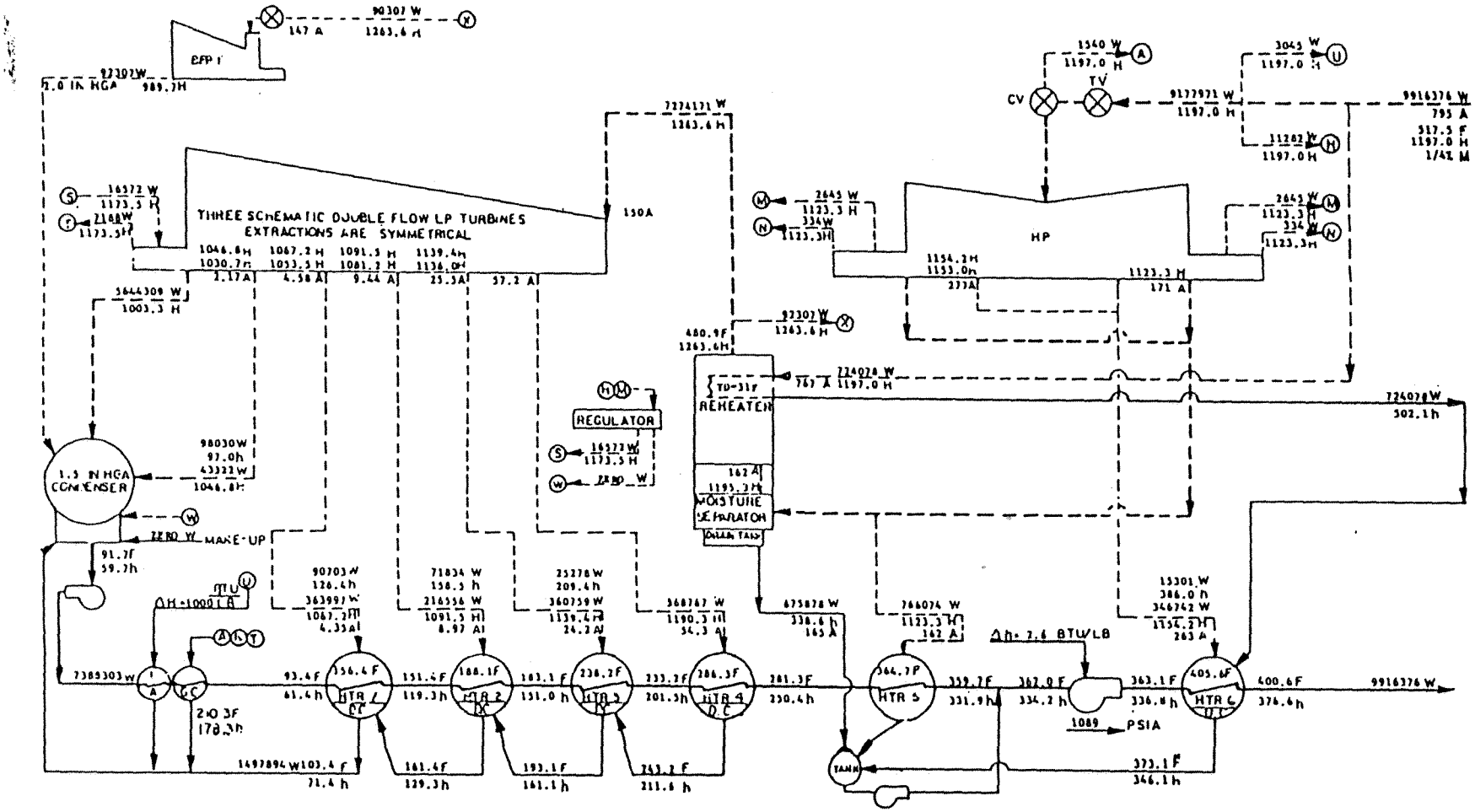
REV. 1 NOV 2001 | FIG. NO. 10.2-16

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT

INDIAN POINT 3 FSAR UPDATE

766350 KW NET LOAD HEAT
BALANCE 75% LOAD

REV. 1 NOV 2001 | FIG. NO. 10.2-17




| | | |
|---|---|---|
| NET HEAT RATE = 9916376 (1197.0-376.6) / 766350 = 10414 BTU/KW HR | TEP = 1003.0 BTU/LB<br>ELEP = 993.0 BTU/LB<br>MECH LOSS = 3448 KW<br>ELECT LOSS = 9180 KW<br>0.90 PF 75 $^{\#}H_2$<br>FWP POWER = 7411 KW<br>FWP EFF = 85% | 1021793 KW TURB-GEN UNIT TCGF-44 IN.<br>730 PSIA - 507.8 F 1.5 IN. HGA<br>1125600 KVA 0.90 PF 22000 VOLTS 75 $^{\#}H_2$ |

1) CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK
2) PRIMARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS

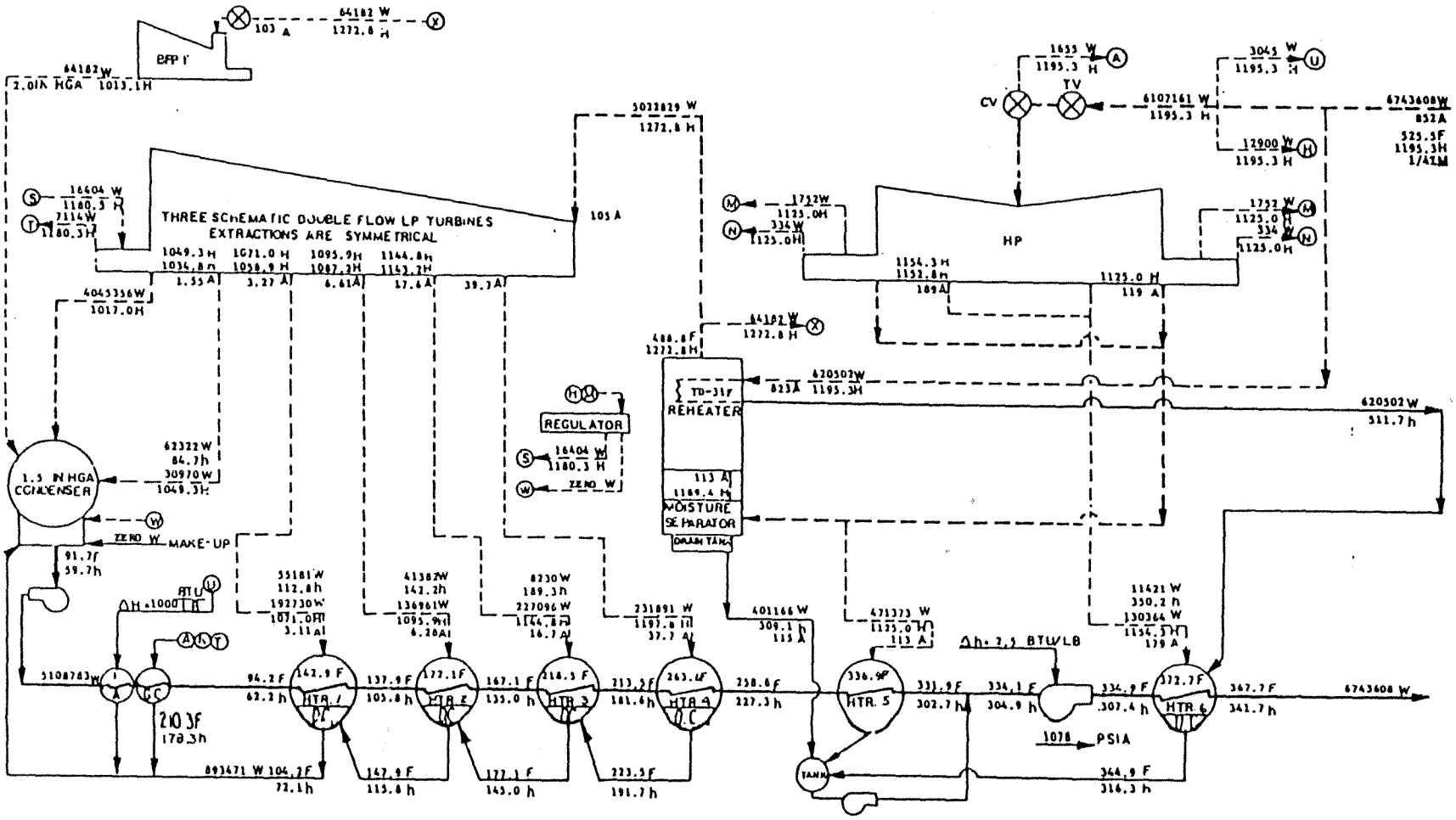
STEAM GEN FLOW AT MAX CALC. IS NOT GUARANTEED.
VAN GUAR SG. FLOW = 13283282 LB/HR. MAX.CALC. SG. FLOW = 13947446 LB/HR.

