



TRANSMITTED SAMPLE



LOCAL SAMPLE

LOCALLY MOUNTED

REMOTE MOUNTED



NON-TRANSMITTING



TRANSMITTING TO MAIN CONTROL ROOM



TRANSMITTING TO SUB-PANEL

1-LOCALLY MOUNTED INSTRUMENT: ON A PIPE, COLUMN, OR INSTRUMENT STAND IN CLOSE PROXIMITY TO SENSING POINT.

2-REMOTE PANEL MOUNTED INSTRUMENT: SIGNAL RUN DIRECTLY FROM SENSING POINT TO MAIN CONTROL PANEL OR SUB-PANEL.

DESIGNATIONS USED WITH ABOVE SYMBOLS

FIRST LETTER	SECOND LETTER		THIRD LETTER	
	LETTER	PROCESS OR MEASUREMENT	LETTER	MAIN FUNCTION
SYSTEM IDENTIFICATION (INSTRUMENT OR SAMPLE LOCATION) SEE LIST	D	DIFFERENTIAL PRESSURE	S	CONTROL SWITCH
	F	FLOW	A	ALARM
	L	LEVEL	C	CONTROLLER
	P	PRESSURE	I	INDICATOR
	T	TEMPERATURE	R	RECORDER
	S	SAMPLE	X	TEST POINT
	R	RADIATION	Q	COMPUTER INPUT
	V	VIBRATION	P	PROTECTION SYSTEM INPUT

1- LETTERS IN TOP HALF OF SYMBOL INDICATE FUNCTION AND SYSTEM

2- NUMBERS IN BOTTOM HALF OF SYMBOL IDENTIFY INDIVIDUAL INSTRUMENTS OR SAMPLE CONNECTIONS.

INSTRUMENT & SAMPLING CONNECTION SYMBOLS

INSTRUMENTATION AND SAMPLING FIRST LETTER IDENTIFICATION LIST

A	AUXILIARY STEAM AND FEED PUMP TURBINE STEAM
B	STEAM GENERATOR
C	CONDENSATE AND COOLING WATER
D	DRIPS, DRAINS AND WARMING STEAM
E	ENVIRONMENTAL MONITORING
F	FEEDWATER
G	GAS SYSTEMS (EXCEPT FIRE FIGHTING CO ₂)
H	HEATER BLEEDS AND DRAINS
I	SAFETY INJECTION, RESIDUAL HEAT REMOVAL & CONTAINMENT SPRAY
J	
K	CONDENSATE AND CHEMICAL SERVICES
L	LUBE OIL AND ELECTRO-HYDRAULIC CONTROL FLUID
M	MAIN STEAM
N	NUCLEAR REACTOR COOLANT AND IN-CORE INSTRUMENTS
O	
P	PLANT AIR
Q	CHEMICAL AND VOLUME CONTROL
R	RADIOACTIVE WASTE DISPOSAL AND SPENT FUEL
S	STEAM SEALS AND AIR REMOVAL
T	TURBINE
U	BYPASS SYSTEM
V	VENTILATION AND HEATING STEAM
W	CIRCULATING WATER AND SERVICE WATER
X	CONTROL AIR
Y	
Z	FIRE SYSTEMS

VALVES

	GATE		SAFETY
	GLOBE		ANGLE
	NORMALLY CLOSED		CHECK
	BUTTERFLY		STOP CHECK
	THREE WAY		FLOAT CHECK
	DIAPHRAGM		NEEDLE

VALVE OPERATORS

	AIR		COCK
	SOLENOID		AIR PISTON
	ELECTRIC MOTOR		PROCESS ACTUATED (EXTERNAL TAP)

MISC. SYMBOLS

	SIGHT FLOW		VITAULIC COUPLING
	FLOW NOZZLE		
	EXPANSION JOINT		
	FLEXIBLE HOSE		
	STRAINER		
	ORIFICE		
	THERMAL SLEEVE		
	HEAT TRACED		
R	RESISTANCE ORIFICE		

F.O. FAIL OPEN

F.C. FAIL CLOSED

F.A.I. FAIL AS IS

L.O. LOCKED OR SEALED OPEN

L.C. LOCKED OR SEALED CLOSED

OMB OUTSIDE MISSILE BARRIER

IMB INSIDE MISSILE BARRIER

17	Revised per UCR-70		
DATE	NO.	DESCRIPTION	APPROVED
REVISIONS			
<p>THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED TO YOU ON THE CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTERESTS, AND IS TO BE RETURNED UPON REQUEST.</p>			
<p>INDIANA MICHIGAN POWER COMPANY DONALD C. COOK NUCLEAR PLANT</p>			
<p>BRIDGMAN MICHIGAN</p>			
<p>STANDARD SYMBOLS</p>			
<p>DWG. NO. FSAR FIG. 1 - 1</p>			
ARCH	ELEC	MECH	STR
SCALE	DATE	DATE	DATE
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN		MICHIGAN	
PLOT PLAN			
DWG. NO. FSAR FIG. 1.3-1			
ARCH	ELEC	MECH	STR
SCALE:		DATE:	
DESIGN		REVISION	
AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215			

