This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

DOCUMENT NUMBER: SD-WM-DP-150

SECTION 2 **OF** 3

TITLE: Tank 241-AY-102 / Waste Management / PPC / Analytical Services

DATE: 11/16/95

ORIGINATOR: Ruth A. Esch

CO:

RECIPIENT:

CO:

REFERENCES: EDT-612094

Analysis Report Summary Wed 10-04-95 11:56:23 AM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
	ICV	951004B	ICP2	10/04/95	10:19	BJG	Q	CONC
2	ICB	951004B	ICP2	10/04/95	10:23	BJG	Q	CONC
3	ICSA	951004B	ICP2	10/04/95	10:26	BJG	Q	CONC
4	ICSAB	951004B	ICP2	10/04/95	10:30	BJG	Q	CONC
5	S95T002444_L	951004B	ICP2	10/04/95	10:34	BJG	S	CONC
6	S95T002444	951004B	ICP2	10/04/95	10:37	BJG	S	CONC
7	S95T002444_D	951004B	ICP2	10/04/95	10:41	BJG	S	CONC
8	S95T002444_A	951004B	ICP2	10/04/95	10:44	BJG	S	CONC
9	S95T002445_L	951004B	ICP2	10/04/95	10:48	BJG	S	CONC
10	S95T002445	951004B	ICP2	10/04/95	10:51	BJG	S	CONC
11	S95T002445_D	951004B	ICP2	10/04/95	10:55	BJG	S	CONC
12	S95T002445_A	951004B	ICP2	10/04/95	10:58	BJG	S	CONC
13	CCV	951004B	ICP2	10/04/95	11:02	BJG	Q	CONC
14	CCB	951004B	ICP2	10/04/95	11:06	BJG	Q	CONC
15	S95T002469_L	951004B	ICP2	10/04/95	11:10	BJG	S	CONC
16	S95T002469	951004B	ICP2	10/04/95	11:14	BJG	S	CONC
17	S95T002469_D	951004B	ICP2	10/04/95	11:17	BJG	S	CONC
18	S95T002469_A	951004B	ICP2	10/04/95	11:20	BJG	S	CONC
19	S95T002470_L	951004B	ICP2	10/04/95	11:24	BJG	S	CONC
20	S95T002470	951004B	ICP2	10/04/95	11:27	BJG	S	CONC
21	S95T002470_D	951004B	ICP2	10/04/95	11:30	BJG	S	CONC
22	S95T002470_A	951004B	ICP2	10/04/95	11:33	BJG	S	CONC
23	ICSA	951004B	ICP2	10/04/95	11:43	BJG	Q	CONC
24	ICSAB	951004B	ICP2	10/04/95	11:46	BJG	Q	CONC
25	CCV_1	951004B	ICP2	10/04/95	11:49	BJG	Q	CONC
26	CCB_1	951004B	ICP2	10/04/95	11:52	BJG	Q	CONC

BJGreer 10-04-95
AY-102
SMC-10-2
S95T002444, 45-68, 70

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 145 TO 149.