W WESTINGHOUSE
LESTER, PENNA.

ENGR. VJH-JLF
LCD-2099
DATE: 2/12/68
CT-21372

REV A 4/1/68

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT




NET HEAT RATE = $\frac{6743608\ (1195.3-341.7)}{510897}$ = 11767 BTU/KW HR

1) CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK.
2) PRIMARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS.

STEAM GEN FLOW AT MAX CALC. IS NOT GUARANTEED.
VAR. GUAR. S.G. FLOW = 13283282 LB/HR. MAX. CALC. S.G. FLOW = 13947446 LB/HR.

TEP = 1016.6 BTU/LB
ELEP = 1010.9 BTU/LB
MECH LOSS = 3648 KW
ELECT LOSS = 6373 KW
0.90 PF 75 $^{\#}H_2$
FWP POWER = 4883 KW
FWP EFF = 77 %

1021793KW TURB-GEN. UNIT TC6F-44 IN.
730 PSIA - 507.8F 1.5 IN. HGA
1125600KVA 0.90 PF 22000 VOLTS 75 $^{\#}H_2$

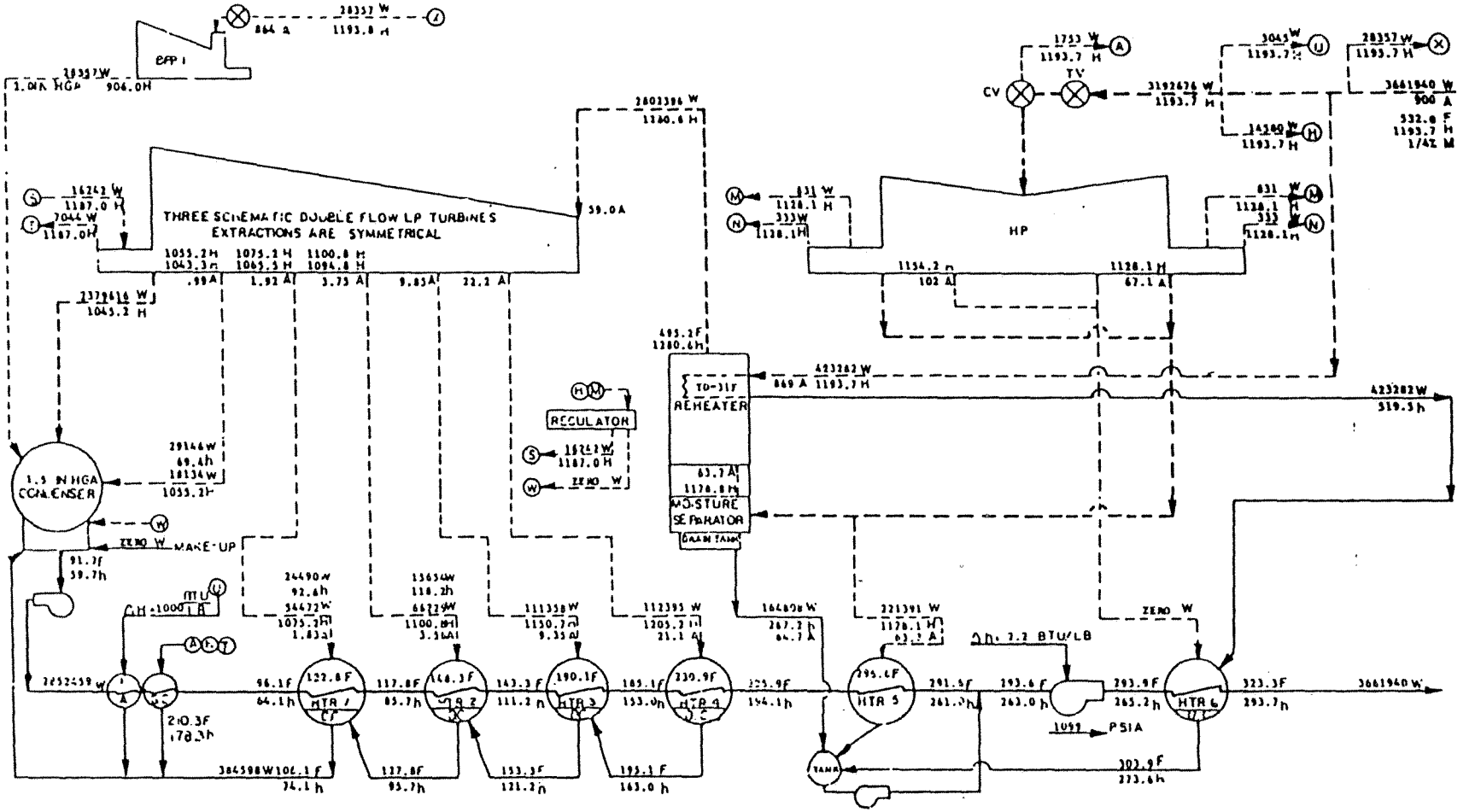
LESTER, PENNA
ENGR. VJH
LCD 2099
DATE: 2/9/68
CT-21373
REV. A 4/1/68

INDIAN POINT 3 FSAR UPDATE

510897 KW LOAD HEAT
BALANCE 50% LOAD

REV. 1 NOV 2001 | FIG. NO. 10.2-18

HISTORICAL-USED FOR
INITIAL PLANT LAYOUT




HEAT RATE = 3661940 (1193.7-293.7) / 255448 = 12902 BTU/KW HR

CALCULATIONS ARE BASED ON NO RADIATION LOSSES TO HEATERS OR EXTRACTION PIPING LOCATED IN THE CONDENSER NECK.
PRIMARY VALVE AND ABOVE HEAT RATES ARE CALCULATED ON LOCUS OF VALVE POINTS

STEAM GEN FLOW AT MAX CALC. IS NOT GUARANTEED.
VWO GUAR. SG FLOW = 13283262 LB/HR. MAX CALC. SG FLOW = 13947446 LB/HR.

