

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8111240380. DOC. DATE: 81/11/19 NOTARIZED: NO DOCKET #  
 FACIL: 50-261 H. Bl. Robinson Plant, Unit 2, Carolina Power and Light 05000261  
 AUTH. NAME: AUTHOR AFFILIATION  
 ZIMMERMAN, S. R. Carolina Power & Light Co.  
 RECIP. NAME: RECIPIENT AFFILIATION  
 VARGAS, S. A. Operating Reactors Branch 1

SUBJECT: Forwards tables re diesel generator operations data,  
 scheduled & unscheduled down time record & auxiliary  
 equipment mods record for 1976-80, in support of review of  
 Unresolved Safety Issue A-44 re station blackout.

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 TITLE: Station Blackout (USIA-44)

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	NRR/DSI/ICSB	05	1	1	NRR/DSI/PSB	05	1
	<del>RES FILE</del>	04	1	1	RES BARANOWSK01	2	2
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	LPDR	03	1	1	NRC PDR	02	1
	NSIC	05	1	1	NTIS	1	1

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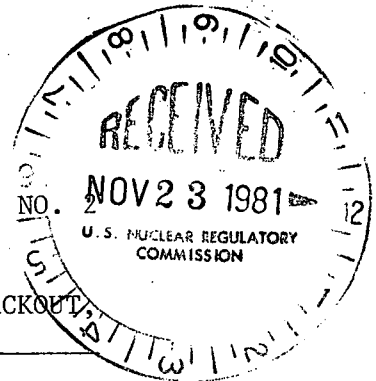
November 19, 1981

File: NG-3514(R)

Serial No.: NO-81-1913

Office of Nuclear Reactor Regulation  
ATTN: Mr. S. A. Varga, Chief  
Operating Reactors Branch No. 1  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO.  
DOCKET NO. 50-261  
LICENSE NO. DPR-23  
INFORMATION REQUEST REGARDING STATION BLACKOUT/  
UNRESOLVED SAFETY ISSUE A-44



Dear Mr. Varga:

Carolina Power & Light Company (CP&L) has received your letter of July 9, 1981 requesting information to be used in the Unresolved Safety Issue (USI) A-44, Station Blackout, effort. Pursuant to your request, the information enclosed for the Robinson Plant should assist your efforts at determining the generic reliability of onsite standby diesel generators.

Specifically, your letter requested the completion of the following four tables: (1) Diesel Generator Operations Data, (2) Diesel Generator Scheduled Down Time Record, (3) Diesel Generator Unscheduled Down Time Record, and (4) Onsite Emergency Diesel Generator and Auxiliary Equipment Modifications Record. The information requested for the years 1976 to 1980 is provided in the completed tables. We hope that the information enclosed will assist you in incorporating as much actual experience as possible into the reliability model for emergency power systems being developed as a part of the resolution of USI A-44.

If any additional information is needed, please contact us.

Yours very truly,

S. R. Zimmerman  
Manager

Licensing & Permits

DCW/lr (0570)

Enclosures

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TABLE 1

## Diesel Generator Operations Data Calendar Year 1976

[illegible]

TABLE 1

## Diesel Generator Operations Data Calendar Year 1977

[illegible]

TABLE 1

## Diesel Generator Operations Data Calendar Year 1978

[illegible]

TABLE 1

## Diesel Generator Operations Data Calendar Year 19 79

[illegible]

TABLE 1

## Diesel Generator Operations Data Calendar Year 19<sup>80</sup>

[illegible]

## Diesel Generator Scheduled Downtime Record

### Calendar Year 1976

Enclosure 1 - Page 2  
Plant Name H. B. Robinson  
Unit No. 2

[illegible]



## Diesel Generator Scheduled Downtime Record

### Calendar Year 1977

Reason for Downtime	Hours of Downtime										Comments
	Reactor shutdown					Reactor not shutdown					
	DG# 2A	DG# 2B	DG#	DG#	DG#	DG#	DG#	DG#	DG#	DG#	
Scheduled Maintenance											
None											
Time DG is unavailable for emergency service because of required tests											

## Diesel Generator Scheduled Downtime Record

Plant Name H. B. Robinson.

