********** -COMM. JOURNAL- ********** DATE JAN-11-2000 ***** TIME 16:39 *** P.01

MODE = MEMORY TRANSMISSION START=JAN-11 16:34 END=JAN-11 16:39

FILE NO.= 166

STN NO.	COM	ABBR NO.	STATION NAME/TEL.NO.	PAGES	DURATION
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1/11/2000

To: Soli Khericha (208) 526-9254

From: Glenn Kelly (301) 415-1075

Subject: Revised ~~ET + FT~~ for LOI, plus Table 4.5

Please call Gareth Parry if you have questions on the FI/E.T. (301) 415-1460

Fax: (208) 526-2930

9 Pages + Coversheet

4/104

1/11/2000

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plus Table 4.5.

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Fax: (208) 526-2930

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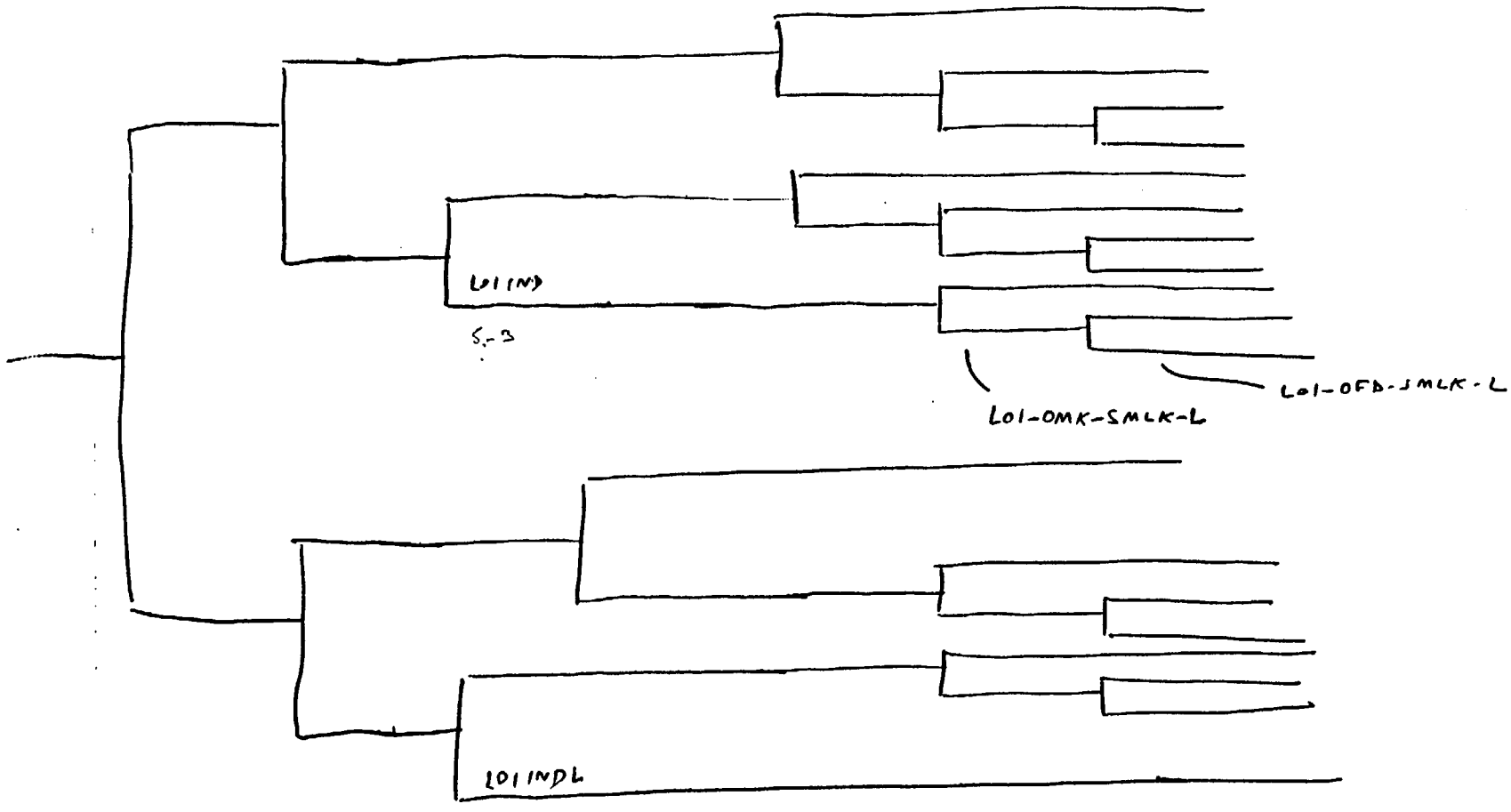
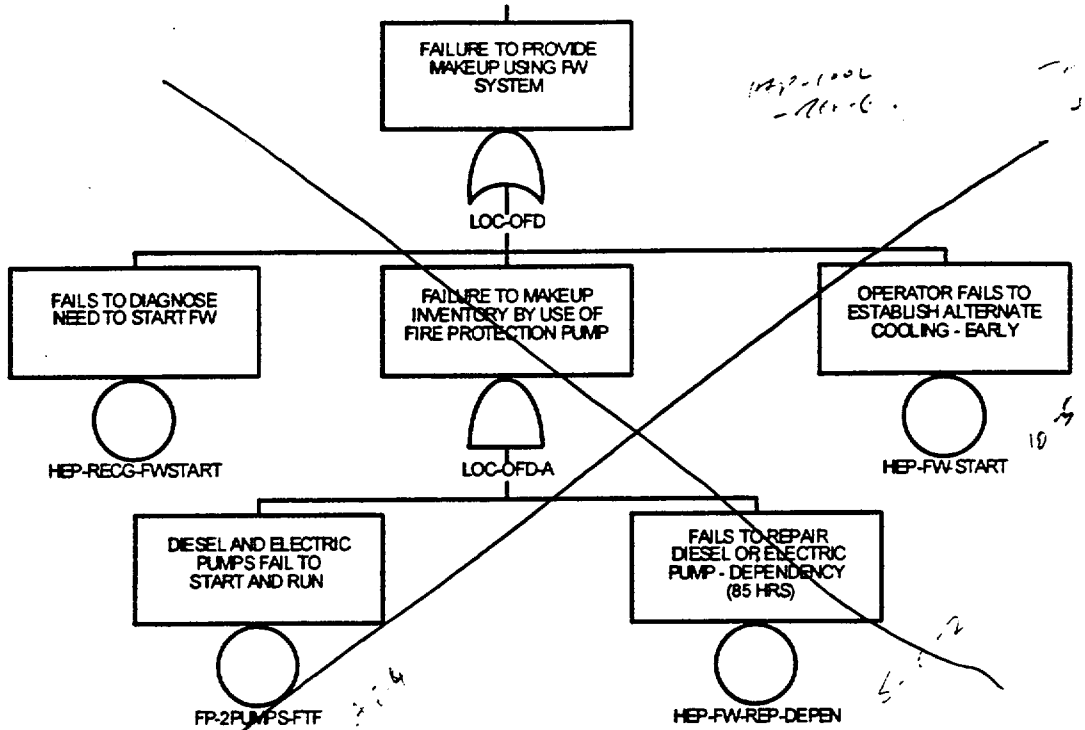
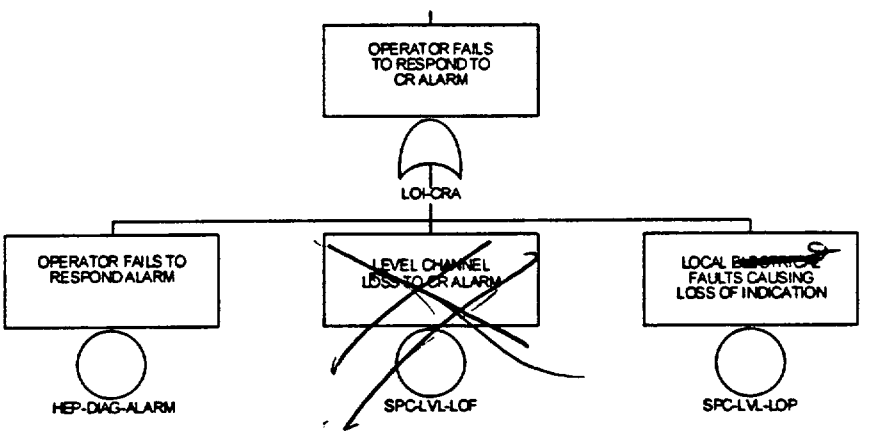
LO1-IND