TEP = 1044.7 BTU/LB
CLEP = 1038.2 BTU/LB
MECH LOSS = 3648 KW
ELECT LOSS = 5032 KW
0.90 PF 55 $H_2$
FWP POWER = 2391 KW
FWP EFF. = 80%

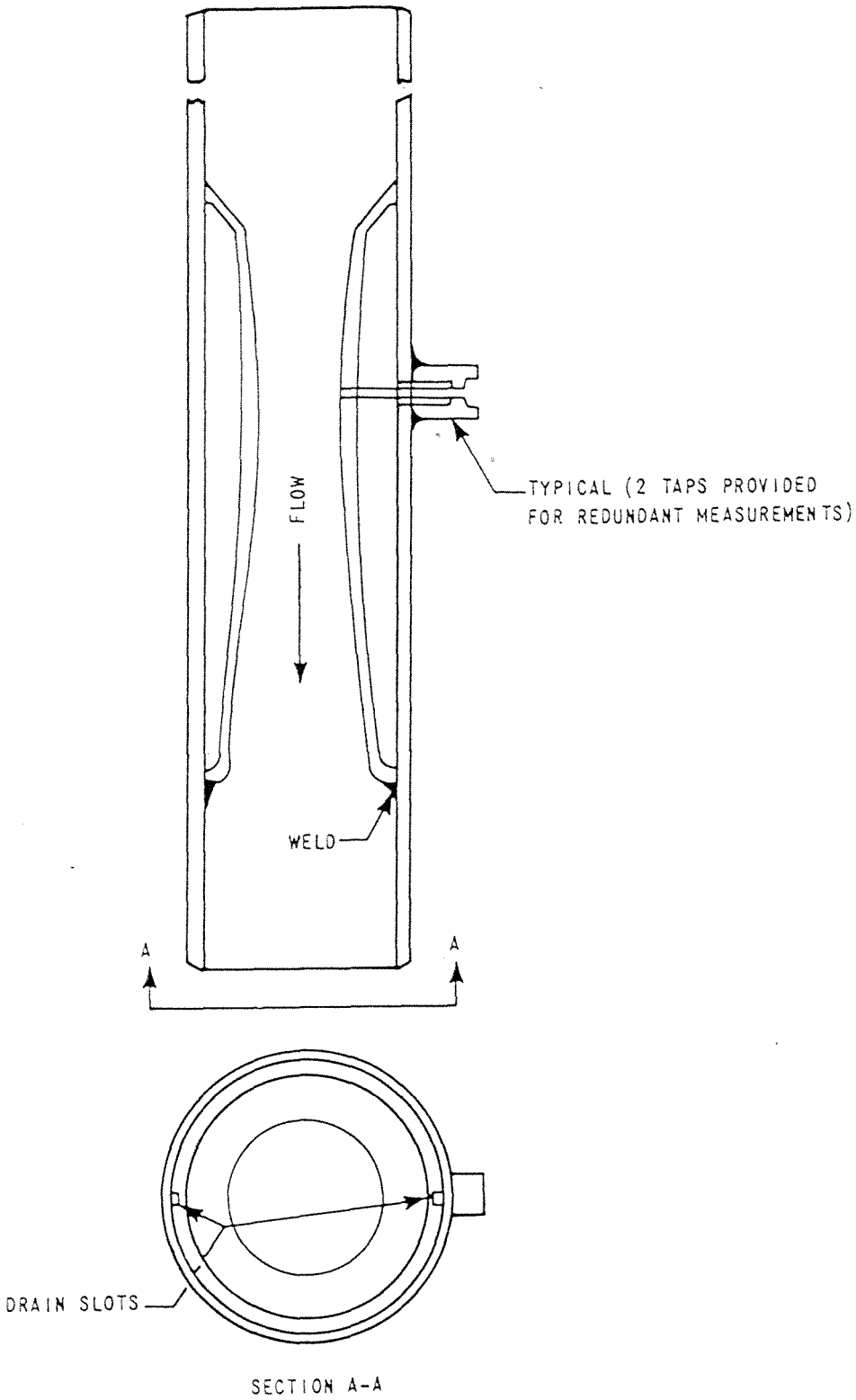
1021793KW TURB-GEN UNIT TC6F-44 IN.
730 PSIA - 901.8 F 1.5 IN. HGA
1135600K VA 0.90 PF 22000 VOLTS 75 $H_2$

