TABLE 2-2: SUMMARY OF RESULTS FROM SEPTEMBER CALIBRATION TEST SERIES

DATE		***9/25/96***			***9/26/96***
TIME	**1st half**	11:09 - 11:39	14:02 - 14:32	16:34 - 17:04	09:56 - 10:20
	2nd half	12:04 - 12:34	14:47 - 14:17	17:16 - 17:46	11:48 - 12:12
TEST CONDITIONS	**RUN NUMBER**	10	11	2	11-Rerun
	WASTE FEEDS	Solvent Mix, Solids	Solvent Mix, Solids	Fuel Oil Only	Solvent Mix, Solids
	EDV POWER	Low	Low (Mid intended)	Mid	Mid
REFERENCE METHOD	**SAMPLE TIME (MIN)**	60.0	60.0	48.0	60.0
	TEMPERATURE, ^{0}F	323	317	316	321
	% MOISTURE	28.5	29.3	28.6	28.7
	MM5 RESULTS (mg/dscm)	11.20	23.70	6.40	21.50
	MM5 TRAIN 'A' (mg/dscm)	11.40	24.0	6.60	28.40
	MM5 TRAIN 'B' (mg/dscm)	11.00	23.40	6.20	14.60
	MM5 RESULTS (gr/dscf)	0.0047	0.0110	0.0030	0.0110
CEMS *Response (arbitrary units)*	**ESA**	7.39	9.96	5.05	10.01
	VEREWA	20.39	40.22	16.19	63.37
	ESCP5	13.2	22.90	5.87	42.70
	DURAG	15.3	25.40	7.04	44.3
	SIGRIST	14.02	23.18	2.81	51.19

TABLE 2-2(CONT.): SUMMARY OF RESULTS FROM SEPTEMBER CALIBRATION TEST SERIES

DATE		*9/26/97*		*9/27/96*	
TIME	**1st half**	16:32 - 16:50	13:51 - 14:15	09:02 - 09:24	11:05 - 11:23
	2nd half	17:18 - 17:36	14:37 - 15:01	09:45 - 10:09	11:37 - 11:57
TEST CONDITIONS	**RUN NUMBER**	10-Rerun	3	8	9
	WASTE FEEDS	Solvent Mix, Solids	Solvent Mix, Solids	Solids	Solids
	EDV POWER	Low	Low/Off	Mid	Low
REFERENCE METHOD	**SAMPLE TIME (MIN)**	36.0	48.0	48.0	36.0
	TEMPERATURE, ^{0}F	321	323	312	318
	% MOISTURE	28.2	27.6	28.6	27.9
	MM5 RESULTS (mg/dscm)	8.95	33.90	14.15	13.35
	MM5 TRAIN 'A' (mg/dscm)	11.90	32.80	14.60	14.00
	MM5 TRAIN 'B' (mg/dscm)	6.00	35.00	13.70	12.70
	MM5 RESULTS (gr/dscf)	0.0055	0.0150	0.0063	0.0057
CEMS *Response (arbitrary units)*	**ESA**	9.55	7.95	9.75	9.25
	VEREWA	25.04	39.69	25.15	26.87
	ESCP5	12.20	18.10	13.00	16.00
	DURAG	12.30	18.70	14.70	17.00
	SIGRIST	8.04	18.36	10.85	15.81

TABLE 2-2(CONT.): SUMMARY OF RESULTS FROM SEPTEMBER CALIBRATION TEST SERIES

DATE		*9/27/96*	
TIME	**1st half**	13:03 - 13:21	15:03 - 15:27
	2nd half	13:47 - 14:05	15:39 - 16:03
TEST CONDITIONS	**RUN NUMBER**	15	14
	WASTE FEEDS	Solvents,Solids,Pigments	Solvents,Solids,Pigments
	EDV POWER	Low	Mid
REFERENCE METHOD	**SAMPLE TIME (MIN)**	36.0	36.0
	TEMPERATURE, ^{0}F	320	317
	% MOISTURE	28.8	29.3
	MM5 RESULTS (mg/dscm)	24.25	28.40
	MM5 TRAIN 'A' (mg/dscm)	27.20	36.00
	MM5 TRAIN 'B' (mg/dscm)	21.30	20.80
	MM5 RESULTS (gr/dscf)	0.0110	0.0140
CEMS *Response (arbitrary units)*	**ESA**	10.2	10.18
	VEREWA	48.60	47.20
	ESCP5	27.40	24.30
	DURAG	29.90	27.20
	SIGRIST	32.16	26.53

TABLE 2-3. SUMMARY OF RESULTS FROM OCTOBER CALIBRATION TEST SERIES

DATE		*10/15/96*		*10/16/96*	*10/17/96*
TIME	**1st half**	14:02 - 14:20	16:10 - 16:29	12:44 - 12:56	08:37 - 08:49
	2nd half	14:32 - 14:50	16:41 - 16:59	13:04 - 13:16	09:01 - 09:13
TEST CONDITIONS	**RUN NUMBER**	4	5	6	6-Rerun1
	WASTE FEEDS	Solvents, Solids	Solvents, Solids	Solvents, Solids	Solvents, Solids
	EDV POWER	High	Mid	Low	Low
REFERENCE METHOD	**SAMPLE TIME (MIN)**	33.0	36.0	24.0	24.0
	TEMPERATURE, ^{0}F	320	321	316	307
	% MOISTURE	24.4	24.3	25.6	25.7
	MM5 RESULTS (mg/dscm)	33.4	34.4	26.55	40.00
	MM5 TRAIN 'A' (mg/dscm)	34.00	32.60	27.60	43.00
	MM5 TRAIN 'B' (mg/dscm)	32.80	36.20	25.50	37.00
	MM5 RESULTS (gr/dscf)	0.0150	0.0160	0.0110	0.0170
CEMS *Response (arbitrary units)*	**ESA**	Off Line	Off Line	Off Line	Off Line
	VEREWA	Off Line	Off Line	Off Line	Off Line
	ESCP5	33.42	36.00	31.34	37.28
	DURAG	39.29	42.79	36.87	45.23
	SIGRIST	35.08	38.10	36.31	50.7

TABLE 2-3 (Cont). SUMMARY OF RESULTS FROM OCTOBER CALIBRATION TEST SERIES

DATE		*10/17/96*			
TIME	**1st half**	10:15 - 10:24	11:57 - 12:06	14:15 - 14:24	15:10 - 15:19
	2nd half	10:38 - 10:47	12:19 - 12:28	14:31 - 14:36	16:18 - 16:27
TEST CONDITIONS	**RUN NUMBER**	6-Rerun2	16	17	18
	WASTE FEEDS	Solvents, Solids	Solvents, Solids	Solvents, Solids	Solvents, Solids
	EDV POWER	Low	Mid	Mid	Mid
REFERENCE METHOD	**SAMPLE TIME (MIN)**	18.0	18.0	18.0	18.0
	TEMPERATURE, ^{0}F	308	310	311	311
	% MOISTURE	25.7	29.8	24.6	27.3
	MM5 RESULTS (mg/dscm)	57.20	40.70	37.10	36.80
	MM5 TRAIN 'A' (mg/dscm)	43.00	63.60	43.20	36.90
	MM5 TRAIN 'B' (mg/dscm)	70.20	38.20	37.30	35.10
	MM5 RESULTS (gr/dscf)	0.0250	0.0180	0.0160	0.0160
CEMS *Response* *(arbitrary units)*	**ESA**	Off Line	Off Line	Off Line	Off Line
	VEREWA	Off Line	Off Line	Off Line	Off Line
	ESCP5	38.08	55.05	51.29	42.43
	DURAG	49.55	60.43	58.85	45.36
	SIGRIST	55.93	69.91	66.12	47.42

TABLE 2-3 (Cont). SUMMARY OF RESULTS FROM OCTOBER CALIBRATION TEST SERIES

DATE		*10/17/96*	*10/18/96*
TIME	**1st half**	17:06 - 17:15	13:16 - 13:40
	2nd half	17:22 - 17:31	13:54 - 14:18
TEST CONDITIONS	**RUN NUMBER**	19	21
	WASTE FEEDS	Solvents, Solids	Fuel Oil
	EDV POWER	High	High
REFERENCE METHOD	**SAMPLE TIME (MIN)**	18.0	48.0
	TEMPERATURE, ^{0}F	311	309
	% MOISTURE	30.4	25.6
	MM5 RESULTS (mg/dscm)	30.00	9.41
	MM5 TRAIN 'A' (mg/dscm)	25.60	8.50
	MM5 TRAIN 'B' (mg/dscm)	34.40	10.30
	MM5 RESULTS (gr/dscf)	0.0130	0.0040
CEMS *Response (arbitrary units)*	**ESA**	Off Line	Off Line
	VEREWA	Off Line	Off Line
	ESCP5	29.52	9.27
	DURAG	32.06	12.27
	SIGRIST	30.21	7.12

TABLE 2-4. ESA MASTER CALIBRATION

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
7.385	16.800	33.329	12.402	49.967	-4.235
9.960	35.550	41.099	21.286	58.094	4.291
5.005	9.600	29.997	0.341	43.578	-13.239
10.100	32.250	41.682	21.608	58.547	4.744
9.550	13.425	39.481	20.253	56.636	3.098
7.950	50.850	34.561	14.825	51.594	-2.209
9.750	21.225	40.253	20.774	57.415	3.612
9.250	20.025	38.386	19.407	55.665	2.128
10.200	36.375	42.108	21.830	58.871	5.067
10.175	42.600	42.001	21.775	58.790	4.986

TABLE 2-5. VEREWA MASTER CALIBRATION

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
21.200	16.800	27.760	7.969	40.410	-4.681
45.300	35.550	46.311	27.317	59.124	14.504
13.900	9.600	24.562	-0.313	35.321	-11.072
49.250	32.250	50.655	29.185	62.755	17.085
35.500	13.425	36.858	21.359	50.966	7.251
33.100	50.850	34.943	19.499	49.079	5.364
25.000	21.225	29.706	11.999	42.981	-1.277
25.250	20.025	29.843	12.255	43.178	-1.080
43.650	36.375	44.568	26.465	57.827	13.207
47.100	42.600	48.264	28.195	60.775	15.684