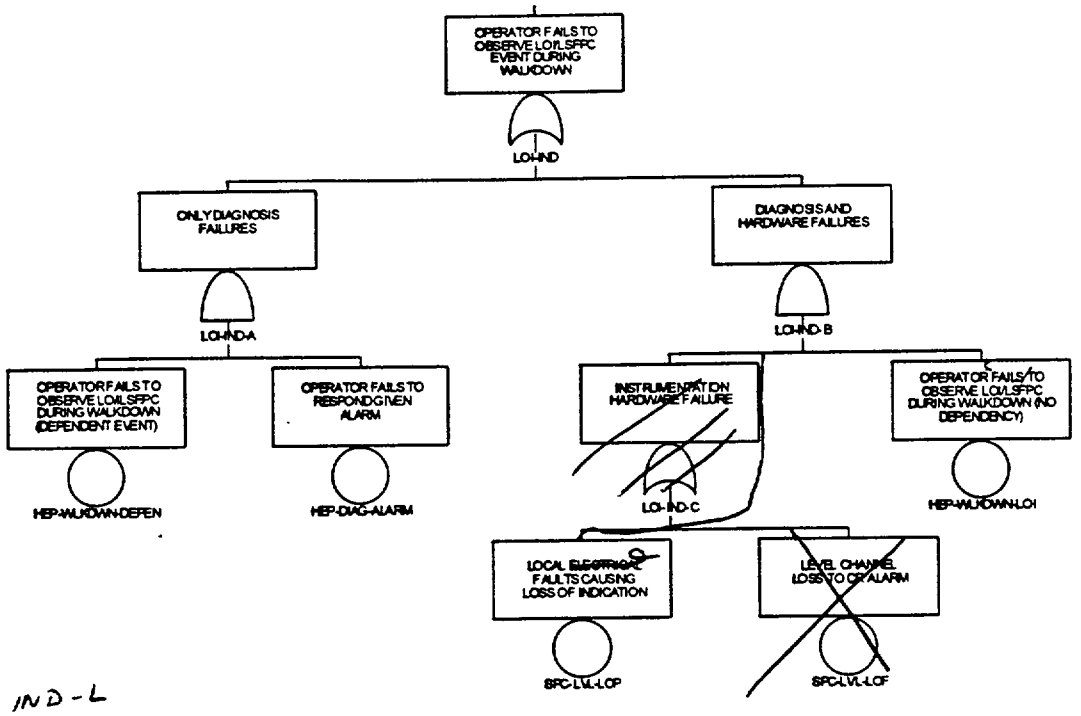
IE LO1 NLL CRA IND OLS OIL OMK OFD



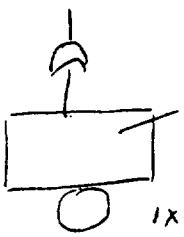


LoI Event Tree





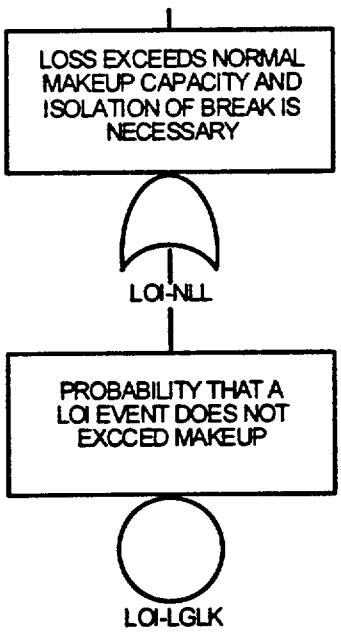
LOI-IND-L

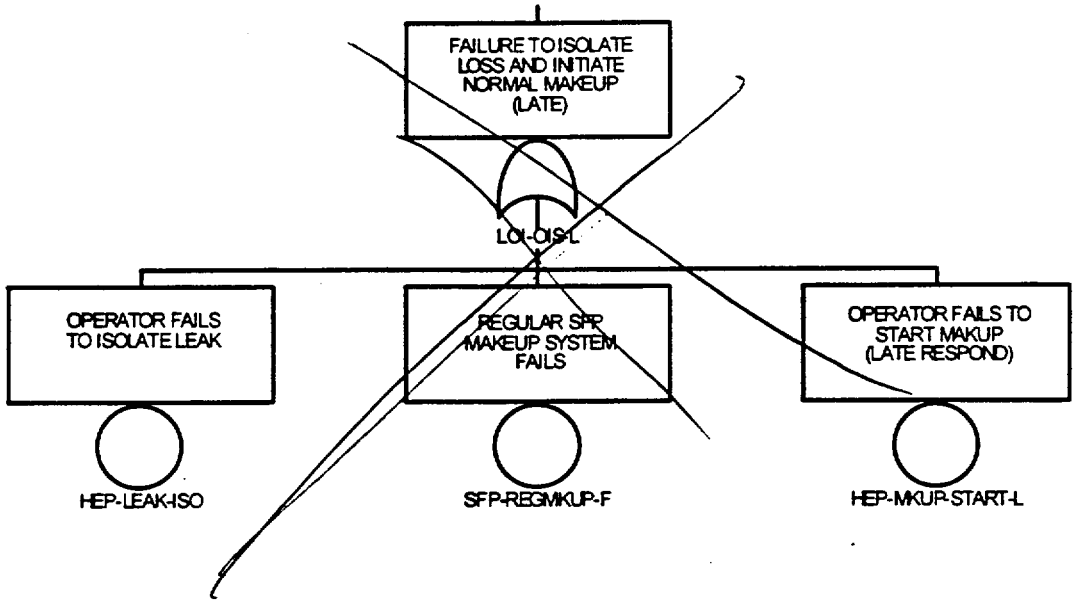


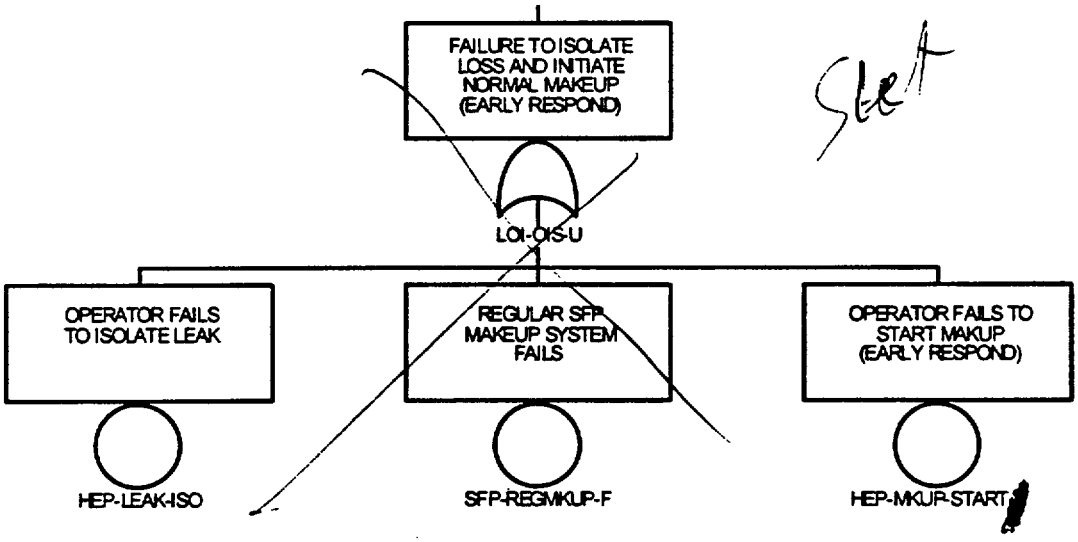
OPERATORS FAIL TO OBSERVE LOI/SFPC DURING WALKDOWNS