LESTER, PENNA.
ENGR. VJH-JLF
LCD-2111
DATE 2/12/68
CT-21374
REV A 4/1 A3

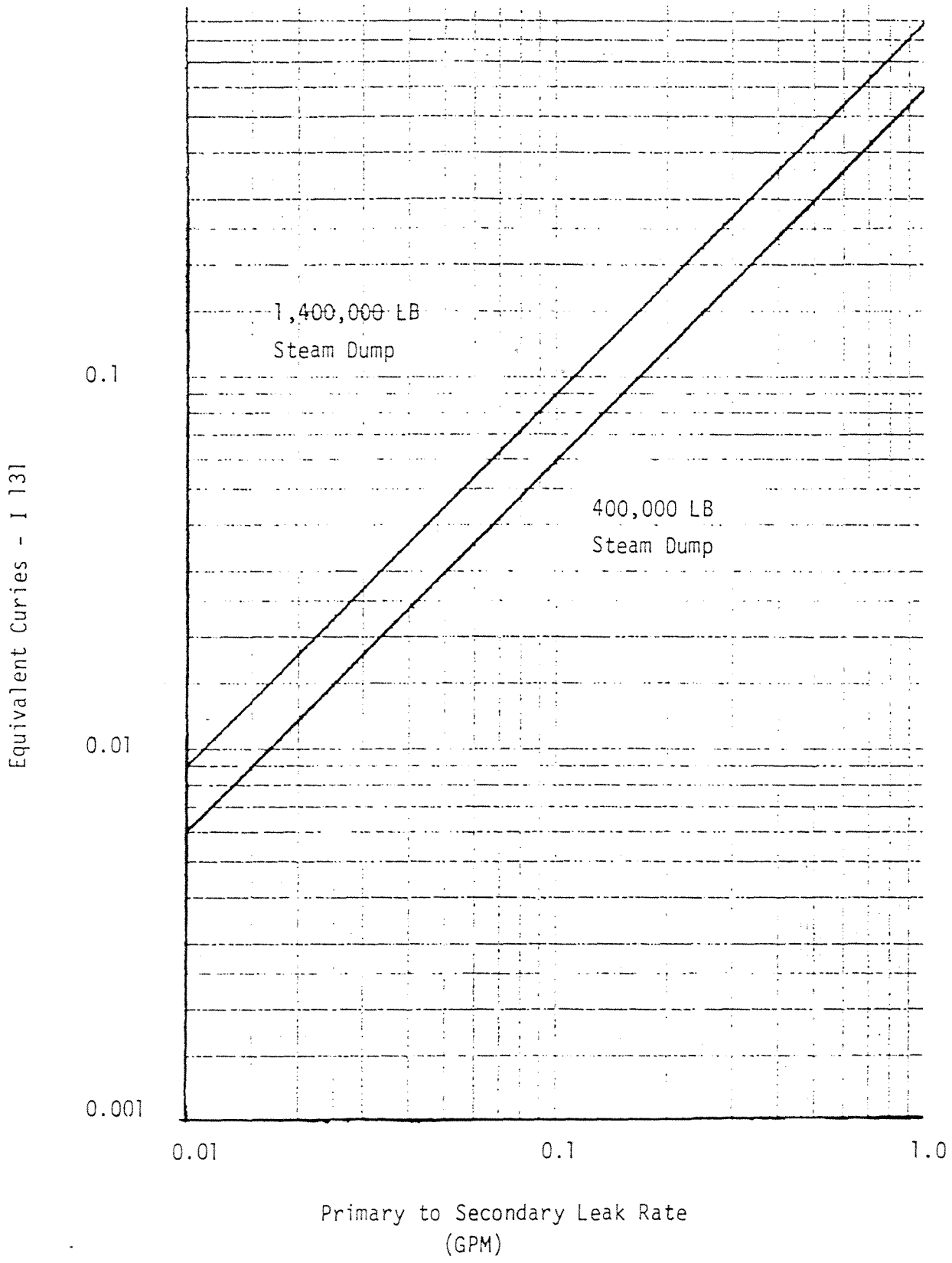
INDIAN POINT 3 FSAR UPDATE

255448 KW LOAD HEAT
BALANCE 25% LOAD

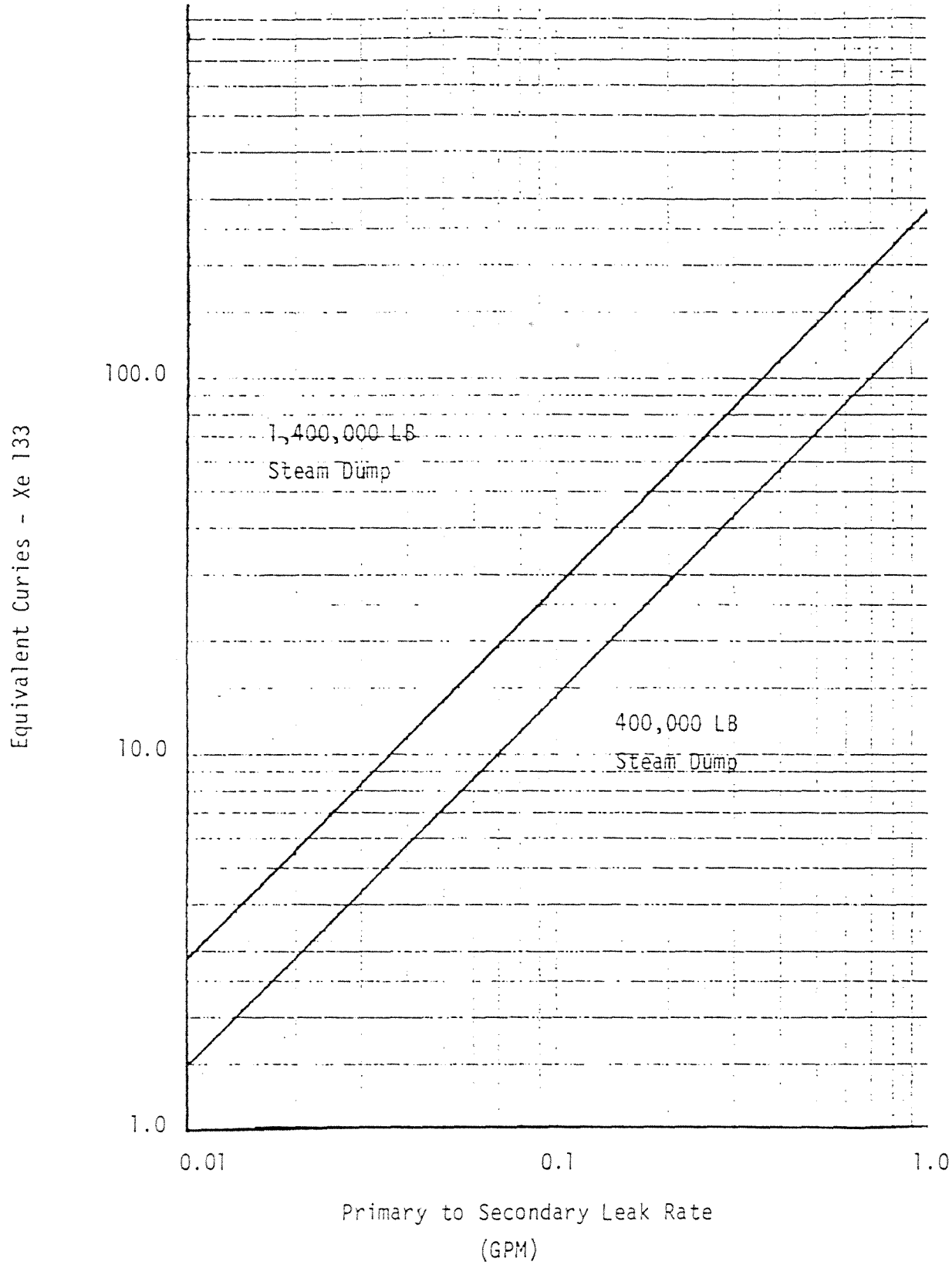
REV. 1 NOV 2001 | FIG. NO. 10.2-19



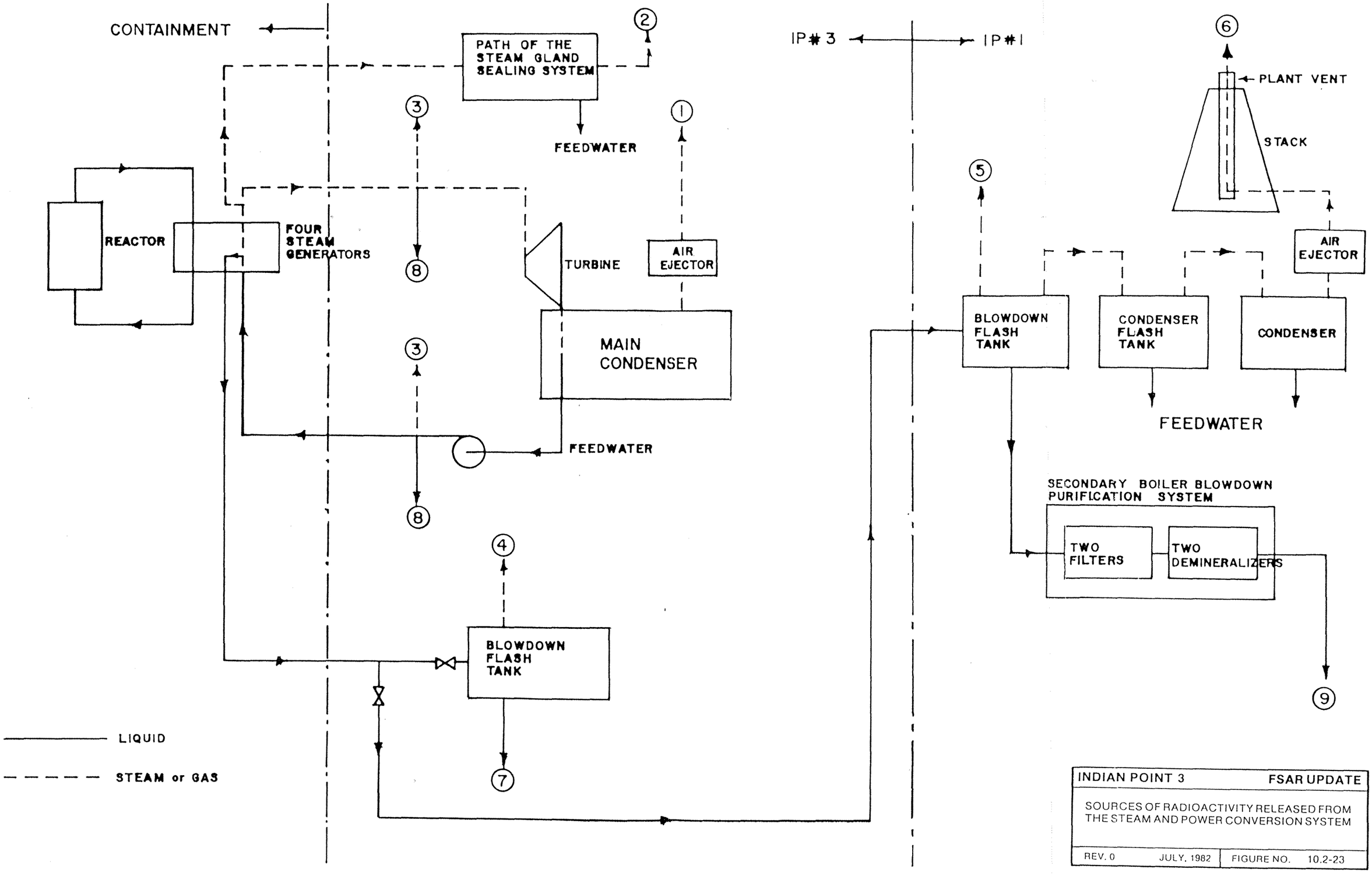

| INDIAN POINT 3 | | FSAR UPDATE |
|---|---|---|
| TYPICAL FLOW RESTRICTOR IN CONTAINING PIPE | | |
| REV. 0 | JULY, 1982 | FIGURE NO. 10.2-20 |