TABLE 2-6. DURAG MASTER CALIBRATION

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
39.00	50.100	56.679	43.345	70.496	29.529
43.100	51.600	62.179	47.150	75.321	34.009
36.150	39.825	53.007	40.550	67.159	26.398
45.230	60.000	65.115	49.048	77.806	36.357
49.550	100.350	71.187	52.780	83.053	40.914
60.430	61.050	86.904	61.754	96.415	52.243
58.850	55.650	84.596	60.476	94.277	50.795
45.360	55.200	65.295	49.163	77.954	36.504
32.060	45.000	48.018	36.257	62.449	21.826
17.590	24.300	33.229	18.208	46.375	5.062
12.270	14.108	28.561	10.802	40.596	-1.233
15.250	16.800	31.146	14.981	43.874	2.252
25.350	35.550	40.654	28.394	54.904	14.143
7.035	9.600	24.157	3.326	35.208	-7.724
12.250	13.425	28.544	10.774	40.574	-1.255
18.650	50.850	34.192	19.650	47.508	6.334
14.650	21.225	30.620	14.145	43.194	1.571
16.950	20.025	32.654	17.331	45.648	4.336
29.850	36.375	45.478	33.781	59.941	19.318
27.150	42.600	42.530	30.603	56.912	16.220

TABLE 2-7. ESC MASTER CALIBRATION

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
33.12	50.1	53.76966282	39.23017623	70.24418567	22.75565338
36.19	51.6	57.97427183	42.03154013	73.86759951	26.13821245
30.66	39.825	50.58358922	36.80234318	67.35694742	20.02898498
37.28	60	59.51743509	42.97583958	75.17154455	27.32173011
38.08	100.35	60.66424711	43.65468825	76.1445886	28.17434677
55.05	61.05	86.57394515	56.47181774	97.25419945	45.79156344
51.29	55.65	80.67443365	53.79072396	92.56247219	41.90268542
42.43	55.2	67.07007033	47.17589507	81.489457	32.7565084
29.52	45	49.17143859	35.61292732	66.05616417	18.72820174
13.92	24.3	33.89570809	15.28827424	48.73768192	0.446300403
9.27	14.1075	30.27765173	8.294677795	43.83328014	-5.260950614
13.175	16.8	33.30030217	14.18353363	47.98796482	-0.504129014
22.935	35.55	41.88782656	27.86906974	58.58257183	11.17432447
5.865	9.6	27.74384262	3.058018572	40.40968428	-9.607823095
42.65	32.25	67.40032785	47.34769424	81.74048535	33.00753674
12.15	13.425	32.49195249	12.65275555	46.81840093	-1.673692897
18.05	50.85	37.3460211	21.26293458	53.16917137	5.439784308
13	21.225	33.16143259	13.92303993	47.78828318	-0.703810652
15.95	20.025	35.5567348	18.25986154	50.89341909	2.923177258
27.4	36.375	46.66295512	33.28340995	53.61709252	16.32927254
24.3	42.6	4327682991	29.59509995	60.09994615	12.77198371

TABLE 2-8. SIGRIST MASTER CALIBRATION

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
34.690	50.100	49.207	36.733	64.647	21.293
38.350	51.600	52.666	39.565	67.866	24.365
35.300	39.825	49.770	37.219	65.171	21.817
50.760	60.000	65.518	48.042	78.990	34.570
55.930	100.350	71.189	51.257	83.709	38.738
69.910	61.050	86.951	59.525	96.808	49.667
66.120	55.650	82.636	57.325	93.183	46.778
47.420	55.200	61.931	45.889	75.954	31.865
30.210	45.000	45.253	32.987	60.778	17.461
12.360	24.300	32.272	15.287	45.898	1.662
7.120	14.108	28.986	9.567	41.762	-3.209
14.016	16.800	33.343	17.064	47.248	3.159
23.182	35.550	39.686	26.474	54.830	11.330
2.814	9.600	26.373	4.779	38.246	-7.094
51.188	32.250	65.983	48.314	79.358	34.938
8.040	13.425	29.554	10.581	42.387	-2.253
18.358	50.850	36.246	21.623	50.795	7.074
10.854	21.225	31.313	13.658	44.695	0.276
15.812	20.025	34.525	18.968	48.717	4.775
32.160	36.375	46.934	34.657	62.454	19.137
26.532	42.600	42.247	29.671	57.636	14.282

TABLE 2-9. ESA MASTER CALIBRATION - WITHOUT STATISTICAL OUTLIERS

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
7.385	16.800	28.929	11.082	43.443	-3.432
9.960	35.550	36.280	18.747	50.760	4.266
5.005	9.600	23.508	2.624	37.054	-10.923
9.550	13.425	34.994	17.642	49.565	3.071
9.750	21.225	35.616	18.186	50.148	3.654
9.250	20.025	34.080	16.806	48.690	2.196
10.200	36.375	37.052	19.374	51.460	4.966
10.175	42.600	36.971	19.309	51.387	4.893

TABLE 2-10. VEREWA PARTIAL CALIBRATION - WITHOUT STATISTICAL OUTLIERS

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
21.200	16.800	22.027	9.762	30.939	0.849
45.300	35.550	41.178	28.401	49.993	19.586
13.900	9.600	17.246	3.096	25.570	-5.228
35.500	13.425	32.701	21.511	42.029	12.183
25.000	21.225	24.670	13.078	33.919	3.829
25.250	20.025	24.848	13.291	34.115	4.025
43.650	36.375	39.695	27.297	48.699	18.292
47.100	42.600	42.818	29.584	51.404	20.997

TABLE 2-11. DURAG INITIAL CALIBRATION - WITHOUT STATISTICAL OUTLIERS

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
39.000	50.100	49.213	42.888	55.644	36.457
43.100	51.600	53.958	46.995	60.151	40.803
36.150	39.825	45.972	39.976	52.551	33.396
45.230	60.000	56.454	49.098	62.483	43.070
60.430	61.050	74.634	63.736	79.368	59.003
58.850	55.650	72.725	62.235	77.662	57.297
45.360	55.200	56.607	49.226	62.623	43.210
32.060	45.000	41.421	35.696	48.104	29.013
17.590	24.300	26.346	19.529	32.580	13.296
12.270	14.108	21.108	13.281	26.941	7.447
15.250	16.800	24.028	16.795	30.118	10.705
25.350	35.550	34.243	28.387	40.876	21.754
7.035	9.600	16.042	7.044	21.492	1.594
12.250	13.425	21.088	13.257	26.968	7.377
14.650	21.225	23.438	16.090	29.470	10.057
16.950	20.025	25.709	18.784	31.921	12.572
29.850	36.375	39.017	33.329	45.718	26.628
27.150	42.600	36.133	30.383	42.803	23.713

TABLE 2-12. ESC INITIAL CALIBRATION - WITHOUT STATISTICAL OUTLIERS

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
33.120	50.100	47.970	41.318	55.093	34.194
36.190	51.600	51.983	44.871	58.921	37.933
30.660	39.825	44.808	38.416	52.044	31.180
37.280	60.000	53.424	46.117	60.290	39.250
55.050	61.050	77.597	65.742	82.779	60.559
51.290	55.650	72.411	61.660	78.005	56.067
42.430	55.200	60.319	51.915	66.752	45.482
29.520	45.000	43.361	37.053	50.639	29.775
13.920	24.300	24.773	17.192	31.538	10.427
9.270	14.108	19.563	10.941	25.939	4.565
13.175	16.8	23.93109438	16.19770288	30.619729	9.509068
22.935	35.55	35.25131164	28.93306006	42.524268	21.660103
5.865	9.6	15.8020671	6.309696423	21.822495	0.2892684
12.15	13.425	22.77799687	14.82447212	29.391779	8.2160901
13	21.225	23.73385394	15.96361898	30.439281	9.258192
15.95	20.025	27.08134854	19.88702034	34.004301	12.964068
27.4	36.375	40.70372053	34.48558353	48.009128	27.180177
24.3	42.6	36.89741674	30.65128479	44.188826	23.359875

TABLE 2-13. SIGRIST INITIAL CALIBRATION - WITHOUT OUTLIERS

x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
34.690	50.100	45.520	37.255	54.890	27.885
38.350	51.600	49.147	40.485	58.364	31.268
35.300	39.825	46.118	37.799	55.461	28.456
50.760	60.000	61.987	50.899	70.276	42.610
69.910	61.050	82.642	66.126	88.992	59.776
66.120	55.650	78.511	63.155	85.213	56.453
47.420	55.200	58.467	48.160	67.021	39.606
30.210	45.000	41.210	33.169	50.670	23.710
12.360	24.300	25.471	15.462	34.129	6.805
7.120	14.108	21.166	9.949	29.390	1.724
14.016	16.800	26.854	17.183	35.680	8.356
23.182	35.550	34.761	26.450	44.108	17.103
2.814	9.600	17.689	5.358	25.459	-2.412
8.040	13.425	21.915	10.923	30.184	2.655
10.854	21.225	24.224	13.887	32.763	5.348
15.812	20.025	28.366	19.035	37.317	10.084
32.160	36.375	43.067	34.966	52.496	25.537
26.532	42.600	37.788	29.700	47.224	20.264

Table 2-14. Durag Initial Calibration with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	39.0	50.1	55.442	41.407	70.617	26.231
	43.1	51.6	60.670	44.956	75.006	30.621
	36.2	39.8	51.990	38.757	67.566	23.180
	45.2	60.0	63.483	46.705	77.286	32.901
	49.6	100.4	69.332	50.104	81.911	37.525
	60.4	61.1	84.588	58.143	93.558	49.173
	58.9	55.7	82.342	57.006	91.867	47.481
	45.4	55.2	63.656	46.810	77.426	33.040
	32.1	45.0	47.362	34.627	63.188	18.802
	12.3	14.1	29.891	9.727	42.002	-2.384
Oct Data	15.3	16.8	32.182	13.817	45.192	0.806
	25.4	35.6	40.668	26.955	56.004	11.619
	7.04	9.60	25.999	2.411	36.398	-7.988
	44.3	32.3	62.248	45.948	76.291	31.905
	12.3	13.4	29.876	9.699	41.980	-2.405
	18.7	50.9	34.889	18.389	48.832	4.446
	14.7	21.2	31.715	12.999	44.550	0.164
	20.0	24.8	33.521	16.117	47.012	2.626
	36.4	38.6	45.037	32.221	60.822	16.436
	42.6	35.7	42.360	29.117	57.931	13.546

	Initial Calibration w outliers				
n=	20				
x bar=	31.67				
y bar=	40.58				
Sxx=	4990.5				
Syy=	9024.1	Conf at y em lim=		12.45	18.04%
Sxy=	5342.5	n' at y em lim =		5.23	
a=	1.07	u (n')=	(from table)	1.183	
b=	6.67	Kt =		1.64	
SL=	13.55	Tol at y pred (max) (%)=		22.19	32.16%
t(f)=	2.101				
v(f)=	1.3845	y pred max	x		
r=	0.796	69	58.22		

