Tim Leahy

10/21/99 ① Soli Khericha

Dan Henry

Harold Blackman

INEEL Review

10/27 Joe Staudenmeier

Review philosophy - Loss of cooling events - Operator has 128 hours.

Mike's Table 1 - Note 1 - ¿ Why multiply? by 0.84 or 0.34. It seems that might DIVIDE by .84 rather than multiply? - Adding mass that ~~removes~~ absorbs energy

10/27 Boolean multiplied + reductions cutsets cancel out

LOSP - DG fire pump checked twice in ET. Why? If "Yes" for ~~[illegible]~~ "DG", then have injection to pool.

Loss of Coolant Inventory -

10/22/99 Dan Henry, Soli

seismic
wind
heavy loads

Did we miss any impt initiators? Int flood part of loss of cooling. EXT floods site specific.

Are there any new insights? no new impt seq. Relative ranking is changed

B/2/0

Do we need to change any insights we've already made?

(2) 10/22/99

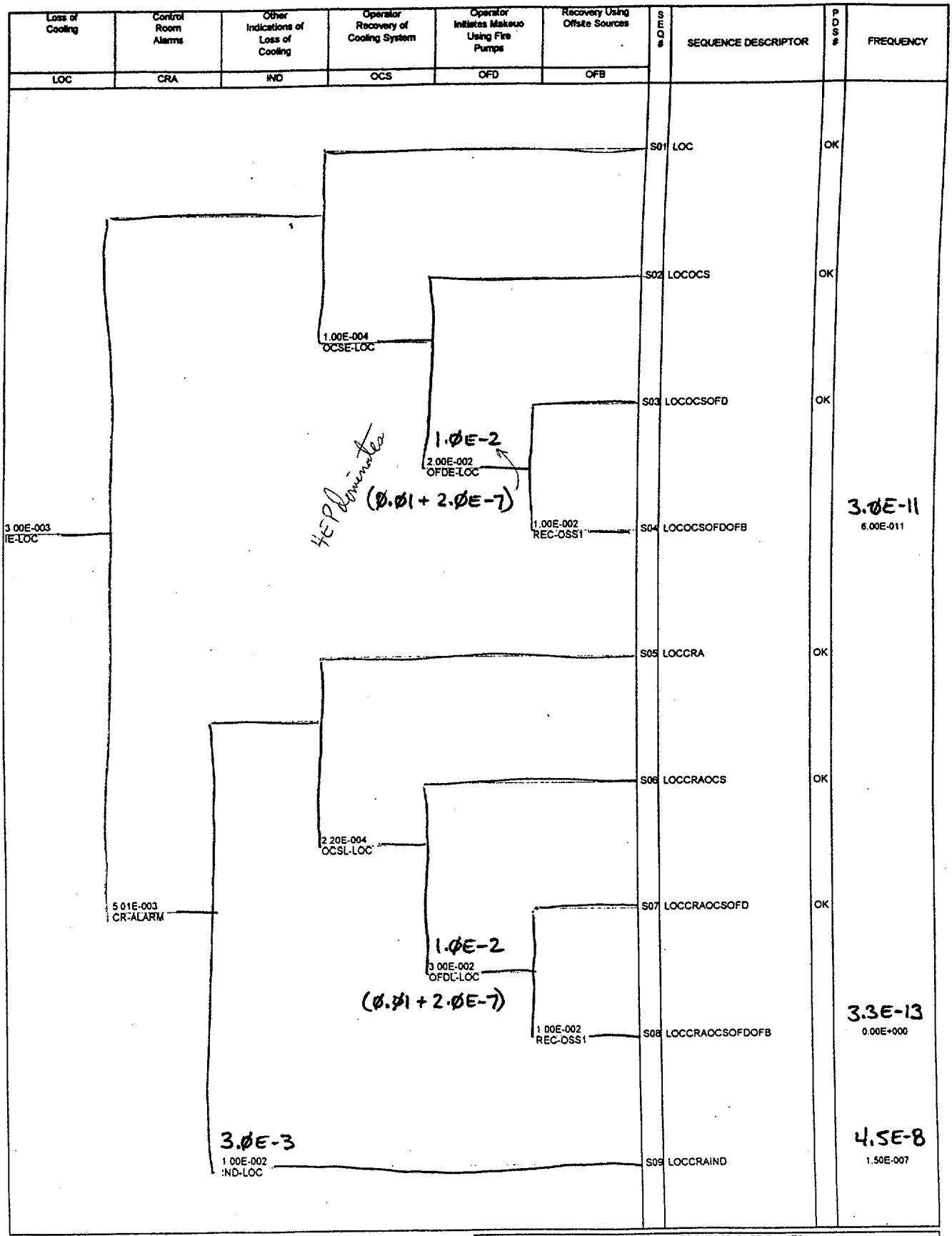
Boric acid crystalization + heat transfer?

