

LICENSEE EVENT REPORT

CONTROL BLOCK:

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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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(2)

0	0	0	0	0	0	0	0	0	0	0	0
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(3)

4	1	1	1	1	1	1	1
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(4)

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(5)

LICENSEE CODE (8-14) LICENSE NUMBER (15-25) LICENSE TYPE (26-30) CAT 58 (31-58)

CON'T

0	1
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 REPORT SOURCE

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(6)

0	5	0	0	0	0	3	1	5
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(7)

1	0	2	7	8	2
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(8)

1	1	1	1	0	8	1	2
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(9)

DOCKET NUMBER (60-68) EVENT DATE (69-74) REPORT DATE (75-80)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | DURING NORMAL OPERATIONS, THE FIRE DETECTION SYSTEM ALARM FOR ZONE 2 IN THE AUX

0 3 | BUILDING WAS RECEIVED IN THE CONTROL ROOM. INVESTIGATION FOUND A PYRALARM DETECTOR

0 4 | ALARMING FOR NO APPARENT REASON. A FIRE WATCH WAS ESTABLISHED IN THE AREA OF THE MAL-

0 5 | FUNCTIONING DETECTOR UNTIL THE SITUATION WAS CORRECTED. SUBSEQUENT INVESTIGATION DIS-

0 6 | CLOSED SYSTEM DESIGN TO BE SUCH THAT THIS CONDITION WOULD HAVE PREVENTED ANOTHER

0 7 | DETECTOR IN THE ZONE FROM ALARMING IN THE CONTROL ROOM AND THE FIRE WATCH THEREFORE

0 8 | SHOULD HAVE BEEN ESTABLISHED FOR THE ENTIRE ZONE PER T.S.3.3.3.7.

SYSTEM CODE		CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE				COMP. SUBCODE	VALVE SUBCODE	
A B		D	Z	I N S T R U				E	Z	
(11)		(12)	(13)	(14)				(15)	(16)	
EVENT YEAR		SEQUENTIAL REPORT NO.			OCCURRENCE CODE		REPORT TYPE		REVISION NO.	
8 2		0 9 6			/		0 1		0	
(17)		(18)			(19)		(20)		(21)	
ACTION TAKEN		FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER
G		X	Z	Z	0 0 0 0	Y	N	A		P 4 3 5
(22)		(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | INVESTIGATION REVEALED THAT THE ALARM SETPOINT ON THE PYRALARM WAS LOW. THE ALARM

1 1 | SETPOINT WAS ADJUSTED TO THE PROPER VALUE, THE DETECTOR VERIFIED TO BE OPERABLE, AND

1 2 | THE DETECTION SYSTEM WAS RETURNED TO SERVICE. ANNUNCIATOR RESPONSE PROCEDURES WERE

1 3 | CHANGED AND ADMINISTRATIVE CONTROLS IMPOSED TO ENSURE RESTORATION OF THE DETECTOR

1 4 | SYSTEM TO OPERABLE STATUS OR POSTING OF PROPER FIRE WATCH WITHIN THE ONE-HOUR T/S LIM.

FACILITY STATUS			% POWER	OTHER STATUS		METHOD OF DISCOVERY	DISCOVERY DESCRIPTION	
E			1 0 0	N/A		A	EVENT INVESTIGATION	
(28)			(29)	(30)		(31)	(32)	
ACTIVITY RELEASED			AMOUNT OF ACTIVITY		LOCATION OF RELEASE			
Z			Z		N/A			
(33)			(34)		(35)			
PERSONNEL EXPOSURES			DESCRIPTION					
0 0 0			Z					
(37)			(38)					
PERSONNEL INJURIES			DESCRIPTION					
0 0 0								
(40)			(41)					
LOSS OF OR DAMAGE TO FACILITY			DESCRIPTION					
Z								
(42)			(43)					
PUBLICITY ISSUED			DESCRIPTION					
N								
(44)			(45)					

8211190221 821110
PDR ADOCK 05000315
S PDR

NRC USE ONLY

NAME OF PREPARER PAUL JACQUES

PHONE 616-465-5901

GPO # 17-026

DESCRIPTION OF EVENT:

FOLLOWUP EVALUATION OF THE INVESTIGATION REPORT ON THE MALFUNCTIONING DETECTOR DISCLOSED THAT WHEN ANY DETECTOR IN A STRING IS ALARMING ON THE CONTROL ROOM ANNUNCIATOR PANEL, THE ALARM FUNCTION OF THE REMAINING DETECTORS IN THE ZONE IS BLOCKED. THIS PREVENTS THEM FROM ALARMING IN THE CONTROL ROOM AND MAKES THE STRING INOPERABLE FROM AN ALARM STANDPOINT. IT ALSO BECAME CLEAR THAT WHILE ALL OF THE FIRE DETECTION ZONES ENTER THE CONTROL ROOM TO A ZONE STATUS BOARD, ONLY ONE DROP (#29) IS PROVIDED TO THE ANNUNCIATOR PANEL. THUS, ANY DETECTOR ALARMING ON THE ANNUNCIATOR PANEL WILL BLOCK ANY OTHER ZONE FROM ALARMING IN THE CONTROL ROOM. HOWEVER, A STATUS LIGHT IS AVAILABLE FOR EACH ZONE THAT WOULD PROVIDE VISUAL INDICATION OF AN ALARM CONDITION.

