

ADDITIONAL INFORMATION FOR  
1980 ANNUAL ENVIRONMENTAL RADIOLOGICAL MONITORING  
FOR ANO-1 AND ANO-2

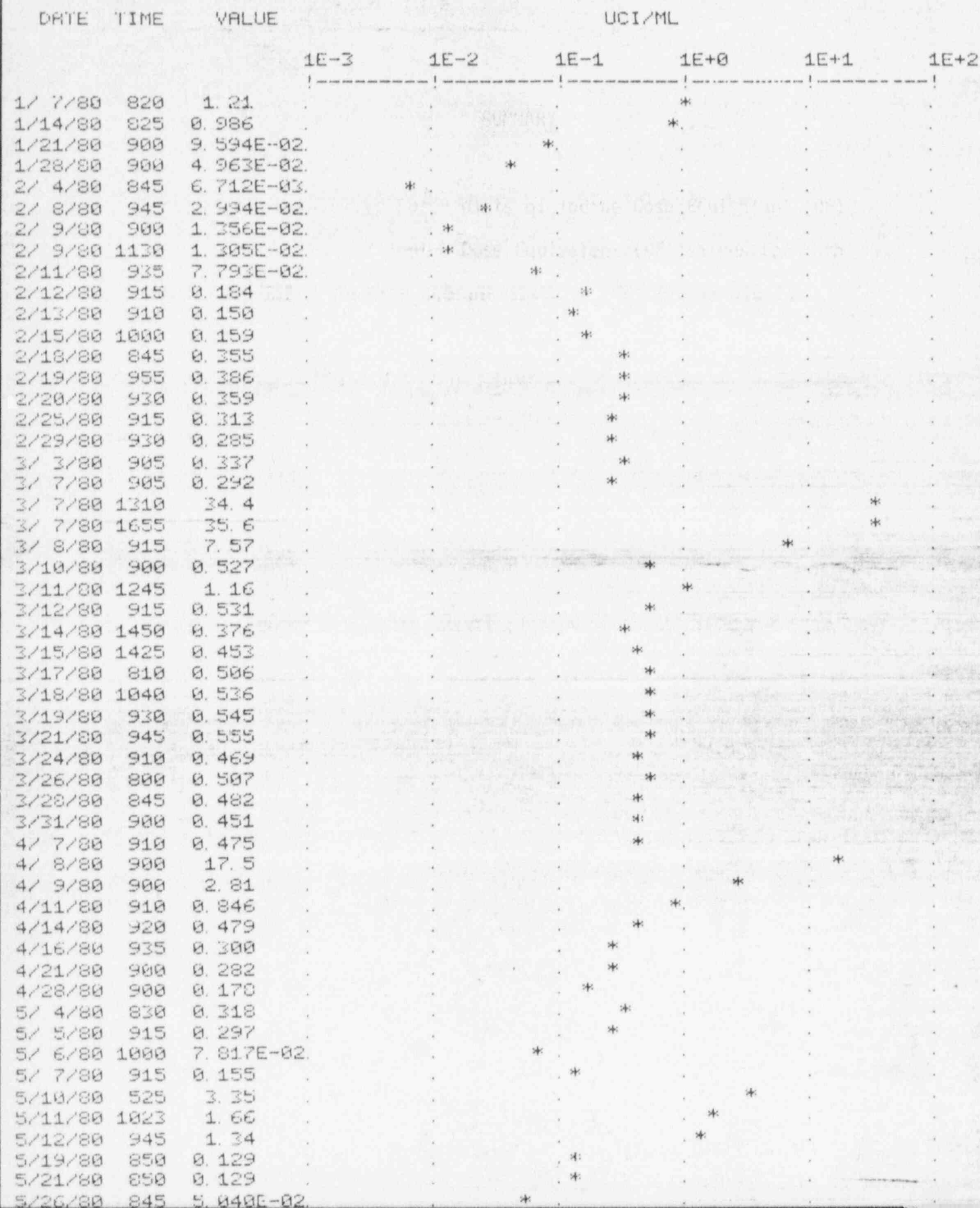
Additional information for Section 2.4 "Samples Not collected in 1980"