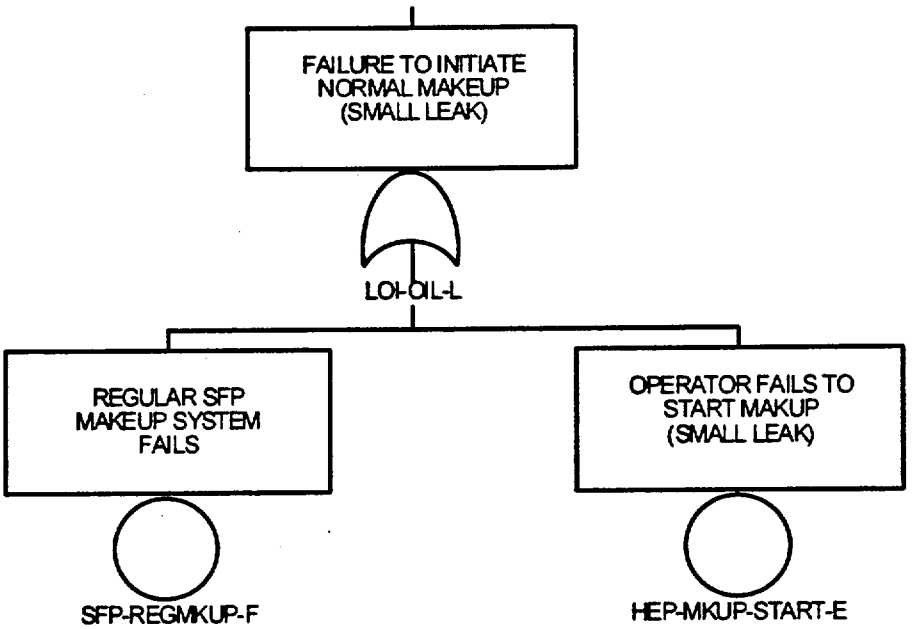
1×10^{-3}

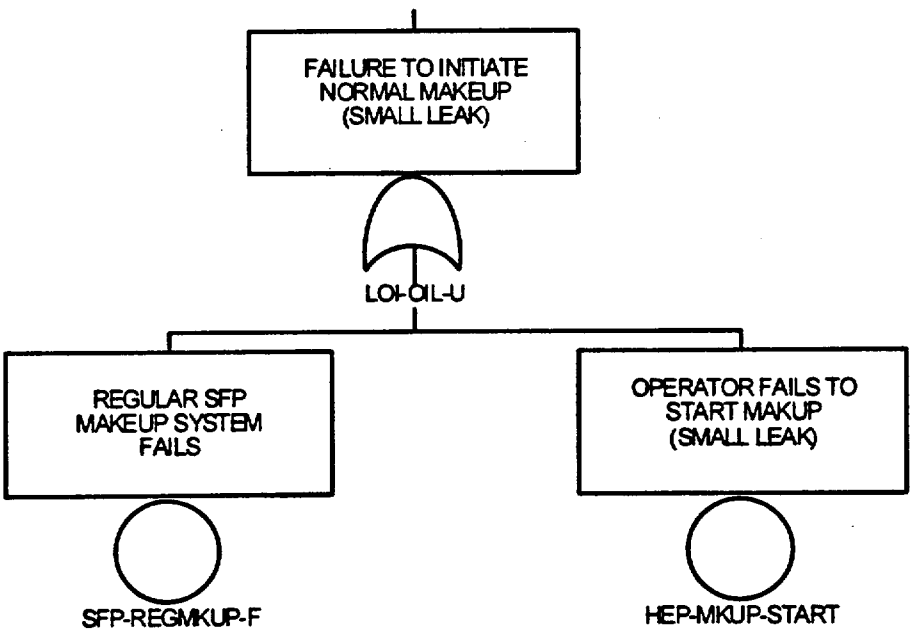
HEP-WLKDWN-LOI-L

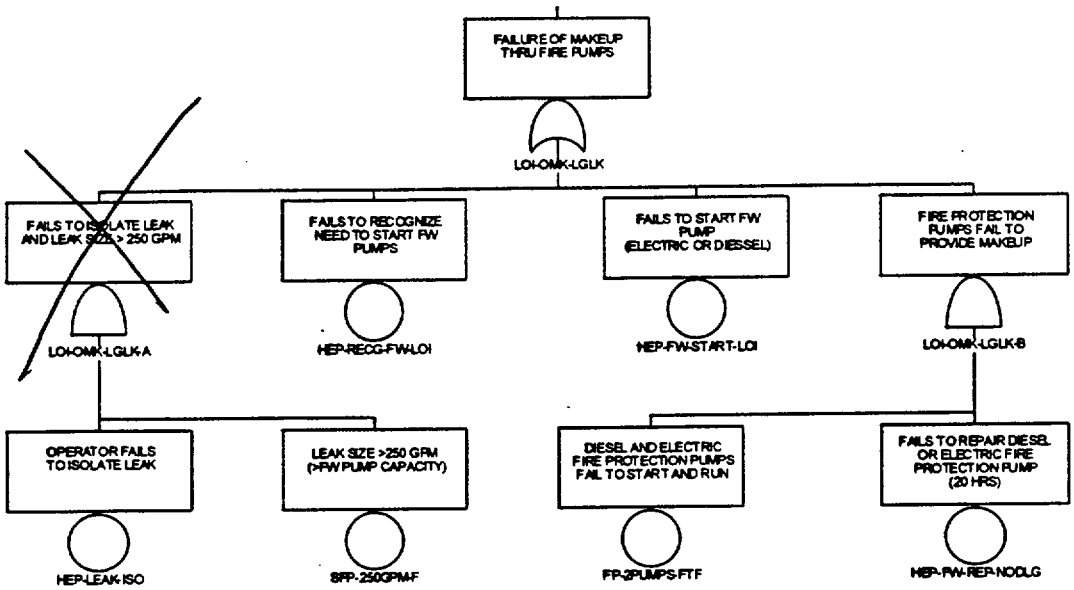



FAILURE TO ISOLATE LOSS AND INITIATE NORMAL MAKEUP (LATE)
LOI-OIS-L
OPERATOR FAILS TO ISOLATE LEAK
REGULAR SFP MAKEUP SYSTEM FAILS
OPERATOR FAILS TO START MAKUP (LATE RESPOND)
HEP-LEAK-ISO
SFP-REGMKUP-F
HEP-MKUP-START-L