#	Sample Name	Ag	Al	As	B	Ba	Be
	ICV	5.078	4.820	5.252	4.960	5.002	5.259
2	ICB	.0011	.0063	.0015	.0048	.0001	.0000
3	ICSA	-.0115	241.4	.0972	.0038	.0037	.0002
4	ICSAB	.9672	240.9	.0589	-.0021	.4732	.4864
5	S95T002444_L	.1399	12.11	.1218	3.824	.0038	-.0021
6	S95T002444_	.0963	12.11	-.1004	3.418	.0065	.0010
7	S95T002444_D	.0556	11.64	.0121	3.354	.0040	.0017
8	S95T002444_A	19.55	30.90	21.78	23.09	19.74	21.02
9	S95T002445_L	.0564	12.29	-.1321	2.816	.0048	-.0027
10	S95T002445_	.0702	12.49	.4617	3.053	.0043	.0025
11	S95T002445_D	.0861	12.28	.0136	3.035	.0072	.0009
12	S95T002445_A	19.56	31.42	21.95	22.76	19.74	20.99
13	CCV	5.139	4.900	5.385	5.068	5.117	5.365
14	CCB	-.0006	.0032	-.0134	.0000	-.0000	.0001
15	S95T002469_L	.0856	11.79	-1.693	3.272	-.0081	.0017
16	S95T002469_	.1044	11.85	.0594	3.289	.0073	.0003
17	S95T002469_D	.0933	11.91	.3530	3.225	.0050	.0032
18	S95T002469_A	19.42	30.95	21.67	22.87	19.78	20.91
19	S95T002470_L	.2167	13.19	-.5928	2.768	.0036	.0087
20	S95T002470_	.0726	12.96	-.1671	3.024	.0050	-.0001
21	S95T002470_D	.0564	12.75	-.1754	2.923	.0056	.0014
22	S95T002470_A	19.43	31.92	21.86	22.81	19.85	21.04
23	ICSA	-.0110	244.1	.0624	-.0030	.0037	.0003
24	ICSAB	.9744	241.3	.1038	-.0052	.4733	.4905
25	CCV_1	5.159	4.904	5.341	5.070	5.140	5.357
26	CCB_1	.0002	-.0048	-.0127	.0062	.0001	-.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.243	Q5.503	5.300	5.141	5.218	5.343
2	ICB	-.0286	.0072	.0011	.0069	.0017	.0010
3	ICSA	.0141	265.9	.0022	.0068	.0003	-.0065
	ICSAB	-.0167	265.5	.9823	.0115	.4824	.4876
	S95T002444_L	1.193	1.431	.1882	.1621	.1022	15.68
6	S95T002444_	.2139	.6089	.1539	.0264	.0152	15.83
7	S95T002444_D	.2048	.4341	.1238	-.1032	.0200	15.40
8	S95T002444_A	20.90	22.68	21.18	20.70	20.72	36.80
9	S95T002445_L	-2.212	.7033	.1822	-.6853	.1534	20.27
10	S95T002445_	.1852	.4840	.1705	-.1484	.0353	20.24
11	S95T002445_D	.4526	.3959	.1677	.0798	.0303	20.02
12	S95T002445_A	20.68	22.68	21.18	20.63	20.74	41.25
13	CCV	5.297	Q5.663	5.384	5.241	5.296	5.419
14	CCB	-.0039	.0037	.0007	-.0049	.0000	-.0001
15	S95T002469_L	-.5556	1.317	.2565	-.0253	.0015	15.25
16	S95T002469_	-.2336	1.057	.1515	.1308	.0353	15.55
17	S95T002469_D	.5457	.5727	.1517	-.0353	.0553	15.41
18	S95T002469_A	20.05	23.32	21.09	20.57	20.69	36.47
19	S95T002470_L	-.1140	1.252	.2741	-.2017	.0522	25.93
20	S95T002470_	.4984	.4978	.1718	-.0980	-.0250	25.92
21	S95T002470_D	.7995	.4027	.1447	-.0739	.0101	25.51
22	S95T002470_A	19.89	22.57	21.14	20.65	20.67	46.53
23	ICSA	-.0299	274.4	.0020	.0161	.0012	-.0059

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
	ICSAB	-.0369	271.5	.9931	.0095	.4852	.4948
	CCV_1	5.282	Q5.710	5.362	5.261	5.283	5.424
26	CCB_1	.0023	.0053	.0001	.0054	-.0009	.0003

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.987	.0087	5.221	5.081	5.063	4.745
2	ICB	.0005	.0031	.0015	.0313	.0011	.0031
3	ICSA	-.0080	-.0529	95.73	.2189	-.0034	.0051
4	ICSAB	.4704	-.0512	95.23	.2406	-.0038	.9395
5	S95T002444_L	.3889	.2463	.7302	396.8	.0372	1.092
6	S95T002444_	.2999	.0315	.2154	390.5	.0351	.8597
7	S95T002444_D	.2702	.0180	.1771	388.7	-.0025	.8436
8	S95T002444_A	20.21	.0513	20.99	405.7	20.31	19.76
9	S95T002445_L	.3989	.2604	.7483	374.6	-.0502	1.072
10	S95T002445_	.3300	.0189	.1296	380.3	.0024	.8136
11	S95T002445_D	.3382	.0227	.1150	375.2	.0273	.8096
12	S95T002445_A	20.27	.0474	20.97	394.8	20.33	19.73
13	CCV	5.093	.0076	5.335	4.914	5.172	4.850
14	CCB	.0002	.0021	.0008	-.0704	-.0004	.0022
15	S95T002469_L	.2851	.1981	.7211	389.9	-.0241	1.042
16	S95T002469_	.2790	.0292	.1607	388.3	.0326	.8416
17	S95T002469_D	.2959	.0170	.1333	383.1	.0161	.8336
18	S95T002469_A	20.16	.0518	20.99	397.5	20.28	19.70
19	S95T002470_L	.4239	.2042	.6937	388.4	-.0107	1.032
20	S95T002470_	.3683	.0246	.1844	386.9	.0239	.7975
21	S95T002470_D	.3558	.0157	.1096	373.4	.0012	.7755
22	S95T002470_A	20.31	.0437	21.07	388.7	20.43	19.74
23	ICSA	-.0086	-.0674	97.51	.2276	-.0042	.0057
24	ICSAB	.4697	-.0624	96.42	.2217	-.0041	.9288
25	CCV_1	5.096	.0086	5.322	5.183	5.188	4.884
26	CCB_1	.0001	.0026	.0017	.1762	.0002	.0029