Table 2-15. ESC Initial Calibration with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	33.1	50.1	54.064	38.954	71.155	21.863
	36.2	51.6	58.251	41.766	74.654	25.363
	30.7	39.8	50.912	36.497	68.350	19.059
	37.3	60.0	59.794	42.708	75.897	26.606
	38.1	100.4	60.943	43.384	76.809	27.518
	55.1	61.1	87.103	55.914	96.154	46.863
	51.3	55.7	81.127	53.317	91.868	42.576
	42.4	55.2	67.381	46.863	81.768	32.476
	29.5	45.0	49.522	35.288	67.051	17.759
	9.3	14.1	31.206	7.436	43.966	-5.325
Oct Data	13.2	16.8	34.118	13.427	48.418	-0.873
	22.9	35.6	42.415	27.382	59.544	10.253
	5.9	9.6	28.767	2.112	40.085	-9.206
	42.7	32.3	67.714	47.032	82.018	32.727
	12.2	13.4	33.339	11.869	47.250	-2.042
	18.1	50.9	38.021	20.639	53.975	4.684
	13.0	21.2	33.984	13.162	48.219	-1.073
	20.0	26.9	36.294	17.578	51.581	2.290
	36.4	40.0	47.063	32.914	64.634	15.343
	42.6	36.5	43.763	29.146	61.100	11.809

Initial Calibration w outliers

n=	20				
x bar=	27.918				
y bar=	40.579				
Sxx=	3807.9				
Syy=	9024.1	Conf at y em lim=		14.599	21.16%
Sxy=	4340.9	n' at y em lim =		4.690	
a=	1.140	u (n')=	(from table)	1.183	
b=	8.753	Kt =		1.638	
SL=	15.047	Tol at y pred (max) (%)=		24.646	35.72%
t(f)=	2.101				
v(f)=	1.3845	y pred max	x		
r=	0.741	69	52.850		

Table 2-16. Sigrist Initial Calibration with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	34.7	50.1	49.487	36.408	65.523	20.372
	38.4	51.6	52.916	39.280	68.673	23.523
	35.3	39.8	50.044	36.901	66.048	20.897
	50.8	60.0	65.791	47.768	79.355	34.204
	55.9	100.4	71.513	50.947	83.805	38.654
	69.9	61.1	87.467	59.058	95.838	50.687
	66.1	55.7	83.095	56.906	92.576	47.425
	47.4	55.2	62.181	45.628	76.480	31.330
	30.2	45.0	45.592	32.591	61.667	16.516
	7.12	14.1	29.715	8.719	41.792	-3.358
Oct Data	14.0	16.8	33.958	16.347	47.728	2.578
	23.2	35.6	40.144	25.941	55.618	10.467
	2.8	9.6	27.171	3.851	38.086	-7.064
	51.2	32.3	66.259	48.037	79.723	34.573
	8.0	13.4	30.268	9.750	42.584	-2.566
	18.4	50.9	36.788	20.992	51.465	6.315
	10.9	21.2	31.982	12.881	45.006	-0.144
	20.0	26.7	35.111	18.287	49.274	4.124
	36.4	40.8	47.246	34.294	63.345	18.195
	42.6	35.9	42.647	29.205	58.501	13.351

	Initial Calibration w outliers				
n=	20				
x bar=	31.938				
y bar=	40.579				
Sxx=	7564.8				
Syy=	9024.1	Conf at y em lim=		12.759	18.49%
Sxy=	6511.3	n' at y em lim =		5.151	
a=	0.861	u (n')=	(from table)	1.183	
b=	13.089	Kt =		1.638	
SL=	13.783	Tol at y pred (max) (%)=		22.575	32.72%
t(f)=	2.101				
v(f)=	1.3845	y pred max	x		
r=	0.788	69	64.958		

Table 2-17. Durag Initial Calibration without outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	39.0	50.1	48.829	42.268	55.156	35.940
	43.1	51.6	53.454	46.080	59.375	40.159
	36.2	39.8	45.690	39.541	52.224	33.007
	45.2	60.0	55.897	48.021	61.567	42.351
	60.4	61.1	73.756	61.444	77.208	57.992
	58.9	55.7	71.878	60.070	75.583	56.366
	45.4	55.2	56.047	48.139	61.701	42.485
	32.1	45.0	41.324	35.490	48.015	28.799
	12.3	14.1	22.475	13.610	27.651	8.434
Oct Data	15.3	16.8	25.148	17.070	30.717	11.501
	25.4	35.6	34.564	28.440	41.110	21.894
	7.04	9.60	17.847	7.465	22.264	3.047
	12.3	13.4	22.458	13.586	27.630	8.414
	14.7	21.2	24.607	16.376	30.100	10.883
	17.0	20.0	26.688	19.028	32.467	13.250
	29.9	36.4	39.042	33.223	45.741	26.525
	27.2	42.6	36.329	30.380	42.963	23.746

Initial Calibration w/ outliers

n=	17				
x bar=	30.643				
y bar=	36.949				
Sxx=	4323.9				
Syy=	5052.7	Conf at y em lim=		6.156	9.11%
Sxy=	4449.4	n' at y em lim =		3.788	
a=	1.029	u (n')=	(from table)	1.189	
b=	5.416	Kt =		1.7089497	
SL=	5.622	Tol at y pred (max) (%)=		9.608	14.21%
t(f)=	2.131				
v(f)=	1.4373	y pred max	x		
r=	0.952	67.600	60.43		

Table 2-18. ESC Initial Calibration without outliers

	x	y	y pred + conf	y pred - conf	y pred + to	y pred - tol
Sept Data	33.12	50.1	47.3654388	40.59971124	54.25169	33.713462
	36.19	51.6	51.2342831	43.82732977	57.79992	37.261693
	30.66	39.825	44.3462002	37.93253338	51.40848	30.870253
	37.28	60	52.6302079	44.95099593	59.05972	38.521489
	55.05	61.05	76.2393147	62.41815766	79.59785	59.059623
	51.29	55.65	71.1646736	58.80136545	75.25213	54.713906
	42.43	55.2	59.3422534	50.14344018	65.01196	44.473733
	29.52	45	42.9754313	36.66813366	50.0909	29.552669
	9.27	14.108	21.4141888	11.42046028	26.68644	6.1482112
Oct Data	13.175	16.8	25.2863579	16.57489935	31.19974	10.661515
	22.935	35.55	35.4454254	28.97657362	42.48011	21.941886
	5.865	9.6	18.0859918	6.877824707	22.75102	2.2127949
	12.15	13.425	24.2629227	15.22899437	30.01507	9.4768452
	13	21.225	25.111221	16.34551476	30.99748	10.459255
	15.95	20.025	28.0890263	20.18678615	34.40702	13.868793
	27.4	36.375	40.4783052	34.26477081	47.64065	27.102425
	24.3	42.6	36.9522655	30.62500111	44.05775	23.51952

Initial Calibration w outliers

n=	17				
x bar=	27.034				
y bar=	36.949				
Sxx=	3377.0				
Syy=	5052.7	Conf at y em lim=		6.855	9.93%
Sxy=	3903.0	n' at y em lim =		3.490	
a=	1.156	u (n')=	(from table)	1.189	
b=	5.703	Kt =		1.709	
SL=	6.009	Tol at y pred (max) (%)=		10.269	14.88%
t(f)=	2.131				
v(f)=	1.437	y pred max	x		
r=	0.945	69	54.766		

Table 2-19. Sigrist Initial Calibration without outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	34.7	50.1	44.303	37.065	52.337	29.030
	38.4	51.6	47.524	39.874	55.352	32.046
	35.3	39.8	44.832	37.541	52.840	29.533
	50.8	60.0	59.059	48.785	65.576	42.269
	69.9	61.1	77.724	61.672	81.351	58.045
	66.1	55.7	73.991	59.161	78.229	54.922
	47.4	55.2	55.885	46.456	62.824	39.517
	30.2	45.0	40.518	33.469	48.647	25.340
	7.1	14.1	23.438	12.505	29.625	6.318
Oct Data	14.0	16.8	28.234	19.071	35.306	11.999
	23.2	35.6	34.948	27.459	42.857	19.550
	2.2	9.6	20.082	7.726	25.557	2.250
	8.0	13.4	24.070	13.390	30.383	7.076
	10.9	21.2	26.016	16.080	32.701	9.394
	15.8	20.0	29.513	20.751	36.785	13.479
	32.2	36.4	42.143	35.057	50.253	26.946
	26.5	42.6	37.548	30.378	45.617	22.310

	Initial Calibration w outliers				
n=	17				
x bar=	30.156				
y bar=	36.949				
Sxx=	6417.4				
Syy=	5052.7	Conf at y em lim=		7.888	11.43%
Sxy=	5286.7	n' at y em lim =		3.393	
a=	0.824	u (n')=	(from table)	1.189	
b=	12.106	Kt =		1.709	
SL=	6.819	Tol at y pred (max) (%)=		11.653	16.89%
t(f)=	2.131				
v(f)=	1.4373	y pred max	x		
r=	0.9284	69	69.063		

TABLE 2-20. SUMMARY OF PM CEMS PERFORMANCE CHARACTERISTICS WITH OUTLIERS

CEMS		Correlation Coefficient > 0.90	Confidence Interval < 20%	Tolerance Interval < 35%	Calibration Drift < 2%	Zero Drift < 2%
ESA	Partial Calibration	0.743	18.04%	25.37%		
VEREWA	Initial Calibration	0.666	109.22%	190.08%		
DURAG	Initial Calibration	0.796	18.04%	32.16%		
	November	0.187	57.60%	67.12%		
	Updated Master Plot	0.739	18.04%	30.30%		
ESC	Initial Calibration	0.741	21.16%	35.72%		
	November	0.554	50.57%	46.84%		
	Updated Master Plot	0.678	21.18%	33.10%		
SIGRIST	Initial Calibration	0.788	18.49%	32.72%		
	November	0.453	54.93%	52.90%		
	Updated Master Plot	0.729	18.57%	30.82%		