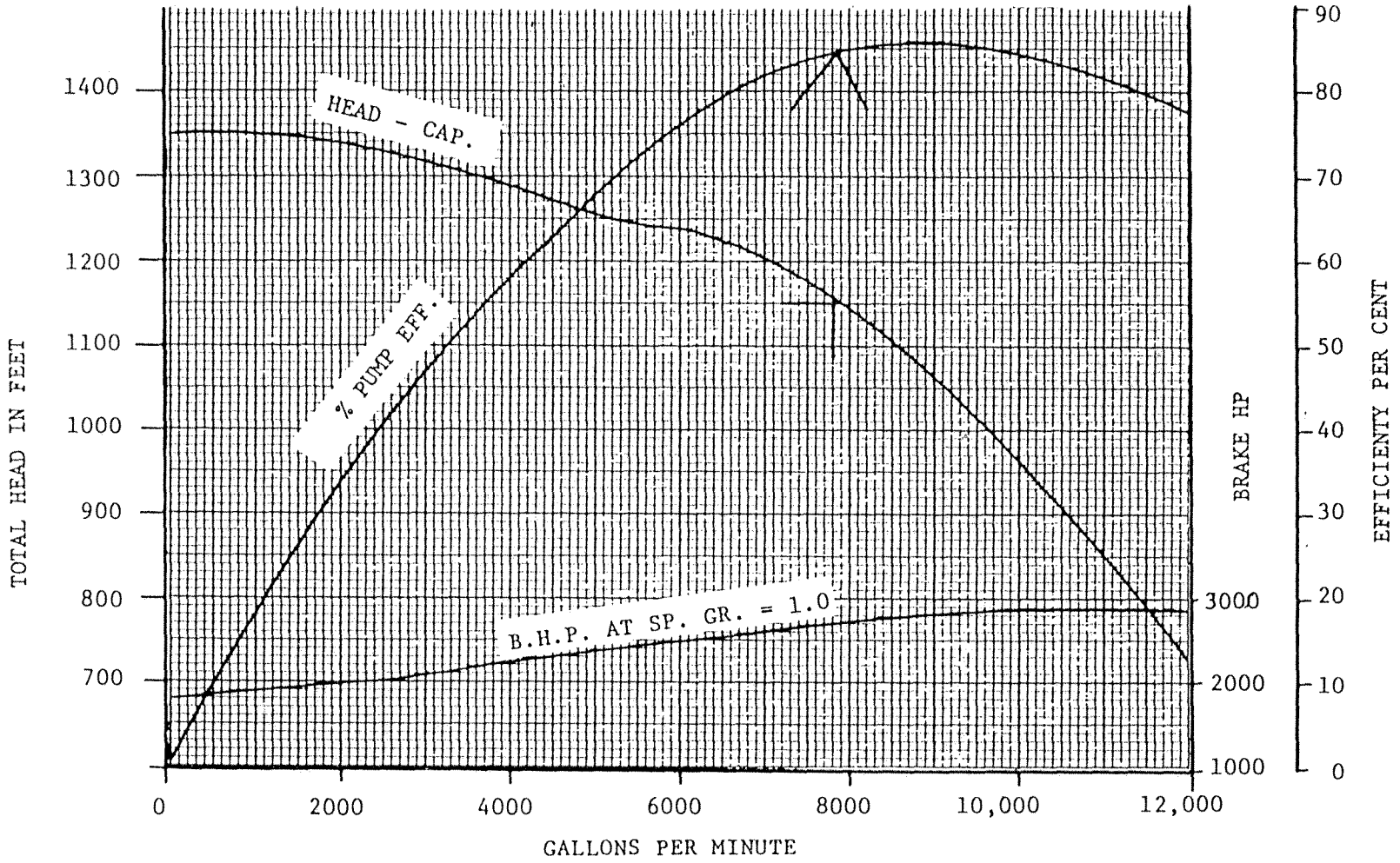

| INDIAN POINT 3 | | FSAR UPDATE |
|---|---|---|
| EQUIVALENT CURIES I-131 RELEASED DURING TWO HOUR STEAM DUMP OF 400,000 POUNDS AND SIX HOUR STEAM DUMP OF 1,400,000 POUNDS BASED ON 1% FUEL DEFECTS | | |
| REV. 0 | JULY, 1982 | FIGURE NO. 10.2-21 |




| INDIAN POINT 3 | FSAR UPDATE |
|---|---|
| EQUIVALENT CURIES Xe-133 RELEASE DURING TWO HOUR STEAM DUMP OF 400,000 POUNDS AND SIX HOUR STEAM DUMP OF 1,400,000 POUNDS BASED ON 1% FUEL DEFECTS | |
| REV. 0 JULY, 1982 | FIGURE NO. 10.2-22 |