What about if go critical > 5yrs?

Criticality + non-coolable geometry.
Can it eat through concrete?

→ electric fire water pump failure rate.
.06 failure to start + run

Where does it come from

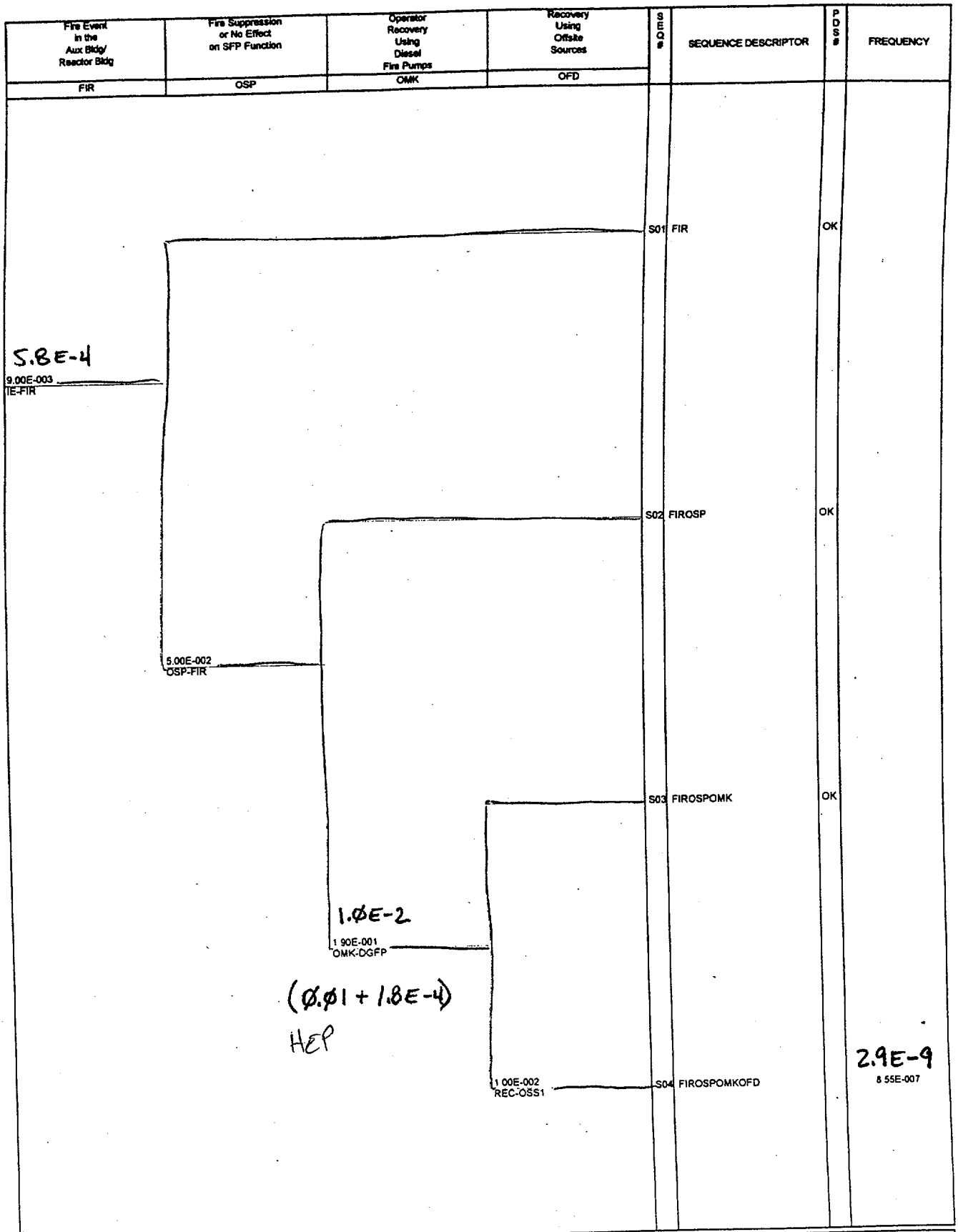


C:\WinNUPRA\SFP-1\LOC.EVT 10:37:29 06/10/99 WIN-NUPRA 1.0
Quantification Date: 06/10/99 10:36:45 TOTAL CMF = 1.50E-007