Removed per Regulatory Issue Summary 2015-17

	27.48	REVISED PER UCR 2100, REV.0			
	27.51	REVISED PER UCR 2219, REV.0			
	27.54	REVISED PER UCR 2220, REV.0			
DATE	NO.	DESCRIPTION	DR.	CHK'D	APP'D
REVISIONS					
AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN		TITLE	KEY PLAN		
		REFER TO DRAWING MICROFILM OR MASTER INDEX FOR APPROVAL DATES AND SIGNATURES. (CADD-RASTER)			
		DWG. NO.	FSAR FIG. 1.3-1A		

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRICGMAN		MICHIGAN	
PLANT ARRANGEMENT			
SECTIONS "D-D", "E-E" &			
"F-F"			
UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 1.3 - 2			
ARCH	ELEC	MECH	STR
SCALE:		IN	
DATE:		BY	
DESIGN ENGINEERING DIVISION			
AMP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN			
PLANT ARRANGEMENT			
SECTIONS "G-G", "H-H",			
"J-J" & "K-K"			
UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 1.3-3			
ARCH	ELEC	MECH	STR
SCALE:			
DATE:			
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN			MICHIGAN
PLANT ARRANGEMENT			
SECTIONS "L-L" & "M-M"			
UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 1.3 - 4			
ARCH	ELEC	MECH	STR
SCALE:		DR	
DATE:		CH	
DESIGN ENGINEERING DIVISION			
ASP AMERICAN ELECTRIC POWER		ASP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN		MICHIGAN	
PLANT ARRANGEMENT			
SECTIONS "N-N", "P-P",			
"Q-Q" & "R-R"			
UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 1.3 - 5			
ARCH	ELEC	MECH	STR
SCALE:		BY:	
DATE:		CHK:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 7 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN		MICHIGAN	
PLANT ARRANGEMENT			
PLAN BELOW BASEMENT			
UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 1.3 - 6			
ARCH	ELEC	MECH	STR
SCALE:		DR:	
DATE:		CHK:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN		MICHIGAN	
PLANT ARRANGEMENT BASEMENT PLAN EL 591'-0" & 587'-0" UNITS 1 & 2			
DWG. NO. FSAR FIG. 1.3-7			
ARCH	ELEC	MECH	STR
SCALE:		DR:	
DATE:		CH:	
DESIGN ENGINEERING DIVISION			
REFER TO ORIGINAL ISSUE MICROFILM FOR SIGNATURES			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN		MICHIGAN	
PLANT ARRANGEMENT MEZZANINE FLOOR EL. 609'-0" UNITS 1 & 2			
DWG. NO. FSAR FIG. 1.3-8			
ARCH	ELEC	MECH	STR
SCALE:		DR:	
DATE:		CR:	
DESIGN ENGINEERING DIVISION			
REFER TO ORIGINAL ISSUE MICROFILM FOR SIGNATURES			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43216	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY			
DONALD C. COOK			
NUCLEAR PLANT			
BRIDGMAN			MICHIGAN
PLANT ARRANGEMENT			
TURBINE BUILDING			
MAIN FLOOR EL. 633'-0"			
UNITS 1 & 2			
DWG. NO. FSAR FIG. 1.3-9			
ARCH	ELEC	MECH	STR
SCALE:		DN:	
DATE:		DN:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

Removed per Regulatory Issue Summary 2015-17

INDIANA MICHIGAN POWER COMPANY				
DONALD C. COOK				
NUCLEAR PLANT				
BRIDGMAN		MICHIGAN		
PLANT ARRANGEMENT REACTOR BUILDING MAIN FLOOR EL. 650'-0" UNITS NO. 1 & 2				
DWG. NO. FSAR FIG. 1.3-10				
ARCH	ELEC	MECH	STR	
SCALE:		BY:		
DATE:		CHK:		
DESIGN ENGINEERING DIVISION				
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215		



TRANSMITTED SAMPLE



LOCAL SAMPLE

LOCALLY MOUNTED

REMOTE MOUNTED



NON-TRANSMITTING



TRANSMITTING TO MAIN CONTROL ROOM



TRANSMITTING TO SUB-PANEL

1-"LOCALLY MOUNTED" INSTRUMENT: ON A PIPE, COLUMN, OR INSTRUMENT STAND IN CLOSE PROXIMITY TO SENSING POINT.