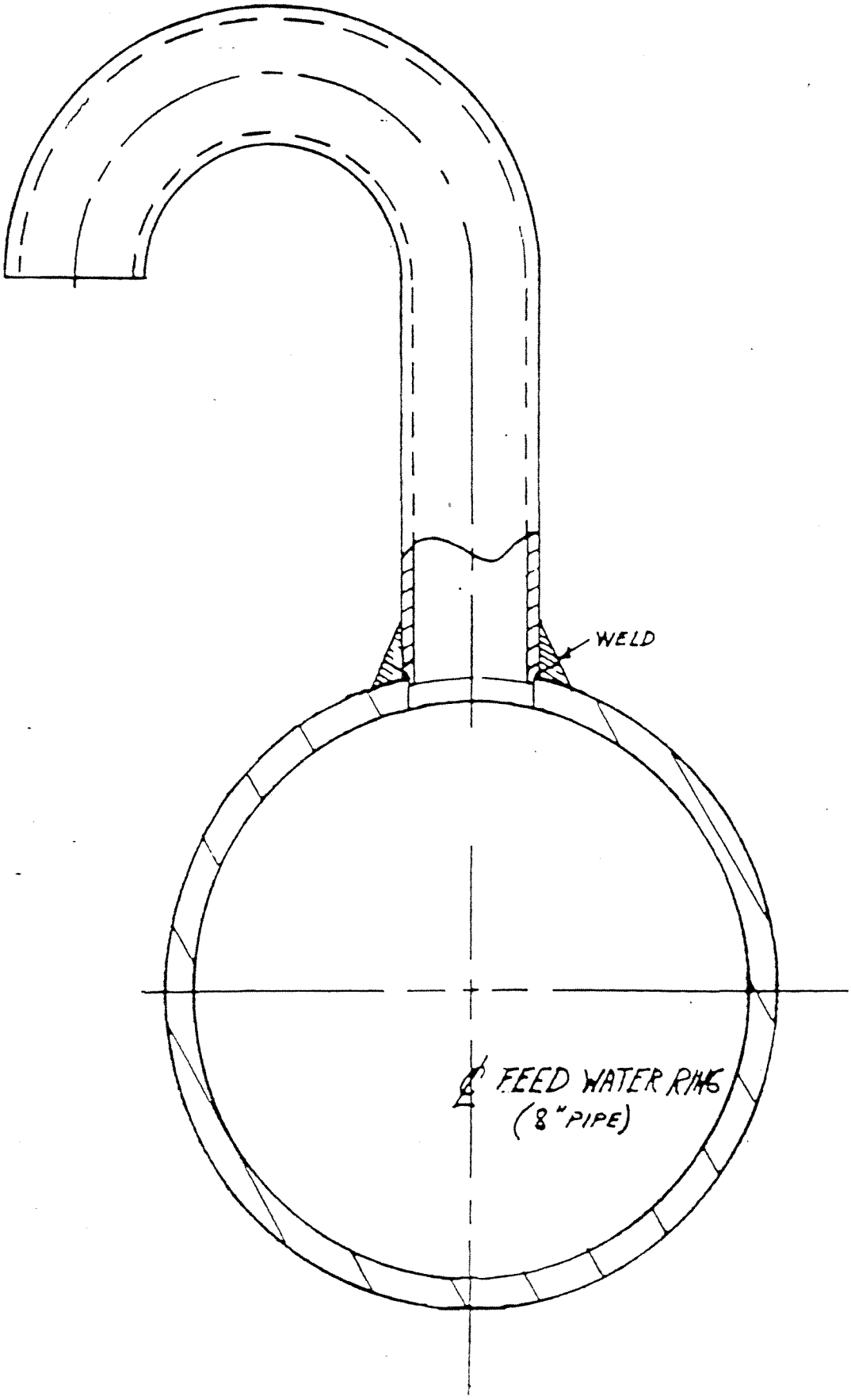

| INDIAN POINT 3 | FSAR UPDATE |
|---|---|
| SOURCES OF RADIOACTIVITY RELEASED FROM THE STEAM AND POWER CONVERSION SYSTEM | |
| REV. 0 JULY, 1982 | FIGURE NO. 10.2-23 |



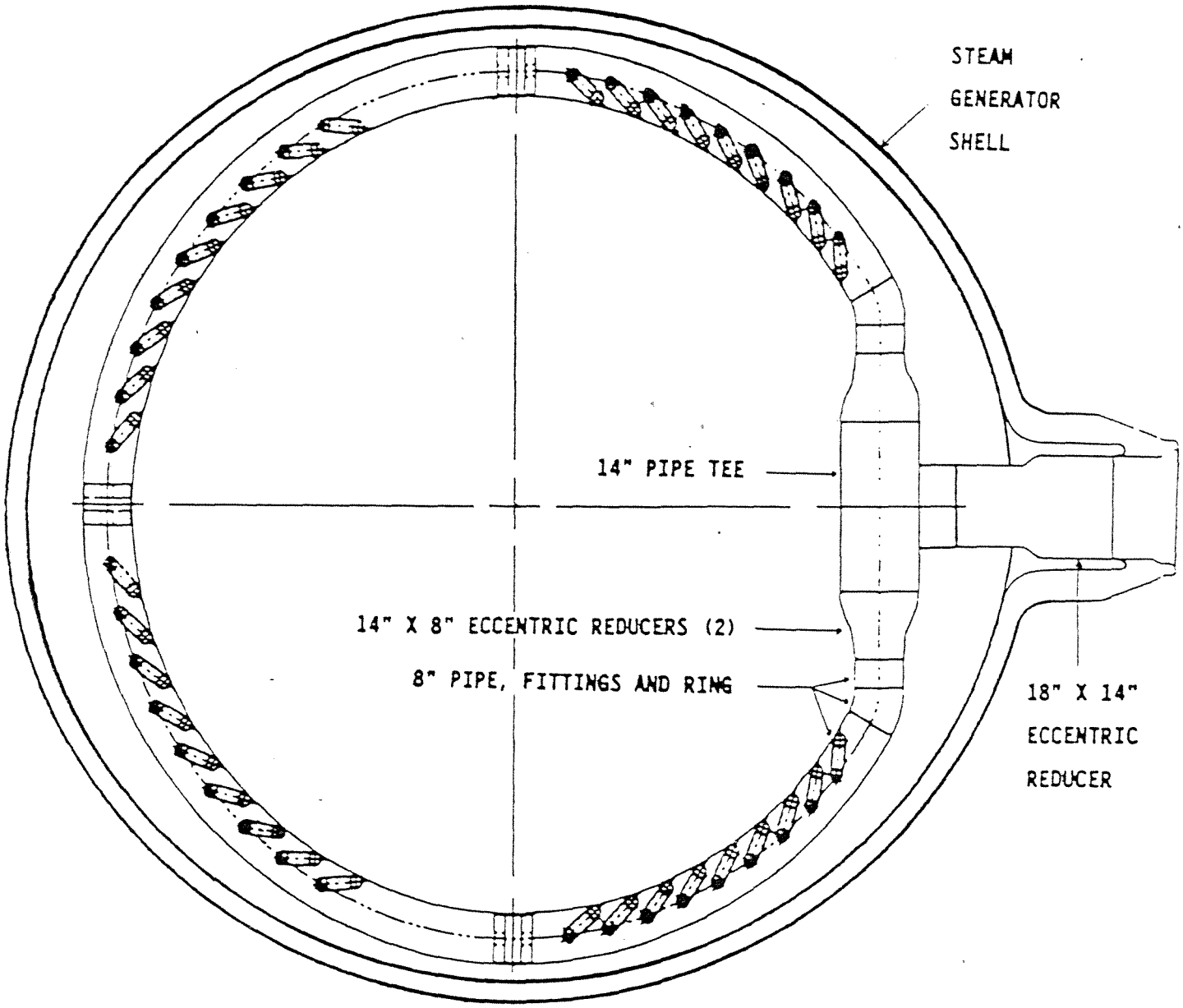

INDIAN POINT 3 FSAR UPDATE

CONDENSATE PUMPS
CHARACTERISTIC CURVE

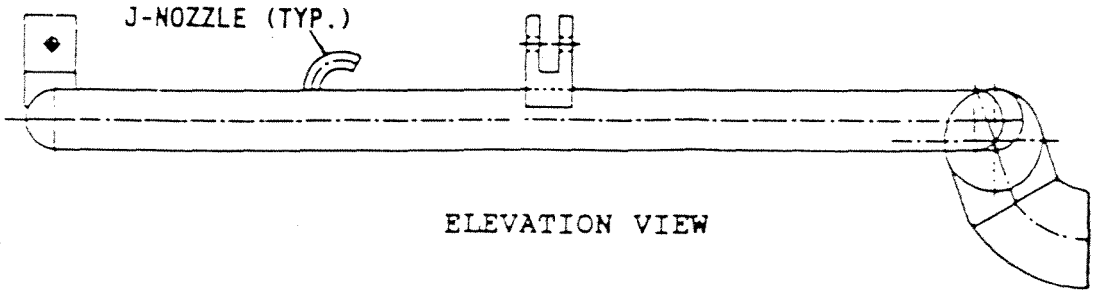
REV. 0 | JULY 1982 | FIGURE NO. 10.2-29




| INDIAN POINT 3 | FSAR UPDATE |
|---|---|
| STEAM GENERATOR<br>FEEDWATER RING (TYPICAL) | |
| REV. 1 JULY 1980 | FIGURE NO. 10.2-30 |