	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.921	5.133	5.243	4.856	5.078	5.240
2	ICB	.0060	.0013	-.0021	.0255	.0009	.0072
3	ICSA	245.3	-.0055	-.0163	187.5	.0117	-.0062
4	ICSAB	245.2	.4619	-.0175	189.4	.0132	.9376
5	S95T002444_L	.0548	.1334	-.1109	3016.	.0710	1.344
6	S95T002444_	.3428	.0514	.1350	2990.	.0447	.5757
7	S95T002444_D	-.0575	.0481	.1009	2971.	.0139	.4552
8	S95T002444_A	19.38	20.07	21.14	2965.	20.37	21.42
9	S95T002445_L	-.5734	.1012	.0351	3108.	.1873	.7025
10	S95T002445_	.1526	.0155	.1265	3087.	.0386	.3231
11	S95T002445_D	.1277	.0171	.1888	3064.	.0285	.3350
12	S95T002445_A	19.45	20.03	21.14	3074.	20.38	21.22
13	CCV	4.990	5.219	5.336	4.914	5.177	5.328
14	CCB	-.0069	.0009	-.0029	.0149	-.0019	.0098
15	S95T002469_L	.1567	.1021	-.0267	2989.	.0950	.6120
16	S95T002469_	.1725	.0301	.1280	2959.	.0303	.5588
17	S95T002469_D	.1069	.0294	.1555	2934.	.0552	.4074

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
[illegible]	S95T002469_A	19.42	19.95	20.98	2929.	20.35	21.54
[illegible]	S95T002470_L	-.0618	.1045	-.0725	3335.	.1086	.6323
20	S95T002470_	.2166	.0179	.1736	3285.	.0432	.4118
21	S95T002470_D	-.0891	.0153	.1633	3240.	-.0007	.3399
22	S95T002470_A	19.36	20.00	21.26	3229.	20.44	21.44
23	ICSA	248.4	-.0055	-.0167	188.6	.0124	-.0034
24	ICSAB	246.4	.4669	-.0145	188.0	.0128	.9505
25	CCV_1	4.998	5.219	5.325	4.971	5.201	5.326
26	CCB_1	.0108	.0009	-.0022	.0202	.0024	.0019

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.553	5.337	5.066	4.925	5.063	4.973
2	ICB	-.0069	.0092	-.0112	.0067	.0792	.0155
3	ICSA	.0292	.0579	.0376	.0058	-.0062	.0261
4	ICSAB	-.0046	1.079	.0440	.0088	-.0188	.0251
5	S95T002444_L	179.6	-.4346	87.49	.2966	6.563	9.452
6	S95T002444_	181.4	.1772	88.48	.1721	2.653	8.611
7	S95T002444_D	179.0	-.0796	85.72	-.0080	2.834	8.302
8	S95T002444_A	204.3	20.87	106.7	19.86	24.78	28.76
9	S95T002445_L	218.9	.4133	87.27	.1751	9.943	10.14
10	S95T002445_	220.6	.1129	87.64	.1622	2.884	8.843
11	S95T002445_D	221.2	.0253	86.04	.3079	3.323	8.723
12	S95T002445_A	240.3	21.27	106.2	19.87	25.15	29.05
13	CCV	Q5.692	5.409	5.125	5.003	5.167	5.037
14	CCB	.0031	.0084	-.0101	.0001	.0693	.0122
15	S95T002469_L	175.2	-.2477	85.76	.3797	8.348	9.130
16	S95T002469_	186.5	.9622	88.15	.1688	2.569	8.394
17	S95T002469_D	182.9	.0706	86.59	.2208	3.153	8.276
18	S95T002469_A	200.7	20.77	104.8	19.75	24.96	28.41
19	S95T002470_L	282.0	-1.013	92.44	1.721	9.137	10.55
20	S95T002470_	286.4	-.0635	92.60	.0074	2.718	9.530
21	S95T002470_D	278.2	-.1437	89.61	.2170	3.279	9.340
[illegible]	S95T002470_A	298.3	21.27	109.4	19.82	25.64	29.54
[illegible]	ICSA	.0205	.0623	.0244	.0028	.0164	.0255
24	ICSAB	.0280	1.082	.0246	.0071	.0086	.0273
25	CCV_1	Q5.782	5.392	5.144	4.995	5.198	5.042
26	CCB_1	.0034	-.0160	-.0070	.0029	.0826	.0143