TABLE 2-21. SUMMARY OF PM CEMS PERFORMANCE CHARACTERISTICS WITHOUT OUTLIERS

CEMS		Correlation Coefficient > 0.90	Confidence Interval < 20%	Tolerance Interval < 35%	Calibration Drift < 2%	Zero Drift < 2%
ESA	Partial Calibration	0.703	31.20%	63.80%		
VEREWA	Initial Calibration	0.691	1.93%	2.91%		
DURAG	Initial Calibration	0.952	9.11%	14.21%		
	November	0.187	57.60%	67.12%		
	Updated Master Plot	0.839	14.08%	21.60%		
ESC	Initial Calibration	0.945	9.93%	14.88%		
	November	0.554	50.57%	46.84%		
	Updated Master Plot	0.806	16.07%	23.21%		
SIGRIST	Initial Calibration	0.928	11.43%	16.89%		
	November	0.453	54.93%	52.90%		
	Updated Master Plot	0.809	16.15%	22.60%		

TABLE 2-22: SUMMARY OF RESULTS FROM NOVEMBER TEST SERIES

DATE		*11/12/96*		
TIME	**1st half**	12:44 - 13:02	14:12 - 14:30	15:59 - 16:17
	2nd half	13:12 - 13:30	14:37 - 14:55	16:26 - 16:44
TEST CONDITIONS	**RUN NUMBER**	22	23	24
	WASTE FEEDS	#2Fuel Oil	Solvent,Jugs,Solids	Solvent,Jugs,Solids
	EDV POWER	High	High	High
REFERENCE METHOD	**SAMPLE TIME (MIN)**	36.0	36.0	36.0
	TEMPERATURE, ^{0}F	303	304	304
	% MOISTURE	21.2	21.9	22.2
	MM5 RESULTS (mg/dscm)	32.5	18.6	35.7
	MM5 TRAIN 'A' (mg/dscm)	32.4	16.2	38.5
	MM5 TRAIN 'B' (mg/dscm)	32.6	20.9	32.9
	MM5 RESULTS (gr/dscf)	0.014	0.008	0.0155
CEMS RESPONSE (arbitrary units)	**ESA**	Off Line	Off Line	Off Line
	VEREWA	26.98	43.09	39.28
	ESCP5	12.02	14.36	18.01
	DURAG	9.08 (*online 81%*)	12.67 (*online 92%*)	33.32
	SIGRIST	10.58	14.52	19.53
	JONAS	No Data	No Data	74.49

TABLE 2-22 (cont) : SUMMARY OF RESULTS FROM NOVEMBER TEST SERIES

DATE		***11/13/96***		
TIME	**1st half**	08:44 - 09:08	10:24 - 10:48	16:38 - 16:56
	2nd half	09:15 - 09:39	10:55 - 11:19	17:04 - 17:22
TEST CONDITIONS	**RUN NUMBER**	25	26	29
	WASTE FEEDS	Solvent,Jugs,	Solvent,Jugs,	#2 Fuel Oil
	EDV POWER	Mid	Mid	Low
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48.0	48.0	36.0
	TEMPERATURE, ^{0}F	304	303	303
	% MOISTURE	22.7	21.4	22.3
	MM5 RESULTS (mg/dscm)	19.4	19.6	23.9
	MM5 TRAIN 'A' (mg/dsccm)	22.2	17.8	24.6
	MM5 TRAIN 'B' (mg/dscm)	16.7	21.4	23.3
	MM5 RESULTS (gr/dscf)	0.0085	0.0085	0.0105
CEMS *RESPONSE (arbitrary units)*	**ESA**	Off Line	Off Line	Off Line
	VEREWA	31.37	33.37	43.57
	ESCP5	11.58	12.20	11.83
	DURAG	22.63 (*online 73%*)	25.26	23.74
	SIGRIST	11.86	11.70	14.43
	JONAS	67.78	17.51	88.18

Table 2-23. Evaluation Summary of PM CEMS November RCA

Percentage of RCA Data within Tolerance Interval		
PM CEM	Initial Calibration w/ outliers	Initial Calibration w/out outliers
Durag	83%	67%
ESC	83%	50%
Sigrist	83%	50%

Table 2-24. Durag Master Updated Data Base with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	39.0	50.1	55.630	42.579	70.011	28.199
	43.1	51.6	60.433	45.548	73.897	32.085
	36.2	39.8	52.429	40.379	67.310	25.498
	45.2	60.0	62.997	47.022	75.915	34.103
	49.6	100.4	68.298	49.910	80.010	38.198
	60.4	61.1	82.009	56.821	90.321	48.509
	58.9	55.7	79.997	55.838	88.824	47.012
	45.4	55.2	63.154	47.111	76.039	34.226
	32.1	45.0	48.098	36.957	63.434	21.621
	12.3	14.1	32.020	15.523	44.678	2.865
Oct Data	15.3	16.8	34.068	19.123	47.502	5.690
	25.4	35.6	41.823	30.513	57.074	15.262
	7.04	9.60	28.564	9.056	39.716	-2.096
	44.3	32.3	61.872	46.383	75.034	33.222
	12.3	13.4	32.006	15.499	44.659	2.846
	18.7	50.9	36.511	23.125	50.724	8.912
	14.7	21.2	33.650	18.405	46.933	5.121
	17.0	20.0	35.273	21.141	49.113	7.301
	29.9	36.4	45.913	34.953	61.339	19.527
	27.2	42.6	43.402	32.346	58.780	16.968
Nov Data	9.08	48.7	29.896	11.600	41.654	-0.158
	12.7	27.9	32.290	16.011	45.057	3.244
	33.3	53.6	49.395	38.049	64.628	22.816
	29.1	33.6	39.569	27.611	54.496	12.684
	29.3	36.1	41.746	30.420	56.989	15.177
	35.9	34.6	40.471	28.814	55.548	13.736

Master Cal Supporting Statistical Data

n=	26				
x bar=	29.236				
y bar=	39.851				
Sxx=	5896.2				
Syy=	9687.4	Conf at y em lim=		12.451	18.04%
Sxy=	5588.2	n' at y em lim =		5.028	
a=	0.948	u (n')=	(from table)	1.174	
b=	12.143	Kt =		1.546	
SL=	13.526	Tol at y pred (max) (%)=		20.906	30.30%
t(f)=	2.064				
v(f)=	1.317	y pred max	x		
r=	0.739	69	59.992		

Table 2-25. ESC Master Updated Data Base with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	33.1	50.1	55.146	41.013	70.918	25.241
	36.2	51.6	58.896	43.160	73.866	28.190
	30.7	39.8	52.272	39.161	68.555	22.879
	37.3	60.0	60.262	43.888	74.913	29.237
	38.1	100.4	61.274	44.412	75.681	30.005
	55.1	61.1	83.813	54.471	91.980	46.304
	51.3	55.7	78.711	52.351	88.369	42.693
	42.4	55.2	66.892	47.150	79.859	34.183
	29.5	45.0	50.989	38.255	67.460	21.784
	9.3	14.1	34.164	16.182	48.011	2.335
Oct Data	13.2	16.8	36.718	21.129	51.762	6.085
	22.9	35.6	44.321	32.274	61.136	15.459
	5.9	9.6	32.059	11.746	44.741	-0.935
	42.7	32.3	67.181	47.284	80.071	34.394
	12.2	13.4	36.030	19.849	50.777	5.101
	18.1	50.9	40.234	26.977	56.444	10.768
	13.0	21.2	36.599	20.912	51.594	5.917
	16.0	20.0	38.664	24.514	54.427	8.751
	27.4	36.4	48.696	36.475	65.424	19.748
	24.3	42.6	45.591	33.626	62.447	16.770
Nov Data	12.0	48.7	35.943	19.685	50.652	4.976
	14.4	27.9	37.533	22.590	52.900	7.224
	18.0	53.6	40.203	26.931	56.405	10.729
	29.1	27.4	35.653	19.131	50.230	4.554
	29.3	28.0	36.063	19.912	50.825	5.149
	35.9	27.6	35.818	19.446	50.470	4.794

Master Cal Supporting Statistical Data

n=	26				
x bar=	24.553				
y bar=	39.851				
Sxx=	4821.0				
Syy=	9687.4	Conf at y em lim=		14.611	21.18%
Sxy=	4630.3	n' at y em lim =		4.357	
a=	0.960	u (n')=	(from table)	1.174	
b=	16.270	Kt =		1.546	
SL=	14.777	Tol at y pred (max) (%)=		22.838	33.10%
t(f)=	2.06				
v(f)=	1.317	y pred max	x		
r=	0.678	69	54.90		

Table 2-26. Sigrist Master Updated Data Base with outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	34.7	50.1	51.000	39.122	66.325	23.796
	38.4	51.6	54.205	41.408	69.071	26.542
	35.3	39.8	51.522	39.514	66.783	24.254
	50.8	60.0	65.934	48.299	78.381	35.852
	55.9	100.4	71.050	50.940	82.259	39.730
	69.9	61.1	85.189	57.777	92.747	50.218
	66.1	55.7	81.325	55.954	89.904	47.375
	47.4	55.2	62.683	46.538	75.875	33.346
	30.2	45.0	47.317	36.083	62.964	20.435
	7.1	14.1	32.657	16.098	45.642	3.113
Oct Data	14.0	16.8	36.454	22.648	50.816	8.286
	23.2	35.6	42.159	30.696	57.692	15.163
	2.8	9.6	30.413	11.882	42.412	-0.117
	51.2	32.3	66.354	48.521	78.702	36.173
	8.0	13.4	33.147	16.989	46.332	3.803
	18.4	50.9	39.037	26.580	54.073	11.544
	10.9	21.2	34.675	19.683	48.443	5.914
	15.8	20.0	37.500	24.297	52.163	9.634
	32.2	36.4	48.884	37.441	64.427	21.898
	26.5	42.6	44.521	33.360	60.205	17.676
Nov Data	10.6	48.7	34.524	19.423	48.238	5.709
	14.5	27.9	36.744	23.114	51.194	8.665
	19.5	53.6	39.768	27.607	54.952	12.423
	29.1	27.9	35.233	20.634	49.198	6.669
	29.3	27.8	35.144	20.483	49.078	6.549
	35.9	29.9	36.692	23.031	51.126	8.597

Master Cal Supporting Statistical Data

n=	26				
x bar=	27.746				
y bar=	39.851				
Sxx=	9140.6				
Syy=	9687.4	Conf at y em lim=		12.814	18.57%
Sxy=	6857.3	n' at y em lim =		4.911	
a=	0.750	u (n')=	(from table)	1.174	
b=	19.036	Kt =		1.546	
SL=	13.758	Tol at y pred (max) (%)=		21.265	30.82%
t(f)=	2.06				
v(f)=	1.317	y pred max	x		
r=	0.729	69	66.60		

