REVISIONS		
REV	ZONE	DESCRIPTION
19	D-8	REVISED TO INCORPORATE ECR-13-00325 REV. 0

VALVES

TYPES

- GATE
- HOSE GATE
- GLOBE
- HOSE GLOBE
- BALL
- PLUG
- BUTTERFLY
- NEEDLE
- DIAPHRAGM PACKLESS
- BELLOWS SEAL PACKLESS
- SWING-CHECK
- STOP-CHECK
- ANGLE STOP-CHECK
- LIFT-CHECK
- BALL-CHECK
- TILTING DISC-CHECK
- SPRING CONTROLLED-CHECK
- SPRING CONTROLLED BALL-CHECK
- AUTOMATIC BALL DRIP-CHECK
- HORIZONTAL DRIP-CHECK
- ANGLE DRIP-CHECK
- ANGLE
- ANGLE SAFETY OR RELIEF
- HOSE ANGLE
- BACKFLOW PREVENTER (19)
- CONTROL
- PRESSURE REGULATOR (INTERNAL PRESS. TAP)
- PRESSURE REGULATOR (EXTERNAL PRESS. TAP)
- PRESSURE REGULATING VALVE SPRING CONTROLLED, SELF-CONTAINED
- 3-WAY
- 4-WAY
- STEM LEAKOFF
- VACUUM BREAKER
- IN-LINE RELIEF
- POP-OFF RELIEF
- DEAD-WEIGHT RELIEF
- FLOW & PRESSURE CONTROL
- MAIN REHEAT STOP & INTERCEPT
- EXTENSION STEM THROUGH SHIELD WALL
- ED VALVE STEM LEAKOFF TO EQUIPMENT DRAIN
- MES ENGINEERED SAFEGUARD ACTUATED
- ED VALVE STEM LEAKOFF TO EQUIPMENT DRAIN
- VALVE NORMALLY OPEN
- VALVE NORMALLY CLOSED

VALVE FAILURE MODES

FC	FAILS CLOSED
FO	FAILS OPEN
FAI	FAILS AS IS

OPERATORS

- MOTOR OPERATOR
- SOLENOID OPERATOR
- DIAPHRAGM OPERATOR
- PISTON OPERATOR
- NON-RETURN VALVE WEIGHT OPERATOR
- HYDRAULIC OPERATOR
- FLOAT OPERATOR
- DIAPHRAGM OPERATOR WITH HANDWHEEL
- POWER OPERATOR

SPECIALTY

- Y-STRAINER
- PERMANENT STRAINER
- BATHTUB UNIT TEMPORARY STRAINER
- SINGLE BASKET STRAINER
- DUPLEX STRAINER
- TEMPORARY STRAINER
- FLOW VENTURI, INSTRUMENT ORIFICE, OR CAVITATING VENTURI
- FLOW ELEMENT OR RESTRICTING ORIFICE
- ANNUBAR
- IN LINE SIGHT FLOW GLASS
- IN-LINE ROTATING FLOW DEVICE
- SPARGER
- TRAP
- FILTER
- SPRAY NOZZLE
- RUPTURE DISC
- TANK SCREEN STRAINER
- VALVE DISCHARGE TARGET
- BEARING
- EXPANSION JOINT
- INSTRUMENT AIR FILTER REGULATOR
- SPECTACLE BLIND
- RUPTURE DIAPHRAGM
- STRAIGHTENING VANE

EQUIPMENT

- HEAT EXCHANGERS OR COOLERS
- JET AIR EJECTOR OR EDUCTOR
- DESUPERHEATER
- TURBINE
- AGITATOR OR MIXER
- ELECTRIC MOTOR DRIVE
- TURBINE DRIVE
- TANK
- PRESSURE VESSEL
- COOLER
- BLOWER OR FAN
- POSITIVE DISPLACEMENT PUMP
- VACCUM PUMP OR COMPRESSOR
- CENTRIFUGAL PUMP
- VERTICAL PUMP
- SUMP PUMP
- VERTICAL PUMP (OPEN SUCTION BELL TYPE)
- AIR ACTUATED PUMP
- VERTICAL CENTRIFUGAL PUMP
- MISC. PUMP
- IN-LINE VERTICAL CIRCULATING PUMP
- ROTARY GEAR PUMP