SFP RISK AT DECOMMISSIONED PLANTS

LOSS OF COOLING

CASE 1



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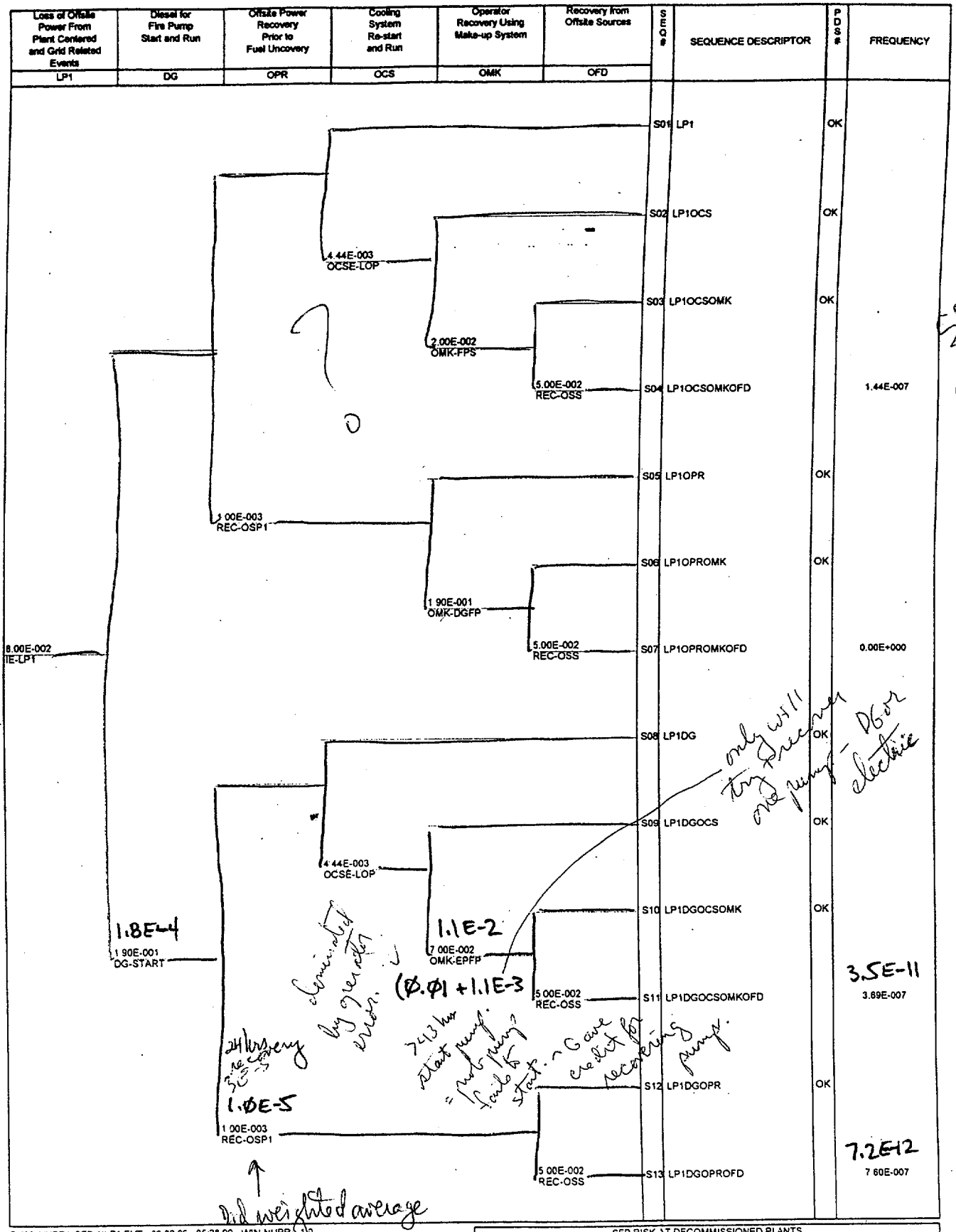
Quantification Date 06/10/99 10:34:45 TOTAL CMF = 8.55E-007

