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Indian Point 3 Nuclear Power Plant

Systems Interaction Study Report

Volume 16

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New York Power Authority

Indian Point 3 Nuclear Power Plant

Systems Interaction Study Report

Volume 16

COPY NUMBER 5

New York Power Authority

11.0 Diesel Generator System

11.1 Function & Applicability

The Diesel Generator System (DGS) is required to provide a source of backup power to safety related equipment following a loss of normal power supply. DGS is described in System Description 27.3.

11.2 Scope

11.2.1 For the purpose of this study DGS includes:

- Diesel Generator
- Jacket Water System
- Fuel Oil System
- Starting Air System
- Lube Oil System
- D G Building Ventilation
- Piping, Valves, Instrumentation and Electrical components as indicated in the corresponding disciplines Nonconnected and Interconnected Matrices.

The boundaries of this study for DGS are shown on flow diagram FD 5209.11, Sheets 1 and 2.

11.2.2 Support systems relied upon for DGS safety related functions are indicated on Auxiliary Diagray AD-11.

11.2.3 The city water system interfaces with the jacket water system of the Diesel Generator by providing makeup. The makeup is for fluid loss through primarily evaporation and leakage. Makeup is not considered a safety function since it is assumed that the Diesel Generator could operate for an extended period of time with the available water inventory of the jacket and expansion tank.

11.2.4 All devices located in the Control Room are evaluated generically as part of the Control Room review.

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3
SYSTEMS INTERACTION STUDY
TABULATION OF POTENTIALLY UNACCEPTABLE SPATIAL INTERACTIONS
DIESEL GENERATOR SYSTEM
MECHANICAL

	POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1) (2)	EIC (1) (2)	SPAN EVALUATION (1) (2) (3)
	L-11-1-1	11-M-1-A	NR	NR
	L-11-5-3	11-M-2-P	102A-001-A	NR
*	L-11-5-5	11-M-2-P	102A-002-P	NA
	L-11-6-4	11-M-3-P	102A-003-A	NR
*	L-11-6-5	11-M-3-P	102A-002-P	NA
	L-11-7-1	11-M-4-A	NR	NR
	L-11-9-1	11-M-5-P	102A-005-P	5209-10-039-A
	L-11-10-1	11-M-6-A	NR	NR
	L-11-11-1	11-M-7-A	NR	NR
*	L-11-17-1	11-M-8-P	102A-002-P	NA
	L-11-18-2	11-M-9-A	NR	NR
*	L-11-19-1	11-M-10-P	102A-002-P	NA
*	L-11-20-1	11-M-11-P	102A-002-P	NA
	L-11-21-1	11-M-12-A	NR	NR
	L-11-24-2	11-M-13-P	102A-005-P	5209-10-039-A
	L-11-27-1	11-M-14-A	NR	NR
*	L-11-32-1	11-M-15-P	101A-002-P	NA

NOTES: 1) Letter following numbers mean; A - Acceptable, P - Potentially Unacceptable.
2) NR - Evaluation is Not Required since interaction is now acceptable.
3) NA - Type of evaluation is not applicable to this interaction.
4) Disposed of by repair in AFW pump building.
* Unacceptable by all 3 types of evaluation.

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	L-11-32-2	11-M-15-P	101A-001-A	NR
*	L-11-33-1	11-M-16-P	101A-002-P	NA
	L-11-35-4	11-M-17-A	NR	NR
	L-11-37-4	11-M-18-P	101A-005-P	5209-101A-038-A
	L-11-38-4	11-M-19-A	NR	NR
	L-11-39-4	11-M-20-A	NR	NR
	L-11-40-4	11-M-21-A	NR	NR
	L-11-41-4	11-M-22-P	101A-005-P	5209-10-039-A
*	L-11-48-1	11-M-23-P	101A-002-P	NA
	L-11-49-1	11-M-24-A	NR	NR
*	L-11-50-1	11-M-25-P	101A-002-P	NA
*	L-11-51-1	11-M-26-P	101A-002-P	NA
	L-11-52-1	11-M-27-A	NR	NR
	L-11-53-3	11-M-28-P	101A-005-P	5209-10-039-A
	L-11-59-1	11-M-29-A	NR	NR
	L-11-60-3	11-M-30-A	NR	NR
	L-11-63-2	11-M-31-A	NR	NR

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	L-11-65-3	11-M-32-A	NR	NR
	L-11-67-3	11-M-33-P	10-005-P	5209-10-037-A
	L-11-68-3	11-M-34-A	NR	NR
	L-11-69-3	11-M-35-A	NR	NR
*	L-11-73-2	11-M-36-P	10-002-P	NA
	L-11-73-3	11-M-36-P	10-005-P	5209-10-039-A
	L-11-75-2	11-M-37-A	NR	NR
	L-11-75-3	11-M-37-A	NR	NR
*	L-11-78-1	11-M-38-P	10-002-P	NA
*	L-11-79-1	11-M-39-P	10-002-P	NA
*	L-11-80-1	11-M-40-P	10-002-P	NA
	L-11-81-1	11-M-41-A	NR	NR
	L-11-82-2	11-M-42-P	10-005-P	5209-10-039-A
	L-11-87-1	11-M-43-A	NR	NR
*	V-11-5-1	11-M-44-P	102A-004-P	NA
*	V-11-5-2	11-M-44-P	102A-002-P	NA
*	V-11-5-3	11-M-44-P	102A-001-P	NA

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	POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1) (2)	EIC (1) (2)	SPAN EVALUATION (1) (2) (3)
*	V-11-5-4	11-M-44-P	102A-003-P	NA
	V-11-6-2	11-M-45-A	NR	NR
	V-11-7-2	11-M-46-P	102A-002-A	NR
	V-11-10-1	11-M-47-P	102A-005-P	5209-101A-038-A
	V-11-12-1	11-M-48-P	102A-005-P	5209-101A-038-A
	V-11-13-1	11-M-49-A	NR	NR
	V-11-19-1	11-M-50-A	NR	NR
	V-11-23-1	11-M-51-P	102A-002-A	NR
*	V-11-45-1	11-M-52-P	101A-001-P	NA
*	V-11-45-2	11-M-52-P	101A-003-P	NA
*	V-11-45-3	11-M-52-P	101A-002-P	NA
*	V-11-45-4	11-M-52-P	101A-004-P	NA
	V-11-52-1	11-M-53-P	101A-005-P	5209-101A-038-A
	V-11-53-1	11-M-54-A	NR	NR
	V-11-58-1	11-M-55-A	NR	NR
*	V-11-84-1	11-M-56-P	10-004-P	NA
*	V-11-84-2	11-M-56-P	10-002-P	NA

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POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1) (2)	EIC (1) (2)	SPAN EVALUATION (1) (2) (3)
* V-11-84-3	11-M-56-P	10-003-P	NA
* V-11-84-4	11-M-56-P	10-001-P	NA
V-11-89-1	11-M-57-P	10-005-P	5209-10-037-A
V-11-91-1	11-M-58-P	10-005-P	5209-10-037-A
V-11-92-1	11-M-59-A	NR	NR
V-11-97-1	11-M-60-A	NR	NR
V-11-101-1	11-M-61-A	NR	NR
V-11-103-1	11-M-62-P	10-002-A	NR

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INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
MATRIX PREPARATION

SYSTEM NO 11

SYSTEM NAME DIESEL GENERATOR SYSTEM

MATRIX CATEGORY

NON-CONNECTED _____

INTERCONNECTED X

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Ebasco Services Incorporated

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INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (EQUIPMENT)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
40 GAL JACKET WATER EXPANSION TANK #33	1"-JW-1042	S	
	1"-CHEMICAL INJECTION POINT & FILL CONN.	S	
	½"-LG- (INST CONN.)	S	
	3/4"-JW-1035	S	
	3/4"-JW-1039	S	
	1"-JW-1036	S	
DIESEL ENGINE NO.33	3/4"-JW-1039	S	
	1"-JW-1036	S	
	3/4"-DF-1110	S	
	3/4"-DF-1109	S	
	3/4"-DF-1108	S	
	1½"-DA-1111	S	
	1½"-DA-1114	S	
GENERATOR	480V SWGR BUS 5A	S	
40GAL JACKET WATER EXPANSION TANK #32	1"-JW-1043	S	
	1"-CHEMICAL INJECTION POINT & FILL CONN.	S	
	½"-LG (INST. CONN.)	S	
	3/4"-JW-1034	S	
	3/4"-JW-1040	S	
	1"-JW-1037	S	
DIESEL ENGINE NO. #32	3/4"-JW-1040	S	

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INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT EQUIPMENT	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
	3/4"-JW-1037	S	
	3/4"-DF-1107	S	
	3/4"-DF-1106	S	
	3/4"-DF-1105	S	
	1½"-DA-1112	S	
	1½"-DA-1115	S	
GENEATOR #32	480V SWGR BUS 6A	S	
40GAL. JACKET WATER EXPANSION TANK #31	1"-JW-1044	S	
	1"-CHEMICAL INJECTION POINT & FILL CONN.	S	
	½"-LG (INST. CONN.)	S	
	3/4"-JW-1033	S	
	3/4"-JW-1041	S	
	1"-JW-1038	S	
DIESEL ENGINE	3/4'-JW-1041	S	
	3/4"-JW-1038	S	
	3/4"-DF-1104	S	
	3/4"-DF-1103	S	
	3/4"-DF-1102	S	
	1½"-DA-1113	S	
	1½"-DA-1116	S	
GENERATOR #31	480V SWGR BUS 2A	S	
7700 GAL FUEL OIL STORAGE	3"-DF-1218	S	
	LI-1135	S	

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SYSTEM INTERACTION STUDY

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TANK NO.#33	4"-DIESEL OIL FILL LINE	N	11-M-1
	4"-DF-1119	S	
	FUEL OIL TRANSFER PUMP NO33	S	
	LC-1206-s	S	
	3"-DF-1062	S	
	3"-DF-7	S	
FUEL OIL TRANSFER PUMT NO. #33	1½"-DF-1050	S	
	7700 GAL. FUEL OIL STORAGE TANK NO. #33	S	
MOTOR	480 V MCC 36A	S	
175 GAL FUEL OIL DAY TANK NO. 33	3"-DF-1068	S	
	3/4"-DF-1108	S	
	2"-DF-1079	S	
	LI-1138	S	
	1"-DF-1063	S	
	1"-DF-1052	S	
	3/4"-DF-1109	S	
	LC-1209-S	S	
	3/4"-DF-1110	S	
7700 GAL FUEL OIL STORAGE TANK NO. 32	3"-DF-1217	S	
	LI-1134	S	
	4"-DIESEL OIL FILL LINE	N	11-M-1
	4"-DF-1118	S	
	FUEL OIL TRANSFER PUMP NO. 32	S	
	LC-1205-S	S	
	3"-DF-1065	S	
	3"-DF-1218	S	
	3"-DF-7	S	

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INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (EQUIPMENT)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
FUEL OIL TRANSFER PUMP NO. 32	1½"-DF-1053	S	
	7700 GAL FUEL OIL STORAGE TANK NO. 32	S	
MOTOR	480V MCC 36B	S	
175 GAL FUEL OIL DAY TANK NO32	3"-DF-1067	S	
	3/4"-DF-1105	S	
	2"-DF-1078	S	
	LI-1137	S	
	1"-DF-1069	S	
	1"-DF-1054	S	
	3/4"-DF-1106	S	
	LC-1208-S	S	
	3/4"-DF-1107	S	
7700GAL. FUEL OIL STORAGE TANK NO 31	LI-1133	S	
	4"DIESEL OIL FILL LINE	N	11-M-1
	4"-DF-1117	S	
	FUEL OIL TRAMSFER PUMP NO 31	S	
	LC-1204	S	
	3"-DF-1066	S	
	3"-DF-1217	S	
	3"-DF-7	S	
FUEL OIL TRANSFER PUMP NO. 31	1½"-DF-1055	S	
	7700 GAL. FUEL OIL STORAGE TANK NO. 31	S	
MOTOR	480V MCC 36C	S	

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SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

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175 GAL. FUEL OIL DAY TANK NO. 31	3"-DF-1062	S	
	3/4"-DF-1102	S	
	2"-DF-1077	S	
	LI-1136	S	
	1"-DF-1057	S	
	1"-DF-1050	S	
	3/4"-DF-1103	S	
	LC-1207-S	S	
	3/4"-DF-1104	S	
STARTING AIR TANK NO. 33	1½"-DA-1111	S	
	1½"-DA-1114	S	
	1½"-DA-1048	S	
	3/4"SRV-S-1	S	
	3/4"-DA-1045	S	
	3/4"-DA-3 (PG-)	S	
	3/4"-DA-4 (PS-)	S	
	3/4"-DA-4 (PC-1161-S)	S	
	3/4"-DA-4	S	
	3/4"-AUTOMATIC WATER TRAP (AT-1)	S	
	3/4"-DA-1211	S	

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SYSTEM INTERACTION STUDY

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SAFETY RELATED COMPONENT (EQUIPMENT)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
STARTING AIR TANK NO. 32	1½"-DA-1112	S	
	1½"-DA-1115	S	
	1½"-DA-1049	S	
	3/4"-SRV-S-2	S	
	3/4"-DA-1046	S	
	3/4"-DA-3 (PG-)	S	
	3/4"-DA-4 (PS-)	S	
	3/4"-DA-4 (PC-1160-S)	S	
	3/4"-DA-4	S	
	3/4"-AUTOMATIC WATER TRAP (AT-1)	S	
	3/4"-DA-1212	S	
STARTING AIR TANK NO. 31	1½"-DA-1113	S	
	1½"-DA-1116	S	
	1½"-DA-1048	S	
	3/4"-SRV-S-3	S	
	3/4"-DA-1047	S	
	3/4"-DA-3 (PG-)	S	
	3/4"-DA-4 (PS-)	S	
	3/4"-DA-4 (PC-1159-)	S	
	3/4"-DA-4	S	
	3/4"-AUTOMATIC WATER TRAP (AT-1)	S	
	3/4"-DA-1213	S	
EXHAUST FAN #318 Motor	480V MCC 36A	S	

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INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (EQUIPMENT)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
EXHAUST FAN # 319 MOTOR	480V MCC 36B	S	
EXHAUST FAN #316 MOTOR	480V MCC 36A	S	
EXHAUST FAN #317 MOTOR	480V MCC 36A	S	
EXHAUST FAN #314 MOTOR	480V MCC 36A	S	
EXHAUST FAN #315 MOTOR	480V MCC 36B	S	

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INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-MW-1	1½"-JW-1033	S	
	DRAIN	S	
3/4"-MW-14	3/4"-JW-1035	S	
	3/4"-JW-1035	S	
3/4"-JW-4	3/4"-JW-1039	S	
	3/4"-JW-1039	S	
1"-JW-3	1"-CHEMICAL INSECTION POINT & FILL CONN.	S	
	40 GAL. JACKET WATER EXPANSION TANK #33	S	
1"-JW-1	1'-JW-1036	S	
	1"-JW-1036	S	
1'-JW-2	1"-JW-1036	S	
	DRAIN	S	
3/4"-MW-14	3/4"-JW-1034	S	
	3/4"-JW-1034	S	
3/4"-JW-4	3/4"-JW-1040	S	
	3/4"-JW-1040	S	
1"-JW-3	1"-CHEMICAL INSECTION POINT & FILL CONN	S	
	40GAL. JACKET WATER EXPANSION TANK #32	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-JW-1	1"-JW-1037	S	
	1"-JW-1037	S	
1"-JW-2	1"-JW-1037	S	
	DRAIN	S	
3/4"-JW-14	3/4"-JW-1033	S	
	3/4"-JW-1033	S	
3/4"-JW-3	1"-CHEMICAL INJECTION POINT & FILL CONN.	S	
	40 GAL. JACKET WATER EXPANSION TANK #31	S	
1"-JW-1	1"-JW-1038	S	
	1"-JW-1038	S	
1"-JW-2	1"-JW-1038	S	
	DRAIN	S	
3"-DF-7	7700 GAL FUEL OIL STORAGE TANK NO. 33	S	
	DRAIN	S	
½"-DF-5	1½"-DF-1050	S	
	PI-1359	S	
1½"-DF-3	1½"-DF-1050	S	
	1½"-DF-1050	S	

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SRV-DE-4	1½"-DF-1050	S	
(3/4"X1")	1"-DF-1051	S	
3"-DF-6	3"-DF-1062	S	
	3"-DF-1062	S	
1½"-DF-20	1½"-DF-1050	S	
	CAP	S	
1½"-DF-15	1½"-DF-1050	S	
	1½"-DF-1050	S	
3/4"-DF_10	1½"-DF-1050	S	
	DRAIN	S	
1½"-DF-8	1½"-DF-1050	S	
	1½"-DF-1050	S	
1½"-DF-9	1½"-DF-1050	S	
	1½"=DF-1057	S	
1"-LCV-1209B	1"-DF-1063	S	
(ELEC. HYDRL MOV)	1"-DF-1063	S	
MOTOR	480V SWGR 5A	S	
1"-DF-17	1"-DF-1063	S	
	1"-DF-1063	S	

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POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-DF-17	1"-DF-1052	S	
	1"-DF-1052	S	
1"-LCV-1209A	1"-DF-1052	S	
(ELEC. HYDRL MOV)	1"-DF-1052	S	
MOTOR	480V SWGR 5A	S	
3/4"-DF-18	3/4"-DF-1110	S	
	3/4"-DF-1110	S	
3/4"-DF-19	3/4"-DF-1110	S	
	SRAIN	S	
3"-DF-7	7700 GAL FUEL OIL STORAGE TANK NO. 32	S	
	DRAIN	S	
4"-DF-2	4"-DIESEL OIL FILL LINE	S	
	4"-DIESEL OIL FILL LINE	S	
½"-DF-5	1½"-DF-1053	S	
	PI-1358	S	
1½"-DF-3	1½"=DF-1053	S	
	1½"-DF-1053	S	
SRV-DF-4	1½"-DF-1053	S	
(3/4"X1")	1"-DF-1058	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3"-DF-6	3"-DF-1065	S	
	3"-DF-1065	S	
1½"-DF-15	1½"-DF-1053	S	
	1½"-DF-1053	S	
1½"-DF-8	1½"-DF-1053	S	
	1½"-DF-1053	S	
1½"-DF-9	1½"-DF-1053	S	
	1½"-DF-1060	S	
3/4"-DF-10	1½"-DF-1053	S	
	DRAIN	S	
1"-LCV-1208B	1"-DF-1069	S	
(ELEC. HYDRL MOV)	1"-DF-1069	S	
MOTOR	480v SWGR 6A	S	
3/4"-DF-18	3/4"-DF-1107	S	
	3/4"-DF-1107	S	
3/4"-DF-19	3/4'-DF-1107	S	
	DRAIN	S	
3"-DF-7	7700GAL FUEL OIL STORAGE TANK NO. 31	S	
	DRAIN	S	

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SAFETY RELATED COMPONENT	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-DF-17	1"-DF-1069	S	
	1"-DF-1069	S	
1"-DF-17	1"-DF-1054	S	
	1"-DF-1054	S	
1"-LCV-1208A	1"-DF-1054	S	
(ELEC. HYDRL. MOV)	1"-DF-1054	S	
MOTOR	480 SWGR 6A	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
½"-DF-5	1½"-DF-1055	S	
	PI-1357	S	
1½"-DF-3	1½"-DF-1055	S	
	1½"-DF-1055	S	
SRV-DF-4	1½"-DF-1055	S	
	1"-DF-1059	S	
3"-DF-6	3"-DF-1066	S	
	3"-DF-1066	S	
1½"-DF-15	1½"-DF-1055	S	
	1½"-DF-1055	S	
3/4"-DF-10	1½"-DF-1055	S	
	DRAIN	S	
1½"-DF-12	1½"-DF-1055	S	
	1½"-DF-1055	S	
1½"-DF-11	1½"-DF-1055	S	
	1½"-DF-1061	S	
SRV-DF-13	1½"-DF-1057	S	
	1"-DF-1064	S	

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INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
SRV-DF-14	1½"-DF-1050	S	
	1"-DF-1056	S	
1"-LCV-1207B	1"-DF-1057	S	
(ELEC. HYDRL MOV)	1"-DF-1057	S	
MOTOR	480V SWGR 2A	S	
1"-DF-17	1"-DF-1057	S	
	1"-DF-1057	S	
1"-DF-17	1"-DF-1050	S	
	1"-DF-1050	S	
1"-LCV-1207A	1"-DF-1050	S	
(ELEC HYDRL MOV)	1"-DF-1050	S	
MOTOR	480V SWGR 2A	S	
3/4'-DF-18	3/4"-DF-1104	S	
	3/4"-DF-1104	S	
3/4"-DF-19	3/4"-DF-1104	S	
	DRAIN	S	
SRV-DA-5	3/4"-DF-1045	S	
	VENT	S	
3/4"-DA-1	3/4'-DA-1045	S	
	3/4¼-DA-1045	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-DA-3	STARTING AIR TANK NO. 33	S	
	PG-	S	
3/4"-DA-4	STARTING AIR TANK NO. 33	S	
	PS-	S	
3/4"-DA-4	STARTING AIR TANK NO. 33	S	
	PC-1161-S	S	
3/4"-DA-4	STARTING AIR TANK NO. 33	S	
	TO RECEIVER	S	
3/4"-AT-1 (AUT. WATER TRAP)	3/4"-DA-1211	S	
	DRAIN	S	
3/4"-DA-6	3/4"-DA-1211	S	
	3/4"-DA-1211	S	
3/4"-DA-8	3/4"-DA-1211	S	
	DRAIN	S	
SRV-S-1	STARTING AIR TANK NO. 33	S	
	VENT	S	
1½"-DA-2	1½"-DA-1048	S	
	1½"-DA-1048	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1½"-DA-11	1½"-DA-1114	S	
	1½"-DA-1114	S	
1½"-DA-11	1½"-DA-1111	S	
	1½"-DA-1111	S	
SRV-DA-5	3/4"-DA-1046	S	
	VENT	S	
3/4"-DA-1	3/4'-DA-1046	S	
	3/4"-DA-1046	S	
3/4"-DA-3	STARTING AIR TANK NO. 32	S	
	PG-	S	
3/4"-DA-4	STARTING AIR TANK NO. 32	S	
	PS-	S	
3/4"-DA-4	SRARTING AIR TANK NO. 32	S	
	PC-1160-S	S	
3/4"-DA-4	STARTING AIR TANK NO. 32	S	
	TO RECEIVER	S	
3/4"-AT-1 (AUT. WATER TRAP)	3/4"-DA-1212	S	
	DRAIN	S	
3/4"-DA-6	3/4"-DA-1212	S	
	3/4"-DA-1212	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-DA-8	3/4"-DA-1212	S	
	DRAIN	S	
SRV-S-2	STARTING AIR TANK NO. 32	S	
	VENT	S	
1½"-DA-2	1½"-DA-1049	S	
	1½"-DA-1049	S	
1½"-DA-10	1½"-DA-1115	S	
	1½"-DA-1115	S	
1½"-DA-10	1½"-DA-1112	S	
	1½"-DA-1112	S	
SRV-DA-5	3/4"-DA-1047	S	
	VENT	S	
3/4"-DA-1	3/4"-DA-1047	S	
	3/4"-DA-1047	S	
3/4"-DA-3	STARTING AIR TANK NO. 31	S	
	PG-	S	
3/4"-DA-4	STARTING AIR TANK NO. 31	S	
	PS-	S	
3/4"-DA-4	STARTING AIR TANK NO. 31	S	
	PC-1159-S	S	

