EMERGENCY POWER SHUTDOWN MANAGEMENT SYSTEM SEQUENCE OF OPERATION MATRIX

	EPSMS INPUT SIGNAL	MAINTENANCE OVERRIDE KEYED SWITCH IN NORMAL POSITION	FIRE ALARM CONTROL PANEL 2ND ALARM ACTIVATED	FIRE CONTROL PANEL DISCHARGE ALARM ACTIVATED	EMERGENCY POWER OFF (EPO) SWITCH ACTIVATED	MAINTENANCE OVERRIDE KEYED SWITCH IN OVERRIDE POSITION (See Note 1,2,3,4,5)	LAMP TEST SWITCH (MOMENTARY) ACTIVATED (Note: Lamps shall return to normal condition when lamp test button is released)	LOSS OF POWER TO EPSMS CONTROL PANEL	SILENCE BUTTON (MOMENTARY) ACTIVATED
EPSMS OUTPUT SIGNALS/ANNUNCIATION									
"POWER" GREEN LED ILLUMINATES		●	●	●	●	●	●		
"NORMAL" GREEN LED ILLUMINATES		●	●	●	●		●		
"OVERRIDE" AMBER LED ILLUMINATES						●	●		
"2ND ALARM ACTIVATION" RED LED ILLUMINATES			●				●		
2ND ALARM SHUTDOWN RELAYS ARE ENERGIZED AND LATCHED			●		●				
2ND ALARM MOMENTARY (5 SECOND) 120V SHUNT TRIP CIRCUIT SHALL ACTIVATE			●		●				
ALL INTERCONNECTED 2ND ALARM EQUIPMENT SHALL DE-ENERGIZE			●		●				
"DISCHARGE (WATER FLOWIF PRE-ACTION ONLY)" RED LED ILLUMINATES				●			●		
DISCHARGE SHUTDOWN RELAYS ARE ENERGIZED AND LATCHED				●	●				
DISCHARGE MOMENTARY (5 SECOND) 120V SHUNT TRIP CIRCUIT SHALL ACTIVATE				●	●				
ALL DISCHARGE EQUIPMENT SHALL DE-ENERGIZE				●	●				
"EPO ACTIVATION" RED LED ILLUMINATES					●		●		
EPO SWITCH MONITORING RELAY ACTIVATED					●				
PIEZO ALERT ACTIVATED			●	●	●				
PIEZO ALERT DE-ACTIVATED									●
SYSTEM TROUBLE RELAY ACTIVATED						●		●	
AMBER NOTIFICATION BEACON ILLUMINATES						●	●		

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1. WHEN MAINTENANCE OVERRIDE SWITCH IS IN THE OVERRIDE POSITION, THE 2ND ALARM ACTIVATED, DISCHARGE ACTIVATED, AND EPO ACTIVATED RELAYS SHALL REMAIN IN THE NORMAL POSITION (LOCKED OUT) REGARDLESS OF THE INPUT SIGNALS RECEIVED TO PREVENT ACCIDENTAL SHUTDOWN OF EQUIPMENT.

2. WHEN THE MAINTENANCE OVERRIDE SWITCH IS IN THE OVERRIDE POSITION, IF ANY INPUT SIGNAL IS RECEIVED, THE CORRESPONDING "2ND ALARM ACTIVATION", "DISCHARGE ACTIVATION", AND "EPO ACTIVATION" LEDs SHALL ILLUMINATE.

3. WHEN MAINTENANCE OVERRIDE SWITCH IS IN THE OVERRIDE POSITION, IF ANY INPUT SIGNAL IS RECEIVED THEN CLEARED, THE CORRESPONDING "2ND ALARM ACTIVATION", "DISCHARGE ACTIVATION", AND "EPO ACTIVATION" LEDs SHALL FLASH INDICATING THE INPUT ALARM CONDITION IS CLEARED. THE OUTPUT RELAYS SHALL REMAIN LOCKED OUT.

