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DOCUMENT CLEARANCE REQUEST

Part 1 – Issuing Manager's Approval

SECTION 1 – Clearance Information

1. Date Clearance Required: 10-26-89
2. Document Identification: WHC-~~3956305~~ MR-0057
2B. Previous Document Identification:
3. Title (Include UC Category): Temperature Data
4. Author's Name(s): N. W. Kirch
5. Phone: 3-2380
6. MSIN: R2-12
7. Desired Clearance/Release: Public Clearance [XX] Open Literature [ ] Oral Public; Limited Clearance [ ] Applied Technology [ ] Foreign Exchange; DOE Directed Release [ ] FOIA [ ] Media [ ] Other
8. Document Type: (Choose One) [XX] Speech/Article [ ] Abs. [ ] Sum. (WHC-SA-XXXX) [ ] Full Paper [ ] Speakers Bureau. Complete Sections 1, 2, 3, 4, submit with four copies of S/A to Doc. Clearance. [ ] Report (WHC-EP-XXXX) Complete Sections 1, 2, 3, 4, submit with two copies of doc. to Doc. Clearance
9. Meeting Name, Location, Date: Nuclear Waste Board, Hanford House, 10-26-89
10. [ ] To Be Published in Journal [ ] Handouts for Attendees Official Publishing Month: NA

SECTION 2 – Program Office Information

11. WHC Program: Defense Waste Management
12. Does this document contain Liquid Metal Reactor (LMR) information? [X] No [ ] Yes (If "Yes" and public clearance or limited clearance for foreign exchange is desired, answer questions 12A and 12B.)
12A. When was the information generated? 10-89
12B. What prior dissemination of the information has been made to LMR contractors? (Cite report number, page, date of issuance, and distribution, and/or meeting handouts, date and distribution.)
None
13. Does this document or its source document contain applied technology information [X] No [ ] Yes (If "Yes" and public clearance or limited clearance for foreign exchange is desired, answer questions 13A, 13B, 13C.)
13A. What prior dissemination of the information has been made under international exchange agreements? Identify country, document, and date of release.
None
13B. Does the information have substantive value for international exchange? (Explain)
None
13C. What is the justification for the proposed release of this information? (Be specific)
Availability of information on Ferrocyanide issue.
14. Does the document contain Nuclear Waste Policy Act information? (Explain)
None

NOV 1990 RECEIVED EDMC

SECTION 3 – Patent Legal Info.

Does this document contain or disclose any of the following? If "Yes" identify information and location in document.

15. New or novel (patentable) subject matter? [X] No [ ] Yes. If "Yes", has disclosure been submitted by WHC or other company? [X] No [ ] Yes Disclosure No(s).
16. Information received from a foreign country under an exchange agreement? [X] No [ ] Yes (Identify)
17. Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions? [X] No [ ] Yes (Identify)
18. Copyrighted material? [XX] No [ ] Yes. If "Yes", has written permission been granted? [ ] No [ ] Yes (Attach Permission)
19. Trademarks? [XX] No [ ] Yes (Identify)

SECTION 4 – Remarks and Approvals

20. Sponsoring Agency (if not U.S. Department of Energy):
21. DOE/HQ Assistant Secretary For:
22. Remarks

Document is approved as conforming to all applicable requirements. The above information is certified to be correct.

	23. Author	Immediate Manager	Issuing Manager (Level III)	24 Date
Type Name	N. W. Kirch	/RKKELLY	D. D. Wodrich	10-23-89
Signature	NWKirch	RKKelly	DDWodrich	10/23/89

Attach additional sheet if more space is needed.

