

RAD-CHEM PROCEDURE

SPECIFICATIONS AND SURVEILLANCE SAFETY INJECTION SYSTEM

Approved by	Page 1 of
RSCE <u>JLT 12-19-6</u>	
POSRC <u>75-121</u>	
Chief ENGR <u>1st</u>	

1.0 PURPOSE

The purpose of this procedure is to specify the water chemistry and radiochemistry specifications and the surveillance program for the safety injection tanks. The safety injection system component covered by this procedure is the safety injection tanks because the refueling water tanks (RWT's) are covered in RCP 1-204 and the shutdown cooling systems are covered in RCP 1-202 during plant conditions of cold shutdown and refueling.

2.0 SPECIFICATIONS - TABLE 1

The specifications for the safety injection tanks are included in Table 1.

3.0 SURVEILLANCE - TABLE 1

The surveillance program for the safety injection tanks is included in Table 1.

1073 222

7910020 699

SPECIFICATIONS AND SURVEILLANCE

SAFETY INJECTION SYSTEM

POOR ORIGINAL

TABLE 1SAFETY INJECTION TANKS

<u>Analysis Procedure/Method</u>	<u>Specification</u>	<u>Frequency</u>
1. Boron/903 (Tech. Spec. 3.5.1)	1720-2200ppm (2)	1/31 days (1)
2. Chloride/906	0.15 ppm (max)	1/31 days
3. Fluoride/907	0.1 ppm (max)	1/31 days

- (1) Boron also to be determined within 6 hours after each solution volume increase of 1% of tank volume.
- (2) Any time Boron does not fall within this range, the shift supervisor and the RSCF must be immediately notified and a confirmation sample drawn.

1073 223

POOR ORIGINAL

1073 224

REFUELING AND SPENT FUEL POOL
CHEM. LOG

615 179 FROM 712 179 TO

SPENT FUEL POOL AND REFUELING WATER TANKS

IX. EFFLUENT

FILTER

DATE	TIME	SAMPLE POINT	PH	COND umho/cm	TECH SPEC B (ppm)	Cl- (ppm)	F- (ppm)	Li (ppm)	NH ₃ (ppm)	GROSS B g uCl/cc	TOT. SOL. (ppm)	OPTICAL CLARITY	PH	COND umho/cm	Cl- (ppm)	F- (ppm)	Li (ppm)	ACT (DF)	DOSE R/hr	SUSP SOL. (DF)	DOSE R/hr	INT.
6/5/79	0750	11 RWT	4.7	4.6	1955	<0.8	<0.5	<0.1		7.51E-4												RTS
6/5/79	0755	21 RWT	4.9	4.8	1972	<0.8	<0.5	<0.1		2.13E-4												RTS
6/6/79	1050	21 RWT			1970																	AS
6/11/79	1110	SFP			1887																	RTS
6/12/79	1030	11 RWT			1894																	RTS
6/12/79	1135	21 RWT			1953																	RTS
6/18/79	1130	SFP			1893																	RTS
6/20/79	1300	11 RWT			1875																	RTS
6/20/79	1300	21 RWT			1923																	RTS
6/21/79	1535	21 RWT			1993																	RTS
6/23/79	1330	21 RWT			1952																	RTS
6/23/79	1115	21 RWT			1987																	RTS
6/25/79	1100	SFP			1911																	RTS
6/26/79	0955	11 RWT			1873																	RTS
6/26/79	1000	21 RWT			1981																	RTS
6/27/79	1140	21 RWT				.08																RTS
6/27/79	1135	11 RWT				.08																RTS
6/27/79	1250	SFP			1865																	RTS

Rad Chem Foreman

Rad Chem Engineer

RCP 1-102.11 Rev. 1

POOR ORIGINAL

1073 225

REACTOR COOLANT CHEMISTRY LOG SHEET

UNIT # 1

FROM 1/14/12

TO 12/12/12

DATE	TIME	PH	COND uS/cm	TECH SPEC		LI (ppm)	TECH SPEC				H ₂ (cc/kg)	TECH SPEC		GAS ACT. (uCi/cc)	131 I ₂	TECH SPEC		NH ₃ (ppm)	SUS. SOL. (ppm)	GROSS (uCi/cc)	INT.
				B (ppm)	F. (ppm)	GROSS BY (uCi/cc)	O ₂ (ppm)	TOTAL ACT. (uCi/g)	DOSE E ₅₀ /g (uCi/g)												
12/15/12	09:15	6.5	7.0	351																	
12/15/12	09:20	5.3	2.2	360																	
12/15/12	09:25	6.1	2.8	379	2.05		2.01	1.88	1.02					2.09	258-2						
12/15/12	09:30	6.0	3.5	350																	
12/15/12	09:35	6.1	2.3	350	2.05	5.06 uCi/cc	2.01	2.05	8.57-2	19.7 uCi/g				1.92	9.84-2	6.51-2					
12/15/12	09:40	6.5	7.1	346																	
12/15/12	09:45	6.4	7.4	371	2.05		2.01	1.93	8.61-2					1.78	1.27						
12/15/12	09:50	6.9	8.3	346																	
12/15/12	09:55	6.9	7.5	337																	
12/15/12	10:00	6.8	8.1	331	2.05		2.01	1.54	7.37-2					9.66-1	9.92-1						
12/15/12	10:05	7.1	11.7	329																	
12/15/12	10:10	6.7	13.5	327	2.05	1.07	2.01	1.87	8.44-2	16.8				1.50	1.12	5.68-2				3.67-6	7.1-1
12/15/12	10:15	6.9	4.2	323																	
12/15/12	10:20	6.9	4.2	326	2.05		2.01														
12/15/12	10:25	7.0	4.5	320																	
12/15/12	10:30	6.5	4.8	313																	
12/15/12	10:35	6.7	7.9	311	2.05		2.01	1.25-1	8.41-2												
12/15/12	10:40	6.9	8.6	312																	

