

Appendix G. Results of Continuing Quality Control Samples.

2,4-D Control Limits

	Upper Control Limit (UCL)	Upper Warning Limit (UWL)	Lower Warning Limit (LWL)	Lower Control Limit (LCL)
Beargrass	96.1	88.1	56.4	48.5
Huckleberry	95.6	90.4	69.9	64.8
Maidenhair Fern	99.8	92	60.5	52.7
Manzanita Berries	96.7	88.5	55.8	47.7
Oregon Grape	na	na	na	na
Yarrow	69.7	64	41.1	35.4

na=not available

Continuing Quality Control for 2,4-D Plant Samples

Matrix	Date Extracted	Sample #'s	Spike Level 1	Spike 1 Result	Spike 1 % Recovery	Spike 1 Control Limit	Spike Level 2	Spike 2 Result	Spike 2 % Recovery	Spike 2 Control Limit	% Difference
Beargrass	05/16/00	1017,1018,1019,1101,1124	3.00	1.950	64.9	No	3.00	1.980	66.0	No	1.68
Beargrass	05/23/00	1096-1103,1123,1126	3.00	2.400	80.0	No	3.00	2.460	82.0	No	2.47
Beargrass	06/14/00	1072-1074	3.00	2.240	74.7	No	3.00	2.040	68.0	No	9.35
Beargrass	08/03/00	1078-1080	3.00	2.330	77.7	No	3.00	2.380	79.3	No	2.12
Beargrass	09/18/00	1139, 1212-1220	3.00	2.180	72.7	No	3.00	2.160	72.0	No	0.92
Beargrass	09/29/00	1150, 1151	3.00	2.120	70.7	No	3.00	2.340	78.0	No	9.87
Beargrass	05/03/01	1025-1034	3.00	2.116	70.5	No	3.00	2.106	70.2	No	0.47
Beargrass	05/08/01	1035,1172,1173,1225,1226,1227,1228,1232,1233,1234	3.00	1.526	50.9	LWL	3.00	1.661	55.4	LWL	8.47
Beargrass	6/5/01	1236, 1237,1238	3.00	2.02	67.3	No	3.00	2.35	78.4	No	15.24
Beargrass	8/15/01	124,212,431,244	3.00	1.58	52.8	LWL	3.00	1.82	60.6	no	13.76
Beargrass	10/5/01	1104,1105,1106,1245,1254-1258	3.00	2.40	79.8	see note	3.00	2.28	76.1	see note	4.74
Beargrass	10/5/01	1104,1105,1106,1245,1254-1258	3.00	1.42	47.3	LCL	3.00	1.24	41.3	LCL	13.62
Deer Brush	12/05/00	1181	3.00	2.190	73.0	n/a	3.00	2.200	73.3	n/a	0.46
Huckleberry	09/21/00	1138, 1203-1211	3.00	2.640	88.0	No	3.00	2.500	83.3	No	5.45
Huckleberry	09/25/00	1149,1186,1187,1198,1199,1221,1155	3.00	2.540	84.7	No	3.00	2.530	84.3	No	0.39
Huckleberry	10/18/00	1168, 1197	3.00	2.350	78.3	No	3.00	2.490	83.0	No	5.79
Huckleberry	11/07/00	1174	3.00	2.470	82.3	No	3.00	2.580	86.0	No	4.36
Huckleberry	10/9/01	1140, 1141	3.00	4.04	134.7	see note	3.00	3.95	131.7	see note	2.25
Huckleberry	10/9/01	1140, 1141	3.00	2.42	80.8	No	3.00	2.50	83.3	No	3.09
Manzanita berries	9/20/00	1191,1192,1193,1194,1195,1196.	3.00	2.46	82.0	No	3.00	2.24	74.7	No	9.36
Manzanita berries	9/27/00	1156,1157, 1158	3.00	2.22	74.0	No	3.00	2.18	72.7	No	1.82
Manzanita berries	10/06/00	1156, 1160,1161	3.00	2.420	80.7	No	3.00	2.560	85.3	No	5.62
Manzanita berries	10/17/00	1165, 1166,1167	3.00	2.070	69.0	No	3.00	2.310	77.0	No	10.96
Manzanita berries	11/27/00	1178, 1179,1180,159-172	3.00	2.500	83.3	No	3.00	3.240	108.0	UCL	25.78
Manzanita berries GC/MSD	10/9/01	1135, 1136	3.00	3.15	105.1	see note	3.00	3.45	114.8	see note	8.85
Manzanita berries GC/ECD	10/9/01	1135, 1136	3.00	3.46	115.3	UCL	3.00	2.65	88.2	No	26.60
Manzanita berries GC/ECD #2	11/16/01	1259, 1260	3.00	2.98	99.2	UCL	3.00	2.92	97.2	UCL	2.10

