

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8711200078 DOC. DATE: 87/11/16 NOTARIZED: NO DOCKET #
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light Co 05000250
 AUTH. NAME AUTHOR AFFILIATION
 SALAMON, GAGE Florida Power & Light Co.
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-029-00: on 871015, determined that waste gas operated in configuration not described in FASR. Caused by inadequate procedure rev. Procedure 3/4-OP-47.1 revised to ensure that valve 4627 closed. Rev process centralized. W/871116 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	PD2-2 LA	1 1	PD2-2 PD	1 1
	McDONALD, D	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1
	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1
	ARM/DCTS/DAB	1 1	DEDRO	1 1
	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1
	NRR/DEST/SGB	1 1	NRR/DLPQ/HFB	1 1
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1
	NRR/DREP/RAB	1 1	NRR/DREP/RPB	2 2
	NRR/DRIS/SIB	1 1	NRR/PMAS/ILRB	1 1
	<u>REG FILE</u> 02	1 1	RES DEPY GI	1 1
	RES TELFORD, J	1 1	RES/DE/EIB	1 1
	RGN2 FILE 01	1 1		
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 5 D										PAGE (3) 1 OF 013																															
TITLE (4) Waste Gas System Operated In a Configuration Not Described in the Final Safety Analysis Report During Volume Control Tank Purge Operations																																																			
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																																									
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES						DOCKET NUMBER(S)																																				
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OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																																	
5		20.402(b)										20.406(c)										60.73(a)(2)(iv)										73.71(b)																			
POWER LEVEL (10)		0 0 0										20.406(a)(1)(i)										60.36(c)(1)										60.73(a)(2)(v)										73.71(c)									
		20.406(a)(1)(ii)										60.36(c)(2)										60.73(a)(2)(vii)										OTHER (Specify in Abstract below and in Text, NRC Form 368A)																			
		20.406(a)(1)(iii)										60.73(a)(2)(i)										60.73(a)(2)(viii)(A)																													
		20.406(a)(1)(iv)										60.73(a)(2)(ii)										60.73(a)(2)(viii)(B)																													
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LICENSEE CONTACT FOR THIS LER (12)																																																			
NAME												TELEPHONE NUMBER																																							
Gabe Salamon, Compliance Engineer												AREA CODE 3 0 5 2 4 6 1 - 6 5 1 6 1 0																																							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																			
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC																																									
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)										MONTH	DAY	YEAR																											
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO																																							

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On October 15, 1987, a safety evaluation of the past operation of the waste gas system during Volume Control Tank (VCT) purge operations determined that the configuration was not as described in the FSAR. Investigations revealed that an Auxiliary Building gassing problem had existed due to a leak path through the A gas stripper. When the gas strippers were taken out of service in 1978, the gas stripper to vent header isolation valves were left open. When the airborne contamination conditions were experienced, procedures were revised to allow the opening of the vent header to cover gas header cross-connect line valve (4627) during VCT purging. This helped alleviate the problem but bypassed the vent header regulator, thus permitting the potential pressurization of the vent header beyond the FSAR basis of 3 psig. Procedures were revised to ensure that valve 4627 was closed. In addition, the A gas stripper to vent header isolation valve was energized to close and isolate the leakage path, thus restoring the original flow path for the VCT purging mode of operation. The improper operation of the waste gas system was due to an inadequate procedure revision. The revised procedure did not assure that the FSAR requirements were being met. The Procedure Upgrade Project has generated additional administrative control procedures which increase the depth of the FSAR review.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 7	— 0 2 9	— 0 0	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

EVENT

On October 15, 1987, a safety evaluation of the past operation of the waste gas system (EIIS:WE) during Volume Control Tank (VCT) purge operations determined that operation in a particular procedurally controlled configuration was not in accordance with the Final Safety Analysis Report (FSAR).

