

## Unit 3,4 Shift Supervisor Task Handover Journal

Disclaimer

This English translation is only for reference purpose. When there are any discrepancies between original Japanese version and English translation version, the original Japanese version always prevails.

Form-1

Fukushima Daiichi Nuclear Power Plant Unit 3 and 4

Shift Supervisor Task Handover Journal ( 1/3 )

## Shift Supervisor Task Handover Journal

				[confirmed by ] Chief engineer of reactors
March 11, 2011, Friday, 8:30, Shift 2, Group E				[ confirmed by ] Supervisor of next shift
				[ made and approved by ] Shift supervisor
On duty 8 ( operator ) - ( instructor ) 1 ( trainee )	No. of organization	Off duty		Support duty
	172	On proxy duty	---	none
Unit 3	Generator Output	792MWe	Reactor Status	in operation • start up • hot shutdown • cold shutdown • fuel exchange
Unit 4	Generator Output	0MWe	Reactor Status	in operation • start up • hot shutdown • cold shutdown • fuel exchange
Notes				
Unit 3				
1. Operation Status				
(1) Reactor rated thermal output steady operation				
(2) M. COND B/W <span style="float: right;">04:01-04:53</span>				
2. Compliance status of safety regulation				
No abnormality				
3. Periodic test				
None				
4. Requested work, non compliance event				
None				
5. Status of waste treatment facility				
None				



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Fukushima Daichi Nuclear Power Plant Unit 3 and 4

### Major Test Items

March 11, 2011, Friday, Shift 2, Shift Supervisor Task Handover Journal ( 3/3 )

Test Items		Test Frequency	Unit 3	Unit 4	Notes
1	Core Minimum Fraction of limiting Critical Power ratio (CMFCP)	1/ shift	0.88	---	
2	Core Maximum Fraction of Limiting Power Density (CMFLPD)	1/ shift	0.93	---	
3	Reactor lowest water level	1/ shift	1156 mm	---	Unit 4 all fuel were removed
4	Spent fuel pool highest temperature	1/ shift	25 C°	27 C°	
5	Spent fuel pool water level status	1/ shift	Around overflow water level	Around overflow water level	
6	Reactor coolant maximum temperature change rate	at the time of start-up and shutdown	- C°/hr	- C°/hr	
7	RPV lowest temperature	At the time of pressure resistance test of RPV	- C°	- C°	
8	Common spent fuel pool facility temperature of pool	1/ shift	34 C°		
9	Common spent fuel pool facility status of pool water level	1/ shift	Around overflow water level		

Note: Test items #8 and #9 are only applicable to Unit 3&4. (Form for Unit 3&4)  
 (Unit change in the reporting paper is permissible.)

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Fukushima Daiichi Nuclear Power Plant Unit 3 and 4

Shift Supervisor Task Handover Journal ( 1/3 )

## Shift Supervisor Task Handover Journal

				[confirmed by ] Chief engineer of reactors
March 11, 2011, Friday, 21:00, Shift 1, Group A				[ confirmed by ] Supervisor of next shift
				[ made and approved by ] Shift supervisor
On duty 8 ( operator ) - ( instructor ) 1 ( trainee )	No. of organizati on	Off duty		Support duty
	172	On proxy duty		Refer to attachment
Unit 3	Generator Output	0MWe	Reactor Status	in operation • start up • <u>hot shutdown</u> • cold shutdown • fuel exchange
Unit 4	Generator Output	0MWe	Reactor Status	in operation • start up • hot shutdown • cold shutdown • <u>fuel exchange</u>
Notes				
Unit 3				
1. Operation Status				
(1) Reactor is shutdown				
(2) Alarm "SEISMIC TRIP" <span style="float: right;">14:47</span>				
(3) Reactor automatic scram <span style="float: right;">14:47</span>				
(4) Main turbine manual shutdown <span style="float: right;">14:47</span>				
(5) M Cond Vac break <span style="float: right;">14:51-15:15</span>				
(6) Reactor in subcriticality <span style="float: right;">14:54</span>				
(7) Reactor mode switch "operation" to "shutdown" <span style="float: right;">15:08</span>				
(8) Status of reactor "operation" to "hot shutdown" <span style="float: right;">15:08</span>				
(9) Loss of station power supply / report stipulated by the act on special measures concerning nuclear emergency preparedness, article 10 (from Technical Support Center (TSC)) <span style="float: right;">15:38/15:42</span>				
(10) RCIC "start up" <span style="float: right;">16:03</span>				
(11) Report stipulated by the act on special measures concerning nuclear emergency preparedness, article 15 (from TSC) <span style="float: right;">16:36</span>				
2. Compliance status of safety regulation				
abnormal, following articles are applicable				
(1) Article 17 (procedures at the time of earthquake and fire)				
(2) Article 76 (basic procedures at the occurrence of abnormal event)				
(3) Article 77 (procedures at the time of abnormal event)				
(4) Article 113 (notice)				
(5) Article 121 (report)				



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Fukushima Daiichi Nuclear Power Plant Unit 3 and 4

March 11, 2011, Friday, Shift 1, Shift Supervisor Task Handover Journal ( 2/3 )

Unit 4	
1. Operation Status	
(1) Plant shutdown due to regular inspection	
(2) Loss of station power supply / report stipulated by the act on special measures concerning nuclear emergency preparedness, article 10 (from Technical Support Center (TSC))	15:38/15:42
2. Compliance status of safety regulation	
abnormal, following articles are applicable	
(1) Article 17 (procedures at the time of earthquake and fire)	
(2) Article 113 (notice)	
(3) Article 121 (report)	
3. Periodic test	
None	
4. Requested work, non compliance event	
None	
5. Status of waste treatment facility	<div style="border: 1px solid black; padding: 5px; color: red;">                     Red colored is tentative data.                      Report writing has not been completed due to blackout.                 </div>
None	
6. Others (Common)	
None	

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Fukushima Daiichi Nuclear Power Plant Unit 3 and 4

### Major Test Items

March 11, 2011, Friday, Shift 1, Shift Supervisor Task Handover Journal ( 3/3 )

Test Items		Test Frequency	Unit 3	Unit 4	Notes
1	Core Minimum Fraction of limiting Critical Power ratio (CMFCP)	1/ shift	0.88	---	
2	Core Maximum Fraction of Limiting Power Density (CMFLPD)	1/ shift	0.93	---	
3	Reactor lowest water level	1/ shift	1156 mm	---	Unit 4 all fuel were removed
4	Spent fuel pool highest temperature	1/ shift	25 C°	27 C°	
5	Spent fuel pool water level status	1/ shift	Around overflow water level	Around overflow water level	
6	Reactor coolant maximum temperature change rate	at the time of start-up and shutdown	- C°/hr	- C°/hr	
7	RPV lowest temperature	At the time of pressure resistance test of RPV	- C°	- C°	
8	Common spent fuel pool facility temperature of pool	1/ shift	35 C°		
9	Common spent fuel pool facility status of pool water level	1/ shift	Around overflow water level		

Note: Test items #8 and #9 are only applicable to Unit 3&4. (Form for Unit 3&4)  
 (Unit change in the reporting paper is permissible.)