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.884	4.980	.0644	4.962	5.053	9.459
2	ICB	.0324	.0005	-.0028	.0011	-.0058	.1290
3	ICSA	.0144	-.0041	.0140	.0021	.0624	-.4731
4	ICSAB	.0097	-.0041	.0145	.0021	.0497	-.4687
5	S95T002444_L	2.607	.0477	-.1275	.0901	1.956	46.14
6	S95T002444_	.4343	.0105	.1211	.0402	.0439	36.98
7	S95T002444_D	.1891	.0097	-.0609	.0304	.0283	37.28
8	S95T002444_A	19.82	19.90	.2534	19.89	19.92	74.98
9	S95T002445_L	3.280	.0464	-.6948	.0236	.6002	61.26
10	S95T002445_	.3852	.0092	.1161	.0401	-.1144	51.74
11	S95T002445_D	.4154	.0100	.0671	.0443	-.1322	52.46

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
[illegible]	S95T002445_A	19.75	19.91	.3793	19.94	19.48	89.46
[illegible]	CCV	4.984	5.074	.0686	5.056	5.167	9.671
14	CCB	.0216	.0003	-.0065	.0002	.0044	.0873
15	S95T002469_L	1.968	.0307	-.5975	.1089	.3816	43.30
16	S95T002469	.4686	.0105	.0846	.0314	.1547	36.71
17	S95T002469_D	.3603	.0088	.0620	.0398	-.2169	36.90
18	S95T002469_A	19.71	19.84	.2778	19.78	20.47	74.24
19	S95T002470_L	2.474	.0385	-.5008	.0883	1.279	53.16
20	S95T002470	.3881	.0099	.0636	.0442	.4154	44.19
21	S95T002470_D	.2794	.0091	-.0142	.0351	-.0118	44.12
22	S95T002470_A	19.77	19.96	.3571	19.90	19.58	81.88
23	ICSA	.0151	-.0043	.0170	.0017	.0517	-.5106
24	ICSAB	.0171	-.0042	.0090	.0019	.0306	-.5059
25	CCV_1	5.003	5.094	.0714	5.063	5.157	9.683
26	CCB_1	.0279	.0004	-.0055	.0011	-.0148	.1064

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.078	.0150	5.190	5.031
2	ICB	.0080	.0020	.0006	.0049
3	ICSA	.0066	.0205	.0021	.0009
4	ICSAB	.4771	.0203	.9882	-.0001
5	S95T002444_L	.6419	.1646	.0021	.2955
6	S95T002444	.1332	.0395	.3267	.0456
7	S95T002444_D	.0953	.0313	.1881	.0178
8	S95T002444_A	20.40	.0922	20.74	20.07
9	S95T002445_L	.7885	.2058	.1971	.4764
10	S95T002445	.1345	.0444	.3176	.0383
11	S95T002445_D	.1401	.0461	.2079	.0474
12	S95T002445_A	20.42	.0988	20.79	20.07
13	CCV	5.166	.0149	5.240	5.122
14	CCB	.0054	.0013	-.0013	.0027
15	S95T002469_L	.5445	.1399	.0912	.2455
[illegible]	S95T002469	.1304	.0379	.1563	.0547
[illegible]	S95T002469_D	.1094	.0313	.2987	.0504
18	S95T002469_A	20.33	.0905	20.87	20.00
19	S95T002470_L	.6646	.1646	.2290	.3489
20	S95T002470	.1480	.0428	.1534	.0555
21	S95T002470_D	.1277	.0362	.2049	.0438
22	S95T002470_A	20.41	.0905	20.74	20.08
23	ICSA	.0078	.0212	.0017	.0008
24	ICSAB	.4826	.0209	.9994	.0005
25	CCV_1	5.172	.0150	5.251	5.125
26	CCB_1	.0067	.0016	-.0036	.0046