1. During the semi-annual Milk-Producing Animal Survey conducted March 24-25, 1980, a single family cow was observed at the J. D. Henderson farm (approximately 70° and 1.5 miles relative to the ANO site). Mr. Henderson was contacted and initially agreed to sell milk samples to AP&L. A week later the Henderson's informed AP&L that their cow had gone dry. When contacted during the September 18-19, 1980 survey, the Henderson's informed AP&L that they still owned the cow but it was not producing milk. The location of the Henderson's milk animal was included in both 1980 survey reports but samples were not obtained based upon the owners information that milk was not being produced.
2. Quarterly grass samples have routinely been obtained from all milk sampling locations and analyzed for radioiodines and other gamma emitting isotopes. Grass samples continued to be collected at the Harms Dairy during 1980 even though milk samples were not provided by the owners after May, 1980.
- Section:  
3. The Arkansas Department of Health was contacted during the fall of 1980 concerning the scheduling to sample for leafy vegetables. The Health Department staff located in the ANO vicinity had been unsuccessful in locating sources for leafy vegetables. The severe drought during 1980 severely damaged the home gardens in the area. AP&L staff associated with environmental sampling knew of no source of leafy vegetables. Therefore, these samples were considered unavailable during 1980 harvest time. Grass samples continued to be collected and analyzed during 1980. The ingestion pathway to man was monitored by the grass analysis. NRC Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I", Revision 1, October 1977, does not differentiate between grasses and leafy vegetables for stable element transfer between soil and vegetation.

### SUMMARY

Enclosed are monthly computer plots of Iodine Dose Equivalent (DE) values and listings of Iodine Dose Equivalent (DE) values for both Unit 1 and Unit 2 Reactor Coolant Systems. The values are in  $\mu$  Ci/ml.

PLOT OF UNIT#1 I-131 DOSE EQUIVALENT ACTIVITY  
FOR: 1/80 THROUGH 12/80



[illegible]

12/15/80	900	0.246
12/19/80	825	0.207
12/22/80	918	0.175
12/26/80	830	0.215
12/29/80	827	0.196

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PLOT OF UNIT#2 I-131 DOSE EQUIVALENT ACTIVITY  
FOR: 1/80 THROUGH 12/80

DATE	TIME	VALUE	UCI/ML					
			1E-4	1E-3	1E-2	1E-1	1E+0	1E+1
1/ 2/80	805	5.870E-02.				*		
1/ 4/80	820	2.810E-02.			*			
1/ 7/80	750	3.160E-02.			*			
1/11/80	730	4.990E-02.			*			
1/16/80	1355	0.146				*		
1/17/80	520	0.154				*		
1/17/80	607	0.192				*		
1/18/80	910	0.106				*		
1/20/80	57	0.544					*	
1/20/80	325	0.461					*	
1/21/80	210	0.324					*	
1/24/80	825	0.361					*	
1/25/80	905	0.275				*		
1/28/80	842	0.378				*		
1/29/80	945	0.407					*	
1/29/80	2100	1.67					*	
1/30/80	45	1.69					*	
1/30/80	515	1.04					*	
1/30/80	915	1.01					*	
1/30/80	1315	0.309					*	
2/ 1/80	912	6.160E-02.				*		
2/ 8/80	920	8.020E-03.		*				
2/15/80	900	5.472E-03.		*				
2/22/80	830	3.130E-03.		*				
2/29/80	850	1.204E-02.		*				
3/ 7/80	905	1.265E-03.	*	*				
3/10/80	840	5.651E-04.	*	*				
3/14/80	820	1.765E-03.		*				
3/17/80	825	1.500E-03.		*				
3/19/80	925	1.280E-03.		*				
3/20/80	920	1.075E-02.			*			
3/20/80	1640	1.625E-02.			*			
3/21/80	925	2.480E-02.			*			
3/22/80	1140	2.590E-02.			*			
3/23/80	820	3.300E-02.			*			
3/24/80	1010	2.440E-02.			*			
3/25/80	955	6.600E-02.				*		
3/26/80	805	0.106				*		
3/27/80	1425	0.213				*		
3/28/80	415	0.633					*	
3/28/80	1320	0.578					*	
3/28/80	2132	9.060E-02.				*		
3/29/80	855	0.433					*	
3/30/80	1000	0.317					*	
3/31/80	935	0.224				*		
4/ 1/80	930	0.183				*		
4/ 2/80	925	0.203				*		
4/ 2/80	1330	0.534					*	
4/ 3/80	1445	0.377					*	
4/ 4/80	950	0.186				*		
4/ 5/80	850	9.850E-02.			*			
4/ 6/80	1035	0.189				*		
4/ 7/80	1445	0.208				*		