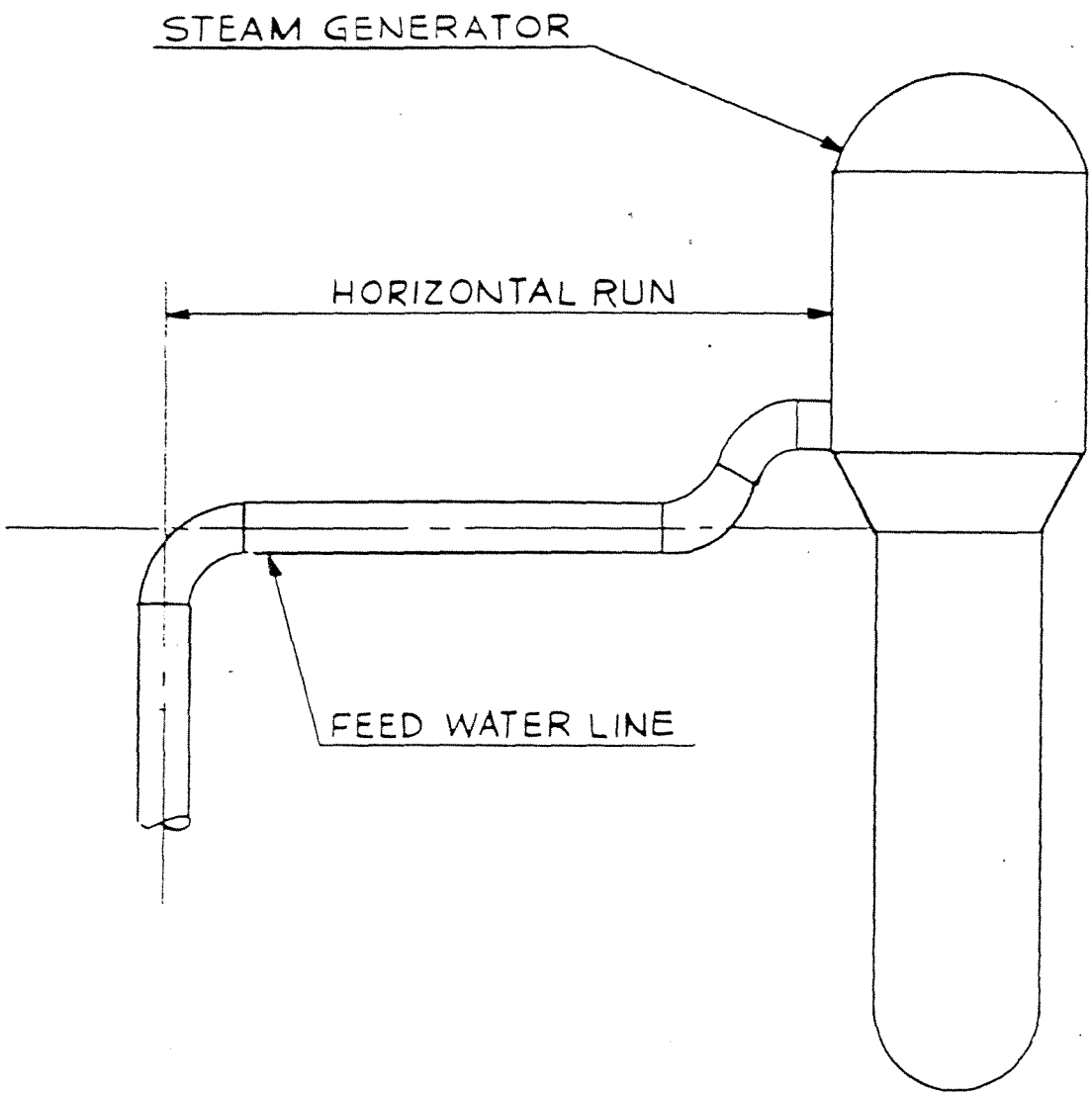



PLAN VIEW

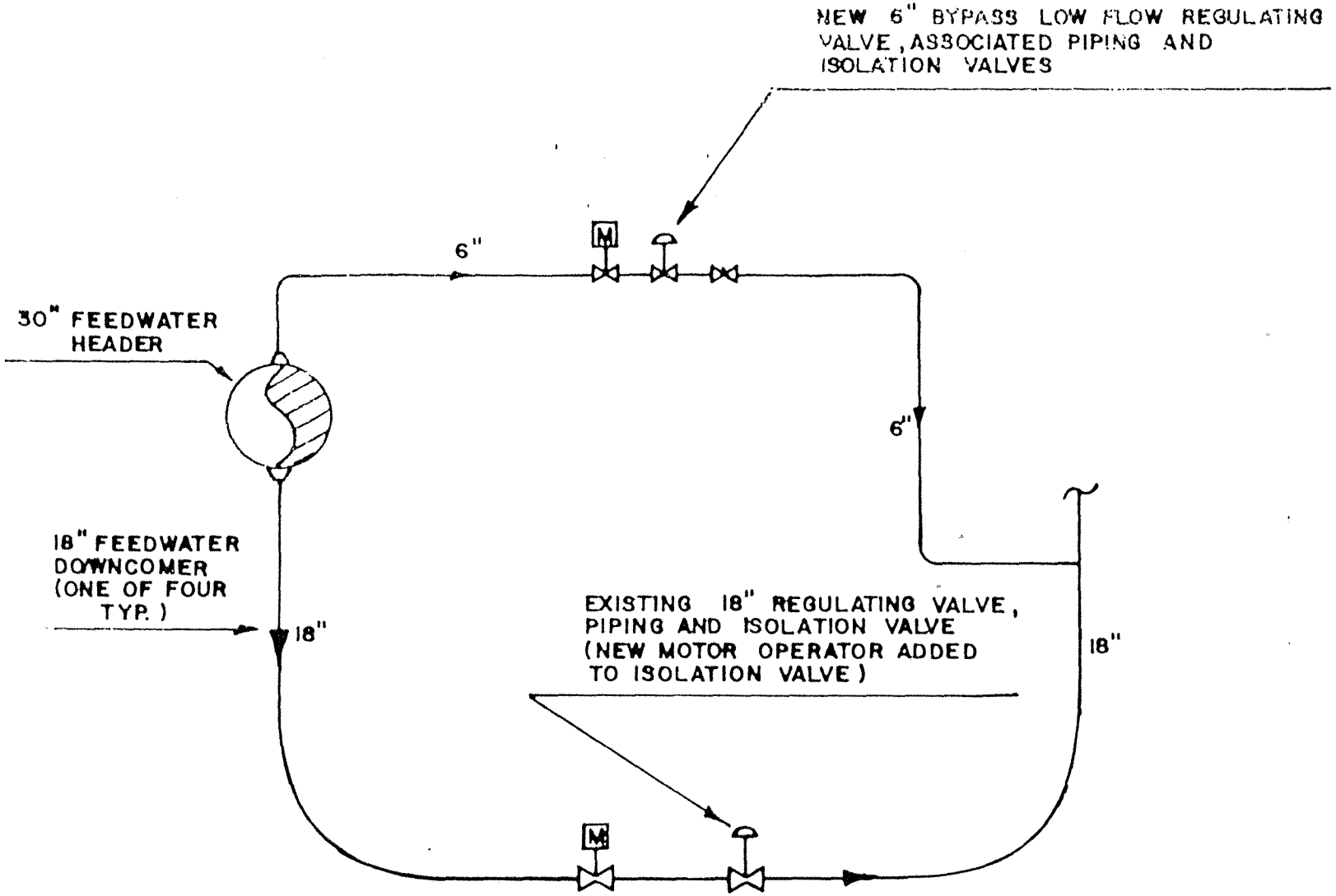



ELEVATION VIEW

| INDIAN POINT 3 | FSAR UPDATE |
|---|---|
| ARRANGEMENT OF STEAM GENERATOR FEEDWATER RING - PLAN AND ELEVATION VIEWS | |
| REV. 1 JULY, 1990 | FIGURE NO. 10.2-32 |