SFP RISK AT DECOMMISSIONED PLANTS

INTERNAL FIRE INITIATING EVENT

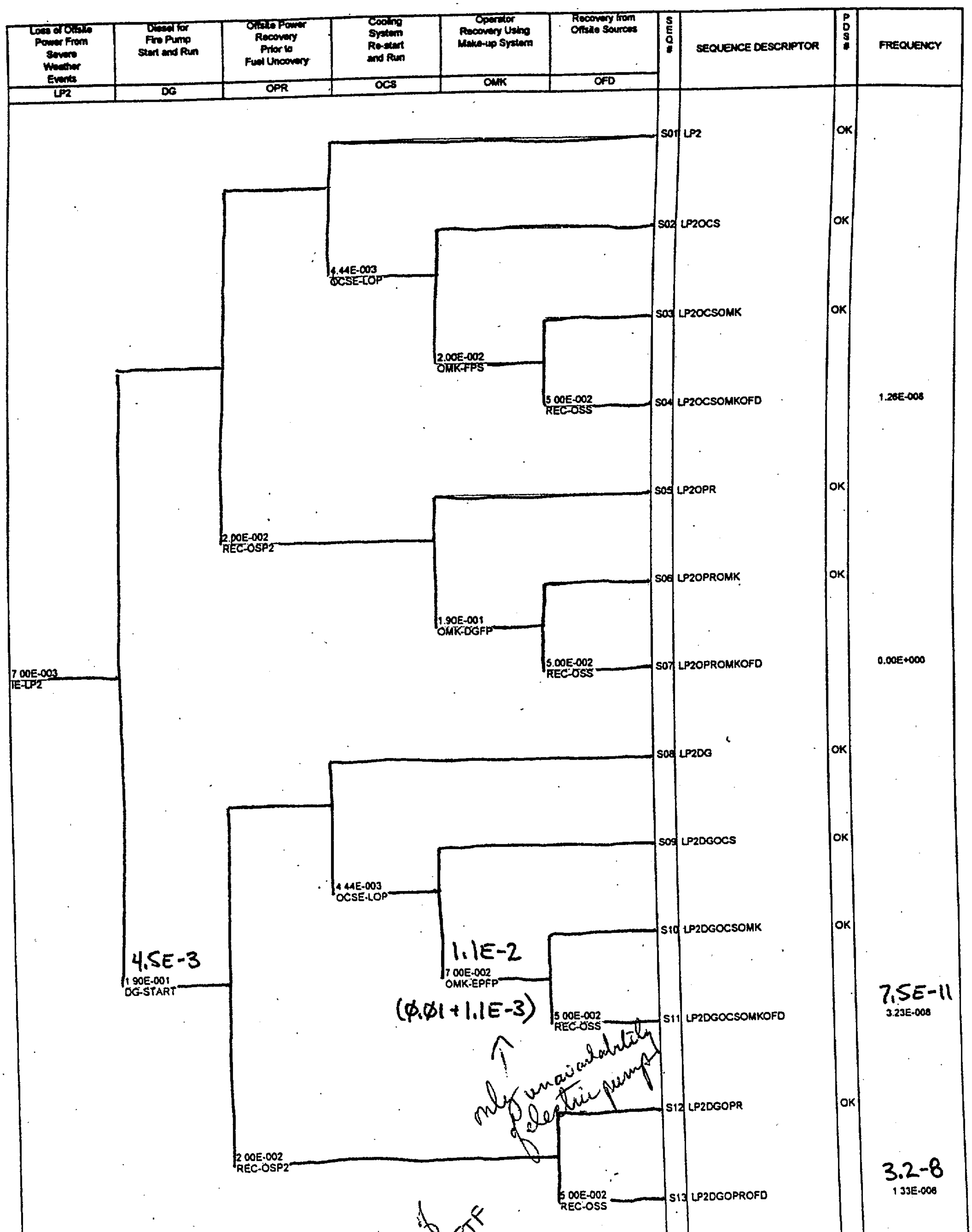
CASE 1



C:\WinNUPRA\SFP-1\LP1.EVT 06.02.26 05/28/99 WIN-NUPRA 1.00
Quantification Date 05/28/99 06:01:19 TOTAL CMF = 1.27E-006