4/ 7/80	2100	0. 515
4/ 9/80	910	0. 772
4/11/80	910	5. 057E-02.
4/16/80	855	3. 810E-02.
4/18/80	920	1. 544E-02.
4/19/80	835	5. 880E-02.
4/20/80	840	8. 070E-02.
4/21/80	900	8. 330E-02.
4/22/80	910	8. 692E-02.
4/23/80	905	5. 491E-02.
4/24/80	1405	9. 114E-02.
4/24/80	1830	0. 185
4/25/80	910	0. 105
4/25/80	2337	0. 186
4/26/80	825	0. 296
4/27/80	940	0. 140
4/28/80	905	0. 111
4/29/80	1020	0. 136
4/30/80	1310	9. 420E-02.
5/ 1/80	1330	8. 990E-02.
5/ 2/80	900	0. 111
5/ 3/80	825	0. 122
5/ 4/80	820	0. 116
5/ 5/80	920	0. 115
5/ 6/80	1005	0. 102
5/ 7/80	915	0. 115
5/ 8/80	900	7. 730E-02.
5/ 9/80	935	6. 530E-02.
5/10/80	914	5. 020E-02.
5/11/80	935	5. 700E-02.
5/12/80	930	8. 650E-02.
5/13/80	850	8. 550E-02.
5/14/80	930	8. 160E-02.
5/15/80	1425	5. 120E-02.
5/16/80	852	6. 620E-02.
5/17/80	835	8. 320E-02.
5/18/80	815	0. 109
5/19/80	830	9. 860E-02.
5/20/80	1025	9. 550E-02.
5/21/80	905	9. 890E-02.
5/22/80	1255	9. 220E-02.
5/23/80	915	9. 070E-02.
5/24/80	902	8. 680E-02.
5/25/80	845	9. 550E-02.
5/26/80	900	0. 104
5/27/80	930	0. 107
5/28/80	850	9. 610E-02.
5/29/80	850	9. 580E-02.
5/30/80	850	0. 118
5/31/80	720	0. 169
6/ 1/80	645	0. 167
6/ 5/80	930	0. 180
6/ 6/80	915	1. 00
6/ 7/80	1240	0. 484
6/ 9/80	900	0. 312
6/11/80	1715	0. 504
6/13/80	915	0. 230
6/20/80	845	0. 167
6/24/80	1005	0. 479
6/27/80	900	0. 452
7/ 4/80	925	9. 791E-02.
7/ 7/80	1345	0. 403
7/11/80	900	0. 142
7/18/80	920	0. 212
7/24/80	315	0. 698

7/25/80	905	0.547
8/ 1/80	995	0.192
8/ 8/80	1315	0.202
8/12/80	600	0.287
8/12/80	1250	0.211
8/15/80	920	0.269
8/15/80	1445	0.949
8/16/80	620	0.940
8/16/80	1620	0.709
8/18/80	2005	0.669
8/21/80	1810	0.352
8/21/80	2111	0.411
8/22/80	110	0.688
8/22/80	935	0.456
8/25/80	1050	3.60
8/23/80	1440	0.262
8/25/80	912	0.215
8/27/80	950	0.219
8/29/80	823	0.227
9/ 3/80	825	0.245
9/ 4/80	200	0.938
9/ 5/80	830	0.604
9/ 8/80	815	0.454
9/12/80	838	8.980E-02
9/15/80	800	1.460E-02
9/19/80	805	1.730E-03
9/22/80	510	1.280E-03
9/26/80	505	8.860E-04
9/29/80	950	6.590E-02
10/ 1/80	755	2.470E-02
10/ 1/80	1315	3.500E-02
10/ 3/80	825	8.580E-02
10/ 6/80	840	0.229
10/ 8/80	930	0.142
10/10/80	900	0.163
10/14/80	840	0.632
10/17/80	810	0.221
10/20/80	745	0.176
10/24/80	955	0.184
10/27/80	1055	0.203
11/ 3/80	845	0.174
11/ 3/80	2210	0.359
11/ 7/80	755	0.158
11/ 9/80	1530	0.273
11/10/80	805	0.208
11/14/80	840	7.820E-02
11/17/80	840	5.640E-02
11/18/80	1452	0.104
11/19/80	830	0.142
11/21/80	1035	6.098E-02
11/24/80	835	3.780E-02
11/28/80	820	7.750E-02
12/ 1/80	827	0.279
12/ 5/80	830	7.840E-02
12/ 5/80	1840	0.440
12/12/80	815	6.180E-02
12/15/80	840	3.960E-03
12/18/80	340	4.000E-02
12/19/80	815	4.890E-02
12/20/80	915	0.155
12/22/80	820	6.870E-02
12/26/80	810	7.670E-02
12/29/80	832	7.890E-02