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SAFETY RELATED COMPONENT (VALVES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-DA-4	STARTING AIR TANK NO. 31	S	
	TO RECEIVER	S	
3/4"-AT-1	3/4"-DA-1213	S	
	DRAIN	S	
3/4"-DA-6	3/4"-DA-1213	S	
	3/4"-DA-1213	S	
3/4"-DA-8	3/4"-DA-1213	S	
	DRAIN	S	
SRV-S-3	STARTING AIR TANK NO. 31	S	
	VENT	S	
1½"-DA-2	1½"-DA-1048	S	
	1½"-DA-1048	S	
1½"-DA-9	1½"-DA-1116	S	
	1½"-DA-1116	S	
1½"-DA-9	1½"-DA-1113	S	
	1½"-DA-1113	S	
3/4"-JW-4	3/4"-JW-1041	S	
	3/4"-JW-1041	S	

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INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-CHEMICAL INJECTION POINT & FILL CONN.	1"-JW-3	S	
	40" GAL JACKET WATER EXPANSION TANK #33	S	
1½"-JW-1033	3/4"-MW-1	S	
	3/4"-JW-1033	S	
3/4"-JW-1035	3/4"-MW-14	S	
	40GAL JACKET WATER EXPANSION TANK #33	S	
	3/4"-JW-1033	S	
1"-JW-1042	40 GAL JACKET WATER EXPANSION TANK #33	S	
	VENT	S	
3/4"-JW-1039	3/4"-JW-4	S	
	40GAL JACKET WATER EXPANSION TANK #33	S	
	DIESEL ENGINE NO. 33	S	
1"-JW-1036	1"-JW-1	S	
	1"-JW-2	S	
	40GAL JACKET WATER EXPANSION TANK #33	S	
	DIESEL ENGINE NO. 33	S	
1"-CHEMICAL INJECTION POINT & FILL CONN.	1"-JW-3	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 32	S	
1"-JW-1043	40GAL JACKET WATER EXPANSION TANK #32	S	
	VENT	S	

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SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-JW-1034	3/4"-MW-14	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 32	S	
	3/4"-JW-1033	S	
3/4"-JW-1040	3/4"-JW-4	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 32	S	
	DIESEL ENGINE NO. 32		
1"_JW-1037	40 GAL JACKET WATER EXPANSION TANK NO. 32	S	
	1"-JW-1	S	
	1"-JW-2	S	
	DIESEL ENGINE NO. 32		
1"-CHEMICAL INJECTION POINT & FILL CONN.	1"-JW-3	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 31	S	
1"-JW-1044	40 GAL JACKET WATER EXPANSION TANK NO. 31	S	
	VENT	S	
3/4"-JW-1033	3/4"-MW-14	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 31	S	
3/4"-JW-1041	3/4"-JW-4	S	
	40 GAL JACKET WATER EXPANSION TANK NO. 31	S	
	DIESEL ENGINE NO. 31	S	

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INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-JW-1038	40 GAL JACKET WATER EXPANSION TANK NO. 31	S	
	1"-JW-1	S	
	1"-JW-2	S	
	DIESEL ENGINE NO. 31	S	
3"-DF-1218	7700 FUEL OIL STORAGE TANK #33	S	
	7700 GAL FUEL OIL STORAGE TANK #32	S	
4"-DE-1119	7700 GAL FUEL OIL STORAGE TANK#33	S	
	VENT	S	
1½"-DF-1050	FUEL OIL TRANSFER PUMP #33	S	
	½"-DF-5	S	
	1½"-DF-3	S	
	SRV-DF-4	S	
	1½"-DF-20	S	
	3/4"-DF-10	S	
	1½"-DF-8	S	
	1½"-DF-1057	S	
	1"-DF-1050	S	
	SRV-DF-14	S	
1"-DF-1050	1"-LCV-1207A	S	
	1½"-DF-1050	S	
	1"-DF-17	S	
	175 GAL FUEL OIL DAY TANK NO.31	S	
3"-DF-1062	7700 GAL FUEL OIL STORAGE TANK NO. 33	S	
	3"-DF-6	S	
	175 GAL FUEL OIL DAY TANK NO#!	S	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3"-DF-1062 (CONT.)	1-DF-1051	S	
	3-DF-1068	S	
	3-DF-1067	S	
	3-DF-1066	S	
	1-DF-1056	S	
	1-DF-1064	S	
	3-DF-1062	S	
1½"-DF-1057	DF-9	S	
	DF-13	S	
	1½"-DF-1050	S	
	1½"-DF-1063	S	
	1½"-DF-1060	S	
	1½"-DF-1061	S	
	1"-DF-1057	S	
1"-DF-1057	DF-17	S	
	LCV-1207B	S	
	175 GAL FUEL OIL STORAGE TANK#31	S	
3"-DF-1217	7700 GAL. FUEL OIL STORAGE TANK #32	S	
	7700 GAL. FUEL OIL STORAGE TANK #31	S	
4"-DF-1118	7700 GAL. FUEL OIL STORAGE TANK #32	S	
	VENT	S	
1½"-DF-1053	FUEL OIL TRANSFER PUMP NO. 32	S	
	½"-DA-5	S	
	1½"-DF-3	S	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
	SRV-DF-4	S	
	1½"-DF-15	S	
	1½"-DF-8	S	
	3/4"-DF-10	S	
	1½"-DF-1060	S	
	1½"-DF-1053	S	
3"-DF-1065	3"-DF-6	S	
	7700 GAL FUEL OIL STORAGE TANK#32	S	
	1"-DF-1058	S	
	3"-DF-1062	S	
1½"-DF-1060	1½"-DF-9	S	
	1½"-DF-1053	S	
	1½"-DF-1057	S	
4"-DF-1117	7700 GAL FUEL OIL STORAGE TANK#31	S	
	VENT	S	
1½"-DF-1055	FUEL OIL TRANSFER PUMP NO. 31	S	
	½"-DF-5	S	
	1½"-DF-3	S	
	SRV-DF-4	S	
	1½"-DF-15	S	
	1½"-DF-12	S	
	3/4"-DF-10	S	
	1½"-DF-1050	S	
	1½"-DF-1061	S	
1½"-DF-1061	1½"-DF-11	S	
	1½"-DF-1057	S	
	1½"-DF-1055	s	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3"-DF-1066	3"-DF-6	S	
	7700 GAL FUEL OIL STORAGE TANK NO. 31	S	
	3"-DF-1062	S	
	1"-DF-1059	S	
1"-DF-52	1"-DF-17	S	
	1"-LCV-1209A	S	
	175 GAL FUEL OIL DAY TANK NO.33	S	
	1½"-DF-1052	S	
1"-DF-1063	1"-DF-17	S	
	1"-LCV-1209B	S	
	175 GAL FUEL OIL DAY TANK NO.33	S	
	1½"-DF-1063	S	
2"-DF-1079	175 GAL FUEL OIL DAY TANK NO.33	S	
	VENT	S	
3/4"-DF-1109	175 GAL FUEL OIL DAY TANK NO.33	S	
	DIESEL ENGINE NO. 33	S	
3"-DF-1068	175 GAL FUEL OIL DAY TANK NO.33	S	
	3-DF-1062	S	
3/4"-DF-1108	175 GAL FUEL OIL DAY TANK NO.33	S	
	DIESEL ENGINE #33	S	
1"-DF-1054	1"-DF-17	S	
	1"-LCV-1208A	S	
	175 GAL FUEL OIL DAY TANK NO.32	S	
	1½"-DF-1054	S	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1"-DF_1069	1"-DF-17	S	
	1"-LCV-1208B	S	
	175 GAL FUEL OIL DAY TANK NO.32	S	
	1½"-DF-1069	S	
2"-DF-1078	175 GAL FUEL OIL DAY TANK NO.32	S	
	VENT	S	
3"-DF-1067	175 GAL FUEL OIL DAY TANK NO.32	S	
	3"-DF-1062	S	
1½"-DF-1052	1"-DF-1052	S	
	1½"-DF-1050	S	
1½"-DF-1063	1"-DF-1063	S	
	1½"-DF-1057	S	
1½"-DF-1054	1"-DF-1054	S	
	1½"-DF-1050	S	
1½"-DF-1069	1"-DF-1069	S	
	1½"-DF-1057	S	
3/4"-DF-1106	175 GAL FUEL OIL DAY TANK NO.32	S	
	DIELSEL ENGINE NO.32	S	
3/4"-DF-1105	175 GAL FUEL OIL DAY TANK NO.32	S	
	DIESEL ENGINE NO. 32	S	
2"-DF-1077	175 GAL FUEL OIL DAY TANK NO. 31	S	
	VENT	S	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-DF-1103	175 GAL FUEL OIL DAY TANK NO.31	S	
	DIESEL ENGINE NO. 31	S	
3/4"-DF-1102	175 GAL FUEL OIL DAY TANK NO.31	S	
	DIESEL ENGINE NO. 31	S	
3/4"-DF-1110	3/4"-DF-18	S	
	3/4"-DF-19	S	
	175 GAL FUEL OIL DAY TANK NO.33	S	
	DIESEL ENGINE NO. 33	S	
3/4"-DF-1107	3/4"-DF-18	S	
	3/4"-DF-19	S	
	175 GAL FUEL OIL DAY TANK NO.32	S	
	DIESEL ENGINE NO. 32	S	
3/4"-DF-1104	3/4"-DF-18	S	
	3/4"-DF-19	S	
	175 GAL FUEL OIL DAY TANK NO.31	S	
	DIESEL ENGINE NO. 31	S	
3/4"-DF-1045	AIR COMPRESSOR #33	S	
	SRV-DA-5	S	
	3/4"-DA-1		
	STARTING AIR TANK #33	S	
3/4"-DA-1211	3/4"-DA-8	S	
	3/4"-DA-6	S	
	3/4"-AT-1	S	

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SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
1½"-DA-1048	STARTING AIR TANK #33	S	
	1½"-DA-2	S	
	1½"-DA-2	S	
	STARTING AIR TANK #31	S	
	1½"-DA-1049	S	
1½"-DA-1114	STARTING AIR TANK #33	S	
	1½"-DA-11	S	
	DIESEL ENGINE NO. 33	S	
3/4"-DA-1046	AIR COMPRESSOR #32	S	
	SRV-DA-5	S	
	3/4"-DA-1	S	
	STARTING AIR TANK #32	S	
3/4"-DA-1212	3/4"-DA-8	S	
	3/4"-DA-6	S	
	3/4"-AT-1	S	
	STARTING AIR TANK #32	S	
1½"-DA-1049	1½"-DA-2	S	
	STARTING AIR TANK NO.32	S	
	1½"-DA-1048	S	
1½"-DA-1115	1½"-DA-10	S	
	STARTING AIR TANK NO. 32	S	
	DIESEL ENGINE NO. 32	S	
1½"-DA-1112	STARTING AIR TANK NO. 32	S	
	1½"-DA-10	S	
	DIESEL ENGINE NO. 32	S	
1½"-DA-111	STARTING AIR TANK NO.33	S	
	1½"-DA-11	S	
	DIESEL ENGINE NO.33	S	

D MIRKOVIC 9/13/82
PREPARED BY/DATE

T P RUGGIERO 9/20/82
APPROVED BY/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT (LINES)	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
3/4"-DA-1047	AIR COMPRESSOR #31	S	
	SRV-DA-5	S	
	3/4"-DA-1	S	
	STARTING AIR TANK NO.31	S	
1½"-DA-1213	STARTING AIR TANK NO. 31	S	
	3/4"-DA-8	S	
	3/4"-DA-6	S	
	3/4"-AT-1	S	
1½"-DA-1116	STARTING AIR TANK NO. 31	S	
	1½"-DA-9	S	
	DIESEL ENGINE NO. 31	S	
1½"-DA-1113	STARTING AIR TANK #31	S	
	1½"-DA-9	S	
	DIESEL ENGINE NO. 31	S	

D MARKOVIC 9/13/82
PREPARED BY/DATE

T P RUGGIERO 9/20/82
APPROVED BY/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

Interconnected System Interaction Evaluation Notes

1. Rupture of non-seismic line
2. Leakage from connecting line
3. Valve required to be closed fails open
4. Valve required to be open fails closed
5. Loss of flow or insufficient flow
6. Loss of function due to loss of motive power
7. Electrical fault

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
SYSTEMS INTERACTION EVALUATION

SYSTEM NO. 11

SYSTEM NAME DIESEL GENERATOR SYSTEM

EVALUATION CATEGORY

NON-CONNECTED _____

INTERCONNECTED X

L Pugacin 9-28-82
INTERACTION ENGINEER/DATE

W A Griswold 9-30-82
VERIFIED/DATE

Ebasco Services Incorporated

System No. 11

Sheet 1 of 1

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
INTERCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

POTENTIAL INTERACTION NUMBER:

CONNECTED COMPONENT: Diesel Oil Fill Lines

BOUNDARY SAFETY RELATED COMPONENT (S): 7700 Gal Fuel Oil Storage Tanks 31 thru 33.

POSTULATED FAILURE (SEE NOTES):
METHOD OF DETECTION: None other than visual.

EVALUATION OF INTERACTION:

Line rupture will not drain storage tanks since elevation is higher than top of tank.

X ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

T P Ruggiero/9-28-82
INTERACTION ENGINEER/DATE

W A Griswold/9-29-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
MATRIX PREPARATION

SYSTEM NO 11

SYSTEM NAME DIESEL GENERATOR SYSTEM

MATRIX CATEGORY

NON-CONNECTED X

INTERCONNECTED

PREPARED BY/DATE 9/7/82

APPROVED BY/DATE 9/13/82

Ebasco Services Incorporated

SOURCES

TARGETS

L-11	LINES	NO INTERACTION	1 4"-DIESEL OIL FILL LINE	2 LOUDSPEAKER	3 SPACE HEATER	4 EMERGENCY LIGHT	5 LIGHT FIXTURE							
1	3/4"-JW-1033		M395											
2	3/4"-JW-1035	X												
3	1"-JW-1042	X												
4	1" CHEMICAL INJEC. POINT & FILL CONN	X												
5	3/4"-JW-1039				M388		M388							
6	1"-JW-1036			M386		M386	M388							
7	3"-DF-1218		M395											
8	4"-DF-1119	X												
9	1½"-DF-1050		M395 M392											
10	1"-DF-1051		M392											
11	3"-DF-1062		M395 M392											
12	1½"-DF-1057	X												
13	1½"-DF-1052	X												
14	1"-DF-1052	X												
15	1½"-DF-1063	X												
16	1"-DF-1063	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION: DIESEL ENGINE NO. 33
WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 1 OF 6
DIV. MECH. DR. DM DATE ____ CH. ____ SCALE NONE	APPROVED T P RUGGIERO	

bn

SOURCES

TARGETS	LINES L-11	NO INTERACTION	1 LIGHT FIXTURE	2 4" DIESEL OIL FILL LINE									
17	2"-DF-1079		M388										
18	3"-DF-1068		M388	M395									
19	3/4"-DF-1108		M388										
20	3/4"-DF-1110		M388										
21	3/4"-DF-1109		M388										
22	3/4"-DA-1045	X											
23	3/4"-DF-1211	X											
24	1½"-DA-1048			M395									
25	1½"-DA-1114	X											
26	1½"-DA-1111	x											
27	D. G. ROOM AIR INTAKE DUCT		M389										

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 2 OF 6
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

L-11	LINES	NO INTERACTION	1 LIGHT FIXTURE	2 SPACE HEATER	3 LOUDSPEAKER	4 4" DIESEL OIL FILL LINE								
28	3/4"-JW-1033	X												
29	3/4"-JW-1034	X												
30	1"-JW-1043	X												
31	CHEMICAL INJECT. POINT & FILL CONN	X												
32	3/4"-JW-1040		M382	M382	M384									
33	1"-JW-1037		M382											
34	3"-DF-1218	X												
35	3"-DF-1217					M394								
36	4"-DF-1118	X												
37	1½"-DF-1053					M391								
38	1"-DF-1058					M391								
39	3"-DF-1065					M391								
40	3"-DF-1062					M394								
41	1½"-DF-1050					M394								
42	1½"-DF-1057													
43	1½"-DF-1060	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 3 OF 6
DIV. MECH DR. DM DATE ____ CH. ____ SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

L-11	LINES	NO INTERACTION	1 LIGHT FIXTURE	2 LOUDSPEAKER	3 4" DIESEL OIL FILL LINE									
44	1½"-DF-1054	X												
45	1"-DF-1054	X												
46	1½"-DF-1069	X												
47	1"-DF-1069	X												
48	2"-DF-1078		M382											
49	3"-DF-1067		M382											
50	3/4"-DF-1105		M382											
51	3/4"-DF-1107		M382											
52	3/4"-DF-1106		M382											
53	1½"-DA-1048				M394									
54	1½"-DA-1049	X												
55	3/4"-DA-1046	X												
56	3/4"-DA-1212	X												
57	1½"-DA-1115	X												
58	1½"-DA-1112	X												
59	D.G. ROOM AIR INTAKE DUCT		M385											

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION: DIESEL ENGINE NO. 32

WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 4 OF 6
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

L-11	LINES	NO INTERACTION	1 LOUDSPEAKER	2 LIGHT FIXTURE	3 4" DIESEL OIL FILL LINE								
60	3/4"-JW-1033				M393								
61	1"-JW-1044	X											
62	1"-CHEMICAL INJECT. POINT & FILL CONN.	X											
63	3/4"-JW-1041			M378									
64	1"-JW-1038		M377										
65	3"-DF-1217				M393								
66	4"-DF-1117	X											
67	1½"-DF-1055				M390								
68	1"-DF-1059				M390								
69	3"-DF-1066				M390								
70	1½"-DF-1061	X											
71	1½"-DF-1057	X											
72	1"-DF-1064	X											
73	1½"-DF-1050			M378	M393								
74	1"-DF-1056	X											
75	3"-DF-1062			M378	M393								

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31 DIESEL GENERATOR

WITHIN FIRE ZONE

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 5 OF 6
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

L-11	LINES	NO INTERACTION	1 LIGHT FIXTURE	2 4" DIESEL OIL FILL LINE										
76	1"-DF-1050	X												
77	1"-DF-1057	X												
78	2"-DF-1077		M378											
79	3/4"-DF-1102		M378											
80	3/4"-DF-1104		M378											
81	3/4"-DF-1103		M378											
82	1½"-DA-1048			M393										
83	3/4"-DA-1047	X												
84	3/4"-DA-1213	X												
85	1½"-DA-1116	X												
86	1½"-DA-1113	X												
87	D.G. ROOM AIR INTAKE DUCT		M379											

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31
WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 L-11 SH 6 OF 6
DIV. MECH DR. DM DATE CH. SCALE NONE APPROVED T. P. RUGGIERO		

SOURCES

V-11	VALVES	NO INTERACTION	1 LOUDSPEAKER	2 LIGHT FIXTURE	3 SPACE HEATER	4 EMERGENCY LIGHT								
	3/4"-JW-1035													
1	3/4"-MW-14	X												
2	JACKET WATER EXPANSION TANK #33	X												
	1"-CHEMICAL INJECT. & FILL CONN.													
3	1"-JW-3	X												
	3/4"-JW-1039													
4	3/4"-JW-4	X												
5	DIESEL ENGINE NO. 33 & EXHAUST SY.		M386	M388 M389	M387 M388	M387								
	1"-JW-1036													
6	1"-JW-1			M388										
7	1"-JW-2 (1" DRN)			M388										
8	COMBUSTION AIR AFTER COOLER	X												
9	JACKET WATER PUMP	X												

TARGETS

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 1 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION	1 4" DIESEL OIL FILL LINE											
V-11														
	1½"-DF-1050													
10	FUEL OIL TRANSFER PUMP NO. 33		M392											
11	FUEL OIL STORAGE TANK NO. 33	X												
12	½"-DF-5 (INST CONN.)		M392											
13	1"-DF-3		M392											
14	SRV-DF-4 (3/4" x 1")	X												
15	1½"-DF-20	X												
16	1½"-DF-15	X												
17	3/4"-DF-10 (3/4" DRN)	X												
18	1½"-DF-8	X												
	3"-DF-1062													
19	3"-DF-6		M392											
	1½"-DF-1057													
20	1½"-DF-9	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION: DIESEL ENGINE NO. 33

WITHIN FIRE ZONE DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH2 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS			1											
	VALVES	NO INTERACTION	LIGHT FIXTURE											
V-11														
	1"-DF-1052													
21	1"-DF-LCV-1209A	X												
22	1"-DF-17	X												
23	FUEL OIL DAY TANK NO. 33		M388											
	1"-DF-1063													
24	1"-DF-LCV-1209B	X												
25	1"-DF-17	X												
	3/4"-DF-1110													
26	3/4"-DF-18	X												
27	3/4"-DF-19 (3/4"DRN)	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH3 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS		NO INTERACTION												
V-11	VALVES													
	3/4"-DA-1045													
28	AIR COMPRESSOR NO. 33	X												
29	3/4"-SRV-DA-5	X												
30	3/4"-DA-1	X												
	STARTING AIR TANK NO. 33													
31	3/4"-DA-3 (INST. CONN.)	X												
32	3/4"-DA-4 (INST. CONN.AMT.3)	X												
33	3/4"-SRV-S-1	X												
	3/4"-DA-1211													
34	3/4"-DA-8 (3/4" DRN)	X												
35	3/4"-DA-6	X												
	1½"-DA-1048													
36	1½"-DA-2	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 4 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION												
V-11														
	1½"-DA-1114													
37	1½"-DA-11	X												
	1½"-DA-1111													
38	1½"-DA-11	X												

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11
DIV. MECH DR. DM DATE CH. SCALE NONE APPROVED T. P. RUGGIERO		SH 5 OF 19

SOURCES

TARGETS

	VALVES	NO INTERACTION
V-11		
39	EXHAUST FAN #318	X
40	EXHAUST FAN #319	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 33

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 6 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T P RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION	1 SPACE HEATER	2 EMERGENCY LIGHT	3 LIGHT FIXTURE	4 LOUDSPEAKER								
V-11														
	3/4"-JW-1034													
41	3/4"-MW-14	X												
42	JACKET WATER EXPANSION TANK NO. 32	X												
	1"-CHEMICAL INJECT. POINT & FILL CONN.													
43	1"-JW-3	X												
	3/4"-JW-1040													
44	3/4"-JW-4	X												
45	DIESEL ENGINE NO. 32 & EXHAUST SYS.		M382 M383	M383	M382 M383	M384								
	1"-JW-1037													
46	1"-JW-1	X												
47	1"-JW-2 (1" DRN)	X												
48	COMBUSTION AIR AFTER COOLER	X												
49	JACKET WATER PUMP	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 7 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION	1 4" DIESEL OIL FILL LINE											
V-11														
	1½"-DF-1053													
50	FUEL OIL TRANSFER PUMP NO. 32	X												
51	FUEL OIL STORAGE TANK NO. 32	X												
52	½"-DF-5 (INST. CONN.)		M391											
53	1"-DF-3		M391											
54	SRV-DF-4 (3/4"x 1")	X												
55	1½"-DF-15	X												
56	3/4"-DF-10 (3/4" DRN)	X												
57	1½"-DF-8	X												
	3"-DF-1065													
58	3"-DF-6		M391											
	1½"-DF-1060													
59	1½"-DF-9	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION: DIESEL ENGINE NO. 32 DIESEL GENERATOR