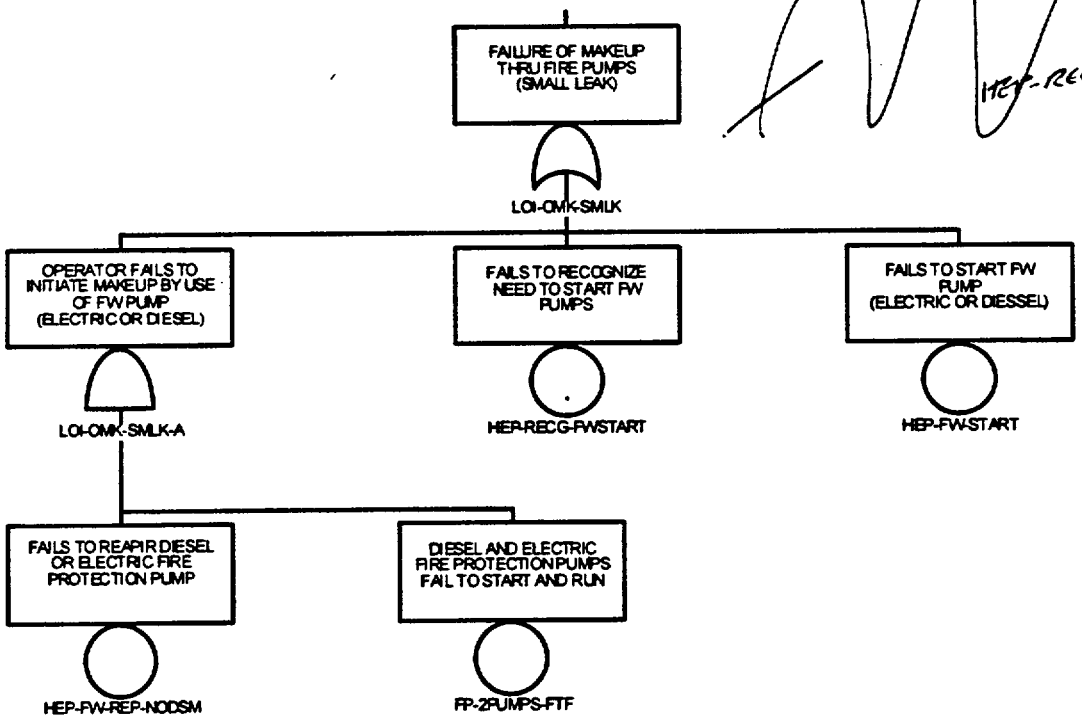

FAILURE TO ISOLATE LOSS AND INITIATE NORMAL MAKEUP (EARLY RESPOND)
LOI-OIS-U
OPERATOR FAILS TO ISOLATE LEAK
REGULAR SFP MAKEUP SYSTEM FAILS
OPERATOR FAILS TO START MAKUP (EARLY RESPOND)
HEP-LEAK-ISO
SFP-REGMKUP-F
HEP-MKUP-START

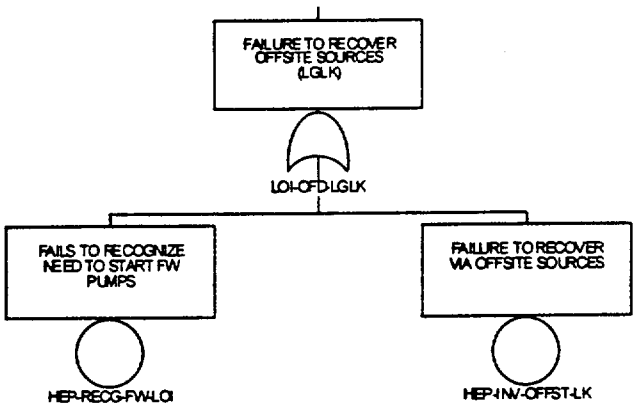

FAILURE TO INITIATE NORMAL MAKEUP (SMALL LEAK)
LOI-OIL-L
REGULAR SFP MAKEUP SYSTEM FAILS
OPERATOR FAILS TO START MAKUP (SMALL LEAK)
SFP-REGMKUP-F
HEP-MKUP-START-E