Table 2-27. Durag Master Updated Data Base without outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	39.0	50.1	51.442	41.860	60.819	32.483
	43.1	51.6	55.758	44.788	64.441	36.105
	36.2	39.8	48.530	39.736	58.301	29.965
	45.2	60.0	58.045	46.265	66.323	37.986
	60.4	61.1	74.819	56.346	79.751	51.414
	58.9	55.7	73.053	55.321	78.355	50.019
	45.4	55.2	58.185	46.354	66.438	38.101
	32.1	45.0	44.526	36.514	54.688	26.352
	12.3	14.1	28.699	17.375	37.205	8.869
Oct Data	15.3	16.8	30.795	20.545	39.838	11.501
	25.4	35.6	38.536	30.649	48.760	20.424
	7.04	9.60	25.131	11.694	32.581	4.244
	12.3	13.4	28.685	17.354	37.188	8.851
	14.7	21.2	30.368	19.911	39.308	10.971
	17.0	20.0	32.019	22.324	41.340	13.003
	29.9	36.4	42.468	34.667	52.736	24.399
	27.2	42.6	40.067	32.298	50.351	22.014
Nov Data	9.08	48.7	26.511	13.927	34.387	6.051
	12.7	27.9	28.977	17.804	37.559	9.222
	33.3	53.6	45.734	37.532	55.801	27.465
	22.6	29.1	36.322	28.056	46.358	18.021
	25.3	29.3	38.461	30.565	48.681	20.344
	23.7	35.9	37.212	29.128	47.338	19.002

Master Cal Supporting Statistical Data

n=	23				
x bar=	28.158				
y bar=	37.073				
Sxx=	5117.9				
Syy=	5671.0	Conf at y em lim=		9.237	14.08%
Sxy=	4521.2	n' at y em lim =		4.049	
a=	0.883	u (n')=	(from table)	1.178	
b=	12.197	Kt =		1.586	
SL=	8.936	Tol at y pred (max) (%)=		14.168	21.60%
t(f)=	2.080				
v(f)=	1.346	y pred max	x		
r=	0.839	65.583	60.43		

Table 2-28. ESC Master Updated Data Base without outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	33.1	50.1	51.254	40.892	61.507	30.639
	36.2	51.6	54.720	43.147	64.367	33.500
	30.7	39.8	48.559	39.003	59.215	28.347
	37.3	60.0	55.972	43.925	65.383	34.515
	55.1	61.1	77.195	55.815	81.939	51.072
	51.3	55.7	72.629	53.375	78.436	47.568
	42.4	55.2	62.000	47.494	70.181	39.314
	29.5	45.0	47.342	38.096	58.152	27.285
	9.27	14.1	29.958	17.746	39.285	8.418
Oct Data	13.2	16.8	32.786	22.194	42.924	12.056
	22.9	35.6	40.808	32.359	52.017	21.150
	5.87	9.60	27.589	13.769	36.113	5.246
	12.2	13.4	32.029	21.041	41.969	11.101
	13.0	21.2	32.656	21.998	42.761	11.893
	16.0	20.0	34.900	25.251	45.509	14.642
	27.4	36.4	45.139	36.348	56.177	25.310
	24.3	42.6	42.085	33.626	53.289	22.422
Nov Data	12.0	48.7	31.934	20.894	41.848	10.980
	14.4	27.9	33.676	23.512	44.028	13.160
	18.0	53.6	36.544	27.446	47.428	16.561
	11.6	29.1	31.613	20.395	41.438	10.570
	12.2	29.3	32.066	21.097	42.015	11.148
	11.8	35.9	31.795	20.678	41.670	10.803

Master Cal Supporting Statistical Data

n=	23				
x bar=	23.460				
y bar=	37.073				
Sxx=	4240.7				
Syy=	5671.0	Conf at y em lim=		10.690	16.07%
Sxy=	3951.1	n' at y em lim =		3.587	
a=	0.932	u (n')=	(from table)	1.178	
b=	15.215	Kt =		1.586	
SL=	9.734	Tol at y pred (max) (%)=		15.434	23.21%
t(f)=	2.080				
v(f)=	1.346	y pred max	x		
r=	0.806	66.505	55.05		

Table 2-29. Sigrist Master Updated Data Base without outliers

	x	y	y pred + conf	y pred - conf	y pred + tol	y pred - tol
Sept Data	34.7	50.1	47.855	38.556	58.514	27.897
	38.4	51.6	50.825	40.683	61.062	30.446
	35.3	39.8	48.342	38.918	58.939	28.322
	50.8	60.0	61.474	47.315	69.703	39.086
	69.9	61.1	78.663	56.792	83.036	52.419
	66.1	55.7	75.226	54.951	80.397	49.780
	47.4	55.2	58.546	45.592	67.377	36.760
	30.2	45.0	44.390	35.783	55.395	24.778
	7.1	14.1	30.016	18.005	39.319	8.702
Oct Data	14.0	16.8	33.806	23.817	44.120	13.503
	23.2	35.6	39.426	30.960	50.502	19.885
	2.2	9.6	27.435	13.709	35.880	5.264
	8.0	13.4	30.507	18.795	39.959	9.342
	10.9	21.2	32.034	21.186	41.918	11.302
	15.8	20.0	34.844	25.279	45.370	14.754
	32.2	36.4	45.872	37.016	56.752	26.136
	26.5	42.6	41.716	33.336	52.834	22.217
Nov Data	10.6	48.7	31.884	20.955	41.728	11.111
	14.5	27.9	34.095	24.230	44.471	13.854
	19.5	53.6	37.084	28.217	47.959	17.342
	11.9	29.1	32.591	22.030	42.619	12.002
	11.7	29.3	32.502	21.896	42.507	11.891
	14.4	35.9	34.043	24.156	44.408	13.791

Master Cal Supporting Statistical Data

n=	23				
x bar=	25.882				
y bar=	37.073				
Sxx=	7660.5				
Syy=	5671.0	Conf at y em lim=		10.935	16.15%
Sxy=	5333.6	n' at y em lim =		3.372	
a=	0.696	u (n')=	(from table)	1.178	
b=	19.053	Kt =		1.586	
SL=	9.655	Tol at y pred (max) (%)=		15.308	22.60%
t(f)=	2.080				
v(f)=	1.346	y pred max	x		
r=	0.809	67.727	69.91		

TABLE 2-30. REVISED CEMS DATA FOR SEPT, OCT, NOV TESTS WITHOUT RSD OUTLIERS

	RUN NO.	ESA (Response Arbitratuy Units)	VEREWA (Response Arbitratuy Units)	DURAG (Response Arbitratuy Units)	ESC (Response Arbitratuy Units)	SIGRIST (Response Arbitratuy Units)
Sept	10	7.265	9.457	15.559	13.225	13.949
	11	9.888	20.354	25.985	23.174	23.602
	11-R1	10.061	32.049	43.143	42.580	51.143
	8	9.318	14.381	16.160	12.751	10.690
	9	9.822	12.734	16.771	15.793	37.447
	15	10.161	24.353	29.764	27.314	31.130
	14	10.149	23.615	27.579	24.744	27.202
	3	9.979	19.651	12.285	12.185	8.007
Oct	4			39.293	33.417	35.081
	5			42.794	36.001	38.103
	6			36.873	31.336	36.310
	6-R1			45.102	40.210	50.575
	6-R2	Not in	Not in	49.992	45.223	56.720
	16	Service	Service	61.329	55.838	70.923
	17			59.361	54.422	66.306
	18			45.623	42.714	47.839
	19			32.008	29.485	30.159
	21			12.230	9.167	7.013
Nov	22		26.951	9.081	12.015	10.576
	23		43.882	12.669	14.358	14.519
	24		39.532	33.321	18.006	19.532
	25	Not in	33.890	22.625	11.581	11.858
	26	Service	33.710	25.258	12.204	11.700
	27		49.388	19.076	13.003	12.782
	28		70.388	7.475	25.622	31.998
	29		43.283	23.743	11.828	14.426

TABLE 2-31. DECEMBER RCA TEST SUMMARY

DATE		***12/17/96***	*12/18/96*	
TIME	**1st half**	13:51 - 14:15	08:52 - 09:16	12:05 - 12:29
	2nd half	1422 - 14:46	09:22 - 09:46	12:34 - 12:58
TEST CONDITIONS	**RUN NUMBER**	32	34	36
	WASTE FEEDS	Solids,Solvents	Solids,Solvents	Solids,Solvents
	EDV POWER	Low	Low	Low
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48	48	48
	TEMPERATURE, ^{0}F	295	282	290
	% MOISTURE	22.1	22.6	21.7
	MM5 RESULTS (mg/dscm @ 7% O_2)	32.2	32.7	38.4
	MM5 TRAIN 'A' (mg/dscm @ 7% O_2)	38.1	25.8	39.5
	MM5 TRAIN 'B' (mg/dscm @ 7% O_2)	26.4	39.7	37.3
	MM5 RESULTS (gr/dscf @ 7% O_2)	0.0141	0.0143	0.0168
CEMS	**ESVSA (mg/dscm)**	14.1	15.5	16.6
	VEREWA (mg/dscm)	19.1	21.6	26.0
	ESCP5 (mg/dscm)	18.5	21.9	27.1
	DURAG (mg/dscm)	17.7	21.3	27.7
	SIGRIST (mg/dscm)	16.7	21.3	28.8

TABLE 2-31.(CONT) DECEMBER RCA TEST SUMMARY

DATE		***12/18/96***	
TIME	**1st half**	13:36 - 14:00	15:00 - 15:24
	2nd half	14:04 - 14:28	15:28 - 15:52
TEST CONDITIONS	**RUN NUMBER**	37	38
	WASTE FEEDS	Solids,Solvents	Solids,Solvents
	EDV POWER	Low	Low
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48	48
	TEMPERATURE, ^{0}F	284	283
	% MOISTURE	22.7	22.4
	MM5 RESULTS (mg/dscm @ 7% O_2)	45.9	47.6
	MM5 TRAIN 'A' (mg/dscm @ 7% O_2)	48.5	51.9
	MM5 TRAIN 'B' (mg/dscm @ 7% O_2)	43.3	43.3
	MM5 RESULTS (mg/dscm @ 7% O_2)	0.0201	0.0208
CEMS	**ESVSA (mg/dscm)**	19.4	19.7
	VEREWA (mg/dscm)	24.7	30.3
	ESCP5 (mg/dscm)	31.5	32.3
	DURAG (mg/dscm)	33.1	33.9
	SIGRIST (mg/dscm)	34.1	34.4