Red colored is tentative data



Unit 3 Shift Supervisor Task Handover Journal

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Fukushima Daiichi Nuclear Power Station Unit 3

**Operator Task Handover Journal**

Operator Task Handover Journal (1/3)

11-Mar-11 Friday		Shift 2 Group E		[Approved by] Shift Supervisor			
Name of Predecessor (Recorder)	[ ]	(Team E)					
Name of Successor	[ ]	(Team A)					
Operation Status	Reactor Status	In Operation	Start up	Hot shutdown	Cold shutdown	Fuel exchange	
	Reactor heat output	237.8 MWt	C/D pressure difference	20.0 KPa	P L R - A	P L R - B	
	Generator output	793.2 MWe	HFF pressure difference	9.2 KPa	Speed	88.3 %	88.3 %
	Core flow rate	3117.0 T/H	Core electro conductivity	0.06 μs/cm	Top	28 ~ 44 μm	24 ~ 36 μm
	Condenser vacuum rate	4.76 KPa·abs	R C W temperature	18.3	X	43 μm	54 μm
	D/W·HVH drain	- L/min	T C W temperature	16.9	Y	30 μm	59 μm
	D / W pressure	5.31 KPa	irculating water temperature	7.0			
	S/C level	- 0.1 cm	CST level	66.1 %			#REF!
	Exception of interlock regarding LCO	None					
	Regular tests, operation status of switching	Operation time	Context		Result	Status	
		< Regular inspection, regular switching operation >					
		Neither regular inspection nor switching operation done.		Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
				Pass/ Fail	Fine/ Caution/ In progress/ Cancelled		
Note		None.					



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Fukushima Daiichi Nuclear Power Station Unit 3

March 11, 2011 Friday

( Shift 2 )

Operator Task Handover Journal (3/3)

Context	Classification
1. Under monitoring	
·T/D RFP mechanical seal amount: (A) 1d/10s (B) 1d/15s	Mon
·HPCP(A) Main body anti-CP side mechanical leak 1d/15s HPCP(B) (C) Main body anti-CP side mechanical leak Leakage	Mon
·C/D Recirculation pump mechanical leak Leakage	Mon
·IBP(A) mechanical leak status CP side: 1d/3s Anti-CP side: 1d/ 5s (in operation)	Mon
·IBP(B) mechanical leak status CP side: Leakage Anti-CP side: 1d/ 15s (shutdown)	Mon
·Bawser Filter Pump Gland Leak 1d/17s (Bawser level 550mm Subsidiary oil pump under operation)	Mon
·Fire pump for adjustment anti-cup side plug for oil drainage No oil leakage found.	Mon
·D/G3B Engine Main body cover Not yet wiped (Tray No dripping confirmed.)	Mon
·Stator cooling pump (A) mechanical leak Leakage	Mon
·D/G3B Shimizu priming pump Gland tray Water drainage: fine. Gland leak 1d/7s	Mon
·Condensate storage tank LCV-52-20 ground bleeding. Wiped.	Mon
·R / B the north of HCU FP pipe leakage No dripping confirmed.	Mon
·HCU 06-35: 7.4 MPa	Mon
2. PLR (B) the 2nd stage seal cavity pressure 3.51MPa (7:00)	Others
Confirmed by Processing Control CRT: Minimum Pressure 3.50 Mpa Maximum Pressure 3.51MPa Fluctuation range 0.01 MPa	
3. The following shows the power receipt status of Common M/C (A) before power receipt switching.	Others
·Common boiler MCC(C) receives power from MCC(A) side now.	
·Power control panel for common boiler air conditioning selects B-system use-side now.	
·Direct current power source does not locate in common boiler building, but in 1.2U switch yard. The name is DC125V charger panel.	
Here receives power from switch yard MCC side now.	
4. CUW F / Dpressure difference	Mon
F / D (A / B) 14 / 14 14 / 15 KPa	
Notes on classification	M: MRF issued    N: Non compliant report    R: Regular Test/ Switching    O: Operation P: PTW    RW: R/W related    Mon: Monitoring    Others: Others

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Fukushima Daiichi Nuclear Power Station Unit 3

**Operator Task Handover Journal**

Operator Task Handover Journal (1/3)

11 March 2011		Friday		Shift 1 Group A		[Approved by] Shift Supervisor						
Name of predecessor (Recorder)		[Redacted] (Group A)										
Name of successor		[Redacted] (Group E)										
Reactor Status		In Operation		Start up		Hot shutdown		Cold shutdown		Fuel exchange		
Operation Status	Reactor heat output	2 3 7 8	MWt	C/D differential pressure	2 0 0	KPa	PLR - A	PLR - B				
	Generator output	7 9 3 . 2	MWe	HFF differential pressure	9 2	KPa	Velocity	88.3	%	88.3	%	
	Core flow rate	3 1 1 7 0	T / H	Reactor water conductivity	0 . 0 6	μ s / cm	Top	28 ~ 44	μ m	24 ~ 36	μ m	
	Condenser vacuum	4 . 7 6	KPa · abs	R C W temperature	1 8 . 3		X	43	μ m	54	μ m	
	D/W · HVH drain	-	L / min	T C W temperature	1 6 . 9		Y	30	μ m	59	μ m	
	D/W pressure	5 . 3 1	KPa	Circulating water temperature	7 . 0							
	S/C level	- 0 . 1	cm	CST level	6 6 . 1	%					#REF!	
Exception of interlock regarding LCO		None										
Operation Status of Regular tests · Regular switching	Operated time	Context					Result	Status				
		< Regular tests, Regular switching operation >										
		Thrust wear detecting device test					Success · rejected	Fine · caution · in progress · cancelled				
		Turbine master trip solenoid valve test					Success · rejected	Fine · caution · in progress · cancelled				
		Emergency seal oil pump automatic start up test					Success · rejected	Fine · caution · in progress · cancelled				
		Seal oil differential pressure alarm test					Success · rejected	Fine · caution · in progress · cancelled				
		RFP-T oil pump automatic start up test					Success · rejected	Fine · caution · in progress · cancelled				
		Automatic oscilloscope operation test					Success · rejected	Fine · caution · in progress · cancelled				
		OLR receiving device & suppression pilot lamp tests					Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
							Success · rejected	Fine · caution · in progress · cancelled				
	Note	None										

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Fukushima Daiichi Nuclear Power Station Unit 3

11 March 2011 Friday ( Shift 1 )

Operator Task Handover Journal (2/3)