2-"REMOTE PANEL MOUNTED" INSTRUMENT: SIGNAL RUN DIRECTLY FROM SENSING POINT TO MAIN CONTROL PANEL OR SUB-PANEL.

DESIGNATIONS USED WITH ABOVE SYMBOLS

SYSTEM IDENTIFICATION (INSTRUMENT OR SAMPLE LOCATION) SEE LIST	FIRST LETTER		SECOND LETTER		THIRD LETTER	
	LETTER	PROCESS OR MEASUREMENT	LETTER	MAIN FUNCTION		
	D	DIFFERENTIAL PRESSURE	S	CONTROL SWITCH		
	F	FLOW	A	ALARM		
	L	LEVEL	C	CONTROLLER		
	P	PRESSURE	I	INDICATOR		
	T	TEMPERATURE	R	RECORDER		
	S	SAMPLE	X	TEST POINT		
	R	RADIATION	Q	COMPUTER INPUT		
	V	VIBRATION	P	PROTECTION SYSTEM INPUT		

1- LETTERS IN TOP HALF OF SYMBOL INDICATE FUNCTION AND SYSTEM

2- NUMBERS IN BOTTOM HALF OF SYMBOL IDENTIFY INDIVIDUAL INSTRUMENTS OR SAMPLE CONNECTIONS.

INSTRUMENT & SAMPLING CONNECTION SYMBOLS

INSTRUMENTATION AND SAMPLING FIRST LETTER IDENTIFICATION LIST

A	AUXILIARY STEAM AND FEED PUMP TURBINE STEAM
B	STEAM GENERATOR
C	CONDENSATE AND COOLING WATER
D	DRIPS, DRAINS AND WARMING STEAM
E	ENVIRONMENTAL MONITORING
F	FEEDWATER
G	GAS SYSTEMS (EXCEPT FIRE FIGHTING CO ₂)
H	HEATER BLEEDS AND DRAINS
I	SAFETY INJECTION, RESIDUAL HEAT REMOVAL & CONTAINMENT SPRAY
J	
K	CONDENSATE AND CHEMICAL SERVICES
L	LUBE OIL AND ELECTRO-HYDRAULIC CONTROL FLUID
M	MAIN STEAM
N	NUCLEAR REACTOR COOLANT AND IN-CORE INSTRUMENTS
O	
P	PLANT AIR
Q	CHEMICAL AND VOLUME CONTROL
R	RADIOACTIVE WASTE DISPOSAL AND SPENT FUEL
S	STEAM SEALS AND AIR REMOVAL
T	TURBINE
U	BYPASS SYSTEM
V	VENTILATION AND HEATING STEAM
W	CIRCULATING WATER AND SERVICE WATER
X	CONTROL AIR
Y	
Z	FIRE SYSTEMS

VALVES

	GATE		SAFETY
	GLOBE		ANGLE
	NORMALLY CLOSED		CHECK
	BUTTERFLY		STOP CHECK
	THREE WAY		FLOAT CHECK
	DIAPHRAGM		NEEDLE

VALVE OPERATORS

	AIR		COCK
	SOLENOID		AIR PISTON
	ELECTRIC MOTOR		

MISC. SYMBOLS

	SIGHT FLOW		VITA CLUC COUPLING
	FLOW NOZZLE		

	EXPANSION JOINT
	FLEXIBLE HOSE
	STRAINER
	ORIFICE
	THERMAL SLEEVE
	HEAT TRACED

R	RESISTANCE ORIFICE
F.O.	FAIL OPEN
F.C.	FAIL CLOSED
FAI.	FAIL AS IS
L.O.	LOCKED OR SEALED OPEN
L.C.	LOCKED OR SEALED CLOSED
OMB	OUTSIDE MISSILE BARRIER
IMB	INSIDE MISSILE BARRIER

REFERENCES:

DATE	NO.	DESCRIPTION	APPRO.
REVISIONS FILENAME: fsar-fig-1-3-11.163 (master file: fsar-fig-1-3-11.163.cit)			
THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED TO YOU ON THE CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.			
INDIANA MICHIGAN POWER COMPANY DONALD C. COOK NUCLEAR PLANT			
STANDARD SYMBOLS			
DWG. NO. FSAR FIG. 1.3			
ARCH	ELEC	MECH	STR
SCALE	ORI		
DATE	CHI		
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	