BD-7600-062 (06/88)

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DOCUMENT CLEARANCE REQUEST
Part 2 – Clearance Reviews and Approvals

Document Identification: WHC- 8956305

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Reviewer	Required (✓ if yes)	Approve Yes	Approve No	Mandatory Changes Yes	Mandatory Changes No	See Remarks (✓ if yes)	Signature	Date
Publications Services								
WHC Classification								
WHC Patent/Legal		✓			✓		[illegible]	10/24/89
DOE Patent/Legal		✓			✓		[illegible]	10/24/89
Westinghouse Corporate								
WHC Public Relations								
References								
WHC Int. Prog. Coord.								
WHC Prog. Office/or Working Group Rep.								
DOE Program Sponsor								
DOE Working Group Chairman								

Working Group Name:

Remarks

9112054072

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BD-7600-062R (06/88)

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MONITORING SCHEDULE: MONTHLY

TEMPERATURE DATA - TANK 104-BY

Contains ferrocyanide

THERMO-COUPLE	TEMPERATURES (degrees F) 1/2/89	2/7/89	3/6/89	4/5/89	6/6/89	7/5/89	8/2/89	8/7/89	9/4/89	10/2/89	10/18/89			DISTANCE FROM BOTTOM OF TANK
L.L.	(1)39.75	129.5	129.5	129.5	129	129.3	129.2	130.25	130.05	130.25	RECHECK			
1	69	144	133	135	132	(2) 66	131	125	132	(3) 15	122			0' 4"
2	68	148	134	136	133	65	133	126	133	13	124			2' 4"
3	69	142	129	132	128	70	128	122	129	18	120			4' 4"
4	65	134	121	123	119	79	120	116	121	26	114			6' 4"
5	59	126	113	115	111	87	112	109	113	33	107			8' 4"
6	45	88	76	78	77	120	81	84	83	63	78			10' 4"

(1) Data in this column inconsistent. Discrepancy Report #47 issued.
(2) Data in this column inconsistent. Discrepancy Report #128 issued.
(3) Data in this column inconsistent. Discrepancy Report #166 issued.

9 1 1 2 0 5 4 0 7 3

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TEMPERATURE DATA - TANK 104-BY

DATE	# OF TCs MONITORED	TEMPERATURE RANGE (CENTIGRADE) LOW	HIGH
8/74	12	46	93
9/74	12	47	106
10/74	12	39	96
11/74	12	26	96
12/74	12	22	94
1/75	12	20	91
2/75	12	24	94
3/75	12	22	92
4/75	12	21	83
5/75	12	28	90
		(FAHRENHEIT)	
6/75	12	86	192
7/75	12	97	193
8/75	12	71	197
11/75	12	82	196
12/75	12	106	193
3/76	12	90	190
5/76	12	75	182
6/76	12	88	192
7/76	12	84	181
8/76	12	82	174
9/76	12	86	181
11/76	12	79	180
12/76	12	95	200
1/77	12	84	191
2/77	12	74	176
3/77	12	80	179
4/77	12	82	177
6/77	12	84	176
8/77	12	82	167
9/77	12	75	164
10/77	12	76	173
12/77	12	64	172

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
2/78	12	70	184
3/78	12	62	170
4/78	12	69	175
6/78	12	72	165
7/78	12	61	153
8/78	12	79	162
9/78	12	84	173
10/78	12	77	170
1/79	12	51	170
4/79	12	67	167
7/79	12	76	158
8/79	12	83	164
9/79	12	75	157
11/79	12	69	165
2/80	12	55	164
5/80	12	65	159
11/80	12	72	167
12/80	12	60	170
6/81	12	73	145
11/81	12	54	130
1/82	12	78	159
2/82	12	87	164
3/82	12	80	156
SHEET REMOVED FROM BOOK			
10/83	6	75	135
11/83	6	82	144
12/83	6	77	145

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
1/84	6	72	143
2/84	6	70	143
3/84	6	68	138
4/84	6	64	126
6/84	6	76	140
9/84	6	84	132
3/85	6	75	135
4/85	6	77	141
6/85	6	79	139
7/85	6	81	140
8/85	6	86	139
9/85	6	86	139
1/86	6	78	139
3/86	6	76	140
4/86	6	77	140
5/86	6	78	139
6/86	6	78	138
8/86	6	83	136
9/86	6	95	145
11/86	6	80	125
12/86	6	75	122
2/87	6	77	138
3/87	6	76	135
4/87	6	76	136
6/87	6	79	136
7/87	6	82	138
8/87	6	82	134
9/87	6	83	136
10/87	6	85	136
11/87	6	101	149

