The second is superimered number of digits/characters for each block!       Starting Station, Unit 1       Control of digits/characters for each block!       Starting Station, Unit 1       Control of digits/characters for each block!       Control of digits/characters for each block!       Control of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block!       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each block.       Control of the second of digits/characters for each	NRC FORM 36	6		U.S	. NUCLEAR	REGULATO	RY COMM	ISSION	1	APPROVED	Y ONO NO	1160.0	
LICENSEE EVENT REPORT (LER)       Station and an analysis         See reverse for required number of digits/characters for each block)       The second										EXE	PIRES 5/31	1/95	104
Limerick Generating Station, Unit 1       DOCKT NUMBER (3)       NAME (3)         ODDER TANGER (3)       DOCKT NUMBER (3)       NAME (3)         OF Fire-Induced Damage to Unprotected Voltage and Speed Control Cables         EVENT DAY (3)       VER MEER (6)       If BERGER (1)       REFORM DATE (2)         OP 11       98       98        010       09       98       FACIDIT NUMER         OPERATING       11       158       REFORM DATE (2)       FACIDIT NUMER       DOCKT NUMER         OPERATING       1       108       02000       10       09       98       FACIDIT NUMER       DOCKT NUMER         OPERATING       1       103       02000       10       09       98       FACIDIT NUMER       DOCKT NUMER         OPERATING       1       103       02000       10       03       100       10       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100	(See rev	LIC:	equired	EVENT REP	PORT (I	LER)	ich bloc	:k)	ESTIMA THIS FORWAR THE II (MNBB WASHIN REDUCT MANAGE	TED BURDEN F NFORMATION CO D COMMENTS R VFORMATION AN 7714) U.S. NI GTON, DC 2055 ION PROJECT MENT AND BUDGI	PER RESPO DULECTION EGARDING D RECORDS UCLEAR RE( 5-0001, A (3150-( ET, WASHIN	NSE TO REQUES BURDEN S MANAG GULATORY ND TO T 0104). NGTON C	COMPLY WIT 50 0 HRS ESTIMATE T EMENT BRANC COMMISSION HE PAPERWOR OFFICE 0 0C 20503
TILE (4) Potential Loss of Emergency Diesel Generator Control In the Event of a Fire due       to Fire-induced Damage to Unprotected Voltage and Speed Control Cables       VANT DAY YEAR       VEXTOR (5)       Uter Needer (6)       REFERENCES       09       11     98       98     018       09     11       98     98       010     09       98     10       09     11       98     98       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       010 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)       0000 (3)   <	Limeric	k Gener	ating	Station Ur	it 1				DOCKET	NUMBER (2)		1	PAGE (3)
to Fire-induced Damage to Unprotected Voltage and Speed Control Cables         EVENT DATE (5)       LER NUMBER (5)         EVENT DATE (5)       LER NUMBER (5)         OPENATING (5)       10       09       99         OPENATING (5)       11       98       98       -0       10       09       99       7XLIITY NAME       DOCKET NUMBER (5)         OPENATING (5)       11       98       98       -0       10       09       99       7XLIITY NAME       DOCKET NUMBER (5)         OPENATING (5)       11       120.405(a)(1)(1)       130.30(c)(1)       130.73(a)(2)(1)(1)       130	FITLE (4) P	otentia	Los	s of Emerger	Dias	al Car			1	05000	352		1 OF 7
EVENT DATE (5)       LER NUMBER (6)       REFIRE PROFE CYCLE CONTOUR CONTOUR STATISTICS INFOLVED (8)         NOME CALL IN ARKE       CONTOUR CALL IN ARKE IN ALL REPORT (13)         COMPLETE ONE LINE FOR EACH COMPORENT FAILURE DESCRIBED IN THIS BEAR (13)       COMPLETE ONE LINE FOR EACH COMPORENT FAILURE DESCRIBED IN THIS BEAR (13)         COMPLETE ONE LINE FOR EACH COMPORENT FAILURE DESCRIBED IN THIS BEAR (13)       COMPLETE ONE LINE FO	to Fire-	induced	Dama	ge to Unprot	ected V	oltage	e and	Spee	d Con	in the Ev	vent of	a Fi	re due
CNUTH       DAY       YEAR       SEQUENTIAL MUMER       REVISION NUMBER       CNUTH       Day       YEAR       YEAR       SEQUENTIAL MUMER       Revision Number       CNUTH       Day       YEAR	EVENT DA	TE (5)		LER NUMBER (6	)	REPOR	T DATE	(7)		OTHER FACT	ITTER TH	UCI UED	
09         11         98         98          00         00         09         98         FACILITY NAME         000000000000000000000000000000000000	MONTH DAY	YEAR	YEAR	SEQUENTIAL	REVISION	MONTH	DAY	VEAD	FACILIT	Y NAME	LITIES INT	TOOCKET	NUMBER
09       11       98       98        01       10       09       98       PACILITY MAKE       DOCKT NUMER (0500)         000ERATING MODE (9)       1       THIS REPORT IS SUMMITED PURSUANT TO THE REQUIREMENTS OF 10 CFR \$. (Check one or more) (11)       35       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73       73				NUMBER	NUMBER			TLAN	Lime	rick, Unit	: 2	0	5000353
OPERATING       1       THIS REPORT IS SUMMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR \$. (Check one on more) (11)         POMER       10       400501       10       400501       10       400501       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10	09 11	98	98	018	0	10	09	98	FACILIT	Y NAME	and the second states of	DOCKET	NUMBER
NODE (9)       1       20 402(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1)       10 404(1) <th< td=""><td>OPERATING</td><td></td><td>THIS RE</td><td>PORT IS SUBMITTE</td><td>D PURSUANT</td><td>TO THE</td><td>PEOUTPE</td><td>MENTS</td><td>DE 10 CP</td><td>0.8 (0)</td><td></td><td></td><td>5000</td></th<>	OPERATING		THIS RE	PORT IS SUBMITTE	D PURSUANT	TO THE	PEOUTPE	MENTS	DE 10 CP	0.8 (0)			5000