TABLE 2-32. JANUARY RCA TEST SUMMARY

DATE		***01/15/97***	***01/16/97***	
TIME	**1st half**	09:25 - 09:49	12:25 - 12:49	13:40 - 14:04
	2nd half	10:14 - 10:38	12:55 - 13:19	14:10 - 14:34
TEST CONDITIONS	**RUN NUMBER**	40	43	44
	WASTE FEEDS	Jugs,Solids,Solvents	Jugs,Solids,Cl Solv.	Jugs,Solids,Cl Solv.
	EDV POWER	High	High	High
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48	48	48
	TEMPERATURE, ^{0}F	291	293	292
	% MOISTURE	20.3	21.0	20.5
	MM5 RESULTS (mg/dscm @ 7% O_2)	9.54	20.9	19.9
	MM5 TRAIN 'A' (mg/dscm @ 7% O_2)	9.54	20.9	19.9
	MM5 TRAIN 'B' (mg/dscm @ 7% O_2)	N/A	N/A	N/A
	MM5 RESULTS (gr/dscf @ 7% O_2)	0.0042	0.0091	0.0087
CEMS	**ENVSA (mg/dscm)**	7.01	12.9	8.47
	VEREWA (mg/dscm)	10.7	13.1	13.6
	ESCP5 (mg/dscm)	8.35	15.8	12.0
	DURAG (mg/dscm)	5.24	15.1	9.72
	SIGRIST (mg/dscm)	7.03	16.8	11.6

TABLE 2-32 (CONT) JANUARY RCA TEST SUMMARY

DATE		***1/16/97***		***1/17/97***
TIME	**1st half**	15:00 - 15:24	16:38 - 17:02	08:39 - 10:10
	2nd half	15:40 - 16:04	17:08 - 17:32	10:19 - 10:43
TEST CONDITIONS	**RUN NUMBER**	45	46	47
	WASTE FEEDS	Solids, Cl Solvents	Cl Solv.,Mixed Solv	Solids,Cl Solv,Jugs
	EDV POWER	High	High	High
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48	48	48
	TEMPERATURE, ^{0}F	291	289	288
	% MOISTURE	20.6	19.0	17.2
	MM5 RESULTS (mg/dscm @ 7% O_2)	7.91	13.7	20.3
	MM5 TRAIN 'A' (mg/dscm @ 7% O_2)	7.91	13.7	15.6
	MM5 TRAIN 'B' (mg/dscm @ 7% O_2)	N/A	N/A	25.1
	MM5 RESULTS (gr/dscf @ 7% O_2)	0.0035	0.0060	0.0089
CEMS	**ENVSA (mg/dscm)**	6.33	6.70	9.14
	VEREWA (mg/dscm)	11.7	10.7	12.7
	ESCP5 (mg/dscm)	8.43	9.59	13.8
	DURAG (mg/dscm)	5.59	7.05	13.5
	SIGRIST (mg/dscm)	6.91	8.63	15.9

TABLE 2-32. (CONT) JANUARY RCA TEST SUMMARY

DATE		***1/17/97***	
TIME	**1st half**	12:22 - 12:46	14:57 - 15:21
	2nd half	12:53 - 13:17	15:46 - 16:10
TEST CONDITIONS	**RUN NUMBER**	48	49
	WASTE FEEDS	Solids, Cl Solv., Jugs	Cl Solv, Jugs
	EDV POWER	High	High
REFERENCE METHOD	**SAMPLE TIME (MIN)**	48	48
	TEMPERATURE, ^{0}F	285	287
	% MOISTURE	18.0	19.7
	MM5 RESULTS (mg/dscm @ 7% O_2)	34.4	32.2
	MM5 TRAIN 'A' (mg/dscm @ 7% O_2)	26.6	31.4
	MM5 TRAIN 'B' (mg/dscm @ 7% O_2)	42.2	33.0
	MM5 RESULTS (gr/dscf @ 7% O_2)	0.0150	0.0141
CEMS	**ENVSA (mg/dscm)**	33.7	29.6
	VEREWA (mg/dscm)	22.0	21.8
	ESCP5 (mg/dscm)	21.5	27.6
	DURAG (mg/dscm)	24.0	32.1
	SIGRIST (mg/dscm)	28.5	38.5

TABLE 2-33. ESA INITIAL CALIBRATION WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
7.26	16.76	27.323	36.697	17.949	44.651	9.995
9.89	35.55	31.101	37.870	24.331	48.429	13.773
10.06	32.31	31.351	37.987	24.715	48.679	14.023
9.32	21.11	30.280	37.529	23.032	47.608	12.952
9.82	20.04	31.006	37.827	24.185	48.334	13.678
10.16	36.40	31.494	38.057	24.931	48.822	14.166
10.15	42.59	31.478	38.049	24.906	48.806	14.149
9.98	50.87	31.233	37.931	24.535	48.561	13.905
14.14	32.23	37.226	43.388	31.063	54.554	19.898
15.53	32.75	39.232	46.418	32.046	56.560	21.904
16.61	38.42	40.781	49.007	32.556	58.109	23.453
19.36	45.89	44.747	56.169	33.326	62.075	27.419
19.70	47.59	45.238	57.087	33.389	62.566	27.910

Supporting Statistical Data

n=	13				
x bar=	12.461				
y bar=	34.807				
Sxx=	202.6				%
Syy=	1369.4	Conf at y em lim=		11.849	26.19%
Sxy=	291.8	n' at y em lim =		2.977	
a=	1.440	u (n')=	(from table)	1.203	
b=	16.860	Kt =		1.865	
SL=	9.289	Tol at y pred (max) (%)=		17.328	38.30%
t(f)=	2.201				
v(f)=	1.551	y pred max	x		
r=	0.554	45.238	19.704		

TABLE 2-34. VEREWA REVISED INITIAL CALIBRATION WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
9.46	16.76	22.462	33.733	11.192	43.536	1.388
20.35	35.55	30.202	38.145	22.258	51.275	9.128
32.05	32.31	38.508	45.015	32.001	59.582	17.434
14.38	21.11	25.960	35.594	16.326	47.034	4.886
12.73	20.04	24.790	34.953	14.628	45.864	3.716
24.35	36.40	33.042	40.143	25.941	54.116	11.968
23.61	42.59	32.518	39.752	25.284	53.591	11.444
19.65	50.87	29.702	37.822	21.583	50.776	8.629
26.95	48.74	34.887	41.618	28.156	55.961	13.813
43.88	27.86	46.912	55.383	38.440	67.986	25.838
39.53	53.60	43.823	51.243	36.403	64.896	22.749
33.89	29.15	39.816	46.418	33.213	60.889	18.742
33.71	29.34	39.688	46.277	33.099	60.761	18.614
49.39	42.37	50.822	60.958	40.686	71.896	29.748
70.39	82.82	65.737	83.673	47.801	86.811	44.663
43.28	35.87	46.487	54.797	38.176	67.560	25.413

Supporting Statistical Data

n=	16				
x bar=	31.101				
y bar=	37.835				
Sxx=	3726.9			%	
Syy=	3933.6	Conf at y em lim=		17.936	27.28%
Sxy=	2647.0	n' at y em lim =		2.098	
a=	0.710	u (n')=	(from table)	1.192	
b=	15.746	Kt =		1.740	
SL=	12.112	Tol at y pred (max) (%)=		21.074	32.06%
t(f)=	2.145				
v(f)=	1.460	y pred max	x		
r=	0.691	65.737	70.388		

TABLE 2-35. DURAG REVISED INITIAL CALIBRATION WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
15.56	16.76	26.470	38.104	14.837	51.341	1.600
25.98	35.55	36.278	44.632	27.924	61.148	11.407
43.14	32.31	52.418	61.046	43.789	77.288	27.547
16.16	21.11	27.037	38.444	15.629	51.907	2.166
16.77	20.04	27.610	38.793	16.428	52.481	2.740
29.76	36.40	39.833	47.501	32.165	64.703	14.963
27.58	42.59	37.777	45.798	29.757	62.648	12.907
12.29	50.87	23.391	36.297	10.485	48.261	-1.479
39.29	50.15	48.797	56.621	40.972	73.667	23.926
42.79	51.65	52.089	60.631	43.547	76.960	27.219
36.87	39.76	46.519	54.037	39.002	71.390	21.649
45.10	60.05	54.261	63.420	45.101	79.131	29.390
49.99	100.35	58.860	69.603	48.117	83.730	33.990
61.33	61.10	69.525	84.764	54.286	94.395	44.655
59.36	55.61	67.673	82.080	53.266	92.543	42.803
45.62	55.22	54.751	64.063	45.439	79.621	29.881
32.01	44.97	41.943	49.392	34.495	66.814	17.073
12.23	14.11	23.340	36.268	10.412	48.210	-1.530

Supporting Statistical Data

n=	18			
x bar=	33.9917			
y bar=	43.8096			
Sxx=	4129.4			%
Syy=	7149.0	Conf at y em lim=	15.0018	21.74%
Sxy=	3884.3	n' at y em lim =	4.3625	
a=	0.9407	u (n')= (from table)	1.1870	
b=	11.8352	Kt =	1.6827	
SL=	14.7800	Tol at y pred (max) (%)=	24.8702	36.04%
t(f)=	2.1200			
v(f)=	1.4176	y pred max x		
r=	0.7149	69.0 60.7713		

TABLE 2-36. ESC REVISED INITIAL CALIBRATION WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
13.23	16.76	26.478	38.280	14.676	51.580	1.376
23.17	35.55	36.441	44.849	28.032	61.543	11.339
42.58	32.31	55.875	65.680	46.069	80.977	30.772
12.75	21.11	26.003	38.001	14.005	51.105	0.901
15.79	20.04	29.050	39.834	18.266	54.152	3.948
27.31	36.40	40.587	48.233	32.941	65.689	15.485
24.74	42.59	38.013	46.071	29.955	63.116	12.911
12.18	50.87	25.436	37.670	13.203	50.538	0.334
33.42	50.15	46.698	54.307	39.090	71.800	21.596
36.00	51.65	49.286	57.282	41.291	74.388	24.184
31.34	39.76	44.614	52.081	37.148	69.717	19.512
40.21	60.05	53.502	62.543	44.460	78.604	28.399
45.22	100.35	58.522	69.287	47.756	83.624	33.419
55.84	61.10	69.151	84.467	53.835	94.253	44.049
54.42	55.61	67.733	82.399	53.067	92.835	42.631
42.71	55.22	56.009	65.860	46.157	81.111	30.906
29.49	44.97	42.761	50.236	35.286	67.863	17.659
9.17	14.11	22.414	35.948	8.880	47.516	-2.688