4. ONCE THE MAINTENANCE OVERRIDE SWITCH IS IN THE OVERRIDE POSITION, THE SYSTEM CANNOT BE RETURNED TO "NORMAL" WITHOUT ACTIVATING THE RESET SWITCH. THE RESET SWITCH "UNLOCKS" THE MAINTENANCE OVERRIDE FEATURE.

5. IF THE EPSMS PANEL RECEIVES AN INPUT SIGNAL WHILE IN MAINTENANCE OVERRIDE IT CANNOT BE RETURNED TO NORMAL AND RESET UNTIL ALL INPUT SIGNALS ARE CLEARED. THIS FEATURE PROVIDES A SECOND LEVEL OF PROTECTION AGAINST ACCIDENTAL EQUIPMENT SHUTDOWN.

6. TWO NORMALLY OPEN/NORMALLY CLOSED CONTACTS SHALL CHANGE STATE UPON LOSS OF POWER OR WHEN MAINTENANCE OVERRIDE SWITCH IS IN OVERRIDE POSITION.

7. TWO NORMALLY OPEN/NORMALLY CLOSED DRY CONTACTS SHALL CHANGE STATE UPON EPO ACTIVATION.

8. THE EMERGENCY POWER OFF SWITCH SHALL BE DUAL ACTION KEYED LATCHING TYPE. THE BUTTON SHALL HAVE A FLIP UP PROTECTIVE COVER TO PROTECT AGAINST ACCIDENTAL EQUIPMENT SHUTDOWN. ALL EPO BUTTONS AS SHOWN ON THE DRAWINGS SHALL TERMINATE INSIDE THE EPSMS CABINET.

9. THE LOGIC FOR THE EPSMS SHALL BE CONTROLLED BY A PROGRAMMABLE RELAY LOGIC CONTROLLER. LOGIC USING HARDWIRED RELAYS SHALL NOT BE ACCEPTABLE.

10. SUBMITTALS SHALL INCLUDE ONE-LINE GENERAL ARRANGEMENT DIAGRAM SHOWING THE EPSMS CONTROL PANEL AND IDENTIFYING ALL DEVICES THE EPSMS CONNECTS TO, ENCLOSURE DIAGRAM SHOWING THE KEY SWITCH, INDICATING LEDs, AND LABELS. THIS SHEET SHALL CONTAIN THE ENCLOSURE DIMENSIONS AND A COMPLETE BILL OF MATERIALS TO BE USED IN THE CONSTRUCTION OF THE EPSMS, SEQUENCE OF OPERATION DETAILING THE INPUT SIGNALS, OUTPUT LOGIC, MONITORING RELAY OPERATION, AND MAINTENANCE OVERRIDE OPERATION AND WIRING SCHEMATIC CLEARLY IDENTIFYING TERMINATION POINTS ON TERMINAL BLOCKS WITHIN THE EPSMS CONTROL PANEL.

11. ONE AMBER ROTATING NOTIFICATION BEACON SHALL BE FURNISHED AND INSTALLED PER EPSMS PANEL. THE BEACON SHALL BE ACTIVATED WHEN THE MAINTENANCE OVERRIDE KEY SWITCH IS IN THE OVERRIDE POSITION.

12. THE EPSMS SHALL BE A FIKE MODEL 20-1181 MANUFACTURED BY FIKE CORPORATION. QUANTITIES AND LOCATIONS AS SHOWN ON THE DRAWINGS.

REVISIONS

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B
C
D

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BLUE SPRINGS, MISSOURI - USA

EPSMS

ENGINEER SAMPLE

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SHEET TITLE:
SEQUENCE OF OPERATION MATRIX

DATE:	6/1/2006	SCALE	AS SHOWN
PROJECT DESIGNER:	A. FELO	D SIZE BORDER	CHECKED:
ENGINEERING MANAGER:	R. LOPEZ	PLOT SCALE:1/4"=1'-0"	REVIEWED:
PROJECT MANAGER:	C. ROARK	PLOT TIME: 5:00 pm	APPROVED:

SHEET NUMBER:
EPSMS-4
4 OF 4 SHEET