Time	Context	Classification
	< Regular task >	
8:55 ~ 8:56	Main control room ANN test	R
	RW Main control room ANN test (Incl. 25-17, 25-160)	R
10:53 ~ 11:11	TCW Hx(A)(C) Backwashing	R
11:20 ~ 11:42	RCW Hx(A)(C) Backwashing	R
9:22 ~ 9:34	Generator Hydrogen supplementation (1 bottle) 0.407 0.413MPa	R
	Condenser backwashing	R
	Ferrous injection	R
	< Reactor heat output adjustment >	
	Reactor heat output adjustment PLRA/B 88.3 88% (drop)	
9:23 / 12:02	Switchyard COMP(A/B) Power "OFF" / "ON" Receiver pressure 1.45/1.45 Mpa	P
9:28 / 11:56	Switchyard MCC "Stop" / "Power receiving"	P
9:40 / 11:54	Switchyard MCC Receiving circuit breaker P/C 3SB-5B Circuit breaker "DC off & R.O" / "R.I & DC on"	P
9:10 ~	Fire close operation 3-1019 T/B carry-in gate for large stuff	P
9:10 ~	Fire close operation 3-1020 R/B airlock	P
9:37 ~ 10:00	CRD suction filter cleaning	P
10:02 ~ 10:17	CRD suction filter water filling & L/C (Oozing through FC flange have been improved by further tightening)	P
10:17 ~ 10:27	CRD suction filter in service differential pressure 3kPa	O
10:03 ~ 10:46	Feed water control device C system in FTV circuit AOC platform replacement	P
10:46	ANN Light malfunction of feed water flow rate control device, clear (ANN backside reset)	Others
10:14 ~ 10:37	Feed water and condenser metal collection filter replacement	P
10:36 ~ 10:47	OG sampling	P
	< Common pool P/C(A) power receiving switch >	
11:23	Common boiler MCC(C) Power receiving switch MCC(A) (B)	O
11:39	Common boiler(C) Start-up/shutoff mode SW 'off' operation (After power-off, it cannot be started up without 'off' operation.)	O
13:51	Common boiler header control A B	O
14:22 /	Common boiler(A) Air vent valve V-7108A "Fully close" / "Fully open" (Considering shock of power source switching)	O
	Common boiler MCC(A) "Shutoff" / "Receiving power"	O
12:20	D/W device drain sampling pump(A) Manual start-up (Operation check of sump operation record)	O
13:31	DS pump power "ON" (Completion of DS tank lining repair)	P
14:00	D/G 3A SW pump(A) Standby incomplete circuit "Lift restoration"	P
14:01	D/G 3A SW pump(A) Power "ON"	P
14:03 ~	D/G 3A SW pump(A) T/R (T/R fine A: Automatic B: Standby)	P
14:05 ~ 14:18	T/B HVCW T/B HVCW Chemical feeding tank "KURIREX" 1kg Injection (HOUKA G Instruction)	P
	T/B HVCW Chemical feeding recycle	O
Notes of classification	M: MRF issued N: Non compliant report R: Regular test/switching O: Operation P: PTW RW: R/W related Mon: Monitoring Others: Others	

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Fukushima Daiichi Nuclear Power Station Unit 3

11/03/2011 Friday ( Shift 1 )

Operator Task Handover Journal (3/3)

Context	Classification
1. Trend surveillance is in progress	
·T/D RFP Mechanical leak (A) 1d/10s (B) 1d/15s	Mon
·CPCP(A) Mechanical leak of anti CP side of main unite 1d/15s HPCP(B)(C) Mechanical leak of anti CP side of main unit Oozing	Mon
·C/D Mechanical leak of recirculation pump Oozing	Mon
·IBP(A) Mechanical leak condition CP side: 1d/3s Anti CP side: 1d/5s (In operation)	Mon
·IBP(B) Mechanical leak condition CP side: oozing Anti CP side: 1d/15s (Under suspension)	Mon
·Bowser filter pump gland leak 1d/17s (Bowser level 550mm Supplemental oil pump in operation)	Mon
·Anti cup side of adjustment fire pump Oil-drain plug No oil oozing	Mon
·D/G3B engine main unite cover Wiping is not applied (Confirmed that there was no drop into pan)	Mon
·Stator cooling water pump(A) Mechanical leak oozing	Mon
·D/G3B SHIMIZU priming pump Gland pan Drain well Gland leak 1d/7s	Mon
·Condensate return tank LCV-52-20 gland oozing Wiping implementation	Mon
·R/B HCU northern side FP pipe leak No drop	Mon
·HCU 06-35: 7.4MPa	Mon
2. PLR(B) second seal cavity pressure 3.5MPa (20:00)	Others
Confirmed minimum pressure by process computer CRT 3.50MPa Maximum pressure 3.5MPa Fluctuation range 0.0MPa	
3. CUW Information that F/D differential pressure is increasing was shared with Mr. X, HOUKA G.	Mon
F/D (A/B) 14/15KPa (No change with nightshift)	
4. Regarding alarm occurrence of "Light malfunction of feed water flow rate control device", replacement of AOC platform in FTV circuit of feed water control device C system was implemented. At the present moment, conclusive cause has not verified because the platform will be brought to a factory for investigation. (Mr. X, KEISOU G)	P
5. RCW pump(B) Motor of anti CP side 3 touch grease up implementation	Mon
6. According to the DS tank lining repair completion, all of the isolation were restored. We are planning to conduct sampling and check availability of DS tank treatment after tomorrow.	RW
7. We have finished repair of the fire monitoring system. (Mr. X, KEISOU G)	
Notes of classification	M: MRF issued N: Non compliant report R: Regular test/switching O: Operation P: PTW RW: R/W related Mon: Monitoring Others: Others





Operator Task Handover Journal - Appendix

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Friday, March 11, 2011

1/

		Contents
Operation · Time of Event	14:47	<b>Earthquake Occurred Unit 3 Acceleration Horizontal: 507.0gal Up and Down: 231gal (Seismic intensity a little less than 6)</b>
	14:47	<b>R*Scrum *Successful</b>
	14:47	<b>Main Turbine "Manual Trip" O - 3 "Automatically Open" LS - 3 "Manually Open"</b>
		*Internal Switching Failed (Cause Unknown)
		*D/G3A, D/G3B Activation Successful
		Feed Water Dead Stop, SW Dead Stop
	14:51 / 15:15	<b>Main Condenser Vacuum Break</b>
	14:54	<b>Subcritical Confirmed</b>
	15:56	<b>L- 8</b>
	15:02	SW Pump B "Activate"
	15:02	S/P Water Temperature 32°C
	15:06 / 15:25	RCIC Quick Start/ L-8 Trip
	15:08	Reactor Mode SW "Stop"
	15:15	P/C3SA Power Received (Power Received from P/C3D)
	15:24 / 15:25	RPS M-G(A) "Accelerate" / "Power Receive"
	15:28 / 15:29	RPS M-G(A) "Accelerate" / "Power Receive"
15:26	STr3A 3 Points at the Bottom Confirmed *Points of Leakage Not Detected	
15:31	T/B Sump "P/L"	
15:33	R/B Sump "P/L"	
15:33	ANN "Leakage at Condenser Area" ANN Occurred *Damage by Tsunami	
15:36	SW Pump B "Trip"	