PORE       100       20.405(a)(1)(1)       50.36(c)(1)       50.73(a)(2)(1)       71.7(c)       71.7(c)         LEVEL (10)       20.405(a)(1)(11)       50.73(a)(2)(11)       50.73(a)(2)(11)       150.73(a)(2)(11)       150.73(a)(2)(1)       150.73(a)(2)(1)       150.73(a)(2)(1)       150.73(a)(2)(11)       150.73(a)(	MODE (9)	1	20.4	02(b)	- Stadual	20.4050	c)	ncm13 (	T	50.73(a)(2)(	one or mo	re) (11	71(5)
20.405(3)(1)(1)       50.35(2)(2)       50.73(3)(2)(1)(1)       X       DTHER         20.405(3)(1)(1)       30.73(3)(2)(1)(1)       30.73(3)(2)(1)(1)       X       DTHER         20.405(3)(1)(1)       X       50.73(3)(2)(1)(1)       S0.73(3)(2)(1)(1)       S0.73(3)(2)(1)(	POWER	100	20.4	05(a)(1)(1)		50.36(c	)(1)			50.73(a)(2)(	v)	73	71(0)
20.4034(1)(11)       10.734(2)(2)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)(1)       10.734(2)(2)(11)       10.734(2)(2)(11)       10.734(2)(2)(11)       10.734(2)(2)(11)       10.734(2)(2)(11)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(11)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.734(2)(2)(1)       10.	LEVEL (10)	1.00	20.4	05(a)(1)(11)		50.36(c	)(2)			50.73(a)(2)(	v11)	X OTH	ER
Image: Structure in the second sec			20.4	05(a)(1)(111)		50.73(a	(2)(1)			50.73(a)(2)(	v111)(A)	(Speci	fy in
In I       LICENSE CONTACT FOR TWIS LER (12)       WRC Form 366A)         ANE       ILLEPHONE NUMBER (Include Area Code)         COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)       (610) 718-3400         CAUSE       SYSTEM       COMPONENT       MANUFACTURER       REPORTABLE         CAUSE       SYSTEM       COMPONENT       MANUFACTURER       REPORTABLE         CAUSE       SYSTEM       COMPONENT       MANUFACTURER       REPORTABLE         TYES       SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED       SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED         YES       SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED       SUBMISSION       DATE (15)         STRACT       COMPONENT       MANUFACTURER       REPORTABLE         YES       SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED       WONTH       DATE (15)         STRACT       CONT to L400 spaces. 1.e.       APPORXIMATELY       NO       SUBMISSION       DATE (15)         STRACT       Control to L400 spaces. 1.e.       APPORXIMATELY       NO       SUBMISSION       DATE (15)         STRACT       Component manufactor       SUBDE control may not be control may not be control cables.       An assumption in the original (pre-Unit 1 licensing) SSD analysis toock credit for transfer to local control stations, prior			20.4	05(a)(1)(v)	X	50.73(a	(2)(1)	)		50.73(a)(2)(	v111)(B)	and in	Text.
ANC       Teleforme verse for the first Like (L2)       Teleforme verse for the first like (L2)         T. A. Moore, Manager - Experience Assessment, LGS       (610) 718-3400         COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)         CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NPROS         SUPPLEMENTAL REPORT EXPECTED (14)         YES         (1f yes. complete EXPECTED SUMFISSION DATE).         X       NO         SUPPLEMENTAL REPORT EXPECTED (14)         YES         (1f yes. complete EXPECTED SUMFISSION DATE).       X       NO         SUPPLEMENTAL REPORT EXPECTED (14)         YES         (1f yes. complete EXPECTED SUMFISSION DATE).       X       NO         SUPPLEMENTAL REPORT EXPECTED (14)         YES         (1f yes. complete EXPECTED SUMFISSION DATE).         X       NO         SUPPLEMENTAL REPORT EXPECTED (14)         YES         (1f yes. complete EXPECTED SUMFISSION DATE).         X       NO         SUPPLEMENTAL REPORT EXPECTED (14)			-		LICENSEE C	ONTACT E	OR THIS	150 /	12)	50.73(a)(2)()	X)	NRC For	m 366A)
T. A. Moore, Manager - Experience Assessment, LGS (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-3400 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-340 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (610) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710) 718-34 (710)	IAME						1113	Long (	101	TELEPHONE NUM	MBER (Inc.)	ude Ace	a (oda)
(610) 718-3400         COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)         CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NPROS         SUPPLEMENTAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         EXPECTED SUBMISSION DATE).         X NO         SUPPLEMENTIAL REPORT EXPECTED (14)         SUPPLEMENTIAL REPORT EXPECTED (14)         SUPPLEMENTIAL REPORT EXPECTED (14)         SUPPLEMENTIAL REPORT EXPECTED (14)	T. A. M	oore. M	anager	- Experies			1.00				Ser Trici	uue Ale	a couer
CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NPROS SUPPLEMENTAL REPORT EXPECTED (14) EXPECTED SUPPLEMENTAL REPORT EXPECTED (14) STRACT (LIMIT to 1400 Spaces 1.e. approximately 15 single-spaced toped and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer Concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C. (3) for both units. Therefore, this report is			0000	experient	CC ASSE	SSMEIL	, 165			(610) 7	18-3400	0	