WITHIN FIRE ZONE

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 8 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE APPROVED T. P. RUGGIERO		

SOURCES

TARGETS	VALVES	NO INTERACTION												
V-11														
	1"-DF-1054													
60	1"-DF-LCV-1208A	X												
61	1"-DF-17	X												
62	FUEL OIL DAY TANK NO. 32	X												
	1"-DF-1069													
63	1"-DF-LCV-1208B	X												
64	1"-DF-17	X												
	3/4"-DF-1107													
65	3/4"-DF-18	X												
66	3/4"-DF-19 (3/4" DRN)	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 9 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

V-11	VALVES	NO INTERACTION												
	1½"-DF-1049													
67	1½"-DA-2	X												
	3/4"-DA-1046													
68	AIR COMPRESSOR NO. 32	X												
69	3/4"-SRV-DA-5	X												
70	3/4"-DA-1	X												
	STARTING AIR TANK NO. 32													
71	3/4"-DA-3 (INST. CONN.)	X												
72	3/4"-DA-4 (INST. CONN. AMT 3)	X												
73	3/4"-SRV-S-2	X												
	3/4"-DA-1212													
74	3/4"-DA-8 (3/4" DRN)	X												
75	3/4"-DA-6	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 10 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION
V-11		
	1½"-DA-1115	
76	1½"-DA-10	X
	1½"-DA-1112	
77	1½-DA-10	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 11 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

	VALVES	NO INTERACTION
V-11		
78	EXHAUST FAN #316	X
79	EXHAUST FAN #317	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 32

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 12 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T P RUGGIERO	

SOURCES

TARGETS		1	2	3	4								
V-11	VALVES	NO INTERACTION	LOUDSPEAKER	LIGHT FIXTURE	EMERGENCY LIGHT	SPACE HEATER							
	3/4"-JW-1033												
80	3/4"-MW-14	X											
81	JACKET WATER EXPANSION TANK NO. 31	X											
	1"-CHEMICAL INJECT POINT & FILL CONN.												
82	1"-JW-3	X											
	3/4"-JW-1041												
83	3/4"-JW-4	X											
84	DIESEL ENGINE NO. 31 & EXHAUST SYS.		M377	M378 M379	M380	M381 M380							
	1"-JW-1038												
85	1"-JW-1	X											
86	1"-JW-2 (1" DRN)	X											
87	COMBUSTION AIR AFTER COOLER	X											
88	JACKET WATER PUMP	X											

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 31

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 13 OF 19
DIV. MECH DR. DM DATE ____ CH. ____ SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS	VALVES	NO INTERACTION	4" DIESEL OIL FILL LINE (1)
V-11			
	1½"-DF-1055		
89	FUEL OIL TRANSFER PUMP NO. 31		M390
90	FUEL OIL STORAGE TANK NO. 31	X	
91	½"-DF-5 (INST. CONN.)		M390
92	1"-DF-3		M390
93	SRV-DF-4 (3/4" x 1")	X	
94	1½"-DF-15	X	
95	3/4"-DF-10 (3/4" DRN)	X	
96	1½"-DF-12	X	
	3"-DF-1066		
97	3"-DF-6		M390
	1½"-DF-1061		
98	1½-DF-11	X	

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 31

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 14 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS			1											
V-11	VALVES	NO INTERACTION	LIGHT FIXTURE											
	1½"-DF-1057													
99	SRV-DF-13 (3/4" X 1")	X												
	1½"-DF-1050													
100	SRV-DF-14 (3/4" X 1")	X												
	1"-DF-1050													
101	1"-DF-LCV-1207A		M378											
102	1"-DF-17	X												
103	FUEL OIL DAY TANK NO. 31		M378											
	1"-DF-1057													
104	1"-DF-LCV-1207B	X												
105	1"-DF-17	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31

WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 15 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS		NO INTERACTION
V-11	VALVES	
	3/4"-DF-1104	
106	3/4"-DF-18	X
107	3/4"-DF-19 (3/4" DRN)	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: DIESEL ENGINE NO. 31

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	SH 16 OF 19

SOURCES

TARGETS	VALVES	NO INTERACTION												
V-11														
	1½"-DA-1048													
108	1½"-DA-2	X												
	3/4"-DA-1047													
109	AIR COMPRESSOR NO. 31	X												
110	3/4"-SRV-DA-5	X												
111	3/4"-DA-1	X												
	STARTING AIR TANK NO. 31													
112	3/4"-DA-3 (INST. CONN.)	X												
113	3/4"-DA-4 (INST. CONN. AMT.3)	X												
114	3/4-SRV-S-3	X												
	3/4"-DA-1213													
115	3/4"-DA-8 (3/4" DRN)	X												
116	3/4"-DA-6	X												

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31

WITHIN FIRE ZONE DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 17 OF 19
DIV. MECH DR. DM DATE ____ CH. ____ SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS		NO INTERACTION
VALVES		
V-11		
	1½"-DA-1116	
117	1½"-DA-9	X
	1½"-DA-1113	
118	1½"-DA-9	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31

WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11 SH 18 OF 19
DIV. MECH DR. DM DATE CH. SCALE NONE	APPROVED T. P. RUGGIERO	

SOURCES

TARGETS

	VALVES	NO INTERACTION
V-11		
119	EXHASUT FAN #314	X
120	EXHAUST FAN #315	X

BUILDING: DIESEL GENERATOR BUILDING

FIRE ZONE: 10

LOCATION: DIESEL ENGINE NO. 31

WITHIN FIRE ZONE

DIESEL GENERATOR

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 V-11
DIV. MECH DR. DM DATE CH. SCALE NONE APPROVED T P RUGGIERO		SH 19 OF 19

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

NON-CONNECTED INTERACTIONS EVALUATION

1.	No Interaction	-	Source is Class II and is therefore supported adequately. (See response to IP-3 FSAR question 5.24).
2.	Acceptable	-	Source pipe/conduit is equal size or smaller in diameter and/or the same thickness or thinner wall than the target pipe/conduit/tubing. Paragraph 6.2.2.1a Volume I.
3.	Acceptable	-	Source has insufficient mass to damage the target component.
4.	Acceptable	-	Basis is engineering judgement. Specific justification is on the evaluation form.
5.	Potentially Unacceptable	-	Discussion of specific is on the evaluation form.
6.	Potentially Unacceptable	-	Source pipe/conduit is large enough to damage target conduit/pipe/tubing.
7.	Potentially Unacceptable	-	Source will fall a sufficient distance, or has adequate mass such that damage to target conduit/box/instrument/tubing/panel may be possible.
8.	No Interaction	-	Upon further investigation of the source, this portion of its system is designated Seismic I.

R2 7/22/82
R1 6/30/82
R0 6/26/82

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
SYSTEMS INTERACTION EVALUATION

SYSTEM NO. 11

SYSTEM NAME DIESEL GENERATOR SYSTEM

EVALUATION CATEGORY

NON-CONNECTED X

INTERCONNECTED

8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9-30-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-1-1

PHOTOGRAPH NO.: M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1033 (Bottom right)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-5-3

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1039 (Not shown)

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L-11-5-5

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1039 (Not Shown)

SOURCE: Light Fixture (Arrow top of photo)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE
D Mirkovic	8/17/82	W Griswold	9/7/82
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-6-2

PHOTOGRAPH NO.: M-386

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 1036 (at center of photo)

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L-11-6-4

PHOTOGRAPH NO.: M-386

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1"-JW-1036

SOURCE: Emergency Light

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-6-5

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 1036 (Not shown)

SOURCE: Light Fixture (Arrow top of photo)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-7-1

PHOTOGRAPH NO.: M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1218 (Beneath source)

SOURCE: 4" - Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:
Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-9-1

PHOTOGRAPH NO.: M-392, M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2"-DF - 1050 (M-395 Middle pipe on right side, M-392 pipe on right side)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-10-1

PHOTOGRAPH NO.: M-392

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - 1051 (Lower left)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X _____ POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-11-1

PHOTOGRAPH NO.: M-392, M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1062 (M-395: Lowest pipe on left side)
(M-392: Not shown)

SOURCE: 4" Diesel Oill Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION: 6

EVALUATION NOTE NO:

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-17-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" - DF - 1079 (Not shown)

SOURCE: Light Fixture (Arrow top of photo)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-18-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1068 (Not shown)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-18-2

PHOTOGRAPH NO.: M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1068 (Not shown)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-19-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1108 (Not shown)

SOURCE: Light Fixture (Arrow top off photo)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-20-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1110 (Not shown)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-21-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1109 (Not shown)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L11-24-2

PHOTOGRAPH NO.: M-395

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DA - 1048 (lowest pipe on right side)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: L-11-27-1

PHOTOGRAPH NO.: M-389

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: D.G. Room Air Intake Duct (Against the back wall, shown by bottom arrow)

SOURCE: Light Fixture (Top white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-32-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1040 (Not shown)

SOURCE: Light Fixture (top arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-32-2

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1040 (Not shown)

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-32-3

PHOTOGRAPH NO.: M-384

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1040 (Not Shown)

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Generator Building

POTENTIAL INTERACTION NO.: L11-33-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 1037 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-35-4

PHOTOGRAPH NO.: M-394

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF -1217 (Beneath source)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION: 6

EVALUATION NOTE NO:

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-37-4

PHOTOGRAPH NO.: M-391,

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DF - 1053 (lower right side of photo)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-38-4

PHOTOGRAPH NO.: M-391

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" DF - 1058 (lower left corner of photo)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION: 6

EVALUATION NOTE NO:

_____ ACCEPTABLE	X _____ POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-39-4

PHOTOGRAPH NO.: M-391

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1065 (Not shown)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-40-4

PHOTOGRAPH NO.: M-394

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1062 (2nd pipe below source, does not appear in photo)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-41-4

PHOTOGRAPH NO.: M-394

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DF - 1050 (2nd pipe down on the left side of photo)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-48-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" - DF - 1078 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-49-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1067 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Gnerator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-50-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1105 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-51-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11076

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF-1107 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-52-1

PHOTOGRAPH NO.: M-382

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" DF - 1106 (Not shown)

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: L11-53-3

PHOTOGRAPH NO.: M-394

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DA - 1048 (Lowest line on the left side of photo)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine NO. 32

POTENTIAL INTERACTION NO.: L-11-59-1

PHOTOGRAPH NO.: M385

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: D. G. Room Air Intake Duct (Bottom Arrow)

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-60-3

PHOTOGRAPH NO.: M-393

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1033 (Not shown)

SOURCE: 4" Diesel Oil Fill Line (White arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-63-2

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - JW - 1041 (Not shown)

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-64-1

PHOTOGRAPH NO.: M-377

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 1038

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

D Mirkovic 8/17/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-65-3

PHOTOGRAPH NO.: M-393

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1217 (Pipe directly beneath source)

SOURCE: 4" Diesel Oil Fill Line (White arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-67-3

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" DF - 1055 (center right of photo)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-68-3

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - 1059 (left side of picture)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/18/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-69-3

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1066 (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION: 6

EVALUATION NOTE NO:

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-73-2

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2"-DF - 1050 (Not Shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Ssource falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-73-3

PHOTOGRAPH NO.: M-393

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DF - 1050 (Right side of photo, 2nd pipe down)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-75-2

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1062 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-75-3

PHOTOGRAPH NO.: M-393

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 1062 (Not shown)

SOURCE: 4" Diesel Oil Fill Line (White arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-78-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" - DF - 1077 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-79-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1102 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/18/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-80-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1104 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/18/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-81-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" - DF - 1103 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION: 5

EVALUATION NOTE NO:

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: L11-82-2

PHOTOGRAPH NO.: M-393

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1-1/2" - DA - 1048 (Not shown)

SOURCE: 4" Diesel Oil Fill Line (White arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine NO. 31

POTENTIAL INTERACTION NO.: L11-87-1

PHOTOGRAPH NO.: M-379

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Room Air Intake Duct.

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/17/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-5-1

PHOTOGRAPH NO.: M-386

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 33 & Exhaust System

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/23/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-5-2

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 33 & Exhaust System

SOURCE: Light Fixture (Arrow off photo)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-5-3

PHOTOGRAPH NO.: M-387, M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 33 & Exhaust System

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-5-4

PHOTOGRAPH NO.: M-387

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 33 & Exhaust System

SOURCE: Emergency Light

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V-11-6-2

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 1 (Not Shown)

SOURCE: Light Fixture (Top arrow off photo)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-7-2

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - JW - 2 (1" DRN) (Not Shown)

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D. Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-10-1

PHOTOGRAPH NO.: M-392

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Fuel Oil Transfer Pump No. 33 (Shown at center)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-12-1

PHOTOGRAPH NO.: M-392

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1/2" - DF - 5 (Inst. Conn.) (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION: 5

EVALUATION NOTE NO:

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-13-1

PHOTOGRAPH NO.: M-392

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - 3 (Not Shown)

SOURCE: 4" Diesel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-19-1

PHOTOGRAPH NO.: M-392

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 6 (Not shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 33

POTENTIAL INTERACTION NO.: V11-23-1

PHOTOGRAPH NO.: M-388

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Fuel Oil Day Tank No. 33 (Not shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-45-1

PHOTOGRAPH NO.: M-382, M-383

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 32 & Exhaust System

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-45-2

PHOTOGRAPH NO.: M-383

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 32 & Exhaust System

SOURCE: Emergency Light

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE		X	POTENTIALLY UNACCEPTABLE
D Mirkovic	8/23/82	W Griswold	9/7/82
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-45-3

PHOTOGRAPH NO.: M-385

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 32 & Exhaust System

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Generator Building

POTENTIAL INTERACTION NO.: V-11-45-4

PHOTOGRAPH NO.: M-384

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 32 & Exhaust System

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE		X	POTENTIALLY UNACCEPTABLE
D Mirkovic	8/23/82	W Griswold	9/7/82
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-52-1

PHOTOGRAPH NO.: M-391

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1/2" - DF-5 (Inst. Conn.) (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-53-1

PHOTOGRAPH NO.: M-391

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - 3 (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 32

POTENTIAL INTERACTION NO.: V-11-58-1

PHOTOGRAPH NO.: M-391

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 6 (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-84-1

PHOTOGRAPH NO.: M-377

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 31 & Exhaust System

SOURCE: Loudspeaker

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-84-2

PHOTOGRAPH NO.: M-378, M-379

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 31 & Exhaust System

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/23/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-84-3

PHOTOGRAPH NO.: M-380

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 31 & Exhaust System

SOURCE: Emergency Light

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-84-4

PHOTOGRAPH NO.: M-380, M-381

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Diesel Engine No. 31 & Exhaust System

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-89-1

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Fuel Oil Transfer Pump No. 31 (Center of photo)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-91-1

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1/2" - DF - 5 (Inst. Conn.) (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V-11-92-1

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - 3 (Not Shown)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V11-97-1

PHOTOGRAPH NO.: M-390

BACKGROUND NO.: 11-78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3" - DF - 6 (Handwheel on lower left corner of photo)

SOURCE: 4" Diesel Oil Fill Line (white arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

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POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V11-101-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" - DF - LCV - 1207A (Not Shown)

SOURCE: Light Fixture (Top Arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source fall on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
D Mirkovic 8/23/82	W Griswold 9/7/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: Diesel Engine No. 31

POTENTIAL INTERACTION NO.: V11-103-1

PHOTOGRAPH NO.: M-378

BACKGROUND NO.: 11-76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Fuel Oil Day Tank No. 31 (Not Shown)

SOURCE: Light Fixture (Top arrow)

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 5

Source has sufficient mass or will fall sufficient distance such that damage to the target may result.

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

D Mirkovic 8/23/82
INTERACTION ENGINEER/DATE

W Griswold 9/7/82
VERIFIED/DATE

Postulated Failure Modes

MECHANICAL FAILURES

M - 1 Ruptured Pipe or Tube

M - 2 Crimped or Collapsed Pipe or Tube

M - 3 Loss of Function (Pump, Fan, Blowers etc.)

M - 4 Loss of Valve Motive Power

M - 5 Failure of or damage to Valve Actuating Mechanism

M - 6 Other (Explain)

ELECTRICAL FAILURES

E - 1 Open Circuit

E - 2 Short Circuit

E - 3 Other (Explain)

INSTRUMENTATION & CONTROL FAILURES

C - 1 Fail High

C - 2 Fail Low

C - 3 Fail Open

C - 4 Fail Closed

C - 5 Loss of Motive Power

C - 6 Other (Explain)

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
FMEA PREPARATION

SYSTEM NO 11

SYSTEM NAME Diesel Generators

FMEA CATEGORY

NON-CONNECTED X

INTERCONNECTED

Roy G. Chopra 3/11/83
PREPARED BY/DATE

J P Ruggieri 4/11/83
CHECKED BY/DATE

W A Griswold 5·11·83
VERIFIED BY/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-M-1

Interaction Number(s): L-11-1-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3/4"-JW-1033 3/4" City Water line to Jacket Water expansion tanks. For make-up of jacket water to the expansion tank.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A) The line is for water make-up to compensate for normal fluid loss due to evaporation. The expansion tank will provide sufficient water
M-2-(A) for D-G cooling. Makeup is not normally required, hence, loss of the city water line will not degrade the safety functioning of the D-G.

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-2

Interaction Number(s): L-11-5-3
L-11-5-5

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3/4"-JW-1039 Jacket water discharge conn from Diesel Engine #33 to J W Expansion Tank #32. Returns J W to the tank (closed loop).

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)

D G Cooling function affected. Cooling is a required safety function.

M-2-(P)

	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-3

Interaction Number(s): L-11-6-4
L-11-6-5

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1"-JW-1036 Jacket water inlet line from J W expansion tank to Diesel Gen #33. For jacket water inlet to D G.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-2
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-4

Interaction Number(s): L-11-7-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3"-DF-1218 Line connecting Fuel Oil Storage Tanks #'s 32 & 33. Tank Overflow Line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)

Rupture of line could cause spillage of any overflow from either tank. Crimping of line would not cause any spillage. No safety function is effected since the tank inventory will not be depleted.

M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-5

Interaction Number(s): L-11-9-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1-1/2"-DF-1050 Normal fill line for Fuel Oil Day tanks. The line accepts discharge from each of F O Transfer Pumps #31, 32, & 33.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)

Rupture or crimping of line affects fuel oil fill system, which is a safety related system.

M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-6

Interaction Number(s): L-11-10-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1"-DF-1051 1" line, off Fuel Oil Transfer Pump #33. Discharge header #1050 to overflow header 3" #1062 & to F O Storage Tank #33. To direct fuel oil overflow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)

Rupture of line could cause spillage of fuel oil overflow. Safety function maintained. Crimping of line would also have no effect on safety function.

M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-7

Interaction Number(s): L-11-11-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3"-DF-1062 Overflow header for F O Storage Tanks and F O Day Tanks #31, 32 & 33.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-8

Interaction Number(s): L-11-17-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

2"-DF-1079 Vent to atmosphere for F O Day Tank #33.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A) Venting function is maintained following rupture of the line.

M-2-(P) Crimping of the line could prevent tank venting; vacuum caused by fuel discharge could distort (& damage) the tank or deprive the pump of suction.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-9

Interaction Number(s): L-11-18-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3"-DF-1068 Line from Fuel Oil Day Tank #33 to 3" overflow header #1062. For directing overflow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-4
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-10

Interaction Number(s): L-11-19-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3/4"-DF-1108 Fuel Return Line from D G #33 to Fuel Oil Day Tank #33. For Venting D G System during starting. For system priming.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)

Rupture of line does not prevent proper system priming. Crimping of line may prevent essential priming function.

M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-11

Interaction Number(s): L-11-20-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3/4"-DF-1110 Fuel Oil Supply line from Day Tank #33 to D G #33.
To supply oil to D G.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
Rupture or crimping of line would disrupt essential fuel oil supply to D G.

M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-12

Interaction Number(s): L-11-21-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3/4"-DF-1109 Connection from D G #33 Fuel Oil drip Tank to Day Tank #33. For recovery of fuel oil drip.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)

Collection of oil drip is not a safety function. Rupture or crimping of line will not degrade safety functioning of the DG.

M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-13

Interaction Number(s): L-11-24-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1-1/2"-DA-1048 Line connecting Starting Air Tanks #31, 32 & 33. Equalizing line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P) Rupture of line results in loss of air from the Tanks.

M-2-(A) Crimping of line does not effect safety function. The line merely serves as a pressure equalizer.

	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-14

Interaction Number(s): L-11-27-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

D G Room Air Intake Duct.

Postulated Failure Modes(s)
and Evaluation:

M-3-(A) Room Air Intake Duct performs no safety function. DG intake is from outside the building.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-15

Interaction Number(s): L-11-32-1
L-11-32-2

Fire Zone: 101A (Diesel Engine #32)

Target Component(s)
Number, Description & Function:

3/4"-JW-1040 Jacket Water Discharge Conn from Diesel Engine #32 to J W Expansion Tank #32. Returns J W to the tank (closed loop).

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-2.
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-16

Interaction Number(s): L-11-33-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1"-JW-1037 Jacket Water Inlet line from J W Expansion Tank to Diesel Generator #32. For Jacket Water inlet to D G.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-2.
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-17

Interaction Number(s): L-11-35-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3"-DF-1217 Line connecting Fuel Oil Storage Tanks #31 & 32. Tank overflow line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-4.
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-18

Interaction Number(s): L-11-37-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1-1/2"-DF-1053 Fuel oil transfer line from Fuel Oil Transfer Pump #32 discharge to Fuel Oil Day Tanks fill line. For transfer of fuel oil.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-5
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X)
	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-19

Interaction Number(s): L-11-38-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1"-DF-1058 1" line, off Fuel Oil Transfer Pump #32 discharge header #1053 to overflow header 3" #1062 & to F O Storage Tank #32. To direct fuel oil overflow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6.
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-20

Interaction Number(s): L-11-39-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3"-DF-1065 Overflow return line from Fuel Oil Transfer Pump #32 discharge header #1053 to F O Storage Tank #32. To direct overflow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
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FMEA NUMBER: 11-M-21

Interaction Number(s): L-11-40-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3"-DF-1062 Overflow header for Fuel Oil Storage Tanks and Day Tanks.

Postulated Failure Modes(s)
and Evaluation:

See FMEA #11-M-6

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-22

Interaction Number(s): L-11-41-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1-1/2"-DF-1050 See FMEA #11-M-5.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-5.
M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-23

Interaction Number(s): L-11-48-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

2"-DF-1078 Vent to atmosphere for Fuel Oil Day Tank #32.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-8.
M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-24

Interaction Number(s): L-11-49-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3"-DF-1067 Line from Fuel Oil Day Tank #32 to 3" overflow header #1062. For directing overflow. (Also see FMEA #11-M-9).

