# Point Beach Nuclear Plant PBNP SHUTDOWN SAFETY ASSESSMENT AND FIRE CONDITION CHECKLIST

### Whenever fuel has been removed from the reactor vessel and refueling cavity, all key safety functions are GREEN except spent fuel pool cooling.    Y SAFETY FUNCTION CRITERIA: No/False = 0, Yes/True = 1 through 4    REACTIVITY	Date:	April 9, 2004 Time: 0100 F	reparer:	Richard Wood	บ_	<u>1</u> R <u>2</u>					
X SAFETY FUNCTION CRITERIA: No/False = 0, Yes/True = 1 through 4	OTE:	Refer to base procedure NP 10.3.6 for safe	ty assessment c	hecklist KSF defin	itions.						
REACTIVITY   Subtotal   Condition	OTE:	Whenever fuel has been removed from the reactor vessel <u>and</u> refueling cavity, all key safety functions are GREEN <u>except</u> spent fuel pool cooling.									
a.) For RSD, RCS boron > Refueling boron concentration = 2860 ppm a.) For RSD, RCS boron > Refueling boron concentration specified in unit-specific COLR (TRM 2.1) b.) For CSD and prior to RSD no fuel motion, RCS boron > boron concentration required by OP 3C 2. Number of boration paths 3. No fuel motion 4. SR instrumentation operable 6. Subtotal = 5  CORE COOLING 1. Number of SG available for DHR 2. Refueling cavity filled 3. Number of SG available for DHR 2. Refueling cavity filled 3. Number of Trains RHR available 4. RCS level above REDUCED INVENTORY RCS TEMP = 107*F; 6 days shutdown; RCS ¾ pipc Subtotal = 2 RCS Time to Boll 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources available to 4.05 and 4.06 (totally independent at the 4160 V, 13.8 kV, and 345 kV levels) 6. G-03 or G-04/A-06/B-04 available (0-1) 1 2 3 3 3 3 3 3 3 4 3 4 5 4 5 4 5 4 5 4 5 4	EY SAF	ETY FUNCTION CRITERIA: No/False = 0	, Yes/True = 1	through 4	<del></del>						
a.) For RSD, RCS boron Netherling boron concentration specified in unit-specific COLR (TRM 2.1) b.) For CSD and prior to RSD no fuel motion, RCS boron > For concentration required by OP 3C 2. Number of boration paths 3. No fuel motion 4. SR instrumentation operable 6. Subtotal = 5  CORE COOLING 1. Number of SQ available for DHR 2. Refueling cavity filled 3. Number of trains RHR available 2. Refueling cavity filled 3. Number of trains RHR available 4. RCS level above REDUCED INVENTORY RCS TEMP = 107°F; 6 days shutdown; RCS ¼ pipe Subtotal = 2 RCS Time to Boll 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources available (0-1) 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	REACTIVITY	<u> </u>	<del>                                     </del>	Subtotal	Condition					
Concentration specified in unit-specific COLR (TRM 2.1)	1.	RCS Boron concentration = 2860 ppm									
CTRM 2.1)   b.) For CSD and prior to RSD no fuel motion, RCS boron > boron concentration required by OP 3C   (0-1)   1   0-1   RED											
b.) For CSD and prior to RSD no fuel motion,			ic COLK								
RCS boron > boron concentration required by OP 3C (0-1) 1 0-1 RED ORANGE 3. No fuel motion (0-1) 1 3-4 FILLION (0-1) 1 3-4 FILLION (0-1) 1 3-4 FILLION (0-1) 1 3-4 FILLION (0-1) 1 5 GREEN (0-1) 1 7 GREEN (0			otion,			• .					
3. No fuel motion 4. SR instrumentation operable    Subtotal = 5   Subtotal   5		RCS boron > boron concentration requi				RED					
Subtotal = 5  CORE COOLING  1. Number of SG available for DHR  2. Refueling cavity filled  3. Number of trains RHR available  4. RCS level above REDUCED INVENTORY  1. Independent off-site power sources available to A-05 and A-06 (totally independent at the 4160 V, 13.8 kV, and 345 kV levels)  2. G-01 or G-02/A-05/B-03 available  G-03 or G-04/A-05/B-03 available  G-03 or G-04/A-05/B-03 available  G-03 or G-04/A-05/B-04 available  G-03 or G-04/A				` ' ——		ORANGE					
Subtotal = 5  CORE COOLING  1. Number of SG available for DHR 2. Refueling cavity filled 3. Number of trains RHR available 4. RCS level above REDUCED INVENTORY 4. RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources 1 RED available to 4.05 and A-06 (totally 2 ORANGE independent at the 4160 V, 13.8 kV, and 348 kV levels) 2. G-01 or G-02/A-05/B-03 available (0-1) 1 G-03 or G-04/A-05/B-04 available (0-1) 1 G-03 or G-04/A-06/B-04 available (0-1) 1 Subtotal above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal Condition  1. Pressurizer level ≥20 percent w/head on (0-1) 0 2 ORANGE 1 RED ORANGE 2. Refueling Cavity filled (see definition) (0-3) 0 3 1 Indicated 1 RED ORANGE 2. Refueling Cavity filled (see definition) (0-3) 0 3 1 Indicated 1 RED ORANGE 2. Refueling Cavity filled (see definition) (0-3) 0 3 1 Indicated 1 RED ORANGE 2. Refueling Cavity filled (see definition) (0-1) 0 4 GREEN 3 RED ORANGE 4 Makeup from VCT/BLENDER 2 Subtotal 2 Subtotal 2 Indicated 3 GREEN 3 Indicated 3 GRE				\- '\ <del></del>							