		Contents	
Operation · Time of Event	2:32	Main Control Room Clock Power "Stop"	
	2:45	Main Control Room Power Supply for Communication "Off]	
	3:27	D/D FP Pump "Activation Confirmation" (Activation Failed Cause Unknown)	
	4:03	HPCI Test Valve MO-23-21 "Open "Prevention Lift	
	8:11	AM Facility MO-111 "Fully Open"	
	8:52	NSS Side ANN Pilot Lump "All Out"	
	9:27	Stack Monitor D.S Confirmation No Power Supply	
	10:18	CST Supply LCV Bypass Valve "Open"	
	10:18	Unit 1 D/W Ventilation	
	11:13	RCIC MO - 18、19、41 NFB「OFF」	
	11:13	D/D FP Pump "Manually Activated at Site"(Confirmed) / "Stop"(Automatically Activated after Being Stopped at Main Control Room)	
	11:36	D/D FP Pump "Emergency Stop" (Activated for Confirmation, but Did Not Stop. Stopped by Emergency Stop PB)	
	11:36	RCIC Trip Reactor Water Level: +200mm (W)	
	12:06	D/D FP Pump "Manually Activated"	
	12:35	Reactor Water Level L-2 Reactor Water Level: -1220mm (W) HPCI Automatically Activated	
	12:40	FP No.2-3 Tie Valve (301, 22) "Close" (AM Panel Flow Rate Hunching Observed)	
	12:55	RCIC Vac Pump Trip (Cooling Water Valve MO-23-132 Close)	
	14:00	D/D FP Pump Fuel Supply (Reception Valve Open, Supply only for the line) 172 195L Inhaling Pressure: 0.02MPa D/D FP Pump Inlet Pressure: 0.02MPa Discharge Pressure: 0.35MPa	
	16:35	Water Level Rise Operation +400mm (W) Reactor Pressure: 2.86MPa	
	17:35-17:50	No.2 Light-Oil Tank D/D FP Pump Transfer Line Structure (Integrator, Pump Bypass)	
	20:00	D/D FP Pump Fuel Tank 130L	

		Contents	
	20:27	AM Panel D/W Pressure, S/C Pressure, S/C Water Level Indicator	No Power Supply
	20:35	Reactor Water Level Indicator No Power Supply	Final Data Wide Range A System: 1350mm, Fuel R
	20:57	Water Supply Control Equipment A	Power "Off"
		PLR Control Equipment A	Power "Off"
		ECCS Recorder	Power "Off"
	21:30	Site PI Instruction: D/W Pressure	170 kPa
Operation · Time of Event	3/13		
	1:45	D/D FP Pump Light Oil Supply 70 110L	Inlet Pressure: 0MPa Discharge Pressure: 0.42MPa
	2:42	HPC Stop	Reactor Pressure: 0.58MPa
	2:45	SRV Kept Closed	Reactor Pressure: 0.8MPa
	2:55	SRV Kept Closed	Reactor Pressure: 1.3MPa
	3:05	D/D FP Pump Injection into Reactor MO-10-27B	15% Open Probable Flowing Sound at 7% Inlet Pressure: 0 0.14MPa Discharge: 0.4 0.61MPa
	3:35	HPCI FIC Pilot Lump Off	
	3:37	RCIC Vac Pump	Not Activated
	3:39	HPCI AOP Stop	
	3:51	Rx Water Level Indicator (W) Indicator Power ON	-3600mm Rx Water Level Indicator (Fuel Range) Indicator ON -1600mm Reactor Pressure: 5MPa Possibility of TAF
	4:04	Rx Water Level Indicator (Fuel Range)	-1600mm Reactor Pressure: 5.6MPa
	4:06	HPCI Condenser Pump Power OFF	
	4:52	D/W Ventilation Valve AO-205 Temporary Outlet ON	Valve: Fully Open Cylinder Pressure: 0
	5:08	S/C Spray Start MO-10-25B Close	
	5:08	RCIC Manually Activated/Stop Valve Close	RCIC Stop Valve Did Not Move
	5:10	<b>Water Supply All Lost, article 15, Act on Special Measures Concerning Nuclear Emergency Preparedness</b>	
	5:15	DTr Pump Megohmmeter Finished	No Water Attached Usability Confirmed





Unit 4 Shift Supervisor Task Handover Journal

Form-2

Fukushima Daiichi Nuclear Power Station Unit 4

## Operator Task Handover Journal

Operator Task Handover Journal( 1/2 )

11 March 2011		Shift 2 Group E		[Approved by] Shift Supervisor			
Name of predecessor (Recorder)	[REDACTED]			(Group E)			
Name of successor	[REDACTED]			(Group A)			
Operation Status	Reactor Status	In Operation	Start up	Hot shutdown	Cold shutdown	<u>fuel exchange</u>	
	RHR(B) [Emergency heat load mode]	Fuel pool gate ( Open <u>Close</u> )			LR2-3-103 (water-feed)	1220 cm	
	RHR pump ( A B C <u>D</u> )	RHRS Pump ( A <u>B</u> C <u>D</u> )			Core water temp.	-	
	FPC pump ( <del>A B</del> ) *All stopped	Hx ( <del>A B</del> )			Pool water temp.	26.8	
	RCW pump ( <del>A B C</del> ) *All stopped	Hx ( A B <u>C</u> )	RCW pressure	-	MPa	RCW temp.	-
	TCW pump ( A <u>B</u> C )	Hx ( A <u>B</u> C )	TCW pressure	0.68	MPa	TCW temp.	8.0
	SW pump ( A <u>B</u> C )		SW pressure	0.48	MPa	SW temp.	7.0 (3u)
	Circulating water pump ( <del>A B C</del> )		CST level	76.4	%	Torus level	D·S cm
( Data taken at 7:00am )							
Exception of interlock regarding LCO		<ul style="list-style-type: none"> <li>- SRNM neutron high interlock unlocked</li> <li>- Fuel exchanger interlock unlocked</li> <li>- APRM high interlock unlocked</li> </ul>					
Operation status of switching	Operated time	Context	Result	Status			
		<Scheduled test>					
		N/A	OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
		<Scheduled switching>					
		N/A	OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
Note	N/A						



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Fukushima Daiichi Nuclear Power Station Unit 4

March 11, 2011 Friday ( Shift 2 ) Operator Task Handover Journal( 2/2 )

Operation -Time of Event	Time	Context	Classification	
	22:15 - 22:48	TCW Hx (B) B / W	O	
	22:17 - 22:45	RCW Hx (C) B / W	O	
	<b>21:00</b>	<b>Main control panel (NSS,BOP) Alarm test</b>	Others	
	<b>6:50</b>	<b>RW Main control panel (25-17B) Alarm test</b>	Others	
		<b>RW Main control FSTR panel(41-01) Alarm test</b>	Others	
	23:46	FPC F / D adjustment of sampling flow volume, (gate) 35×10→80×10ml/min	O	
		<b>【T/B RT operation】 T2020T0023</b>		
	0:18 - 0:42	Radiation source move (R / W 1F hopper A room → T / B B1F condenser western area)	P	
	1:02 - 4:12	<b>RT operation (T / B B1F condenser west)</b>	P	
	4:21 - 4:28	Radiation source move (T / B B1F condenser western area → R / W 1F hopper A room)	P	
		<b>【FPC skimmer surge tank blow operation】</b>		
	3:35 / 3:52	FPC F / D(B) inlet valve (AO-10-4-11B) "Fully open" / "Fully close"	O	
	3:36 / 3:51	FPC F / D(B) FIC "Manual fully open" / "automatic fully close"	O	
	3:41 - 3:48	FPC F / D(B) blow valve (V-19-4-27B) adjustment "open" <b>【FPC skimmer blow】</b> FPC skimmer 4.16m→2.65m (WNT(B) 49→60)	O	
		<b>【FPC skimmer surge tank blow operation】</b>		
	8:04 / 8:12	FPC F / D(B) inlet valve (AO-10-4-11B) "Fully open" / "Fully close"	O	
	8:04 / 8:12	FPC F / D(B) FIC "Manual fully open" / "automatic fully close"	O	
	8:07 - 8:11	FPC F / D(B) blow valve (V-19-4-27B) adjustment "open" <b>【FPC skimmer blow】</b> FPC skimmer 3.60m→2.70m (WNT(B) 60→66)	O	
	Notes on classification	M: MRF issued P: PTW	N: Non compliant report RW: R/W related	R: Regular Test-Switching Mon: Monitoring