Supporting Statistical Data

n=	18				
x bar=	30.532				
y bar=	43.810				
Sxx=	3578.2			%	
Syy=	7149.0	Conf at y em lim=		15.246	22.10%
Sxy=	3583.2	n' at y em lim =		4.303	
a=	1.001	u (n')=	(from table)	1.187	
b=	13.234	Kt =		1.683	
SL=	14.918	Tol at y pred (max) (%)=		25.102	36.38%
t(f)=	2.120				
v(f)=	1.418	y pred max	x		
r=	0.708	69	55.687		

TABLE 2-37. SIGRIST REVISED INITIAL CALIBRATION WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
13.95	16.76	28.789	41.240	16.337	56.014	1.563
23.60	35.55	35.461	45.108	25.814	62.687	8.236
51.14	32.31	54.501	65.027	43.975	81.727	27.275
10.69	21.11	26.536	40.099	12.972	53.761	-0.690
37.45	20.04	45.033	53.154	36.911	72.259	17.807
31.13	36.40	40.666	48.990	32.341	67.891	13.440
27.20	42.59	37.950	46.839	29.061	65.176	10.725
8.01	50.87	24.680	39.199	10.161	51.906	-2.545
35.08	50.15	43.397	51.486	35.308	70.622	16.171
38.10	51.65	45.486	53.640	37.332	72.712	18.260
36.31	39.76	44.247	52.336	36.157	71.473	17.021
50.58	60.05	54.108	64.478	43.739	81.334	26.883
56.72	100.35	58.356	70.582	46.131	85.582	31.130
70.92	61.10	68.175	85.533	50.817	95.401	40.949
66.31	55.61	64.983	80.589	49.377	92.209	37.757
47.84	55.22	52.217	61.884	42.549	79.442	24.991
30.16	44.97	39.994	48.429	31.559	67.220	12.769
7.01	14.11	23.994	38.874	9.113	51.219	-3.232

Supporting Statistical Data

n=	18				
x bar=	35.678				
y bar=	43.810				
Sxx=	6194.6				%
Syy=	7149.0	Conf at y em lim=		17.358	25.46%
Sxy=	4282.3	n' at y em lim =		3.905	
a=	0.691	u (n')=	(from table)	1.187	
b=	19.145	Kt =		1.683	
SL=	16.180	Tol at y pred (max) (%)=		27.226	39.93%
t(f)=	2.120				
v(f)=	1.418	y pred max	x		
r=	0.644	68.175	70.923		

TABLE 2-38. RCA SUMMARY TABLE WITHOUT RSD OUTLIERS

CEM		Percentage of RCA within Init Cal > 75%
ESA	Jan RCA	75%
VEREWA	Dec RCA	100%
	Jan RCA	100%
DURAG	Nov RCA	75%
	Dec RCA	100%
	Jan RCA	100%
ESC	Nov RCA	88%
	Dec RCA	100%
	Jan RCA	100%
SIGRIST	Nov RCA	88%
	Dec RCA	100%
	Jan RCA	100%

TABLE 2-39. ESA CUMULATIVE DATA BASE WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
7.26	16.76	24.451	31.182	17.720	42.853	6.049
9.89	35.55	26.536	32.243	20.828	44.938	8.134
10.06	32.31	26.674	32.330	21.018	45.076	8.272
9.32	21.11	26.083	31.975	20.191	44.485	7.681
9.82	20.04	26.484	32.211	20.756	44.886	8.081
10.16	36.40	26.753	32.381	21.125	45.155	8.351
10.15	42.59	26.744	32.375	21.113	45.146	8.342
9.98	50.87	26.609	32.289	20.929	45.011	8.207
14.14	32.23	29.916	35.161	24.671	48.318	11.514
15.53	32.75	31.023	36.504	25.542	49.425	12.621
16.61	38.42	31.878	37.658	26.098	50.280	13.476
19.36	45.89	34.067	40.969	27.164	52.469	15.665
19.70	47.59	34.337	41.406	27.269	52.740	15.935
7.01	9.54	24.247	31.099	17.395	42.649	5.845
12.92	20.93	28.943	34.138	23.747	47.345	10.541
8.47	19.89	25.408	31.617	19.199	43.810	7.006
6.33	7.91	23.705	30.891	16.519	42.107	5.303
6.70	13.71	24.000	31.002	16.998	42.402	5.598
9.14	20.33	25.938	31.894	19.981	44.340	7.535
33.68	34.43	45.445	61.313	29.576	63.847	27.043
29.56	32.20	42.168	55.230	29.105	60.570	23.766

Supporting Statistical Data

n=	21				
x bar=	13.132				
y bar=	29.115				
Sxx=	1063.4			%	
Syy=	3128.1	Conf at y em lim=		15.869	34.92%
Sxy=	845.1	n' at y em lim =		2.249	
a=	0.795	u (n')=	(from table)	1.181	
b=	18.677	Kt =		1.618	
SL=	11.370	Tol at y pred (max) (%)=		18.402	40.49%
t(f)=	2.093				
v(f)=	1.370	y pred max	x		
r=	0.463	45.445	33.679		

TABLE 2-40. VEREWA CUMULATIVE DATA BASE WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
9.46	16.76	19.668	25.679	13.657	35.449	3.887
20.35	35.55	28.900	33.073	24.726	44.680	13.119
32.05	32.31	38.808	43.170	34.445	54.588	23.027
14.38	21.11	23.840	28.866	18.815	39.621	8.059
12.73	20.04	22.445	27.779	17.111	38.226	6.664
24.35	36.40	32.288	36.217	28.358	48.068	16.507
23.61	42.59	31.662	35.613	27.711	47.443	15.882
19.65	50.87	28.304	32.551	24.057	44.085	12.523
26.95	48.74	34.489	38.434	30.543	50.269	18.708
43.88	27.86	48.832	55.428	42.235	64.612	33.051
39.53	53.60	45.147	50.790	39.504	60.927	29.366
33.89	29.15	40.367	44.986	35.749	56.148	24.587
33.71	29.34	40.215	44.806	35.623	55.995	24.434
49.39	42.37	53.496	61.417	45.575	69.277	37.715
70.39	82.82	71.286	84.770	57.803	87.067	55.506
43.28	35.87	48.324	54.784	41.865	64.105	32.543
19.06	32.23	27.800	32.115	23.484	43.580	12.019
21.63	32.75	29.984	34.046	25.922	45.765	14.203
25.98	38.42	33.669	37.592	29.746	49.450	17.888
24.68	45.89	32.561	36.485	28.637	48.341	16.780
30.33	47.59	37.355	41.525	33.185	53.136	21.575
10.67	9.54	20.699	26.450	14.948	36.480	4.918
13.12	20.93	22.772	28.032	17.513	38.553	6.992
13.56	19.89	23.144	28.320	17.967	38.924	7.363
11.67	7.91	21.539	27.085	15.993	37.320	5.758
10.74	13.71	20.751	26.489	15.013	36.532	4.971
12.66	20.33	22.382	27.730	17.034	38.163	6.601
21.98	34.43	30.276	34.313	26.239	46.057	14.496
21.82	32.20	30.138	34.187	26.090	45.919	14.357

Supporting Statistical Data

n=	29				
x bar=	25.362				
y bar=	33.143				
Sxx=	5425.0			%	
Syy=	6749.3	Conf at y em lim=		12.745	18.47%
Sxy=	4595.8	n' at y em lim =		2.742	
a=	0.847	u (n')=	(from table)	1.173	
b=	11.657	Kt =		1.534	
SL=	10.285	Tol at y pred (max) (%)=		15.781	22.87%
t(f)=	2.052				
v(f)=	1.308	y pred max	x		
r=	0.760	69.000	67.689		

TABLE 2-41. DURAG MASTER DATA BASE WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
15.56	16.76	30.100	36.255	23.944	53.637	6.562
25.98	35.55	38.376	43.392	33.360	61.913	14.838
43.14	32.31	51.996	59.777	44.215	75.533	28.459
16.16	21.11	30.577	36.615	24.539	54.115	7.040
16.77	20.04	31.062	36.985	25.138	54.599	7.524
29.76	36.40	41.376	46.566	36.186	64.914	17.839
27.58	42.59	39.641	44.691	34.592	63.179	16.104
12.29	50.87	27.501	34.374	20.628	51.038	3.964
39.29	50.15	48.940	55.760	42.121	72.478	25.403
42.79	51.65	51.719	59.409	44.029	75.257	28.182
36.87	39.76	47.019	53.303	40.735	70.556	23.481
45.10	60.05	53.551	61.861	45.242	77.089	30.014
49.99	100.35	57.433	67.141	47.725	80.970	33.895
61.33	61.10	66.433	79.646	53.220	89.970	42.895
59.36	55.61	64.870	77.457	52.283	88.407	41.333
45.62	55.22	53.965	62.419	45.512	77.503	30.428
32.01	44.97	43.157	48.597	37.717	66.694	19.620
12.23	14.11	27.458	34.343	20.572	50.995	3.920
9.08	48.74	24.958	32.629	17.287	48.495	1.421
12.67	27.86	27.806	34.588	21.023	51.343	4.268
33.32	53.60	44.200	49.831	38.568	67.737	20.662
22.63	29.15	35.709	40.851	30.568	59.247	12.172
25.26	29.34	37.799	42.820	32.779	61.337	14.262
19.08	42.37	32.892	38.433	27.350	56.429	9.354
7.47	82.82	23.683	31.781	15.584	47.220	0.145
23.74	35.87	36.597	41.667	31.526	60.134	13.059
17.73	32.23	31.822	37.577	26.068	55.360	8.285
21.26	32.75	34.628	39.893	29.363	58.165	11.090
27.73	38.42	39.764	44.819	34.708	63.301	16.226
33.07	45.89	44.002	49.595	38.409	67.540	20.465
33.93	47.59	44.682	50.412	38.952	68.220	21.145
4.25	9.54	21.120	30.119	12.120	44.657	-2.418
15.07	20.93	29.714	35.969	23.460	53.251	6.177
9.72	19.89	25.468	32.973	17.964	49.006	1.931
5.59	7.91	22.189	30.807	13.572	45.727	-1.348
7.05	13.71	23.347	31.560	15.133	46.884	-0.190
13.50	20.33	28.466	35.059	21.874	52.004	4.929
24.04	34.43	36.835	41.892	31.779	60.373	13.298
32.11	32.20	43.234	48.688	37.781	66.772	19.697

