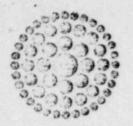
NRC FORM 195 U.S. NUCLEAR REGULA					R REGULATORY CO. "SSIO	50-302	
NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL						FILE NUMBER	
TO: FROM: FLORIDA PO DR D A BUTLER ST PETERSI						DATE OF DOCUMENT 3-16-76	
DR D A BUTLER			ST PETERSBURG, FLA J T RODGERS			DATE RECEIVED	
			PROP INPUT FORM			NUMBER OF COPIES RECEIVED	
			FROF			20	
ESCRIPTION				ENC	LOSURE		
LTR FURN INFO ON THE BY GILBERT ASSOCIATES ING				B B	DRATED WATER STORAGE RANSIENT ANALYSIS FO	TANK DRALDOWN R CRYSTAL RIVER UNIT #3	
DISTRIBUTION: PER MR 1. ENGLE							
PLANT NAME: CRYSTA	AL T	RIVER	#3				
Main		(inclu		1 110	1 CODY FOR ME NUMBER	TTS +	
				*	1 COPY FOR MR MAZE	TIS Que Reto	
SAFETY			FOR ACTIO	N/INEC	RMATION EI	VIRO 3-18-76 RKG	
ASSIGNED AD :	-	DEYOUN	the second s	T	ASSIGNED AD :		
				-++	BRANCH CHIEF :		
				-++	PROJECT MANAGER :		
		LE		LIC. ASST. :			
LIC. ASST. :				-++	LIC. ASSI. :		
and the second sec							
				-++			
			INTERNA			11	
REG FILE		SYSTEMS	SAFETY		PLANT SYSTEMS	ENVIRO TECH	
NRC PDR		HEINEMAN	SAFETY		PLANT SYSTEMS TEDESCO	ERNST	
NRC PDR I & E			SAFETY		PLANT SYSTEMS TEDESCO BENAROYA	ERNST BALLARD	
NRC PDR I & E OELD		HEINEMAN	SAFETY R	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS	ERNST BALLARD SPANGLER	
NRC PDR I & E		HEINEMAN	SAFETY R		PLANT SYSTEMS TEDESCO BENAROYA	ERNST BALLARD SPANGLER	
NRC PDR I & E OELD		HEINEMAN SCHROEDE ENGINEER MACCARY	SAFETY R	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE	ERNST BALLARD SPANGLER WICZ SITE TECH	
NRC FDR I & E OELD GOSSICK & STAFF		HEINEMAN SCHROEDE ENGINEEE MACCARY KNIGHT	SAFETY R	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS	ERNST BALLARD SPANGLER UTCZ SITE TECH GAMMILL	
NRC PDR I & E OELD GOSSICK & STAFF MIPC		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL	SAFETY I R NING	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE	ERNST BALLARD SPANGLER WICZ SITE TFCH GAMMILL STEPP	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT	SAFETY I R NING	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL	
NRC FDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI	SAFETY I R NING	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH	ERNST BALLARD SPANGLER UTC Z SITE TFCH GAMMILL STEPP HULMAN	
NRC FDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT		HEINEMAN SCHROEDE ENGINEEE MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR	SAFETY I R NING	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT	ERNST BALLARD SPANGLER WICZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS	SAFETY IR RING SAFETY	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD	X	HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO	ERNST BALLARD SPANGLER UCCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES	×	HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ	X	HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS	ERNST BALLARD SPANGLER UTCZ SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS	ERNST BALLARD SPANGLER UTC Z SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG	SAFETY R ING SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLEE	ERNST BALLARD SPANGLER UTC Z SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC CONTROL NUMBER	
NRC PDR I & E QELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES SKOVHOLT		HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG	SAFETY I R ING SAFETY 2) * Y DISTRIBUTIO	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLER BROOKHAVEN NATL LA	ERNST BALLARD SPANGLER UTC Z SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC CONTROL NUMBER	
NRC PDR I & E QELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES SKOVHOLT		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG EXTERNAL	SAFETY IR SAFETY SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLEE	ERNST BALLARD SPANGLER UICZ SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC ASEDAG CONTROL NUMBER E	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES SKOVHOLT LPDR:CRUSTN. RIVER, TIC		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG EXTERNAL NATL LAB	SAFETY IR SAFETY SAFETY 2) *	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLER BROOKHAVEN NATL LA	ERNST BALLARD SPANGLER UTCZ SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC ASEDAG CONTROL NUMBER E	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES SKOVHOLT LPDR:CRUSTEL EVER, TIC NSIC		HEINEMAN SCHROEDE ENGINEER MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG EXTERNAL NATL LAB REG. V-I	SAFETY R ING SAFETY 2) * Y U DISTRIBUTIO	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLER BROOKHAVEN NATL LA	ERNST BALLARD SPANGLER UTC Z SITE TECH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC CONTROL NUMBER	
NRC PDR I & E OELD GOSSICK & STAFF MIPC CASE HANAUER HARLESS PROJECT MANAGEMENT BOYD P. COLLINS HOUSTON PETERSON MELTZ HELTEMES SKOVHOLT LPDR:CRUSTM. River, TIC	FL:	HEINEMAN SCHROEDE ENGINEEF MACCARY KNIGHT SIHWEIL PAWLICKI REACTOR ROSS NOVAK (ROSZTOCZ CHECK AT & I SALTZMAN RUTBERG EXTERNAL NATL LAB REG. V-I LA PDR	SAFETY R ING SAFETY 2) * Y U DISTRIBUTIO	×	PLANT SYSTEMS TEDESCO BENAROYA LAINAS IPPOLITO SZUKIE OPERATING REACTORS STELLO OPERATING TECH EISENHUT SHAO BAER SCHWENCER GRIMES SITE SAFETY & ENVI ANALYSIS DENTON & MULLER BROOKHAVEN NATL LA	ERNST BALLARD SPANGLER UTCZ SITE TFCH GAMMILL STEPP HULMAN SITE ANALYSIS VOLLMER BUNCH J. COLLINS KREGER RC ASEDAG CONTROL NUMBER E	



Florida Power



2644

Dr. D. A. Butler, Chief Light Water Reactors Branch #4 Director of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, D.C. 20555

> In Re: Florida Power Corporation Crystal River Unit #3 Docket No. 50-302

Dear Dr. Butler:

We enclose 20 copies of Gilbert Associates Analytical Model -Borated Water Storage Tank Drawdown Transient Analysis, Revision 1.

This analysis has been applied to Crystal River Unit #3 system design and verified during the recently run Borated Water Storage Tank Drawdown Test.

The BWST drawdown test is not a design basis test. It should be noted that the physical (actual) drawdown test was conducted with demineralized water and that actual LOCA conditions did not exist. Therefore, the function of the physical drawdown test was solely to verify an analytical model. This model was then used to evaluate the design basis operation of the tank drawdown. Replacement of stop check valves BSV-9, 10, 67 and 68 with swing check valves does not invalidate the analytical model because of the predictability of valve properties by industry standards.

A drawdown retest would again give indication of water hydraulics only and would not demonstrate the adequacy of the system relative to design conditions. Regardless of physical drawdown results utilizing water, the requirement to validate the FSAR can be accomplished only with the previously verified analytical model.

Dr. D. A. Butler

. . . .

.*

2

We would appreciate your acceptance of this Analysis and the previously run drawdown test as adequate to demonstrate system performance.

Very truly yours,

aer J. T. Rodgers

Asst. Vice President

JTR/iw Attachments.

.....