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
1/88	6	80	134
2/88	6	83	136
3/88	6	77	136
4/88	6	73	122
5/88	6	76	132
6/88	6	81	135
7/88	6	81	133
8/88	6	69	118
9/88	6	81	133
10/88	6	87	134

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MONITORING SCHEDULE: MONTHLY

TEMPERATURE DATA - TANK 105-BY

Contains ferrocyanide

THERMO-COUPLE	TEMPERATURES (degrees F) 1/2/89	2/6/89	3/6/89	4/5/89	6/6/89	6/20/89 RECHECK	7/5/89	8/2/89	8/7/89	9/4/89	10/2/89	10/18/89 RECHECK		DISTANCE FROM BOTTOM OF TANK
L.L.	(1) 27	182.5	O/S	182.5	182.3	182.3	182.3	182.2	183	182	(5)176.25			
1	78	122		120	(2) 72	122	(3) 79	117	112	(4) O/S	117	108		0' 4"
2	77	118		116	75	119	83	113	110	O/S	113	106		2' 4"
3	77	114		111	78	114	88	108	106	O/S	109	101		4' 4"
4	77	109		107	82	101	93	104	102	O/S	105	98		6' 4"
5	82	109		101	86	105	99	99	98	O/S	101	93		8' 4"
6	76	80		77	103	86	119	82	84	O/S	85	77		10' 4"

(1) Data in this column inconsistent. Discrepancy Report #47 issued.

(2) Data in this column inconsistent. Discrepancy Report #116 issued. Recheck 6/20/89

(3) Data in this column inconsistent. Discrepancy Report #128 issued.

(4) J-2 written to check thermocouples.

(5) Daily Status report shows liquid level at 182.5.

8956305

TEMPERATURE DATA - TANK 105-BY

DATE	# OF TCs MONITORED	TEMPERATURE RANGE (CENTIGRADE) LOW	HIGH
9/74	12	32	80
10/74	12	25	70
11/74	12	26	63
12/74	12	13	63
1/75	12	14	64
2/75	12	15	68
3/75	12	18	70
4/75	12	15	77
5/75	12	22	68
		(FAHRENHEIT)	
6/75	12	74	145
7/75	12	86	147
8/75	12	85	150
11/75	12	70	151
12/75	12	67	152
3/76	12	57	145
5/76	12	63	136
6/76	12	76	145
7/76	12	72	136
8/76	12	71	132
9/76	12	76	139
11/76	12	69	140
12/76	12	95	200
1/77	12	72	153
2/77	12	63	139
3/77	12	70	144
4/77	12	70	140
6/77	12	82	143
8/77	12	77	131
9/77	12	70	129
10/77	12	75	142
12/77	12	60	140

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
3/78	12	60	138
4/78	12	68	143
6/78	12	68	131
7/78	12	58	120
9/78	12	82	141
10/78	12	74	140
1/79	12	44	137
4/79	12	61	136
7/79	12	82	133
9/89	12	67	121
11/79	12	80	145
2/80	12	58	140
5/80	12	74	132
11/80	12	77	138
12/80	12	67	143
6/81	12	72	120
11/81	12	52	96
1/82	12	75	135
2/82	12	87	145
3/82	12	80	137

SHEETS REMOVED FROM BOOK

10/83 - THRU 5/84 DATA NO GOOD

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
6/84	6	DATA MAY BE NO GOOD	
9/84	6	"	
4/85	6	84	133
6/85	6	76	122
7/85	6	85	128
8/85	6	56	183
4/86	6	77	130
6/86	6	63	107
7/886	6	74	115
8/86	6	42	82
9/86	6	72	105
10/86 THRU 5/87 DATA NO GOOD			
6/87	6	77	117
7/87	6	79	117
8/87	6	82	117
9/87	6	82	116
10/87	6	84	117
11/87	6	98	129

