

FINAL OUTLINES

FOR THE MONTICELLO INITIAL EXAMINATION

FEBRUARY 2007

Facility: Monticello Nuclear Generating Plant Date of Examination: 2/12/07
 Exam Level: RO ☒ SRO ☐ Operating Test Number: MNGP-07

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S, D	Bulk D/W Temperature Manual Calculation JPM-001 2.1.25 2.8
Conduct of Operations	S, N	Control Room Shift Turnover Checklist JPM-3139-001 2.1.3 3.0
Equipment Control	S, N	Daily Jet Pump Operability Check Test 0133 JPM-0133-001 2.2.12 3.0
Radiation Control	R, M	High Radiation Area Entry JPM-4 AWI-08.04.06-002 2.3.10 2.9
Emergency Plan		
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
*Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected)	

Facility: <u>Monticello Nuclear Generating Plant</u>		Date of Examination: <u>2/12/07</u>
Exam Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>		Operating Test Number: <u>MNGP-07</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S, D	Bulk D/W Temperature Manual Calculation JPM-001 2.1.25 3.1
Conduct of Operations	S, N	Determine Shift Staffing JPM OWI-01.06-003 2.1.4 3.4
Equipment Control	S, N	Review Daily Jet Pump Operability Check Test 0133 2.2.12 3.4
Radiation Control	R, M	High Radiation Area Entry JPM-4 AWI-08.04.06-002 2.3.10 3.3
Emergency Plan	R, D	Protective Action Recommendation JPM-A-2-204-004 2.4.44 4.0
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
*Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected)	

Facility: Monticello Nuclear Generating Plant

Date of Examination:

2/12/07

Exam Level: RO ☒ SRO-I ☐ SRO-U ☐

Operating Test No.:

MNGP-07

Control Room Systems[®] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

	System / JPM Title	Type Code*	Safety Function
a.	JPM-C.4-B.01.03.C-004, PERFORM THE REACTOR SCRAM FUNCTIONAL TEST 0010 / ROD DRIFT / SCRAM 201003.A2.03 3.4/3.7	N, A, S	1
b.	JPM-B.06.05.06-001, REACTOR FEED PUMPS COLD STARTUP 259001.A4.02 3.9/3.7	N, S, L	2
c.	JPM-B.03.03-002, PERFORM SRV OPERABILITY AND POSITION INDICATION CHECK IAW TEST 0112 239002.A4.01 4.4/4.4	D, A, S, L	3
d.	JPM-B.02.03-009, MANUAL INITIATION OF RCIC 217000.A4.04 3.6/3.6	N, A, S	4
e.	JPM-B.04.02-006, DRYWELL TO SUPPRESSION CHAMBER VACUUM BREAKER LEAKAGE OPERATIONAL CHECK 223001.A3.02 3.4/3.4	N, A, S	5
f.	JPM-B.09.08-001, MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS) 264000.A4.04 3.7/3.7	P, S	6
g.	JPM-B.05.11-001, PERFORM THE SERVICE WATER EFFLUENT MONITOR FUNCTIONAL TEST 272000.A4.02 3.0/3.0	D, S	7
h.	JPM-B.04.02-002, RESTORE SBTG TO A NORMAL STANDBY LINEUP 261000.A3.01 3.2/3.3	D, S	9

In-Plant Systems[®] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)

i.	JPM-B.08.01.02-05-001, TRANSFER EDG COOLING FROM EDG-ESW TO SERVICE WATER 295018.AA1.01 3.3/3.4	D	8
j.	JPM-B.02.04-03, STARTUP OF AIR DRIVEN COMPRESSORS FOR MAIN AIR SUPPLY TO OUTBOARD MSIVS 239001.K1.12 2.5/2.6	N, R	4
k.	JPM-C.5-3101-002, DEPRESSURIZE THE SCRAM AIR HEADER LOCALLY PER C.5-3101, PART B 295037.EA1.03 4.1/4.1	D, R, E	1