site Status-Comments to pass on	content		Classification	
	1.	Tube extraction area status of water on the floor ... No accumulated water (23:30)	Mon	
		Status of liner drain FPC-side 14.5m DSP-side 2.8cm (23:00)		
		H/B room water-feed tank LCV ground 1-drop/5sec 5cm water in bucket (23:20)		
	2.	The ANN of "B-automatic valve abnormality-B-emergency stop were activated, when the inlet valve of F/D(B) was fully opened during the implementation of Skimmer Blow. It is continued. Please take action on the issue.	Others	
Notes on classification	M: MRF issued P: PTW	N: Non compliant report RW: R/W related	R: Regular Test-Switching Mon: Monitoring	O: Operation Others: Others

Form-2

Fukushima Daiichi Nuclear Power Station Unit 4

## Operator Task Handover Journal

Operator Task Handover Journal ( 1/3 )

11 March 2011		Shift 1 Group A		[Approved by] Shift Supervisor			
Name of predecessor (Recorder)	[REDACTED]			(Group A)			
Name of successor	[REDACTED]			(Group E)			
Operation Status	Reactor Status	In Operation	Start up	Hot shutdown	Cold shutdown <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">fuel exchange</span>		
	RHR(B) [Emergency heat load mode]	Fuel pool gate ( Open <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Close</span> )		LR2-3-103 (water-feed)	1220 cm		
	RHR pump ( A B C <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">D</span> )	RHRS Pump ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">D</span> )		Core water temp.	-		
	FPC pump ( <del>A B</del> ) <span style="font-size: small;">*All stopped</span>	Hx ( <del>A B</del> )		Pool water temp.	26.9		
	RCW pump ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C )	Hx ( A B <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">C</span> )	RCW pressure	-	MPa	RCW temp.	-
	TCW pump ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C )	Hx ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C )	TCW pressure	0.68	MPa	TCW temp.	8.4
	SW pump ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C )	Hx ( A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B</span> C )	SW pressure	0.49	MPa	SW temp.	7.2 (3u)
	Circulating water pump ( <del>A B C</del> )		CST level	77.2	%	Torus level	D-S cm
( Data taken at 20:00 )							
Exception of interlock regarding LCO		<ul style="list-style-type: none"> <li>- SRNM neutron high interlock unlocked</li> <li>- Fuel exchanger interlock unlocked</li> <li>- APRM high interlock unlocked</li> </ul>					
Operation status of switching	Operated time	Context	Result	Status			
		<Scheduled test>					
		N/A	OK NG	Fine · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
		<Scheduled test>					
	10:55 – 11:05	R/B, T/B, R/W Each building sump pump switching ( B→A )	OK NG	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Fine</span> · caution · in progress · cancelled			
		Exciter room air-conditioning machine switching *1	OK NG	Fine · caution · in progress · <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">cancelled</span>			
			OK NG	Fine · caution · in progress · cancelled			
		TCW heat exchanger switching (B)→(C) *2	OK NG	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Fine</span> · caution · in progress · cancelled			
			OK NG	Fine · caution · in progress · cancelled			
Note	*1 cancelled due to PTW						
	*2 switched originally planned on March 12						

Form-2

Fukushima Daiichi Nuclear Power Station Unit 4

March 11, 2011 Friday ( Shift 1 ) Operator Task Handover Journal( 2/3 )

Operation Time of Event	Time	Context	Classification
		<Scheduled operations>	
	10:38-11:10	TCW Hx (B) B/W	O
	10:24-11:05	RCW Hx (C) B/W	O
		Ferrous sulfate injection	R
			R
	8:30	Main control panel (NSS,BOP) alarm test	Others
		RW Main control panel (25-17B) alarm test	Others
		RW Main control FSTR panel (41-01) alarm test	Others
	9:20-9:27	TCW Hx (C) sampling	O
	9:28/11:50	RCW surge tank LCV front valve open/close	P
	9:36-10:20	RCW system water-feed	P
	9:44/10:41	TCW surge tank LCV front valve open/close	P
	9:53/10:13	SA compressor(A) Power source ON/OFF	P
	10:02-10:11	SA compressor(A) No load T/R	P
	13:56	SA compressor(A) Power source ON	P
	14:01-14:24	SA compressor(A) T/R...cancelled(abnormal noise from cylinder)	P
	14:10	3-4 units SA communication valve close	P
	9:54/11:41	R/B sampling pump for air-conditioner machine stop/start-up (no measuring) change of power source for measuring PTW	P
	9:56/11:38	R/B power distribution board for measuring load CKT-15·21 OFF / makeshift-side CKT-4·9 ON	P
	10:03	R/B power distribution board for measuring Power source OFF	P
	10:16	RCW pump(B) circuit breaker R·I&DC On	
	10:28	RCW pump(A) circuit breaker R·I&DC On	
	10:49	RCW pump(B) start-up	
	10:49-10:59	RCW pump(B)discharge valve slightly open → fully open	
	10:57	ANN clear "R/B coolant water pump low discharge pressure"	Others
	11:50	RCW pump(A) automatic	O
	10:20-10:46	noise check (earthquake-proof reinforcement work and others)	P
	10:49-11:02	noise check (preparation for 24-inspection)	
	11:20	FPC Hx (A)outlet valve fully open→10T open	
	11:22	FPC Hx (B)outlet valve 9T open → fully open	
	14:02	FPC pump(B) Power source ON	O
	14:04	FPC pump(A) Power source ON	O
	14:16	FPC pump(B) start-up skimmer level 3.2→2.7m	O
	14:26	FPC F/D(A) in-service	O
		FPC F/D (A) in-service 14:16	
Notes on classification	M: MRF issued P: PTW	N: Non compliant report RW: R/W related	Operation Others: Others

Noise check ... Good  
 Time: 10:46  
 Name: [REDACTED]  
 Superintendent: [REDACTED]

Noise check ... Good  
 Time: 11:12  
 Name: [REDACTED]  
 Superintendent: [REDACTED]

Form-2

Fukushima Daiichi Nuclear Power Station Unit 4

March 11, 2011 Friday ( Shift 1 ) Operator Task Handover Journal( 3/3 )

	content	Classification		
site Status-Comments to pass on	[Scheduled maintenance team (turbine group) side]			
	1. Tube extraction-area status of water on the floor ... No accumulated water	Mon		
	2. T/R of SA compressor was started, but cancelled due to the noise for cylinder. The communication valve of Unit 3-4 was opened, and the compressor was Isolated again.	P		
	[Scheduled maintenance team (reactor group) side]			
	1. H/B room water-feed tank LCV ground 1-drop/5sec 2cm water in bucket Not implemented	Mon		
	2. FPC (B) pump was activated, and, F/D (A), water obtained.	Others		
	Notes on classification	M: MRF issued P: PTW	N: Non compliant report RW: R/W related	R: Regular Test-Switching Mon: Monitoring