CAUSE       SYSTEM       COMPONENT       MANUFACTURER       REPORTABLE TO NARDS         SUPPLEMENTAL REPORT EXPECTED (14)       CAUSE       SYSTEM       COMPONENT       MANUFACTURER       REPORTABLE TO NARDS         VES       SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED (11 yes. complete EXPECTED SUBMISSION DATE).       X       NO       SUMMISSION OUT (11mit to 1400 spaces. 1.e., approximately 15 single-spaced typewritten lines) (16)         On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency dises! generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C. (3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the			CUMP	LETE ONE LINE FO	R EACH COM	PONENT F	AILURE	DESCRIE	BED IN T	HIS REPORT (1	3)		ann y de desine de la construction de la construction de la construction de la construction de la construction Neu de la construction de la constru
SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED       MONTH       DAY       YEA         SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED       MONTH       DAY       YEA         STRACT (Limit to 1400 spaces. 1.e., approximately 15 single-spaced typewritten lines)       (16)       On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency dises generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire-induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C. (3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) ((ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FIFE. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.	CAUSE SYS	TEM CO	MPONENT	MANUFACTURER	TO NPRDS	2	CA	USE	SYSTEM	COMPONENT	MANUFAC	TURER	REPORTABLE
SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes. complete EXPECTED SUBMISSION DATE). STRACT (Limit to 1400 spaces. 1.e., approximately 15 single-spaced typewritten lines) (16) On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C. (3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) ((i) (b) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.					NOT A 12 MAY AND AN A 19 MORE AND A 19 MAY	-	-						TO NERUS
SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes. complete EXPECTED SUBMISSION DATE). X NO DATE (15) STRACT (Limit to 1400 spaces. i.e., approximately 15 single-spaced typewritten lines) (16) On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C. (3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a)(2)(ii)(B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPF. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.													
SUPPLEMENTAL REPORT EXPECTED (14)       EXPECTED         YES       If yes. complete EXPECTED SUBMISSION DATE).       X       NO       SUBMISSION         ASTRACT (Limit to 1400 spaces. i.e., approximately 15 single-spaced typewritten lines) (16)         On 9/11/98, a review associated with the Thermo-Lag reduction project         determined that local emergency diesel generator (EDG) control may not be         available to support Safe Shutdown (SSD) of the plant in the event of a fire         due to fire-induced damage to unprotected speed and voltage control cables.         An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit         for transfer to local control stations, prior to the occurrence of fire-         induced damage. Following the issuance of Information Notice 85-09, the SSD         analysis was reviewed and modifications were implemented to address "damage         before transfer" concerns. However, the subsequent SSD evaluations failed to         recognize the potential impact of fire damage to the voltage and speed         control circuits for three out of eight EDGs. This resulted in a failure to         maintain the provisions of the Fire Protection Program (FPP) and is a         violation of License Condition 2.C. (3) for both units. Therefore, this report         is being submitted in accordance with License Conditions 2.F and 2.E for         Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that         is						-				A PORT A DESCRIPTION OF A			
YES COMPLETENTIAL REPORT EXPECTED (14) YES COMPLETENTIAL REPORT EXPECTED SUBMISSION DATE). X NO DATE (15) MONTH DAY YEAR SUBMISSION DATE). AND DATE (15) DATE (15) AND DATE (15) DATE (15) D		1	1001 CHCH										
(If yes. complete EXPECTED SUBMISSION DATE). X NO DATE (15) ASTRACT (Limit to 1400 spaces. i.e., approximately 15 single-spaced typewritten lines) (16) On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C.(3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.	YES		OFFLEREN	TAL REPORT EAPEL	HED (14)				E)	PECTED	MONTH	DAY	YEAR
ASTRACT (Limit to 1400 spaces. i.e., approximately 15 single-spaced typewritten lines) (16) On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C.(3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.	(If yes, d	complete E	XPECTED	SUBMISSION DATE)		XN	)		DA	TE (15)			
On 9/11/98, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C.(3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.	BSTRACT (L1	mit to 14	00 space	s. i.e., approxi	mately 15	single-s	baced t	vpewrit	ten lin	es) (16)			