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-4.
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-25

Interaction Number(s): L-11-50-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3/4"-DF-1105 Fuel return line from D G #32 to Fuel Oil Day Tank #32. For Venting D G System during starting, for System priming.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-10
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-26

Interaction Number(s): L-11-51-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3/4"-DF-1107 Fuel oil supply line from Day Tank #32 to D G #32. To supply fuel oil to D G.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-11
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-27

Interaction Number(s): L-11-52-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3/4"-DF-1106 Conn from D G #32 Fuel Oil Drip Tank to Day Tank #32. For recovery of fuel oil drip.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-12.
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-28

Interaction Number(s): L-11-53-3

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1-1/2"-DA-1048 Line Connecting Starting Air Tanks #31, 32 & 33. Equalizing line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-13.
M-2-(A)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-29

Interaction Number(s): L-11-59-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

D G Room Air Intake Duct

Postulated Failure Modes(s)
and Evaluation:

M-3-(A) Room air intake duct performs no safety function. DG intake is from outside the building.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-30

Interaction Number(s): L-11-60-3

Fire Zone: 10 (Diesel Engine #31)

Target Component(s)
Number, Description & Function:

3/4"-JW-1033 See FMEA #11-M-1

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-1
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-31

Interaction Number(s): L-11-63-2

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3/4"-JW-1041 Jacket Water discharge connection from Diesel Engine #31 to J W Expansion Tank #31. Returns jacket water to Tank (closed loop).

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-2
M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-32

Interaction Number(s): L-11-65-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3"-DF-1217 Line Connecting Fuel Oil Storage Tanks #31 & 32. Tank overflow line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-4
M-2-(A)

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-33

Interaction Number(s): L-11-67-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1-1/2"-DF-1055 Fuel Oil transfer line from Fuel Oil Transfer Pump #31 discharge to Fuel Oil Day Tanks fill line for transfer of fuel oil.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-5.
M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-34

Interaction Number(s): L-11-68-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1"-DF-1059 1" line, off Fuel Oil Transfer Pump #31 discharge header #1055 to overflow header #1062 & to F O Storage Tank #31. To direct fuel oil flow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-35

Interaction Number(s): L-11-69-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3"-DF-1066 Overflow return line from Fuel Oil Transfer Pump #31 discharge header #1053 to F O Storage Tank #31. To direct fuel oil overflow.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6.
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-36

Interaction Number(s): L-11-73-2
L-11-73-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1-1/2"-DF-1050 Normal fill line for fuel oil Day Tanks. The line accepts discharge from each of F O Transfer Pumps #31, 32, & 33.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-5.
M-2-(P)

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-37

Interaction Number(s): L-11-75-2
L-11-75-3

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3"-DF-1062 Overflow header for Fuel Oil Storage Tanks and for Fuel Oil Day Tanks #31, 32, & 33.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-6.
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-38

Interaction Number(s): L-11-78-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

2"-DF-1077 Vent to atmosphere for Fuel Oil Day Tank #31.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
M-2-(P) See FMEA #11-M-8.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-39

Interaction Number(s): L-11-79-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3/4"-DF-1102 Fuel return line from D G #31 to Fuel Oil Day Tank #31. For venting D G system during starting, for system priming.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
M-2-(P)
See FMEA #11-M-10.

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-40

Interaction Number(s): L-11-80-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3/4"-DF-1104 Fuel Oil supply line from Day Tank #31 to D G #31. To supply fuel oil to D G.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-11.
M-2-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-41

Interaction Number(s): L-11-81-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3/4"-DF-1103 Connection from D G #31 Fuel Oil Drip Tank to Day Tank #31. For recovery of fuel oil drip.

Postulated Failure Modes(s)
and Evaluation:

M-1-(A)
See FMEA #11-M-12.
M-2-(A)

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-42

Interaction Number(s): L-11-82-2

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1-1/2"-DA-1048 Line connecting Starting Air Tanks #31, 32, & 33.
Equalizing line.

Postulated Failure Modes(s)
and Evaluation:

M-1-(P)
See FMEA #11-M-13.
M-2-(A)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-43

Interaction Number(s): L-11-87-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

D G Room Air Intake Duct

Postulated Failure Modes(s)
and Evaluation:

M-3-(A) Room Air Intake Duct performs no safety function. DG intake is from outside of the building.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-44

Interaction Number(s): V-11-5-1
V-11-5-2
V-11-5-3
V-11-5-4

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

Diesel Engine #33 & Exhaust System

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction could result in loss of Diesel Generator System #33.

	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-45

Interaction Number(s): V-11-6-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1"-JW-1 Normally open valve on jacket water line #1036 (from J W expansion tank to D G #33. See FMEA 11-M-3).

Postulated Failure Modes(s)
and Evaluation:

M-5-(A) Damage to normally open valve will not prevent safety function since jacket water could still be circulated since the valve will be stuck open.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-46

Interaction Number(s): V-11-7-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1"-JW-2 (Drain) 1", manually operated, normally closed drain valve, on conn off line #1036 (see FMEA #11-M-3). Rupture of drain conn is also considered.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A)
M-2-(A) Safety function maintained.

M-1-(P) Essential Jacket Water System for D G #33 would fail.

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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FMEA NUMBER: 11-M-47

Interaction Number(s): V-11-10-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

Fuel Oil Transfer Pump #33.

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction result in loss of essential component. (F O Transfer Pump #33).

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-48

Interaction Number(s): V-11-12-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

1/2"-DF-5 Valve on Inst (PI) Conn line off F O Transfer Pump #33. Discharge line (1-1/2" #1050). Rupture of 1/2" line also considered.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A)
Line & Valve have no safety function & there is no loss of oil from line.

M-2-(A)

M-1-(P) Rupture of line result in partial loss of D G fuel oil.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-49

Interaction Number(s): V-11-13-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

DF-3 Check valve on Fuel Oil Transfer Pump #33 Discharge Line #1050.

Postulated Failure Modes(s)
and Evaluation:

M-6-(A) Internal mechanism of the Check Valve will remain functional. Safety function is maintained.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-50

Interaction Number(s): V-11-19-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

3"-DF-6 Locked open valve on Storage Tank #33 overflow header 3" #1062 (subject of FMEA (11-M-7)).

Postulated Failure Modes(s)
and Evaluation:

M-5-(A) Locked open valve, upon interaction will stay open and remain functional.

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-51

Interaction Number(s): V-11-23-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

Fuel Oil Day Tank #33.

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Loss of day tank will affect Diesel Generator's performance.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-52

Interaction Number(s): V-11-45-1
V-11-45-2
V-11-45-3
V-11-45-4

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

Diesel Engine #32 & Exhaust System.

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction could result in loss of Diesel Generator System #32.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-53

Interaction Number(s): V-11-52-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

1/2"-DF-5 For Pump #32; valve similar to that of FMEA #11-M-48.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A)
M-2-(A) See FMEA #11-M-48.
M-1-(P)

	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-54

Interaction Number(s): V-11-53-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

DF-3 Valve for Pump #32, similar to that of FMEA #11-M-49.

Postulated Failure Modes(s)
and Evaluation:

M-6-(A) See FMEA #11-M-49.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-55

Interaction Number(s): V-11-58-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

3"-DF-6 Valve for Storage Tank #32 similar to that for FMEA #11-M-50.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A) See FMEA #11-M-50.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-56

Interaction Number(s): V-11-84-1
V-11-84-2
V-11-84-3
V-11-84-4

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Diesel Engine #31 & Exhaust System.

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction could result in loss of Diesel Generator System #31.

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-57

Interaction Number(s): V-11-89-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Fuel Oil Transfer Pump #31

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction result in loss of essential component (F O Transfer Pump #31).

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
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FMEA NUMBER: 11-M-58

Interaction Number(s): V-11-91-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1/2"-DF-5 For Pump #31; valve similar to that of FMEA #11-M-48.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A)
M-2-(A) See FMEA #11-M-48
M-1-(P)

_____	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-59

Interaction Number(s): V-11-92-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

1"-DF-3 Valve for Pump #31, similar to that of FMEA #11-M-49.

Postulated Failure Modes(s)
and Evaluation:

M-6-(A) See FMEA #11-M-49.

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-60

Interaction Number(s): V-11-97-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

3"-DF-6 Valve for Storage Tank #31, similar to that for FMEA #11-M-50.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A) See FMEA #11-M-50.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83	T P Ruggiero 4/11/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

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FMEA NUMBER: 11-M-61

Interaction Number(s): V-11-101-1

Fire Zone:

Target Component(s)
Number, Description & Function:

1"-DF-LCV-1207A Level control valve on line #1050 (normal fill line leading to fuel oil Day Tank #31). For transfer of fuel oil to the Day Tank.

Postulated Failure Modes(s)
and Evaluation:

M-5-(A) If valve fails open, its function is maintained. If the valve fails closed, sufficient time would be available following sounding of Low Level Alarm for the bypass valve DF-17 to be opened and system maintained.

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R G Chopra 3/11/83
EVALUATING ENGINEER/DATE

T P Ruggiero 4/11/83
CHECKED/DATE

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FMEA NUMBER: 11-M-62

Interaction Number(s): V-11-103-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Fuel Oil Day Tank #31.

Postulated Failure Modes(s)
and Evaluation:

M-3-(P) Interaction could result in loss of Diesel Generator System.

Acceptable	X / 1 (X) 2 (X) 3 (X) 4 (X) Potentially Unacceptable/Safety Function Affected
R G Chopra 3/11/83 EVALUATING ENGINEER/DATE	T P Ruggiero 4/11/83 CHECKED/DATE

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TABULATION OF POTENTIALLY UNACCEPTABLE SPATIAL INTERACTIONS

DIESEL GENERATOR SYSTEM

I & C

	POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1)	FMEA (2)	EIC (1)	EIC (2)	SPAN EVALUATION (1)	SPAN EVALUATION (2)	SPAN EVALUATION (3)
*	I-11-12-1	11-I-1-P		10-002-P			NA	
	I-11-17-3	11-I-2-A		NR			NR	
	I-11-18-1	11-I-3-A		NR			NR	
	I-11-23-2	11-I-4-A		NR			NR	
	I-11-24-2	11-I-5-A		NR			NR	
	I-11-25-2	11-I-6-A		NR			NR	
	I-11-35-1	11-I-7-A		NR			NR	
*	I-11-47-1	11-I-8-P		101A-002-P			NA	
	I-11-53-1	11-I-9-A		NR			NR	
	I-11-58-2	11-I-10-A		NR			NR	
	I-11-59-2	11-I-11-A		NR			NR	
	I-11-60-2	11-I-12-A		NR			NR	
	I-11-61-2	11-I-13-A		NR			NR	
*	I-11-82-1	11-I-14-P		102A-002-P			NA	
	I-11-88-1	11-I-18-A		NR			NR	
	I-11-93-2	11-I-19-A		NR			NR	
	I-11-94-2	11-I-20-A		NR			NR	

NOTES: 1) Letter following numbers mean; A - Acceptable, P - Potentially Unacceptable.
2) NR - Evaluation is Not Required since interaction is now acceptable.
3) NA - Type of evaluation is not applicable to this interaction.
4) Disposed of by repair in AFW pump building.
* Unacceptable by all 3 types of evaluation.

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3
SYSTEMS INTERACTION STUDY
TABULATION OF POTENTIALLY UNACCEPTABLE SPATIAL INTERACTIONS

DIESEL GENERATOR SYSTEM

I & C

POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1) (2)	EIC (1) (2)	SPAN EVALUATION (1) (2) (3)
I-11-95-2	11-I-21-A	NR	NR
I-11-96-2	11-I-22-A	NR	NR
I-11-107-1	11-I-26-A	NR	NR
I-11-108-1	11-I-27-P	10-005-P	5209-10-037-A
I-11-110-1	11-I-28-A	NR	NR
I-11-111-1	11-I-29-P	101A-005-P	5209-101A-038-A
I-11-113-1	11-I-30-A	NR	NR
I-11-114-1	11-I-31-P	102A-005-P	5209-101A-038-A

NOTES: 1) Letter following numbers mean; A - Acceptable, P - Potentially Unacceptable.
2) NR - Evaluation is Not Required since interaction is now acceptable.
3) NA - Type of evaluation is not applicable to this interaction.
4) Disposed of by repair in AFW pump building.
* Unacceptable by all 3 types of evaluation.

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
MATRIX PREPARATION

SYSTEM NO 11

SYSTEM NAME DIESEL GENERATORS

MATRIX CATEGORY

NON-CONNECTED _____

INTERCONNECTED X

M Sourakous 9/23/82
PREPARED BY/DATE

R Daveni 9/23/82
APPROVED BY/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
LI 1135	7700 Gal Fuel Oil Storage Tank No. 33	S	
LC 1206-S	7700 Gal Fuel Oil Storage Tank No. 33	S	
PI 1359	½" Valve DF5	S	
LI 1138	175 Gal Fuel Oil Day Tank No 33	S	
LC 1209S	175 Gal Fuel Oil Day Tank No 33	S	
LI 1134	7700 Gal Fuel Oil Storage Tank No 32	S	
LC 1205-S	7700 Gal Fuel Oil Storage Tank No 32	S	
PI 1358	½" Valve DF-5	S	
LI 1137	175 Gal Fuel Oil Day Tank No 32	S	
LC 1208-S	175 Gal Fuel Oil Day Tank No 32	S	
LI 1133	7700 Gal Fuel Oil Storage Tank No 31	S	
LC 1204S	7700 Gal Fuel Oil Storage Tank No 31	S	
PI 1357	½" Valve DF-5	S	
LI 1136	175 Gal Fuel Oil Day Tank No 31	S	

M Socratous/9-15-82
PREPARED BY/DATE

R Daverio/9-22-82
APPROVED BY/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

INTERFACING COMPONENTS

SAFETY RELATED COMPONENT	INTERFACING COMPONENTS	SAFETY(S) NONSAFETY(N)	POTENTIAL INTERACTION (IF APPLICABLE)
LC 1207-S	175 Gal Fuel Oil Day Tank No 31	S	
PG-	3/4" -V-DA-3 (Starting Air Tank No. 33)	S	
PS-	3/4"-V-DA-4 (Starting Air Tank No. 33)	S	
PC-1161-S	3/4"-V-DA-4 (Starting Air Tank No. 33)	S	
PG-1161-S	3/4"-V-DA-3 (Starting Air Tank No. 32)	S	
PS-	3/4"-V-DA-4 (Starting Air Tank No. 32)	S	
PC-1160-S	3/4"-V-DA-4 (Starting Air Tank No. 32)	S	
PG-	3/4"-V-DA-3 (Starting Air Tank No. 31)	S	
PS-	3/4"-V-DA-4 (Starting Air Tank No. 31)	S	
PC 1159-S	3/4"-V-DA-4 (Starting Air Tank No. 31)	S	

M Socratous/9-15-82
PREPARED BY/DATE

R Daverio/9-22-82
APPROVED BY/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
SYSTEMS INTERACTION EVALUATION

SYSTEM NO. I-11

SYSTEM NAME DIESEL GENERATOR

EVALUATION CATEGORY

NON-CONNECTED _____

INTERCONNECTED X

No evaluations required

R Daveno 9/23/82
INTERACTION ENGINEER/DATE

W Griswold 9-29-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
MATRIX PREPARATION

SYSTEM NO 11

SYSTEM NAME DIESEL GENERATORS

MATRIX CATEGORY

NON-CONNECTED X

INTERCONNECTED

M Socratous 9/15/82
PREPARED BY/DATE

R Daveno 9/15/82
APPROVED BY/DATE

Ebasco Services Incorporated

SOURCES

I-11		NO INTERACTION	1 LIGHTS											
1	LG-1166	X												
2	PI 1375	X												
3	DPI 1134	X												
4	DPC 1119S	X												
5	DPI 1137	X												
6	DPC 1122S	X												
7	LC 1207S	X												
8	LI 1136	X												
9	(LAPS-1) #31	X												
10	PG #31	X												
11	PS (LAPS-2) #31	X												
12	GENERATOR PANEL #31		I112											
13	PG #31	X												
14	PC 1159S	X												
15	PG (AIR TANK) #31	X												
16	PS (AIR TANK) #31	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR BLDG

FIRE ZONE: 10

LOCATION : WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD
DATE 7/82 CH.
SCALE NONE

APPROVED
R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
I-11
SH 1 OF 10

SOURCES

I-11		NO INTERACTION	1 SPEAKER	2 LIGHTS & CONDUIT	3 HEATER									
17	ENGINE PANEL #31				I126									
	PS-1													
	PS-2													
	PS-3													
	PS-4													
	PS-5													
	PG													
18	TI (JWP SUCTION)		I113											
19	TI	X												
20	TS	X												
21	TS	X												
22	LG (EXP TANK)	X												
23	VENTILATION PANEL #31			I114										
24	INTAKE LOUVER TUBING			I114 I115										
25	EXHAUST DAMPER TUBING			I114										
26	PCV	X												

TARGETS

INCHES 0 1 2 3 4 5 2
CM. 0 1 2

BUILDING: DIESEL GENERATOR BLDG

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD
DATE 7/82 CH.
SCALE NONE

APPROVED
R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
I-11
SH 2 OF 10

SOURCES

I-11		NO INTERACTION	1 LIGHTS & CONDUIT											
27	CHECK VALVE	X												
28	PI	X												
29	SRV	X												
30	30 GAL TANK	X												
31	DRYER	X												
32	PRV	X												
33	SPV	X												
34	PI	X												
35	AIR SUPPLY TO VENT PANEL		I114											

TARGETS

BUILDING: DIESEL GEN BLDG

FIRE ZONE: 10

LOCATION : WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 I-11 SH 3 OF 10
DIV. I&C DR. RD DATE 7/82 CH. SCALE NONE	APPROVED R M DAVERIO	

SOURCES

I-11		NO INTERACTION	LIGHTS											
			1											
36	LG 1167	X												
37	PI 1376	X												
38	DPI 1135	X												
39	DPC 1120S	X												
40	DPI 1138	X												
41	DPC 1123S	X												
42	LC 1208S	X												
43	LI 1137	X												
44	PS (LAPS-1) #32	X												
45	PG #32	X												
46	PS (LAPS-2) #32	X												
47	GENERATOR PANEL #32		I119											
48	PG #32	X												
49	PC 1160S	X												
50	PG (AIR TANK #32)	X												
51	PS (AIR TANK #32)	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GEN BLDG

FIRE ZONE: 101A

LOCATION: WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD

DATE 7/82 CH.

SCALE NONE

APPROVED

R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
I-11
SH 4 OF 10

SOURCES

TARGETS

I-11		NO INTERACTION	1 SPEAKER	2 LIGHTS & CONDUITS										
52	ENGINE PANEL #32	X												
	PS-1													
	PS-2													
	PS-3													
	PS-4													
	PS-5													
	PG													
53	TI (JWP SUCTION)		I120											
54	TI	X												
55	TS	X												
56	TS	X												
57	LG (EXP TANK #32)	X												
58	VENT PANEL #32			I121										
59	INTAKE LOUVERS TUBING			I121 I122										
60	EXHAUST DAMPERS TUBING			I121										
61	AIR SUPPLY TO VENT PANEL			I121										

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATORS BLDG

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE:

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD
DATE 7/82 CH.
SCALE NONE

APPROVED
R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
I-11
SH 5 OF 10

SOURCES

I-11

TARGETS		NO INTERACTION
62	PCV	X
63	CHECK VALVE	X
64	PI	X
65	SRV	X
66	30 GAL TANK	X
67	DRYER	X
68	PRV	X
69	SPV	X
70	PI	X

BUILDING: DIESEL GENERATOR BLDG

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE:

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD

DATE 7/82 CH.

SCALE NONE

APPROVED

R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

I-11

SH 6 OF 10

SOURCES

I-11		NO INTERACTION	1 LIGHTS											
71	LG 1168	X												
72	PI 1377	X												
73	DPI 1136	X												
74	DPC 1121S	X												
75	DPI 1139	X												
76	DPC 1124S	X												
77	LC 1209S	X												
78	LI 1138	X												
79	PS (LAPS-1) #33	X												
80	PG #33	X												
81	PS (LAPS-2) #	X												
82	GENERATOR PANEL #33		I123											
83	PG #33	X												
84	PC 1161S	X												
85	PG (AIR TANK #33)	X												
86	PS (AIR TANK #33)	X												

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR BLDG

FIRE ZONE: 102A

LOCATION : WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD
DATE 7/82 CH.
SCALE NONE

APPROVED
R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
I-11
SH 7 OF 10

SOURCES

I-11		NO INTERACTION	1 SPEAKER	2 LIGHTS & CONDUIT										
87	ENGINE PANEL #33	X												
	PS-1													
	PS-2													
	PS-3													
	PS-4													
	PS-5													
	PG													
88	TI (JWP SUCTION)		I124											
89	TI	X												
90	TS	X												
91	TS	X												
92	LG (EXP TANK #33)	X												
93	VENT PANEL #33			I125										
94	INTAKE LOUVER TUBING			I125										
95	EXHAUST DAMPERS TUBING			I125										
96	AIR SUPPLY TO VENT PANEL			I125										

TARGETS

BUILDING: DIESEL GENERATORS BLDG

FIRE ZONE: 102A

LOCATION : WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 I-11 SH 8 OF 10
DIV. I&C DR. RD DATE 7/82 CH. SCALE NONE	APPROVED R M DAVERIO	

SOURCES

I-11		NO INTERACTION												
97	PCV	X												
98	CHECK VALVE	X												
99	PI	X												
100	SRV	X												
101	30 GAL TANK	X												
102	DRYER	X												
103	PRV	X												
104	SPV	X												
105	PI	X												

TARGETS

BUILDING: DIESEL GENERATOR BLDG

FIRE ZONE: 102A

LOCATION : WITHIN FIRE ZONE

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 I-11 SH 9 OF 10
DIV. I&C DR. RD DATE 7/82 CH. SCALE NONE APPROVED R M DAVERIO		

SOURCES

TARGETS

I-11		NO INTERACTION	1 DIESEL OIL TANK 4" FILL LINE
106	LI 1133	X	
107	PI 1357 SENSING LINE		I116
108	LC 1204S		I116
109	LI 1134	X	
110	PI 1358 SENSING LINE		I117
111	LC 1205S		I117
112	LI 1135	X	
113	PI 1359 SENSING LINE		I118
114	LC 1206S		I118
115	PI 1357	X	
116	PI 1358	X	
117	PI 1359	X	

BUILDING: YARD AREA

FIRE ZONE: N/A

LOCATION WITHIN FIRE ZONE:

DIESEL GENERATORS

EBASCO SERVICES INCORPORATED

DIV. I&C DR. RD

DATE 7/82 CH.