[illegible]

## Diesel Generator Scheduled Downtime Record

### Calendar Year 1979

[illegible]

## Diesel Generator Scheduled Downtime Record

### Calendar Year 19<sup>80</sup>

Plant Name H. B. Robinson

Unit No. 2

[illegible]

TABLE 3

Diesel Generator Unscheduled Downtime Record  
Calendar Year 19      Enclosure 1 - Page 3  
Plant Name H. B. Robinson  
Unit No. 2

LER Abstract No. (Refer to attached LER Abstracts)	Downtime Hours				Comments - If any of the reported failures would not have been a failure under emergency conditions, please explain here. Refer to attached LERs or the failures listed in Table 1.
	Total Hours	Trouble-shooting	Parts, Delivery, etc.	Repair/Replace	
1	0	0	0	0	Diesels did not assume rated load within 50 seconds after initial starting signal.
2	4	0	0	4	
3	11	0	0	11	
4	5	0	0	5	

TABLE 4

**Onsite Emergency Diesel Generator and  
Auxiliary Equipment Modification Record**

Enclosure 1 - Page 4  
Plant Name H. B. Robinson  
Unit No. 2

Equipment or procedure modified	Date of Mod.	Reason for Modification and Desired Improvement	Description of Modification
Diesel Cooling Water System	7/71	To provide early notice of leak in the diesel cooling water system and allow surveillance of expansion tank filling operation.	Connect an alarm in parallel with the cooling water expansion tank auto refill solenoid valve to provide remote and locate indication of cooling water make up.
Trips Defeat Switches	2/72	To eliminate the diesel trips (except when testing) and make the system more dependable for emergency use.	Install key operated switches on both units so the normal position with the key removed will block the diesel trips into this system. The operator position will reinstall the trips for test runs and will alarm in the control room when operated.
DG Start Up	10/75	Provide redundant startup system for DGs for increased reliability.	Addition of a second air start solenoid on each diesel.
Emergency Field Flashing Batteries	10/74	Provide more reliable Emergency Field Flashing batteries.	Replace existing lead-acid type batteries with nickel-cadmium batteries and locate in diesel generator rooms.
Fuel Supply Lines	8/74	Eliminate possibility of fuel line rupture, providing more reliability per vendor recommendations.	Replace existing synthetic hoses with new designed steel fuel supply tubes.
DG Control Panels	8/74	Replace components in W-2 switches which may be defective.	Install replacement parts in Westinghouse type W-2 control switches with the "pull-to-lock" feature.
Starting Circuit	6/78	Prevent "dry starts" of the DGs preventing possible bearing damage.	Replace the emergency diesel generator starting circuit time delay relay for prelube of the DGs. Prelube time will be increased from 15 seconds to 2 minutes.

TABLE 4

Onsite Emergency Diesel Generator and  
Auxiliary Equipment Modification Record

Enclosure 1 - Page 4  
Plant Name H. B. Robinson  
Unit No. 2

Equipment or procedure modified	Date of Mod.	Reason for Modification and Desired Improvement	Description of Modification
DG Fuel Oil Tanks Level Column Lines	11/77	Allow testing of level alarms and opening of the fuel transfer solenoid valves.	Install drains on Fuel Oil Tanks Level Column Lines to allow draining of the column without draining the tank.
DG Annunciation	8/80	Give immediate warning if the DGs have a disabling condition.	Provide alarming of any disabling condition on a separate window to ensure the operator knows the diesel is out of service.
Normal Start Circuit	2/81	Assure ample time for the diesels to crank on routine starts.	Change a relay in the normal start circuit of the DGs to increase the duration of a start signal from 1 second to 10 seconds.
DG Prelube Time	8/81	Prevent failures of DGs. Recommended by manufacturer.	This setpoint change will increase the prelube time of the DGs from 2 minutes to 4 1/2 minutes.
DG Air Dryer Service Water Piping	In Progress	Existing carbon steel piping has become fouled. Must be replaced to permit sufficient Service Water flow. Stainless Steel piping should lessen the chance of subsequent fouling.	Replace carbon steel piping with stainless steel piping.