On 9/11/96, a review associated with the Thermo-Lag reduction project determined that local emergency diesel generator (EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to unprotected speed and voltage control cables. An assumption in the original (pre-Unit 1 licensing) SSD analysis took credit for transfer to local control stations, prior to the occurrence of fire- induced damage. Following the issuance of Information Notice 85-09, the SSD analysis was reviewed and modifications were implemented to address "damage before transfer" concerns. However, the subsequent SSD evaluations failed to recognize the potential impact of fire damage to the voltage and speed control circuits for three out of eight EDGs. This resulted in a failure to maintain the provisions of the Fire Protection Program (FPP) and is a violation of License Condition 2.C.(3) for both units. Therefore, this report is being submitted in accordance with License Conditions 2.F and 2.E for Units 1 and 2, respectively, and 10CFR50.73(a) (2) (ii) (B) as a condition that is outside the design basis of the plant. The potential consequences of this event are minimized by other permanent design and administrative features of the FPP. Compensatory measures are in place, and a modification that assures the availability of the EDGs will be implemented.	0- 0/11	100 -						, p =					
C ECOM 366 (5.02)	determi availab due to	ned th le to fire-i	at lo	cal emerger	nou die		100	rmo-	Lag r	eduction	proje	ect	
C FORM 366 (5.02)	for tra induced analysi before recogni control maintai violati is bein Units 1 is outs event a the FPP the ava	mption nsfer damag s was transf ze the circu n the on of g subm and 2 ide th re min . Comp ilabil	nduce in the to loo e. Fo review er" co poten its fo provi its fo provi itted , resp e des imized ensato	rt Safe Shu d damage to he original cal control llowing the wed and mod oncerns. Ho ntial impac or three ou sions of th se Conditio in accorda pectively, ign basis of d by other ory measure f the EDGs	tdown o unpro l (pre- l stati e issua dificat owever, ct of f at of e on 2.C. ance wi and 10 of the perman es are will b	esel g (SSD) Unit Ons, ince of ions the ight (3) f cFR50 plant of imple imple	ener of spi l li prio f In were subs ecti or b cens .73( . Th esig ace, leme	rmo- ator the eed form imp eque to of to P oth och och och och och an (2 e pon n and nted	Lag r (EDG plant and v ing) the ation lemen nt SS is re rogra units nditi )(ii) tenti d adm a mo	eduction in the oltage c SSD anal occurren Notice ted to a D evalua voltage sulted i m (FPP) . Theref ons 2.F (B) as a al conse inistrat dificati	proje l may event ontrol ysis t ce of 85-09, ddress tions and sp n a fa and is ore, t and 2. condi quence ive fe on tha	ct not of a cab cook fire the fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail fail fail fail fail fail fail fai	be fire les. credit SSD mage ed to e to report r that this es of sures
	for tra induced analysi before recogni control maintai violati is bein Units 1 is outs event a the FPP the ava	mption nsfer damag s was transf ze the circu n the on of g subm and 2 ide th re min . Comp ilabil	nduce in the to loo e. Fo review er" co provis its fo provis itted , res e des imized ensato ity o	rt Safe Shu d damage to he original cal control llowing the wed and mod oncerns. Ho ntial impac or three ou sions of th se Condition in accorda pectively, ign basis of d by other ory measure f the EDGs	tdown o unpro (pre- l stati e issua dificat owever, ct of f ut of e on 2.C. ance wi and 10 of the perman es are will b	esel g (SSD) tecte Unit ons, ince o ions the ire d eight (3) f th Li CFR50 plant d in pl oe imp	ener of sp 1 li prio f In were subs amag EDGs ecti or b cens .73( . Th esig ace, leme	rmo- ator the peed cens r to form eque e to on P oth och och co co co co co co co co co co co co co	Lag r (EDG plant and v ing) the ation lemen nt SS the is re rogra units nditi )(ii) tenti d adm a mo	eduction ) contro in the oltage c SSD anal occurren Notice ted to a D evalua voltage sulted i m (FPP) . Theref ons 2.F (B) as a al conse inistrat dificati	proje l may event ontrol ysis t ce of 85-09, ddress tions and sp n a fa and is ore, t condi quence ive fe on tha	ct not of a cab cook fire the fail ceed ailur chis E fo chis cos chis catur at as	be fire les. credit SSD mage ed to e to report that this es of sures
	for tra induced analysi before recogni control maintai violati is bein Units 1 is outs event a the FPP the ava	mption nsfer damag s was transf ze the circu n the on of g subm and 2 ide th re min . Comp ilabil	nduce in the to loo e. Fo review er" co provis its fo provis itted , resp e des imized ensato	rt Safe Shu d damage to he original cal control llowing the wed and mod oncerns. Ho ntial impac or three or sions of th se Conditio in accorda pectively, ign basis of d by other ory measure f the EDGs	utdown o unpro l (pre- l stati e issua dificat owever, ct of f at of e fut of e fut of f ene Fire on 2.C. ance wi and 10 of the perman es are will b	esel g (SSD) tecte Unit ons, ince c ions the ire d ight (3) f th Li OCFR50 plant in pl oe imp	ener of spi prio f In were subs ecti or b cens .73( . Th esig ace, leme	rmo- ator the cens r to form eque e to on P oth oct on P oth oct a) (2 e po n and nted	Lag r (EDG plant and v ing) the ation lemen nt SS the rogra units nditi )(ii) tenti d adm a mo	eduction in the oltage c SSD anal occurren Notice ted to a D evalua voltage sulted i m (FPP) . Theref ons 2.F (B) as a al conse inistrat dificati	proje l may event ontrol ysis t ce of 85-09, ddress tions and sp n a fa and is ore, t and 2. condi quence ive fe on tha	ct not cab cook fire the fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail cook fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fail coof fai fail coof fai fail coof fail coof fail coof fail coof fa	be fire les. credit SSD mage ed to e to report that this es of sures