SFP RISK AT DECOMMISSIONED PLANTS

LOSS OF OFFSITE POWER
FROM PLANT CENTERED EVENTS
CASE 1

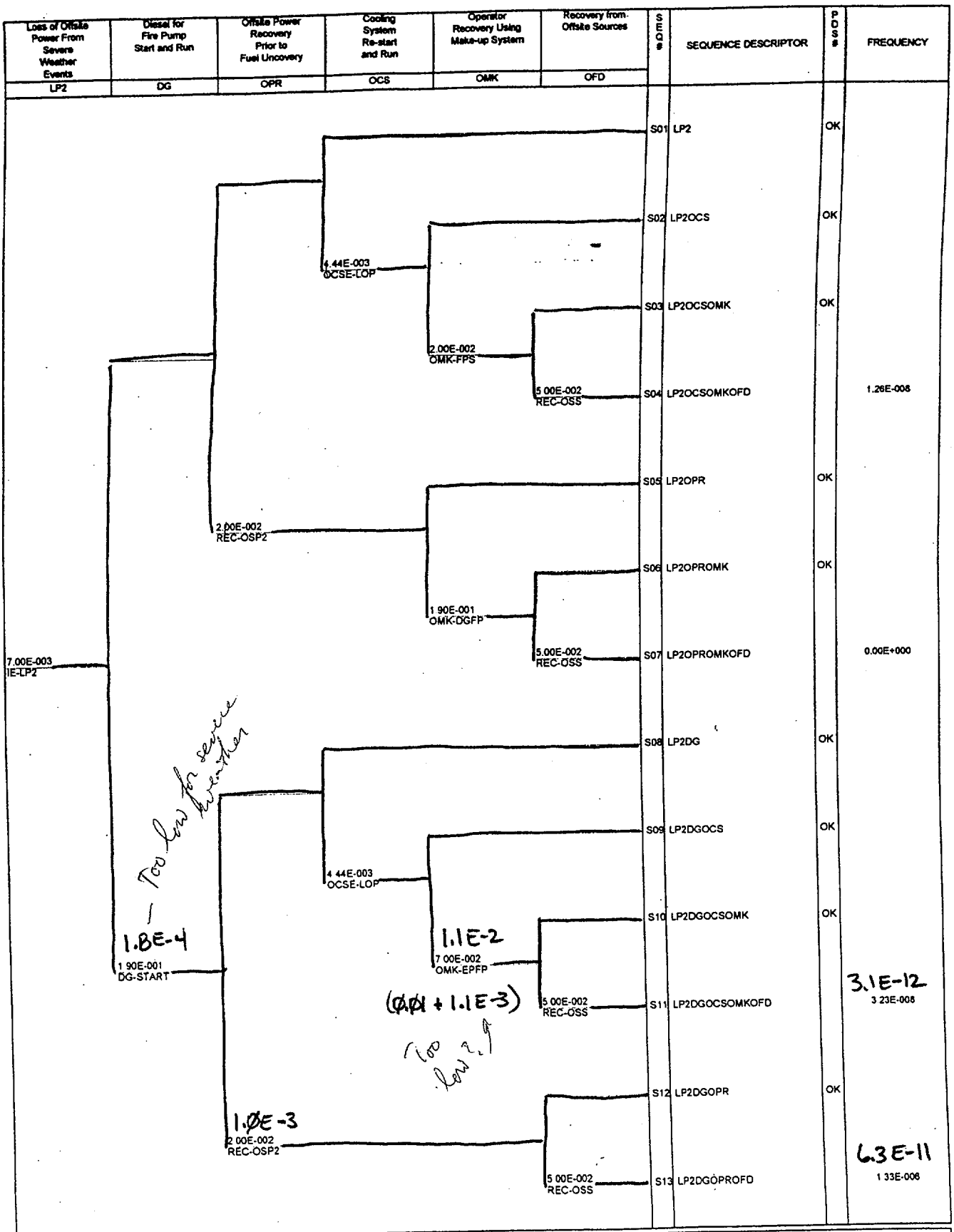


C \WinNUPRA\SFP-1 LP2 EVT 06 04 12 05/28/99 WIN-NUPRA 1 0
Quantification Date 05/28/99 06 03:27 TOTAL CMF = 1 37E-006