SP
10/13/95

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LABCORE Data Entry Template for Worklist# 2831

Analyst: RAN **Instrument:** TOC01 NB39937 **Book #** 6N12-B

Method: LA-344-105 Rev/Mod C-0

Worklist Comment: AW-105, AY-102 TOC RERUN - See comments

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TOC-01	LIQUID	0	<50	N/A	ug/mL
		2	STD				TOC-01	LIQUID	3.00e3	2.88 E3	N/A	ug/mL
95000127	AW-102 GRAB	3	SAMPLE	S95T002556	0		TOC-01	LIQUID	N/A	4.85 E3	550 E1	ug/mL
95000127	AW-102 GRAB	4	DUP	S95T002556	0		TOC-01	LIQUID	4.85 E3	4.62 E3	N/A	ug/mL
95000127	AW-102 GRAB	5	SPK	S95T002556	0		TOC-01	LIQUID	100	~~111.8~~ 102.5	N/A	ug/mL
95000130	AW-105 GRAB	6	SAMPLE	S95T002189	0		TOC-01	LIQUID	N/A	8.19 E2	300 E1	ug/mL
95000130	AW-105 GRAB	7	DUP	S95T002189	0		TOC-01	LIQUID	8.19 E2	8.43 E2	N/A	ug/mL
95000139	AY-102 GRAB	8	SAMPLE	S95T002444	0		TOC-01	LIQUID	N/A	5.28 E2	3.00 E1	ug/mL
95000139	AY-102 GRAB	9	DUP	S95T002444	0		TOC-01	LIQUID	5.28 E2	4.92 E2	N/A	ug/mL

RWS 10/17/95

Final page for worklist # 2831

R. Wendland 10-10-95
Analyst Signature Date

Gary Hammett 10-16-95
Analyst Signature Date

Reviewed Ray Schroeck 10/17/95

.200 - 2mL

Data Entry Comments: AW-102 S95T002556 has not been analyzed yet. AW105 S95T002189 and AY-102 S95T002444 have and are reruns. Use a 6x dilution factor like 0.200 sample + 1.0ml Acid - 0.200ml inject.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			STANDARD
Type	Sample Volume in mL	(SS)	0.200
STANDARD	H2SO4 Volume in mL	(VR)	2.000
Work List	Volume Injected in mL	(VI)	0.200
2831	Dilution Factor	(DF)	11
Test Code	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	56.1
Matrix	µg of Carbon in Blank	(C2)	3.8
LIQUID	g of Carbon/L	=	2.88E+00

Sample #
16N12B
Instrument Code
WB39937
Analyst
R. WENDLAND
Date
10/10/95
Time

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	2.88E+03	DETECTION LEVEL in µg/mL
		5.50E+01

Data Entry by:	RW Schroeder	Date:	10/11/95
Approved by:	RW Schroeder	Date:	10/16/95

Form 344105_C Rev. 1.1 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				BLANK
Type	Sample Volume in mL		(SS)	0.200
BLANK	H2SO4 Volume in mL		(VR)	0.200
Work List	Volume Injected in mL		(VI)	0.200
2831	Dilution Factor		(DF)	1
Test Code	Digest Dilution Factor		(DDF)	1
TOC-01	µg of Carbon in Sample		(C1)	3.8
Matrix	µg of Carbon in Blank		(C2)	3.7
LIQUID	g of Carbon/L	=	<	5.00E-03

Sample #
BLNK
Instrument Code
WB39937
Analyst
R. WENDLAND
Date
10/10/95
Time

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \text{ µg C} * DF * DDF}{VI}$

NOTE: Reported Result is Below Detection Level.