PDR ADOCK 05000352 S PDR

NRC FORM 366A (5-92)	RM 366A U.S. NUCLEAR REGULATORY COMMISSIO					DMB NO. 315 ES 5/31/95	50-0104		
LICEN	CENSEE EVENT REPORT (LE) TEXT CONTINUATION		R)		ESTIMATED BURDEN PER RESPONSE TO COMPLY THIS INFORMATION COLLECTION REQUEST: 50.0 FORWARD COMMENTS REGARDING BURDEN ESTIMATE THE INFORMATION AND RECORDS MANACEMENT BR (MNBB 7714). U.S. NUCLEAR REGULATORY COMMISS WASHINGTON, DC 20555-0001, AND TO THE PAPER REDUCTION PROJECT (3150-0104). OFFICE MANAGEMENT AND BUDGET WASHINGTON DC 20503				
FACI	LITY NAME (1)	DOCKET NUM	BER (2)		LER NUMBER (6	)	PAGE (3)	)	
Limerick Generat:	ing Station, Units 1&2	0500	10	YEAR	SEQUENTIAL NUMBER	REVISION			
		352/35	3	98	018	0	2 OF	7	
TEXT (If more space is r	equired, use additional copies o	f NRC Form 30	6A) (17	')	A set of the set of th				

Unit Conditions Prior To The Event

Units 1 and 2 were in various Operational Conditions prior to the event. There were no other systems, structures, or components that were inoperable that contributed to the event.