Investigations performed by Florida Power and Light Engineering revealed that an Auxiliary Building gassing problem had existed as early as 1978, and that the cause of this problem was associated with a leak path through the A gas stripper. When the gas strippers were taken out of service (OOS) in 1978, the gas stripper control panels were also disabled. This left the gas stripper to vent header isolation valves open, which was their failure mode position. Leaving these valves open was thought to be acceptable since the gas strippers and associated equipment and piping were assumed to be leak tight, and therefore no leakage was assumed. When the airborne contamination conditions were experienced, procedure OP-2132.1, "Chemical and Volume Control System - Volume Control Tank Gas Space Concentration Control", was revised in June, 1984, to allow the opening of the vent header to cover gas header cross-connect line valve (4627) during VCT purging to establish another low pressure sink for VCT gases (the holdup tanks). This helped alleviate the gassing problem of the Auxiliary Building. In October, 1986, questions were raised about whether the newly established flow path from the VCT to the holdup tanks conformed with the chemical and volume control system (CVCS) (EIIS:CB) and waste gas system operation as described in the FSAR. Valve 4627 was closed and maintained closed upon identification of this issue.

A review of the design basis of valve 4627 was performed. This review concluded that if the VCT gases are purged directly to the holdup tanks, the process of temporarily storing the gases in the gas decay tanks as described in FSAR Section 11.1 may not be performed. Instead, the gases would be held in the holdup tanks or discharged back to the gas decay tanks via the cover gas and vent gas collection headers. The gases would still remain contained with this mode of operation, but the cover gas pressure in the holdup tanks would not be regulated since PCV-1027, the vent header pressure regulator, is bypassed.

In April, 1987, procedure 3/4-OP-47.1, "VCT Gas Space Concentration Control", (which superseded OP-2132.1), was revised to ensure that valve 4627 was closed. In addition, the A gas stripper to vent header isolation valve was energized to close this valve and isolate the leakage path. This has corrected the Auxiliary Building gassing problem and has returned the system to its original flow path for the VCT purging mode of operation.

CAUSE OF EVENT

The cause of the improper operation of the waste gas system was an inadequate procedure revision, in that the revised procedure did not assure that the FSAR

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

requirements were being met. Since the time procedure OP 2132.1 was revised to permit the cited operation, the depth of review to assure compliance with the FSAR has been increased.

ANALYSIS OF EVENT

A release due to operation with valve 4627 open is considered to be extremely unlikely. If it is assumed that the entire purge volume is directed to the three holdup tanks which are initially at normal expected operating conditions, the pressure increase in the holdup tanks would not be large enough to cause the tank relief valves to open at their setpoint of 12 psig. This analysis is conservative since during the purging evolution, the gas decay tanks via the waste gas compressors would be available to receive most of the purge volume instead of the entire purge volume actually flowing to the holdup tanks.

The postulated worst case release through the gas stripper leakage path during VCT purging is release of the entire tank contents assuming an equilibrium gaseous activity for the tank based on operation with 1% defective fuel. This postulated release is discussed in Section 14.2.3 of the FSAR Amendment 5, which assumes a rupture of the VCT releasing all noble gases plus that small amount contained in the 60 GPM flow from the demineralizers which would continue for up to 5 minutes before isolation would occur. The release activity would be 14,000 curies equivalent Xe-133. The off-site whole body dose would be less than 0.2 rem with a negligible I-131 thyroid dose. It is concluded that this postulate release is within that described in FSAR Section 14.2.3 and would present no effect on safety of the public.

During the time that the cited flowpath was being utilized, no releases in excess of regulatory limits occurred. Plant releases were monitored and controlled. Based on the above, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

- 1) Procedure 3/4-OP-47.1 was revised to ensure that valve 4627 is closed.
- 2) Since July, 1984, the procedure change process for operating procedures has been centralized in the Procedure Upgrade Project (PUP). PUP has generated additional administrative control procedures which increase the depth of the FSAR review.

ADDITIONAL INFORMATION

Similar occurrences: none.



NOVEMBER 16 1987

L-87-468
10 CFR 50.73

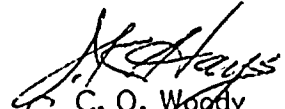
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Unit 3
Docket No. 50-250
Reportable Event: 87-29
Date of Event: October 15, 1987
Waste Gas System Operated In a Configuration Not Described in the
Final Safety Analysis Report During Volume Control Tank Purge Operations

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,


for C. O. Woody
Group Vice President
Nuclear Energy

COW/SDF/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

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