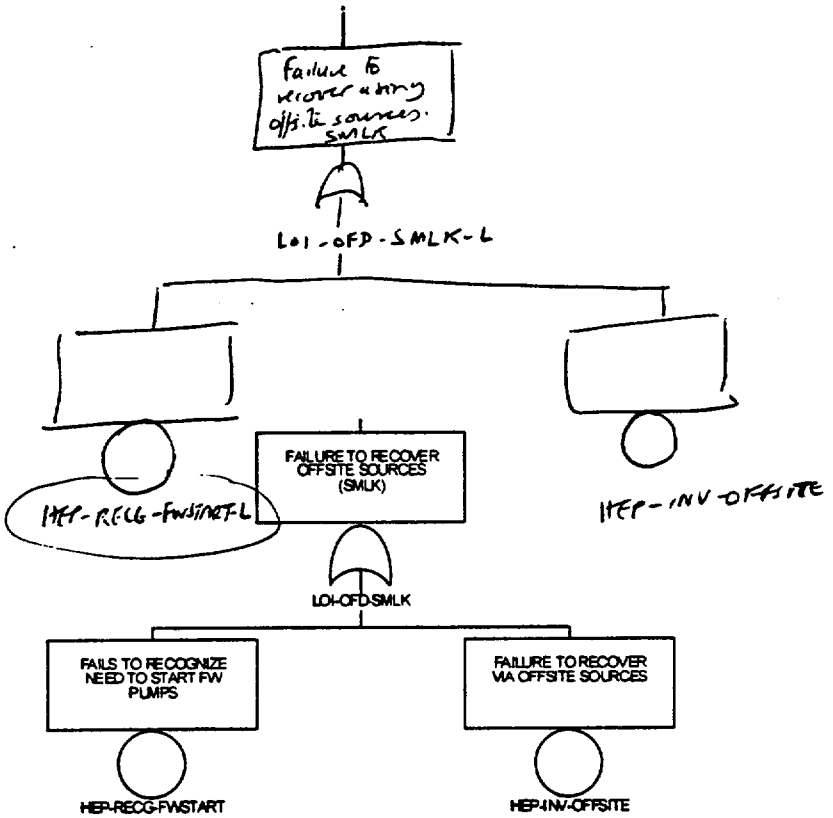

FAILURE TO INITIATE NORMAL MAKEUP (SMALL LEAK)
LOI-OIL-U
REGULAR SFP MAKEUP SYSTEM FAILS
OPERATOR FAILS TO START MAKUP (SMALL LEAK)
SFP-REGMKUP-F
HEP-MKUP-START