µg Carbon/mL =	<	5.00E+00	DETECTION LEVEL in µg/mL
			5.00E+00

Data Entry by:	[illegible]	Date:	10/11/95
Approved by:	R.W. Schroeder	Date:	10/16/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				SAMPLE
Type	Sample Volume in mL		(SS)	0.200
SAMPLE	H2SO4 Volume in mL		(VR)	1.000
Work List	Volume Injected in mL		(VI)	0.200
2831	Dilution Factor		(DF)	6
Test Code	Digest Dilution Factor		(DDF)	1
TOC-01	µg of Carbon in Sample		(C1)	21.4
Matrix	µg of Carbon in Blank		(C2)	3.8
LIQUID	g of Carbon/L	=		5.28E-01
Sample#				
S95T002444				
Instrument Code				
WB39937				
Analyst				
R. WENDLAND				
Date				
10/10/95				
Time				

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g\ C * DF * DDF}{VI}$

µg Carbon/mL =	5.28E+02	DETECTION LEVEL in µg/mL
		3.00E+01

Data Entry by:	RT Steele	Date:	10/11/95
Approved by:	RW Schroeder	Date:	10/16/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			SAMPLE/DUP
Type	Sample Volume in mL	(SS)	0.200
SAMPLE/DUP	H2SO4 Volume in mL	(VR)	1.000
Work List	Volume Injected in mL	(VI)	0.200
2831	Dilution Factor	(DF)	6
Test Code	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	20.2
Matrix	µg of Carbon in Blank	(C2)	3.8
LIQUID	g of Carbon/L	=	4.92E-01

Sample #
S95T002444
Instrument Code
WB39937
Analyst
R. WENDLAND
Date
10/10/95
Time

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	4.92E+02	DETECTION LEVEL in µg/mL
		3.00E+01

Data Entry by:	RT Steele	Date:	10/11/95
Approved by:	RW Schroeder	Date:	10/16/95

Form 344105_C Rev. 1.1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 10/10/95 Time: 05:55:44

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .7594252 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	34.70	98.27
3	1.51	45.30	23.40
4	2.01	49.10	7.74
5	2.51	51.50	4.66
6	3.01	53.00	2.83
7	3.51	54.10	2.03
8	4.01	54.80	1.28
9	4.50	55.50	1.26
10	5.00	56.10	1.07

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 155 **TO** 162 .

BLANK VALUE = 3.8 micrograms carbon
BLANK FACTOR = 3.8 / 5.003784 = +7.6E-01 ug/min Carbon

SAMPLE RESULTS:
(56.1 - 3.800695)(11)/(200) = +2.88E+00 g/L Carbon
(56.1 - 3.800695)(11)/(200)(12) = +2.40E-01 Molar Carbon

Sample Run By: RW 10-10-95
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 10/13/95 Time: 07:09:48

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.10	100.00
3	1.51	0.30	66.67
4	2.01	0.60	50.00
5	2.51	1.10	45.45
6	3.01	1.80	38.89
7	3.51	2.50	28.00
8	4.01	3.20	21.88
9	4.51	3.80	15.79
10	5.01	4.40	13.64

BLANK VALUE = 4.4 micrograms carbon
BLANK FACTOR = 4.4 / 5.005493 = +8.8E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/10/95 Time: 05:49:11

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .7594252 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.70	57.14
3	1.51	1.10	36.36
4	2.01	1.50	26.67
5	2.51	1.80	16.67
6	3.01	2.20	18.18
7	3.51	2.50	12.00
8	4.00	2.90	13.79
9	4.50	3.30	12.12
10	5.00	3.70	10.81

BLANK VALUE = 3.8 micrograms carbon
BLANK FACTOR = 3.8 / 5.003784 = +7.6E-01 ug/min Carbon

SAMPLE RESULTS:
(3.7 - 3.800649)(1)/(200) = < 5.00 E-3 g/L Carbon
(3.7 - 3.800649)(1)/(200)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING- PERCENT DIFFERENCE EXCEEDS 10 PERCENT >>>>

Sample Run By: _____
RA WENDLAND 00000

^^P

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 10/10/95 Time: 05:42:32

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.90	66.67
3	1.50	1.30	30.77
4	2.00	1.60	18.75
5	2.50	2.10	23.81
6	3.00	2.40	12.50
7	3.50	2.70	11.11
8	4.00	3.20	15.63
9	4.50	3.60	11.11
10	5.00	3.80	5.26

BLANK VALUE = 3.8 micrograms carbon
BLANK FACTOR = 3.8 / 5.003784 = +7.6E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/16/95 Time: 11:39:21