# 3号機 運転日誌

Unit 3 Operation log



Fukushima Daiichi Nuclear Power Station Unit 3

Operation log [2]

福島第一原子力発電所 3号機  
**運 転 日 誌 [2]**

保安規定9条, 120条関連記録

2011年3月11日

No. 0094 P. 2

炉規則7条/保安規定120条対象記録	
炉規則7条、保安規定120条	原子炉の状態が運転及び起動において1時間ごと
保安規定21条	原子炉の状態が運転及び起動において24時間ごと1回

班	承認	内容確認	作成	承認	内容確認	作成
	当直長	当直副長	当直員	当直長	当直副長	当直員
2直				1-1直		
1-2直				2直		

時刻	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
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22-51																					
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2011年 4月28日 0時00分  
 TEPCO運第3.4号機室

本枠は炉規則第7条ノ保安規定第120条対象記録

Fukushima Daiichi Nuclear Power Station Unit 3  
福島第一原子力発電所 3号機

# 運転日誌別紙

## Operation log Appendix

2011年 3月 11日

確認	承認	内容確認	作成
原子炉主任技術者	当直長	当直副長	当直員
	2直		
	1-1直		
	1-2直		
	2直		

保安規定		9,35,36,37,120										9,37			38		56		他Gr使用子ータ												
炉心の温度		冷却材入口温度		冷却材出口温度		冷却材流量		冷却材圧力		再結合装置内の温度				再結合装置内の温度		再結合装置内の温度		発電機出力													
全燃料取り出し中で且つプールゲート閉の場合以外運転		原子炉の状態が運転及び起動において1箇高ごと																													
12		13		14		15		16		17		18		19				20		21		22		23		24		25			
●再循環系ループ温度(給2)		●給水温度		●主蒸気温度		●主蒸気流量		●給水流量		●給水圧力		●主蒸気圧力		●排ガス再結合器温度				●原子炉最低炉内圧力		●原子炉圧力		●原子炉水位		●電圧		●電圧		●電圧			
A B		A B		A B		A B		A B		A B		A B		A B		A B		A B		A B		A B		A B		A B		A B			
℃		℃		℃		t/h		L/h		MPa		MPa		℃				℃		MPa		mm		kWh × 10,000		MWh		kPa (abs)		MPa	
9-4		9-6		9-5		9-6		9-7		9-34				9-21		9-5		9-31				9-7									
計器		TR-2-150		TR-51-1 No.9		TR-51-1 No.1		FR-6-96		PI-52-31		M-502		TRS-24-713A		TRS-24-713B		VbR-23-1		LR/PR-6-97		WHT-43-107				PI-51-8B		PI-51-5			
PID		C101 C102		D230 C100		D200 D201		C046 B012		L000 L002		L001 L003		-		C003 C004		-				T001 T004									
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補足事項  
補1 原子炉圧力容器減圧(水圧)検査等で原子炉を加压する場合に採取する。  
補2 再循環系ループ温度が記録できない場合は、代替記録採取場所により記録する。詳細は運転日誌記載ガイドを確認すること。

記事  
\*1 原子炉圧力計器変更  
#1-2-3-85A(7体)  
#3 FR/PR-6-98  
\*2 原子炉水位計器変更  
FR/PR-6-98  
#3 L1-2-3-85A(7体)

\*3 #17.3.12 補記訂正印刷  
印刷



福島第一原子力発電所 3号機 非常用機器状態確認チェックシート

2011年3月11日

	水部 当直員	内容確認 当直員	作成 当直員
1直			
2直			

項	目	通常状態	2直	1直	項	目	通常状態	2直	1直	項	目	通常状態	2直	1直	記 事
自動 送し弁系	AO-2 -71A	X	レ		炉心 スプレイ系 (A)	CSポンプA潤滑油ポンプ	SB	レ		残 留 熱 系 (B)	RHRポンプB潤滑油ポンプ	SB	レ		1. 主要操作が終了し、引継ぎまでの間に状態を確認する。 1直前は1.8時~引継ぎまで、2直前は6時~引継ぎまで 2. 通常状態と比較し異常なければ「レ」相違する場合は、次の記号で 記載する。 3. 記号 レ: 異常なし O: 開 X: 閉 W: 作業中 RUN: 運転中 MAN: 手動 P/L: 引き保持
	-71B	X	レ			CSポンプA非常用潤滑油ポンプ	SB	レ			RHRポンプD潤滑油ポンプ	SB	レ		
	-71C	X	レ			MO-23-15	O	レ			RHRポンプB、D非常用潤滑油ポンプ	SB	レ		
	-71E	X	レ			-16	O	レ			RHRポンプB、D潤滑油ポンプ <sub>1</sub>	SB	レ		
	-71G	X	レ			-14	X	レ			RHRポンプB、D潤滑油ポンプ <sub>2</sub>	SB	レ		
	-71H	X	レ			-17	O	レ			RHRポンプB、D潤滑油冷却ファン <sub>1</sub>	SB	レ		
残 留 熱 系 (A)	RHRポンプ A	SB	レ		-57	X	レ		RHRポンプB、D潤滑油冷却ファン <sub>2</sub>	SB	レ				
	RHRポンプ C	SB	レ		-58	X	レ		ポンプ B	SB	レ				
	RHRSポンプ A	SB	レ		-21	X	レ		MO-14-7B	O	レ				
	RHRSポンプ C	SB	レ		-20	O	レ		-11B	O	レ				
	MO-10-15A	X	レ		-19	X	レ		-12B	X	レ				
	-15C	X	レ		-24	X	レ		-26B	X	レ				
	-65A	O	レ		-25	X	レ		-5B	O	レ				
	-66A	O	レ		-144	X	レ		CSポンプB潤滑油ポンプ	SB	レ				
	-12A	O	レ		タービン止め弁	X	レ		CSポンプB非常用潤滑油ポンプ	SB	レ				
	-27A	O	レ		タービン加減弁	X	レ		MO-13-15	O	レ				
	-25A	X	レ		潤滑油ポンプ	SB	レ		-16	O	レ				
	-31A	X	レ		真空ポンプ	SB	レ		-131	X	レ				
	-26A	X	レ		復水ポンプ	SB	レ		-18	O	レ				
	-38A	X	レ		流量制御器	AUTO	レ		-39	X	レ				
	-39A	X	レ		RHRポンプ B	SB	レ		-41	X	レ				
	-34A	X	レ		RHRポンプ D	SB	レ		-20	O	レ				
	-13A	O	レ		RHRSポンプ B	SB	レ		-21	X	レ				
	-19C	O	レ		RHRSポンプ D	SB	レ		-30	X	レ				
	-89A	X	レ		MO-10-15B	X	レ		-27	X	レ				
	-20	O	レ		-15D	X	レ		-132	X	レ				
RHRポンプA潤滑油ポンプ	SB	レ		-65B	O	レ		タービン止め弁	O	レ					
RHRポンプC潤滑油ポンプ	SB	レ		-66B	O	レ		タービン加減弁	O	レ					
RHRポンプA、C非常用潤滑油ポンプ	SB	レ		-12B	O	レ		復水ポンプ	SB	レ					
RHRSポンプA、C潤滑油ポンプ <sub>1</sub>	SB	レ		-27B	O	レ		真空ポンプ	SB	レ					
RHRSポンプA、C潤滑油ポンプ <sub>2</sub>	SB	レ		-25B	X	レ		流量制御器	AUTO	レ					
RHRSポンプA、C潤滑油冷却ファン <sub>1</sub>	SB	レ		-31B	X	レ		ディーゼル 発電機3A	SB	レ					
RHRSポンプA、C潤滑油冷却ファン <sub>2</sub>	SB	レ		-26B	X	レ		6.9kvしゃ断器3C3	O	レ					
ポンプ A	SB	レ		-38B	X	レ		ディーゼル 発電機3B	SB	レ					
MO-14-7A	O	レ		-39B	X	レ		6.9kvしゃ断器3D3	O	レ					
-11A	O	レ		-34B	X	レ									
-12A	X	レ		-13B	O	レ									
-26A	X	レ		-13D	O	レ									
-5A	O	レ		-89B	X	レ									

4号機 運転日誌  
Unit 4 Operation log

No. 0036 P. 1

本枠は炉規則第7条/保安規定第120条対象記録

Fukushima Daiichi Nuclear Power Station Unit 4  
福島第一原子力発電所 4号機

# 運転日誌 [1]

## Operation log [1]

2011年 3月 11日

項目	運転	停止	待機	稼働率 (%)			備考
				1-1	1-2	1-3	
冷却水ポンプ	○	○	○				1.57A10
発電機	○	○	○				1.78A11, 1.79A12
送電機	○	○	○				1.23A13, 1.24A14
高圧ポンプ	○	○	○				1.25A15, 1.26A16
低圧ポンプ	○	○	○				1.27A17, 1.28A18
凝縮機	○	○	○				1.29A19, 1.30A20
冷却水ポンプ	○	○	○				1.31A21, 1.32A22
送電機	○	○	○				1.33A23, 1.34A24
高圧ポンプ	○	○	○				1.35A25, 1.36A26
低圧ポンプ	○	○	○				1.37A27, 1.38A28
凝縮機	○	○	○				1.39A29, 1.40A30

1. 炉内各種機器の稼働状況を確認する
2. 炉内各種機器の稼働状況を確認する
3. 炉内各種機器の稼働状況を確認する
4. 炉内各種機器の稼働状況を確認する
5. 炉内各種機器の稼働状況を確認する
6. 炉内各種機器の稼働状況を確認する
7. 炉内各種機器の稼働状況を確認する
8. 炉内各種機器の稼働状況を確認する
9. 炉内各種機器の稼働状況を確認する
10. 炉内各種機器の稼働状況を確認する
11. 炉内各種機器の稼働状況を確認する
12. 炉内各種機器の稼働状況を確認する
13. 炉内各種機器の稼働状況を確認する
14. 炉内各種機器の稼働状況を確認する
15. 炉内各種機器の稼働状況を確認する
16. 炉内各種機器の稼働状況を確認する
17. 炉内各種機器の稼働状況を確認する
18. 炉内各種機器の稼働状況を確認する
19. 炉内各種機器の稼働状況を確認する
20. 炉内各種機器の稼働状況を確認する
21. 炉内各種機器の稼働状況を確認する
22. 炉内各種機器の稼働状況を確認する
23. 炉内各種機器の稼働状況を確認する
24. 炉内各種機器の稼働状況を確認する

確認	承認	内容確認	作成	備考
原子炉主任技師	当班長	当班副長	感直員	
2				異変なし 計測正常
1-1				異常なし 計測正常
1-2				異常なし 計測正常
2				異常なし 計測正常

項目	1	2	3	4	B	
時	μS/cm	cm	°C	96O <sub>2</sub>	KW	MA
計器	ORS-59-101/102	LI-16-132	TWS-16-353A/B	ORS-51-110A	原子炉熱出力	原子炉平均熱出力
PID	-	-	-	-	CS25	CS27
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

28		28	
炉出力・炉心中性子束密度			
原子炉に1体以上燃料が稼働されている場合連続			
原子炉熱出力 (補1)			
( SRNM APRM )			
A	C	E	G
B	D	F	H

9,120		9,131	
原子炉に稼働している冷却材及び減速剤の毎日の積算量			
毎日1回			
プラント起動前の格納容器閉鎖～プラント停止後の格納容器開放まで			
補給水積算記録		格納容器内の原子炉冷却材濃度	
銅水補給水量 FQ-57-1(8)	D/W液ドレンサンプリング量 FQ-20-527 (K.0.01m <sup>3</sup> )	D/W液ドレンサンプリング量 FQ-20-530 (×0.01m <sup>3</sup> )	D/W冷却材ドレン量 FQ-20-2533 (×0.1t)
現場	9-19	9-4	
24			D/W液ドレン m <sup>3</sup> /h
0	51234.9920	58274	639337
差			901329

立降機	炉内実用機				炉内実用機				出線機	炉内電力合計
	4A	4B	小計	4A	4B	小計	電力	電力		
24										
0	71	15	686.0	29	39	027.6	05	635.5		

炉内電力算出  
 $(4A-3) + (4B-3) + (4A-1) + (4B-1) + (WH-43-2 \times 0.1) + (\text{共用炉内ボイラー実用機}(4号負荷分)) = \text{MW}$

炉内電力のうち共用炉内ボイラー(4号負荷分)使用分 \_\_\_\_\_ MW

炉内電力	炉内電力
9-57	9-57
YWR-30-1/2/3/4/5	YWR-30-1/2/3/4/5
出力 No.	出力 No.
最大値	最大値

記号  
 CUV停止中  
 フォコル停止中

全燃料取出中

2011年 4月 23日 0403分 TEP600機3-4号機

本枠は炉規則第7条/保安規定第120条対象記録

Fukushima Daiichi Nuclear Power Station Unit 4

福島第一原子力発電所 4号機

# 運転日誌別紙

## Operation log Appendix

2011年 3月 11日

承認	内容確認	作成
原子炉主任技師	当班長	当班員
2直		
1-1直		
1-2直		
2夜		

No. 0096 P. 2

報告予定	9,120							9,37	9,38	9,56	他Gr検用データ								
炉心の温度	冷却材入口温度	冷却材出口温度	冷却材流量	冷却材圧力			再結合装置内の温度				発電機出力								
原子炉の状態が運転及び起動において1時間ごと										原子炉主回路圧力(補1)		原子炉主回路圧力(補2)		原子炉主回路圧力(補3)		発電機出力運転中			
12		13	14	15	16	17	18	19				20	21	22	23		24	25	
●再循環系ループ温度(補2)		●原子炉出口温度	●主蒸気温度	●主蒸気流量	●給水流速	●給水圧力	●主蒸気圧力	●凝ガス再結合筒温度				原子炉温度	●原子炉圧力	●原子炉水位	凝	電	●復水器真空	●高圧第1段圧力	
A B		℃	℃	T/H	T/H	MPa	MPa	A B				℃	MPa	%	kWh x 10,000	MWh	kPa(abs)	MPa	
入口 出口								入口 出口											
9-4		9-5		9-5		9-6	9-7	9-34				9-21	9-31		9-7				
TR-2-150		TRS-51-1 No.13	TRS-51-1 No.1	FR-6-98		PI-52-31	PI-30-20-MSPS	TRS-24-426				TRS-2-3-89	9-31		9-7				
PID	C308	C310	D230	C311	D200	D201	C046	B012	S031	S030	S033	S032	-	O003	C004	WHM	-	PI-51-8B	PI-51-5
0																			
1															1220				
2															1220				
3															1220				
4															1220				
5															1220				
6															1220				
7															1220				
8															1220				
9															1220				
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16															1220				
17															1220				
18															1220				
19															1220				
20															1220				
21															1220				
22															1220				
23															1220				
24															1220				