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
3/88	6	74	120
4/88	6	71	108
6/88	6	76	113
7/88	6	79	116
8/88	6	68	100
9/88	6	100	118
10/88	6	86	117

8956305

MONITORING SCHEDULE: MONTHLY

TEMPERATURE DATA - TANK 106-BY

Contains ferrocyanide

THERMO-COUPLE	TEMPERATURES (degrees F) 1/2/89	2/7/89	3/6/89	4/5/89	6/6/89	7/5/89	8/2/89	8/7/89	9/4/89	10/2/89	10/18/89		DISTANCE FROM TANK BOTTOM
L.L.	(1)12.25	242	242.2	242.3	242.3	242.3	242.5	242.3	240	242.25	RECHECK		
1	73	140	135	137	135	(2) 60	134	127	134	(3) 8	122		0' 4"
2	74	138	130	133	131	64	131	124	130	12	119		2' 4"
3	74	136	128	130	130	67	128	122	128	15	118		4' 4"
4	74	132	124	126	124	72	124	118	124	19	114		6' 4"
5	74	128	119	121	118	79	118	114	118	26	109		8' 4"
6	73	88	80	80	80	115	84	86	86	57	80		10' 4"

(1) Data in this column inconsistent. Discrepancy Report #47 issued.
(2) Data in this column inconsistent. Discrepancy Report #128 issued.
(3) Data in this column inconsistent. Discrepancy Report #166 issued.

8956305

TEMPERATURE DATA - TANK 106-BY

DATE	# OF TCs MONITORED	TEMPERATURE RANGE (CENTIGRADE) LOW	HIGH
8/74	12	54	113
9/74	12	35	83
10/74	12	28	77
11/74	12	13	68
12/74	12	17	74
1/75	12	15	73
2/75	12	16	76
3/75	12	18	78
4/75	12	52	83
5/75	12	22	76
		(FAHRENHEIT)	
6/75	12	75	166
7/75	12	87	167
8/75	12	85	170
11/75	12	73	174
3/76	12	58	163
5/76	12	63	159
6/76	12	78	167
7/76	12	72	156
8/76	12	71	151
9/76	12	77	158
11/76	12	74	156
12/76	12	88	175
1/77	12	78	166
2/77	12	67	157
3/77	12	73	161
4/77	12	73	157
6/77	12	83	153
8/77	12	77	147
9/77	12	69	138
10/77	12	77	146
12/77	12	61	148

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
2/78	12	69	165
3/78	12	61	152
4/78	12	69	158
6/78	12	61	145
8/78	12	75	143
9/78	12	84	156
10/78	12	72	152
1/79	12	53	150
4/79	12	62	150
7/79	12	73	141
9/79	12	67	131
11/79	12	91	16
2/80	12	71	160
5/80	12	73	147
11/80	12	84	151
12/80	12	75	156
6/81	12	75	135
11/81	12	95	148
1/82	12	76	145
2/82	12	88	161
3/82	12	74	147
SHEETS REMOVED FROM BOOK			
10/83	6	83	133
11/83	6	87	141
12/83	6	80	142

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
2/84	6	77	142
3/84	6	67	131
4/84	6	70	126
6/84	6	78	139
9/84	6	85	131
3/85	6	70	125
4/85	6	76	140
6/85	6	80	139
7/85	6	83	139
8/85	6	85	137
9/85	6	87	138
1/86	6	75	138
3/86	6	75	140
4/86	6	74	139
5/86	6	77	139
6/86	6	78	139
8/86	6	89	123
9/86	6	98	147
11/86	6	80	123
12/86	6	73	120
2/87	6	73	135
3/87	6	74	135
4/87	6	69	130
6/87	6	78	134
7/87	6	82	136
8/87	6	83	133
9/87	6	85	135
10/87	6	87	135
11/87	6	80	122