SCALE NONE

APPROVED

R M DAVERIO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003

I-11

SH 10 OF 10

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

NON-CONNECTED INTERACTIONS EVALUATION

1.	No Interaction	-	Source is Class II and is therefore supported adequately. (See response to IP-3 FSAR question 5.24).
2.	Acceptable	-	Source pipe/conduit is equal size or smaller in diameter and/or the same thickness or thinner wall than the target pipe/conduit/tubing. Paragraph 6.2.2.1a Volume I.
3.	Acceptable	-	Source has insufficient mass to damage the target component.
4.	Acceptable	-	Basis is engineering judgement. Specific justification is on the evaluation form.
5.	Potentially Unacceptable	-	Discussion of specific is on the evaluation form.
6.	Potentially Unacceptable	-	Source pipe/conduit is large enough to damage target conduit/pipe/tubing.
7.	Potentially Unacceptable	-	Source will fall a sufficient distance, or has adequate mass such that damage to target conduit/box/instrument/tubing/panel may be possible.
8.	No Interaction	-	Upon further investigation of the source, this portion of its system is designated Seismic I.

R2 7/22/82
R1 6/30/82
R0 6/26/82

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
SYSTEMS INTERACTION EVALUATION

SYSTEM NO. 11

SYSTEM NAME DIESEL GENERATORS

EVALUATION CATEGORY

NON-CONNECTED X

INTERCONNECTED

R Davens 9/14/82
INTERACTION ENGINEER/DATE

W A Griswold 9-20-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-12-1

PHOTOGRAPH NO.: I-112

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Generator Panel #31

SOURCE: Lights

DESCRIPTION OF POSTULATED INTERACTION:
Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE X POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-17-3

PHOTOGRAPH NO.: I-126

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Engine Panel #31

SOURCE: Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-18-1

PHOTOGRAPH NO.: I-113

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: TI (JWP Suction)

SOURCE: Speaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE
R M Daverio	8/2/82	W Griswold	8/30/82
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-23-2

PHOTOGRAPH NO.: I-114

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Ventilation Panel #31

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-24-2

PHOTOGRAPH NO.: I-114, I-115

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Intake Louver Tubing

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Tubing is run over non-seismic conduit. Light falls on tubing.

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-25-2

PHOTOGRAPH NO.: I-114

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Exhaust Damper Tubing

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-35-1

PHOTOGRAPH NO.: I-114

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Air Supply to Vent Panel

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-47-1

PHOTOGRAPH NO.: I-119

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Generator Panel #32

SOURCE: Lights

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/83	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-53-1

PHOTOGRAPH NO.: I-120

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: TI (JWP Suction)

SOURCE: Speaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-58-2

PHOTOGRAPH NO.: I-121

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Vent Panel #32

SOURCE: Lights & Conduits

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-59-2

PHOTOGRAPH NO.: I121, I122

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Intake Louvers Tubing

SOURCE: Lights & Conduits

DESCRIPTION OF POSTULATED INTERACTION:

Tubing runs over non-seismic conduit. Lights falls on target.

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82		W Griswold 8/30/82	
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-60-2

PHOTOGRAPH NO.: I-121

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Exhaust Dampers Tubing

SOURCE: Lights & Conduits

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-61-2

PHOTOGRAPH NO.: I-121

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Air Supply to Vent Panel

SOURCE: Lights & Conduits

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-82-1

PHOTOGRAPH NO.: I-123

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Generator Panel #33

SOURCE: Lights

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

PHOTOGRAPH NO.:

BACKGROUND NO.:

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IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

PHOTOGRAPH NO.:

BACKGROUND NO.:

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IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

PHOTOGRAPH NO.:

BACKGROUND NO.:

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IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-88-1

PHOTOGRAPH NO.: I-124

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: TI (JWP Suction)

SOURCE: Speaker

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-93-2

PHOTOGRAPH NO.: I-125

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Vent Panel #33

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-94-2

PHOTOGRAPH NO.: I-125

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Intake Louvers Tubing

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-95-2

PHOTOGRAPH NO.: I-125

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Exhaust Dampers Tubing

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

R M Daverio 8/2/82
INTERACTION ENGINEER/DATE

W Griswold 8/30/82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-96-2

PHOTOGRAPH NO.: I-125

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Air Supply to Vent Panel

SOURCE: Lights & Conduit

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

PHOTOGRAPH NO.:

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BACKGROUND NO.:

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

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PHOTOGRAPH NO.:

BACKGROUND NO.:

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING:

FIRE ZONE:

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.:

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PHOTOGRAPH NO.:

BACKGROUND NO.:

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET:

SOURCE:

DESCRIPTION OF POSTULATED INTERACTION:

EVALUATION OF INTERACTION:

EVALUATION NOTE NO:

_____ ACCEPTABLE

_____ POTENTIALLY UNACCEPTABLE

_____
INTERACTION ENGINEER/DATE

_____
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-107-1

PHOTOGRAPH NO.: I-116

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PI 1357

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82		W Griswold 8/30/82	
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-108-1

PHOTOGRAPH NO.: I-116

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: LC 1204S

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-110-1

PHOTOGRAPH NO.: I-117

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PI 1358

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

	ACCEPTABLE	X	POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82		W Griswold 8/30/82	
INTERACTION ENGINEER/DATE		VERIFIED/DATE	

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-111-1

PHOTOGRAPH NO.: I-117

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: LC 1205S

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-113-1

PHOTOGRAPH NO.: I-118

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PI 1359

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator Building

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE:

POTENTIAL INTERACTION NO.: I-11-114-1

PHOTOGRAPH NO.: I-118

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: LC 1207S

SOURCE: Diesel Oil Tank 4" Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
R M Daverio 8/2/82	W Griswold 8/30/82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Ebasco Services Incorporated

Postulated Failure Modes

MECHANICAL FAILURES

M - 1 Ruptured Pipe or Tube

M - 2 Crimped or Collapsed Pipe or Tube

M - 3 Loss of Function (Pump, Fan, Blowers etc.)

M - 4 Loss of Valve Motive Power

M - 5 Failure of or damage to Valve Actuating Mechanism

M - 6 Other (Explain)

ELECTRICAL FAILURES

E - 1 Open Circuit

E - 2 Short Circuit

E - 3 Other (Explain)

INSTRUMENTATION & CONTROL FAILURES

C - 1 Fail High

C - 2 Fail Low

C - 3 Fail Open

C - 4 Fail Closed

C - 5 Loss of Motive Power

C - 6 Other (Explain)

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
FMEA PREPARATION

SYSTEM NO I-11

SYSTEM NAME Diesel Generators

FMEA CATEGORY

NON-CONNECTED X

INTERCONNECTED

Sudhendu N. Nath 3/18/83
PREPARED BY/DATE

J R Price 4/8/83
CHECKED BY/DATE

W Griswold 5-4-83
VERIFIED BY/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-1

Interaction Number(s): I-11-12-1

Fire Zone: 10

Target Component(s)
Number, Description & Function: Generator Panel #31

Starting and controlling of diesel generator #31.

Postulated Failure Mode(s)
and Evaluation:

C-6-(P) (Damage of control components mounted in generator panel #31)

This failure may degrade the operation of the diesel generator.

_____	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-2

Interaction Number(s): I-11-17-3

Fire Zone: 10

Target Component(s)
Number, Description & Function: Engine Panel #31 (PS-1, PS-2, PS-3, PS-4, PS-5, PG)

Locally indicates lube oil, water, and air pressure as well as individual cylinder exhaust temperature.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Damaging one or more components on the panel)

Failure of any of the local gages, indicating light or pyrometer will not affect any safety function.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-3

Interaction Number(s): I-11-18-1

Fire Zone: 10

Target Component(s)
Number, Description & Function: TI (JWP Suction)

Locally indicates the jacket water pump suction temperature for diesel generator #31.

Postulated Failure Mode(s)
and Evaluation:

C-1-(A)/C-2-(A)

This local indication does not affect any safety function.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-4

Interaction Number(s): I-11-23-2

Fire Zone: 10

Target Component(s)
Number, Description & Function: Ventilation Panel #31

Operates the exhaust fans, dampers and louvers for diesel generator #31 compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Damage to the ventilation panel)

Ventilation is not required in the diesel generator compartments.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-5

Interaction Number(s): I-11-24-2

Fire Zone: 10

Target Component(s)
Number, Description & Function: Intake Louver Tubing

Operates the intake louvers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-6

Interaction Number(s): I-11-25-2

Fire Zone: 10

Target Component(s)
Number, Description & Function: Exhaust Damper Tubing

Operates the exhaust dampers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-7

Interaction Number(s): I-11-35-1

Fire Zone: 10

Target Component(s)
Number, Description & Function: Air Supply to Vent Panel

Operates exhaust fans, dampers and louvers for the diesel generator compartment

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-8

Interaction Number(s): I-11-47-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function: Generator Panel #32

Starting and controlling of the diesel generator #32.

Postulated Failure Mode(s)
Evaluation:

C-6-(P) (Damage of control components mounted in generator panel #32)

This failure may degrade the operation of the diesel generator.

_____	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-9

Interaction Number(s): I-11-53-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function: TI (JWP Suction)

Locally indicates the jacket water pump suction temperature for diesel generator #32

Postulated Failure Mode(s)
and Evaluation:

C-1-(A)/C-2-(A) See FMEA 11-I-3

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-10

Interaction Number(s): I-11-58-2

Fire Zone: 101A

Target Component(s)
Number, Description & Function: Vent Panel #32

Operates the exhaust fans, dampers and louvers for diesel generator #32 compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Damage to the ventilation panel) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-11

Interaction Number(s): I-11-59-2

Fire Zone: 101A

Target Component(s)
Number, Description & Function: Intake Louvers Tubing

Operates the intake louvers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-5

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-12

Interaction Number(s): I-11-60-2

Fire Zone: 101A

Target Component(s)
Number, Description & Function: Exhaust Dampers Tubing

Operates the exhaust dampers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-5

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-13

Interaction Number(s): I-11-61-2

Fire Zone: 101A

Target Component(s)
Number, Description & Function: Air Supply to Vent Panel

Operates the exhaust fans, dampers, and louvers for the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-14

Interaction Number(s): I-11-82-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function: Generator Panel #33

Starting and controlling of diesel generator #33.

Postulated Failure Mode(s)
and Evaluation:

C-6-(P) (Damage of control components mounted in generator panel #33)

This failure may degrade the operation of the diesel generator.

	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER:

Interaction Number(s):

Fire Zone:

Target Component(s)
Number, Description & Function:

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Postulated Failure Mode(s)
and Evaluation:

Acceptable	/ 1 ( ) 2 ( ) 3 ( ) 4 ( ) Potentially Unacceptable/Safety Function Affected
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER:

Interaction Number(s):

Fire Zone:

Target Component(s)
Number, Description & Function:

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Postulated Failure Mode(s)
and Evaluation:

Acceptable	/ 1 ( ) 2 ( ) 3 ( ) 4 ( ) Potentially Unacceptable/Safety Function Affected
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER:

Interaction Number(s):

Fire Zone:

Target Component(s)
Number, Description & Function:

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Postulated Failure Mode(s)
and Evaluation:

Acceptable	/ 1 ( ) 2 ( ) 3 ( ) 4 ( ) Potentially Unacceptable/Safety Function Affected
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-18

Interaction Number(s): I-11-88-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function: TI (JWP Suction)

Locally indicates the jacket water pump suction temperature for diesel generator #33.

Postulated Failure Mode(s)
and Evaluation:

C-1-(A)/C-2-(A) See FMEA 11-I-3

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-19

Interaction Number(s): I-11-93-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function: Vent Panel #33

Operates the exhaust fans, dampers and louvers for diesel generator #33 compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Damage to the ventilation panel) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-20

Interaction Number(s): I-11-94-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function: Intake Louver Tubing

Operates the intake louvers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-21

Interaction Number(s): I-11-95-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function: Exhaust Dampers Tubing

Operates the exhaust dampers in the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-22

Interaction Number(s): I-11-96-2

Fire Zone: 102A

Target Component(s)
Number, Description & Function: Air Supply to Vent Panel

Operates the fans, dampers, and louvers for the diesel generator compartment.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-4

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-26

Interaction Number(s): I-11-107-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: PI-1357 Sensing Line (Oil storage tank #31)

Locally indicates fuel oil transfer pump discharge pressure.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-30

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-27

Interaction Number(s): I-11-108-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: LC-1204S (Oil storage tank #31)

Level controller generates an alarm for fuel refill.

Postulated Failure Mode(s)
and Evaluation:

C-1-(P) See FMEA 11-I-31

	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-28

Interaction Number(s): I-11-110-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: PI-1358 Sensing Line (Oil storage tank #32)

Locally indicates fuel oil transfer pump discharge pressure.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) See FMEA 11-I-30

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-29

Interaction Number(s): I-11-111-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: LC-1205S (Oil storage tank #32)

Level controller generates an alarm for fuel refill.

Postulated Failure Mode(s)
and Evaluation:

C-1-(P) See FMEA 11-I-31

Acceptable	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-30

Interaction Number(s): I-11-113-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: PI-1359 Sensing Line (Oil storage tank #33)

Locally indicates fuel oil transfer pump discharge pressure.

Postulated Failure Mode(s)
and Evaluation:

C-6-(A) (Crimp/Break) The pressure reading may be high or low due to this failure. This failure will not degrade the process of transferring fuel to the day tanks.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-I-31

Interaction Number(s): I-11-114-1

Fire Zone: N/A

Target Component(s)
Number, Description & Function: LC-1206S (Oil storage tank #33)

Level controller generates an alarm for fuel refill.

Postulated Failure Mode(s)
and Evaluation:

C-1-(P) Unindicated low fuel level may reduce the operating capability of the diesel generators.

	X / 1 ( ) 2 (X) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
S Nath 3/18/83	J R Price 4/8/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3
SYSTEMS INTERACTION STUDY
TABULATION OF POTENTIALLY UNACCEPTABLE SPATIAL INTERACTIONS

DIESEL GENERATOR SYSTEM

ELECTRICAL

	POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1)	FMEA (2)	EIC (1)	EIC (2)	SPAN EVALUATION (1)	SPAN EVALUATION (2)	SPAN EVALUATION (3)
*	E-11-33-2	11-E-1-P		10-001-P			NA	
	E-11-35-5	11-E-2-A		10-001-P			NA	
	E-11-36-5	11-E-2-A		10-001-P			NA	
	E-11-37-5	11-E-2-A		10-001-P			NA	
	E-11-41-1	11-E-3-A		10-001-P			NR	
*	E-11-59-1	11-E-4-P		10-002-P			NA	
*	E-11-71-1	11-E-5-P		10-001-P			NA	
*	E-11-73-1	11-E-5-P		10-001-P			NA	
*	E-11-78-1	11-E-6-P		10-001-P			NA	
*	E-11-80-1	11-E-6-P		10-001-P			NA	
*	E-11-148-1	11-E-7-P		101A-002-P			NA	
*	E-11-253A-1	11-E-8-P		102A-002-P			NA	
	E-11-378-2	11-E-9-P		36A-006-A			NR	
	E-11-380-2	11-E-10-P		36A-006-A			NR	
	E-11-382-2	11-E-11-P		36A-006-A			NR	
	E-11-386-1	11-E-12-P		10-005-P		5209-10-037-A		
	E-11-387-1	11-E-12-P		10-005-P		5209-10-037-A		
	E-11-391-1	11-E-13-P		101A-005-P		5209-101A-038-A		

NOTES: 1) Letter following numbers mean; A - Acceptable, P - Potentially Unacceptable.
2) NR - Evaluation is Not Required since interaction is now acceptable.
3) NA - Type of evaluation is not applicable to this interaction.
4) Disposed of by repair in AFW pump building.
* Unacceptable by all 3 types of evaluation.

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3
SYSTEMS INTERACTION STUDY
TABULATION OF POTENTIALLY UNACCEPTABLE SPATIAL INTERACTIONS

DIESEL GENERATOR SYSTEM

ELECTRICAL

POTENTIALLY UNACCEPTABLE INTERACTION NUMBER	FMEA (1) (2)	EIC (1) (2)	SPAN EVALUATION (1) (2) (3)
E-11-394-1	11-E-14-P	101A-005-P	5209-101A-038-A
E-11-395-1	11-E-14-P	101A-005-P	5209-101A-038-A
E-11-399-1	11-E-15-P	102A-005-P	5209-101A-038-A
E-11-402-1	11-E-16-P	102A-005-P	5209-101A-038-A
E-11-403-1	11-E-16-P	102A-005-P	5209-101A-038-A

NOTES: 1) Letter following numbers mean; A - Acceptable, P - Potentially Unacceptable.
2) NR - Evaluation is Not Required since interaction is now acceptable.
3) NA - Type of evaluation is not applicable to this interaction.
4) Disposed of by repair in AFW pump building.
* Unacceptable by all 3 types of evaluation.

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
MATRIX PREPARATION

SYSTEM NO E-11

SYSTEM NAME DIESEL GENERATOR

MATRIX CATEGORY

NON-CONNECTED X

INTERCONNECTED

Eugene Licari 7/30/82
PREPARED BY/DATE

J. Montalbano 8-30-82
APPROVED BY/DATE

Ebasco Services Incorporated

SOURCES

E-11

TARGETS		NO INTERACTION	1 3/4" CITY WATER LINE 1035	2 ELECTRIC UNIT HEATER										
	EXHAUST FAN 314													
1	BOX MU9	X												
2	1"CND 6NQ	X												
3	PANEL KF2	X												
	EXHAUST FAN 315													
4	BOX MV1	X												
5	1" CND 6NR		E227											
6	PANEL KF1	X												
	EXHAUST HOOD VENT FAN 31													
7	MOTOR & FLEX CND		E226											
8	BOX MA3		E226											
9	1" CND GMI		E226											
10	PB W68	X												
11	1" CND 6MH	X												
12	BOX KA7	X												
13	1¼" CND 6WT			E229										

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION: EL 43' AND 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 1 OF 36

SOURCES

E-11		NO INTERACTION	3/4" CITY WATER LINE 1035 (1)											
	LCV 1207A													
14	FLEX CNDS	X												
15	BOX KQ8	X												
16	½" CND	X												
	LCV 1207B													
17	FLEX CNDS	X												
18	BOX KQ9	X												
19	½" CND	X												
	LC 1207S													
20	FLEX CNDS	X												
21	BOX KQ7	X												
22	1¼" CND 6VP	X												
23	TB XH7	X												
24	2½" CND 6SM	X												
25	PB W94	X												
26	1¼" CND 6SL		E227											

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION: EL 27'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 2 OF 36

SOURCES

E-11		NO INTERACTION	1 3/4" CITY WATER LINE 1035	2 ELECTRIC UNIT HEATER	3 ½" LIGHTING CND	4 LIGHT FIXTURE	5 ELECTRIC UNIT HEATER							
	FUEL OIL PUMP 31 (CONT'd)													
27	TB ZY4	X												
28	1¼" CND 6PG		E227											
	LC 1204S (CONT'd)													
29	TB ZY7	X												
30	1"CND 6PI		E227											
31	1" CND 6WM1		E227											
32	1¼" CND 6WM		E227											
33	PANEL KF3			E229										
34	1¼" CND 6GJ	X												
	MISC RELAY													
35	RELAY BOX TR31						E259							
36	3/4" CND DB 54						E259							
37	1½" CND DB53				E182	E230	E259							

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR
FIRE ZONE: 10
LOCATION: EL 27"AND 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 3 OF 36

SOURCES

E-11		NO INTERACTION	1 ELECTRIC UNIT HEATER											
	DIESEL GENERATOR 31													
38	GENERATOR GB1	X												
39	CURRENT TRANSFORMER BF4	X												
40	3000A BUS DUCT	X												
	ENGINE GUAGE PANEL 31													
41	BOX PQ7		E229											
42	1" CND 5DL	X												
	HEATER CONTACTOR PANEL													
43	BOX KA4	X												
44	1¼" CND 6MR		E229											
	STARTING AIR PRESSURE SWITCH													
45	1" CND 6NK1	X												

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR
FIRE ZONE: 10
LOCATION: EL 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 4 OF 36

SOURCES

E-11		NO INTERACTION	1 LIGHT FIXTURE											
TARGETS	DG #31 CONTROL PANEL													
46	2" CND 6MU	X												
47	3" CND 6MY1	X												
48	3" CND 6MY	X												
49	3" CND 6MZ	X												
50	1½" CND 6NB1	X												
51	3" CND 6NB	X												
52	2" CND 6YK	X												
53	1¼" CND 5QK	X												
54	4" CND 6TN	X												
55	4" CND 6TN1	X												
56	4" CND 6TN2	X												
57	3" CND 6WP	X												
58	3" CND 6WP1	X												
59	PANEL PP9		E230											

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 5 OF 36

SOURCES

E-11		NO INTERACTION	1 ELECTRIC UNIT HEATER											
	PC 1159S													
60	BOX LY7	X												
61	1" CND 6UR	X												
	PNEUMATIC CONTROL PANEL #31													
62	1" CND 6WH	X												
63	1" CND 6WH1	X												
64	1" CND 6WG	X												
65	1" CND 6WG1	X												
	DG AIR COMPRESSOR #31													
66	BOX ME5	X												
67	1" CND 6NK	X												
68	BOX XV5	X												
69	1" CND 6NJ	X												
70	1" CND 6NJ1	X												
71	PANEL KF4		E229											
72	1¼" CND 6TC		E229											

TARGETS

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 6 OF 36

SOURCES

E-11		NO INTERACTION	1 ELECTRIC UNIT HEATER											
	DG #31 AIR COMPRESSOR (CONTD)													
73	PB W87		E229											
74	1¼" CND 6NA		E229											
75	PB XX1	X												
76	4" CND 6TQ	X												
	VALVES 1207(CONT"D)													
77	2" CND 6SN	X												
78	PANEL RG8		E229											
79	2" CND 6RV	X												
80	PB W23		E229											
81	1" CND 6MD	X												
82	1¼" CND 6WF	X												

TARGETS

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 7 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	PB XL8													
83	PB XL8	X												
84	4" CND 6VZ	X												
85	4" CND 6VZ1	X												
86	4" CND 6VZ2S	X												
87	4" CND 6VZ3	X												
88	4" CND 6VZ4S	X												
89	4" CND 6WCS	X												
90	4" CND 6WC1	X												
91	4" CND 6WC2S	X												
92	4" CND 6WC3	X												
93	4" CND 6WC4S	X												
	PB W93													
94	PB W93	X												
95	1¼" CND 6SB	X												
96	1½" CND 6RS	X												

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003

E-11
SH 8 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	PB XX7													
97	PB XX7	X												
98	4" 6QRS	X												
99	4" 6QR1	X												
100	4" 6QR2S	X												
101	4" 6QR3	X												
102	4" 6QR4S	X												
	PB W9 2													
103	1½" CND 6RK	X												
104	1¼" CND 6SC	X												

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR
FIRE ZONE: 10
LOCATION: EL 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 9 OF 36

