- VALVES -

- GATE, L.O. N.O., LOCK OPEN NORMALLY OPEN
- GATE, L.C. N.C., LOCK CLOSED NORMALLY CLOSED
- GATE (NORMALLY CLOSED) L.C.C., LOCKED CLOSED & CAPPED
- GLOBE, T.O., THROTTLED OPEN
- GLOBE, L.T., LOCKED THROTTLED
- CHECK
- BUTTERFLY
- PLUG OR BALL
- NEEDLE
- FLOW CONTROL
- STOP CHECK, STRAIGHT
- STOP CHECK
- CHECK WITH MANUAL LEVER
- DRAGON MANIFOLD BLOCK VALVE NORMALLY CLOSED & PLUGGED
- NORMALY CLOSED PORT, THREE WAY, NEXT PORT OF CLOSURE
- FOUR WAY
- DELUGE
- ANGLE
- STOP CHECK ANGLE
- GLAND LEAK-OFF
- GLAND SEAL-OFF
- FLOW LIMITING (OR EXCESS FLOW CHECK VALVE) NOTE 7 (EFC)
- POST INDICATOR
- EXPLOSION (EX)
- SAUNDERS TYPE
- QUICK OPENING
- BLEEDER TRIP (BT)
- RELIEF (RV)
- ALARM CHECK VALVE (SPRINKLER) (ACV)
- MANUAL REMOTE OPERATED — VALVE OPERATOR, P&ID NUMBER, SEQUENCE NUMBER (e.g. V0-61-16)
- WITH MANUAL OVERRIDE
- GLOBE Y-PATTERN
- HYDRAULIC OPERATED VALVE (HO)
- FLOAT OPERATED (FO)
- MOTOR OPERATED VALVE (MO)
- AIR OPERATED VALVE (AO) (OPEN-CLOSED) F.O.-FAILS OPEN F.C.-FAILS CLOSED
- CAM ACTUATED VALVE (COV)
- VACUUM BREAKER
- DELUGE VALVE (DV)
- FLOODING VALVE (FV)
- THERMAL EXPANSION VALVE (TEV)

- PIPE SYMBOLS -

- EJECTOR OR EDUCTOR
- INCREASER, REDUCER
- ECCENTRIC REDUCER
- WELDING CAP (W.C.)
- SCREWED CAP (S.C.)
- HOSE CONNECTION (H.C.)
- BLIND FLANGE (B.F.)
- FLEXIBLE CONNECTION
- FIRE DEPARTMENT CONNECTION
- EXHAUST HEAD
- ATMOS VENT
- CLOSED DRAIN
- OPEN DRAIN FUNNEL

CRW- EQUIPMENT (CLEAN) RADWASTE
DRW- FLOOR (DIRTY) RADWASTE
AW- ACID WASTE (CORROSIVE, CAUSTIC)
NW- NORMAL WASTE (CONVENTIONAL)
OW- OILY WATER WASTE
SW- SANITARY WASTE
SRW- SLUDGE RADWASTE

- FIRE HYDRANT
- HEAT DETECTOR (HD)
- FIRE HOSE STATION (HR)
- INSULATED COUPLING OR UNION
- FORWARD-REVERSE TUBE
- SPECTACLE FLANGE
- INSULATING FITTING
- SAMPLE TEST POINT (SX)
- SPRAY NOZZLE (SN)
- AIR VENT (AV)
- DRAIN TRAP (DT)
- STEAM TRAP (ST)
- FLOW RESTRICTING ORIFICE (RO)
- VACUUM RELIEF VALVE (VRV)
- VACUUM AIR RELEASE VALVE (VAV)
- RUPTURE DISC (RD)
- EXPANSION JOINT (IN-LINE) (EJ)
- EXPANSION JOINT (CASING TO PIPE) (EJ)
- BASKET STRAINER SIMPLEX (BS)
- BASKET STRAINER DUPLEX (BS)
- "Y" TYPE STRAINER (YS)

- PIPE SYMBOLS CONTINUE -

- TEMPORARY STRAINER (START-UP)
- FILTER
- FLAME ARRESTER (FA)
- (B) (GE) BECHTEL/GEN ELECTRIC SUPPLY
- ROD IN TUBE PRESSURE REDUCER
- CALIBRATION COLUMN
- STATIC MIXER

TYPICAL NOTATION - PIPE SPEC CHANGE -

A ↔ B
THIS WELD IS IN THE LOWER PIPE CLASS

- LINES -

SYSTEM NUMBER
LINE CLASS
LINE SIZE
4 DD-2"