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
1/88	6	70	124
2/88	6	70	124
3/88	6	?	137
4/88	6	74	123
5/88	6	79	134
6/88	6	80	132
7/88	6	82	133
8/88	6	70	118
9/88	6	82	133
10/88	6	89	133

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MONITORING SCHEDULE: MONTHLY

TEMPERATURE DATA - TANK 110-BY

Contains ferrocyanide

THERMO-COUPLE	TEMPERATURES (degrees F) 1/2/89	2/7/89	3/6/89	4/5/89	6/6/89	7/5/89	8/2/89	8/7/89	8/8/89 RECHECK	9/4/89	10/2/89	10/18/89 RECHECK		DISTANCE FROM TANK BOTTOM
L.L.	(1) 180.4	150.75	150.75	150	150.5	150.6	150.5	150.5	150.5	150	(3) 142			
1	128	124	124	136	131	(2) 66.4	124	97	123	123	123	121		0' 4"
2	72	123	122	134	129	66.6	122	94	122	122	122	120		2' 4"
3	71	121	119	130	123	69.2	117	88	118	118	118	117		4' 4"
4	O/S	116	113	123	116	73.6	112	82	112	113	114	112		6' 4"
5	O/S	106	104	111	106	83.4	104	72	104	105	106	104		8' 4"
6	73	76	73	75	72	109.2	79	43	80	81	83	82		10' 4"

(1) Data in this column inconsistent. Discrepancy Report #47 issued.

(2) Data in this column inconsistent. Discrepancy Report #128 issued.

(3) Daily Status Report shows liquid level at 150.75.

8956305

TEMPERATURE DATA - TANK 110-BY

DATE	# OF TCs MONITORED	TEMPERATURE RANGE (CENTIGRADE) LOW	HIGH
8/74	14	26	68
9/74	14	26	87
10/74	14	22	81
11/74	14	22	83
12/74	14	22	82
1/75	14	19	96
2/75	14	20	85
3/75	14	22	84
4/75	14	18	96
5/75	14	24	80
		(FAHRENHEIT)	
6/75	14	77	177
7/75	14	88	177
8/75	14	80	174
11/75	14	71	182
12/75	14	106	193
3/76	14	68	181
5/76	14	69	165
6/76	14	68	165
7/76	14	73	101
8/76	14	73	160
12/76	12	81	125
1/77	14	69	175
2/77	14	60	161
3/77	14	63	164
4/77	12	63	148
6/77	14	76	156
8/77	14	70	143
9/77	12	59	76
10/77	12	66	91
12/77	14	56	148

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
1/78	12	65	137
3/78	12	50	138
4/78	12	64	145
8/78	14	75	139
9/78	14	71	92
10/78	14	74	148
1/79	12	49	90
4/79	12	62	81
7/79	8	79	89
11/79	8	120	163
12/89 THRU 9/83 DATA NO GOOD			
10/83	6	85	135
11/83	6	94	146
12/83	6	93	147
1/84	6	85	142
2/84	6	86	148
3/84	6	73	134
4/84	6	75	130
6/84	6	78	129
9/84	6	85	131
3/85	6	73	128
4/85	6	73	126
5/85	6	78	140
6/85	6	78	138
7/85	6	73	131
8/85	6	82	133
9/85	6	83	126

DATE	# OF TC MONITOR	TEMPERATURE RANGE (FAHRENHEIT) LOW	HIGH
1/86	6	79	128
3/86	6	73	127
4/86	6	74	126
5/86	6	73	124
6/86	6	75	126
7/86	6	78	126
8/86	6	81	126
9/86	6	83	126
10/86	6	92	125
11/86	6	82	126
12/86	6	91	145
2/87	6	78	137
3/87	6	76	136
4/87	6	79	139
6/87	6	78	134
8/87	6	79	123
9/87	6	79	128
10/87	6	86	125
11/87	6	82	123
1/88	6	75	127
2/88	6	80	127
3/88	6	76	125
4/88	6	73	123
5/88	6	74	124
6/88	6	75	123
7/88	6	77	124
8/88	6	80	124
9/88	6	78	124
10/88	6	87	188