CORE COOLING  1. Number of SG available for DHR  2. Refueling cavity filled  3. Number of trains RHR available  4. RCS level above REDUCED INVENTORY  (0-1) 0 2 ORANGE  3. Number of trains RHR available  4. RCS level above REDUCED INVENTORY  (0-1) 0 4-5 GREEN  RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY  1. Independent off-site power sources 1 REDUCED available to A-05 and A-06 (totally 2 ORANGE independent at the 4160 V, 13.8 kV, 3 TELLOW and 345 kV levels)  2. G-01 or G-02/A-05/B-03 available (0-1) 1 GREEN  3. G-05 available, Reactor Cavity filled to ≥23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal ORANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 GRANGE Internals removed REDUCED INVENTORY (0-1) 0 4 GREEN GREEN GREEN GREEN GREEN GREEN GREEN Advent for RWST available (0-2) 2 Subtotal = 2  INTORNATION GREEN GREEN GREEN GREEN GREEN Act, exemptions 4 Act, exemptio	4.	SR instrumentation operable		(0-1)1	5	GREEN					
1. Number of SG available for DHR  2. Refueling cavity filled  3. Number of trains RHR available  4. RCS level above REDUCED INVENTORY  (0-1) 0 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Subtotal =5									
2. Refueling cavity filled 3. Number of trains RHR available 4. RCS level above REDUCED INVENTORY 4. RCS level above REDUCED INVENTORY 6. O-1) 0 4-5 GREEN  RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources available to A-05 and A-06 (totally independent at the 4160 V, 13.8 kV, and 345 kV levels) 2. G-01 or G-02/A-05/B-03 available (0-1) 1 GREEN  3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal 1 GREEN  INVENTORY 1. Pressurizer level ≥20 percent w/head on (0-1) 0 Subtotal 0-1 O-1 O-1 O-1 O-1 O-1 O-1 O-1 O-1 O-1 O					Subtotal	Condition					
3. Number of trains RHR available 4. RCS level above REDUCED INVENTORY 4. RCS level above REDUCED INVENTORY 4. RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources available to A-05 and A-06 (totally available to A-05 and A-06 (totally and 345 kV levels) 2. G-01 or G-02/A-05/B-03 available (0-1) 1											
4. RCS level above REDUCED INVENTORY  RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY 1. Independent off-site power sources available to A-05 and A-06 (totally independent at the 4160 V, 13.8 kV, and 345 kV levels) 2. G-01 or G-02/A-05/B-03 available (0-1) 1 1 3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal = 4  INVENTORY 1. Pressurizer level ≥20 percent w/head on (0-1) 0 2 ORANGE 2. Refueling Cavity filled (see definition) (0-3) 0 3 TEMPORY 4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2 Subtotal = 2  INTOTMATION IN INITIAL CONDITION (0-1) 0 4 GREEN  Subtotal = 2				` ' ———							
RCS TEMP = 107°F; 6 days shutdown; RCS ½ pipe Subtotal = 2 RCS Time to Boil 28 min (Applicable at Cold or Refueling Shutdown)  POWER AVAILABILITY  1. Independent off-site power sources 1 1 RED 2 ORANGE independent at the 4160 V, 13.8 kV, 3 3 TELLON 3 And 345 kV levels) (0-2) 2 4-5 GREEN  2. G-01 or G-02/A-05/B-03 available (0-1) 1 G-03 or G-04/A-05/B-04 available (0-1) 1 Subtotal = 4  3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal = 4  INVENTORY  1. Pressurizer level ≥20 percent w/head on 0-1 ORANGE 2. Refueling Cavity filled (see definition) (0-3) 0 3 TELLON 3 RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2 Subtotal = 2  Internation in this record was deleted in accordance with the Freedom of Information Act, exemptions 4 Act, exemptions			v								
POWER AVAILABILITY  1. Independent off-site power sources available to A-05 and A-06 (totally independent at the 4160 V, 13.8 kV, and 345 kV levels)  2. G-01 or G-02/A-05/B-03 available G-03 or G-04/A-06/B-04 available G-03 or G-04/A-06/B-04 available G-03 or G-04/A-06/B-04 totally  3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours.  INVENTORY 1. Pressurizer level ≥20 percent w/head on C-1 C-1 C-2 C-3 C-4 C-4 C-4 C-5 C-6 C-7	4.	KCS level above REDUCED INVENTOR	Y	(0-1)	4-5	GREEN .					