[®] All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

*Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

Facility: Monticello Nuclear Generating Plant

Date of Examination: 2/12/07

Exam Level: RO ☐ SRO-I ☒ SRO-U ☐

Operating Test No.: MNGP-07

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

	System / JPM Title	Type Code*	Safety Function
a.	JPM-C.4-B.01.03.C-004, PERFORM THE REACTOR SCRAM FUNCTIONAL TEST 0010 / ROD DRIFT / SCRAM 201003.A2.03 3.4/3.7	N, A, S	1
b.			
c.	JPM-B.03.03-002, PERFORM SRV OPERABILITY AND POSITION INDICATION CHECK IAW TEST 0112 239002.A4.01 4.4/4.4	D, A, S, L	3
d.	JPM-B.02.03-009, MANUAL INITIATION OF RCIC 217000.A4.04 3.6/3.6	N, A, S	4
e.	JPM-B.04.02-006, DRYWELL TO SUPPRESSION CHAMBER VACUUM BREAKER LEAKAGE OPERATIONAL CHECK 223001.A3.02 3.4/3.4	N, A, S	5
f.	JPM-B.09.08-001, MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS) 264000.A4.04 3.7/3.7	P, S	6
g.	JPM-B.05.11-001, PERFORM THE SERVICE WATER EFFLUENT MONITOR FUNCTIONAL TEST 272000.A4.02 3.0/3.0	D, S	7
h.	JPM-B.04.02-002, RESTORE SBTG TO A NORMAL STANDBY LINEUP 261000.A3.01 3.2/3.3	D, S	9

In-Plant Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U)

i.	JPM-B.08.01.02-05-001, TRANSFER EDG COOLING FROM EDG-ESW TO SERVICE WATER 295018.AA1.01 3.3/3.4	D	8
j.	JPM-B.02.04-03, STARTUP OF AIR DRIVEN COMPRESSORS FOR MAIN AIR SUPPLY TO OUTBOARD MSIVS 239001.K1.12 2.5/2.6	N, R	4
k.	JPM-C.5-3101-002, DEPRESSURIZE THE SCRAM AIR HEADER LOCALLY PER C.5-3101, PART B 295037.EA1.03 4.1/4.1	D, R, E	1

[@] All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

*Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

Facility: Monticello Nuclear Generating Plant		Date of Examination: 2/12/07
Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test No.: MNGP-07
Control Room Systems [®] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. JPM-C.4-B.01.03.C-004, PERFORM THE REACTOR SCRAM FUNCTIONAL TEST 0010 / ROD DRIFT / SCRAM 201003.A2.03 3.4/3.7	N, A, S	1
b.		
c. JPM-B.03.03-002, PERFORM SRV OPERABILITY AND POSITION INDICATION CHECK IAW TEST 0112 239002.A4.01 4.4/4.4	D, A, S, L	3
d.		
e.		
f.		
g.		
h. JPM-B.04.02-002, RESTORE SBTG TO A NORMAL STANDBY LINEUP 261000.A3.01 3.2/3.3	D, S	9
In-Plant Systems [®] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U)		
i. JPM-B.09.08-008, No. 11 EDG OPERATION WITHOUT DIVISION 1 BATTERY 295004.AA1.02 3.8/4.1	D, E	6
j. JPM-B.02.04-03, STARTUP OF AIR DRIVEN COMPRESSORS FOR MAIN AIR SUPPLY TO OUTBOARD MSIVS 239001.K1.12 2.5/2.6	N, R	4
k.		
<p>@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		
*Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	≤9 / ≤8 / ≤4	
(E)mergency or abnormal in-plant	≥1 / ≥1 / ≥1	
(L)ow-Power / Shutdown	≥1 / ≥1 / ≥1	
(N)ew or (M)odified from bank including 1(A)	≥2 / ≥2 / ≥1	
(P)revious 2 exams	≤3 / ≤3 / ≤2 (randomly selected)	
(R)CA	≥1 / ≥1 / ≥1	
(S)imulator		

Facility: MNGP Scenario No.: NRC-01 Op-Test No.: MNGP-07

Examiners: _____ Operators: _____

Initial Conditions: 100% reactor power with RCIC inoperable due to planned maintenance on the trip/throttle valve. Test 0008 MAIN STEAM LINE ISOLATION VALVE CLOSURE SCRAM TEST is scheduled to be performed.

Turnover:

Perform Test 0008 MAIN STEAM LINE ISOLATION VALVE CLOSURE SCRAM TEST.