SFP RISK AT DECOMMISSIONED PLANTS

LOSS OF OFFSITE POWER
FROM SEVERE WEATHER EVENTS
CASE 1

See App A-1 pg A-1 what is source of FP-ELPUMP-FTF



C:\WinNUPRA\SFP-1 LP2 EVT 06 04 12 05/28/99 WIN-NUPRA 1 0
Quantification Date 05/28/99 06 03 27 TOTAL CMF = 1 37E-006

SFP RISK AT DECOMMISSIONED PLANTS

LOSS OF OFFSITE POWER
FROM SEVERE WEATHER EVENTS
CASE 1

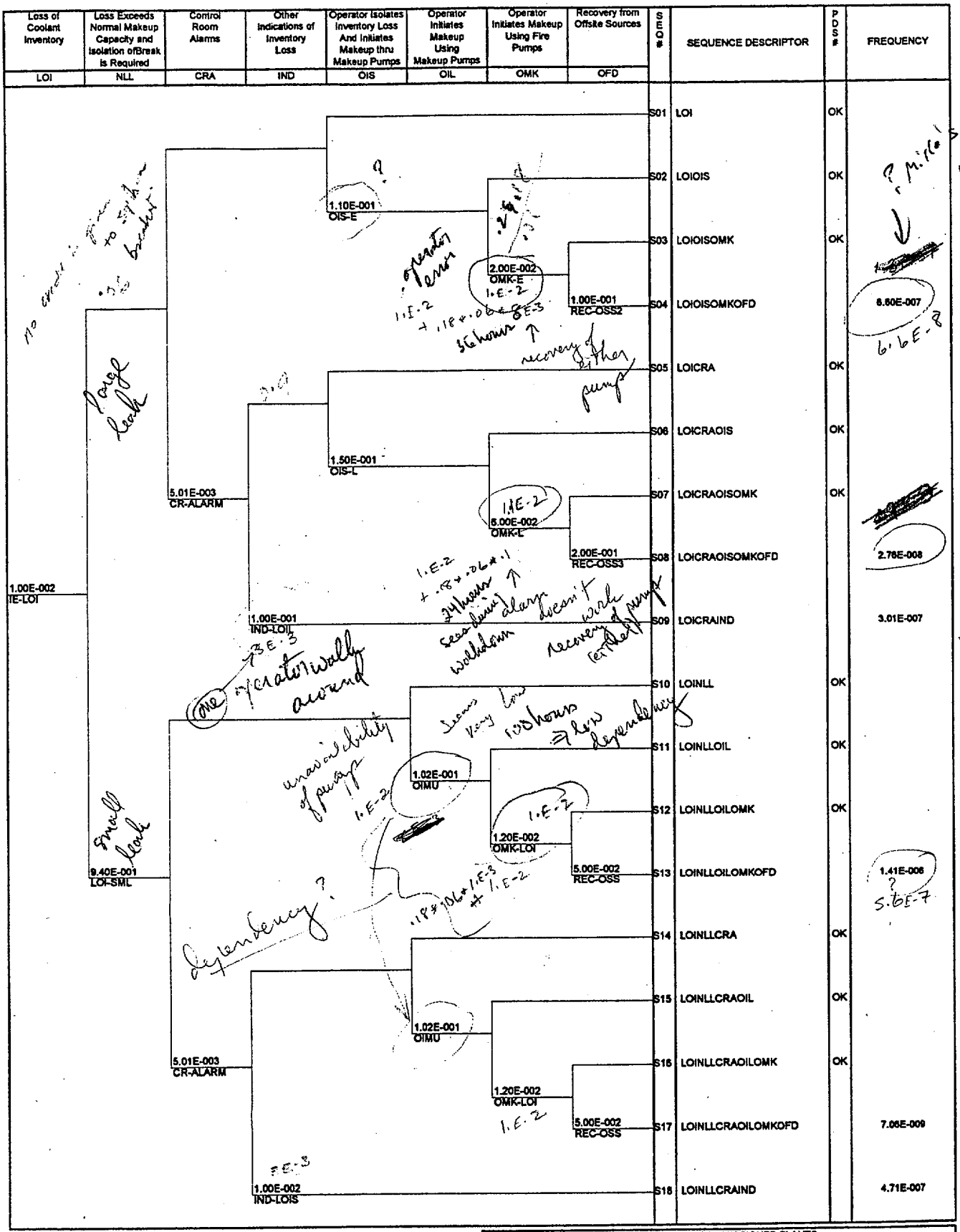
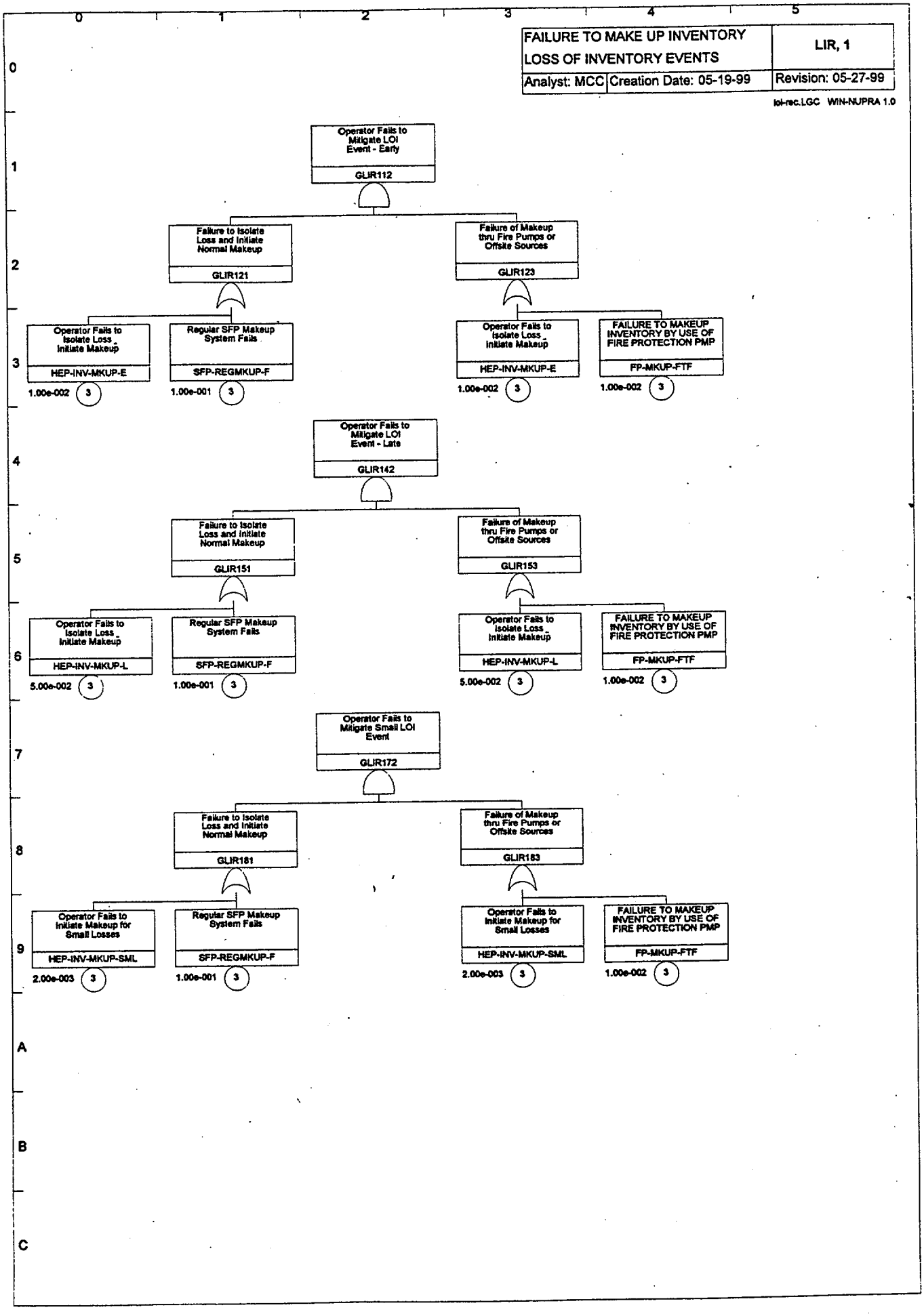

Loss of Coolant Inventory
Loss Exceeds Normal Makeup Capacity and Isolation ofBreak is Required
Control Room Alarms
Other Indications of Inventory Loss
Operator Isolates Inventory Loss And Initiates Makeup thru Makeup Pumps
Operator Initiates Makeup Using Makeup Pumps
Operator Initiates Makeup Using Fire Pumps
Recovery from Offsite Sources
SEQ #
SEQUENCE DESCRIPTOR
PDS #
FREQUENCY
LOI
NLL
CRA
IND
OIS
OIL
OMK
OFD
1.00E-002
IE-LOI
9.40E-001
LOI-SML
5.01E-003
CR-ALARM
1.00E-001
IND-LOIL
1.10E-001
OIS-E
1.50E-001
OIS-L
1.02E-001
OIMU
2.00E-002
OMK-E
8.00E-002
OMK-L
1.20E-002
OMK-LOI
1.00E-001
REC-OSS2
2.00E-001
REC-OSS3
5.00E-002
REC-OSS
1.00E-002
IND-LOIS
S01 LOI OK
S02 LOIOIS OK
S03 LOIOISOMK OK
S04 LOIOISOMKOFD 6.60E-007
S05 LOICRA OK
S06 LOICRAOIS OK
S07 LOICRAOISOMK OK
S08 LOICRAOISOMKOFD 2.76E-008
S09 LOICRAIND 3.01E-007
S10 LOINLL OK
S11 LOINLLOIL OK
S12 LOINLLOILOMK OK
S13 LOINLLOILOMKOFD 1.41E-006
S14 LOINLLCRA OK
S15 LOINLLCRAOIL OK
S16 LOINLLCRAOILOMK OK
S17 LOINLLCRAOILOMKOFD 7.06E-009
S18 LOINLLCRAIND 4.71E-007
C:\WinNUPRA\sfp-1\Loi.evt 16:47:59 07/07/99 WIN-NUPRA 1.0
Quantification Date: 05/28/99 05:47:31 TOTAL CMF = 2.88E-006
SFP RISK AT DECOMMISSIONED PLANTS
LOSS OF COOLANT INVENTORY
CASE 1

Figure 5a


FAILURE TO MAKE UP INVENTORY LOSS OF INVENTORY EVENTS
LIR, 1
Analyst: MCC
Creation Date: 05-19-99
Revision: 05-27-99
loi-rec.LGC WIN-NUPRA 1.0
Operator Fails to Mitigate LOI Event - Early
GLIR112
Failure to Isolate Loss and Initiate Normal Makeup
GLIR121
Failure of Makeup thru Fire Pumps or Offsite Sources
GLIR123
Operator Fails to Isolate Loss _ Initiate Makeup
HEP-INV-MKUP-E
1.00e-002
3
Regular SFP Makeup System Fails
SFP-REGMKUP-F
1.00e-001
3
Operator Fails to Isolate Loss _ Initiate Makeup
HEP-INV-MKUP-E
1.00e-002
3
FAILURE TO MAKEUP INVENTORY BY USE OF FIRE PROTECTION PMP
FP-MKUP-FTF
1.00e-002
3
Operator Fails to Mitigate LOI Event - Late
GLIR142
Failure to Isolate Loss and Initiate Normal Makeup
GLIR151
Failure of Makeup thru Fire Pumps or Offsite Sources
GLIR153
Operator Fails to Isolate Loss _ Initiate Makeup
HEP-INV-MKUP-L
5.00e-002
3
Regular SFP Makeup System Fails
SFP-REGMKUP-F
1.00e-001
3
Operator Fails to Isolate Loss _ Initiate Makeup
HEP-INV-MKUP-L
5.00e-002
3
FAILURE TO MAKEUP INVENTORY BY USE OF FIRE PROTECTION PMP
FP-MKUP-FTF
1.00e-002
3
Operator Fails to Mitigate Small LOI Event
GLIR172
Failure to Isolate Loss and Initiate Normal Makeup
GLIR181
Failure of Makeup thru Fire Pumps or Offsite Sources
GLIR183
Operator Fails to Initiate Makeup for Small Losses
HEP-INV-MKUP-SML
2.00e-003
3
Regular SFP Makeup System Fails
SFP-REGMKUP-F
1.00e-001
3
Operator Fails to Initiate Makeup for Small Losses
HEP-INV-MKUP-SML
2.00e-003
3
FAILURE TO MAKEUP INVENTORY BY USE OF FIRE PROTECTION PMP
FP-MKUP-FTF
1.00e-002
3