and 345 kV levels)  2. G-01 or G-02/A-05/B-03 available G-03 or G-04/A-06/B-04 available G-03 or G-04/A-06/B-04 available G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours.    Subtotal = 4	1.	Independent off-site power sources available to A-05 and A-06 (totally			1 2	RED					
2. G-01 or G-02/A-05/B-03 available G-03 or G-04/A-06/B-04 available (0-1) 1  3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0  Subtotal = 4  INVENTORY  1. Pressurizer level ≥20 percent w/head on (0-1) 0 2 ORANGE  2. Refueling Cavity filled (see definition) (0-3) 0 3 ORANGE  3. RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Intormation in this record was deleted in accordance with the Freedom of Information  Act, exemptions 4  Act, exemptions				(0.0)							
G-03 or G-04/A-06/B-04 available (0-1) 1  3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0  Subtotal = 4  INVENTORY  1. Pressurizer level ≥20 percent w/head on (0-1) 0 2 ORANGE  2. Refueling Cavity filled (see definition) (0-3) 0 3 Indicated (0-1) 0 4 GREEN  3. RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Intermation in this record was deleted in accordance with the Freedom of Information  Act, exemptions   G-01 0 0 2 ORANGE  Condition  O-1 ORANGE  1. Subtotal Condition  O-1 ORANGE  2. Subtotal = 2  Intermation in this record was deleted in accordance with the Freedom of Information  Act, exemptions	2				4-5	GREEN					
3. G-05 available, Reactor Cavity filled to ≥ 23 ft above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1) 0 Subtotal = 4  INVENTORY  1. Pressurizer level ≥20 percent w/head on (0-1) 0 2 ORANGE  2. Refueling Cavity filled (see definition) (0-3) 0 3 Indicated and or RCED (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act. exemptions 4	۷.		_		•						
above the top of the reactor vessel flange, upper internals removed and RCS time to boil ≥ 12 hours. (0-1)	3.		3 ft	(5 -)							
Subtotal =4  INVENTORY  1. Pressurizer level ≥20 percent w/head on    Condition   Cond		above the top of the reactor vessel flange, u	pper								
INVENTORY  1. Pressurizer level ≥20 percent w/head on  2. Refueling Cavity filled (see definition)  3. RCS level above REDUCED INVENTORY  4. Makeup from VCT/BLENDER and/or RWST available  Subtotal = 2   Information in this record was deleted in accordance with the Freedom of Information  Act. exemptions  Subtotal  Condition  O-1  ORANGE  1 EDDOT  ORANGE		internals removed and RCS time to boil ≥ 1	2 hours.	(0-1) <u>0</u>							
1. Pressurizer level ≥20 percent w/head on  (0-1) 0 2  2. Refueling Cavity filled (see definition) (0-3) 0 3  3. RCS level above REDUCED INVENTORY (0-1) 0 4  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act. exemptions 4  SED  ORANGE  1. DELOT  ORANGE  O			Subt	otal =4							
2. Refueling Cavity filled (see definition) (0-3) 0 3 3. RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN 4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act. exemptions 4						Condition					
2. Refueling Cavity filled (see definition) (0-3) 0 3  3. RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act. exemptions 4	1.	Pressurizer level ≥20 percent w/head on		(0.4)							
3. RCS level above REDUCED INVENTORY (0-1) 0 4 GREEN  4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act, exemptions 4	2	Defining County filled (see definition)		(0-1) = 0							
4. Makeup from VCT/BLENDER and/or RWST available (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act, exemptions 4		RCS level above REDITCED INVENTORS	,								
and/or RWST available  (0-2) 2  Subtotal = 2  Information in this record was deleted in accordance with the Freedom of Information  Act, exemptions 4			ı	(0-1)	₹	GKLLIV					
in accordance with the Freedom of Information  Act, exemptions				(0-2)2_							
in accordance with the Freedom of Information  S-34  Act, exemptions			Subte	otal =							
Act, exemptions 4					<del></del>						
Act, exemptions 4			ormation			S-34					
	-1562	Act, exemptions 4									