- PROCESS LINE MAIN
- PROCESS AUXILIARY
- PIPING PER PENN STATE REQ'TS
- STEAM TRACING
- INSTRUMENT CONTROL AIR/GAS
- INSTRUMENT PRIMARY LINE
- INSTRUMENT CAPILLARY TUBING
- ELECTRICAL AND THERMOCOUPLE LEADS
- ELECTRICAL HEAT TRACING
- FUSED CLOSED SPRAY HEADS
- OPEN SPRAY HEADS
- (D.5) DRAWING REFERENCE, DRAWING COORDINATE
- BURIED EMBEDED OR IN PIPE CHASE
- INSIDE → OUTSIDE CONTAINMENT PENETRATION

VALVE SIZE — VALVE MARK NO. (3"-N1)

N-MEETS QE-APED REQ'TS FOR NUCLEAR SERVICE

R-MEETS QE-APED REQ'TS FOR REACTOR AUXILIARY AND SAFETY SYSTEMS

- HEATING & VENTILATION ABBREVIATIONS & SYMBOLS -

CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
RA	RETURN AIR
OA	OUTSIDE AIR
UH	UNIT HEATER
BD	BALANCE DAMPER
BDD	BACKDRAFT DAMPER
PRD	PRESSURE RELIEF DAMPER
→	AIR FLOW (DUCTED)
⇢	AIR FLOW (NOT DUCTED)
–	RETURN OR EXHAUST AIR
⊣	SUPPLY AIR
⊣⊢	DUCT DAMPER
⊣⊢	BACKDRAFT DAMPER
	CLEANABLE OR THROW AWAY FILTER
	CHARCOAL FILTER
	HIGH EFFICIENCY FILTER
	BAG FILTER
	ROLL TYPE FILTER
	HEATING COIL - COOLING COIL

- VALVE IDENTIFYING NUMBERS -

UNIT NUMBER

UNIT	COMMON	UNIT #2	UNIT #3
NUMBER	0	2	3

UNIT IDENTIFIER

UNIT	COMMON	UNIT #2	UNIT #3
IDENTIFIER	A 1 & 6	2, 4 & 8	3, 5 & 9

SUB SYSTEM
UNIT IDENTIFIER — SHOWN ONLY WITH FOUR OR FIVE DIGIT SEQUENCE NUMBERS
SEQUENCE NUMBER
SIMILAR SERVICE IDENTIFIER — FOR VALVES IN DUPLICATE SERVICE THE SEQUENCE NUMBER SHALL BE FOLLOWED WITH AN ALPHA CHARACTER
SYSTEM
VALVE DESCRIPTION (SEE NOTE)

EXAMPLE #1	IDV-1-0A-12345
EXAMPLE #2	IDV-1-0A-1234A (EXAMPLE A, B, C ETC.)
EXAMPLE #3	IDV-0-1-0A-1234 (FOR VENTILATION VALVES THE SEQUENCE NUMBER SHALL BE FOLLOWED BY A DASH "-" AND A TWO DIGIT NUMERIC CHARACTER.)
EXAMPLE #4	IDV-0-1-0A-12A
EXAMPLE #5	IDV-0-1-0A-1A

UNIT NUMBER — SHOWN ONLY WITH ONE, TWO OR THREE DIGIT SEQUENCE NUMBERS

VALVE DESCRIPTION
CHK - CHECK VALVE
HV - HAND VALVE
IDV - INSTRUMENT DRAIN VALVE
IEV - INSTRUMENT EQUALIZATION VALVE
IIV - INSTRUMENT ISOLATION VALVE
ISV - INSTRUMENT SHUTOFF VALVE
IVV - INSTRUMENT VENT VALVE
PCR - PRESSURE CONTROL REGULATOR
RTV - ROOT VALVE
SSI - SAMPLE SINK ISOLATION VALVE
XFC - EXCESS FLOW CHECK VALVE
VBV - VACUUM BREAKER

NOTE:
VALVE DESCRIPTION PREFIX "CHK" (CHECK VALVE), "HV" (HAND VALVE) AND "XFC" (EXCESS FLOW CHECK VALVE) SHALL NOT BE SHOWN IN THE VALVE IDENTIFYING NUMBER ON THE P & ID BUT SHALL BE UNDERSTOOD.

COMPONENT DESCRIPTION
CC - CONDENSING CHAMBERS

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REVD	DWN	CHKD	APPD
A	ANY	INITIAL ISSUE FOR LICENSE RENEWAL	JDO	KCS	MSM	DAP

LICENSE RENEWAL DRAWING
LEGEND
PEACH BOTTOM APS UNITS 2 & 3
EXELON
SHEET 2 OF LR-M-300 A

LR-M-300 (SHT.2)
CATEGORY A1
D-2