HVAC

- RETURN OR TRANSFER AIR
- SUPPLY OR OUTSIDE AIR
- P AIR FILTER PREFILTER
- H AIR FILTER HEPA
- C AIR FILTER CARBON
- REFRIGERANT FILTER
- CENTRIFUGAL FAN
- FAN W/INLET VORTEX DAMPER
- C COOLING COIL
- RH COIL REHEATER
- A-HEPA FILTER, C-CHARCOAL FILTER, P-PREFILTER
- H HEATING COIL
- R RADIANT HEATER
- EH ELECTRIC HEATING COIL
- D DEMISTER
- DX DIRECT EXPANSION COIL
- LOUVER
- TS THERMOSTAT
- H HUMIDSTAT
- TC TEMPERATURE CONTROLLERS
- FS FLOW SWITCH
- AXIAL FAN
- PROPELLER FAN
- AXIAL FAN WITH VORTEX DAMPER
- AW AIR WASHER
- LOUVER
- POWERED ROOF VENTILATOR
- SUPPLY OUTLET
- RETURN / EXHAUST INLET
- SUPPLY AIR DUCT
- EXHAUST OR RETURN AIR DUCT
- HUMIDIFIER
- POS POSITION LIMIT SWITCH
- HIS HAND INDICATING SWITCH
- P/E PNEUMATIC/ELECTRIC SIGNAL CONNECTOR
- ALARM IN CONTROL RM

-- DAMPERS --

- FAIL CLOSE TYPE DAMPER
- BACKDRAFT DAMPER
- DAMPER
- PARALLEL BLADE
- OPPOSED BLADE
- M MOTOR OPERATED DAMPER
- G GRAVITY
- FD FIRE DAMPER
- DAMPER W/POSITIONER
- VD MANUAL OPERATED VOLUME DAMPER

LINE

- PRIMARY PROCESS
- SECONDARY PROCESS
- AUXILIARY
- ALL OTHER
- PNEUMATIC SIGNAL
- HEAT TRACED (ELECTRICAL)
- S HEAT TRACED (STEAM)
- CAPILLARY TUBING
- ELECTRICAL SIGNAL
- INSTRUMENT AIR
- DWG.NO.(A-1) CONTINUING TO DWG.NO. AT GRID COORDINATE A-1
- DWG.NO.(A-1) CONTINUING FROM DWG.NO. AT GRID COORDINATE A-1
- CHANGE OF LINE SPECIFICATION
- DIRECTION OF FLOW
- REDUCER
- FLANGED JOINT
- CAPPED LINE (BW)
- HOSE CONNECTION
- PIPE CAP
- VENT
- REMOVABLE SPOOL
- BLIND FLANGE
- FLEXIBLE HOSE
- ISOLATION & TEST CONNECTION
- PIPE PLUG
- DRAIN TO WASTE
- FLEXIBLE CONNECTOR

SYMBOL	LINE SPEC. NO.
A	900-1
B	600-1
C	400-1
D	300-1
E	150-1
F	150-2
G	125-1
H	125-2
J	150-F1
K	300-F1
L	50-1
M	300-2
N	150-3
P	C-1
Q	600-2
R	2500-2
S	125-3
T	2500-3
U	1500-1
V	CPVC
W	HCD
X	PVC
Y	FRP

FIRE PROTECTION

- HOSE REEL WITH HOSE
- FIRE HYDRANT
- DELUGE VALVE NORMALLY CLOSED)
- FLAME ARRESTER

MISCELLANEOUS

- S-I, S-II SEISMIC CLASS MARKER
- N-1, N-2 NUCLEAR CLASS MARKER
- (7) CONDENSER CONNECTION NUMBER
- (AB) PIPE SPECIFICATION FLAG
- RB REACTOR BUILDING
- HATCH PATTERN PLACED OVER ABANDONED PIPING/COMPONENTS

NO.	DWG. NO.	TITLE
REFERENCES		

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Exelon Nuclear

DRAWN: MARK TETKOSKIE	DATE: 02/24/14	
CHECKED:	DATE: 3/5/14	SYMBOLS FLOW DIAGRAM
DESIGN MANAGER	DATE	
ENGINEER	DATE	
ENGINEERING MANAGER	DATE: 5/15/14	

TMI-1	DWG. NO. 302-001	SH.	REV. 19
	SCALE: NONE		

INTERFACING CONCURRENCE

BA NO.

DWG.NO. 302-001 SH.