SOURCES

E-11		NO INTERACTION	1 3/4" CITY WATER LINE 1035											
	EXHAUST FAN 316													
105	BOX MV2	X												
106	1" CND 6NS	X												
107	BOX KE4	X												
	EXHAUST FAN 317													
108	BOX MV3	X												
109	1" CND 6NT		E231											
110	BOX KE3	X												
	EXHAUST HOOD VENT FAN 32													
111	MOTOR & FLEX CNDS		E231											
112	BOX MA7		E231											
113	1" CND 6 MK		E231											
114	PB W69	X												
115	1" CND 6MJ	X												
116	BOX KA8	X												
117	1¼" CND 6WU	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 43'AND 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 10 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	LCV 1208A													
118	FLEX CNDS	X												
119	BOX KR2	X												
120	½" CND	X												
	LCV 1208B													
121	FLEX CNDS	X												
122	BOX KR3	X												
123	½" CND	X												
	LC 1208S													
124	FLEX CNDS	X												
125	BOX KR1	X												
126	½" CND	X												
127	TB ZX1	X												
128	2½" CND 6SP	X												
129	PB W96	X												
130	1¼" CND 6SS	X												

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 27'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

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POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 11 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	FUEL OIL PUMP 32 (CONT'D)													
131	TB ZY3	X												
132	1¼" CND 6PF	X												
	LC 1205S (CONT'D)													
133	TB ZY6	X												
134	1" CND 6PI	X												
135	1" CND 6PH	X												
136	1¼" CND 6WN	X												
137	1" CND 6WN1	X												
138	BOX KE5	X												

INCHES 0 1 2 CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 27' AND 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

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POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 12 OF 36

SOURCES

E-11		NO INTERACTION												
	DIESEL GENERATOR NO. 32													
139	GENERATOR GB2	X												
140	CURRENT TRANSFORMER BF5	X												
141	3000A BUS DUCT	X												
	ENGINE GAUGE PANEL													
142	BOX PQ8	X												
143	1" CND 6SZ	X												
144	BOX HF8	X												
	HEATER CONTACTOR PANEL													
145	BOX KA 5	X												
146	1¼" CND 6MS	X												
	STARTING AIR PRESSURE SWITCH													
147	1" CND 6NMI	X												

TARGETS

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 13 OF 36

SOURCES

TARGETS

E-11	DG #32 CONTROL PANEL	NO INTERACTION	1 LIGHT FIXTURE											
148	PANEL PQ1		E232											
148a	3" CND 6WP	X												
149	3" CND 6WP1	X												
150	4" CND 6TT	X												
151	4" CND 6TT 1	X												
152	4" CND 6TT2S	X												
153	3" CND 6WQ	X												
154	3" CND 6WQ1	X												
155	2" CND 6YJ	X												
156	3" CND 6PN	X												
157	3" CND 6PN1	X												
158	2" CND 6MV	X												
159	3" CND 6NC	X												
160	3" CND 6NC1	X												
161	2" CND 6NG	X												
162	1" CND 6PL1	X												

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR
FIRE ZONE: 101A
LOCATION: EL 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 14 OF 36

SOURCES

E-11		NO INTERACTION												
	PC 1160S													
163	BOX LY8	X												
164	1" CND 6US	X												
	PNEUMATIC CONTROL PANEL													
165	1" CND 6WJ	X												
166	1" CND 6WJ1	X												
167	1" CND 6WI	X												
168	1" CND 6WI1	X												
	DG #32 AIR COMPRESSOR													
169	BOX ME6	X												
170	1" CND 6NM	X												
171	PB XV6	X												
172	1" CND 6NL	X												
173	1" CND 6NL1	X												
174	BOX KE6	X												
175	1¼" CND 6TF	X												

TARGETS

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 15 OF 36

SOURCES

E-11		NO INTERACTION												
	DG 32 AIR COMPRESSOR (CONTD)													
176	PB W86	X												
177	1¼" CND 6NF	X												
178	PB XX2	X												
179	4" CND 6TV	X												
	VALVES 1208 (CONT'd)													
180	2" CND 6SQ	X												
181	BOX RG7	X												
182	2" CND 6RU	X												
183	PB WZ3	X												
184	1¼" CND 6WD	X												
185	1" CND 6MF	X												
	VALVES 1207 (CONT"D)													
186	1¼" CND 6WF	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003

E-11

SH 16 OF 36

SOURCES

TARGETS

E-11

		NO INTERACTION												
	PB XM1													
187	PB XM1	X												
188	4" CND 6WB	X												
189	4" CND 6WB1	X												
190	4" CND 6WB2S	X												
191	4" CND 6WB3S	X												
192	4" CND 6WB4S	X												
193	4" CND 6VYS	X												
194	4" CND 6VY1	X												
195	4" CND 6VY2S	X												
196	4" CND 6VY3S	X												
197	4" CND 6VY4S	X												
	PB W90													
198	PB W90	X												
199	1¼" CND 6RZ	X												
200	1½" CND 6RR	X												

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 17 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	PB XX8													
201	PB XX8	X												
202	4" CND 6QT	X												
203	4" CND 6QT1	X												
204	4" CND 6QT2S	X												
205	4" CND 6QT3S	X												
206	4" CND 6QT4S	X												
	PB W 89													
207	PB W89	X												
208	1¼" CND 6SA	X												
209	1" CND 6YM	X												
210	1¼" CND 6TD	X												
211	1½" CND 6RU	X												

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 15'

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 E-11 SH 18 OF 36
DIV. ELEC DR. EL. DATE 7/82 CH. SCALE NONE	APPROVED J F MONTALBANO	

SOURCES

E-11		NO INTERACTION	1 1½" CITY WATER LINE 1033	2 LIGHTING CND										
	EXHAUST FAN 318													
212	BOX MV4	X												
213	1" CND 6NU	X												
214	BOX KD6	X												
	EXHAUST FAN 319													
215	BOX MW1	X												
216	1" CND 6NV		E233 E234	E234										
217	BOX KD5	X												
	EXHAUST HOOD VENT FAN 33													
218	MOTOR & FLEX CNDS		E233											
219	BOX MA8		E233											
220	1" CND 6MM		E233	E234										
221	BOX W70		E234											
222	1" CND 6ML		E234											
223	BOX KA9	X												
224	1¼" CND 6WV	X												

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL43' AND 15'

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 19 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	LCV 1209A													
225	FLEX CNDS	X												
226	BOX KR5	X												
227	½" CND	X												
	LCV 1209B													
228	FLEX CNDS	X												
229	BOX KR6	X												
230	½" CND	X												
	LC 1209S													
231	FLEX CNDS	X												
232	BOX KR4	X												
233	½" CND	X												
234	TB ZX3	X												
235	2½" CND 6ST	X												
236	PB W9 8	X												
237	1¼" CND 6SW	X												

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 27'

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 E-11 SH 20 OF 36
DIV. ELEC DR. EL DATE 7/82 CH. SCALE NONE	APPROVED J F MONTALBANO	

SOURCES

TARGETS

E-11		NO INTERACTION												
	FUEL OIL PUMP #33 (CONT'd)													
238	TB ZY2	X												
239	1¼" CND 6PD	X												
	LC 1206S (CONT'd)													
240	TB ZY5	X												
241	1" CND 6PH	X												
242	1¼" CND 6WR	X												
243	1" CND 6WR1	X												
244	BOX KO7	X												

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION: EL 27' AND 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 E-11 SH 21 OF 36
DIV. ELEC DR. EL DATE 7/82 CH. SCALE NONE	APPROVED J F MONTALBANO	

SOURCES

TARGETS

E-11		NO INTERACTION	1 LIGHT FIXTURE											
	DIESEL GENERATOR NO. 33													
245	GENERATOR GB3	X												
246	CT BF6	X												
247	3000A BUS DUCT	X												
	ENGINE GUAGE PANEL													
248	BOX PQ9	X												
249	1" CND 6TA	X												
250	BOX HF7	X												
	HEATER CONTACTOR PANEL													
251	BOX KA6	X												
252	1¼" CND 6MT	X												
	PRESSURE SWITCH													
253	1" CND 6NP	X												
	DG 33 CONTROL PANEL													
253A	DG 33 CONTROL PANEL - PQ2		E377											

INCHES 0 1 2 CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 22 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	DG #33 CONTROL PANEL													
254	3" CND 6WQ	X												
255	3" CND 6WQ1	X												
256	2" CND 6NI	X												
257	1" CND 6PJ	X												
258	3" CND 6ND	X												
259	1½" CND 6ND1	X												
260	2" CND 6YI	X												
261	3" CND 6PP1	X												
262	3" CND 6PP	X												
263	2" CND MW	X												
264	2" CND 6ZC1	X												
265	1¼" CND 6ZC2	X												
266	4" CND 6UB	X												
267	4" CND 6UB1	X												
268	4" CND 6UB2	X												

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL.
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 23 OF 36

SOURCES

E-11		NO INTERACTION	1 ½" CITY WATER LINE 1033											
	PC 1161S													
269	BOX LY9	X												
270	1" CND 6UT		E234											
	PNEUMATIC CONTROL PANEL													
271	1" CND 6WL	X												
272	1" CND 6WL1	X												
273	1" CND 6WK	X												
274	1" CND 6WK1	X												
	DG #33 AIR COMPRESSOR													
275	BOX ME1	X												
276	1" CND 6NP	X												
277	PB XV7	X												
278	1" CND 6NN	X												
279	1" CND 6NN1	X												
280	BOX KD8	X												
281	1¼" CND 6TH	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 15'

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 24 OF 36

SOURCES

TARGETS

E-11		NO INTERACTION												
	DG #33 AIR COMPRESSOR (CONTD)													
282	PB W85	X												
283	1¼" CND 6NH	X												
284	PB XX3	X												
285	4" CND 6UA	X												
	VALVES 1209 (cont'd)													
286	2" CND 6SU	X												
287	BOX RG6	X												
288	2" CND 6RT	X												
289	PB WZ5	X												
290	1" CND 6MG	X												
291	1¼" CND 6VV	X												
	VALVES 1208 (cont'd)													
292	1¼" CND 6WD	X												
	VALVES 1207 (cont'd)													
293	1¼" CND 6WF	X												

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 25 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION												
	PB XM3													
294	PB XM3	X												
295	4" CND 6VW	X												
296	4" CND 6VW1	X												
297	4" CND 6VW2S	X												
298	4" CND 6VW3S	X												
299	4" CND 6VW4S	X												
300	4" CND 6WAS	X												
301	4" CND 6WA1	X												
302	4" CND 6WA2S	X												
303	4" CND 6WA3S	X												
304	4" CND 6WA4S	X												
	PB W83													
305	PB W83	X												
306	1¼" CND 6RY	X												
307	1½" CND 6RC	X												

BUILDING: DIESEL GENERATOR

FIRE ZONE: 102A

LOCATION: EL 15 '

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH26 OF 36

SOURCES

E-11		NO INTERACTION												
	PB XX9													
308	PB XX9	X												
309	4" CND 6QVS	X												
310	4" CND 6QV1	X												
311	4" CND 6QV2S	X												
312	4" CND 6QV3S	X												
313	4" CND 6QV4S	X												
	PB W84													
314	PB W84	X												
315	1" CND 6YL	X												
316	1½" CND 6RF	X												
317	1¼" CND 6RW	X												
318	1¼" CND 6TG	X												

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR
FIRE ZONE: 102A
LOCATION: EL 15'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED	POWER AUTHORITY STATE OF NEW YORK INDIAN POINT No. 3 SYSTEMS INTERACTION STUDY INTERACTION MATRIX	5209.003 E-11 SH 27 OF 36
DIV. ELEC DR. EL DATE 7/82 CH. SCALE NONE	APPROVED J F MONTALBANO	

SOURCES

E-11		NO INTERACTION	1 MISC BOX	2 SPACE HEATER										
	PB XY1													
319	PB XY1		E239	E240										
320	4" CND 6QR4S	X												
321	4" CND 6QRS	X												
322	4" CND 6QR1	X												
323	4" CND 6QR2S	X												
324	4" CND 6QR3	X												
325	4" CND 1SP TO DD @ 0147		E239											
326	1" CND 6PK TO DC @ 0054	X												
327	1" CND 1SP1S TO JD @ 0147	X												

TARGETS

BUILDING: CONTROL

FIRE ZONE: 11

LOCATION: EL 33'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 28 OF 36

SOURCES

E-11		NO INTERACTION	1 1¼" CND	2 LIGHT FIXTURE										
TARGETS	PB XY2													
328	PB XY2			E242										
329	4" CND 6QT	X												
330	4" CND 6QT1	X												
331	4" CND 6QT2S	X												
332	4" CND 6QT3S	X												
333	4" CND 6QT4S	X												
334	1½" CND 5UT1 TO FA @1059			E242										
335	4" CND 15Q TO DA @ 0080		E241	E242										
336	2" CND 152 Q/S TO JA @ 0080			E242										

BUILDING: CONTROL

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33' -

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 29 OF 36

SOURCES

E-11		NO INTERACTION	1 LIGHT FIXTURE	2 3/4" CND										
	PB XY3													
337	PB XY3		E243											
338	4" CND 6QVS	X												
339	4" CND 6QV1	X												
340	4" CND 6QV2S	X												
341	4" CND 6QV3S	X												
342	4" CND 6QV4S	X												
343	4" CND EXITING PULL BOX XY3		E243	E244										
344	1" CND EXITING PULL BOX XY3		E243	E244										
345	1½" CND EXITING PULL BOX XY3		E243	E244										
346	2" CND EXITING PULL BOX XY3		E243	E244										

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: CONTROL
FIRE ZONE: 11
LOCATION: EL 33'
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 30 OF 36

SOURCES

E-11		NO INTERACTION	1 LIGHT FIXTURE	2 2-3/4" CNDS										
	PB XL9													
347	PB XL9	X												
348	4" CND 6VZ	X												
349	4" CND 6VZ1	X												
350	4" CND 6VZ2S	X												
351	4" CND 6VZ3	X												
352	4" CND 6VZ4S	X												
353	1¼" CND 6GK	X												
354	1¼" CND ITM1	X												
355	2" CND ITMS	X												
356	3" CND III	X												
357	3" CND IIKS	X												
	DG #31 (CONT'D)													
358	3000A BUS DUCT		E235	E236										

TARGETS

BUILDING: CONTROL

FIRE ZONE: 14

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 31 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION	1 3/4" CND	2 3/4" CND	3 2" CND	4 1" CND								
	PB XM2													
359	PB XM2	X												
360	4" CND 6VYS	X												
361	4" CND 6VY1	X												
362	4" CND 6VY2S	X												
363	4" CND 6VY3S	X												
364	4" CND 6VY4S	X												
365	3½" CND 1I4 TO DA @ 0353	X												
	DG #32 (CONT'D)													
366	3000A BUS DUCT		E237	E237	E237	E237								

BUILDING: CONTROL

FIRE ZONE: 14

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J. F. MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 32 OF 36

SOURCES

E-11

TARGETS		NO INTERACTION	1 1" CND	2 1" CND	3 1" CND									
	PB XM4													
367	PB XM4	X												
368	4" CND 6VW	X												
369	4" CND 6VW1	X												
370	4" CND 6VW2S	X												
371	4" CND 6VW3S	X												
372	4" CND 6VW4S	X												
373	1¼" CND ITN TO FB @ 0348	X												
374	3" CND ITH TO DB @ 0366	X												
	DG#33 (CONT'D)													
375	3000A BUS DUCT		E238	E238	E238									

BUILDING: CONTROL

FIRE ZONE: 14

LOCATION: EL 15'

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 33 OF 36

SOURCES

E-11		NO INTERACTION	1 1" DRAIN LINE	2 4" DRAIN LINE										
	VALVES 1208 (CONT'D)													
376	1¼" CND 6WD	X												
377	PB XA5	X												
378	1" CND 6YY2		E228	E228										
	VALVES 1207 (CONT'd)													
379	1¼" CND 6WF	X												
380	1" CND 6YY1		E228	E228										
	VALVES 1209 (CONT'd)													
381	1¼" CND 6VV	X												
382	1" CND 6YY3		E228	E228										

TARGETS

INCHES 0 1 2
CM. 0 1 2 3 4 5

BUILDING: DIESEL GENERATOR

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: VALVE ROOM

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 34 OF 36

SOURCES

E-11		NO INTERACTION	1 4" FUEL OIL FILL LINE											
	FUEL OIL PUMP 31													
383	FLEX CNDS	X												
384	BOX MX4	X												
385	1" CND 6NY	X												
	LC 1204S													
386	FLEX CNDS		E245											
387	½" CNDS		E245											
388	BOX WO1	X												
389	1" CND 6NW	X												
390	1" CND 6NW1	X												
	FUEL OIL PUMP 32													
391	FLEX CNDS		E246											
392	BOX MX5	X												
393	1" CND 6NZ	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: YARD

FIRE ZONE: NONE

LOCATION: FUEL OIL TANKS

WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL

DATE 7/82 CH.

SCALE NONE

APPROVED

J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK

INDIAN POINT No. 3

SYSTEMS INTERACTION STUDY

INTERACTION MATRIX

5209.003

E-11

SH 35 OF 36

SOURCES

E-11		NO INTERACTION	4" FUEL OIL FILL LINE (1)											
	LC 1205S													
394	FLEX CNDS		E246											
395	½" CNDS		E246											
396	BOX W02	X												
397	1" CND 6PA	X												
398	1" CND 6PA1	X												
	FUEL OIL PUMP 33													
399	FLEX CNDS		E247											
400	BOX MX6	X												
401	1" CND 6PC	X												
	LC 1206S													
402	FLEX CNDS		E247											
403	½" CNDS		E247											
404	BOX W03	X												
405	1" CND 6PB	X												
406	1" CND 6PB1	X												

TARGETS

INCHES 0 1 2 3 4 5
CM. 0 1 2

BUILDING: YARD

FIRE ZONE: NONE

LOCATION: FUEL OIL TANKS
WITHIN FIRE ZONE

DIESEL GENERATOR SYSTEM

EBASCO SERVICES INCORPORATED

DIV. ELEC DR. EL
DATE 7/82 CH.
SCALE NONE

APPROVED
J F MONTALBANO

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT No. 3
SYSTEMS INTERACTION STUDY
INTERACTION MATRIX

5209.003
E-11
SH 36 OF 36

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY

NON-CONNECTED INTERACTIONS EVALUATION

1.	No Interaction	-	Source is Class II and is therefore supported adequately. (See response to IP-3 FSAR question 5.24).
2.	Acceptable	-	Source pipe/conduit is equal size or smaller in diameter and/or the same thickness or thinner wall than the target pipe/conduit/tubing. Paragraph 6.2.2.1a Volume I.
3.	Acceptable	-	Source has insufficient mass to damage the target component.
4.	Acceptable	-	Basis is engineering judgement. Specific justification is on the evaluation form.
5.	Potentially Unacceptable	-	Discussion of specific is on the evaluation form.
6.	Potentially Unacceptable	-	Source pipe/conduit is large enough to damage target conduit/pipe/tubing.
7.	Potentially Unacceptable	-	Source will fall a sufficient distance, or has adequate mass such that damage to target conduit/box/instrument/tubing/panel may be possible.
8.	No Interaction	-	Upon further investigation of the source, this portion of its system is designated Seismic I.

R2 7/22/82
R1 6/30/82
R0 6/26/82

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
SYSTEMS INTERACTION EVALUATION

SYSTEM NO. E-11

SYSTEM NAME DIESEL GENERATOR

EVALUATION CATEGORY

NON-CONNECTED x

INTERCONNECTED _____

Eugene Licari 7/30/82
INTERACTION ENGINEER/DATE

W A Grisewold 8-30-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-5-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6NR (not shown)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-7-1

PHOTOGRAPH NO.: E226

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Motor & Flex Cnd

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-8-1

PHOTOGRAPH NO.: E226

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Box MA3

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-9-1

PHOTOGRAPH NO.: E226

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd GMI (not shown)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-13-2

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6WT (within group of boxes)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 4

Cnd is vertical and mounted against the wall

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27'

POTENTIAL INTERACTION NO.: E-11-26-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6SL (right vertical cnds)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-28-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6PG (right vertical cnds)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-30-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6PI (right vertical cnds)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-31-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6WM1 (right vertical cnds)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-32-1

PHOTOGRAPH NO.: E227

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6WM (right vertical cnds)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-33-2

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Panel KF3 (group of boxes)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-35-5

PHOTOGRAPH NO.: E259

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Relay Box TR31 (bottom right box)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-36-5

PHOTOGRAPH NO.: E259

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3/4" Cnd DB 54 (not shown)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-37-3

PHOTOGRAPH NO.: E 182

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd DB 53 (first cnd below source)

SOURCE: ½" Lighting Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-37-4

PHOTOGRAPH NO.: E230

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd DB 53 (shown on E228)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 27' and EL 15'

POTENTIAL INTERACTION NO.: E-11-37-5

PHOTOGRAPH NO.: E259

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd DB 53 (exiting top of lower right box)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-41-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Box PQ7 (to the left of heater)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-44-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6MR (within group of cnds)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 4

Cnd is vertical and mounted against wall

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-59-1

PHOTOGRAPH NO.: E230

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Panel PP9

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-71-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Panel KF4 (first panel in front of green enclosure)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-72-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6TC (within group of cnds)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 4

Cnd is vertical and mounted against the wall

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-73-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB W87 (within group of boxes)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-74-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1¼" Cnd 6NA (within group of boxes)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 4

Cnd is vertical and mounted against wall

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-78-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Panel RG8 (lower center panels)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 10

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-80-1

PHOTOGRAPH NO.: E229

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB W23 (within group of boxes)

SOURCE: Electric Unit Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-109-1

PHOTOGRAPH NO.: E231

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6NT (not shown)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-111-1

PHOTOGRAPH NO.: E231

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Motor & Flex Cnds (below black railing)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 43 and EL 15'

POTENTIAL INTERACTION NO.: E-11-112-1

PHOTOGRAPH NO.: E231

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Box MA7

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-113-1

PHOTOGRAPH NO.: E231

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6 MK (not shown)

SOURCE: 3/4" City Water Line 1035

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 101A

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-148-1

PHOTOGRAPH NO.: E232

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Panel PQ1 (not shown)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-216-1

PHOTOGRAPH NO.: E233, E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6NV (vertical cnd to right of copper source)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-216-2

PHOTOGRAPH NO.: E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6NV (to right of copper source)

SOURCE: Lighting Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-218-1

PHOTOGRAPH NO.: E233

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Motor & Flex Cnds (behind railing)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-219-1

PHOTOGRAPH NO.: E233

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Box MA8 (behind railing)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-220-1

PHOTOGRAPH NO.: E233

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6MM (exiting box MA8 from bottom)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-220-2

PHOTOGRAPH NO.: E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6MM (between arrows)

SOURCE: Lighting Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-221-1

PHOTOGRAPH NO.: E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Box W70 (lower left, behind valve)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 43' and EL 15'

POTENTIAL INTERACTION NO.: E-11-222-1

PHOTOGRAPH NO.: E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6ML (exiting box W70 from bottom)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: Elev 15'

POTENTIAL INTERACTION NO.: E-11-253A-1

PHOTOGRAPH NO.: E 377

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: DGT 33 Control Panel PQ2

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source falls on target.