250 =

TECH ACT SPEC

Rod Chem Engineer

Rod Chem Foreman

PCP 1-102.10 Rev. 1

Unit # 2

CVCS

POOR ORIGINAL

11/21/74
FROM2PVT
TO

DATE	TIME	SAMPLE POINT	PH	COND. (UMHO/CM)	B PPM	Cl- (PPM)	F- (PPM)	LI (PPM)	ACTIVITY DF	H ₂ rel. c/kg	SUS. SOL. (DF)	DOSE RATE @ CONTACT (R/HR)	INT.	REMARKS ON BACK
12/74	0910	#21 VCT								41.86			20	
12/74	0915	#21 VCT								59.5			Off 30	
12/74	0930	#21 VCT								39.56			FP/20	1073
12/74	0940	#21 VCT								47.6			FP/20	1073
12/74	1135	#21 VCT								5.04			X	
12/74	0940	#21 VCT								2.56			X	
12/74	1300	#21 VCT								13.08			FP/20	
12/74	1015	#21 VCT								26 c/kg			FP	
12/74	0930	#21 VCT								27.5 c/kg			FP/20	✓
12/74	1315	#22 CVCS IX							3.1				FP	
12/74	1400	#22 CVCS Filter									Inf.		FP	
12/74	0730	#21 VCT								24.7			20	✓
12/74	0930	#21 VCT								32.5 c/kg			FP/20	✓
12/74	0935	21 VCT								31 c/kg			20	
12/74	0920	21 VCT								28 c/kg			FP/20	
12/74	0935	21 VCT								31 c/kg			20	✓
12/74	0935	21 VCT								56.33 c/kg			FP/20	
12/74	0940	21 VCT								43.17 c/kg			FP/20	
12/74	1030	21 VCT								53 c/kg			20	

J. Carlson

RF chate

Unit # 2

BORIC ACID BATCHING AND STORAGE TANK CHEMISTRY LOG

TO

FROM

5/23/79 6/14/79

DATE	TIME	SAMPLE PT.	PH	COND. (UMHO/CM)	TECH SPEC H ₃ BO ₃ (%)	CL- (PPM)	F- (PPM)	LI (PPM)	H ₃ (UC/CC)	GROSS BY UC/CC	INT.	REMARKS ON BACK
5/23/79	0035	22 BAST			7.8%						SC	221
5/24/79	0925	21 BAST	4.3	29	7.5%	0.26	10.10	0.20	6.3E-3	2.52E-4	SC	1013
5/24/79	0930	22 BAST	4.4	27	7.7%	0.28	10.10	0.20	1.06E-2	4.80E-4	SC	
5/26/79	1545	21 BAST			7.5%						SC	
5/24/79	0730	22 BAST			7.8%						AP	
5/30/79	1015	21 BAST			7.6%						SC	
5/31/79	1000	21 BAST			7.6%						SC	
5/31/79	1000	22 BAST			7.7%						SC	
6/3/79	1015	22 BAST			7.7%						SC	
6/6/79	1500	22 BAST			7.5%						RTS	
6/7/79	1030	21 BAST			N/S						RTS	
6/7/79	1030	22 BAST			7.3%						RTS	
6/7/79	1435	21 BAST			7.4%						RTS	
6/9/79	1215	22 BAST			7.6%						RTS	
6/11/79	0950	21 BAST			7.4%						RTS	
6/15/79	0750	21 BAST	4.0	36.0	7.8%	10.16	10.10	0.20	8.78E-3	1.49E-4	RTS	
6/13/79	0750	22 BAST	4.1	50.0	7.4%	10.16	10.10	0.20	8.45E-3	1.52E-4	RTS	
6/14/79	0930	21 BAST			7.8%						RTS	
6/14/79	0930	22 BAST			7.5%						RTS	

SAFETY INJECTION CHEMISTRY LOG

Unit #

2

FROM

5/24/79

TO

5/30/79

DATE	TIME	SAMPLE LOCATION	TECH SPEC B (PPM)	CL- (PPM)	F (PPM)	INT.	REMARKS
5/24/79	1340	21B	1815			2C	After Fill
5/24/79	1340	22B	1825			2C	" "
5/25/79	1140	Header	1846			2C	
5/25/79	1315	21A	1875			2C	
5/25/79	1315	21B	1813			2C	
5/25/79	1315	22B	1826			2C	
5/26/79	1520	Header	1945			2C	
5/26/79	1715	21B	1823			2C	
5/26/79	1715	22B	1824			2C	
5/26/79	0125	Header	1946			2C	Pipes to Fill
5/26/79	0212	21C	1814			2C	After F, 1)
5/26/79	0212	22C	1917			2C	" "
5/26/79	1545	22A	1872			2C	After 13.5 in head increase
5/29/79	1240	Header	1981			2C	
5/29/79	1448	21B	1835			2C	
5/29/79	1448	22B	1871			2C	
5/30/79	1030	Header	1975			2C	
5/30/79	1250	21A	1894	20.08	20.05	2C	
5/30/79	1250	21B	1858	20.06	20.05	2C	