### Point Beach Nuclear Plant PBNP SHUTDOWN SAFETY ASSESSMENT AND FIRE CONDITION CHECKLIST

1.	CONTAINMENT Containment integrity (TS 15.1.D) {Containment		Subtotal 0	Condition RED				
	Operable) {ITS TS 3.6.1} set	(0 or 4) <u>0</u>	1	ORANGE				
2.	Containment Closure CL-1E maintained		2-3	THEE				
	and closure < time to boil	(0 or 2) <u>2</u>	4-5-6	GREEN				
3.	No fuel motion	(0-1) 1						
4.	DHR Capability:							
	- cavity flooded and internals out  OR							
	- at least one SG available OR							
	- one fan cooler with Equip hatch installed and personnel hatches							
	capable of being shut	(0-1) _1						
Subtotal = 4								

### SPENT FUEL POOL COOLING (ONLY APPLICABLE when starting AND during FULL CORE OFFLOADS)

NOTE: Take credit for only one P-12 independent offsite power source during periods of single X-03 or X-04 availability (\*). Subtotal Condition 0 - 1RED 1. "A" SFP cooling pump available with power available from: 2 **ORANGE** 3 G-02 or G-01 via 2B-32 (0-1) n/2YELLOW 4-5 -(\*) an independent off-site power **GREEN** source different than that for Train B below (0-1) n/a2. "B" SFP cooling pump available with power available from: G-03 or G-04 via 1B-42 (0-1) n/a-(\*) an independent off-site power source different than that for Train A above (0-1) n/a3. Temporary power available to one SFP cooling pump, G-05 available, and SFP time to boil ≥ 12 hours. (0-1) n/aSFP Temperatures: Subtotal = n/aNW n/a n/a ۰F SFP Average Temp n/a ٥F SFP Time to Boil

GIVE A BRIEF EXPLANATION OF ANY CHANGE IN SAFETY ASSESSMENT THAT TOOK PLACE:

Reactor Vessel Level is at reduced inventory, therefore Core cooling and inventory are orange.

## Point Beach Nuclear Plant PBNP SHUTDOWN SAFETY ASSESSMENT AND FIRE CONDITION CHECKLIST

#### **OUTAGE SAFETY ASSESSMENT**

UNIT:	1	DATE:	April 9, 2004	TIME:	0100

#### **KEY SAFETY FUNCTIONS:**

REACTIVITY:

GREEN

**CORE COOLING:** 

**ORANGE** 

POWER AVAILABLE:

GREEN

**INVENTORY:** 

**ORANGE** 

CONTAINMENT:

GREEN

SFP COOLING: NA

### PROTECTED EQUIPMENT:

**COMMENTS:** 

Fire Protection Condition III: Credit taken for fire rounds RCS Time to Boil is 28 minutes RCS is in Reduced Inventory

pth

References: NP 10.3.6 NP 10.2.1