Event No.	Malf. No.	Event Type*	Event Description
1	MS06A	N (BOP) (SRO)	Perform Test 0008 MAIN STEAM LINE ISOLATION VALVE CLOSURE SCRAM TEST. The 'A' Outboard MSIV will fail to close when required by test resulting in an ITS LCO.
2	CH07B	I (RO)	CRD Flow Control Valve Fails Closed. The STBY FCV will be placed in service when High CRD Temperature annunciator alarms.
3	AP07	C (BOP) (SRO)	Inadvertent ADS timer actuation. ADS taken to inhibit. ITS LCO
4	TU03G TU03H	R (RO)	Main Turbine Vibrations, lower reactor power to lower / stabilize vibrations.
5	SW01A	C (BOP)	RBCCW system degradation. RBCCW Pump Trip. Standby pump fails to auto start.
6	FW20A	C (RO)	Loss of Air to 'A' Feed Reg. Valve. FRV Lockup and recovery.
7	MS04A MS04B	M (ALL) M (ALL) M (ALL)	Steam line break inside primary containment. Scram. Unable to spray D/W. EOP 1100 entry (RPV Control). EOP 1200 entry (Primary Containment Control). EOP 2002 entry (Blowdown)
8	S054-01	C (BOP)	Failure of D ADS SRV to open

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Facility: MNGP Scenario No.: NRC-02 Op-Test No.: MNGP-07

Examiners: _____ Operators: _____

Initial Conditions: 89% reactor power. Test OSP-TRB-0570, EXERCISE MAIN TURBINE BYPASS VALVES, is scheduled to be completed.

Turnover:
Complete Test OSP-TRB-0570, EXERCISE MAIN TURBINE BYPASS VALVES and return to 100% power.

Event No.	Malf. No.	Event Type*	Event Description
1	TC06B	N (BOP) (SRO)	Complete Test OSP-TRB-0570, EXERCISE MAIN TURBINE BYPASS VALVES The #2 Turbine Bypass Valve will not open as required by the test resulting in an ITS LCO.
2	CH08A	C (RO)	11 CRD Pump trip. Start 12 CRD pump.
3	TC05A	I (BOP)	EPR Oscillations and placing the MPR in control.
4	RR02C PP06	I (RO) (SRO)	RPV press inst fails upscale, half scram fails to be initiated. ITS LCO.
5	MS09	C (BOP)	11 Steam Packing Exhauster trip, start standby blower.
6	RR07 RR08	R (RO) C (BOP) (SRO)	12 Recirc pump motor bearing temp and vibrations high and subsequent shutdown of pump. ITS LCO.
7	PP05A PP05C CH16	M (ALL)	Group 1 isolation, ATWS EOP-2007 (Failure to Scram) entry. All rods inserted, EOP-1100 (RPV Control) entry and RPV parameter recovery

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Facility: MNGP Scenario No.: NRC-03a Op-Test No.: MNGP-07

Examiners: _____ Operators: _____

Initial Conditions: Reactor power is ~95% with APRM 2 inoperable.

Turnover:

Withdraw control rod 26-27 to position 08 and then perform Test 0255-03-IA-1-1, CORE SPRAY LOOP A QUARTERLY PUMP AND VALVE TESTS.

Event No.	Malf. No.	Event Type*	Event Description
1	CH02	C (RO)	Withdraw control rod with raised drive pressure.
2	N/A	N (BOP)	Perform Test 0255-03-IA-1-1, CORE SPRAY LOOP A QUARTERLY PUMP AND VALVE TESTS. [Event Deleted]
3	SL02A	(SRO)	SBLC Squib Valve Loss of Continuity ITS LCO
4	NI13D	I (RO)	APRM 4 Fails Upscale. Bypass APRM and reset half scram.
5	FW15B	C (BOP) R (RO)	12 RFP bearing high temperature, shutdown 12 RFP. Lower reactor power to support removal of 12 RFP.
6	HP01	I (BOP) (SRO)	HPCI inadvertent initiation and shutdown. HPCI will be inoperable. ITS LCO.
7	RU07	M (ALL)	RWCU Leak, un-isolable, EOP-1300 Entry, Scram Blowdown, EOP 2002 Entry.

* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor