APPENDIX TO REPORT EH 90-7

ATRAZINE LEACHING AND ITS RELATION TO PERCOLATION OF WATER AS INFLUENCED BY THREE RATES AND FOUR METHODS OF IRRIGATION WATER APPLICATION

October, 1990

Environmental Hazards Assessment Program

STATE OF CALIFORNIA
Department of Food and Agriculture
Division of Pest Management, Environmental Protection and Worker Safety
Environmental Monitoring and Pest Management Branch
1220 N Street, Sacramento, California 95814

EH 90-9

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APPENDIX I

REFERENCE EVAPOTRANSPIRATION DATA OBTAINED FROM CIMIS AND SCHEDULE OF IRRIGATION EVENTS BASED ON THOSE VALUES

TUDY 65 SUMMER 87

GALLONS OF WATER PER DAY

Etp DATE	RUN DATE	Eto (CIMIS)	1.75 Eto	1.25 Eto	.75 Eto
15-Jun	22-Jun	Ø.27	265.1	189.4	113.6
16-Jun	23-Jun	Ø.28	274.9	196.4	117.8
17-Jun	24-Jun	Ø.3Ø	294.5	21Ø.4	126.2
18-Jun	25-Jun	Ø.28	274.9	196.4	117.8
19-Jun	26-Jun	Ø.3Ø	294.5	21Ø.4	126.2
2Ø-Jun	27-Jun	Ø.29	284.7	2Ø3.4	122.Ø
21-Jun	28-Jun	Ø.29	284.7	2Ø3.4	122.Ø
22-Jun	29-Jun	Ø.31	3Ø4.4	217.4	13Ø.4
23-Jun	3Ø-Jun	Ø.32	314.2	224.4	134.7
24-Jun	Ø1-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
25-Jun	Ø2-Jul	Ø.32	314.2	224.4	134.7
26-Jun	Ø3-Jul	Ø.32	314.2	224.4	134.7
27-Jun	Ø4-Jul	Ø.32	314.2	224.4	134.7
28-Jun	Ø5-Jul	Ø.3Ø	294.5	21Ø.4	126.2
29-Jun	Ø6-Jul	Ø.32	314.2	224.4	134.7
3Ø-Jun	Ø7-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
Ø1-Jul	Ø8-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
Ø2-Jul	Ø9-Jul	Ø.32	314.2	224.4	134.7
Ø3-Jul	1Ø-Jul	Ø.33	324.Ø	231.4	138.9
Ø4-Jul	11-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
Ø5-Jul	12-Jul	Ø.3Ø	294.5	21Ø.4	126.2
Ø Jul	13-Jul	Ø.32	314.2	224.4	134.7
Ø7-Jul	14-Jul	Ø.3Ø	294.5	21Ø.4	126.2
Ø8-Jul	15-Jul	Ø.32	314.2	224.4	134.7
Ø9-Jul	16-Jul	Ø.32	314.2	224.4	134.7
1Ø-Jul	17-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
11-Jul	18-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
12-Jul	19-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
13-Jul	2Ø-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
14-Jul	21-Jul	Ø.31	3Ø4.4	217.4	13Ø.4
15-Jul	22-Jul	Ø.29	284.7	2Ø3.4	122.Ø
16-Jul	23-Jul	Ø.27	265.1	189.4	113.6
17-Jul	24-Jul	Ø.29	284.7	2Ø3.4	122.Ø
18-Jul	25-Jul	Ø.29	284.7	2Ø3.4	122.Ø
19-Jul	26-Jul	Ø.28	274.9	196.4	117.8
2Ø-Jul	27-Jul	Ø.27	265.1	189.4	113.6
21-Jul	28-Jul	Ø.28	274.9	196.4	117.8
22-Jul	29-Jul	Ø.24	235.6	168.3	1Ø1.Ø
23-Jul	3Ø-Jul	Ø.26	255.3	182.3	1Ø9.4
24-Jul	31-Jul	Ø.27	265.1	189.4	113.6
25-Jul	Ø1-Aug	Ø.26	255.3	182.3	1Ø9.4
26-Jul	Ø2-Aug	Ø.28	274.9	196.4	117.8

27-Jul	03-Aug	0.31	304.4	217.4	130.4
28-Jul	04-Aug	0.32	314.2	224.4	134.7
[illegible]-Jul	05-Aug	0.33	324.0	231.4	138.9
30-Jul	06-Aug	0.31	304.4	217.4	130.4
31-Jul	07-Aug	0.30	294.6	210.4	126.2
01-Aug	08-Aug	0.31	304.4	217.4	130.4
02-Aug	09-Aug	0.32	314.2	224.4	134.7
03-Aug	10-Aug	0.33	324.0	231.4	138.9
04-Aug	11-Aug	0.30	294.6	210.4	126.2
05-Aug	12-Aug	0.31	304.4	217.4	130.4
06-Aug	13-Aug	0.28	274.9	196.4	117.8
07-Aug	14-Aug	0.30	294.6	210.4	126.2
08-Aug	15-Aug	0.30	294.6	210.4	126.2
09-Aug	16-Aug	0.29	284.7	203.4	122.0
10-Aug	17-Aug	0.30	294.6	210.4	126.2
11-Aug	18-Aug	0.28	274.9	196.4	117.8
12-Aug	19-Aug	0.28	274.9	196.4	117.8
13-Aug	20-Aug	0.26	255.3	182.3	109.4
14-Aug	21-Aug	0.26	255.3	182.3	109.4
15-Aug	22-Aug	0.26	255.3	182.3	109.4
16-Aug	23-Aug	0.27	265.1	189.4	113.6
17-Aug	24-Aug	0.27	265.1	189.4	113.6
18-Aug	25-Aug	0.24	235.6	168.3	101.0
19-Aug	26-Aug	0.25	245.5	175.3	105.2
20-Aug	27-Aug	0.23	225.8	161.3	96.8
21-Aug	28-Aug	0.24	235.6	168.3	101.0
22-Aug	29-Aug	0.25	245.5	175.3	105.2
23-Aug	30-Aug	0.25	245.5	175.3	105.2
24-Aug	31-Aug	0.26	255.3	182.3	109.4
25-Aug	01-Sep	0.26	255.3	182.3	109.4
26-Aug	02-Sep	0.26	255.3	182.3	109.4
27-Aug	03-Sep	0.26	255.3	182.3	109.4
28-Aug	04-Sep	0.26	255.3	182.3	109.4
29-Aug	05-Sep	0.27	265.1	189.4	113.6
30-Aug	06-Sep	0.26	255.3	182.3	109.4
31-Aug	07-Sep	0.23	225.8	161.3	96.8
01-Sep	08-Sep	0.25	245.5	175.3	105.2
02-Sep	09-Sep	0.24	235.6	168.3	101.0
03-Sep	10-Sep	0.25	245.5	175.3	105.2
04-Sep	11-Sep	0.27	265.1	189.4	113.6
05-Sep	12-Sep	0.26	255.3	182.3	109.4
06-Sep	13-Sep	0.25	245.5	175.3	105.2
07-Sep	14-Sep	0.18	176.7	126.2	75.7
08-Sep	15-Sep	0.20	196.4	140.3	84.2
09-Sep	16-Sep	0.20	196.4	140.3	84.2
10-Sep	17-Sep	0.22	216.0	154.3	92.6
11-Sep	18-Sep	0.24	235.6	168.3	101.0
12-Sep	19-Sep	0.25	245.5	175.3	105.2
13-Sep	20-Sep	0.23	225.8	161.3	96.8
14-Sep	21-Sep	0.22	216.0	154.3	92.6
15-Sep	22-Sep	0.21	206.2	147.3	88.4
16-Sep	23-Sep	0.21	206.2	147.3	88.4
17-Sep	24-Sep	0.21	206.2	147.3	88.4
18-Sep	25-Sep	0.20	196.4	140.3	84.2
19-Sep	26-Sep	0.20	196.4	140.3	84.2
20-Sep	27-Sep	0.20	196.4	140.3	84.2

21-Sep	28-Sep	0.19	186.5	133.2	79.9
22-Sep	29-Sep	0.18	176.7	126.2	75.7
23-Sep	30-Sep	0.16	157.1	112.2	67.3
24-Sep	01-Oct	0.16	157.1	112.2	67.3
25-Sep	02-Oct	0.17	166.9	119.2	71.5
26-Sep	03-Oct	0.18	176.7	126.2	75.7
27-Sep	04-Oct	0.15	147.3	105.2	63.1
28-Sep	05-Oct	0.17	166.9	119.2	71.5
29-Sep	06-Oct	0.13	127.6	91.2	54.7
30-Sep	07-Oct	0.13	127.6	91.2	54.7
01-Oct	08-Oct	0.13	127.6	91.2	54.7
02-Oct	09-Oct	0.16	157.1	112.2	67.3
03-Oct	10-Oct	0.16	157.1	112.2	67.3
04-Oct	11-Oct	0.15	147.3	105.2	63.1
OTAL GALLONS			28689	20492	12295
OTAL INCHES		29.2	51.1	36.5	21.9

Table I-1. Summary of water applications in basin and furrow-irrigated treatments applied in 1987.

Dates for ETo Accumulation	Irrigation Application		Liters of Water Applied per Plot at		
	M/day	Julien	0.75 ETo	1.25 ETo	1.75 ETo
0.75 ETo Treatment					
6/15-7/16	7/21	202	15645[a]	-	-
7/17-8/21	8/25	237	16213	-	-
8/22-10/4	10/7	280	14623	-	-
1.25 ETo Treatment					
6/15-7/3	7/7	188	-	15399[a]	-
7/4 -7/16	7/27	208	-	16383[a]	-
7/17-8/11	8/18	230	-	14415	-
8/12-9/2	9/3	246	-	15645	-
9/4 -9/27	10/1	174	-	15698	-
1.75 ETo Treatment					
6/15-6/28	7/7	188	-	-	15645[a]
6/29-7/12	7/14	195	-	-	16296[a]
7/13-7/26	7/27	208	-	-	14502[a]
7/27-8/9	8/11	223	-	-	16020
8/10-8/23	8/25	237	-	-	13518
8/24-9/6	9/3	246	-	-	13302
9/7 -9/20	9/22	265	-	-	10910
9/21-10/4	10/7	280	-	-	8260
Total liters applied:			46481	77540	108453

[a] Water additions made prior to first soil-coring date.

Table I-3. Summary of water application in sprinkler irrigation treatments applied in 1987.

Dates for ETo Accumulation	Irrigation Application		Liters of Water Applied per Plot at		
	M/day	Julien	0.75 ETo	1.25 ETo	1.75 ETo
6/15-6/21	6/24	175	1067[a]	1779[a]	2491[a]
	6/25	176	1067[a]	1779[a]	2491[a]
	6/26	177	1067[a]	1779[a]	2491[a]
6/22-6/28	6/30	181	-	5841[a]	5867[a]
	7/6	187	3505[a]	-	2309[a]
6/29-7/5	7/8	189	3505[a]	5841[a]	-
	7/9	190	-	-	8139[a]
7/6 -7/12	7/15	196	3490[a]	5814[a]	-
	7/16	197	-	-	8139[a]
7/13-7/19	7/23	204	3248[a]	5436[a]	7582[a]
7/20-7/26	7/29	210	2964	4936	-
	7/30	211	-	-	6912
7/27-8/1	8/5	217	3505	5841	-
	8/6	218	-	-	8176
8/3 -8/9	8/12	224	3361	5602	-
	8/13	225	-	-	7843
8/10-8/16	8/19	231	3043	5072	-
	8/20	232	-	-	7098
8/17-8/23	8/26	238	2756	4592	-
	8/27	239	-	-	6431
8/24-8/30	9/2	245	2915	4857	-
	9/3	246	-	-	6802
8/31-9/6	9/10	253	2786	4645	6503
9/7 -9/13	9/16	259	2358	3929	-
	9/17	260	-	-	5500
9/14-9/20	9/23	266	2309	3850	-
	9/24	267	-	-	5390
9/21-9/27	9/30	273	1896	3161	-
	10/1	274	-	-	4421
9/28-10/4	10/8	281	1639	2733	3827
Total liters applied:			46481	77487	108412

[a] Water additions made prior to the first soil-coring date.

Table I-5. Summary of water application in drip irrigation treatments applied in 1987.

Dates for ETo Accumulation	Week of Application		Liters of Water Applied per Plot at		
	M/day	Julien	0.75 ETo	1.25 ETo	1.75 ETo
6/15-6/21	6/22	173	640[a]	1067[a]	1495[a]
6/22-6/28	6/29	180	700[a]	1170[a]	1635[a]
6/29-7/5	7/6	187	700[a]	1170[a]	1635[a]
7/6 -7/12	7/13	194	697[a]	1162[a]	1628[a]
7/13-7/19	7/20	201	651[a]	1083[a]	1518[a]
7/20-7/26	7/27	208	594	988	1385
7/27-8/2	8/3	215	700	1170	1635
8/3 -8/9	8/10	222	674	1120	1571
8/10-8/16	8/17	229	609	1014	1419
8/17-8/23	8/24	236	553	920	1287
8/24-8/30	8/31	243	583	973	1363
8/31-9/6	9/7	250	560	931	1302
9/7 -9/13	9/14	257	473	787	1102
9/14-9/20	9/21	264	462	772	1079
9/21-9/27	9/28	271	379	632	886
9/28-10/4	10/5	278	329	549	768
Total liters applied:			46520	77540	108540

[a] Water additions made prior to the first soil-coring date.

STUDY 65 SUMMER 88 MAY 15. 1988 THROUGH JUNE 22.1988

		GALLONS OF WATER PER DAY			GALLONS OF WATER PER DAY		
DATE	Eto (CIMIS)	1.75 Eto	1.25 Eto	.75 Eto	1.50 Eto	1.00 Eto	.50 Eto
15-May	0.27	265.1	189.4	113.6	227.2	151.5	75.7
16-May	0.27	265.1	189.4	113.6	227.2	151.5	75.7
17-May	0.28	274.9	196.4	117.8	235.6	157.1	78.5
18-May	0.29	284.7	203.4	122.0	244.1	162.7	81.4
19-May	0.30	294.5	210.4	126.2	252.5	168.3	84.2
20-May	0.31	304.4	217.4	130.4	260.9	173.9	87.0
21-May	0.31	304.4	217.4	130.4	260.9	173.9	87.0
22-May	0.28	274.9	196.4	117.8	235.6	157.1	78.5
23-May	0.30	294.5	210.4	126.2	252.5	168.3	84.2
24-May	0.30	294.5	210.4	126.2	252.5	168.3	84.2
25-May	0.29	284.7	203.4	122.0	244.1	162.7	81.4
26-May	0.30	294.5	210.4	126.2	252.5	168.3	84.2
27-May	0.29	284.7	203.4	122.0	244.1	162.7	81.4
28-May	0.28	274.9	196.4	117.8	235.6	157.1	78.5
29-May	0.30	294.5	210.4	126.2	252.5	168.3	84.2
30-May	0.27	265.1	189.4	113.6	227.2	151.5	75.7
31-May	0.31	304.4	217.4	130.4	260.9	173.9	87.0
01-Jun	0.25	245.5	175.3	105.2	210.4	140.3	70.1
02-Jun	0.23	225.8	161.3	96.8	193.6	129.0	64.5
03-Jun	0.26	255.3	182.3	109.4	218.8	145.9	72.9
04-Jun	0.25	245.5	175.3	105.2	210.4	140.3	70.1
05-Jun	0.28	274.9	196.4	117.8	235.6	157.1	78.5
06-Jun	0.29	284.7	203.4	122.0	244.1	162.7	81.4
07-Jun	0.32	314.2	224.4	134.7	269.3	179.5	89.8
08-Jun	0.30	294.5	210.4	126.2	252.5	168.3	84.2
09-Jun	0.31	304.4	217.4	130.4	260.9	173.9	87.0
10-Jun	0.32	314.2	224.4	134.7	269.3	179.5	89.8
11-Jun	0.33	324.0	231.4	138.9	277.7	185.1	92.6
12-Jun	0.31	304.4	217.4	130.4	260.9	173.9	87.0
13-Jun	0.30	294.5	210.4	126.2	252.5	168.3	84.2
14-Jun	0.33	324.0	231.4	138.9	277.7	185.1	92.6
15-Jun	0.30	294.5	210.4	126.2	252.5	168.3	84.2
16-Jun	0.31	304.4	217.4	130.4	260.9	173.9	87.0
17-Jun	0.33	324.0	231.4	138.9	277.7	185.1	92.6
18-Jun	0.33	324.0	231.4	138.9	277.7	185.1	92.6
19-Jun	0.31	304.4	217.4	130.4	260.9	173.9	87.0
20-Jun	0.30	294.5	210.4	126.2	252.5	168.3	84.2
21-Jun	0.30	294.5	210.4	126.2	252.5	168.3	84.2
22-Jun	0.31	304.4	217.4	130.4	260.9	173.9	87.0
TOTAL GALLONS		11311	8079	4847	9695	6463	3232
TOTAL INCHES	11.5	20.1	14.4	8.6	17.3	11.5	5.8

Table I-2. Summary of water applications in basin and furrow-irrigated treatments applied in 1988.

Dates for ETo Accumulation	Irrigation Application		Liters of Water Applied per Plot at		
	M/day	Julien	0.75 Eto	1.25 ETo	1.75 ETo
0.75 ETo Treatment					
5/15-6/4	6/8	159	15259	-	-
6/5 -6/22	6/22	174	2994	-	-
1.25 ETo Treatment					
5/15-6/4	6/1	153	-	15104	-
6/5 -6/22	6/22	174	-	15479	-
1.75 ETo Treatment					
5/15-5/28	5/25	146	-	-	15126
5/29-6/4	6/8	160	-	-	14940
6/5 -6/22	6/22	174	-	-	12749
Total liters applied:			18253	30583	42815

Table I-4. Summary of water application in sprinkler irrigation treatments applied in 1988.

Dates for ETo Accumulation	Irrigation Application		Liters of Water Applied per Plot at		
	M/day	Julien	0.75 ETo	1.25 ETo	1.75 ETo
5/15-5/21	5/19	140	3234	5389	7544
5/22-5/28	5/26	147	3250	5416	7582
5/29-6/4	6/2	154	2978	4965	6950
6/5 -6/11	6/9	161	3425	5707	7991
6/12-6/18	6/16	168	3393	5654	7916
6/19-6/22	6/22	174	1943	3238	4534
Total liters applied:			18223	30369	42517

Table I-6. Summary of water application in drip irrigation treatments applied in 1988.

Dates for ETo Accumulation	Week of Application		Liters of water aplied twice per week at		
	M/day	Julien	0.50 ETo	1.00 ETo	1.50 ETo
5/15-5/21	5/15	136	871	1741	2611
			1285	2570	3855
5/22-5/21	5/22	143	934	1869	2803
			1232	2464	3695
5/29-6/4	5/29	150	934	1869	2803
			1051	2103	3154
6/5 -6/11	6/5	157	945	1890	2835
			1338	2676	4014
6/12-6/18	6/12	164	998	1996	2994
			1349	2697	4046
6/19-6/22	6/19	171	1296	2591	4076
Total liters applied:			12233	24466	36886

APPENDIX II
DATA FOR SOIL TEXTURE, ORGANIC MATTER CONTENT AND INFILTRATION RATE OF SOIL

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 1

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	90.20	6.00	3.80	0.50
0.2286	92.20	4.00	3.80	0.10
0.381	90.20	7.00	2.80	0.10
0.5334	90.20	4.00	5.80	0.10
0.6858	88.20	4.00	7.80	0.10
0.8382	88.20	5.00	6.80	0.10
0.9906	86.20	6.00	7.80	0.00
1.143	88.20	4.00	7.80	0.00
1.2954	89.20	3.00	7.80	0.00
1.4478	88.20	4.00	7.80	0.00
1.6002	88.20	3.00	8.80	0.00
1.7526	88.20	4.00	7.80	0.00
1.905	85.20	5.00	9.80	0.00
2.0574	87.20	6.00	6.80	0.00
2.2098	80.20	6.00	13.80	0.00
2.3622	85.20	5.00	9.80	0.00
2.5146	83.20	5.00	11.80	0.00
2.667	86.20	4.00	9.80	0.00
2.8194	88.20	4.00	7.80	0.00
2.9718	87.20	5.00	7.80	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 2

	SAND	SILT	CLAY	OC
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	89.00	7.00	4.00	1.10
0.2286	90.00	5.00	5.00	0.30
0.381	91.00	4.00	5.00	0.10
0.5334	90.00	3.00	7.00	0.10
0.6858	90.00	3.00	7.00	0.00
0.8382	91.00	4.00	5.00	0.10
0.9906	92.00	2.00	6.00	0.00
1.143	91.00	4.00	5.00	0.00
1.2954	91.00	4.00	5.00	0.00
1.4478	90.00	4.00	6.00	0.00
1.6002	91.00	4.00	5.00	0.00
1.7526	89.00	4.00	7.00	0.00
1.905	88.00	2.00	10.00	0.00
2.0574	91.00	3.00	6.00	0.00
2.2098	91.00	3.00	6.00	0.00
2.3622	91.00	4.00	5.00	0.00
2.5146	89.00	6.00	5.00	0.00
2.667	88.00	5.00	7.00	0.00
2.8194	79.00	10.00	11.00	0.00
2.9718	81.00	6.00	13.00	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 3

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	81.00	15.00	4.00	0.70
0.2286	87.00	8.00	5.00	0.20
0.381	88.00	7.00	5.00	0.10
0.5334	89.00	6.00	5.00	0.10
0.6858	89.00	5.00	6.00	0.00
0.8382	89.00	6.00	5.00	0.10
0.9906	89.00	6.00	5.00	0.10
1.143	89.00	5.00	6.00	0.10
1.2954	89.00	5.00	6.00	0.00
1.4478	89.00	6.00	5.00	0.00
1.6002	90.00	5.00	5.00	0.10
1.7526	84.00	5.00	11.00	0.10
1.905	81.00	6.00	13.00	0.10
2.0574	86.00	5.00	9.00	0.00
2.2098	87.00	5.00	8.00	0.00
2.3622	90.00	5.00	5.00	0.00
2.5146	87.00	7.00	6.00	0.00
2.667	87.00	8.00	5.00	0.00
2.8194	79.00	8.00	13.00	0.00
2.9718	81.00	8.00	11.00	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 4

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	89.40	6.00	4.60	0.50
0.2286	91.40	4.00	4.60	0.20
0.381	90.40	5.00	4.60	0.10
0.5334	91.40	4.00	4.60	0.10
0.6858	91.40	4.00	4.60	0.10
0.8382	91.40	2.00	6.60	0.10
0.9906	92.40	3.00	4.60	0.00
1.143	91.40	4.00	4.60	0.00
1.2954	91.40	4.00	4.60	0.00
1.4478	90.40	3.00	6.60	0.00
1.6002	87.40	4.00	8.60	0.00
1.7526	89.40	4.00	6.60	0.00
1.905	87.40	4.00	8.60	0.00
2.0574	88.40	5.00	6.60	0.00
2.2098	87.40	4.00	8.60	0.00
2.3622	89.40	4.00	6.60	0.00
2.5146	90.40	3.00	6.60	0.00
2.667	89.40	4.00	6.60	0.00
2.8194	89.40	6.00	4.60	0.00
2.9718	81.40	6.00	12.60	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 5

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	89.40	6.00	4.60	0.70
0.2286	90.40	5.00	4.60	0.60
0.381	91.40	3.00	5.60	0.10
0.5334	91.40	3.00	5.60	0.10
0.6858	89.40	4.00	6.60	0.10
0.8382	90.40	4.00	5.60	0.10
0.9906	91.40	3.00	5.60	0.10
1.143	89.40	4.00	6.60	0.10
1.2954	90.40	4.00	5.60	0.10
1.4478	89.40	6.00	4.60	0.00
1.6002	90.40	5.00	4.60	0.10
1.7526	89.40	5.00	5.60	0.10
1.905	89.40	4.00	6.60	0.00
2.0574	93.40	4.00	2.60	0.10
2.2098	90.40	4.00	5.60	0.00
2.3622	91.40	4.00	4.60	0.00
2.5146	92.40	5.00	2.60	0.00
2.667	87.40	6.00	6.60	0.00
2.8194	87.40	6.00	6.60	0.00
2.9718	83.40	6.00	10.60	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 6

	SAND	SILT	CLAY	OC
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	97.40	2.60	0.00	0.80
0.2286	96.40	3.60	0.00	0.30
0.381	89.00	6.00	5.00	0.10
0.5334	89.00	4.00	7.00	0.10
0.6858	95.00	2.00	3.00	0.10
0.8382	95.00	4.00	1.00	0.10
0.9906	90.00	3.00	7.00	0.00
1.143	90.00	4.00	6.00	0.10
1.2954	93.00	4.00	3.00	0.00
1.4478	91.00	3.00	6.00	0.00
1.6002	90.00	4.00	6.00	0.00
1.7526	89.00	3.00	8.00	0.00
1.905	94.00	5.00	1.00	0.00
2.0574	89.00	4.00	7.00	0.00
2.2098	83.00	7.00	10.00	0.00
2.3622	80.00	7.00	13.00	0.00
2.5146	91.00	6.00	3.00	0.00
2.667	85.00	4.00	11.00	0.00
2.8194	89.00	4.00	7.00	0.00
2.9718	89.00	5.00	6.00	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 7

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	88.20	9.00	2.80	0.60
0.2286	91.20	5.00	3.80	0.10
0.381	89.20	5.00	5.80	0.10
0.5334	88.20	5.00	6.80	0.10
0.6858	88.20	4.00	7.80	0.00
0.8382	88.20	4.00	7.80	0.10
0.9906	88.20	4.00	7.80	0.00
1.143	88.20	5.00	6.80	0.00
1.2954	86.20	5.00	8.80	0.00
1.4478	86.20	6.00	7.80	0.00
1.6002	90.20	4.00	5.80	0.00
1.7526	90.20	4.00	5.80	0.00
1.905	88.20	5.00	6.80	0.00
2.0574	88.20	6.00	5.80	0.00
2.2098	78.20	9.00	12.80	0.00
2.3622	81.20	5.00	13.80	0.00
2.5146	86.20	5.00	8.80	0.00
2.667	90.20	3.00	6.80	0.00
2.8194	90.20	4.00	5.80	0.00
2.9718	90.20	4.00	5.80	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 8

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	88.20	8.00	3.80	0.70
0.2286	91.20	5.00	3.80	0.10
0.381	92.20	4.00	3.80	0.10
0.5334	92.20	3.00	4.80	0.10
0.6858	90.20	4.00	5.80	0.10
0.8382	90.20	4.00	5.80	0.10
0.9906	90.20	3.00	6.80	0.10
1.143	88.20	6.00	5.80	0.10
1.2954	90.20	5.00	4.80	0.10
1.4478	90.20	4.00	5.80	0.00
1.6002	89.20	4.00	6.80	0.00
1.7526	91.20	4.00	4.80	0.00
1.905	88.20	5.00	6.80	0.00
2.0574	91.20	3.00	5.80	0.00
2.2098	91.20	4.00	4.80	0.00
2.3622	90.20	4.00	5.80	0.00
2.5146	88.20	6.00	5.80	0.00
2.667	84.20	7.00	8.80	0.00
2.8194	85.20	7.00	7.80	0.00
2.9718	88.20	7.00	4.80	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 9

	SAND	SILT	CLAY	OC
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	87.40	10.00	2.60	0.50
0.2286	89.40	7.00	3.60	0.20
0.381	89.40	6.00	4.60	0.10
0.5334	91.40	4.00	4.60	0.10
0.6858	91.40	4.00	4.60	0.10
0.8382	90.40	5.00	4.60	0.10
0.9906	90.40	5.00	4.60	0.10
1.143	90.40	5.00	4.60	0.10
1.2954	91.40	5.00	3.60	0.00
1.4478	89.40	6.00	4.60	0.00
1.6002	90.40	7.00	2.60	0.00
1.7526	90.40	6.00	3.60	0.00
1.905	88.40	6.00	5.60	0.00
2.0574	89.40	5.00	5.60	0.00
2.2098	88.40	6.00	5.60	0.00
2.3622	90.40	5.00	4.60	0.00
2.5146	91.40	6.00	2.60	0.00
2.667	89.40	8.00	2.60	0.00
2.8194	86.40	7.00	6.60	0.00
2.9718	86.40	7.00	6.60	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 10

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	81.40	15.00	3.60	1.00
0.2286	86.40	10.00	3.60	0.50
0.381	87.40	8.00	4.60	0.10
0.5334	88.40	7.00	4.60	0.10
0.6858	87.40	8.00	4.60	0.10
0.8382	88.40	7.00	4.60	0.10
0.9906	88.40	6.00	5.60	0.10
1.143	89.40	6.00	4.60	0.00
1.2954	90.40	5.00	4.60	0.10
1.4478	90.40	5.00	4.60	0.10
1.6002	91.40	4.00	4.60	0.10
1.7526	90.40	5.00	4.60	0.10
1.905	88.40	7.00	4.60	0.10
2.0574	89.40	6.00	4.60	0.00
2.2098	90.40	5.00	4.60	0.00
2.3622	88.40	6.00	5.60	0.00
2.5146	89.40	6.00	4.60	0.00
2.667	89.40	6.00	4.60	0.00
2.8194	90.40	6.00	3.60	0.10
2.9718	81.40	8.00	10.60	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 11

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	89.40	9.00	1.60	0.70
0.2286	90.40	7.00	2.60	0.30
0.381	90.40	6.00	3.60	0.10
0.5334	90.40	5.00	4.60	0.10
0.6858	91.40	4.00	4.60	0.10
0.8382	91.40	4.00	4.60	0.10
0.9906	91.40	4.00	4.60	0.10
1.143	90.40	5.00	4.60	0.00
1.2954	91.40	4.00	4.60	0.00
1.4478	91.40	4.00	4.60	0.10
1.6002	90.40	5.00	4.60	0.00
1.7526	91.40	5.00	3.60	0.00
1.905	89.40	6.00	4.60	0.00
2.0574	89.40	6.00	4.60	0.00
2.2098	89.40	6.00	4.60	0.00
2.3622	89.40	7.00	3.60	0.00
2.5146	90.40	6.00	3.60	0.00
2.667	87.40	9.00	3.60	0.00
2.8194	89.40	8.00	2.60	0.00
2.9718	76.40	11.00	12.60	0.00

% SAND SILT CLAY AND ORGANIC CARBON (OC) IN 1 CORE FROM EACH PLOT

PLOT 12

SOIL DEPTH (METERS)	SAND %	SILT %	CLAY %	OC %
0.0762	92.20	4.00	3.80	0.70
0.2286	92.20	4.00	3.80	0.10
0.381	91.20	5.00	3.80	0.10
0.5334	92.20	4.00	3.80	0.10
0.6858	90.20	6.00	3.80	0.00
0.8382	90.20	5.00	4.80	0.00
0.9906	90.20	4.00	5.80	0.10
1.143	90.20	4.00	5.80	0.10
1.2954	90.20	5.00	4.80	0.00
1.4478	90.20	6.00	3.80	0.00
1.6002	88.20	8.00	3.80	0.00
1.7526	88.20	6.00	5.80	0.00
1.905	89.20	5.00	5.80	0.00
2.0574	90.20	4.00	5.80	0.00
2.2098	88.20	8.00	3.80	0.00
2.3622	92.20	2.00	5.80	0.00
2.5146	78.20	12.00	9.80	0.00
2.667	82.20	8.00	9.80	0.00
2.8194	84.20	8.00	7.80	0.00
2.9718	86.20	8.00	5.80	0.00

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 1

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.7	3.3	2.8
10	4.2	5.3	4.5
15	5.5	7.6	6.0
20	6.9	10.2	8.3
30	9.7	14.4	11.1
40	12.5	16.8	14.5
50	15.6	21.8	18.2
60	18.7	26.5	22.0
70	21.8	31.9	25.5
80	24.9	36.7	29.1
90	28.5	42.2	33.0
100	31.6	47.2	36.7

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 2

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.0	2.0	2.3
10	2.9	3.3	3.4
15	3.7	4.5	4.3
20	4.8	5.5	5.3
30	6.5	8.3	7.7
40	8.3	10.7	9.7
50	10.2	13.2	12.1
60	12.1	15.8	14.4
70	14.1	18.2	16.8
80	16.0	20.8	19.1
90	17.9	23.8	21.3
100	20.1	26.4	23.8
110	22.2	29.0	26.4

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 3

	CUMULATIVE INFILTRATION (cm)				
	REPLICATE				
	1	2	3	4	5
MINUTES					
0	0.0	0.0	0.0	.	.
5	2.7	2.0	3.4	2.7	2.8
10	4.2	3.7	5.5	4.5	4.7
15	5.8	5.1	7.6	6.0	6.2
20	7.4	6.3	9.4	7.9	8.1
25	8.5	7.2	11.4	9.3	9.8
30	10.2	8.8	13.1	11.1	11.3
35	11.7	9.9	15.4	12.6	13.2
40	13.3	10.9	17.4	14.4	15.0
45	14.7	12.2	19.6	15.8	16.5
50	16.5	13.5	21.6	17.3	18.4
55	17.8	14.6	23.2	18.9	19.9

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 4

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.0	2.8	2.4
10	2.9	4.5	3.7
15	3.7	6.0	4.8
20	4.5	7.4	6.0
25	5.2	8.8	7.1
30	6.1	10.3	8.1
35	6.7	11.7	9.3

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 5

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	3.0	3.8	2.8
10	5.0	6.2	4.5
15	6.6	8.6	5.7
20	8.4	11.4	7.2
25	10.3	13.8	8.8
30	11.9	16.3	10.2

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 6

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.4	2.4	2.4
10	3.8	4.2	4.2
15	5.1	5.7	5.6
20	6.3	7.2	7.0
25	7.5	8.8	8.5
30	8.6	10.0	9.8

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 7

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.5	2.0	2.0
10	4.3	3.3	3.2
15	5.8	4.3	4.1
20	7.4	5.6	5.0
25	9.3	6.9	6.0
30	10.5	8.0	7.0
35	11.8	8.6	7.6
40	13.7	9.9	8.6
45	15.2	11.2	9.8
50	16.8	12.2	10.5
55	18.3	13.1	11.4
60	19.8	14.4	12.3

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 8

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	2.4	3.3	3.2
10	3.7	5.2	5.0
15	5.0	7.0	6.5
20	5.8	8.8	8.3
25	7.0	10.5	10.0
30	8.1	12.5	11.7

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 9

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	4.2	5.7	6.1
10	7.1	9.5	9.9
15	9.8	13.3	13.8
20	12.5	17.1	17.8
25	15.1	21.2	21.6
30	18.2	23.0	25.6

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 10

	CUMULATIVE INFILTRATION (cm)	
	REPLICATE	
MINUTES	2	3
0	0.0	0.0
5	3.4	3.2
10	4.6	4.8
15	5.7	6.2
20	7.2	8.3
25	8.4	9.9
30	9.7	12.1

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENT MADE IN DECEMBER, 1985

PLOT NUMBER: 11

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
0	0.0	0.0	0.0
5	3.3	2.5	3.0
10	5.0	4.1	4.6
15	6.3	5.2	6.0
20	8.1	6.5	7.5
25	9.5	7.9	8.8
30	10.9	9.0	10.2

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 1

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.8	2.2	1.8
2	3.0	3.4	3.2
3	3.8	4.3	4.1
4	4.8	5.5	5.1
5	5.6	6.7	6.0
7	6.9	8.1	7.6
9	8.3	9.7	9.0
11	9.7	11.3	10.5
13	10.9	12.8	12.1
15	12.2	14.6	13.5
17	13.5	16.0	15.2
19	14.7	17.1	16.5
21	15.9	18.7	18.0
23	17.3	20.3	19.6
25	18.4	21.6	21.0
27	19.6	.	22.2
29	20.7	.	.

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 2

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.1	1.4	1.5
2	2.3	2.5	2.5
3	3.0	3.0	3.4
4	4.1	3.8	3.9
5	5.0	4.5	4.8
7	6.5	5.6	5.8
9	8.0	6.6	7.1
11	9.4	7.6	8.3
13	10.9	8.6	9.4
15	12.3	9.7	10.4
17	14.0	10.9	11.9
19	15.4	11.8	13.1
21	16.8	13.0	14.1
23	18.2	14.0	15.1
25	19.6	15.4	16.4
27	.	16.4	.

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 3

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.4	1.3	0.6
2	2.4	2.3	1.6
3	3.0	2.9	2.3
4	3.6	3.2	2.9
5	3.8	3.6	3.3
7	4.6	4.3	3.8
9	5.5	5.0	4.3
11	6.3	5.7	5.1
13	7.0	6.6	5.7
15	7.9	7.6	6.7
17	8.6	8.4	7.4
19	9.7	9.4	8.3
21	10.4	10.4	9.0
23	11.4	11.4	10.0
25	12.3	12.5	10.9
27	13.3	13.3	12.1
29	14.2	14.2	13.0
31	15.1	15.4	13.8
33	16.0	.	14.9
35	.	.	15.8

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 4

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.6	2.8	2.0
2	2.4	3.9	3.0
3	3.3	4.8	3.9
4	4.1	5.6	4.8
5	4.7	6.7	5.7
7	6.3	8.5	7.1
9	7.7	10.5	8.6
11	9.3	12.3	10.2
13	10.8	13.8	11.7
15	12.2	15.4	13.2
17	13.7	17.1	14.7
19	15.4	18.8	16.1
21	16.9	20.2	17.8
23	18.3	22.1	19.2
25	19.6	23.9	20.5

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 5

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.6	2.0	2.2
2	2.7	2.9	3.3
3	3.6	3.7	4.3
4	4.5	4.3	5.6
5	5.3	4.8	6.7
7	6.6	6.2	8.4
9	7.9	7.2	10.2
11	9.3	8.6	11.8
13	10.4	9.8	13.3
15	11.7	11.2	14.9
17	13.0	12.2	16.3
19	14.2	13.5	17.8
21	15.5	14.6	19.3
23	16.9	15.9	20.6
25	18.5	17.0	22.2

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 6

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	2.2	1.6	1.9
2	3.2	2.8	3.2
3	3.6	3.6	4.1
4	4.5	4.2	5.0
5	5.1	4.8	5.8
7	6.3	6.0	7.1
9	7.5	7.1	8.6
11	8.8	8.3	10.2
13	10.0	9.4	11.6
15	11.2	10.5	12.8
17	12.3	11.6	14.5
19	13.6	12.7	15.8
21	14.9	13.7	17.0
23	16.0	14.9	18.7
25	17.3	16.0	19.8

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 7

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.3	1.8	2.0
2	2.3	2.8	3.0
3	3.2	3.7	3.8
4	3.9	4.6	4.8
5	4.7	5.5	5.7
6	5.6	.	.
7	.	6.6	7.4
8	7.2	.	.
9	.	8.1	9.3
10	9.0	.	.
11	.	9.5	11.2
12	10.9	.	.
13	.	11.1	13.1
14	12.6	.	.
15	.	12.7	15.1
16	14.4	.	.
17	.	14.1	17.1
18	16.4	.	.
19	.	15.5	19.2
20	18.2	.	.
21	.	17.0	21.0
22	20.3	.	.

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 7

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
23	.	18.5	23.0
24	22.2	.	.
25	.	19.9	25.0

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 8

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	2.2	1.8	1.4
2	2.7	2.5	2.2
3	3.2	3.2	2.8
4	3.6	3.8	3.8
5	4.1	4.3	4.6
7	5.3	5.7	5.7
9	6.5	6.9	7.1
11	7.6	8.1	8.8
13	9.0	9.5	10.3
15	10.4	10.8	11.8
17	12.3	12.3	13.6
19	13.8	13.7	15.2
21	15.2	15.2	17.0
23	16.9	16.9	18.7
25	18.4	18.7	20.5

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 9

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.3	1.5	0.6
2	2.3	2.7	1.5
3	2.9	3.4	2.4
4	3.4	4.2	3.0
5	4.1	4.6	3.6
7	5.0	5.3	4.7
9	5.8	6.1	5.5
11	6.6	6.9	6.2
13	7.5	7.5	7.0
15	8.5	8.4	7.6
17	9.5	9.1	8.6
19	10.4	9.9	9.4
21	11.6	10.5	10.4
23	12.5	11.4	10.9
25	13.7	12.3	11.7
30	16.4	14.5	14.0
35	.	16.6	16.0

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 10

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	0.8	0.9	1.1
2	1.3	1.9	1.9
3	1.8	2.5	2.5
4	1.9	3.0	2.9
5	2.3	3.6	3.3
7	2.9	4.6	4.1
9	3.8	5.2	4.7
11	4.7	6.0	5.5
13	5.5	6.6	6.1
15	6.3	7.2	6.7
17	7.0	8.0	7.5
19	7.9	8.9	8.3
21	8.6	9.9	9.0
23	9.5	10.7	9.9
25	10.7	11.6	10.7
30	13.1	13.8	12.8
35	15.6	16.1	15.2
40	18.3	18.5	17.3

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 11

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.8	1.8	1.8
2	2.4	2.9	2.5
3	3.0	4.1	3.0
4	3.9	5.1	3.6
5	4.7	6.1	4.3
7	6.2	7.9	5.5
9	7.6	9.7	6.9
11	9.3	11.7	8.3
13	11.1	13.3	9.8
15	13.0	15.1	11.4
17	14.6	17.0	13.1
19	16.9	18.8	14.7
21	18.5	20.8	16.8
23	20.6	22.7	18.0
25	.	24.6	19.7

SOIL INFILTRATION MEASUREMENTS MADE IN EACH PLOT
MEASUREMENTS MADE IN DECEMBER, 1990

PLOT NUMBER: 12

	CUMULATIVE INFILTRATION (cm)		
	REPLICATE		
	1	2	3
MINUTES			
1	1.6	1.5	1.8
2	3.0	2.0	3.3
3	4.1	2.4	3.9
4	4.6	2.8	4.6
5	5.1	3.4	5.2
7	5.8	4.1	6.5
9	6.6	4.8	7.5
11	7.5	5.8	8.9
13	8.4	6.9	10.2
15	9.4	7.9	11.7
17	10.4	8.9	13.1
19	11.3	9.8	14.2
21	12.6	10.7	15.9
23	13.8	11.7	17.5
25	14.7	12.8	18.9
27	.	14.1	.
29	.	15.0	.
30	17.6	.	22.9
31	.	16.0	.

APPENDIX III

METHOD FOR ANALYSIS OF ATRAZINE IN SOIL AND RAW DATA FOR GRAVIMETRIC WATER CONTENT, ATRAZINE AND TERBUTHYLAZINE CONCENTRATION OF EACH SOIL SAMPLE

ATRAZINE IN SOIL

Agriculture and Priority Pollutants Laboratories, Inc.

I. Sample Analysis

A. Weigh-out 100 grams of sample/ matrix into a 400ml beaker.

B. Add 50 grams of sodium-sulfate , one ml of internal standard and stir until mixture is homogenous. Add 150 mls of ethyl acetate and stir.

C Sonicate the sample for seven minutes. Stir the sample and then pour through #40 ashless filter paper into a 500 ml boiling flask.

D. Using 100 mls of ethyl acetate repeat 'C' above two more times.

E. Add boiling beads to the boiling flask and rotoevaporate at 65°C to dryness. Pipet five mls of ethyl acetate into the boiling flask and swirl. Remove sample for analysis.

II. Chromatography

A. Load the standards along with the samples, blanks and matrix spikes into the vial tray of the HP5890.
(See the STANDARDS PREPARATION appendix)

B. The following chromatigraphic conditions will be used.

1. Chromatigraph: HP5890
2. Column: 30m x 0.25mm SPB-5
   30m x 0.25mm SPB-35
   DETECTOR: NPD
3. Oven temperature:
   Initial Temp 67°C
   Initial Time 5 min
   Rate 20°c/min
   Final Temp 290°C
   Final Time 3.85 min
4. Chartspeed 2.0cm/min
5. Runtime stop: 20 min
6. Attenuation: 6
7. Threshold: 6

C. Special parameters are stored in wokfile#2 of the HP3392 integrator.

D. Initiation of the autosampling sequence starts by using the option 11 dialogs.

STUDY 65

READENT BLANKS

ATRAZINE MDL: 2 PPB

SAMPLE	DATE	ATRAZINE PPB
1	10/19/87	ND
2	10/20/87	ND
3	10/20/87	ND
4	10/23/87	ND
5	10/26/87	ND
6	10/28/87	ND
7	10/31/87	ND
8	11/3/87	ND
9	11/3/87	ND
10	11/3/87	ND
11	11/3/87	ND
12	11/4/87	ND
13	11/4/87	ND
14	11/4/87	ND
15	11/5/87	ND
16	11/6/87	ND
17	11/12/87	ND
18	11/12/87	ND
19	12/9/87	ND
20	12/12/87	ND
21	12/14/87	ND
22	12/15/87	ND
23	12/15/87	ND
24	12/17/87	ND
25	12/18/87	ND
26	1/8/88	ND
27	1/29/88	ND
28	1/30/88	ND
29	1/30/88	ND
30	2/1/88	ND
31	2/4/88	ND
32	2/17/88	ND
33	2/17/88	ND
34	2/17/88	ND
35	2/26/88	ND
36	2/26/88	ND
37	2/26/88	ND
38	2/26/88	ND
39	2/26/88	ND
40	2/26/88	ND
41	2/26/88	ND

STUDY 65

REAGENT BLANKS

ATRAZINE MDL: 2 PP

SAMPLE	DATE	ATRAZINE PPB
43	4/22/88	ND
44	4/22/88	ND
45	4/23/88	ND
46	4/25/88	ND
47	4/27/88	ND
48	4/27/88	ND
49	4/27/88	ND
50	4/28/88	ND
51	4/28/88	ND
52	4/29/88	ND
53	4/29/88	ND
54	4/30/88	ND
55	5/11/88	ND

STUDY 65

MATRIX BLANKS

ATRAZINE MDL: 2 PPB

SAMPLE	DATE	ATRAZINE PPB	
1	4/30/88	ND	
2	5/1/88	ND	
3	5/1/88	ND	
4	5/1/88	ND	
5	5/2/88	ND	
6	5/2/88	ND	
7	5/2/88	ND	
8	5/3/88	ND	
9	5/4/88	ND	
10	5/4/88	ND	
11	5/5/88	ND	
12	5/9/88	ND	
13	5/9/88	ND	
14	5/9/88	ND	REC'D 6/1/88
15	5/25/88	ND	

STUDY 65 ATRAZINE % RECOVERY
METHODOLOGY I

SPIKE PPB	15	150	1500			
	88.7	82.0	64.3			
	79.3	93.3	60.3			
	79.3	71.1	61.8			
	98.7	64.5	71.3			
	97.3	71.3	65.3			
	123.3	74.6	63.7			
	81.3	90.2	63.4			
	90.0	77.1	61.8	LOW AND	MEDIUM	
	84.6	79.6	64.0	MEDIUM	AND HIGH	OVERALL
	82.0	63.3	73.6	TOTALS	TOTALS	TOTALS
MEAN	90.5	76.7	65.0	83.6	70.6	77.4
VARIANCE	181.7	98.6	18.0	182.6	91.6	204.9
SD	13.5	9.9	4.2	13.5	9.6	14.6
SD X 2	27.0	19.9	8.5	27.0	19.1	29.1
CV	14.9	12.9	6.5	16.2	13.6	18.8
UPPER LIMIT	117.4	96.6	73.4	110.6	89.7	106.5
LOWER LIMIT	63.5	56.8	56.5	56.6	51.4	48.2

OCT 29.87 - METHODOLOGY RESULTS ALTERED DUE TO MIKE:
1- USING ONLY SPIKES DONE ON PRIMARY COLUMN
2- GOING BACK AND USING REFERENCE STANDARDS CLOSEST TO SPIKE TO DO CALCULATIONS

STUDY 65 ATRAZINE % RECOVERY
METHODOLOGY II

SPIKE PPB	15	150	1500			
	147.2	69.7	83.9			
	113.2	69.4	85.9			
	113.5	73.7	91.1			
	107.2	83.6	98.6			
	102.1	80.4	93.0			
	102.3	80.0	92.4			
	100.8	82.3	99.7			
	90.1	82.4	91.0			
	85.0	72.5	90.5			
	85.3	72.6	99.4			
	86.6	82.0	92.1			
	68.0	90.6	93.3			
	75.0	92.6	95.9	LOW AND MEDIUM TOTALS	MEDIUM AND HIGH TOTALS	OVERALL TOTALS
	53.0	92.5	101.2			
	74.5	102.3	99.7			
MEAN	93.6	81.6	93.8	87.7	87.8	89.7
VARIANCE	518.3	91.0	26.8	330.2	94.6	234.8
SD	22.8	9.5	5.2	18.2	9.7	16.3
SD X 2	45.5	19.1	10.4	36.3	19.4	32.6
CV	24.3	11.7	5.5	20.7	11.1	18.2
UPPER LIMIT	139.1	100.9	104.2	124.0	107.3	122.4
LOWER LIMIT	48.1	62.7	83.5	51.3	68.4	57.1

JAN 6.1988 - METHODOLOGY WAS RERUN TO CONFIRM FIRST METHODOLOGY RESULTS

METHODOLOGY I AND METHODOLOGY II COMBINED

STUDY 65
METHODOLOGY

ATRAZINE % RECOVERY

SPIKE PPB	15	150	1500			
	88.7	82.0	64.3			
	79.3	93.3	60.3			
	79.3	71.1	61.2			
	98.7	64.5	71.3			
	97.3	71.3	65.3			
	123.2	74.6	63.7			
	81.3	90.2	63.4			
	90.0	77.1	61.8			
	84.6	79.6	64.0			
	82.0	63.3	73.6			
	147.2	69.7	83.9			
	113.2	69.4	85.9			
	113.5	73.7	91.1			
	107.2	83.6	98.6			
	102.1	80.4	93.0			
	102.3	80.0	92.4			
	100.8	82.3	99.7			
	90.1	82.4	91.0			
	85.0	72.5	90.5			
	85.3	72.6	99.4			
	86.6	82.0	92.1			
	68.0	90.6	93.3			
	75.0	92.6	95.9	LOW AND MEDIUM TOTALS	MEDIUM AND HIGH TOTALS	OVERALL TOTALS
	53.0	92.5	101.2			
	74.5	102.3	99.7			
MEAN	92.7	79.7	82.3	86.0	81.0	84.8
VARIANCE	373.0	96.5	231.1	270.4	162.1	257.2
SD	19.3	9.8	15.2	16.4	12.7	16.8
SD X 2	38.6	19.6	30.4	32.9	25.5	33.5
CV	20.9	12.3	18.5	19.1	15.7	19.8
UPPER LIMIT	131.0	99.4	112.7	118.9	106.5	118.3
LOWER LIMIT	53.7	60.1	51.9	53.2	55.6	51.3

STUDY 65

ATRAZINE REPLICATE INJECTIONS

SAMPLE	1ST	2ND	3RD	MEAN	SD	CV
1	99.2	106.1	102.7	102.7	3.5	3.4
2	119.2	108.3	100.4	109.3	9.4	8.6
3	11.7	10.9	10.2	10.9	0.8	6.9
4	85.7	83.5	81.1	83.4	2.3	2.8
5	136.0	127.4	133.9	132.4	4.5	3.4
6	4.7	3.9	3.7	4.1	0.5	12.9
7	81.8	81.6	77.2	80.2	2.6	3.2
8	18.0	16.2	17.2	17.1	0.9	5.3
9	5.9	5.6	5.8	5.8	0.2	2.6
10	10.8	10.6	11.2	10.9	0.3	2.8
11	57.3	59.3	58.3	58.3	1.0	1.7
12	4.4	4.5	4.5	4.5	0.1	1.3
13	55.3	55.0	57.2	55.8	1.2	2.1
14	28.2	27.9	27.3	27.8	0.5	1.8
15	10.4	9.3	9.7	9.8	0.6	5.7
16	14.6	14.4	14.0	14.3	0.3	2.1
17	9.7	10.2	10.4	10.1	0.4	3.6
18	12.0	12.0	12.1	12.0	0.1	0.5
19	21.4	20.6	20.7	20.9	0.4	2.1
				MEAN CV		3.8

STUDY 65 QC MATRIX SPIKE DUPLICATES

ATRAZINE

	SPIKE PPB	% RECOVERY	MEAN % RECOVERY	RELATIVE % DIFFERENCE
PAIR 1	10	97.0		
		75.0	86.0	25.6
PAIR 2	10	111.0		
		79.0	95.0	33.7
PAIR 3	10	122.0		
		100.0	111.0	19.8
PAIR 4	10	74.0		
		57.0	65.5	26.0
PAIR 5	10	74.0		
		70.0	72.0	5.6
PAIR 6	25	85.6		
		80.8	83.2	5.8
PAIR 7	200	103.4		
		98.2	100.8	5.2
PAIR 8	200	83.8		
		83.0	83.4	1.0
PAIR 9	200	109.2		
		91.5	100.4	17.6
PAIR 10	200	85.6		
		80.9	83.3	5.6
PAIR 11	200	83.7		
		75.6	79.7	10.2
PAIR 12	200	62.6		
		56.9	59.8	9.5
PAIR 13	200	95.0		
		79.1	87.1	18.3
PAIR 14	200	86.5		
		84.2	85.4	2.7
PAIR 15	200	92.7		
		76.9	84.8	18.6
PAIR 16	200	77.9		
		76.7	77.3	1.6
PAIR 17	200	90.8		
		90.4	90.6	0.4
PAIR 18	200	95.8		
		75.9	85.9	23.2
PAIR 19	200	128.1		
		122.9	125.5	4.1
PAIR 20	200	102.5		
		102.2	102.4	0.3

PAIR 21	200	96.6		
		82.8	89.7	15.4
PAIR 22	200	92.9		
		71.2	82.1	26.4
PAIR 23	200	113.8		
		102.7	108.3	10.3 ----------
PAIR 24	50	102.8		
		96.2	99.5	6.6
PAIR 25	150	112.7		
		105.8	109.3	6.3
PAIR 26	50	92.0		
		78.2	85.1	16.2
PAIR 27	50	97.4		
		94.6	96.0	2.9
PAIR 28	50	89.8		
		86.4	88.1	3.9
PAIR 29	50	84.0		
		79.4	81.7	5.6
PAIR 30	50	93.6		
		82.8	88.2	12.2 ----------
PAIR 31	50	85.0		
		72.2	78.6	16.3
PAIR 32	50	95.6		
		85.4	90.5	11.3
PAIR 33	50	94.8		
		94.0	94.4	0.8
PAIR 34	50	90.4		
		80.8	85.6	11.2
PAIR 35	50	95.2		
		93.0	94.1	2.3
PAIR 36	50	90.8		
		88.4	89.6	2.7
PAIR 37	50	75.2		
		73.6	74.4	2.2 ----------
PAIR 38	50	110.0		
		104.6	107.3	5.0
PAIR 39	50	114.8		
		113.2	114.0	1.4
PAIR 40	50	108.0		
		99.6	104.3	8.0
PAIR 41	50	82.4		
		76.4	79.4	7.8
PAIR 42	50	86.0		
		83.4	84.7	3.1
PAIR 43	25	120.3		
		108.9	114.6	9.9
PAIR 44	25	106.2		
		96.0	101.1	10.1

PAIR 45	25	114.8		
		97.8	106.3	16.0
PAIR 46	25	111.2		
		96.3	103.8	14.4
PAIR 47	25	114.4		
		107.7	111.1	6.0
PAIR 48	25	123.9		
		112.0	118.0	10.1
PAIR 49	50	103.6		
		102.0	102.8	1.6
PAIR 50	50	116.8		
		106.8	111.8	8.9
PAIR 51	50	116.6		
		114.0	115.3	2.3
PAIR 52	50	98.0		
		97.0	97.5	1.0 ----------
	MEAN		93.6	9.5

STUDY 65

ATRAZINE DUPLICATE EXTRACTS

SAMPLE	1ST	2ND	MEAN	% DIFF
1	62.9	60.8	61.9	3.4
2	11.1	9.8	10.5	12.4
3	70.8	70.8	70.8	0.0
4	7.7	7.1	7.4	8.1
5	31.4	27.8	29.6	12.2
6	14.2	13.6	13.9	4.3
7	14.3	9.4	11.9	41.4
8	10.1	5.7	7.9	55.7
9	14.7	11.4	13.1	25.3
10	12.0	11.2	11.6	6.9
			MEAN % DIFF	17.0

STUDY 65 ATRAZINE BLIND SPIKES II

(SPIKED 11/10/87 AND 5/6/88)

SAMPLE #	ATRAZINE PPB	SPIKE PPB	% RECOVERY 10	50	100	
1	NA	BLANK				
2	LOST	50				
3	NA	BLANK				
4	9.3	10	93.0			
5	LOST	100				
6	7.6	10	76.0			
7	39.9	50		79.8		
8	78.8	100			78.8	
9	43.8	50		87.6		
10	11.5	10	115			
11	BROKEN					
12	8.6	10	86			
		MEAN	92.5	83.7	78.8	85.0
		STD	16.5			
		CV	17.9			

NA = NOT ANALYZED

PROCEDURE: 100g OF SOIL WERE SPIKED
APPL ANALYZED EXTRACTED ENTIRE 100g IN SPIKE CONTAINER

STUDY 65 ATRAZINE DISSIPATION STUDY

30 SAMPLES WERE SPIKED AT 100PPB LEVEL ON SEPT 25.1987
3 SAMPLES WERE EXTRACTED IMMEDIATELY
THEREAFTER 3 SAMPLES WERE EXTRACTED AFTER EACH SET OF
80 SAMPLES WAS ANALYZED

ATRAZINE IN PPB

EXTRACTION DATE	SAMPLE 1	SAMPLE 2	SAMPLE 3	MEAN	SD	CV
9/25/87 INITIAL SET	102.7	91.4	76.4	90.2	13.2	14.6
10/2/87 FIRST 80	114.8	105.8	109.3	110.0	4.5	4.1
10/14/87 SECOND 80	72.2	80.7	79.0	77.3	4.5	5.8
10/14/87 THIRD 80	105.7	122.1	91.7	106.5	15.2	14.3
11/5/87 FOURTH 80	124.0	126.1	118.9	123.0	3.7	3.0
12/21/87 FIFTH 80	117.2	120.8	119.1	119.0	1.8	1.5

CONCENTRATION OF ATRAZINE MEASURED IN BACKGROUND CORES
DATA FROM 1987 STUDY

	PLOT NUMBER		
	2	6	10
	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB
SOIL DEPTH (METERS)			
0.08	ND *	ND	ND
0.23	ND	ND	ND
0.38	ND	ND	ND
0.53	ND	ND	ND
0.69	ND	ND	ND
0.84	ND	ND	ND
0.99	ND	ND	ND
1.14	ND	ND	ND
1.3	ND	ND	ND
1.45	ND	ND	ND
1.6	ND	ND	ND
1.75	ND	ND	ND
1.9	ND	ND	ND
2.06	ND	ND	ND
2.21	ND	ND	ND
2.36	ND	ND	ND
2.51	ND	ND	ND
2.67	ND	ND	ND
2.82	ND	ND	ND
2.97	ND	ND	ND

*
None Detected at a minimum detection limit of 2 ppb

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	140.80	132.40	115.10	119.40
0.2286	37.50	61.90	27.00	14.80
0.381	24.60	43.30	12.50	14.90
0.5334	25.70	40.40	14.00	25.90
0.6858	37.60	36.90	10.90	15.60
0.8382	34.70	26.10	19.40	21.80
0.9906	38.90	27.20	19.70	10.20
1.143	40.90	11.10	15.60	10.10
1.2954	33.10	3.30	14.30	4.30
1.4478	26.50	0.00	10.60	6.70
1.6002	33.50	0.00	5.70	3.00
1.7526	39.00	0.00	7.70	0.00
1.905	7.20	19.10	0.00	5.40
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	4.40
2.3622	0.00	0.00	0.00	4.10
2.5146	0.00	3.00	2.00	0.00
2.667	2.20	0.00	2.10	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	2.30	0.00	2.80	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	61.90	42.60	76.50	39.40
0.2286	73.00	14.10	11.60	6.30
0.381	12.20	9.50	7.30	5.60
0.5334	5.40	8.30	6.50	6.10
0.6858	4.50	13.70	12.60	5.40
0.8382	6.70	10.80	7.00	7.90
0.9906	8.50	11.50	5.10	7.30
1.143	10.20	0.00	4.00	6.10
1.2954	12.30	6.20	3.10	6.20
1.4478	10.30	5.50	2.20	6.10
1.6002	9.10	6.20	2.30	8.30
1.7526	11.90	6.40	0.00	6.00
1.905	16.30	8.30	0.00	39.90
2.0574	13.20	3.60	0.00	18.90
2.2098	13.10	3.20	3.10	3.90
2.3622	9.60	15.60	0.00	2.90
2.5146	15.10	4.80	10.40	2.30
2.667	4.50	3.10	0.00	2.20
2.8194	3.10	2.90	0.00	12.80
2.9718	0.00	5.40	0.00	2.90

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	13.80	10.90	26.00	27.80
0.2286	12.20	2.40	19.30	7.80
0.381	3.90	3.80	3.70	6.40
0.5334	2.40	2.10	25.40	58.00
0.6858	3.10	37.00	3.20	55.30
0.8382	3.60	26.80	4.40	9.30
0.9906	4.40	0.00	5.10	12.20
1.143	3.10	4.10	5.50	9.30
1.2954	3.10	38.10	5.60	15.00
1.4478	10.50	4.30	7.70	15.70
1.6002	5.40	50.90	6.80	12.10
1.7526	4.10	4.00	6.70	20.90
1.905	6.30	3.40	4.80	19.20
2.0574	10.60	5.20	5.80	16.70
2.2098	7.10	19.20	11.30	14.80
2.3622	12.10	5.60	4.10	16.60
2.5146	6.20	8.00	43.40	16.80
2.667	4.20	9.50	4.90	15.70
2.8194	8.20	6.10	3.10	106.90
2.9718	8.10	8.00	3.50	198.80

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	8.40	2.80	3.30	2.20
0.2286	12.00	0.00	0.00	0.00
0.381	0.00	0.00	0.00	0.00
0.5334	0.00	0.00	0.00	0.00
0.6858	0.00	0.00	33.10	0.00
0.8382	0.00	0.00	0.00	0.00
0.9906	0.00	0.00	0.00	0.00
1.143	0.00	12.40	0.00	0.00
1.2954	1.40	0.00	0.00	0.00
1.4478	0.00	0.00	0.00	0.00
1.6002	0.00	0.00	0.00	0.00
1.7526	0.00	0.00	0.00	0.00
1.905	0.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	4.00	0.00	0.00
2.667	0.00	0.00	0.00	5.70
2.8194	0.00	0.00	2.50	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	2.70	3.80	4.90	0.00
0.2286	0.00	2.00	7.90	0.00
0.381	9.10	2.90	45.40	0.00
0.5334	0.00	0.00	11.90	0.00
0.6858	6.90	0.00	0.00	0.00
0.8382	0.00	0.00	0.00	0.00
0.9906	2.70	0.00	0.00	0.00
1.143	0.00	0.00	0.00	73.40
1.2954	0.00	0.00	0.00	5.30
1.4478	3.20	0.00	0.00	4.40
1.6002	2.40	0.00	0.00	0.00
1.7526	2.30	0.00	0.00	0.00
1.905	6.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	2.70	46.60	0.00	0.00
2.667	2.50	88.50	0.00	0.00
2.8194	4.70	50.20	0.00	0.00
2.9718	11.30	9.60	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	0.00	2.20	7.60	4.30
0.2286	0.00	0.00	32.80	5.50
0.381	0.00	0.00	0.00	2.00
0.5334	7.50	0.00	0.00	6.20
0.6858	0.00	0.00	3.70	6.70
0.8382	0.00	0.00	0.00	13.00
0.9906	0.00	0.00	4.50	9.50
1.143	0.00	0.00	0.00	14.00
1.2954	0.00	0.00	0.00	35.80
1.4478	0.00	0.00	0.00	2.10
1.6002	2.80	0.00	3.20	97.00
1.7526	0.00	0.00	0.00	24.30
1.905	0.00	0.00	0.00	10.30
2.0574	0.00	0.00	0.00	55.10
2.2098	0.00	0.00	0.00	4.10
2.3622	0.00	0.00	0.00	64.40
2.5146	0.00	0.00	0.00	20.50
2.667	0.00	0.00	8.40	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	5.20

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	116.50	69.50	44.30	14.70
0.2286	16.70	7.90	10.50	15.00
0.381	2.00	6.20	6.80	7.60
0.5334	6.70	3.80	4.40	11.20
0.6858	4.40	2.60	4.10	9.20
0.8382	22.30	2.30	5.90	19.70
0.9906	308.80	7.60	4.60	13.90
1.143	57.60	8.70	2.90	18.00
1.2954	25.50	10.50	2.90	10.50
1.4478	34.10	9.30	2.70	10.80
1.6002	30.80	9.40	3.50	11.00
1.7526	19.10	7.80	4.10	15.20
1.905	12.20	5.90	6.80	10.40
2.0574	3.80	4.80	8.80	11.80
2.2098	10.30	5.80	12.20	5.70
2.3622	NO SAMPLE	4.90	35.60	10.90
2.5146	3.20	5.30	11.70	4.70
2.667	6.30	5.30	11.30	3.10
2.8194	0.00	6.10	7.10	0.00
2.9718	4.60	3.20	9.80	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	70.80	55.80	29.60	20.50
0.2286	7.80	3.80	3.10	4.20
0.381	4.50	0.00	2.20	6.80
0.5334	3.60	0.00	3.10	9.00
0.6858	4.90	2.80	2.40	4.60
0.8382	6.10	6.40	2.30	7.30
0.9906	5.40	4.60	3.10	7.50
1.143	5.40	4.30	4.80	8.30
1.2954	6.30	4.20	5.50	9.20
1.4478	7.50	2.70	5.80	7.40
1.6002	8.00	3.30	5.70	8.20
1.7526	68.70	7.50	5.60	7.30
1.905	6.00	6.40	4.10	8.10
2.0574	9.90	6.10	12.40	6.10
2.2098	9.80	7.00	5.70	6.30
2.3622	10.50	9.10	8.20	4.80
2.5146	8.90	11.70	7.80	8.80
2.667	16.80	16.80	4.20	12.60
2.8194	19.40	9.20	4.10	12.60
2.9718	20.30	6.70	2.10	13.20

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	3.30	10.80	14.30	9.50
0.2286	0.00	0.00	2.40	0.00
0.381	0.00	0.00	3.70	0.00
0.5334	0.00	3.40	0.00	0.00
0.6858	0.00	0.00	0.00	0.00
0.8382	2.90	0.00	0.00	0.00
0.9906	3.80	12.40	0.00	0.00
1.143	0.00	3.00	0.00	2.70
1.2954	0.00	3.80	0.00	3.30
1.4478	2.20	3.60	2.00	2.40
1.6002	4.40	4.30	0.00	3.20
1.7526	0.00	5.00	2.00	4.50
1.905	0.00	3.90	2.30	7.00
2.0574	3.50	3.20	4.60	13.00
2.2098	6.70	59.00	5.80	10.40
2.3622	3.80	8.10	8.10	7.80
2.5146	8.80	9.80	6.40	7.50
2.667	4.50	23.10	7.50	10.10
2.8194	9.40	21.20	6.20	9.10
2.9718	7.40	10.90	8.20	9.80

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	NO SAMPLE	111.10	3.00	93.70
0.2286	38.80	80.20	17.10	20.50
0.381	6.20	107.70	16.40	12.00
0.5334	0.00	16.50	12.10	10.80
0.6858	0.00	10.40	13.00	3.90
0.8382	0.00	0.00	10.70	0.00
0.9906	10.30	0.00	9.00	0.00
1.143	0.00	0.00	6.60	0.00
1.2954	0.00	0.00	6.70	2.30
1.4478	0.00	0.00	6.50	0.00
1.6002	0.00	0.00	5.00	0.00
1.7526	0.00	0.00	6.40	0.00
1.905	0.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	0.00	0.00	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	384.00	19.30	17.50	78.20
0.2286	108.30	0.00	13.60	101.80
0.381	13.40	0.00	11.90	3.90
0.5334	3.10	0.00	13.10	4.90
0.6858	4.40	2.50	13.90	20.90
0.8382	2.50	0.00	10.70	10.00
0.9906	2.60	0.00	49.30	14.40
1.143	0.00	0.00	9.30	5.20
1.2954	20.40	0.00	8.30	9.00
1.4478	3.90	0.00	4.10	2.50
1.6002	8.20	0.00	2.40	3.50
1.7526	15.90	0.00	0.00	0.00
1.905	2.90	6.20	0.00	0.00
2.0574	8.30	0.00	0.00	3.90
2.2098	5.00	59.70	0.00	0.00
2.3622	0.00	0.00	0.00	9.80
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	261.00	0.00	0.00
2.8194	3.20	108.00	0.00	0.00
2.9718	0.00	99.30	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	PPB	PPB	PPB	PPB
SOIL DEPTH (METERS)				
0.0762	25.80	43.70	24.90	44.30
0.2286	7.20	90.20	24.30	32.90
0.381	0.00	27.80	10.70	139.20
0.5334	4.40	24.30	11.50	4.80
0.6858	7.60	28.90	12.30	42.90
0.8382	17.40	19.40	13.10	58.30
0.9906	29.40	6.10	9.60	6.40
1.143	49.20	8.40	7.90	2.80
1.2954	42.00	9.90	8.20	5.40
1.4478	23.10	44.20	6.40	3.80
1.6002	5.70	5.70	9.20	12.50
1.7526	0.00	35.90	8.50	14.90
1.905	0.00	32.90	0.00	2.80
2.0574	0.00	16.50	4.60	0.00
2.2098	0.00	7.20	2.30	0.00
2.3622	0.00	3.60	0.00	15.10
2.5146	0.00	2.60	0.00	5.20
2.667	0.00	3.00	0.00	109.40
2.8194	0.00	3.70	0.00	4.10
2.9718	0.00	2.00	0.00	12.20

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	101.70	109.90	115.00	116.90
0.2286	116.70	104.90	118.40	108.30
0.381	85.10	108.80	108.00	87.80
0.5334	79.40	100.20	104.60	129.00
0.6858	113.60	104.70	90.30	100.20
0.8382	70.00	99.30	110.80	103.90
0.9906	106.40	107.20	112.60	111.50
1.143	119.60	98.20	96.10	109.70
1.2954	103.50	99.40	106.10	82.60
1.4478	100.00	113.50	109.30	108.30
1.6002	88.00	98.80	101.20	119.60
1.7526	124.90	102.40	107.90	115.70
1.905	85.50	114.20	89.20	119.50
2.0574	84.90	114.50	97.00	111.80
2.2098	93.00	105.70	105.10	115.10
2.3622	92.50	92.50	109.20	119.20
2.5146	77.30	83.40	83.50	81.40
2.667	78.40	79.90	88.40	93.00
2.8194	86.70	95.60	83.70	105.70
2.9718	94.10	98.20	104.60	126.30

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	97.10	79.90	101.40	89.70
0.2286	96.20	87.50	110.80	81.10
0.381	106.60	90.60	104.00	76.40
0.5334	93.20	94.50	97.10	76.40
0.6858	92.90	89.00	105.00	87.70
0.8382	96.40	89.50	120.40	84.20
0.9906	92.40	92.50	103.40	87.40
1.143	97.10	93.20	98.00	79.60
1.2954	94.80	94.90	76.70	77.30
1.4478	97.20	89.20	82.00	97.40
1.6002	100.40	87.00	88.70	73.80
1.7526	95.30	95.80	90.10	72.10
1.905	88.40	93.40	98.10	84.20
2.0574	85.70	91.10	86.20	101.60
2.2098	86.10	88.70	75.20	89.80
2.3622	86.00	91.50	83.40	119.70
2.5146	90.80	95.00	83.40	78.30
2.667	86.20	89.90	91.10	90.50
2.8194	85.60	90.30	96.60	78.70
2.9718	78.10	86.10	71.00	83.00

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	93.90	103.60	100.40	126.60
0.2286	110.00	96.50	108.20	112.60
0.381	87.50	99.60	105.40	113.10
0.5334	87.10	103.40	128.00	93.00
0.6858	99.10	111.30	96.70	127.50
0.8382	127.00	89.90	96.10	115.30
0.9906	109.70	99.00	97.30	116.20
1.143	95.50	92.10	101.50	100.00
1.2954	93.40	96.10	97.80	120.10
1.4478	100.00	100.20	94.00	121.50
1.6002	113.00	87.50	90.70	93.00
1.7526	73.00	70.90	98.60	120.50
1.905	95.40	94.20	75.00	112.70
2.0574	103.30	100.10	76.60	106.50
2.2098	80.00	94.90	91.30	92.10
2.3622	72.30	74.00	100.40	98.60
2.5146	78.00	80.10	80.20	108.50
2.667	76.00	98.40	82.90	76.40
2.8194	80.00	76.10	78.50	97.80
2.9718	80.00	95.40	91.80	84.00

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	109.90	112.40	92.00	98.10
0.2286	112.80	120.70	97.00	84.40
0.381	98.20	106.50	101.50	72.60
0.5334	77.40	104.20	92.70	108.70
0.6858	119.60	102.90	94.20	100.00
0.8382	91.10	105.60	84.60	88.30
0.9906	79.80	105.40	106.10	98.10
1.143	76.70	114.00	88.20	98.10
1.2954	75.30	85.60	110.60	97.20
1.4478	76.60	90.70	81.10	94.40
1.6002	70.60	92.60	119.20	100.30
1.7526	76.20	94.30	86.40	86.70
1.905	89.40	87.90	83.10	116.10
2.0574	71.30	101.50	86.20	101.70
2.2098	87.60	106.30	88.30	101.70
2.3622	NO SAMPLE	113.50	90.50	102.60
2.5146	79.30	101.20	95.50	103.40
2.667	118.00	103.70	90.00	89.50
2.8194	118.00	87.90	102.80	90.90
2.9718	79.70	99.00	102.20	89.20

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	91.30	91.00	72.40	81.00
0.2286	92.50	88.30	83.70	78.70
0.381	117.40	85.70	98.70	78.50
0.5334	112.40	99.90	81.20	74.60
0.6858	90.00	95.20	88.50	90.10
0.8382	88.60	87.20	83.10	90.00
0.9906	90.70	103.60	99.20	85.80
1.143	90.30	103.90	83.50	91.80
1.2954	90.30	79.60	83.30	86.90
1.4478	92.30	81.10	79.60	92.30
1.6002	88.10	97.00	79.80	87.90
1.7526	90.50	104.30	76.20	86.20
1.905	94.30	101.00	74.20	99.10
2.0574	87.60	88.10	76.40	95.50
2.2098	83.20	78.40	79.60	103.40
2.3622	84.30	86.70	79.00	88.60
2.5146	87.10	75.80	89.70	105.20
2.667	91.10	78.40	76.80	104.70
2.8194	90.60	72.30	76.50	112.50
2.9718	86.90	72.10	85.50	99.70

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	84.50	91.70	100.90	122.60
0.2286	75.00	81.00	127.20	123.40
0.381	79.60	87.70	83.80	98.20
0.5334	112.30	102.90	111.10	98.50
0.6858	77.60	70.00	90.10	101.10
0.8382	75.50	70.90	108.80	96.00
0.9906	81.90	85.60	108.50	79.70
1.143	78.00	70.00	83.30	78.90
1.2954	90.00	99.30	70.20	97.60
1.4478	77.80	81.20	82.30	87.60
1.6002	81.70	109.00	92.20	112.80
1.7526	97.30	80.10	87.90	94.20
1.905	72.20	104.50	75.70	105.00
2.0574	116.80	100.40	102.70	99.50
2.2098	107.60	113.90	93.00	96.10
2.3622	105.10	91.00	94.30	96.30
2.5146	94.40	85.70	86.40	90.80
2.667	116.30	88.80	92.60	110.30
2.8194	111.20	97.40	88.00	87.30
2.9718	98.20	107.80	93.20	87.30

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	72.20	123.90	73.40	97.40
0.2286	82.70	105.10	89.40	129.30
0.381	71.50	5.60	100.10	93.80
0.5334	79.50	81.20	81.40	95.40
0.6858	73.40	77.90	88.30	112.10
0.8382	87.70	78.90	104.90	96.40
0.9906	87.90	103.10	109.70	108.70
1.143	110.60	100.70	97.60	128.60
1.2954	101.90	100.70	97.60	119.40
1.4478	93.20	98.40	87.00	117.10
1.6002	97.30	108.50	98.60	85.70
1.7526	106.70	106.70	99.00	94.10
1.905	92.60	86.60	115.20	102.70
2.0574	83.00	81.40	110.30	116.90
2.2098	90.70	85.10	127.20	103.90
2.3622	95.80	89.40	100.00	103.60
2.5146	91.50	106.70	100.90	90.70
2.667	103.00	108.60	85.70	104.00
2.8194	114.20	126.20	81.90	94.80
2.9718	97.20	93.70	89.20	85.20

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	91.60	81.50	76.40	85.50
0.2286	95.40	76.50	92.00	80.80
0.381	95.40	77.30	88.60	80.50
0.5334	103.50	75.40	89.50	80.10
0.6858	92.60	85.00	87.20	74.70
0.8382	102.30	95.20	95.80	86.60
0.9906	72.70	96.60	95.00	86.90
1.143	88.00	97.10	96.50	101.60
1.2954	91.00	94.70	94.50	102.70
1.4478	77.10	100.20	86.70	109.80
1.6002	89.60	96.60	91.60	104.80
1.7526	109.90	99.50	93.90	88.20
1.905	98.80	79.90	90.90	85.00
2.0574	86.70	87.50	80.60	81.20
2.2098	89.50	77.10	74.10	72.40
2.3622	103.10	91.70	82.60	95.40
2.5146	94.40	91.40	91.10	79.90
2.667	106.00	89.90	81.00	70.80
2.8194	92.50	87.40	76.80	114.80
2.9718	75.60	82.50	77.00	115.70

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	86.00	114.90	109.60	111.90
0.2286	98.50	75.80	111.40	110.70
0.381	121.10	106.80	120.00	96.40
0.5334	103.10	100.70	100.90	97.90
0.6858	94.40	100.00	83.40	85.30
0.8382	103.10	100.00	94.30	96.60
0.9906	110.90	96.00	101.10	94.50
1.143	73.90	98.00	90.10	98.30
1.2954	89.60	99.30	97.10	112.50
1.4478	96.40	104.30	95.40	80.50
1.6002	71.30	97.90	98.40	101.20
1.7526	109.20	97.90	100.00	110.60
1.905	79.00	103.30	94.60	92.20
2.0574	87.70	83.20	90.30	102.30
2.2098	125.00	105.90	92.90	88.20
2.3622	72.00	92.80	95.70	74.60
2.5146	75.00	86.80	84.10	72.20
2.667	93.80	101.70	96.40	78.70
2.8194	122.30	120.40	79.40	72.20
2.9718	78.90	102.30	98.20	87.90

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	NO SAMPLE	70.80	84.20	89.50
0.2286	79.10	98.60	87.90	87.50
0.381	84.70	101.80	81.60	96.00
0.5334	89.40	97.30	76.10	73.50
0.6858	82.90	118.00	80.30	90.00
0.8382	88.80	115.20	81.40	79.20
0.9906	83.00	117.10	78.90	79.00
1.143	70.40	109.40	85.60	87.80
1.2954	78.70	80.50	85.60	88.10
1.4478	100.00	119.20	85.60	84.40
1.6002	101.40	104.10	74.90	87.90
1.7526	78.60	119.30	83.20	83.50
1.905	84.20	79.30	98.90	111.10
2.0574	120.50	81.10	105.40	122.90
2.2098	92.10	120.10	98.90	114.80
2.3622	102.60	114.50	96.90	96.50
2.5146	70.30	90.80	123.70	100.60
2.667	72.20	90.80	82.60	88.40
2.8194	81.50	70.40	88.50	124.20
2.9718	78.70	75.10	72.60	124.20

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	111.60	87.50	76.30	74.80
0.2286	84.00	91.30	125.90	71.90
0.381	82.10	89.30	83.10	78.00
0.5334	84.10	88.60	97.70	75.10
0.6858	88.70	92.90	82.70	80.10
0.8382	92.90	93.50	83.10	92.20
0.9906	90.10	98.60	83.80	95.60
1.143	94.00	97.80	76.40	91.70
1.2954	94.20	90.70	81.00	94.70
1.4478	89.00	94.30	87.80	78.60
1.6002	98.20	105.40	81.60	86.70
1.7526	98.20	111.80	75.80	85.10
1.905	83.30	90.00	84.40	83.70
2.0574	87.60	90.80	87.60	83.70
2.2098	80.90	99.00	85.50	84.80
2.3622	93.40	87.10	81.70	76.50
2.5146	97.90	79.20	71.40	85.60
2.667	87.80	88.80	72.10	93.20
2.8194	80.60	87.20	72.80	76.50
2.9718	87.30	70.80	73.50	89.60

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	96.30	101.80	99.60	126.50
0.2286	122.40	100.50	84.00	99.10
0.381	88.10	97.90	98.90	107.80
0.5334	118.60	87.10	91.00	87.90
0.6858	92.80	87.00	95.20	124.30
0.8382	93.40	82.70	94.80	94.10
0.9906	89.70	80.70	99.90	92.70
1.143	95.10	77.70	86.60	116.60
1.2954	93.40	82.80	98.90	129.30
1.4478	89.50	88.00	93.20	127.70
1.6002	83.10	98.10	123.10	104.60
1.7526	93.00	89.50	103.80	111.30
1.905	100.50	95.60	104.40	122.50
2.0574	111.00	92.20	97.10	97.30
2.2098	104.50	84.90	109.80	120.50
2.3622	105.10	79.30	98.10	102.50
2.5146	88.70	84.10	96.20	98.20
2.667	73.90	85.50	86.90	114.10
2.8194	93.00	89.90	84.70	97.90
2.9718	120.60	90.30	94.40	110.90

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	4.00	4.50	4.40	5.50
0.2286	4.90	6.10	5.80	5.20
0.381	5.70	6.30	5.80	6.00
0.5334	6.10	6.60	6.00	6.20
0.6858	6.20	7.30	6.40	6.00
0.8382	6.30	6.70	6.30	6.00
0.9906	5.80	6.40	6.00	5.80
1.143	5.90	6.20	6.00	5.70
1.2954	7.40	5.90	5.90	6.00
1.4478	5.90	6.70	5.90	5.70
1.6002	8.20	6.80	7.80	5.90
1.7526	7.00	9.00	6.60	8.30
1.905	8.50	8.90	9.40	8.10
2.0574	8.30	9.80	9.30	7.70
2.2098	7.80	8.20	8.70	7.50
2.3622	9.50	8.40	7.60	8.00
2.5146	8.30	8.70	8.40	7.10
2.667	8.40	9.80	7.40	8.80
2.8194	9.50	8.40	11.00	8.80
2.9718	10.70	9.90	8.70	10.60

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	10.00	8.60	9.30	8.30
0.2286	11.60	7.20	6.90	6.00
0.381	6.40	7.00	5.90	5.50
0.5334	6.70	7.30	6.10	6.60
0.6858	6.30	7.30	5.70	7.30
0.8382	6.70	7.20	5.10	8.50
0.9906	5.70	6.80	6.40	7.30
1.143	6.40	7.10	6.20	6.10
1.2954	6.20	6.80	7.10	7.00
1.4478	5.00	7.60	7.40	6.90
1.6002	5.60	8.10	9.80	8.00
1.7526	7.10	10.00	10.00	8.10
1.905	7.90	10.10	12.30	9.40
2.0574	6.90	10.20	12.00	9.20
2.2098	8.10	9.80	12.90	8.70
2.3622	8.00	8.90	12.10	9.50
2.5146	8.70	9.40	13.50	9.70
2.667	9.20	10.90	13.40	11.10
2.8194	10.30	12.70	12.90	11.20
2.9718	9.90	11.50	11.10	10.10

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	9.00	8.90	12.20	8.00
0.2286	9.70	6.90	9.80	6.90
0.381	7.90	8.50	7.60	8.40
0.5334	8.70	7.00	8.40	8.30
0.6858	8.70	8.90	8.40	8.00
0.8382	7.50	6.60	8.80	6.90
0.9906	8.10	7.80	8.10	7.10
1.143	8.30	8.40	8.30	7.20
1.2954	10.30	7.90	9.40	8.10
1.4478	11.80	8.80	11.30	9.20
1.6002	10.50	9.80	11.40	9.50
1.7526	9.30	9.90	10.00	9.80
1.905	8.60	9.80	8.90	8.80
2.0574	9.90	8.90	10.10	8.40
2.2098	10.00	10.30	8.10	10.30
2.3622	10.20	11.60	10.60	10.90
2.5146	10.90	11.30	10.40	10.00
2.667	10.80	10.60	10.90	9.80
2.8194	10.70	9.20	10.30	10.00
2.9718	9.40	9.50	8.80	8.80

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	14.50	14.90	14.20	13.20
0.2286	12.70	10.70	17.10	9.90
0.381	9.90	9.30	7.40	8.70
0.5334	10.30	8.90	7.50	8.60
0.6858	10.30	9.80	7.60	7.70
0.8382	8.80	9.10	9.20	8.10
0.9906	7.60	8.60	7.50	7.60
1.143	7.40	7.40	7.30	6.70
1.2954	6.30	7.40	6.60	6.50
1.4478	8.80	7.40	6.50	6.00
1.6002	6.10	7.40	6.30	6.30
1.7526	6.40	7.80	6.90	6.70
1.905	7.30	8.40	7.30	8.30
2.0574	7.50	8.70	7.90	9.00
2.2098	7.70	9.50	8.30	9.00
2.3622	NO SAMPLE	8.90	7.20	8.60
2.5146	6.10	9.30	7.70	8.40
2.667	8.00	9.00	8.60	8.70
2.8194	7.90	10.80	9.70	11.20
2.9718	8.20	11.20	10.30	8.90

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	12.60	13.30	16.10	10.50
0.2286	8.40	8.30	12.60	7.50
0.381	8.90	7.90	12.90	7.20
0.5334	7.70	8.80	12.80	7.20
0.6858	8.90	7.50	11.20	13.10
0.8382	8.60	8.50	11.00	12.80
0.9906	8.50	8.10	7.20	12.40
1.143	8.50	7.20	7.80	12.10
1.2954	8.20	8.20	8.50	10.90
1.4478	8.50	7.00	9.00	11.40
1.6002	8.80	7.80	8.50	12.10
1.7526	8.10	7.30	8.80	13.20
1.905	7.70	8.00	8.30	12.10
2.0574	7.70	7.60	9.20	11.90
2.2098	7.90	6.80	8.20	13.30
2.3622	6.90	8.00	9.00	12.10
2.5146	6.80	7.70	8.10	8.90
2.667	8.50	10.10	9.40	9.20
2.8194	8.90	9.80	8.90	9.40
2.9718	9.00	9.60	9.60	11.30

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	11.00	23.50	19.50	16.40
0.2286	7.80	10.90	18.10	10.50
0.381	9.30	9.60	12.70	10.10
0.5334	9.50	10.00	12.10	10.10
0.6858	9.00	9.50	10.90	11.20
0.8382	12.50	9.50	11.20	11.20
0.9906	11.10	10.40	11.30	11.70
1.143	10.30	9.50	10.40	10.20
1.2954	11.00	10.50	10.20	9.60
1.4478	9.70	10.40	10.40	8.90
1.6002	8.80	11.10	10.50	8.60
1.7526	9.10	8.70	9.60	8.20
1.905	9.40	8.70	8.40	9.50
2.0574	10.30	8.40	10.10	11.10
2.2098	11.30	7.70	9.90	10.80
2.3622	11.60	7.40	9.20	10.20
2.5146	9.20	10.90	10.20	9.90
2.667	8.80	9.40	9.20	8.70
2.8194	7.50	7.20	7.40	8.20
2.9718	8.20	9.20	6.80	9.00

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE %	MOISTURE %	MOISTURE %	MOISTURE %
SOIL DEPTH (METERS)				
0.0762	5.60	4.70	4.90	4.30
0.2286	6.60	5.30	5.50	6.30
0.381	6.20	5.90	6.10	7.00
0.5334	6.40	6.50	6.10	5.90
0.6858	6.50	5.80	6.20	5.80
0.8382	5.00	5.60	6.70	5.50
0.9906	5.90	5.50	5.60	5.60
1.143	5.80	5.30	5.20	5.70
1.2954	6.00	5.20	5.00	5.10
1.4478	6.50	5.10	5.50	6.10
1.6002	7.00	5.60	7.70	7.70
1.7526	9.90	7.20	7.00	7.70
1.905	9.20	7.40	8.70	8.20
2.0574	9.30	7.70	8.00	7.60
2.2098	8.20	7.00	7.90	7.80
2.3622	7.90	6.80	7.80	7.20
2.5146	7.50	6.10	7.50	7.80
2.667	8.70	8.00	10.70	8.00
2.8194	10.10	10.30	9.80	9.90
2.9718	10.60	8.40	9.20	10.10

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	9.70	7.80	7.00	8.10
0.2286	6.10	6.30	5.90	7.30
0.381	6.30	6.10	6.90	8.30
0.5334	6.40	6.50	6.90	8.00
0.6858	5.70	6.70	7.80	7.00
0.8382	5.90	5.30	7.30	6.30
0.9906	5.70	7.00	7.80	6.50
1.143	5.20	6.10	6.50	6.50
1.2954	5.80	6.90	6.60	7.10
1.4478	5.70	8.40	8.30	7.90
1.6002	6.10	6.10	10.20	9.10
1.7526	7.20	7.90	8.70	9.50
1.905	9.10	8.60	7.70	8.80
2.0574	9.20	7.80	7.40	6.60
2.2098	9.30	7.50	7.80	8.10
2.3622	8.60	7.50	9.10	8.40
2.5146	7.90	8.60	8.50	8.90
2.667	9.90	9.60	9.90	10.10
2.8194	11.30	10.40	10.30	10.70
2.9718	11.30	6.50	10.20	10.20

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	6.60	6.80	8.10	7.40
0.2286	6.40	7.00	7.20	6.90
0.381	6.70	8.00	7.20	6.90
0.5334	7.50	7.70	8.60	7.60
0.6858	7.70	7.80	7.40	8.30
0.8382	7.00	7.70	8.10	8.20
0.9906	8.30	10.20	8.90	10.30
1.143	8.60	11.40	10.30	12.70
1.2954	8.60	10.70	10.00	12.70
1.4478	10.60	11.60	8.60	10.80
1.6002	11.70	9.90	9.00	9.90
1.7526	9.90	11.00	9.20	9.30
1.905	9.70	10.60	9.20	10.10
2.0574	8.80	10.00	10.50	10.10
2.2098	8.90	10.70	10.20	9.70
2.3622	9.30	10.30	10.30	10.00
2.5146	8.70	11.30	8.90	10.10
2.667	9.50	11.00	9.80	10.00
2.8194	9.40	10.30	8.40	10.20
2.9718	6.80	10.70	8.20	8.90

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	7.70	6.30	4.30	4.60
0.2286	7.90	9.00	5.30	5.50
0.381	5.80	6.20	6.30	6.10
0.5334	5.50	6.60	6.50	6.20
0.6858	5.30	6.60	6.70	6.10
0.8382	5.50	6.50	6.50	6.10
0.9906	5.90	6.10	6.60	6.20
1.143	5.30	6.10	4.80	5.90
1.2954	5.60	6.50	6.40	6.10
1.4478	7.60	6.30	6.30	5.90
1.6002	5.40	6.40	6.70	6.00
1.7526	5.10	6.30	6.70	6.00
1.905	6.70	9.10	7.50	6.30
2.0574	6.60	11.20	9.30	7.00
2.2098	6.60	10.50	10.10	7.40
2.3622	6.80	8.90	7.90	7.00
2.5146	5.80	10.70	8.20	6.30
2.667	5.90	10.20	8.80	6.50
2.8194	6.00	11.00	10.30	6.20
2.9718	7.50	11.70	8.80	7.20

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	8.40	8.10	10.30	9.10
0.2286	8.10	7.20	11.90	12.50
0.381	7.90	6.50	6.50	7.40
0.5334	7.50	6.80	11.40	6.90
0.6858	7.50	6.20	11.60	7.30
0.8382	7.10	6.10	6.70	7.10
0.9906	6.50	5.80	6.90	7.60
1.143	6.50	5.90	9.90	6.10
1.2954	6.20	5.90	6.30	6.40
1.4478	6.30	6.40	5.80	6.40
1.6002	6.20	5.40	5.80	6.50
1.7526	6.00	6.40	7.10	6.70
1.905	6.40	7.50	7.10	6.40
2.0574	3.90	7.90	6.70	6.60
2.2098	4.40	8.50	8.00	7.40
2.3622	5.10	6.60	6.20	7.90
2.5146	6.80	7.80	9.50	8.00
2.667	6.50	8.20	8.30	9.60
2.8194	7.60	7.60	7.70	11.50
2.9718	9.00	10.30	11.30	10.40

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	7.70	9.50	7.90	7.90
0.2286	6.40	8.60	7.90	7.60
0.381	6.80	7.90	7.90	7.00
0.5334	7.20	8.00	8.80	7.60
0.6858	7.50	8.00	8.30	7.60
0.8382	7.50	7.20	7.50	6.80
0.9906	6.70	6.90	7.10	5.00
1.143	6.50	6.40	6.90	6.20
1.2954	6.60	6.70	6.60	6.30
1.4478	7.80	6.60	7.90	7.20
1.6002	10.30	6.80	8.20	7.00
1.7526	9.10	6.90	8.80	7.30
1.905	9.40	8.00	7.80	8.30
2.0574	8.00	8.60	8.50	7.70
2.2098	9.80	5.50	8.50	7.80
2.3622	9.40	9.20	9.00	8.50
2.5146	10.40	12.00	9.50	9.50
2.667	9.60	11.80	10.50	11.50
2.8194	9.00	12.40	10.10	10.50
2.9718	8.60	10.30	8.40	9.90

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	168.00	198.00	168.00	304.00
0.2286	211.00	54.50	32.50	65.20
0.381	61.60	50.50	35.30	58.70
0.5334	42.60	48.50	48.60	49.60
0.6858	48.00	54.40	68.10	26.60
0.8382	50.10	66.60	62.70	18.00
0.9906	54.80	27.20	65.80	28.00
1.143	48.70	11.60	53.90	31.40
1.2954	57.00	0.00	48.70	34.70
1.4478	49.20	0.00	41.70	23.90
1.6002	54.40	0.00	35.30	13.60
1.7526	42.90	0.00	31.60	4.70
1.905	30.30	0.00	35.50	0.00
2.0574	25.50	0.00	22.20	0.00
2.2098	33.90	0.00	26.40	0.00
2.3622	31.90	0.00	29.50	0.00
2.5146	15.50	0.00	28.90	0.00
2.667	22.70	0.00	28.20	0.00
2.8194	3.00	0.00	20.30	0.00
2.9718	0.00	0.00	18.40	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	80.10	198.00	212.00	175.00
0.2286	15.00	77.00	48.00	49.80
0.381	15.60	24.80	30.90	24.00
0.5334	14.80	28.90	25.00	31.10
0.6858	15.40	26.70	35.70	21.30
0.8382	28.70	35.00	33.60	21.20
0.9906	29.00	44.20	29.70	14.80
1.143	44.20	44.90	41.30	9.80
1.2954	24.70	47.10	35.40	6.30
1.4478	55.80	42.00	30.20	6.90
1.6002	50.10	35.90	29.20	6.30
1.7526	56.20	48.10	0.00	6.90
1.905	62.40	35.90	20.20	3.00
2.0574	58.80	39.00	0.00	4.00
2.2098	64.50	19.40	7.90	3.10
2.3622	60.00	7.60	0.00	0.00
2.5146	56.50	7.10	0.00	0.00
2.667	27.40	0.00	0.00	0.00
2.8194	44.70	0.00	0.00	0.00
2.9718	56.70	0.00	0.00	2.30

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	38.30	74.30	25.50	13.50
0.2286	8.10	55.90	9.80	2.80
0.381	8.50	23.00	8.90	3.70
0.5334	12.80	17.00	6.80	6.60
0.6858	12.70	19.20	10.00	6.60
0.8382	15.90	22.00	15.70	8.50
0.9906	18.20	17.30	15.40	11.30
1.143	18.70	14.40	17.30	9.60
1.2954	22.10	21.40	16.50	16.40
1.4478	29.10	22.00	12.60	16.30
1.6002	31.10	17.90	18.70	21.00
1.7526	40.80	6.40	24.30	22.90
1.905	39.80	0.00	25.70	28.80
2.0574	41.90	0.00	19.30	30.20
2.2098	45.40	0.00	26.50	40.80
2.3622	38.90	0.00	29.20	38.50
2.5146	42.00	0.00	28.40	27.30
2.667	49.20	0.00	22.30	36.40
2.8194	44.20	0.00	16.60	52.80
2.9718	49.40	0.00	3.60	47.90

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	5.00	2.10	0.00	14.70
0.2286	2.20	0.00	0.00	0.00
0.381	0.00	0.00	0.00	0.00
0.5334	0.00	0.00	0.00	3.80
0.6858	0.00	3.40	0.00	4.00
0.8382	0.00	3.50	0.00	0.00
0.9906	0.00	0.00	0.00	2.60
1.143	0.00	0.00	0.00	0.00
1.2954	0.00	0.00	0.00	2.10
1.4478	0.00	0.00	0.00	2.30
1.6002	0.00	0.00	0.00	0.00
1.7526	0.00	0.00	0.00	0.00
1.905	0.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	0.00	0.00	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	0.00	1.20	2.10	0.00
0.2286	0.00	0.00	0.00	0.00
0.381	0.00	0.00	0.00	3.90
0.5334	0.00	0.00	0.00	51.00
0.6858	0.00	0.00	0.00	6.20
0.8382	0.00	0.00	0.00	0.00
0.9906	0.00	0.00	0.00	0.00
1.143	0.00	0.00	0.00	0.00
1.2954	0.00	0.00	0.00	0.00
1.4478	0.00	0.00	0.00	0.00
1.6002	0.00	0.00	0.00	0.00
1.7526	0.00	0.00	0.00	2.10
1.905	0.00	0.00	0.00	2.20
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	0.00	0.00	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	0.00	0.00	0.00	30.90
0.2286	0.00	0.00	0.00	9.90
0.381	0.00	0.00	0.00	8.00
0.5334	0.00	0.00	0.00	0.00
0.6858	0.00	0.00	0.00	0.00
0.8382	0.00	0.00	0.00	0.00
0.9906	0.00	0.00	0.00	0.00
1.143	0.00	0.00	0.00	0.00
1.2954	0.00	0.00	0.00	0.00
1.4478	0.00	0.00	0.00	0.00
1.6002	0.00	0.00	0.00	0.00
1.7526	0.00	0.00	0.00	0.00
1.905	0.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	0.00	0.00	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	97.00	354.00	196.00	124.00
0.2286	14.00	28.20	241.00	22.50
0.381	12.50	29.00	49.40	16.10
0.5334	14.90	36.80	49.60	18.80
0.6858	23.10	40.40	60.60	25.20
0.8382	28.60	48.80	57.50	25.50
0.9906	24.00	56.40	55.90	26.00
1.143	26.60	62.50	62.10	28.90
1.2954	42.20	68.80	62.50	31.40
1.4478	60.00	70.70	86.20	35.50
1.6002	65.60	61.30	105.00	48.20
1.7526	61.60	48.00	98.00	62.50
1.905	89.70	5.30	77.60	75.50
2.0574	107.30	3.80	80.90	66.10
2.2098	79.80	3.20	46.30	72.40
2.3622	88.60	0.00	20.00	63.30
2.5146	72.60	0.00	20.40	82.20
2.667	100.80	0.00	19.60	77.40
2.8194	36.70	0.00	13.00	60.80
2.9718	15.70	0.00	7.20	38.90

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	128.00	103.00	125.00	247.00
0.2286	33.80	17.70	25.50	12.40
0.381	36.90	20.90	15.10	14.50
0.5334	17.90	21.10	3.00	7.10
0.6858	10.80	28.10	9.20	7.00
0.8382	2.00	32.60	7.90	2.70
0.9906	0.00	24.80	0.00	0.00
1.143	0.00	4.20	0.00	0.00
1.2954	0.00	0.00	0.00	0.00
1.4478	0.00	0.00	0.00	0.00
1.6002	0.00	2.30	0.00	0.00
1.7526	0.00	2.70	0.00	0.00
1.905	0.00	0.00	0.00	0.00
2.0574	0.00	0.00	0.00	0.00
2.2098	0.00	0.00	0.00	0.00
2.3622	0.00	0.00	0.00	0.00
2.5146	0.00	0.00	0.00	0.00
2.667	0.00	0.00	0.00	0.00
2.8194	0.00	0.00	0.00	0.00
2.9718	0.00	0.00	0.00	0.00

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	344.00	103.00	14.50	133.00
0.2286	25.60	110.00	19.80	40.10
0.381	21.40	51.70	9.60	39.20
0.5334	17.90	40.10	16.20	63.30
0.6858	17.80	24.80	11.70	63.40
0.8382	13.70	20.20	13.60	77.90
0.9906	7.80	19.90	15.50	52.90
1.143	0.00	20.50	29.10	51.10
1.2954	0.00	18.20	33.90	40.10
1.4478	0.00	17.60	36.50	27.40
1.6002	0.00	20.90	31.70	25.50
1.7526	0.00	22.30	35.20	7.90
1.905	0.00	18.40	31.80	2.70
2.0574	0.00	20.10	27.50	0.00
2.2098	0.00	10.20	25.30	0.00
2.3622	0.00	11.40	20.10	2.10
2.5146	0.00	3.50	10.20	3.00
2.667	0.00	0.00	3.80	0.00
2.8194	0.00	0.00	4.20	0.00
2.9718	0.00	0.00	3.80	2.60

CONCENTRATION OF ATRAZINE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	ATRAZINE	ATRAZINE	ATRAZINE	ATRAZINE
	ppb	ppb	ppb	ppb
SOIL DEPTH (METERS)				
0.0762	105.00	80.90	24.90	32.80
0.2286	17.60	109.00	19.60	56.80
0.381	15.30	16.10	11.30	46.30
0.5334	19.40	15.70	16.20	18.00
0.6858	18.20	10.30	14.50	9.50
0.8382	32.90	6.90	13.00	8.80
0.9906	49.70	13.10	12.90	10.00
1.143	66.10	14.30	16.30	8.30
1.2954	82.10	10.30	21.10	10.40
1.4478	108.00	20.20	23.90	9.20
1.6002	113.00	21.30	26.80	10.30
1.7526	130.00	14.40	42.10	6.50
1.905	104.00	25.60	31.00	7.60
2.0574	86.30	32.10	35.60	11.50
2.2098	84.40	56.30	33.80	10.50
2.3622	99.50	51.00	23.50	11.80
2.5146	159.00	49.30	28.50	6.00
2.667	104.00	6.30	29.30	3.30
2.8194	53.50	8.60	8.70	0.00
2.9718	64.30	15.40	14.50	0.00

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	109.8	93.6	76.8	84.0
0.2286	90.5	98.2	92.8	81.1
0.381	120.1	102.8	90.6	76.6
0.5334	101.4	98.1	101.3	76.4
0.6858	95.3	85.3	88.2	88.0
0.8382	89.9	87.0	91.5	98.5
0.9906	86.0	88.4	94.0	91.5
1.143	85.0	84.7	90.4	97.3
1.2954	85.5	84.8	97.4	97.3
1.4478	84.2	84.6	90.9	93.9
1.6002	85.1	87.4	84.2	86.9
1.7526	78.1	88.2	84.9	95.8
1.905	96.0	87.0	94.3	87.6
2.0574	93.9	83.3	85.0	87.3
2.2098	92.1	84.2	80.7	83.7
2.3622	92.5	81.0	87.3	86.7
2.5146	93.4	91.8	85.7	91.5
2.667	94.0	83.5	85.3	89.0
2.8194	102.7	79.5	87.9	82.5
2.9718	86.2	84.3	94.7	85.6

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	91.7	116.3	103.8	101.3
0.2286	93.2	115.3	100.5	104.2
0.381	95.0	98.3	97.3	101.4
0.5334	91.8	104.3	97.7	107.5
0.6858	81.3	82.4	80.2	90.1
0.8382	89.7	85.7	77.8	90.7
0.9906	84.2	81.8	87.8	84.6
1.143	89.8	81.5	85.1	87.0
1.2954	93.2	90.6	88.4	88.2
1.4478	92.1	83.1	86.3	86.0
1.6002	81.2	86.0	85.4	91.5
1.7526	84.2	88.7	84.5	91.5
1.905	85.6	84.5	91.6	83.2
2.0574	88.8	89.8	89.5	80.7
2.2098	93.7	85.2	87.3	81.2
2.3622	86.9	83.9	100.4	92.0
2.5146	86.4	88.3	85.8	86.8
2.667	84.3	85.6	80.3	94.5
2.8194	85.8	83.0	88.9	92.6
2.9718	88.2	83.8	88.4	96.4

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	103.5	111.7	100.4	103.5
0.2286	110.6	116.3	96.2	99.5
0.381	109.0	117.4	119.6	110.9
0.5334	107.1	99.9	100.8	108.0
0.6858	88.1	92.5	78.2	82.1
0.8382	87.0	91.8	90.4	89.2
0.9906	85.4	92.1	79.0	95.8
1.143	89.9	91.6	80.3	84.7
1.2954	94.7	89.7	82.0	86.0
1.4478	93.8	93.9	78.5	89.6
1.6002	89.7	91.1	87.4	92.1
1.7526	88.3	91.4	78.6	92.4
1.905	94.1	88.4	89.3	97.3
2.0574	91.1	87.6	86.5	89.3
2.2098	89.4	89.8	85.9	91.2
2.3622	84.8	91.6	94.8	88.8
2.5146	87.5	83.6	95.5	92.0
2.667	84.1	84.3	92.6	90.3
2.8194	84.8	89.5	96.4	91.1
2.9718	88.4	88.7	84.2	89.5

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	102.3	100.2	93.5	99.1
0.2286	97.9	102.6	94.2	100.2
0.381	106.0	93.1	94.3	96.2
0.5334	97.7	92.6	91.0	96.6
0.6858	95.6	100.2	93.9	89.8
0.8382	90.4	99.1	91.7	87.4
0.9906	91.3	96.5	86.3	90.3
1.143	93.8	93.0	89.8	90.2
1.2954	94.3	94.5	98.0	93.5
1.4478	88.7	98.5	92.5	92.9
1.6002	85.3	97.7	83.2	93.8
1.7526	85.0	87.2	82.6	91.5
1.905	91.1	91.7	104.5	80.8
2.0574	90.5	94.5	91.5	100.0
2.2098	87.4	97.4	98.2	94.5
2.3622	92.0	93.3	91.9	87.8
2.5146	88.4	97.9	91.5	94.6
2.667	87.7	96.7	92.5	94.6
2.8194	92.5	86.9	88.6	84.0
2.9718	88.4	92.7	87.7	89.4

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	91.0	91.1	96.7	119.6
0.2286	89.4	94.0	102.3	115.8
0.381	96.8	101.0	102.4	117.3
0.5334	103.4	96.1	93.3	114.4
0.6858	95.7	88.5	99.2	93.0
0.8382	95.0	79.3	83.7	90.5
0.9906	94.0	80.6	88.6	87.3
1.143	100.5	84.1	95.5	81.1
1.2954	104.8	88.9	89.1	89.3
1.4478	95.1	88.6	106.8	91.0
1.6002	95.4	84.8	115.2	96.3
1.7526	96.3	85.9	115.9	97.7
1.905	88.5	89.3	98.0	97.0
2.0574	81.9	88.8	100.5	96.1
2.2098	85.4	90.7	90.8	88.9
2.3622	93.5	88.4	88.6	88.8
2.5146	95.3	98.4	87.3	87.9
2.667	98.2	94.9	77.5	90.4
2.8194	103.7	95.7	89.8	88.1
2.9718	103.9	97.4	83.1	88.2

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	86.7	96.6	100.0	103.6
0.2286	124.2	102.7	129.2	99.4
0.381	97.8	105.8	90.3	114.5
0.5334	93.1	114.9	115.8	92.1
0.6858	95.4	100.4	90.5	90.2
0.8382	93.5	88.3	83.8	85.1
0.9906	96.0	98.1	88.4	83.3
1.143	92.7	94.3	89.9	77.9
1.2954	98.2	99.4	94.4	90.1
1.4478	94.0	102.8	90.4	87.3
1.6002	97.6	100.3	93.3	91.2
1.7526	94.8	95.8	88.9	88.2
1.905	87.1	90.9	99.4	92.3
2.0574	82.7	100.2	95.8	91.6
2.2098	94.3	81.9	87.7	95.7
2.3622	90.3	88.0	83.7	84.9
2.5146	90.9	86.9	80.0	93.5
2.667	83.2	87.8	88.2	84.7
2.8194	83.2	85.6	89.3	85.8
2.9718	96.1	73.5	91.0	76.7

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	96.6	70.7	121.4	91.5
0.2286	75.8	78.9	93.6	82.2
0.381	74.0	91.2	98.8	79.7
0.5334	75.3	101.1	99.0	84.3
0.6858	99.1	97.5	103.4	95.0
0.8382	112.3	109.6	103.5	94.6
0.9906	101.2	104.1	93.4	92.1
1.143	101.7	103.2	94.6	101.1
1.2954	99.6	103.0	91.0	97.6
1.4478	95.5	100.8	91.1	99.8
1.6002	91.2	96.0	100.1	99.0
1.7526	91.9	92.9	93.9	91.9
1.905	93.1	82.9	98.6	94.9
2.0574	94.8	83.4	107.4	95.4
2.2098	93.6	80.1	109.9	93.4
2.3622	96.0	100.2	85.5	63.3
2.5146	90.2	97.4	109.3	94.4
2.667	106.2	94.9	98.2	93.2
2.8194	99.0	91.6	100.4	86.9
2.9718	99.9	82.9	99.2	90.6

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	85.4	101.6	79.8	111.9
0.2286	81.7	115.8	87.8	84.2
0.381	70.6	81.4	79.9	83.9
0.5334	85.6	73.8	73.5	81.3
0.6858	94.9	95.5	89.5	98.2
0.8382	95.2	99.2	88.5	82.4
0.9906	96.7	91.2	91.9	88.1
1.143	91.4	99.4	96.5	89.5
1.2954	92.3	90.1	97.7	81.7
1.4478	92.6	86.7	92.3	79.4
1.6002	89.6	102.8	91.4	81.0
1.7526	95.2	99.1	97.2	83.9
1.905	100.5	92.0	87.5	91.4
2.0574	104.7	94.2	89.0	94.7
2.2098	100.9	89.3	88.8	94.1
2.3622	103.4	87.8	85.2	96.4
2.5146	104.3	87.0	84.3	91.1
2.667	105.3	89.0	87.1	92.2
2.8194	111.6	88.6	85.4	108.3
2.9718	105.1	98.1	89.8	100.7

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	118.6	102.4	108.8	87.9
0.2286	99.4	101.7	75.4	83.5
0.381	96.1	100.5	96.9	76.7
0.5334	88.7	108.8	96.5	90.2
0.6858	90.0	93.6	95.6	100.6
0.8382	96.8	89.3	92.5	107.4
0.9906	100.8	87.4	85.7	87.2
1.143	95.9	93.5	89.8	106.6
1.2954	91.5	90.5	95.2	90.3
1.4478	96.4	93.9	91.3	90.8
1.6002	97.1	90.7	99.6	93.9
1.7526	94.6	88.8	102.2	89.2
1.905	86.8	98.1	80.4	91.2
2.0574	86.8	86.2	80.4	84.5
2.2098	87.3	89.6	97.5	88.4
2.3622	90.8	87.6	97.3	92.8
2.5146	90.3	97.0	99.7	93.5
2.667	79.5	91.2	98.4	93.1
2.8194	90.6	97.6	93.5	90.5
2.9718	92.0	91.3	95.7	90.5

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	85.1	84.0	82.8	86.5
0.2286	75.8	82.6	105.6	93.8
0.381	82.8	90.0	94.5	91.2
0.5334	70.7	82.2	90.2	84.6
0.6858	103.5	104.1	96.0	98.3
0.8382	102.7	99.4	97.5	96.0
0.9906	98.3	98.8	94.1	94.9
1.143	97.6	100.1	96.0	96.0
1.2954	99.9	102.1	97.7	97.6
1.4478	95.7	98.9	98.6	101.0
1.6002	91.3	98.5	96.1	93.3
1.7526	93.5	94.8	94.9	105.1
1.905	91.0	94.4	97.1	96.3
2.0574	91.6	108.7	95.1	97.5
2.2098	92.9	88.2	99.3	94.7
2.3622	92.6	103.7	90.1	89.4
2.5146	94.4	105.7	91.6	84.6
2.667	96.7	107.4	87.5	88.3
2.8194	95.7	99.7	84.8	89.2
2.9718	86.7	104.3	95.2	100.0

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	72.2	90.8	84.3	102.5
0.2286	84.0	97.5	91.7	104.0
0.381	80.3	86.9	93.0	92.1
0.5334	80.4	86.7	90.1	94.9
0.6858	94.7	93.2	87.1	97.5
0.8382	97.6	90.0	88.0	98.7
0.9906	89.8	92.6	88.3	99.4
1.143	85.8	88.8	91.0	99.3
1.2954	90.4	86.3	90.2	98.2
1.4478	88.5	91.7	92.1	103.2
1.6002	93.2	93.6	86.6	95.7
1.7526	89.5	97.3	90.3	96.5
1.905	100.9	97.6	89.1	92.9
2.0574	89.6	87.6	86.3	89.3
2.2098	105.8	100.3	87.2	91.4
2.3622	103.5	94.9	92.9	92.2
2.5146	88.4	100.5	83.4	94.7
2.667	92.9	97.2	92.0	88.7
2.8194	88.8	112.0	91.4	92.5
2.9718	86.0	87.4	87.4	92.6

TBZ RECOVERED (%) FROM A STANDARD ADDITION MADE TO EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	TBZ	TBZ	TBZ	TBZ
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	97.3	106.7	94.1	102.5
0.2286	102.3	110.8	101.2	97.0
0.381	86.8	96.5	82.3	96.0
0.5334	101.2	88.0	88.1	87.7
0.6858	91.5	92.8	92.7	88.4
0.8382	95.0	92.5	89.4	87.3
0.9906	96.5	83.7	88.4	86.2
1.143	95.7	86.6	90.4	84.5
1.2954	98.4	85.6	94.3	90.2
1.4478	99.6	84.8	93.3	91.9
1.6002	99.8	91.2	89.6	94.9
1.7526	98.9	94.8	86.7	93.3
1.905	94.5	87.5	83.2	91.7
2.0574	92.1	85.7	91.5	97.5
2.2098	94.8	87.6	92.3	95.9
2.3622	95.0	90.6	94.8	91.7
2.5146	98.9	91.0	91.7	93.0
2.667	97.6	90.1	90.4	89.1
2.8194	95.2	88.3	91.0	87.5
2.9718	97.2	87.0	94.0	87.9

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	6.00	7.30	6.70	6.80
0.2286	4.60	5.50	5.30	5.90
0.381	6.50	6.00	5.90	6.10
0.5334	6.30	6.00	6.50	6.60
0.6858	6.60	6.10	6.40	6.70
0.8382	5.90	6.50	6.40	6.40
0.9906	6.30	6.00	6.20	6.00
1.143	6.20	6.10	6.40	5.60
1.2954	5.70	6.20	6.80	6.20
1.4478	5.30	6.20	6.20	6.20
1.6002	6.10	6.30	6.50	7.00
1.7526	8.10	6.70	8.20	8.80
1.905	9.00	6.60	8.60	9.40
2.0574	7.10	7.40	9.60	9.30
2.2098	8.80	8.90	9.20	9.20
2.3622	8.10	8.80	8.90	7.80
2.5146	7.70	7.60	9.20	7.10
2.667	7.60	8.00	9.80	8.40
2.8194	9.20	10.50	10.80	9.50
2.9718	10.10	10.80	11.30	8.70

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	5.90	6.90	7.40	7.90
0.2286	5.70	5.60	5.50	6.00
0.381	6.50	6.70	5.60	7.20
0.5334	7.50	7.10	6.50	7.80
0.6858	8.00	8.50	6.80	7.50
0.8382	7.00	9.10	6.60	7.00
0.9906	6.60	8.60	6.10	6.60
1.143	6.90	7.80	6.20	7.00
1.2954	6.60	8.60	6.40	7.00
1.4478	9.20	10.30	6.70	7.00
1.6002	8.90	9.90	7.70	8.30
1.7526	9.40	11.40	8.10	8.40
1.905	9.70	8.40	7.80	9.00
2.0574	8.40	8.20	7.00	9.30
2.2098	8.90	9.20	7.30	9.10
2.3622	8.10	9.60	7.80	8.60
2.5146	8.90	9.60	9.70	8.40
2.667	9.10	9.40	9.40	10.10
2.8194	9.00	9.80	10.10	10.30
2.9718	9.30	10.20	11.20	10.40

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	6.00	7.80	7.50	6.80
0.2286	5.30	6.20	6.20	6.30
0.381	7.00	7.20	6.20	7.60
0.5334	9.10	7.20	6.90	8.60
0.6858	8.30	8.20	8.20	8.10
0.8382	12.20	9.30	9.60	8.30
0.9906	10.10	8.50	10.40	9.60
1.143	10.30	8.90	11.30	8.80
1.2954	10.10	10.10	12.30	10.60
1.4478	10.10	10.00	10.40	10.90
1.6002	8.90	10.70	10.70	10.10
1.7526	9.30	10.00	10.60	9.50
1.905	10.60	10.90	10.70	8.70
2.0574	9.70	9.80	9.50	10.40
2.2098	8.30	10.00	10.30	10.60
2.3622	7.80	8.90	10.00	9.90
2.5146	7.70	10.80	11.20	10.30
2.667	8.70	10.40	10.70	10.40
2.8194	7.50	10.80	9.40	11.30
2.9718	10.60	9.40	9.20	10.00

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	11.20	10.60	8.70	8.40
0.2286	17.50	7.80	10.20	7.20
0.381	7.70	8.40	7.70	7.00
0.5334	8.00	7.70	6.10	7.00
0.6858	2.50	7.90	7.70	8.30
0.8382	2.70	7.70	7.60	8.30
0.9906	2.80	8.50	7.90	8.00
1.143	3.30	8.10	7.70	8.20
1.2954	2.50	7.70	7.70	8.40
1.4478	7.50	7.50	8.10	8.00
1.6002	7.40	8.20	7.80	7.70
1.7526	7.60	9.10	8.10	8.30
1.905	7.00	10.30	8.20	8.40
2.0574	7.80	9.40	9.60	8.50
2.2098	8.50	8.10	8.90	8.00
2.3622	7.30	8.40	8.30	10.20
2.5146	7.80	7.70	8.50	9.60
2.667	8.10	8.90	7.90	8.60
2.8194	9.00	9.20	6.50	9.90
2.9718	8.30	9.00	6.50	9.40

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	9.00	8.80	9.60	12.40
0.2286	7.70	7.00	7.80	9.60
0.381	7.50	8.00	7.20	10.00
0.5334	7.50	8.70	8.30	9.20
0.6858	8.10	7.50	9.80	9.60
0.8382	7.80	7.80	8.80	9.10
0.9906	8.10	7.50	7.80	10.10
1.143	7.70	7.60	7.80	11.70
1.2954	7.30	7.50	8.30	10.20
1.4478	11.60	7.30	7.90	10.20
1.6002	7.80	7.80	8.10	9.90
1.7526	8.80	8.10	8.20	10.20
1.905	8.50	9.50	8.30	11.70
2.0574	8.00	8.50	10.30	9.10
2.2098	8.00	7.50	8.50	8.60
2.3622	8.70	8.40	7.80	8.20
2.5146	9.00	7.90	7.70	8.10
2.667	9.30	9.40	7.50	8.70
2.8194	8.80	10.20	9.20	9.30
2.9718	8.30	8.60	10.40	10.10

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE %	MOISTURE %	MOISTURE %	MOISTURE %
SOIL DEPTH (METERS)				
0.0762	12.70	10.80	11.00	4.50
0.2286	9.70	8.40	9.90	6.80
0.381	9.50	9.10	8.90	8.20
0.5334	10.20	9.30	9.20	9.80
0.6858	10.10	9.40	8.80	10.50
0.8382	9.70	8.70	8.70	9.10
0.9906	9.90	8.80	8.80	9.70
1.143	11.40	9.40	9.10	11.00
1.2954	11.00	10.80	10.00	10.50
1.4478	10.90	9.80	9.90	11.50
1.6002	11.00	10.20	10.30	10.40
1.7526	10.60	9.10	9.20	10.10
1.905	10.50	8.50	11.70	9.30
2.0574	10.10	10.10	10.00	8.70
2.2098	10.50	10.30	11.20	7.80
2.3622	9.20	9.90	10.70	10.50
2.5146	9.80	10.20	10.40	10.20
2.667	9.50	11.50	10.30	10.00
2.8194	9.50	10.40	9.60	8.50
2.9718	9.50	10.30	10.00	7.30

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE %	MOISTURE %	MOISTURE %	MOISTURE %
SOIL DEPTH (METERS)				
0.0762	6.60	7.30	5.20	6.40
0.2286	6.00	5.80	8.10	6.30
0.381	6.20	6.80	5.70	6.70
0.5334	6.30	6.90	6.30	7.50
0.6858	6.20	6.90	6.50	6.30
0.8382	5.80	6.10	6.00	5.70
0.9906	5.90	6.10	5.70	6.20
1.143	6.10	6.00	5.70	6.20
1.2954	5.30	5.70	5.70	6.40
1.4478	5.90	5.70	6.00	6.30
1.6002	7.50	6.00	6.20	6.20
1.7526	6.70	5.80	7.90	6.70
1.905	7.60	5.20	7.40	7.10
2.0574	8.20	7.50	7.90	8.20
2.2098	7.80	8.70	8.00	7.70
2.3622	8.40	8.10	9.00	7.50
2.5146	8.90	7.20	7.70	7.10
2.667	8.30	7.30	7.30	7.90
2.8194	8.60	7.60	9.30	6.70
2.9718	8.80	9.70	8.60	9.40

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE %	MOISTURE %	MOISTURE %	MOISTURE %
SOIL DEPTH (METERS)				
0.0762	7.30	7.50	8.10	8.20
0.2286	7.10	5.70	8.10	7.20
0.381	7.20	7.10	7.20	8.10
0.5334	6.70	6.90	7.30	8.00
0.6858	6.60	7.20	6.10	7.30
0.8382	6.50	6.50	6.60	6.80
0.9906	7.20	8.00	6.10	7.30
1.143	8.00	10.10	7.30	8.40
1.2954	8.30	9.20	7.10	8.70
1.4478	8.60	8.70	6.40	11.30
1.6002	7.30	8.30	9.00	10.50
1.7526	9.00	8.40	7.10	10.30
1.905	6.90	7.60	8.70	9.20
2.0574	7.40	8.10	8.40	8.00
2.2098	7.70	7.60	8.90	8.70
2.3622	8.10	10.40	9.20	9.40
2.5146	9.40	8.50	10.00	10.30
2.667	11.20	10.20	10.90	10.30
2.8194	10.20	8.90	11.10	10.40
2.9718	11.80	9.10	11.00	11.10

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	7.20	6.60	6.10	6.00
0.2286	7.70	5.90	5.90	6.30
0.381	8.80	6.90	7.00	6.80
0.5334	9.00	8.10	7.00	7.50
0.6858	7.70	9.10	7.60	7.20
0.8382	7.60	12.80	7.90	8.20
0.9906	10.40	13.30	11.70	10.40
1.143	11.00	7.00	11.40	10.30
1.2954	11.70	11.50	12.20	9.20
1.4478	11.50	13.40	9.40	10.10
1.6002	10.00	11.10	10.40	9.20
1.7526	9.80	11.60	11.00	9.10
1.905	12.40	10.90	9.20	9.40
2.0574	12.00	9.30	8.60	9.30
2.2098	11.30	10.30	8.60	9.30
2.3622	9.60	11.10	7.10	8.80
2.5146	9.50	11.10	7.00	8.50
2.667	11.00	8.60	7.20	8.40
2.8194	11.50	8.90	7.00	8.00
2.9718	10.50	7.00	7.40	9.10

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	8.30	8.00	8.70	8.70
0.2286	6.90	6.00	7.30	7.00
0.381	6.70	6.50	7.10	6.70
0.5334	6.60	6.10	6.00	6.20
0.6858	6.80	6.90	6.10	6.60
0.8382	6.70	7.20	5.90	6.70
0.9906	6.30	6.60	5.60	6.30
1.143	6.20	6.30	5.60	6.10
1.2954	6.10	6.20	5.60	6.00
1.4478	6.00	5.90	5.70	5.80
1.6002	5.90	5.20	5.80	5.80
1.7526	5.90	6.70	6.00	6.00
1.905	6.90	8.60	6.80	7.70
2.0574	9.70	7.20	7.80	7.20
2.2098	7.80	6.10	8.30	7.20
2.3622	6.80	5.60	8.80	6.90
2.5146	5.60	5.50	8.30	7.60
2.667	5.60	5.70	8.60	6.80
2.8194	6.50	5.40	8.40	6.70
2.9718	7.30	7.90	9.30	7.20

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	10.20	9.00	9.80	11.00
0.2286	8.00	8.30	8.20	9.10
0.381	7.20	7.30	8.80	8.50
0.5334	7.40	8.00	8.50	7.80
0.6858	7.70	7.80	8.30	7.80
0.8382	7.80	7.40	7.90	7.80
0.9906	7.50	7.20	7.60	7.40
1.143	7.70	7.40	7.60	7.30
1.2954	8.00	7.20	7.20	7.50
1.4478	7.70	7.20	6.90	7.50
1.6002	7.70	7.10	6.20	7.10
1.7526	8.40	7.60	7.70	7.10
1.905	7.90	8.30	7.40	7.20
2.0574	8.20	7.90	8.30	7.20
2.2098	7.40	8.30	8.60	8.10
2.3622	8.70	8.20	8.70	7.80
2.5146	7.90	7.90	8.50	8.90
2.667	10.00	9.70	8.40	8.40
2.8194	10.40	9.90	9.40	10.20
2.9718	9.10	9.90	10.70	9.70

MOISTURE CONTENT (%) OF EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	MOISTURE	MOISTURE	MOISTURE	MOISTURE
	%	%	%	%
SOIL DEPTH (METERS)				
0.0762	10.20	9.00	10.80	10.40
0.2286	7.60	7.90	7.40	11.60
0.381	8.30	9.40	8.00	9.20
0.5334	8.80	9.40	8.80	9.40
0.6858	8.30	8.30	9.60	9.10
0.8382	7.60	8.20	10.80	8.10
0.9906	8.00	7.90	9.70	7.90
1.143	7.80	7.90	10.20	7.80
1.2954	8.00	7.60	11.00	7.90
1.4478	8.60	9.00	12.60	8.40
1.6002	8.40	8.40	12.90	8.20
1.7526	9.20	9.00	10.90	8.90
1.905	9.30	9.60	10.30	9.40
2.0574	9.70	8.70	9.70	9.40
2.2098	10.10	9.20	9.10	9.10
2.3622	11.00	9.70	10.50	9.70
2.5146	10.80	10.30	9.70	9.70
2.667	10.40	8.90	9.60	10.90
2.8194	11.00	8.60	8.30	10.10
2.9718	11.10	7.90	9.90	9.40

APPENDIX IV
METHODS FOR DETERMINATION OF BROMIDE AND CHLORIDE IN SOIL AND RAW DATA FOR THEIR CONCENTRATION IN EACH SOIL SAMPLE

BROMIDE IN SOIL

EQUIPMENT

100 ML VOLUMETRIC FLASKS - 1 PER STANDARD
125 ML ERLENMEYER FLASKS - 1 PER SAMPLE
50 ML BEAKERS - 1 PER SAMPLE
2 L VOLUMETRIC FLASK
ORION SINGLE JUNCTION REFERENCE ELECTRODE #900100
ORION BROMIDE SELECTIVE ELECTRODE #943500
FISHER MODEL 825MP pH METER
FILTER FUNNELS AND STAND
2 50 ML BURETTES AND BURETTE STAND
BALANCE WITH RESOLUTION TO 0.00g
SHAKER
12.5 CM #42 WHATMAN FILTER PAPERS
PARAFILM
10 ML VOLUMETRIC PIPET
25 ML VOLUMETRIC PIPET
1 - 5 ML FINNPIPET

CHEMICALS

ORION REFERENCE ELECTRODE FILLING SOLUTION #90-00-01 (SAT. W/ AgCl)
ORION BROMIDE STANDARD SOLUTION #943506 (0.1M NaBr = 7990 PPM)
ORION IONIC STRENGTH ADJUSTOR SOLUTION #940011 (5M NaNO3)

PROCEDURE

1) PREPARE STANDARDS ONCE A WEEK

STOCK SOLUTIONS:

100 PPM Br STOCK SOLUTION

WITH A 25 ML VOLUMETRIC PIPET
MEASURE 25 MLS OF 0.1M NaBr (7990 PPM) INTO A 2 L
VOLUMETRIC FLASK AND ADD WATER TO EQUAL 2 L

10 PPM Br STOCK SOLUTION

WITH A 10 ML VOLUMETRIC PIPET
MEASURE 10 MLS OF 100 PPM Br STOCK SOLUTION INTO A 100 ML
VOLUMETRIC FLASK AND ADD WATER TO EQUAL 100 MLS
WRITE DATE ON CONTAINERS

BROMIDE IN SOIL PROCEDURE CONT'D

STANDARDS:

1 PPM AND 10 PPM Br STANDARDS

USE A 100 ML VOLUMETRIC FLASK FOR EACH STANDARD
USE 1 - 5 ML FINNPIPET AND 10 ML VOLUMETRIC PIPET

1 PPM -ADD 1 ML OF 100 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA
10 PPM -ADD 10 ML OF 100 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA

BRING VOLUME UP TO 100 ML IN EACH
WRITE DATE ON CONTAINERS

0.1 PPM, 0.2 PPM, 0.3 PPM, 0.4 PPM, 0.5 PPM Br STANDARDS

USE A 100 ML VOLUMETRIC FLASK FOR EACH STANDARD
USE 1 - 5 ML FINNPIPET

0.1 PPM -ADD 1 ML OF 10 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA
0.2 PPM -ADD 2 ML OF 10 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA
0.3 PPM -ADD 3 ML OF 10 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA
0.4 PPM -ADD 4 ML OF 10 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA
0.5 PPM -ADD 5 ML OF 10 PPM Br STOCK SOLUTION AND 2 ML OF 5M ISA

BRING VOLUME UP TO 100 ML IN EACH
WRITE DATE ON CONTAINERS

2) PREPARE SAMPLES

-WEIGH OUT 25.00 g OF SOIL INTO 125 ML ERLENMEYER FLASK
RECORD SAMPLE # AND FLASK # ON DATA SHEET FOR EACH SAMPLE

-ADD 50 MLS OF 0.1M ISA (TO MAKE 0.1M ISA, ADD 40 ML OF 5M $NaNO_3$ TO WATER IN A 2 L FLASK AND BRING TO VOLUME) TO EACH FLASK, DISPENSING ISA FROM A BURETTE

-COVER TOP OF EACH FLASK WITH PARAFILM AND PUT ON SHAKER FOR 30 MINUTES AT APPROXIMATELY 2200 RPM

FILTER SAMPLE THROUGH # 42 WHATMAN FILTER PAPER
INTO LABELLED 50 ML FLASKS

BROMIDE IN SOIL PROCEDURE CONT'D

3) CALIBRATE METER

-FOLLOW CALIBRATION INSTRUCTIONS FOR METER AND DO A 2 POINT CALIBRATION WITH THE 1 PPM AND 10 PPM Br STANDARDS OR USE THE 0.5 PPM AND 5 PPM STANDARDS
MAKE SURE THE DIFFERENCE IN THE MILLIVOLT READINGS BETWEEN THE TWO STANDARDS IS 57 PLUS OR MINUS 2

-MAKE MILLIVOLT READINGS IN THE NONLINEAR RANGE USING THE 0.5 PPM, 0.4 PPM, 0.3 PPM, 0.2 PPM, AND 0.1 PPM Br STANDARDS

READ A BLANK STANDARD USING THE 0.1M ISA USED TO PREPARE THE SAMPLES

4) RECORD DATA

-RECORD ALL CALIBRATION DATA INCLUDE THE DATE AND THE TEMPERATURE
MAKE SURE THE TEMPERATURE DOESN'T VARY MORE THAN ONE DEGREE CELSIUS FROM TIME OF CALIBRATION UNTIL THE LAST SAMPLE IS READ.

*** QUALITY CONTROL FOR BROMIDE ANALYSIS ***

1) RUN A DUPLICATE SAMPLE WITH EVERY SET

15% RELATIVE PERCENT DIFFERENCE WILL BE ACCEPTABLE

2) CALIBRATION CHECK

WHILE RUNNING A SET OF SAMPLES, AFTER EVERY 5TH SAMPLE, READ THE 0.5 PPM STANDARD AND COMPARE TO ITS FIRST READING, IF THE SUBSEQUENT READINGS ARE WITHIN 5% OF THE FIRST THEN THEY ARE ACCEPTABLE. IF THERE IS MORE THAN A 5% DIFFERENCE, THEN THE INSTRUMENT NEEDS TO BE RECALIBRATED BEFORE MORE READINGS ARE TAKEN.

3) RUN ONE MATRIX SPIKE SAMPLE DAILY

PREPARE SPIKE AS FOLLOWS:

> 25g OF SOIL THAT HAS BEEN PREVIOUSLY FOUND TO HAVE NO BROMIDE
> 50ml OF 1.0 PPM BROMIDE STANDARD (WHICH INCLUDES ISA)

SHAKE, FILTER, AND READ . . . RECORD RESULTS

STUDY: 65
DATE SAMPLED: 10/87

LAB: CSUF

QC FOR BROMIDE ANALYSIS IN SOIL
DUPLICATES

PLOT	CORE	DATE RUN	READING 1 MV OR PPM	READING 2 MV OR PPM	RELATIVE % DIFFERENCE
1	2	12/21/87	167.0	164.3	1.6
2	2	12/28/87	0.95	0.94	1.1
3	2	12/23/87	188.7	184.8	2.1
4	2	12/23/87	1.07	1.03	3.9
5	2	12/30/87	169.3	167.2	1.3
6	2	12/31/87	178.4	176.9	0.8
7	2	1/4/87	173.2	166.1	4.3
8	2	1/6/87	171.4	170.3	0.6
9	2	1/7/87	174.7	162.2	7.7
10	2	1/19/87	166.6	165.5	0.7
11	2	1/21/87	179.9	175.1	2.7
12	2	1/22/87	163.3	163.2	0.1
				MEAN	2.2

STUDY: 65
DATE SAMPLED: 10/87

LAB: CSUF

QC FOR BROMIDE ANALYSIS IN SOIL
DUPLICATES

PLOT	CORE	DATE RUN	READING 1 MV OR PPM	READING 2 MV OR PPM	RELATIVE % DIFFERENCE
1	3	2/11/88	167.9	159.9	5.0
2	3	2/2/88	170.30	168.90	0.8
3	3	2/3/88	160.4	159.1	0.8
4	3	2/18/88	167.90	164.40	2.1
5	3	2/22/88	171.6	169.3	1.4
6	3	2/23/88	171.7	171.1	0.4
7	3	2/24/88	165.3	159.3	3.8
8	3	2/25/88	160.4	160.2	0.1
9	3	2/25/88	160.6	158.3	1.5
10	3	2/26/88	161.7	152.8	5.8
11	3	2/27/88	169.1	169.0	0.1
12	3	3/14/88	180.6	178.6	1.1
				MEAN	1.9

STUDY: 65
DATE SAMPLED: 10/87

LAB: CSUF

QC FOR BROMIDE ANALYSIS IN SOIL
DUPLICATES

PLOT	CORE	DATE RUN	READING 1 MV OR PPM	READING 2 MV OR PPM	RELATIVE % DIFFERENCE
1	4	3/21/88	168.0	163.5	2.8
2	4	3/23/88	174.00	172.70	0.8
3	4	3/24/88	158.6	156.2	1.5
4	4	3/30/88	151.10	141.50	6.8
5	4	3/30/88	159.5	158.5	0.6
6	4	4/2/88	163.5	161.9	1.0
7	4	4/4/88	154.3	150.9	2.3
8	4	4/8/88	166.0	163.5	1.5
9	4	4/12/88	162.1	162.1	0.0
10	4	4/13/88	158.0	152.4	3.7
11	4	4/13/88	166.9	166.4	0.3
12	4	4/19/88	167.1	165.3	1.1
				MEAN	1.9

CONCENTRATION OF BROMIDE MEASURED IN BACKGROUND CORES
DATA FROM 1987 STUDY

	PLOT NUMBER		
	2	6	10
	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM
SOIL DEPTH (METERS)			
0.08	ND *	ND	ND
0.23	ND	ND	ND
0.38	ND	ND	ND
0.53	ND	ND	ND
0.69	ND	ND	ND
0.84	ND	ND	ND
0.99	ND	ND	ND
1.14	ND	ND	ND
1.3	ND	ND	ND
1.45	ND	ND	ND
1.6	ND	ND	ND
1.75	ND	ND	ND
1.9	ND	ND	ND
2.06	ND	ND	ND
2.21	ND	ND	ND
2.36	ND	ND	ND
2.51	ND	ND	ND
2.67	ND	ND	ND
2.82	ND	ND	ND
2.97	ND	ND	ND

* None Detected at a minimum detection limit of 0.4 ppm

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.10	2.10	1.40	1.60
0.2286	0.40	0.00	0.00	0.40
0.381	0.40	0.40	0.40	0.40
0.5334	0.40	0.40	0.00	0.60
0.6858	0.80	0.60	0.40	0.60
0.8382	0.40	0.80	0.40	0.80
0.9906	0.40	2.60	0.40	1.60
1.143	0.60	6.20	0.40	2.00
1.2954	1.00	10.40	0.60	2.90
1.4478	1.20	14.70	0.80	3.90
1.6002	3.10	15.10	2.10	5.40
1.7526	5.10	3.10	5.80	6.30
1.905	5.40	0.80	5.30	5.10
2.0574	1.70	0.40	3.90	3.90
2.2098	4.60	0.60	1.50	4.10
2.3622	4.30	0.00	2.60	2.20
2.5146	4.30	0.40	2.70	1.50
2.667	6.00	0.00	2.50	1.30
2.8194	6.80	0.40	2.70	1.10
2.9718	6.90	0.40	3.30	0.60

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.40	0.00	1.00
0.2286	0.00	0.00	0.00	0.60
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.40
0.6858	0.00	0.40	0.00	0.40
0.8382	0.00	0.40	0.00	0.40
0.9906	0.40	0.40	0.00	0.60
1.143	0.60	0.40	0.40	0.40
1.2954	0.60	0.40	0.40	0.40
1.4478	0.40	0.40	1.20	0.40
1.6002	0.00	0.40	2.10	0.60
1.7526	0.00	0.60	2.10	1.00
1.905	0.40	0.60	2.00	1.10
2.0574	1.30	0.80	3.40	1.50
2.2098	1.20	1.00	3.60	1.80
2.3622	2.30	1.50	3.80	1.50
2.5146	4.90	1.40	3.20	1.60
2.667	1.70	2.00	2.00	1.90
2.8194	6.00	3.40	1.30	2.00
2.9718	1.40	4.10	0.80	1.70

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.00	0.00	0.80
0.2286	0.00	0.00	0.00	0.40
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.00
0.6858	0.00	0.00	0.00	0.60
0.8382	0.00	0.00	0.00	0.60
0.9906	0.00	0.00	0.00	0.60
1.143	0.00	0.00	0.00	0.40
1.2954	0.00	0.00	0.00	0.40
1.4478	0.00	0.00	0.40	0.60
1.6002	0.00	0.00	0.00	0.60
1.7526	0.00	0.00	0.00	0.40
1.905	0.00	0.00	0.00	0.60
2.0574	0.00	0.00	0.00	0.40
2.2098	0.40	0.00	0.40	0.80
2.3622	1.10	0.00	1.20	1.20
2.5146	1.00	0.40	1.10	1.10
2.667	1.00	0.00	0.60	1.20
2.8194	1.00	0.00	1.20	1.50
2.9718	0.80	0.00	1.20	1.60

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.80	0.00	0.80	0.80
0.2286	0.00	0.00	0.40	0.60
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.40
0.6858	0.00	0.00	0.00	0.40
0.8382	0.00	0.00	0.00	0.60
0.9906	0.00	0.00	0.00	0.60
1.143	0.00	0.00	0.00	0.40
1.2954	0.00	0.00	0.00	0.40
1.4478	0.00	0.00	0.00	0.60
1.6002	0.00	0.00	0.00	0.40
1.7526	0.00	0.00	0.00	0.40
1.905	0.00	0.00	0.00	0.60
2.0574	0.00	0.00	0.00	0.40
2.2098	0.00	0.00	0.00	0.40
2.3622	0.00	0.00	0.00	0.40
2.5146	0.00	0.00	0.00	0.40
2.667	0.00	0.00	0.00	1.30
2.8194	0.00	0.00	0.00	0.60
2.9718	0.00	0.00	0.00	0.60

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.00	0.40	0.40
0.2286	0.00	0.40	0.40	0.40
0.381	0.00	0.00	0.40	0.40
0.5334	0.00	0.00	0.40	0.40
0.6858	0.00	0.00	0.00	0.40
0.8382	0.00	0.40	0.00	0.60
0.9906	0.00	0.00	0.00	0.40
1.143	0.00	0.00	0.00	0.40
1.2954	0.00	0.40	0.00	0.40
1.4478	0.60	0.00	0.00	0.40
1.6002	0.00	0.40	0.00	0.40
1.7526	0.00	0.00	0.00	0.60
1.905	0.00	0.00	0.00	0.60
2.0574	0.00	0.00	0.00	0.60
2.2098	0.00	0.00	0.00	0.60
2.3622	0.00	0.00	0.00	0.60
2.5146	0.00	0.40	0.00	0.60
2.667	0.00	0.40	0.00	0.60
2.8194	0.00	0.00	0.00	0.60
2.9718	0.00	0.00	0.00	0.40

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.40	0.00	0.40	1.00
0.2286	0.00	0.00	0.00	0.60
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.40
0.6858	0.00	0.00	0.00	0.40
0.8382	0.00	0.00	0.00	0.80
0.9906	0.00	0.00	0.00	0.60
1.143	0.00	0.00	0.00	0.40
1.2954	0.00	0.00	0.00	0.40
1.4478	0.00	0.40	0.00	0.40
1.6002	0.00	0.00	0.00	0.40
1.7526	0.00	0.40	0.00	0.40
1.905	0.00	0.40	0.00	0.80
2.0574	0.00	0.40	0.00	0.60
2.2098	0.00	0.40	0.00	0.60
2.3622	0.00	0.00	0.00	0.40
2.5146	0.00	0.40	0.00	0.40
2.667	0.00	0.40	0.00	0.40
2.8194	0.00	0.60	0.00	0.60
2.9718	0.00	0.60	0.00	0.40

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.40	0.00	1.20
0.2286	0.00	0.00	0.00	0.40
0.381	0.00	0.00	0.00	0.00
0.5334	0.00	0.00	0.00	0.00
0.6858	0.00	0.00	0.00	0.40
0.8382	0.00	0.00	0.00	0.00
0.9906	0.00	0.00	0.00	0.40
1.143	0.00	0.00	0.00	0.40
1.2954	0.00	0.00	0.00	0.40
1.4478	0.00	0.00	0.00	0.40
1.6002	0.00	0.00	0.00	0.40
1.7526	0.00	0.00	0.00	0.40
1.905	0.00	0.00	0.00	0.40
2.0574	0.00	0.00	0.60	0.40
2.2098	0.40	0.00	0.80	0.60
2.3622	0.40	0.00	0.60	0.40
2.5146	0.40	0.00	1.50	0.40
2.667	0.40	0.00	1.50	0.40
2.8194	0.60	0.40	1.80	0.40
2.9718	0.40	0.40	1.20	0.40

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.40	0.40	0.80
0.2286	1.00	0.60	0.00	2.00
0.381	1.90	1.40	0.00	3.60
0.5334	4.40	2.90	0.40	11.70
0.6858	3.80	3.50	0.40	18.20
0.8382	0.80	5.40	1.40	8.10
0.9906	0.00	8.10	1.80	1.50
1.143	0.00	5.90	2.20	0.60
1.2954	0.00	0.40	2.50	0.60
1.4478	0.00	0.00	4.60	0.60
1.6002	0.40	0.00	5.20	0.40
1.7526	0.00	0.00	5.30	0.40
1.905	0.00	0.00	5.50	0.60
2.0574	0.00	0.00	4.30	0.60
2.2098	0.00	0.00	0.00	0.40
2.3622	0.00	0.00	0.40	0.40
2.5146	0.00	0.00	0.00	0.40
2.667	0.00	0.00	0.00	0.40
2.8194	0.00	0.00	0.00	0.40
2.9718	0.40	0.00	0.00	0.40

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.00	0.00	0.80
0.2286	0.00	0.00	0.00	0.40
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.80
0.6858	0.00	0.00	0.00	0.60
0.8382	0.00	0.00	0.00	0.60
0.9906	1.60	0.00	0.00	0.80
1.143	1.40	0.00	0.40	0.80
1.2954	3.20	0.00	0.60	1.30
1.4478	4.60	0.40	0.80	1.90
1.6002	10.50	0.00	0.80	2.30
1.7526	11.90	1.00	1.70	3.00
1.905	3.70	3.40	3.00	4.10
2.0574	2.20	3.60	4.40	5.10
2.2098	1.00	3.70	4.60	4.90
2.3622	0.40	2.90	3.40	3.70
2.5146	0.00	1.70	1.20	2.30
2.667	0.00	1.20	0.40	4.00
2.8194	0.00	0.00	0.00	2.30
2.9718	0.00	0.00	0.40	1.10

CONCENTRATION OF BROMIDE MEASURED IN EACH SAMPLE
DATA FROM 1987 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	BROMIDE	BROMIDE	BROMIDE	BROMIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	0.00	0.40	0.00	0.80
0.2286	0.00	0.00	0.00	0.40
0.381	0.00	0.00	0.00	0.40
0.5334	0.00	0.00	0.00	0.40
0.6858	0.00	0.00	0.00	0.40
0.8382	0.00	0.00	0.00	0.40
0.9906	0.00	0.40	0.00	0.40
1.143	0.00	0.00	0.40	0.40
1.2954	0.60	0.00	0.00	0.40
1.4478	1.70	0.40	0.00	0.60
1.6002	4.50	0.40	0.00	1.30
1.7526	2.40	0.40	0.00	1.60
1.905	0.00	0.40	0.00	1.90
2.0574	0.40	0.80	0.00	2.50
2.2098	0.40	2.70	1.10	3.10
2.3622	0.40	4.80	1.70	4.10
2.5146	0.00	4.10	2.20	3.10
2.667	0.00	4.40	2.00	2.60
2.8194	0.00	5.30	1.50	2.00
2.9718	0.00	4.60	1.20	1.40

PROCEDURE FROM: HAAKE BUCHLER INSTRUMENTS INC.
244 SADDLE RIVER ROAD
SADDLEBROOK, NJ 07662
1-800-343-4883
INSTRUCTION MANUAL DP-957M, 3/83

MATERIALS:

HAAKEBUCHLER CHLORIDOMETER	ACID REAGENT
3 ml FIXED VOLUME PIPET	GEL
SILVER POLISH	1000 PPM Cl STOCK SOLUTION
SAMPLE VIALS	10 PPM Cl STANDARD
RINSE BOTTLE W/ DI WATER	5 PPM Cl STANDARD
KIMWIPES	FILTER FUNNELS
EYEDROPPER	FUNNEL RACK
CONTAINER FOR WASTE SOLUTION	12.5 cm WHATMAN #40 FILTER PAPERS
1/2 PINT MASON JARS	50 ml BEAKERS

PREPARATION OF SOLUTIONS :

1. ACID REAGENT

   ADD 250 ml DI WATER TO A 500 ml VOLUMETRIC FLASK.
   ADD 12 ml CONC NITRIC ACID AND 200 ml GLACIAL ACETIC ACID. BRING TO VOLUME.