Triclopyr Control Limits

	Upper Control Limit (UCL)	Upper Warning Limit (UWL)	Lower Warning Limit (LWL)	Lower Control Limit (LCL)
Beargrass	97.1	91.1	67.1	61.1
Huckleberry	97.8	92.8	72.5	67.4
Maidenhair Fern	108.1	100.8	71.9	64.7
Manzanita Berries	100	94	68.2	61.8
Oregon Grape	na	na	na	na
Yarrow	78.7	72.4	47.2	40.9

na=not available

Continuing Quality Control for Triclopyr Plant Samples

Matrix	Date Extracted	Sample #'s	Spike Level 1	Spike 1 Result	Spike 1 % Recovery	Spike 1 Control Limit	Spike Level 2	Spike 2 Result	Spike 2 % Recovery	Spike 2 Control Limit	% Difference
Beargrass	5/16/00	1017,1018,1019, 1101, 1124	3.00	2.10	70.00	No	3.00	2.15	71.50	No	2.12
Beargrass	5/23/00	1096-1103, 1123,1126	3.00	2.62	87.33	No	3.00	2.67	89.00	No	1.89
Beargrass	6/14/00	1072-1074	3.00	2.40	80.00	No	3.00	2.18	72.67	No	9.61
Beargrass	8/3/00	1078-1080	3.00	2.48	82.67	No	3.00	2.56	85.33	No	3.17
Beargrass	9/18/00	1139, 1212-1220	3.00	2.35	78.33	No	3.00	2.31	77.00	No	1.72
Beargrass	9/29/00	1150, 1151	3.00	2.27	75.67	No	3.00	2.60	86.67	No	13.55
Beargrass	5/3/01	1025-1034	3.00	2.31	77.07	No	3.00	2.322	77.40	No	0.43
Beargrass	5/8/01	1035,1172, 1173, 1225,1226,1227, 1228,1232,1233, 1234	3.00	1.70	56.80	LCL	3.00	1.817	60.57	LCL	6.42
Beargrass	6/5/01	1236, 1237,1238	3.00	2.22	74.00	No	3.00	2.508	83.60	No	12.18
Beargrass	8/15/01	1242,1243, 1244	3.00	1.90	63.3	LWL	3.00	2.22	74.0	no	15.59
Beargrass	10/5/01	1104,1105,1106, 1245,1254-1258	3.00	2.95	98.17	see note	3.00	2.793	93.10	see note	5.30
Beargrass	10/5/01	1104,1105,1106, 1245,1254-1258	3.00	2.11	70.17	No	3.00	1.979	65.97	LWL	6.17
Deer Brush	12/5/00	1181	3.00	2.52	84.00	n/a	3.00	2.56	85.33	n/a	1.57
Huckleberry	10/1/99	1004, 1009,1011	3.00	2.59	86.33	No					
Huckleberry	9/21/00	1138, 1203-1211	3.00	2.81	93.67	UWL	3.00	2.63	87.67	No	6.62
Huckleberry	9/25/00	1149,1186, 1187,1198, 1199,1221, 1155	3.00	2.69	89.67	No	3.00	2.69	89.67	No	0.00
Huckleberry	10/18/00	1168, 1197	3.00	2.51	83.67	No	3.00	2.66	88.67	No	5.80
Huckleberry	11/27/00	1174	3.00	2.70	90.00	No	3.00	2.75	91.67	No	1.83
Huckleberry	10/9/01	1140, 1141	3.00	3.56	118.77	see note	3.00	3.745	124.83	see note	4.98
Huckleberry	10/9/01	1140, 1141	3.00	2.34	78.07	No	3.00	2.551	85.03	No	8.54
Maidenhair Fern	10/13/99	1002, 1003, 1007	3.00	2.48	82.7						
Manzanita berries	9/20/00	1191,1192,1193, 1194,1195,1196.	3.00	2.72	90.67	No	3.00	2.77	92.3	No	1.82
Manzanita berries	9/27/00	1156,1157, 1158	3.00	2.54	84.67	No	3.00	2.5	83.3	No	1.59
Manzanita berries	10/6/00	1156, 1160,1161	3.00	2.60	86.67	No	3.00	2.78	92.7	No	6.69
Manzanita berries	10/17/00	1165, 1166,1167	3.00	2.31	77.00	No	3.00	2.6	86.7	No	11.81
Manzanita berries	11/27/00	1178, 1179, 1180; 159-172	3.00	2.72	90.67	No	3.00	3.24	108.0	UCL	17.45
Manzanita berries GC/MSD	10/9/01	1135, 1136	3.00	3.52	117	see note	3.00	3.685	123	see note	4.64

Continuing Quality Control - Blind Spikes for Water Samples

Sample numbers	Extraction date	Chemical	Spike level	Recovery (1st Sample)	Percent recovery (1st Sample)	Duplicate recovery (2nd Sample)	Percent recovery (2nd Sample)	Percent difference	Control Limit exceeded
748, 745	5/6/99	2,4-D	0.2	0.194	97.0	0.210	105.0	3.96	No
		Triclopyr	0.2	0.190	95.0	0.188	94.0	0.53	No
751, 752	9/27/99	Triclopyr	0.25	0.233	93.2	0.24	96.0	1.48	
758, 757	11/8/99	Triclopyr	0.200	0.235	117.5	0.226	113.0	1.95	No
794, 795	4/28/00	2,4-D	0.25	0.253	101	0.244	97.6	1.81	No
		Triclopyr	0.35	0.412	118	0.361	103	6.60	No
753, 754	9/22/99	Glyphosate	4.00	3.54	88.5	3.29	82.3	3.66	UWL/No
755, 756	11/10/99	Glyphosate	4.00	3.94	98.5	3.71	92.8	3.01	UCL/UWL
171-349	10/5/98	Atrazine	0.200	0.177	88.5				No
749, 746	5/7/99	Atrazine	0.200	0.193	96.5	0.183	91.5	2.66	No
750, 747	5/7/99	Atrazine	0.100	0.088	88.0	0.096	96.0	4.35	No
694	4/18/00	Atrazine	0.15	0.1444	96.3				No
796, 797	4/27/00	Atrazine	0.3	0.3006	100	0.29	96.7	1.79	No

Blind spikes in parentheses ()

phenoxy QC

Continuing Quality Control Table for 2,4-D and Triclopyr Water Samples

Sample numbers	Extraction date	Chemical	Spike level	Recovery	Percent recovery	Duplicate recovery	Percent recovery	Percent difference	Control Limit exceeded
638,678,680,682 648, (748),(745)	5/6/99	2,4-D Triclopyr	0.200 0.200	0.212 0.199	106 99.5				No
709	5/11/99	2,4-D Triclopyr	0.200 0.200	0.213 0.234	107 117	0.197 0.215	98.5 108	3.90 4.23	No No
639,640,641,642 643,644	9/22/99	Triclopyr	0.200	0.200	100	0.225	113	5.88	No
645,646,647,648 625,626	9/23/99	Triclopyr	0.200	0.215	108	0.248	124	7.13	No
716,717,718,719, 720,697	11/5/99	Triclopyr	0.200	0.211	106	0.229	115	4.09	No
698,699,700,701, (757),(758)	11/8/99	Triclopyr	0.200	0.253	127	0.223	112	6.30	No
722,723,724, 725, 726,727,728, 729, 731	4/27/00	2,4-D Triclopyr	0.200 0.200	0.182 0.213	91.0 107	0.204 0.229	102 115	5.70 3.62	No No
732,733,734, 735, 736,737, 738, (794), (795)	4/28/00	2,4-D Triclopyr	0.200 0.200	0.218 0.225	109 113	0.216 0.214	108 107	0.46 2.51	No No
695,696,705, 721, 730,759,760, 761, 762,763, 764	5/3/00	2,4-D Triclopyr	0.200 0.200	0.227 0.223	114 112	0.229 0.233	115 117	0.44 2.19	No No
765,766,767, 768, 769,770,771, 772 773, 774	5/5/00	2,4-D Triclopyr	0.200 0.200	0.234 0.236	117 118	0.272 0.288	136 144	7.51 9.92	UWL/No UCL/UWL
1266, 1268	4/23/01	2,4-D Triclopyr	0.250 0.250	0.237 0.256	94.8 102	0.286 0.320	114 128	18.74 22.22	No No
1280, 1288	5/7/01	2,4-D Triclopyr	0.250 0.250	0.237 0.290	94.8 116	0.256 0.32	102.4 128	7.71 9.84	No No
1272, 1274	5/11/01	2,4-D Triclopyr	0.250 0.250	0.214 0.210	85.6 84.0	0.265 0.303	106 121	21.29 36.26	No No