補1 原子炉圧力容器破壊(水圧)検査等で原子炉を加压する場合に採取する。  
 補2 再循環系ループ温度が記録できない場合は、代替記録採取場所により記録する。  
 詳細は運転日誌記載ガイドを確認すること。

※採取計器変更

停止中

2011年 4月23日 0時04分  
 TEPCO 福島第一原子力発電所 3号機

福島第一原子力発電所 4号機 日常点検表 (「冷温停止」・「燃料交換」用) 1/2

記録採取: (2直① 5時~6時)・(1-1直 12時~13時)・(1-2直 19時~20時)・(2直② 24時)

2011年 3月 11日

1. 計測及び制御設備

(1) 核計装の確認

a. 起動領域モニタの確認

- 計数率の指示が3CPS以上であることを確認する。(起動領域モニタ周りの燃料が4体未済を除く)
- 動作不能でないことを「動作不能の故障項目」①~③により確認する。

関連規定 保安規定第27条

全燃料が取り出されている場合は記入不要一括判読とする。

P N L	機器名称	設定値	機器番号	2直①	1-1直	1-2直	記入例
9-12	SRNM A	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1A				異常なし「レ」 異常「X」
	SRNM B	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1B				SRNM検出器取りこみ燃料が無い場合 「-」印を記入する
	SRNM C	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1C				
	SRNM D	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1D				
	SRNM E	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1E				
	SRNM F	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1F				
	SRNM G	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1G				
	SRNM H	高トリプ 120%以上/下限3CPS以下 ベータ 短延10秒以下	NIS-7-1H				

動作不能の確認項目

①当該チャンネルが設定値に達している場合、当該チャンネルがトリップしていること(誤動作していないこと)

②当該チャンネルの指示値に異常な変動がないこと

③他のチャンネルと比較して有意な差異がないこと

承認時確認事項

- 全ての枚数が揃っていること。
- 全ての枚数が片面印刷であること。
- ホチキス等で離散防止が図られていること。

承認	作成	
	当直長	主任・副主任・主操
2直①		
1-1直		
1-3直		
2直②		

(2) 原子炉建屋換気系放射線モニタの確認

- 動作不能でないことを「動作不能の確認項目」①~③により確認する。
- (炉心変更時/停止余熱処理後の制御室1本の挿入、引き抜きを除く)又は原子炉建屋内で照射された燃料に係る作業時において動作不能でないこと

関連規定 保安規定第27条

P N L	機器名称	機器番号	設定値	1-2直	記入例
9-10	原子炉建屋換気系放射線モニタA	17-452A	0.425μS/h以上		異常なし「レ」 異常「X」
	原子炉建屋換気系放射線モニタB	17-452B	0.426μS/h以上		

2. 外部電源

- 外部電源1系列が動作可能であることを外部電源の電圧が確立していることを確認する。

関連規定 保安規定第50条

確認項目	2直②	記入例
大綱線3号	※ 1 -	異常なし「レ」 異常「X」
大綱線4号	レ	
3号機主変定機	✓	停止中の場合は「-」

上記の外部電源の内、1系列の電圧が確立していることを確認出来ない場合は、SPDS-電法等他の外部電源の確認を行う。確認した場合は、確認した外部電源を備考欄に記載する。

3. 所内電源系統母線受電状態確認

関連規定 保安規定第66条

- (1) 原子炉保護系母線
  - 原子炉保護系母線が受電されていることを母線受電状態表示ランプ点灯により確認する。

P N L	確認項目	2直②	記入例
9-15	RPS A系母線受電 白ランプ点灯		異常なし「レ」、異常「X」、 停止中の場合は「-」
9-17	RPS B系母線受電 白ランプ点灯		

- (2) 非常用交流高圧電源母線
  - 非常用交流高圧電源母線が受電されていることを電圧指示計にて確認する。

P N L	機器番号	確認項目	2直②	記入例
9-8	EF-27	非常用交流高圧電源母線4C電圧正常		異常なし「レ」、異常「X」、 停止中の場合は「-」
	EF-40	非常用交流高圧電源母線4D電圧正常		

- (3) 設備維持に対する機能満足の確認

確認項目	2直②	記入例
設備維持に対する機能満足		要求機能を満足する「レ」 要求機能を満足しない「X」

- 設備維持に対する機能満足の確認とは、保安規定第27条、第35条、第39条、第40条で要求される設備の維持に必要な原子炉保護系母線、非常用交流高圧電源母線が受電されていること。
- 原子炉保護系母線、非常用交流高圧電源母線が停止中の場合において設備維持に対する機能満足を判断した場合は、その理由を備考欄に記載する。(例、M/C4C停止中 B系角等とし中につき設備維持に対する機能満足)

4. 使用済燃料プール及び使用済燃料共用プールの水温

関連規定 保安規定第54条

PNL	確認項目	機器番号	制限値	2直②		記入例
				記録欄 [°C]	確認欄	
9-21	使用済燃料プールの水温 (1日の最大値)	TR5-10-131 打点9	65°C以下			記録欄: 最大値を記入する。 確認欄: 異常なし「レ」、異常「X」

※管理目標値 52°C以下

PNL	確認項目	機器番号	制限値	2直②		記入例
				記録欄 [°C]	確認欄	
9-56	使用済燃料共用プールの水温 (24時)	TI-541-604A-2	65°C以下			記録欄: 24時の値のみを記入する。 確認欄: 異常なし「レ」、異常「X」

使用済燃料共用プールの水温が65°C以下であることを9-9-56「運用補助非常用施設(使用済燃料共用プール)温度」警報が発生していないこと、で確認し、記録欄に指示の読み値(24時)を記録する。

5. 使用済燃料プール及び使用済燃料共用プールの水位

関連規定 保安規定第55条

確認項目	2直②	記入例
使用済燃料プールの水位がオーバーフロー水位付近にあること		異常なし「レ」、異常「X」

確認項目	2直②	記入例
使用済燃料共用プールの水位がオーバーフロー水位付近にあること		異常なし「レ」、異常「X」

備考

※1 PTWにて停止中のため M/C 35AはM/C 25Aより受電中  
14°16' FPCポンプ(注) 起動

No. 0098 P. 2/3

TEPCO標準表-3.4号機

2011年 4月23日 0時10分