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 7

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

R Sahu 4/26/83
INTERACTION ENGINEER/DATE

W A Griswold 5/7/83
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 102A

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-270-1

PHOTOGRAPH NO.: E234

BACKGROUND NO.: Sheet 76

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6UT (not shown)

SOURCE: 1½" City Water Line 1033

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 8

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-319-1

PHOTOGRAPH NO.: E239

BACKGROUND NO.: Sheet 69

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB XY1 (lower left)

SOURCE: Misc Box

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-319-2

PHOTOGRAPH NO.: E240

BACKGROUND NO.: Sheet 69

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB XY1 (left)

SOURCE: Space Heater

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-325-1

PHOTOGRAPH NO.: E239

BACKGROUND NO.: Sheet 69

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 4" Cnd 1SP (to left of source)

SOURCE: Misc Box

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-328-2

PHOTOGRAPH NO.: E242

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB XY2 (lower center)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-334-2

PHOTOGRAPH NO.: E242

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd 5UT1 (vertical, exiting box XYZ)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-335-1

PHOTOGRAPH NO.: E241

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 4" Cnd 15Q (above arrow, left to right)

SOURCE: 1¼" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-335-2

PHOTOGRAPH NO.: E242

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 4" Cnd 15Q

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-336-2

PHOTOGRAPH NO.: E242

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" Cnd 152 Q/S

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-337-1

PHOTOGRAPH NO.: E243

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: PB XY3 (lower right)

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-343-1

PHOTOGRAPH NO.: E243

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 4" Cnd Exiting Pull Box XY3

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-343-2

PHOTOGRAPH NO.: E244

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 4" Cnd Exiting Pull Box XY3 (vertical cnds)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-344-1

PHOTOGRAPH NO.: E243

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd Exiting Pull Box XY3

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-344-2

PHOTOGRAPH NO.: E244

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd Exiting Pull Box XY3 (vertical cnds)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-345-1

PHOTOGRAPH NO.: E243

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd Exiting Pull Box XY3

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-345-2

PHOTOGRAPH NO.: E244

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1½" Cnd Exiting Pull Box XY3 (vertical cnds)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-346-1

PHOTOGRAPH NO.: E243

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" Cnd Exiting Pull Box XY3

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 11

LOCATION WITHIN FIRE ZONE: EL 33'

POTENTIAL INTERACTION NO.: E-11-346-2

PHOTOGRAPH NO.: E244

BACKGROUND NO.: Sheet 68

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 2" Cnd Exiting Pull Box XY3 (vertical cnds)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Grisweld/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-358-1

PHOTOGRAPH NO.: E235

BACKGROUND NO.: Sheet 67

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct

SOURCE: Light Fixture

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-358-2

PHOTOGRAPH NO.: E236

BACKGROUND NO.: Sheet 67

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct

SOURCE: 2-3/4" Cnds

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-366-1

PHOTOGRAPH NO.: E237

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (lower left)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-366-2

PHOTOGRAPH NO.: E237

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (lower left)

SOURCE: 3/4" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-366-3

PHOTOGRAPH NO.: E237

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (lcwer left)

SOURCE: 2" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 4

Distance source falls is relatively small and target will not be damaged

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-366-4

PHOTOGRAPH NO.: E237

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (lower left)

SOURCE: 1" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-375-1

PHOTOGRAPH NO.: E238

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (upper right)

SOURCE: 1" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-375-2

PHOTOGRAPH NO.: E238

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (upper right)

SOURCE: 1" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Control

FIRE ZONE: 14

LOCATION WITHIN FIRE ZONE: EL 15'

POTENTIAL INTERACTION NO.: E-11-375-3

PHOTOGRAPH NO.: E238

BACKGROUND NO.: Sheet 66

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 3000A Bus Duct (upper right)

SOURCE: 1" Cnd

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 3

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-378-1

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY2 (exiting bottom of ltg panel)

SOURCE: 1" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-378-2

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY2 (exiting bottom of ltg panel)

SOURCE: 4" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-380-1

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY1 (exiting bottom of ltg panel)

SOURCE: 1" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-380-2

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY1 (exiting bottom of ltg panel)

SOURCE: 4" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-382-1

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY3 (exiting bottom of ltg panel)

SOURCE: 1" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 2

X ACCEPTABLE

POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Diesel Generator

FIRE ZONE: 36A

LOCATION WITHIN FIRE ZONE: Valve Room

POTENTIAL INTERACTION NO.: E-11-382-2

PHOTOGRAPH NO.: E228

BACKGROUND NO.: Sheet 82

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: 1" Cnd 6YY3 (exiting bottom of ltg panel)

SOURCE: 4" Drain Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-386-1

PHOTOGRAPH NO.: E245

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Flex Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-387-1

PHOTOGRAPH NO.: E245

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: ½" Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-391-1

PHOTOGRAPH NO.: E246

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Flex Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-394-1

PHOTOGRAPH NO.: E246

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Flex Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-395-1

PHOTOGRAPH NO.: E246

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: ½" Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-399-1

PHOTOGRAPH NO.: E247

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Flex Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-402-1

PHOTOGRAPH NO.: E247

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: Flex Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

_____ ACCEPTABLE

X POTENTIALLY UNACCEPTABLE

E Licari/ 7-30-82
INTERACTION ENGINEER/DATE

W A Griswold/ 8-31-82
VERIFIED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
NONCONNECTED SYSTEMS INTERACTION
EVALUATION SHEET

BUILDING: Yard

FIRE ZONE: None

LOCATION WITHIN FIRE ZONE: Fuel Oil Tanks

POTENTIAL INTERACTION NO.: E-11-403-1

PHOTOGRAPH NO.: E247

BACKGROUND NO.: Sheet 78

IDENTIFICATION OF INTERACTION COMPONENTS:

TARGET: ½" Cnds

SOURCE: 4" Fuel Oil Fill Line

DESCRIPTION OF POSTULATED INTERACTION:

Source Falls on Target

EVALUATION OF INTERACTION:

EVALUATION NOTE NO: 6

ACCEPTABLE	X POTENTIALLY UNACCEPTABLE
E Licari/ 7-30-82	W A Griswold/ 8-31-82
INTERACTION ENGINEER/DATE	VERIFIED/DATE

Postulated Failure Modes

MECHANICAL FAILURES

M - 1 Ruptured Pipe or Tube

M - 2 Crimped or Collapsed Pipe or Tube

M - 3 Loss of Function (Pump, Fan, Blowers etc.)

M - 4 Loss of Valve Motive Power

M - 5 Failure of or damage to Valve Actuating Mechanism

M - 6 Other (Explain)

ELECTRICAL FAILURES

E - 1 Open Circuit

E - 2 Short Circuit

E - 3 Other (Explain)

INSTRUMENTATION & CONTROL FAILURES

C - 1 Fail High

C - 2 Fail Low

C - 3 Fail Open

C - 4 Fail Closed

C - 5 Loss of Motive Power

C - 6 Other (Explain)

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
SYSTEM INTERACTION STUDY
FMEA PREPARATION

SYSTEM NO E-11

SYSTEM NAME Diesel Generators System

FMEA CATEGORY

NON-CONNECTED X

INTERCONNECTED

4/4/83
PREPARED BY/DATE

4/19/83
CHECKED BY/DATE

4/21/83

W Griswold 5-20-83
VERIFIED BY/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-1

Interaction Number(s): E-11-33-2

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Starter (KF3) for Fuel Oil Pump # 31 for day tank Diesel Gen #31, Day Tank.

Postulated Failure Mode(s)
and Evaluation:

M-2-(P) Damage to Starter may lead to a malfunction of the Fuel Oil Pump and nonavailability of fuel to the Diesel Generator # 31.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-2

Interaction Number(s): E-11-35-5
E-11-36-5
E-11-37-5

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Relay Box TR 31, 3/4" Conduit DB54 and 1-1/2" Conduit DB53 associated with the controls of building Ventilation System for Diesel Generator #31.

Postulated Failure Mode(s)
and Evaluation:

E-3-(A)
E-1-(A)
E-2-(A)

Open or short circuit of the cables in conduits DB53 and DB54 or to equipment in Relay Box TR 31 will not effect any safety function.

X
Acceptable

/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Potentially Unacceptable/Safety Function Affected

R Sahu 4/4/83
EVALUATING ENGINEER/DATE

L Cerra 4/19/83
CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-3

Interaction Number(s): E-11-41-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Box PQ 7 housing cables connected to engine gauge panel 31.

Postulated Failure Mode(s)
and Evaluation:

M-2-(A) Damage to Box PQ 7 may lead to a malfunction of the local indicators on gauge the panel. These gauges are not essential for operation of the Diesel Generator.

X	/ 1 ( ) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected

R Sahu 4/4/83	J R Price 4/20/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-4

Interaction Number(s): E-11-59-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Control panel PP 9 for Diesel Generator #31.

Postulated Failure Mode(s)
and Evaluation:

M-2-(P) (Damage to internal components)
Mechanical damage to control panel may degrade the operation of Diesel Generator #31.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected

R Sahu 4/4/83	J R Price 4/20/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-5

Interaction Number(s): E-11-71-1
E-11-73-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Starter for Air Compressor DG 31 (KF4) and PB W 87.

Postulated Failure Mode(s)
and Evaluation:

M-2-(P) Damage to Starter may prevent Air Compressor DG #31 from maintaining the required air pressure to start the Emergency Diesel Generators.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-6

Interaction Number(s): E-11-78-1
E-11-80-1

Fire Zone: 10

Target Component(s)
Number, Description & Function:

Panel RG 8 and PB WZ3 for Level Control Valve LCV-1207 of Fuel Oil Day Tank DG #31.

Postulated Failure Mode(s)
and Evaluation:

E-3-(P) (Damage to internal components)
Damage to Panel RG 8 or PB WZ3 may lead to a malfunction of LCV-1207 and nonavailability of fuel oil to Diesel Generator #31.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	J R Price 4/20/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-7

Interaction Number(s): E-11-148-1

Fire Zone: 101A

Target Component(s)
Number, Description & Function:

Control panel PQ 1 for Diesel Generator #32.

Postulated Failure Mode(s)
and Evaluation:

E-3-(P) (Damage to internal components)
Damage to Panel PQ 1 may lead to the nonavailability of DG #32 for operation.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	J R Price 4/20/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-8

Interaction Number(s): E-11-253A-1

Fire Zone: 102A

Target Component(s)
Number, Description & Function:

Control panel PQ 2 for Diesel Generator #33.

Postulated Failure Mode(s)
and Evaluation:

E-3-(P) (Damage to internal components)
Damage to Panel PQ 2 may lead to the nonavailability of DG #33 for operation.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	J R Price 4/20/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-9

Interaction Number(s): E-11-378-2

Fire Zone: 36A

Target Component(s)
Number, Description & Function:

1" conduit 6YY2 housing cable connected to Valve LCV-1208 for Day Tank DG 32.

Postulated Failure Mode(s)
and Evaluation:

E-1-(P) Open or short circuit of the cable connected to Valve LCV-1208 may
E-2-(P) lead to its failure and affect the availability of fuel oil to DG 32.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-10

Interaction Number(s): E-11-380-2

Fire Zone: 36A

Target Component(s)
Number, Description & Function:

1" conduit 6YY1 housing cable connected to Valve LCV-1207 for Day Tank DG 31.

Postulated Failure Mode(s)
and Evaluation:

E-1-(P) Open or short circuit of the cable connected to Valve LCV-1207 may
E-2-(P) lead to its failure and affect the availability of fuel oil to DG 31.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-11

Interaction Number(s): E-11-382-2

Fire Zone: 36A

Target Component(s)
Number, Description & Function:

1" Conduit 6YY3 housing cable connected to Valve LCV-1209 for Day Tank DG 33.

Postulated Failure Mode(s)
and Evaluation:

M-1-(P) Open or short circuit of the cable connected to Valve LCV-1209 may
E-1-(P) lead to its failure and affect the availability of fuel oil to DG 33.
E-2-(P)

	X / 1 (X) 2 (X) 3 (X) 4 (X)
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-12

Interaction Number(s): E-11-386-1
E-11-387-1

Fire Zone: Yard

Target Component(s)
Number, Description & Function:

Flexible conduit and 1/2" conduit connected to LC-1204S for Day Tank DG #31.

Postulated Failure Mode(s)
and Evaluation:

M-2-(P) Open or short circuit of the cables connected to LC-1204S may lead to
E-1-(P) a possible loss of the level control alarm of Diesel Oil Tank #31.
E-2-(P) This may affect the availability of fuel oil to DG #31, DG #32, and DG #33 through the common supply header.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-13

Interaction Number(s): E-11-391-1

Fire Zone: Yard

Target Component(s)
Number, Description & Function:

Flexible conduit housing cable connected to Fuel Oil Pump #32 motor.

Postulated Failure Mode(s)
and Evaluation:

E-1-(P) Open or short circuit of the cable connected to Fuel Oil Pump #32
E-2-(P) motor would result in nonavailability of the pump. This may affect the fuel oil supply to DG #31, DG #32 and DG #33 through the common supply header.

Acceptable	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-14

Interaction Number(s): E-11-394-1
E-11-395-1

Fire Zone: Yard

Target Component(s)
Number, Description & Function:

Flexible conduit and 1/2" conduit connected to LC-1205S for Day Tank DG #32.

Postulated Failure Mode(s)
and Evaluation:

E-1-(P) Open or short circuit of the cables connected to LC-1205S may lead to
E-2-(P) the possible loss of the level alarm of Diesel Oil Day Tank #32.
This may affect the availability of fuel oil to DG #31, DG #32 and DG #33
through the common supply header.

	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	J R Price 4/21/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-15

Interaction Number(s): E-11-399-1

Fire Zone: Yard

Target Component(s)
Number, Description & Function:

Flexible conduit housing cable connected to Fuel Oil Pump #33 motor.

Postulated Failure Mode(s)
and Evaluation:

E-1-(P) Open or short circuit of the cable connected to Fuel Oil Pump #33
E-2-(P) would result in the nonavailability of the pump. This may effect the fuel oil supply to DG #31, DG #32 and DG #33 through the common supply header.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 SYSTEMS INTERACTION STUDY
FAILURE MODES AND EFFECTS ANALYSIS
OF POTENTIALLY UNACCEPTABLE INTERACTIONS

FMEA NUMBER: 11-E-16

Interaction Number(s): E-11-402-1
E-11-403-1

Fire Zone: Yard

Target Component(s)
Number, Description & Function:

Flex conduit and 1/2" conduit connected to LC-1206S for Day Tank DG #33.

Postulated Failure Mode(s)
and Evaluation:

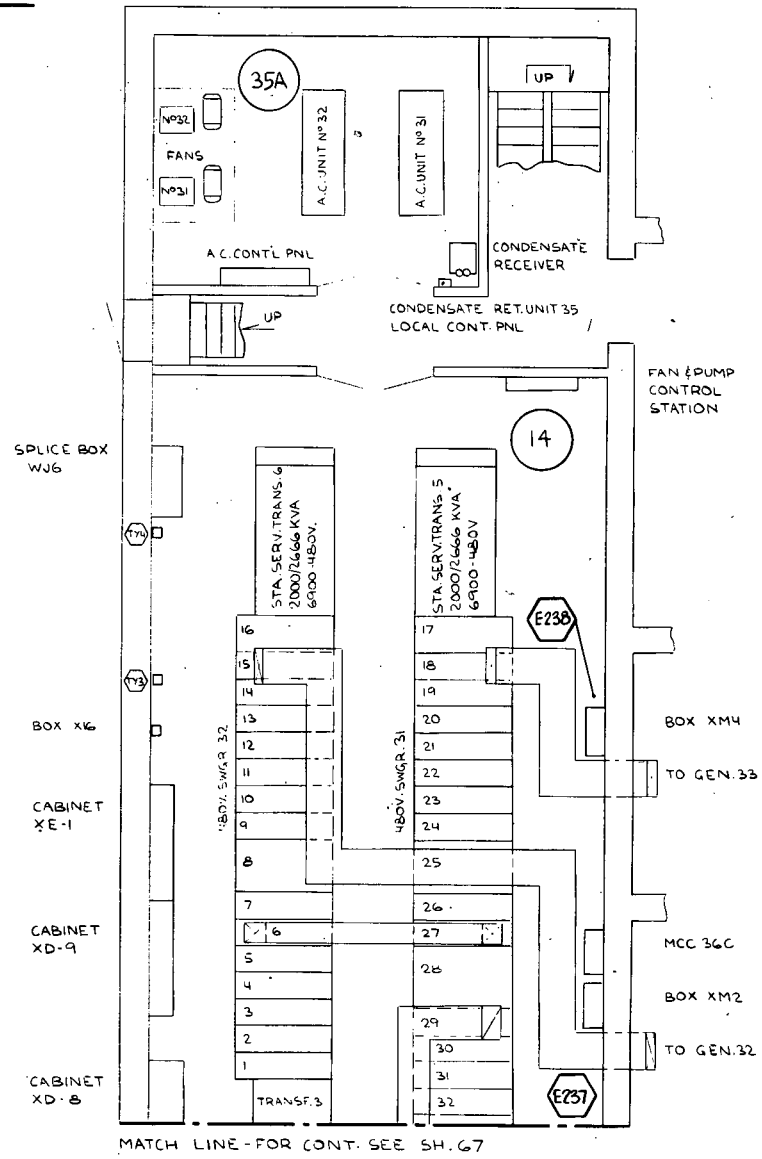
M-2-(P) Open or short circuit of the cables connected to LC-1206S may lead to
E-1-(P) the possible loss of the level control of Diesel Oil Day Tank
E-2-(P) #33. This may effect the availability of fuel oil to DG #31, DG #32 and DG #33 through the common supply header.

_____	X / 1 (X) 2 ( ) 3 ( ) 4 ( )
Acceptable	Potentially Unacceptable/Safety Function Affected
R Sahu 4/4/83	L Cerra 4/19/83
EVALUATING ENGINEER/DATE	CHECKED/DATE

Ebasco Services Incorporated

N

NO PICTURE NUMBER



PARTIAL PLAN EL 15'-0

REFERENCE DRAWINGS:
1. EQUIPMENT ARRANGEMENT CONTROL BUILDING U.E&C DWG. No. 9321-F-30523-21

REV.	DATE	BY	APPROVED
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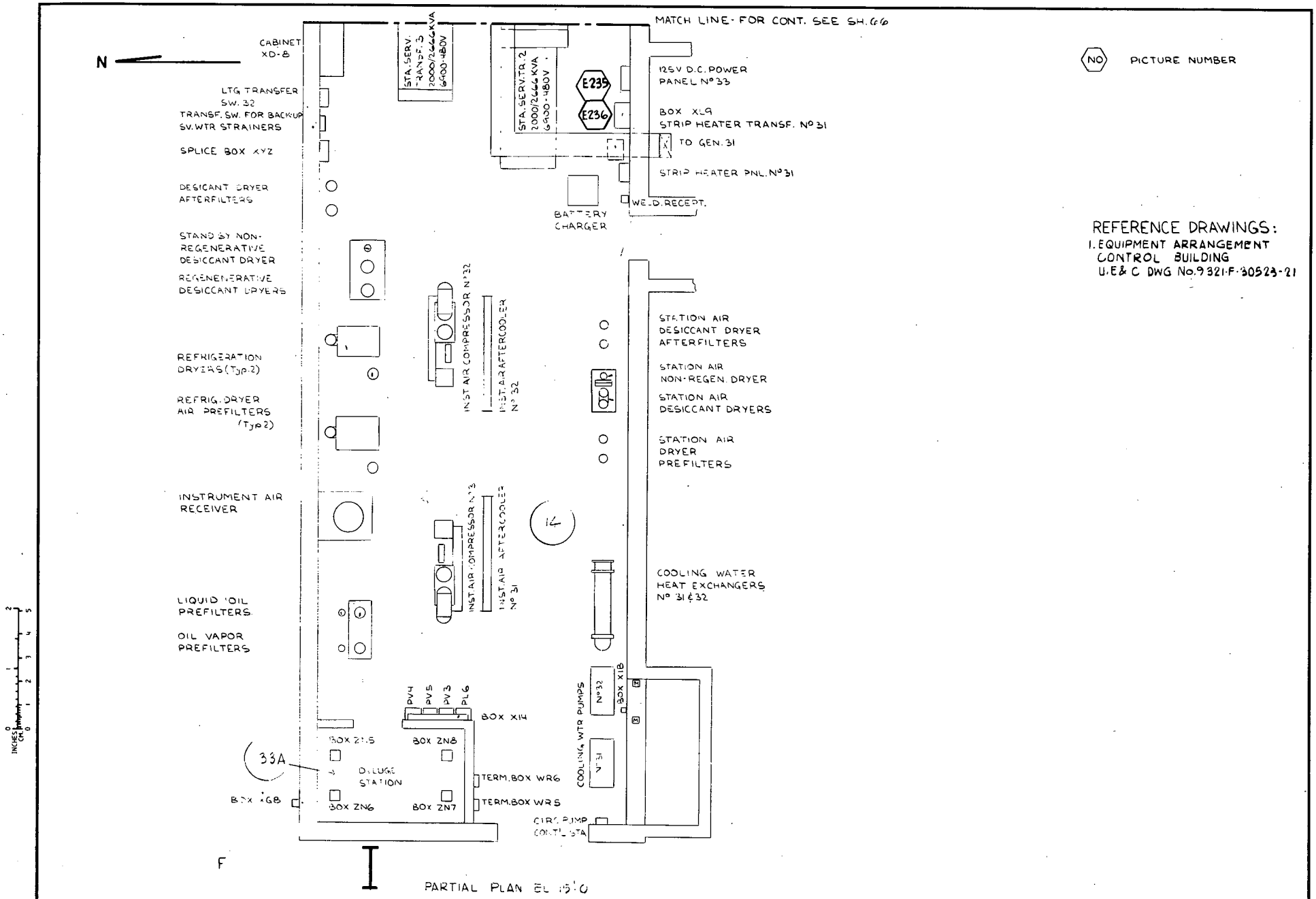
EBASCO SERVICES INCORPORATED
DIV. MECH DR. V.Z.
CH. MM
DATE 4-28-82
APPROVED

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERA ARRANGEMENT
CONTROL BLDG EL. 15'-0

DIESEL GEN. SYS NO. 11
5209.003
SHEET 66



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EBASCO SERVICES INCORPORATED