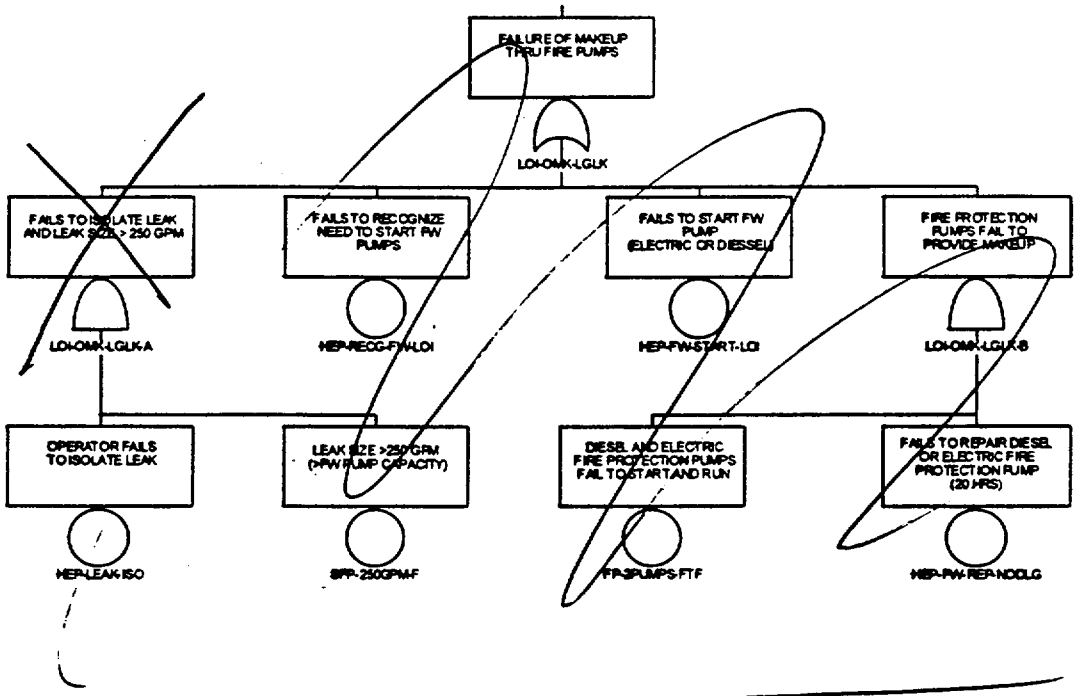


Repeat for
LOI-OMK-SMLK-L
HEP-RECG-FWSTART-L



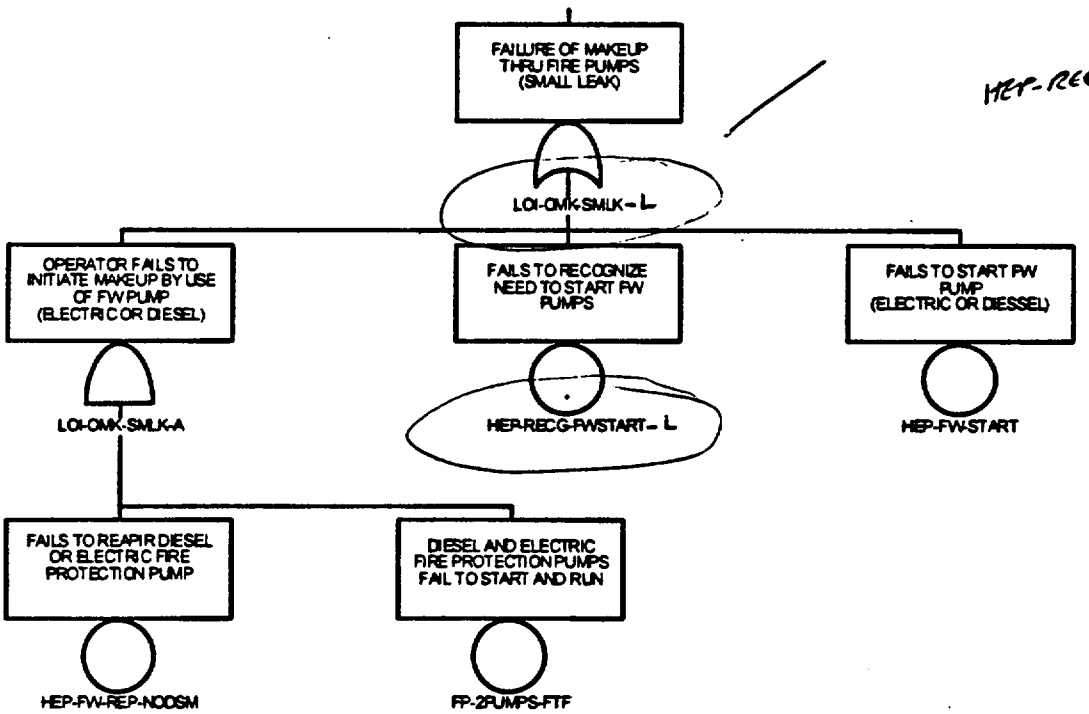

FAILURE TO RECOVER OFFSITE SOURCES (LGLK)
LOI-OFD-LGLK
FAILS TO RECOGNIZE NEED TO START FW PUMPS
FAILURE TO RECOVER VIA OFFSITE SOURCES
HEP-RECG-FW-LOI
HEP-INV-OFFST-LK


Failure to recover using offsite sources. SMLK
LOI-OFD-SMLK-L
FAILURE TO RECOVER OFFSITE SOURCES (SMLK)
HEP-RECG-FWSTART-L
HEP-INV-OFFSITE
LOI-OFD-SMLK
FAILS TO RECOGNIZE NEED TO START FW PUMPS
FAILURE TO RECOVER VIA OFFSITE SOURCES
HEP-RECG-FWSTART
HEP-INV-OFFSITE



New fault Tree

Repeat for LOI-OMK-SMLK-L



HEP-RECG-FWSTART-L
.05

Revised

Table 4.5 Basic Event Summary for the Loss of Inventory Event Tree

Basic Event Name	Description	Basic Event Probability
IE-LOI	Loss of inventory initiating event	1.0E-3
HEP-DIAG-LGLK	Operator fails to respond to a signal indication in the control room (large leak)	4.0E-4
HEP-DIAG-ALARM	Operator fails to respond to a signal indication in the control room	3.0E-4
HEP-WLKDWN-LOI	Operator fails to observe the LOI/loss of cooling in walkdowns, given failure to prevent loss of SFP cooling	5.0E-3
HEP-WLKDWN-LOI-L	Operator fails to observe the LOI/loss of cooling in walkdowns (independent case)	1.0E-5
HEP-WLKDWN-DEPEN	Operator fails to observe the LOI event walkdowns (dependent case)	5.0E-2