IN THE PAST, AS LONG AS THE NUMBER OF OPERABLE DETECTORS WITHIN A ZONE REMAINED GREATER THAN THE TECH. SPEC. MINIMUM, THE TECH. SPEC. REQUIREMENTS WERE CONSIDERED TO BE SATISFIED AND THE ACTION STATEMENT REQUIREMENTS NOT APPLICABLE. FIRE WATCHES WERE ESTABLISHED FOR THE SPECIFIC AREA SERVED BY THE MALFUNCTIONING/ALARMING DETECTOR UNTIL REPAIRS WERE EFFECTED, WHICH DID NOT NECESSARILY COVER THE ENTIRE ZONE.

IMMEDIATE CORRECTIVE ACTION TAKEN:

INVESTIGATION REVEALED THAT THE ALARM SETPOINT ON THE DETECTOR WAS LOW. THE SETPOINT WAS ADJUSTED TO THE PROPER VALUE, THE DETECTOR WAS VERIFIED TO BE OPERABLE, AND THE SYSTEM WAS RETURNED TO SERVICE.

ACTIONS TAKEN TO PREVENT RECURRENCE:

IN ORDER TO PREVENT FUTURE PROBLEMS OF THIS NATURE, ADMINISTRATIVE CONTROLS HAVE BEEN ESTABLISHED THAT CLARIFY THE DESIGN BASIS OF THE PYRALARM DETECTION SYSTEMS AND ACTIONS REQUIRED IN THE EVENT OF AN ALARM IN THE CONTROL ROOM CAUSED BY A FAULTY DETECTOR. THE ACTIONS TAKEN INCLUDE:

1. THE ANNUNCIATOR RESPONSE PROCEDURES FOR DROP #29 ON THE FIRE SYSTEM ANNUNCIATOR PANEL (PYRALARM SYSTEMS) FOR BOTH UNITS HAVE BEEN REVISED TO INDICATE THAT WHEN ANY DETECTOR ON A STRING IS ALARMING, THE ENTIRE STRING BECOMES INOPERABLE AND THE HEAD MUST BE REPLACED OR A FIRE WATCH ESTABLISHED WITHIN ONE HOUR.
2. SPARE DETECTORS HAVE BEEN MADE AVAILABLE TO THE SHIFT SUPERVISOR'S OFFICE TO BE USED FOR IMMEDIATE REPLACEMENT OF A FAILED DETECTOR.
3. THE SHIFT SUPERVISOR'S OFFICE HAS BEEN PROVIDED WITH A SET OF DRAWINGS TO SHOW THE EXACT BOUNDARY OF EACH ZONE AND THE LOCATION OF THE DETECTORS WITHIN THE ZONE.
4. A MEMO WAS ISSUED TO ALL SHIFT SUPERVISORS SPECIFYING REQUIRED RESPONSES TO FIRE DETECTION SYSTEM ALARMS. THIS EVENT WILL ALSO BE REVIEWED BY ALL OPERATING SHIFTS DURING THE REGULARLY-SCHEDULED QUALIFICATION TRAINING SESSIONS.

ACTIONS TAKEN TO PREVENT RECURRENCE (CONTINUED):

5. WHEN A FIRE ALARM ON THE ANNUNCIATOR PANEL EXISTS FOR ANY REASON, THE INDIVIDUAL FIRE ZONE STATUS LIGHTS WILL BE VISUALLY CHECKED NOT LESS THAN ONCE PER HOUR TO VERIFY THAT NO OTHER ZONE STATUS LIGHTS ARE ENERGIZED. AN ENGINEERING REVIEW WILL BE INITIATED TO EXPLORE THE POSSIBILITY OF SEPARATE ANNUNCIATION FOR EACH PYRALARM ZONE.
6. THE FIRE DETECTION SYSTEM MAINTENANCE PROCEDURES HAVE BEEN REVISED TO MINIMIZE DETECTOR OUTAGE TIME DURING MAINTENANCE AND SURVEILLANCE ACTIVITIES.

DATE OF FULL COMPLIANCE:

FULL COMPLIANCE HAS BEEN ACHIEVED.