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CH. MM
DATE 4-28-82

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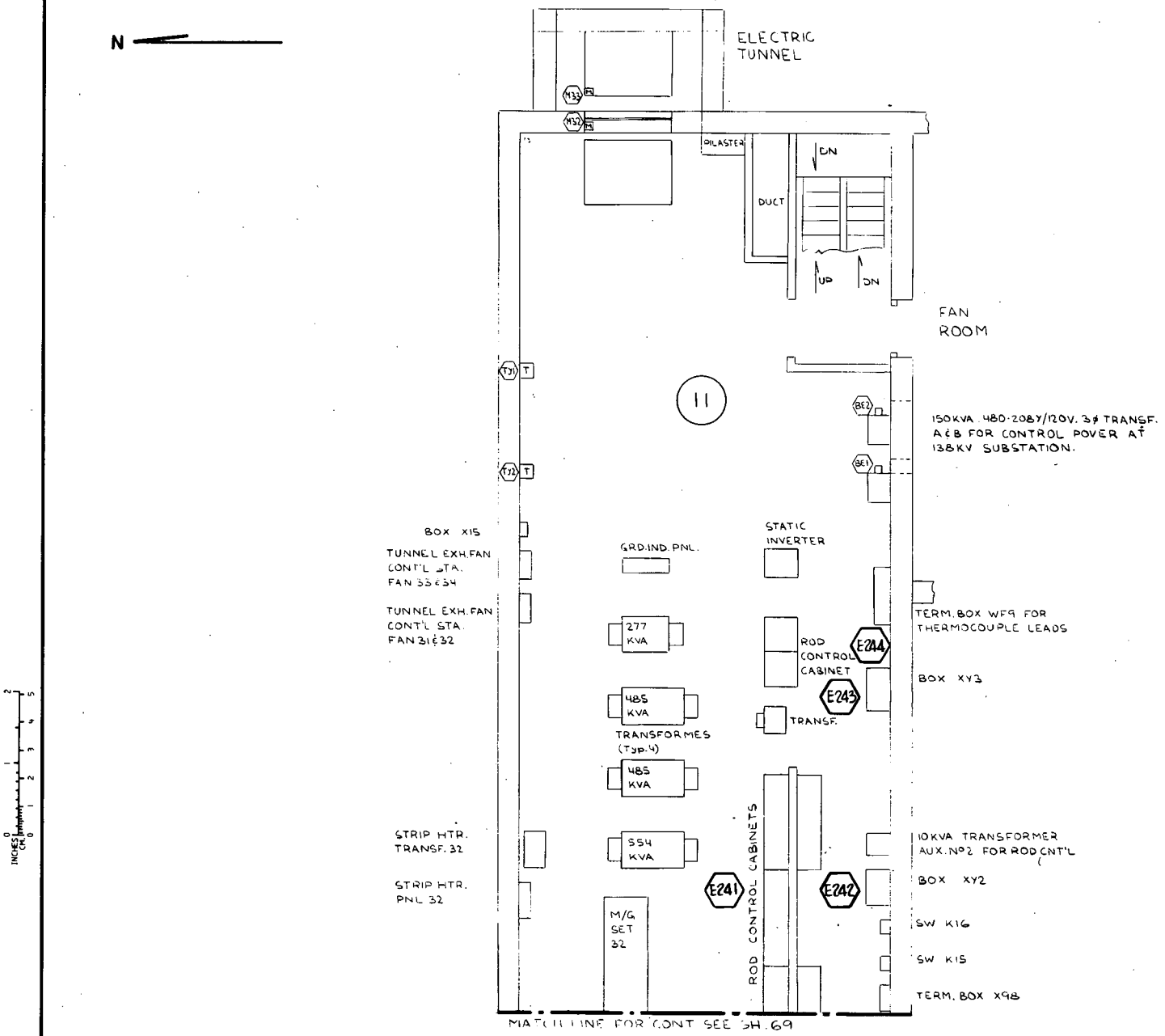
POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
CONTROL BLDG EL. 15'-0

DIESEL GEN SYS NO 11
5209.003
SHEET 7



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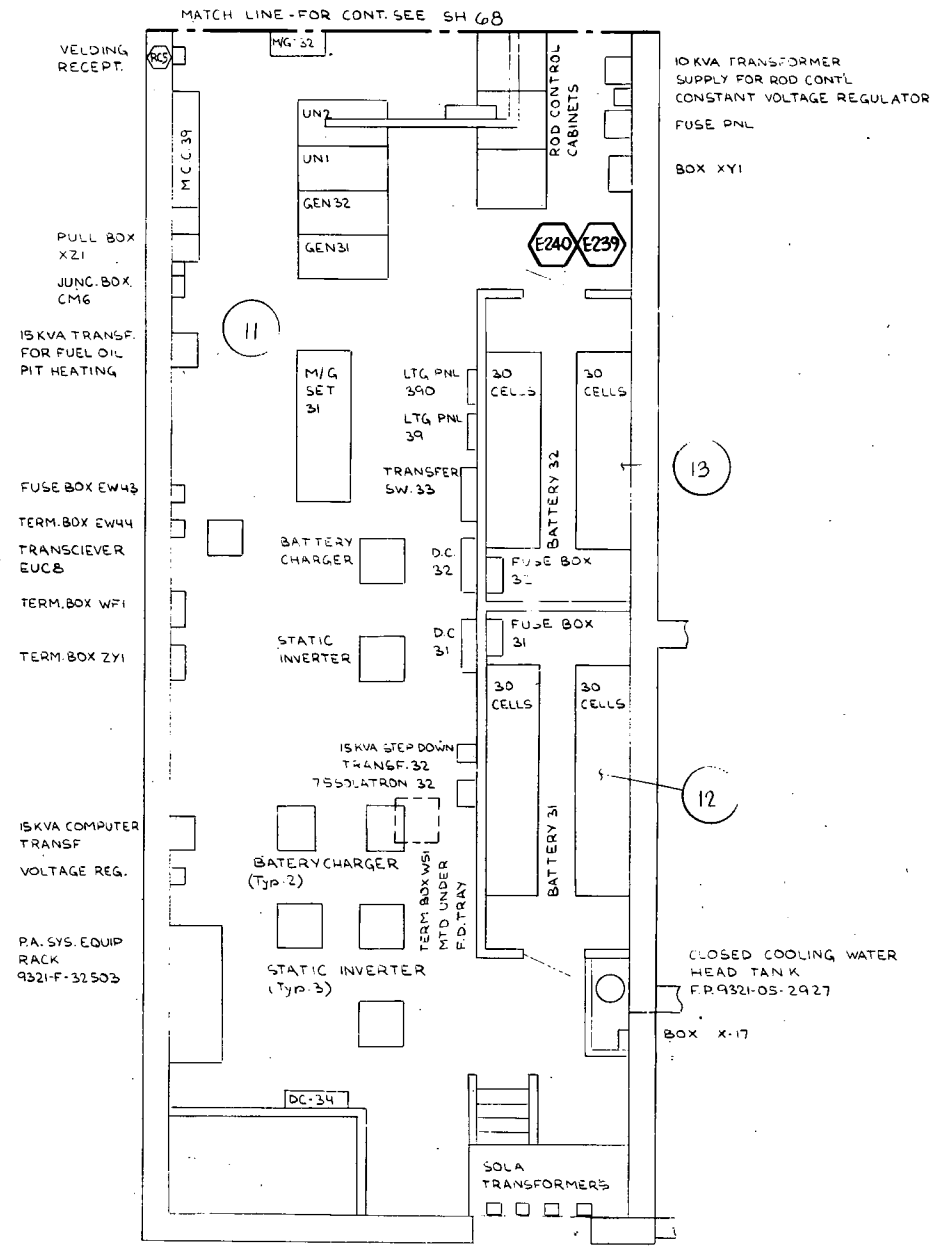
DIV. MECH DR. V.Z
CH. MM
DATE 4-29-82

APPROVED

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
CONTROL BLDG EL 33'-0

DIESEL GEN
SYS NO. 11
5209.003
SHEET 68



NO PICTURE NUMBER

REFERENCE DRAWINGS:
1. EQUIPMENT ARRANGEMENT CONTROL BUILDING U.E.&C DWG No. 9321-F-30523-21

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EBASCO SERVICES INCORPORATED
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CH. MM AF
DATE 4-29-82
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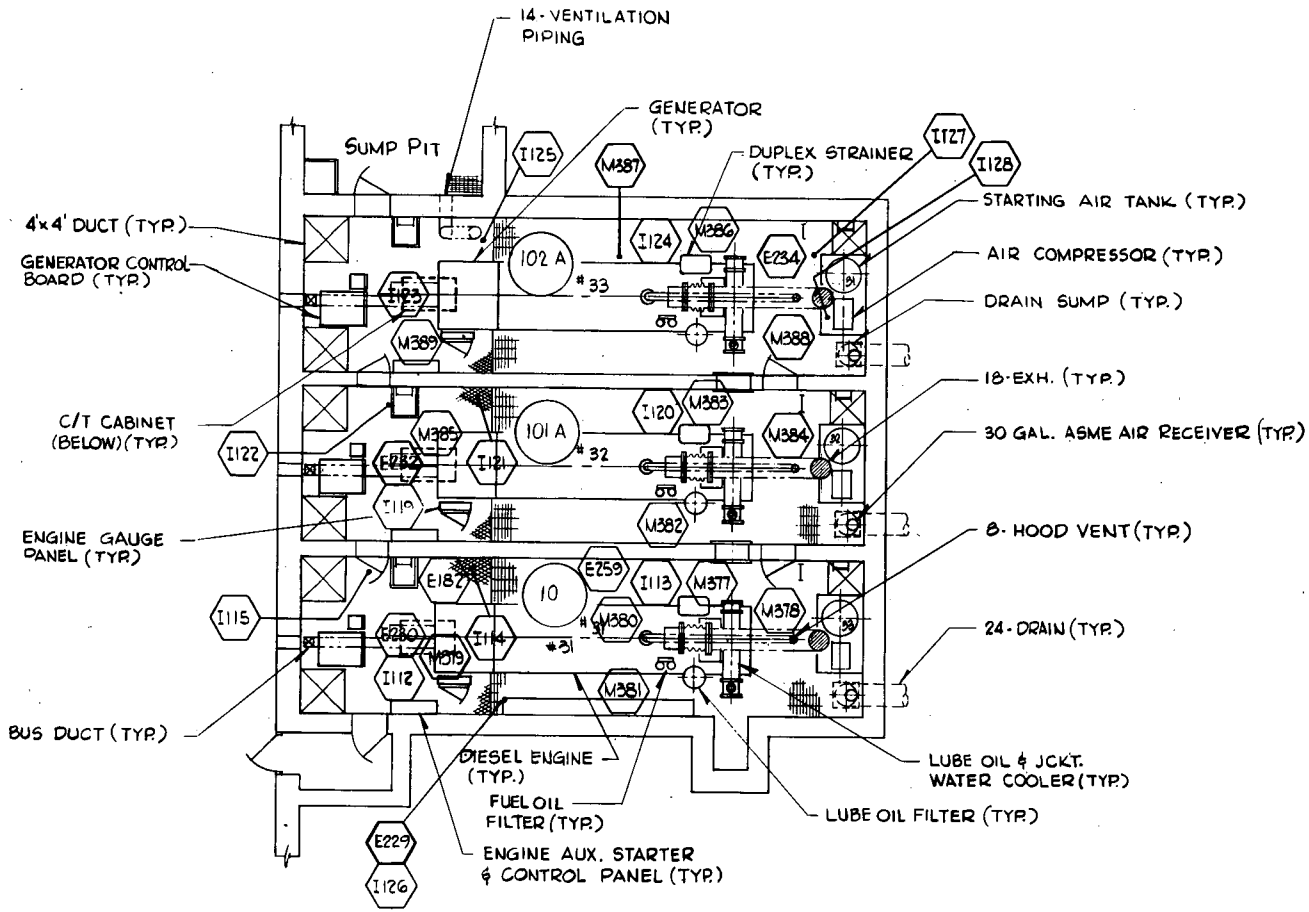
POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
CONTROL BLDG EL. 33'-0

DIESEL GEN SYS NO. 11
3209.003
SHEET 69

N

NO PICTURE NUMBER



PLAN @ EL. 15'-0

REFERENCE DRAWINGS:

1. DIESEL GENERATOR BLDG. GENERAL ARRANGEMENT U.E & C DWG No. 9321-F-22503-4 & 9321-F-22513-6

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EBASCO SERVICES INCORPORATED

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DATE 4-29-82

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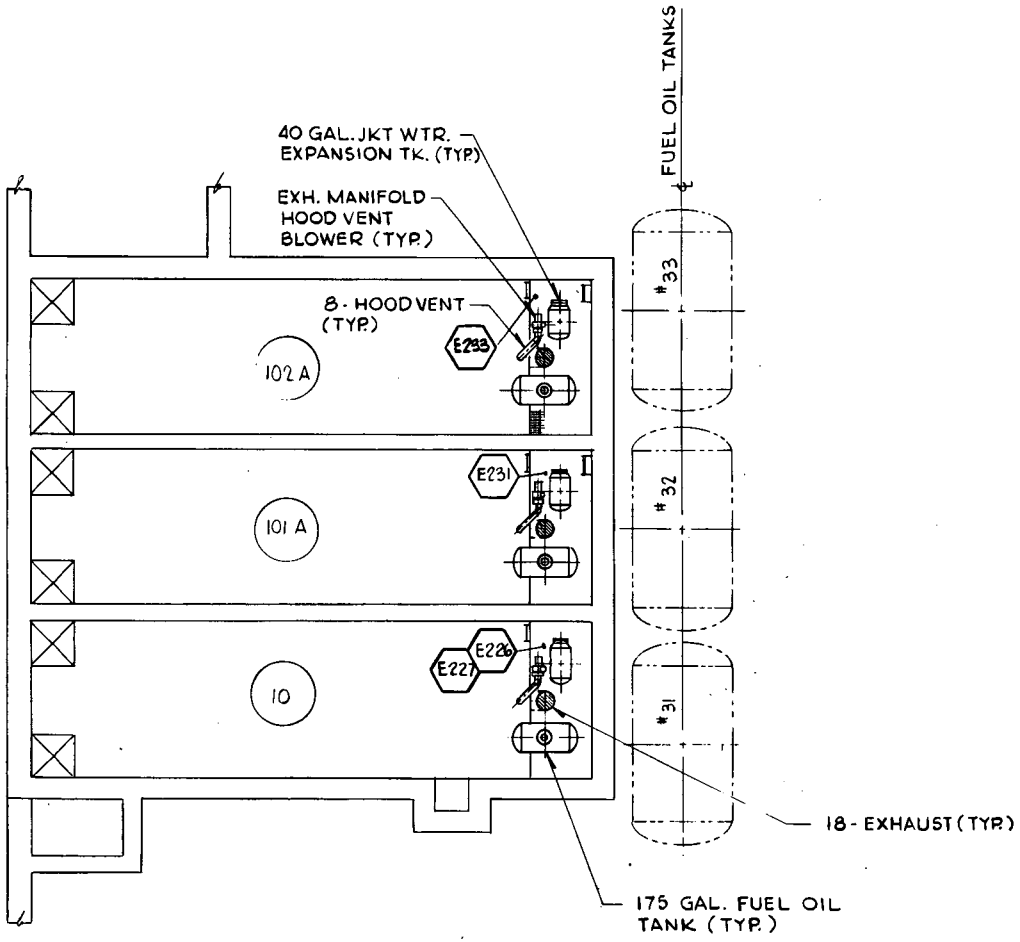
POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
DIESEL GENERATOR BLDG EL. 15'-0

DIESEL GENERATOR SYS NO. 11
5209.003
SHEET 76

N

NO PICTURE NUMBER



REFERENCE DRAWINGS:
1. DIESEL GENERATOR BLDG. GENERAL ARRANGEMENT U.E&C DWG. No. 9321-F-22503-4

PLAN @ EL. 27'-0

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CH. MM
DATE 4-30-82
APPROVED

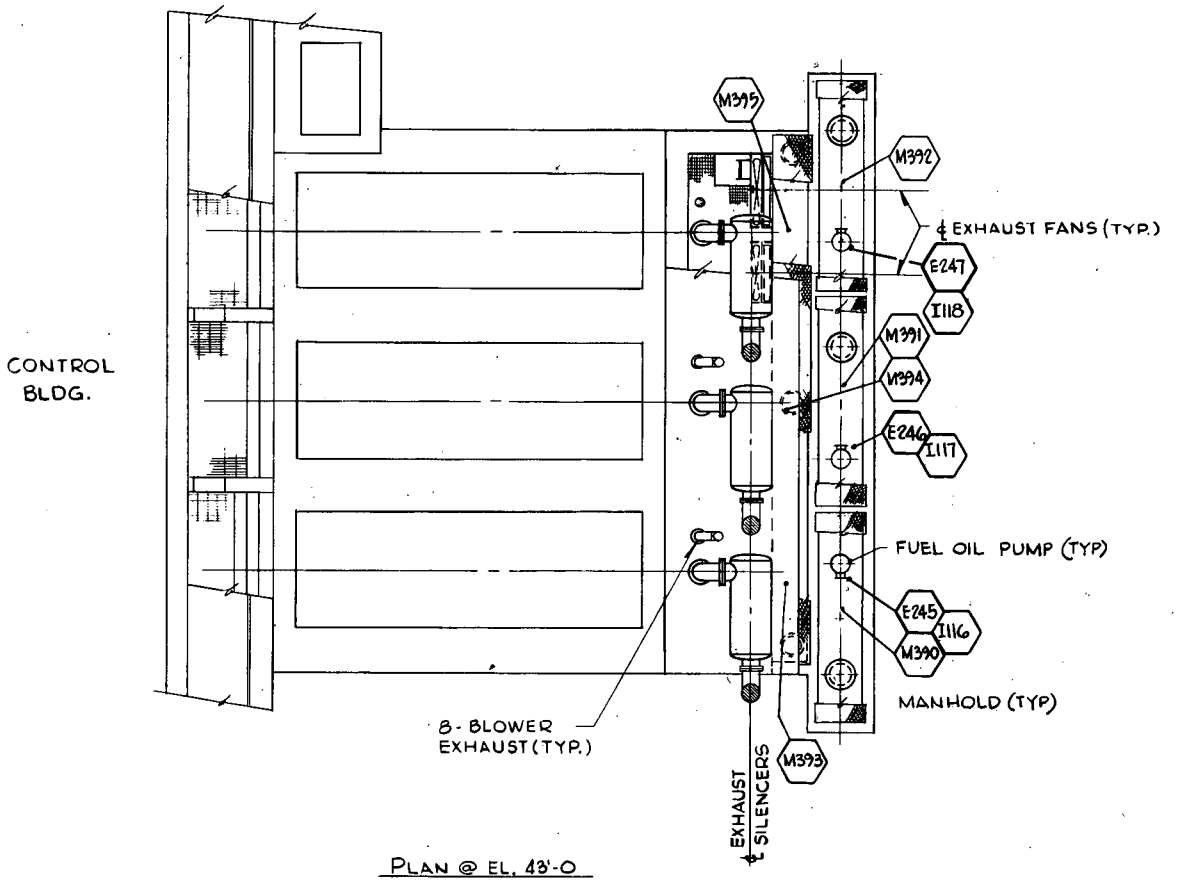
POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
DIESEL GENERATOR BLDG EL. 27'-0

DIESEL GEN
SYS NO. 11
5209.003
SHEET 77

N

NO PICTURE NUMBER

REFERENCE DRAWINGS:
1. DIESEL GENERATOR BUILDING GENERAL ARRANGEMENT U.E & C DWG. No. 9321-F-22503-4



PLAN @ EL. 43'-0

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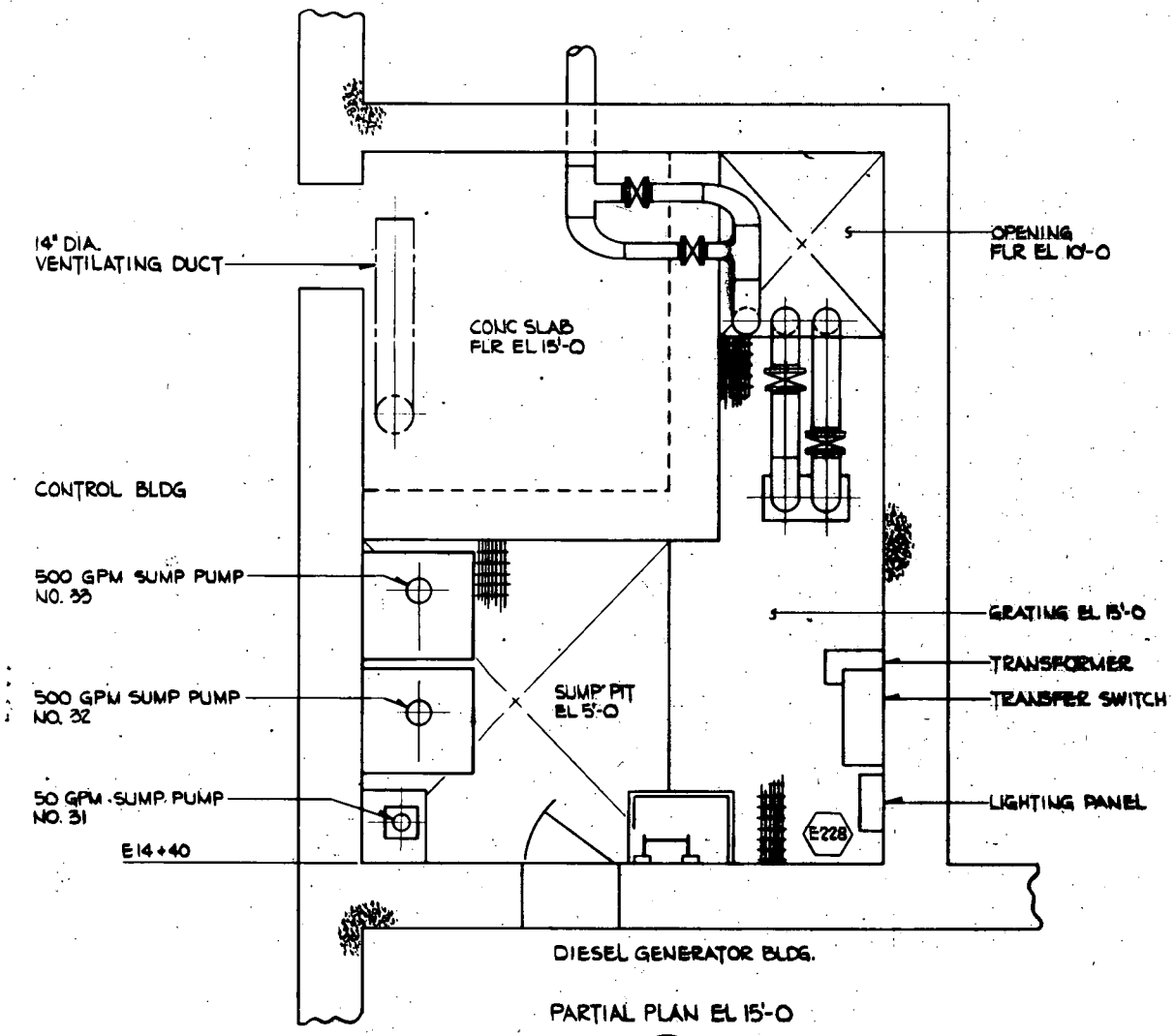
EBASCO SERVICES INCORPORATED
DIV. MECH DR. SR
CH. MM
DATE 4-30-82
APPROVED

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
GENERAL ARRANGEMENT
DIESEL GENERATOR BLDG EL. 43'-0

DIESEL GEN SYS NO. 11
5209.003
SHEET 78

N

PICTURE NUMBER



PARTIAL PLAN EL 15'-0

38A

REFERENCE DRAWINGS

DIESEL GENERATOR BLDG.
GENERAL ARRANGEMENT
UE & C DRWG NO. 8821-F-22503

REV.	DATE	BY	APPROVED
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EBASCO SERVICES INCORPORATED
DIV. MECH DR. KBJ
CH. AF
DATE 9/20/82
APPROVED

POWER AUTHORITY STATE OF NEW YORK
INDIAN POINT NO. 3 N.P.P.
VALVE ROOM EL 15'-0 DGB
(UNDER FAN ROOM)

DIESEL GEN
SYS NO. 11
[illegible]