HEP-RECG-FW-LOI	Operator fails to diagnose need to start the firewater system	2.0E-4
HEP-RECG-FWSTART	Operator fails to diagnose need to start the firewater system	2.0E-5
HEP-RECG-FWSTART-L	Operator fails to diagnose need to start the firewater system given he failed to prevent loss of SFP cooling	5.0E-2
HEP-LEAK-ISO	Operator fails to isolate leak	1.3E-3
HEP-FW-START-LOI	Fails to start firewater pumps	1.3E-3
HEP-FW-START	Operator fails to start firewater pump and provide alignment	1.0E-5
HEP-FW-REP-NODLG	Fails to repair firewater pump (20 hrs)	9.0E-2
HEP-FW-REP-NODSM	Fails to repair firewater pump (49 hrs)	7.5E-3
HEP-INV-OFFST-LK	Operator fails to recover via offsite sources	5.0E-2
HEP-INV-OFFSITE	Operator fails to provide alternate sources of cooling from offsite	5.0E-2
FP-2PUMPS-FTF	Failure of firewater pump system	6.7E-4
LOI-LGLK	Loss exceeds normal makeup normal	6.0E-2
HEP-MKUP-START	Operator fails to start makeup(small leak)	2.5E-6
HEP-MKUP-START-E	Operator fails to start makeup(Early Respond)	2.5E-4
HEP-MKUP-START-L	Operator fails to start makeup(Late Respond)	1.0
SFP-REGMKUP-F	Regular SFP makeup system fails	5.0E-2
SPC-LVL-LOF	Failure of control room alarm channel	1.0E-5
SPC-LVL-LOP	Electrical faults leading to alarm channel failure	2.0E-3