Sipporting Statistical Data

n=	39			
x bar=	25.902			
y bar=	38.310			
Sxx=	8241.4			%
Syy=	13899.6	Conf at y em lim=	13.213	19.89%
Sxy=	6542.0	n' at y em lim =	5.620	
a=	0.794	u (n')= (from table)	1.173	
b=	17.749	Kt =	1.534	
SL=	15.340	Tol at y pred (max) (%)=	23.537	35.43%
t(f)=	2.042			
v(f)=	1.308	y pred max x		
r=	0.611	66.433 61.329		

TABLE 2-42. ESC CUMULATIVE DATA BASE WITHOUT RSD OUTLIERS

x	y	y pred	y pred + conf	y pred - conf	y pred + tol	y pred - tol
13.23	16.76	28.019	33.995	22.044	49.875	6.163
23.17	35.55	37.981	42.640	33.322	59.837	16.125
42.58	32.31	57.414	65.780	49.048	79.270	35.558
12.75	21.11	27.544	33.629	21.459	49.400	5.688
15.79	20.04	30.591	36.029	25.152	52.447	8.735
27.31	36.40	42.127	46.987	37.267	63.983	20.271
24.74	42.59	39.554	44.233	34.874	61.409	17.698
12.18	50.87	26.977	33.197	20.757	48.833	5.122
33.42	50.15	48.238	54.132	42.344	70.094	26.382
36.00	51.65	50.826	57.339	44.313	72.682	28.970
31.34	39.76	46.154	51.617	40.692	68.010	24.299
40.21	60.05	55.041	62.705	47.377	76.897	33.185
45.22	100.35	60.061	69.242	50.879	81.916	38.205
55.84	61.10	70.690	83.356	58.023	92.545	48.834
54.42	55.61	69.272	81.460	57.083	91.127	47.416
42.71	55.22	57.548	65.954	49.141	79.404	35.692
29.49	44.97	44.301	49.443	39.159	66.157	22.445
9.17	14.11	23.955	30.952	16.958	45.811	2.099
12.02	48.74	26.807	33.068	20.546	48.663	4.952
14.36	27.86	29.153	34.879	23.427	51.009	7.297
18.01	53.60	32.807	37.876	27.737	54.662	10.951
11.58	29.15	26.372	32.740	20.004	48.228	4.517
12.20	29.34	26.996	33.212	20.781	48.852	5.141
13.00	42.37	27.797	33.823	21.770	49.652	5.941
25.62	82.82	40.433	45.154	35.712	62.288	18.577
11.83	35.87	26.620	32.926	20.313	48.475	4.764
18.48	32.23	33.276	38.281	28.271	55.132	11.420
21.85	32.75	36.652	41.349	31.956	58.508	14.797
27.10	38.42	41.917	46.756	37.078	63.773	20.061
31.54	45.89	46.361	51.863	40.859	68.217	24.505
32.33	47.59	47.151	52.810	41.491	69.006	25.295
8.35	9.54	23.139	30.360	15.917	44.995	1.283
15.83	20.93	30.624	36.057	25.192	52.480	8.769
11.95	19.89	26.742	33.019	20.465	48.598	4.886
8.43	7.91	23.221	30.419	16.022	45.076	1.365
9.59	13.71	24.381	31.264	17.499	46.237	2.526
13.81	20.33	28.609	34.452	22.765	50.465	6.753
21.48	34.43	36.284	41.000	31.569	58.140	14.429
27.64	32.20	42.456	47.351	37.560	64.312	20.600

n=	39				
x bar=	23.502				
y bar=	38.310				
Sxx=	6375.4				%
Syy=	13899.6	Conf at y em lim=		12.097	17.53%
Sxy=	6384.1	n' at y em lim =		5.781	
a=	1.001	u (n')=	(from table)	1.173	
b=	14.776	Kt =		1.534	
SL=	14.244	Tol at y pred (max) (%)=		21.856	31.67%
t(f)=	2.042				
v(f)=	1.308	y pred max	x		
r=	0.678	69.000	54.150		

TABLE 2-43. SIGRIST CUMULATIVE DATA BASE WITHOUT RSD OUTLIERS

x	y	y pred	y pred + c	y pred - conf	y pred + tol	y pred - tol
13.95	16.76	29.087	35.185	22.988	51.869	6.304
23.60	35.55	36.106	41.040	31.171	58.888	13.323
51.14	32.31	56.134	64.760	47.507	78.916	33.351
10.69	21.11	26.717	33.431	20.002	49.499	3.934
37.45	20.04	46.174	51.959	40.389	68.956	23.392
31.13	36.40	41.580	46.608	36.552	64.363	18.798
27.20	42.59	38.724	43.581	33.866	61.506	15.941
8.01	50.87	24.765	32.041	17.489	47.547	1.983
35.08	50.15	44.453	49.895	39.011	67.235	21.671
38.10	51.65	46.651	52.542	40.759	69.433	23.868
36.31	39.76	45.347	50.960	39.735	68.130	22.565
50.58	60.05	55.721	64.211	47.230	78.503	32.938
56.72	100.35	60.189	70.199	50.179	82.971	37.407
70.92	61.10	70.517	84.288	56.747	93.300	47.735
66.31	55.61	67.160	79.682	54.638	89.942	44.377
47.84	55.22	53.731	61.581	45.880	76.513	30.948
30.16	44.97	40.874	45.836	35.912	63.656	18.092
7.01	14.11	24.043	31.536	16.549	46.825	1.260
10.58	48.74	26.634	33.371	19.896	49.416	3.851
14.52	27.86	29.501	35.500	23.501	52.283	6.718
19.53	53.60	33.146	38.423	27.870	55.929	10.364
11.86	29.15	27.566	34.050	21.081	50.348	4.783
11.70	29.34	27.451	33.966	20.936	50.233	4.669
12.78	42.37	28.238	34.547	21.928	51.020	5.455
32.00	82.82	42.212	47.311	37.112	64.994	19.429
14.43	35.87	29.433	35.449	23.418	52.216	6.651
16.74	32.23	31.118	36.761	25.474	53.900	8.335
21.34	32.75	34.459	39.553	29.365	57.241	11.677
28.83	38.42	39.905	44.802	35.008	62.688	17.123
34.06	45.89	43.710	49.024	38.396	66.492	20.927
34.35	47.59	43.918	49.267	38.570	66.701	21.136
7.03	9.54	24.055	31.545	16.565	46.837	1.273
16.75	20.93	31.126	36.768	25.485	53.909	8.344
11.55	19.89	27.339	33.884	20.794	50.122	4.557
6.91	7.91	23.967	31.484	16.451	46.750	1.185
8.63	13.71	25.219	32.360	18.077	48.001	2.436
15.91	20.33	30.510	36.281	24.738	53.292	7.727
28.53	34.43	39.689	44.575	34.803	62.471	16.906
38.48	32.20	46.924	52.878	40.970	69.706	24.141

n=	39			
x bar=	26.633			
y bar=	38.310			
Sxx=	10859.9			%
Syy=	13899.6	Conf at y em lim=	13.204	19.14%
Sxy=	7897.2	n' at y em lim =	5.273	
a=	0.727	u (n')= (from table)	1.173	
b=	18.943	Kt =	1.534	
SL=	14.848	Tol at y pred (max) (%)=	22.782	33.02%
t(f)=	2.042			
v(f)=	1.308	y pred max		
r=	0.643	69.000	68.837	

TABLE 2-44. SUMMARY OF DPS 11 STATISTICAL EVALUATION WITHOUT RSD OUTLIERS

CEM		Correlation Coefficient >0.90	Confidence Interval < 20%	Tolerance Interval < 35%	Percentage of RCA within Init Cal > 75%
	Initial Calibration	0.554	26.19%	38.30%	
ESA	Jan RCA	0.920	21.23%	25.40%	50%
	MasterPlot	0.463	34.92%	40.49%	
	Initial Calibration	0.691	27.28%	32.06%	
VEREWA	Dec RCA	0.855	23.62%	19.86%	100%
	Jan RCA	0.930	19.22%	24.88%	100%
	Master Plot	0.760	18.47%	22.87%	
	Initial Calibration	0.715	21.74%	36.04%	
	Nov RCA	-0.383	51.91%	77.01%	75%
DURAG	Dec RCA	0.996	12.83%	19.18%	100%
	Jan RCA	0.934	19.60%	22.46%	100%
	Master Plot	0.611	19.89%	35.43%	
	Initial Calibration	0.708	22.10%	36.38%	
	Nov RCA	0.890	21.89%	29.14%	88%
ESC	Dec RCA	0.998	9.16%	13.83%	100%
	Jan RCA	0.930	20.29%	22.98%	100%
	Master Plot	0.678	17.53%	31.67%	
	Initial Calibration	0.644	25.46%	39.93%	
	Nov RCA	0.873	23.85%	31.28%	88%
SIGRIST	Dec RCA	0.993	16.35%	24.46%	100%
	Jan RCA	0.924	21.26%	23.82%	100%
	Master Plot	0.643	19.14%	33.02%	

TABLE 2-45. SUMMARY OF PM CEMS ENDURANCE PERFORMANCE SPECIFICATIONS

CEMS	Month	Zero Drift	Cal Drift	Linearity
Verewa	Sept	Pass	No data	No data
	Oct	Off-line	Off-line	Off-line
	Nov	Pass	No data	No data
	Dec	Pass	No data	No data
	Jan	Pass	Error > 2 %	No data
ESA	Sept	Pass	Pass	No data
	Oct	Off-line	Off-line	Off-line
	Nov	Off-line	Off-line	Off-line
	Dec	Pass	Pass	No data
	Jan	Pass	Pass	No data
Durag	Sept	Pass	Pass	No data
	Oct	Pass	Pass	No data
	Nov	Pass	Pass	No data
	Dec	Pass	Pass	No data
	Jan	Pass	Pass	Pass
ESC	Sept	Pass	Pass	No data
	Oct	Pass	Pass	No data
	Nov	Pass	Pass	No data
	Dec	Pass	Error > 2%	No data
	Jan	Pass	Pass	No data
Sigrist	Sept	No data	Pass	Pass
	Oct	No data	Pass	Pass
	Nov	No data	Pass	Pass
	Dec	No data	Pass	Pass
	Jan	No data	Pass	Pass