2. 1000 PPM Cl STOCK SOLUTION

   ADD DI WATER TO A 1000 ml VOLUMETRIC FLASK.
   ADD 1.649 g OF REAGENT GRADE NaCl.
   BRING TO VOLUME.

3. 10 PPM Cl STANDARD

   ADD 10 ml OF 1000 PPM STANDARD TO DI WATER AND BRING TO VOLUME IN A 1000 ml VOLUMETRIC FLASK.

4. 5 PPM Cl STANDARD

   ADD 5 ml OF 1000 PPM STANDARD TO DI WATER AND BRING TO VOLUME IN A 1000 ml VOLUMETRIC FLASK

SAMPLE EXTRACTION

1. WEIGH 25.00 GRAMS OF AIR DRIED, SEIVED (2mm) SOIL INTO A LABELED 1/2 PINT MASON JAR. FILL IN NECESSARY INFO ON DATA SHEET.
2. ADD 25.0 ml OF DI WATER WITH AUTO PIPET.
3. PUT ON SHAKER FOR 30 MINUTES AT ABOUT 2500 RPM.
4. POUR EXTRACT THROUGH #40 FILTER PAPER AND FUNNEL INTO LABELLED 50 ml BEAKERS.

ANALYSIS

* BRING ALL SOLUTIONS TO ROOM TEMP BEFORE USING
* USE AUTO PIPET TO DISPENSE 1 ml OF ACID REAGENT
* USE AUTO PIPET TO DISPENSE 3 ml OF DI H2O FOR BLANK
* USE 3 ml FIXED VOLUME PIPET TO DISPENSE SAMPLE
* USE EYEDROPPER TO DISPENSE GEL

I PREPARE 10 REAGENT BLANKS

3 ml DI WATER
1 ml ACID REAGENT
4 DROPS GEL

II PREPARE 20 REAGENT SPIKES AT 10 PPM SPIKE LEVEL

3 ml OF 10 PPM STANDARD
1 ml ACID REAGENT
4 DROPS GEL

III PREPARE 5 REAGENT SPIKES AT 5 PPM SPIKE LEVEL

3 ml OF 5 PPM STANDARD
1 ml ACID REAGENT
4 DROPS GEL

IV CLEAN ELECTRODES

WITH MACHINE OFF, CLEAN ALL 4 ELECTRODES W/ SILVER POLISH, RINSE W/ DI WATER, BUFF W/ TISSUE.

V BLANK ADJUSTMENT

1. SELECT 'LOW' RANGE
2. SET TITRATION SWITCH IN 'AUTO' POSITION
3. SET BLANK ADJUST DIAL TO 00.0
4. PLACE VIAL W/ REAGENT BLANK IN HOLDER AND SLIDE UP , WAIT UNTIL COUNTER STOPS AND RECORD THIS NUMBER
5. REMOVE VIAL AND RINSE ELECTRODE
6. REPEAT STEPS 4 AND 5 FOR ALL REAGENT BLANKS
7. CALCULATE THE MEAN OF ALL BUT THE FIRST TWO BLANKS
8. SET BLANK ADJUSTMENT DIAL TO CALCULATED MEAN

VI RUN REAGENT SPIKES AND CALIBRATE

1. PLACE TITRATION SWITCH IN 'STANDBY' POSITION
2. PLACE VIAL W/ 10 PPM REAGENT SPIKE IN HOLDER AND SLIDE UP
3. PLACE TITRATION SWITCH IN 'START' POSITION
4. RECORD READING WHEN COUNTER STOPS
5. REPEAT FOR 5 OF THE 10 PPM SAMPLES
6. CALCULATE THE MEAN READING .
   THE MEAN MIILIEQUIVALENT READING FOR THE 10 PPM SPIKE SHOULD BE 85.
   IF THE SPIKE MEAN DISAGREES W/ THIS ADJUST THE BLANK READING TO COMPENSATE AND RESET THE BLANK ADJUST DIAL.
   THEN RUN 5 MORE 10 PPM REAGENT SPIKES . IF THEY SHOW A MEAN % RECOVERY BETWEEN 90 AND 110 % THEN CALIBRATION IS COMPLETE. IF THEY ARE NOT WITHIN THIS RANGE THEN REPEAT THE CALIBRATION STEPS.

VII RUN SAMPLES INCLUDING QUALITY CONTROL STEPS

1. CALIBRATION

2. MATRIX SPLIT SPIKE SAMPLE

CHOOSE ONE SAMPLE EACH DAY AND WEIGH OUT TWO 25.00 GRAM ALIQUOTS. RUN ONE AS USUAL. INSTEAD OF ADDING 25.0 ml OF WATER TO THE OTHER SPIKE IT WITH 25.0 ml OF 10PPM Cl STANDARD AND THEN RUN. SUBTRACT THE ANALYZED VALUE OF THE SAMPLE FROM THE ANALYZED VALUE OF THE SPIKED SAMPLE AND FIGURE THE SPIKE PERCENT RECOVERY.

EXAMPLE:

NORMAL SAMPLE - 20 MEQ x 0.118 = 2.4 PPM

SPIKE SAMPLE - 110 MEQ X 0.118 = 13.0 PPM

13.0 PPM - 2.4 PPM = 10.6 PPM

(10.6 PPM / 10 PPM) X 100 = 106 % RECOVERY

(AMOUNT RECOVERED / AMOUNT SPIKED) X 100 = % RECOVERY

ACCEPTABLE % RECOVERY IS FROM 85 TO 115 %.

3. DUPLICATE EXTRACT SAMPLE

EACH DAY CHOOSE ONE FILTRATE AND ANALYZE TWO 3ml ALIQUOTS FROM IT. CALCULATE THE RELATIVE PERCENT DIFFERENCE. A RPD OF 15% OR LESS IS ACCEPTABLE.

EXAMPLE:

EXTRACT 1 = 34 MEQ

EXTRACT 2 = 38 MEQ

38 - 34 = 4
(38 + 34) / 2 = 36
(4 / 36) X 100 = 11%

RPD = THE DIFFERENCE BETWEEN THE ANALYZED VALUES OF THE TWO SAMPLES DIVIDED BY THE MEAN OF THE TWO SAMPLES TIMES 100

4. EVERY 10 SAMPLES RUN :

1 10 PPM REAGENT SPIKE

CALCULATE % RECOVERY. 85 TO 115% IS ACCEPTABLE.

STUDY:
PLOT:
CORE:

RUN DATE:
SAMPLE DATE:
LAB:

CHLORIDOMETER CALIBRATION

	1st BLANK meq/l	2nd 5 PPM meq/l	5th 10 PPM meq/l
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
$\bar{X}$			

-42.4

3rd [ ] If this no. is pos. add it to the x of the blanks, if this no. is neg. subtract it from the x of the blanks

adj

4th $\bar{X}$ [ ]

	5 ppm after adj meq/l
1	
2	
3	
4	
5	
$\bar{X}$	

	5 ppm after every 10 rdgs meq/l	% diff.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
$\bar{X}$		

meq X 0.118 = ppm

5 ppm = 42.4 meq

10 ppm = 84.8 meq

CONCENTRATION OF CHLORIDE MEASURED IN BACKGROUND CORES
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

SOIL DEPTH (METERS)	CHLORIDE PPM
0.0762	4.0
0.2286	4.0
0.381	4.0
0.5334	3.0
0.6858	2.0
0.8382	3.0
0.9906	8.0
1.143	3.0
1.2954	2.0
1.4478	2.0
1.6002	2.0
1.7526	2.0
1.905	1.0
2.0574	2.0
2.2098	4.0
2.3622	3.0
2.5146	2.0
2.667	2.0
2.8194	2.0
2.9718	1.0

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

SOIL DEPTH (METERS)	CHLORIDE PPM
0.0762	2.0
0.2286	4.0
0.381	4.0
0.5334	4.0
0.6858	3.0
0.8382	3.0
0.9906	2.0
1.143	4.0
1.2954	3.0
1.4478	3.0
1.6002	4.0
1.7526	3.0
1.905	3.0
2.0574	3.0
2.2098	4.0
2.3622	4.0
2.5146	3.0
2.667	4.0
2.8194	4.0
2.9718	5.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	3.0	1.0	2.0
0.2286	2.0	2.0	2.0	0.0
0.381	2.0	2.0	2.0	2.0
0.5334	2.0	2.0	1.0	4.0
0.6858	2.0	2.0	2.0	2.0
0.8382	1.0	3.0	1.0	2.0
0.9906	1.0	5.0	1.0	2.0
1.143	3.0	5.0	1.0	1.0
1.2954	2.0	4.0	2.0	1.0
1.4478	2.0	2.0	2.0	2.0
1.6002	3.0	2.0	3.0	1.0
1.7526	3.0	3.0	6.0	1.0
1.905	6.0	3.0	5.0	2.0
2.0574	6.0	2.0	6.0	3.0
2.2098	5.0	3.0	7.0	4.0
2.3622	3.0	3.0	6.0	5.0
2.5146	5.0	3.0	6.0	2.0
2.667	6.0	3.0	6.0	7.0
2.8194	4.0	3.0	8.0	3.0
2.9718	4.0	3.0	9.0	4.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	2.0	2.0	3.0
0.2286	2.0	1.0	2.0	2.0
0.381	3.0	2.0	1.0	2.0
0.5334	3.0	2.0	1.0	2.0
0.6858	3.0	1.0	1.0	2.0
0.8382	4.0	2.0	1.0	1.0
0.9906	4.0	2.0	2.0	2.0
1.143	4.0	2.0	2.0	2.0
1.2954	4.0	3.0	2.0	3.0
1.4478	3.0	3.0	2.0	5.0
1.6002	4.0	3.0	3.0	6.0
1.7526	3.0	4.0	12.0	6.0
1.905	3.0	4.0	4.0	8.0
2.0574	5.0	4.0	11.0	9.0
2.2098	4.0	3.0	6.0	6.0
2.3622	3.0	5.0	13.0	6.0
2.5146	5.0	4.0	7.0	6.0
2.667	5.0	2.0	7.0	9.0
2.8194	5.0	2.0	5.0	7.0
2.9718	4.0	3.0	8.0	6.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: BASIN
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	3.0	2.0	1.0	2.0
0.2286	4.0	3.0	1.0	3.0
0.381	4.0	2.0	1.0	4.0
0.5334	4.0	2.0	1.0	3.0
0.6858	3.0	1.0	1.0	3.0
0.8382	3.0	2.0	1.0	2.0
0.9906	2.0	2.0	1.0	3.0
1.143	3.0	3.0	1.0	3.0
1.2954	3.0	3.0	1.0	4.0
1.4478	3.0	5.0	1.0	4.0
1.6002	3.0	6.0	1.0	3.0
1.7526	5.0	7.0	2.0	4.0
1.905	5.0	5.0	4.0	4.0
2.0574	5.0	2.0	4.0	5.0
2.2098	5.0	2.0	4.0	4.0
2.3622	4.0	2.0	4.0	5.0
2.5146	5.0	5.0	3.0	5.0
2.667	6.0	4.0	5.0	5.0
2.8194	5.0	4.0	7.0	5.0
2.9718	5.0	3.0	7.0	4.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 0.5

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	3.0	2.0	1.0	3.0
0.2286	2.0	3.0	1.0	1.0
0.381	1.0	2.0	2.0	2.0
0.5334	2.0	1.0	1.0	2.0
0.6858	1.0	2.0	1.0	2.0
0.8382	1.0	2.0	1.0	1.0
0.9906	1.0	2.0	1.0	2.0
1.143	2.0	2.0	2.0	2.0
1.2954	2.0	3.0	1.0	2.0
1.4478	2.0	2.0	2.0	3.0
1.6002	2.0	3.0	1.0	1.0
1.7526	2.0	2.0	2.0	2.0
1.905	2.0	2.0	2.0	2.0
2.0574	2.0	2.0	2.0	2.0
2.2098	2.0	2.0	1.0	1.0
2.3622	3.0	3.0	2.0	3.0
2.5146	1.0	3.0	2.0	2.0
2.667	2.0	3.0	2.0	2.0
2.8194	2.0	3.0	2.0	1.0
2.9718	2.0	2.0	1.0	3.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ETo LEVEL: 1

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	1.0	2.0	2.0
0.2286	1.0	3.0	2.0	2.0
0.381	2.0	2.0	3.0	2.0
0.5334	1.0	2.0	3.0	2.0
0.6858	2.0	1.0	2.0	4.0
0.8382	1.0	2.0	1.0	3.0
0.9906	1.0	3.0	4.0	2.0
1.143	2.0	1.0	2.0	4.0
1.2954	1.0	1.0	2.0	3.0
1.4478	2.0	2.0	2.0	3.0
1.6002	1.0	2.0	2.0	2.0
1.7526	1.0	2.0	2.0	2.0
1.905	2.0	2.0	2.0	2.0
2.0574	2.0	1.0	2.0	3.0
2.2098	1.0	2.0	1.0	2.0
2.3622	2.0	2.0	2.0	2.0
2.5146	1.0	1.0	2.0	2.0
2.667	2.0	2.0	2.0	2.0
2.8194	2.0	2.0	2.0	2.0
2.9718	1.0	2.0	2.0	2.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: DRIP
AND ET_o LEVEL: 1.5

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
SOIL DEPTH (METERS)	PPM	PPM	PPM	PPM
0.0762	0.0	3.0	1.0	19.0
0.2286	2.0	3.0	2.0	5.0
0.381	1.0	2.0	3.0	4.0
0.5334	2.0	5.0	2.0	2.0
0.6858	2.0	4.0	2.0	1.0
0.8382	2.0	3.0	1.0	2.0
0.9906	2.0	3.0	1.0	2.0
1.143	2.0	3.0	1.0	1.0
1.2954	3.0	4.0	2.0	2.0
1.4478	3.0	3.0	2.0	2.0
1.6002	2.0	2.0	1.0	2.0
1.7526	2.0	3.0	1.0	2.0
1.905	2.0	3.0	1.0	2.0
2.0574	2.0	4.0	1.0	2.0
2.2098	2.0	3.0	1.0	2.0
2.3622	1.0	3.0	2.0	1.0
2.5146	3.0	3.0	1.0	2.0
2.667	2.0	3.0	2.0	1.0
2.8194	2.0	3.0	2.0	1.0
2.9718	3.0	3.0	2.0	2.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	3.0	2.0	1.0
0.2286	2.0	4.0	1.0	1.0
0.381	2.0	3.0	1.0	1.0
0.5334	2.0	3.0	1.0	1.0
0.6858	2.0	2.0	2.0	1.0
0.8382	2.0	3.0	1.0	1.0
0.9906	2.0	3.0	1.0	2.0
1.143	1.0	2.0	2.0	2.0
1.2954	3.0	3.0	2.0	1.0
1.4478	2.0	4.0	1.0	2.0
1.6002	2.0	3.0	3.0	1.0
1.7526	2.0	4.0	1.0	2.0
1.905	2.0	6.0	1.0	2.0
2.0574	2.0	9.0	4.0	2.0
2.2098	2.0	5.0	4.0	2.0
2.3622	2.0	6.0	7.0	2.0
2.5146	2.0	5.0	6.0	4.0
2.667	4.0	4.0	4.0	4.0
2.8194	4.0	4.0	5.0	5.0
2.9718	4.0	3.0	1.0	4.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	3.0	2.0	4.0	1.0
0.2286	3.0	1.0	2.0	1.0
0.381	2.0	1.0	3.0	1.0
0.5334	3.0	3.0	2.0	1.0
0.6858	2.0	1.0	3.0	1.0
0.8382	3.0	2.0	2.0	1.0
0.9906	3.0	1.0	2.0	1.0
1.143	3.0	2.0	2.0	2.0
1.2954	3.0	2.0	3.0	1.0
1.4478	2.0	2.0	2.0	1.0
1.6002	3.0	2.0	3.0	2.0
1.7526	2.0	1.0	2.0	1.0
1.905	4.0	2.0	3.0	2.0
2.0574	4.0	1.0	3.0	2.0
2.2098	6.0	2.0	3.0	2.0
2.3622	5.0	2.0	3.0	1.0
2.5146	7.0	4.0	4.0	1.0
2.667	6.0	4.0	4.0	2.0
2.8194	6.0	3.0	3.0	3.0
2.9718	7.0	3.0	3.0	3.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: FURROW
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	1.0	2.0	1.0
0.2286	4.0	1.0	1.0	1.0
0.381	2.0	2.0	2.0	1.0
0.5334	3.0	2.0	2.0	1.0
0.6858	3.0	2.0	1.0	1.0
0.8382	3.0	1.0	1.0	1.0
0.9906	3.0	2.0	2.0	1.0
1.143	3.0	1.0	3.0	2.0
1.2954	4.0	2.0	2.0	1.0
1.4478	4.0	1.0	1.0	1.0
1.6002	3.0	3.0	1.0	2.0
1.7526	3.0	2.0	2.0	1.0
1.905	3.0	2.0	2.0	2.0
2.0574	4.0	2.0	2.0	2.0
2.2098	3.0	2.0	2.0	2.0
2.3622	4.0	3.0	2.0	1.0
2.5146	5.0	2.0	3.0	1.0
2.667	4.0	3.0	2.0	2.0
2.8194	5.0	2.0	1.0	3.0
2.9718	5.0	3.0	2.0	3.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 0.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	6.0	6.0	4.0	2.0
0.2286	15.0	6.0	4.0	5.0
0.381	11.0	8.0	6.0	9.0
0.5334	14.0	10.0	7.0	12.0
0.6858	20.0	11.0	13.0	8.0
0.8382	16.0	17.0	7.0	8.0
0.9906	14.0	5.0	10.0	9.0
1.143	19.0	3.0	8.0	8.0
1.2954	13.0	1.0	6.0	8.0
1.4478	5.0	1.0	11.0	8.0
1.6002	3.0	0.0	5.0	4.0
1.7526	2.0	0.0	2.0	3.0
1.905	1.0	1.0	2.0	3.0
2.0574	3.0	0.0	2.0	1.0
2.2098	3.0	2.0	2.0	2.0
2.3622	2.0	1.0	2.0	3.0
2.5146	2.0	1.0	2.0	1.0
2.667	2.0	2.0	2.0	3.0
2.8194	3.0	2.0	2.0	2.0
2.9718	4.0	3.0	2.0	2.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.25

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	1.0	1.0	3.0	2.0
0.2286	2.0	2.0	2.0	2.0
0.381	2.0	2.0	2.0	1.0
0.5334	1.0	2.0	2.0	2.0
0.6858	2.0	2.0	3.0	2.0
0.8382	4.0	2.0	2.0	3.0
0.9906	7.0	1.0	3.0	1.0
1.143	10.0	2.0	4.0	1.0
1.2954	12.0	2.0	3.0	3.0
1.4478	11.0	3.0	3.0	6.0
1.6002	11.0	3.0	5.0	7.0
1.7526	4.0	4.0	4.0	12.0
1.905	4.0	8.0	4.0	11.0
2.0574	3.0	8.0	6.0	8.0
2.2098	3.0	11.0	5.0	5.0
2.3622	2.0	13.0	6.0	3.0
2.5146	4.0	17.0	6.0	3.0
2.667	2.0	15.0	7.0	2.0
2.8194	1.0	8.0	6.0	1.0
2.9718	2.0	7.0	7.0	3.0

CONCENTRATION OF CHLORIDE MEASURED IN EACH SAMPLE
DATA FROM 1988 STUDY

IRRIGATION METHOD: SPRINKLER
AND ETo LEVEL: 1.75

	CORE			
	1	2	3	4
	CHLORIDE	CHLORIDE	CHLORIDE	CHLORIDE
	PPM	PPM	PPM	PPM
SOIL DEPTH (METERS)				
0.0762	2.0	3.0	2.0	2.0
0.2286	2.0	2.0	2.0	2.0
0.381	1.0	1.0	1.0	2.0
0.5334	2.0	2.0	2.0	2.0
0.6858	2.0	2.0	3.0	2.0
0.8382	2.0	2.0	1.0	2.0
0.9906	3.0	3.0	2.0	3.0
1.143	3.0	2.0	2.0	3.0
1.2954	2.0	2.0	1.0	3.0
1.4478	3.0	3.0	2.0	4.0
1.6002	4.0	3.0	2.0	4.0
1.7526	3.0	1.0	2.0	4.0
1.905	8.0	2.0	4.0	4.0
2.0574	9.0	3.0	9.0	6.0
2.2098	1.0	5.0	4.0	5.0
2.3622	14.0	5.0	6.0	1.0
2.5146	10.0	9.0	4.0	8.0
2.667	7.0	4.0	4.0	6.0
2.8194	9.0	5.0	4.0	6.0
2.9718	9.0	6.0	6.0	3.0