## Description Of The Event

On September 11, 1998, an engineering evaluation associated with the Thermo-lag reduction project determined that local emergency diesel generator (EIIS: EK, EDG) control may not be available to support Safe Shutdown (SSD) of the plant in the event of a fire due to fire-induced damage to speed and voltage control cables (EIIS:CBL1) which are not protected for certain fires in the Control Structure and the Unit 2 Reactor Building. Since sacrificial fuses are not currently part of the control circuits, a fire-induced hot short prior to transfer to local control of the D11, D21, and D22 EDGs (EIIS:DG) has the potential to blow control power fuses that could disable the voltage regulator, governor control, field flashing, and interlocks for connecting the EDGs to their respective switchgear. This would result in the unavailability of these EDGs to support Safe Shutdown (SSD) Method R in the control room and cable spreading rooms, and SSD Methods B and D in two other fire areas in the Unit 2 reactor building, i.e., Fire Areas 67W, the Unit 2 Safeguard System Access Area, and Fire Area 68W, the Unit 2 Control Rod Drive (CRD) Hydraulic Control Unit (HCU) Area. In addition, positioning the local/remote control transfer switch to the local position does not disconnect the negatives of these circuits from fire areas of concern. Therefore, even if a hot short did not occur prior to transfer, a hot short on the negatives of these circuits after transfer could blow control power fuses while operating the EDG from the local control station.

Engineering personnel evaluated the significance of this issue upon its discovery and immediately contacted station personnel to implement appropriate compensatory measures. Station personnel verified that the cable spreading rooms, and Fire Areas 67W and 68W, were already included on the hourly fire watch patrol rounds. The list of fire protection system impairments was revised to include this nonconforming issue.

This condition resulted in a failure to maintain the provisions of the approved Fire Protection Program as described in the Limerick Generating Station (LGS) Updated Final Safety Analysis Report (UFSAR) and is a

NRC FORM 366A (5-92)	U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95					
	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714). U.S. NUCLEAR REGULATORY COM.ISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104). OFFICE OF MANAGEMENT AND BURCET WITH TOTAL OFFICE OF				
	FACILITY NAME (1)	DOCKET NUMBER (2)		LER NUMBER (6	)	PAGE (3)			
Limerick (	Generating Station, Units 1&2	05000	YEAR	SEQUENTIAL NUMBER	REVISION	- FAGE (3)			
		352/353	98	018	0	3 OF 7			
TEXT (If more s	space is required, use additional copies of	NRC Form 366A) (17	7)	La contra c		1			

violation of Facility Operating License Condition 2.C.(3) for the LGS, Units 1 and 2. In addition, this condition is outside the design basis of the plant. Accordingly, at 1759 hours on September 11, 1998, a 1hour notification was made to the NRC in accordance with the requirements of 10CFR50.72(b)(2)(ii)(B). This notification also satisfied the 24-hour notification requirements of License Condition 2.F and 2.E for Units 1 and 2, respectively. This report is being submitted in accordance with 10CFR50.73(a)(2)(ii)(B) and License Conditions 2.F and 2.E for Units 1 and 2, respectively.

## Consequences Of The Event

The actual consequences for this condition are minimal since a fire challenging the fire protection program or requiring the safe shutdown of either unit did not occur. The potential for a fire and the impact of a fire in the Main Control Room, the Unit 1 and Unit 2 Cable Spreading Rooms, the Unit 2 Safeguard System Access Area and the Unit 2 CRD HCU Area is minimized by a combination of many factors. The design of the Fire Protection Program relies on a 'defense-in-depth' approach which serves to: prevent a fire from starting, quickly detect and suppress fires which do start, provide reasonable electrical isolation and separation of circuits to minimize the plant system challenge of fires prior to detection and suppression, prevent the rapid spread of fires by selecting fire retardant construction materials, and protect safety related equipment so that a fire will not prevent SSD of the plant.

The potential for a fire and the consequences of postulated fire damage in the specific areas of concern are further mitigated by the following factors.

Automatic fire detection is provided in all five (5) fire areas and suppression equipment exists in all five areas as outlined below:

- the Main Control Room is continually manned and provided with manual fire suppression equipment,
- the Cable Spreading Rooms are protected by an automatic pre-action sprinkler system and are provided with manual fire suppression equipment, and
- the Unit 2 Safeguard System Access Area and Unit 2 CRD HCU Area are provided with manual fire suppression equipment.