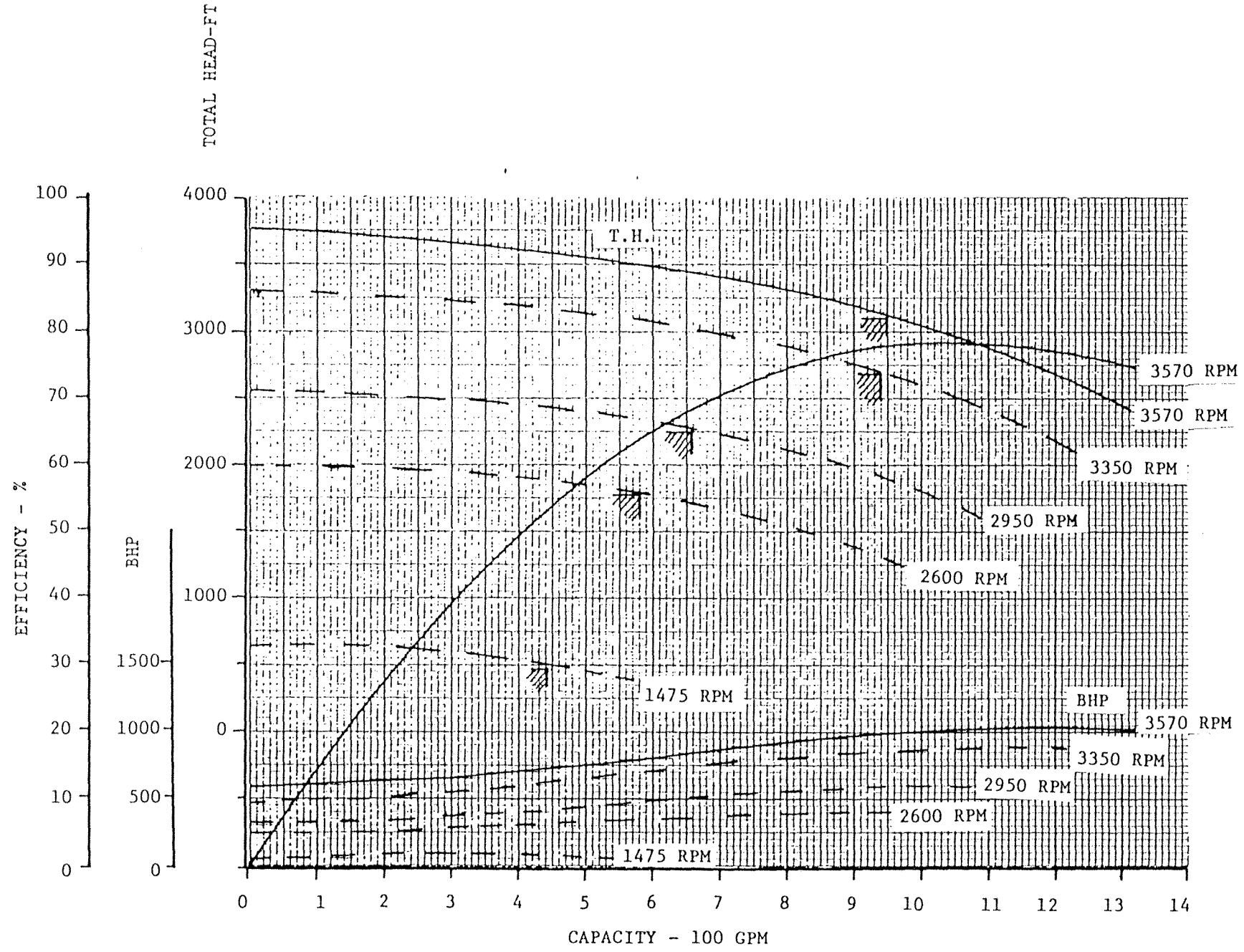

| INDIAN POINT 3 | | FSAR UPDATE |
|---|---|---|
| FEEDWATER PIPING TO STEAM GENERATOR | | |
| REV. 0 | JULY, 1982 | FIGURE NO. 10.2-33 |




INDIAN POINT 3 FSAR UPDATE

FEEDWATER REGULATING SYSTEM
SHOWING LOW FLOW BYPASS
REGULATOR (ONE OF FOUR TYP)

REV. 0 | JULY, 1982 | FIGURE NO. 10.2-34




INDIAN POINT 3 FSAR UPDATE

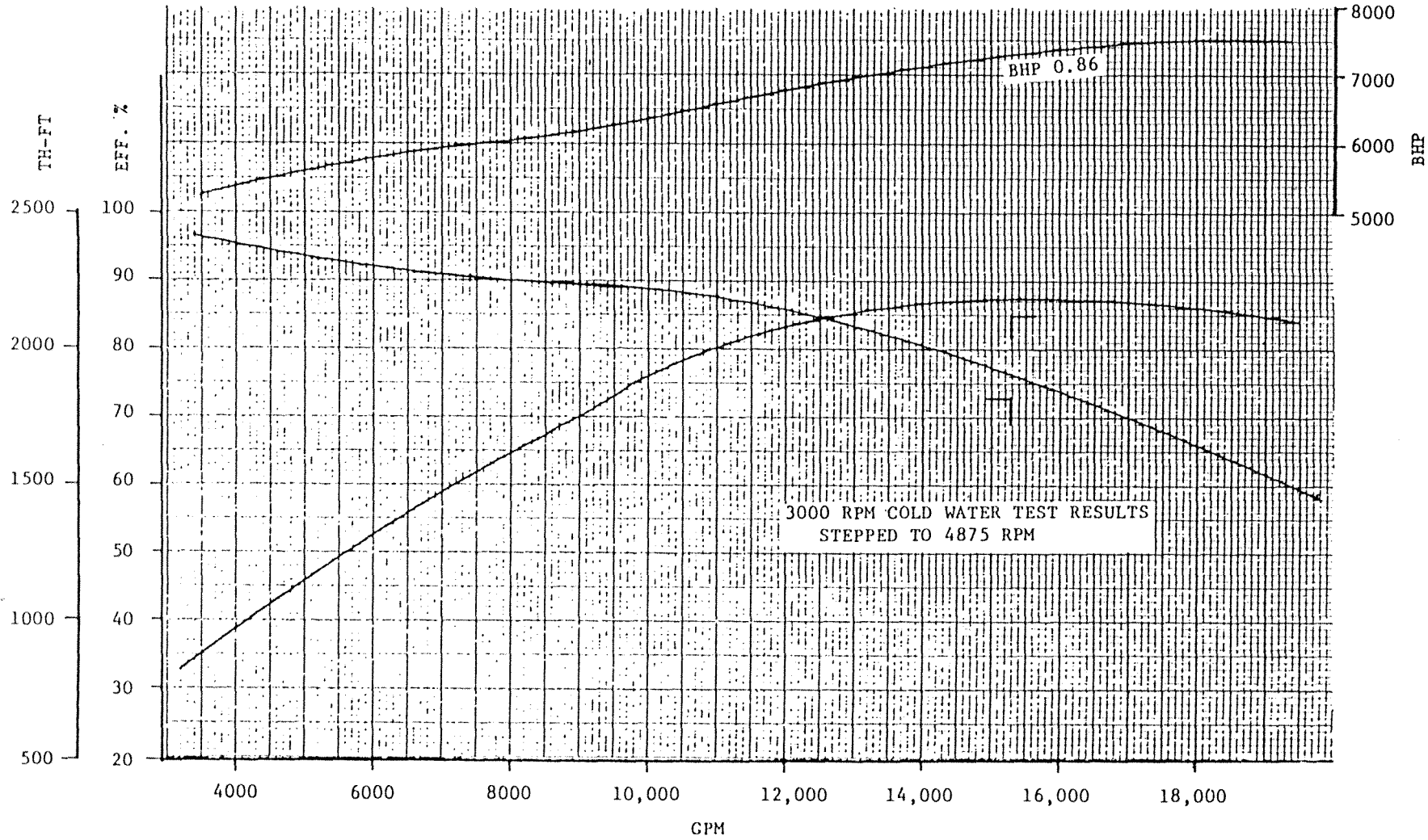
TURBINE DRIVEN AUXILIARY WATER PUMP CHARACTERISTIC CURVE

REV. 0 | JULY, 1982 | FIGURE NO. 10.2-35

INDIAN POINT 3 FSAR UPDATE

MOTOR DRIVEN AUXILIARY FEEDWATER PUMP CHARACTERISTIC CURVE

REV 0 JULY 1982 FIGURE NO. 10.2-36




INDIAN POINT 3 FSAR UPDATE

MAIN FEEDPUMP CHARACTERISTIC CURVE

REV. 0 | JULY, 1982 | FIGURE NO. 10.2-37