Blind spikes in parentheses ()

Triclopyr Control Limits

Upper Control Limit (UCL)	146.9
Upper Warning Limit (UWL)	134.1
Lower Warning Limit (LWL)	83.2
Lower Control Limit (LCL)	70.4

2,4-D Control Limits

Upper Control Limit (UCL)	128.5
Upper Warning Limit (UWL)	116.3
Lower Warning Limit (LWL)	67.6
Lower Control Limit (LCL)	55.5

Glyphosate

Continuing Quality Control for Glyphosate Water Samples

Sample numbers	Extraction date	Chemical	Spike level	Recovery	Percent recovery	Duplicate recovery	Percent recovery	Percent difference	Control Limit exceeded
631,632,633, 634, 635,636,662, (753), (754)	9/22/99	Glyphosate	4.00	3.49	87.3	3.59	89.8	1.41	UWL/UWL
663,664,665,666, 667,668,669,670, (755), (756)	11/10/99	Glyphosate	4.00	3.90	97.5	4.04	101.0	1.76	UCL/UCL

Atrazine QC

Continuing Quality Control for Atrazine Water Samples

Sample numbers	Extraction date	Chemical	Spike level	Recovery	Percent recovery	Duplicate recovery	Percent recovery	Percent difference	Control Limit exceeded
601, 603, 605 (171-349)	10/5/98	Atrazine	0.500	0.446	89.2				
657,655,653,651 649,637,675,673 659	5/6/99	Atrazine	0.100	0.103	103				No
(747),(746),683, 681,679, 677, (750),(749)	5/7/99	Atrazine	0.100	0.102	102				No
685,686,687, 688, 689,690,691, 692, 693, (694)	4/18/00	Atrazine	0.100	0.0915	91.5	0.0865	86.5	2.81	No
702,703,739, 740, 741,742,743, 744, (796), (797)	4/27/00	Atrazine	0.100	0.0833	83.3	0.0917	91.7	4.80	LWL/No
1446, 1453	7/8/02	Atrazine	0.200	0.167	83.5	0.182	91.0	4.30	No
		DEA	0.200	0.155	77.5	0.196	98.0	11.68	LWL/No
		ACET	0.200	0.147	73.5	0.168	84.0	6.67	LWL/No
		DACT	0.200	0.141	70.5	0.157	78.5	5.37	LWL/No

Blind spikes in parentheses ()

Atrazine Control Limits (through 4/00)

Upper Control Limit (UCL)	121.4
Upper Warning Limit (UWL)	114.1
Lower Warning Limit (LWL)	85
Lower Control Limit (LCL)	77.7

Atrazine Control Limits (after 4/00)

Upper Control Limit (UCL)	101
Upper Warning Limit (UWL)	96.7
Lower Warning Limit (LWL)	80.7
Lower Control Limit (LCL)	76.7

DEA Control Limits

Upper Control Limit (UCL)	116
Upper Warning Limit (UWL)	110.8
Lower Warning Limit (LWL)	88.8
Lower Control Limit (LCL)	83.2

DACT Control Limits

Upper Control Limit (UCL)	98
Upper Warning Limit (UWL)	92.9
Lower Warning Limit (LWL)	73.2
Lower Control Limit (LCL)	68.2

ACET Control Limits

Upper Control Limit (UCL)	108
Upper Warning Limit (UWL)	105.7
Lower Warning Limit (LWL)	98.4
Lower Control Limit (LCL)	96.6