U.S. NUCLEAR REGULATORY COMMISSION APPROVED BY OME NO. 2150-0104					0.0104	Photo Property	
		COTINAT	EXPIR	ES 5/31/95	0.0104		
LICENSEE EVENT REPORT (LE TEXT CONTINUATION	ER)	THIS INFORMATION COLLECTION REQUEST: 50.0 H FORWARD COMMENTS REGARDING BURDEN ESTIMATE THE INFORMATION AND RECORDS MANAGEMENT BRAI (MNBB 7714). U.S. NUCLEAR REGULATORY COMMISSIO WASHINGTON. DC 20555-0001. AND TO THE PAPERW REDUCTION PROJECT (3150-0104). OFFICE MANAGEMENT AND BUDGET, WASHINGTON DC 2053					
FALILITY NAME (1)	DOCKET NUMBER (2)		LER NUMBER (6	)	PAGE (3	3)	
Limerick Generating Station, Units 1&2	05000 352/353	YEAR 98	NUMBER	REVISION NUMBER O	4 OF	7	
TEXT (If more space is required, use additional copies of	F NRC Form 366A) (17	')		A Annual Contraction of the Charles			
Divisional separation of equipment independent trains of SSD equipm likelihood of damage to redundan	nt and cabli ent per the t trains of	ng as desig equip	ssociated yn reduce oment in	with s the these a	reas.		
Transient combustibles and fire I controlled through strict admini- currently provided with an exist Cable Spreading Rooms, the Unit the Unit 2 CRD HCU Area. The us- consistent with the defense-in-d- Technical Position (BTP) CMEB 9. Manual (TRM), and commitments as Lag fire barriers.	hazards with strative pro ing hourly f 2 Safeguard e of an hour epth philoso 5.1, the LGS sociated wit	in th cedur ire v Syste ly fi phy i Tech h the	nese area res. The watch pat em Access ire watch in the Br inical Re inoperal	s are se area rol in Area, patrol anch quireme ble The	s are the and is nts rmo-		
The Cable Spreading Rooms are concombustible materials are permit measures.	ntrolled suc ted in the a	h tha reas	at no tran without o	nsient compens	atory		
The Unit 2 Safeguard System Acce are controlled such that the use permitted in the vicinity of ele	ss Area and and storage ctrical race	the l of c ways	Unit 2 CR combustib and compo	D HCU A les is onents.	rea not		
As an interim corrective action, a Shift Night Order (SNO) was issued to alert operators that fire induced faults on diesel generator voltage and speed control circuits may result in blown control power fuses, which may prevent the diesel from starting or achieving rated voltage. The SNO identified that troubleshooting may be required to operate the diesel(s) in the event of these fire induced circuit faults. The specific fire areas, diesel generators and Fire Safe Shutdown Procedures were identified.							
The combination of these factors also provides the basis for the adequacy of the interim compensatory actions taken for this discovered condition (i.e., hourly fire watch patrol, control of transient combustible materials, and the notification of the licensed operators.)							
Cause Of The Event							
The cause of this event was less design requirements. The origina issuance of the Unit 1 Operating diesel generators would be contro	than adequa al LGS fire License in olled at the	te in SSD a 1984, loca	nplementa analysis, assumed al diesel	tion of prior that a genera	to 11 tor		

NRC FORM 366A U.S. N (5-92)	IUCLEAR RE	EGULATORY COMMISSION		APPROVED BY EXPIR	OMB NO. 315 ES 5/31/95	60-0104		
LICENSEE EVENT REPOR	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION			ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714). U.S. NUCLEAR REGULATORY COMMISSION. WASHINGTON. DC 20555-0001. AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104). OFFICE OF MANAGEMENT AND BUDGET. WASHINGTON. DC 20503				
FAULLITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6	)	PAGE (3)		
Limerick Generating Station, Units	Generating Station, Units 1&2	05000	YEAR	SEQUENTIAL NUMBER	REVISION			
TEXT (If more space is permised and it's		352/353	98	018	0	5 OF 7		
is required, use additional	copies of	NRC FORM 366A) (17	7)		NAME AND ADDRESS OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.	We have a second a restory of second and s		

control stations. This was consistent with the LGS analysis practice to minimize the number of cables that were designated as required to support SSD. Rationale for exclusion or inclusion of individual cables was not documented. The cables associated with this deficiency were not identified as required for SSD. It is believed that the potential for fire damage before transfer was not identified as a concern, and therefore, was not evaluated at this time.

Information Notice (IN) 85-09 identified the potential for fire damage to occur to control and control power circuits, prior to isolating circuits subject to fire damage at local control stations. The specific concern was the potential for the blowing of the only control power fuses for hot shutdown equipment. The operability of hot shutdown systems, including the ability to overcome fire induced damage and mispositioning of hot shutdown equipment and the supporting power distribution system, must exist without repairs, including replacement of fuses. Documentation for both the 1985 and 1988 reviews of applicability of IN 85-09 to the LGS SSD analysis only addresses the start and stop circuits for diesel generator control. As a result, modifications were made to the diesel generator start and stop control circuits, only. No documentation could be located for the acceptability or the failure of the diesel generator voltage and speed control circuits. At the time, i.e., pre-Unit 2 licensing, the cables associated with this deficiency were incorrectly not identified as required for SSD. The lack of documentation for exclusion of these cables was consistent with LGS SSD analysis practices (i.e., minimizing the number of cables designated as required to support SSD.)

The LGS SSD analysis was re-verified in 1991 and 1992. This verification effort changed the SSD analysis and cable inclusion philosophy. This approach maximized the inclusion of cables for analysis. The analysis subsequently evaluated and documented the acceptability of cable failures on a fire area by fire area basis. The diesel generator cables associated with this deficiency are included in this SSD analysis. The verification effort correctly concluded that post-fire SSD did not require the "function" of this cable (i.e., remote control of diesel generator voltage and speed). However, there is no documented evaluation of the acceptability of potential fire damage before transfer and its effects on control power, or fire-induced faults which may affect the circuit after transfer.

NRC FORM 366A U.S. NUCLEAR F	1 366A U.S. NUCLEAR REGULATORY COMMISSIO				
LICENSEE EVENT REPORT (L TEXT CONTINUATION	ER)	ESTIMA THIS I FORWARD THE IN (MNBB WASHING REDUCTI MANAGEN	TED BURDEN PER NFORMATION COLL D COMMENTS REGA FORMATION AND 7714). U.S. NUCL STON, DC 20555-0 ION PROJECT MENT AND BUDGET.	RESPONSE ECTION REQ RDING BURE RECORDS MA EAR REGULA 1001, AND T (3150-0104, WASHINGTON	TO COMPLY WITH UEST: 50.0 HRS. DEN ESTIMATE TO NAGEMENT BRANCH TORY COMMISSION. O THE PAPERWORK O. OFFICE OF N. DC 20503
FACILITY NAME (1)	DOCKET NUMBER (2)		LER NUMBER (6	)	PAGE (3)
Limerick Generating Station, Units 1&2	05000	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
	352/353	98	018	0	6 OF 7
ILAI (IT more space is required, use additional copies of	NRC Form 366A) (1)	7)	Contraction of the second se	NAME AND ADDRESS OF TAXABLE PARTY.	make open and reactions of \$1.500 million and 1.000 millions

A contributing factor to the identified condition was that the original fire SSD analysis and SSD cable selection analysis were not well documented due to the practice of minimizing cables identified as required for post-fire SSD.

## Corrective Actions

NCR 98-02422 was generated to disposition the identified deficiencies in the fire SSD design. A modification that assures availability of control power and isolation from potential fire damage will be implemented by the end of the 1999 Unit 2 refueling outage.

A review will be performed to assess for potential generic implications. This deficiency was associated with fire-induced damage to diesel generator control circuits, occurring prior to transfer to local control stations. The damage before transfer could disable local control of the diesel generators. Transfer to local control locations did not necessarily provide isolation from cables routed in remote fire areas. This generic implications review will include:

- review of other diesel generator circuits for the potential to disable diesel generator controls by:
  - damage prior to transfer
  - lack of circuit isolation from potential fire damage, or
  - damage not associated with transfer from remote to local control stations.
- review of selected circuits associated with transfer to other local control stations.

These reviews will be completed by November 15, 1998.

This issue was identified during the Thermo-Lag reduction project. The project includes documenting SSD analysis assumptions and calculations supporting the revised plant wide SSD re-analysis supporting Thermo-Lag reduction modifications. Numerous SSD assumptions, analyses, and calculations are being re-verified as part of this project.

NRC FORM 366A (5-92)	U.S. NUCLEAR RE	APPROVED BY OHB NO. 3150-0104 EXPIRES 5/31/95						
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION. WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104). OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON DC 20503				
	FACILITY NAME (1)	DOCKET NUMBER (2)		LER NUMBER (6	)	PAGE (3)		
Limerick Generating Station, Units 1&		05000	YEAR	SEQUENTIAL NUMBER	REVISION			
		352/353	98	018	0	7 OF 7		
TEXT (If more s	pace is required, use additional copies of	NRC Form 366A) (17	')	A second se	and the second s	1		

## Previous Similar Occurrences

LER 1-88-031, Rev. 2, reported a condition outside the design basis of the plant and a violation License Condition 2.C.(3) for LGS, Unit 1, due to fire safe shutdown concerns. Actions performed as a result of LER 1-88-031 and other subsequent related LERs included a study to verify basic compliance for various SSD issues, including "Fire Damage Prior to Transfer." This study was the basis for the modifications that were performed to the diesel generator start and stop circuits but failed to recognize the potential damage to the voltage and speed control circuits.

There have been several subsequent LERs that reported non-conformances with the fire SSD analysis (e.g., 1-96-012, 1-96-015, 1-96-021). These issues were also identified during the Thermo-Lag reduction project but did not involve the potential for fire-induced damage before transfer of control to local control stations, nor did they involve errors with cable analysis. The previous corrective actions for fire SSD deficiencies did not address incorrect assumptions in the original SSD analysis, and therefore, would not have identified and corrected the non-conformance identified in this report.