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .6394263 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	0.80	37.50
3	1.50	1.00	20.00
4	2.00	1.40	28.57
5	2.50	1.80	22.22
6	3.00	2.10	14.29
7	3.50	2.60	19.23
8	4.00	2.90	10.34
9	4.50	3.10	6.45
10	5.00	3.60	13.89

BLANK VALUE = 3.2 micrograms carbon
BLANK FACTOR = 3.2 / 5.004486 = +6.4E-01 ug/min Carbon

SAMPLE RESULTS:
(3.6 - 3.199473)(1)/(200) = < 5.00 E-3 g/L Carbon
(3.6 - 3.199473)(1)/(200)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING- PERCENT DIFFERENCE EXCEEDS 10 PERCENT >>>>

Sample Run By: _____
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44 Date: 10/10/95 Time: 06:05:03

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .7594252 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	14.00	95.71
3	1.51	16.20	13.58
4	2.01	17.60	7.95
5	2.51	18.50	4.86
6	3.01	19.20	3.65
7	3.51	19.90	3.52
8	4.01	20.50	2.93
9	4.50	21.00	2.38
10	5.00	21.40	1.87

BLANK VALUE = 3.8 micrograms carbon
BLANK FACTOR = 3.8 / 5.003784 = +7.6E-01 ug/min Carbon

SAMPLE RESULTS:
(21.4 - 3.800649)(1)/(200) = +8.80E-02 g/L Carbon
(21.4 - 3.800649)(1)/(200)(12) = +7.33E-03 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44 DUP Date: 10/10/95 Time: 06:20:08

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .7594252 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.20	0.00
2	1.01	12.00	90.00
3	1.51	14.70	18.37
4	2.01	16.00	8.13
5	2.51	17.00	5.88
6	3.01	17.80	4.49
7	3.51	18.50	3.78
8	4.00	19.10	3.14
9	4.50	19.60	2.55
10	5.00	20.20	2.97

BLANK VALUE = 3.8 micrograms carbon
BLANK FACTOR = 3.8 / 5.003784 = +7.6E-01 ug/min Carbon

SAMPLE RESULTS:
(20.2 - 3.800533)(1)/(200) = +8.20E-02 g/L Carbon
(20.2 - 3.800533)(1)/(200)(12) = +6.83E-03 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/13/95 Time: 07:22:24

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .8790343 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.50	60.00
3	1.51	0.80	37.50
4	2.01	1.30	38.46
5	2.51	1.60	18.75
6	3.01	1.80	11.11
7	3.51	2.20	18.18
8	4.01	2.60	15.38
9	4.50	2.90	10.34
10	5.00	3.20	9.37

BLANK VALUE = 4.4 micrograms carbon
BLANK FACTOR = 4.4 / 5.005493 = +8.8E-01 ug/min Carbon

SAMPLE RESULTS:
(3.2 - 4.399276)(1)/(200) = < 5.00 E-3 g/L Carbon
(3.2 - 4.399276)(1)/(200)(12) = < 4.17 E-4 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

LABCORE Data Entry Template for Worklist# 2832

Analyst: RAW **Instrument:** TOC01 WB39937 **Book #** 16N12-B
SPK 11N12-G

Method: LA-344-105 Rev/Mod C-0

Worklist Comment: AY-102 TOC RERUN - See comments

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TOC-01	LIQUID	1	~~2.50E01~~ <5.00E0	N/A	ug/mL
		2	STD				TOC-01	LIQUID	2.495E03	3.06E03	N/A	ug/mL
95000139	AY-102 GRAB	3	SAMPLE	S95T002445	0		TOC-01	LIQUID	N/A	7.83E02	2.50E01	ug/mL
95000139	AY-102 GRAB	4	DUP	S95T002445	0		TOC-01	LIQUID	7.83E02	7.18E02	N/A	ug/mL
95000140	AY-102 GRAB	5	SAMPLE	S95T002469	0		TOC-01	LIQUID	N/A	6.50E02	2.50E01	ug/mL
95000140	AY-102 GRAB	6	DUP	S95T002469	0		TOC-01	LIQUID	6.50E02	6.08E02	N/A	ug/mL
95000140	AY-102 GRAB	7	SPK	S95T002469	0		TOC-01	LIQUID	100	70.9	N/A	ug/mL
95000140	AY-102 GRAB	8	SAMPLE	S95T002470	0		TOC-01	LIQUID	N/A	6.38E02	2.50E01	ug/mL
95000140	AY-102 GRAB	9	DUP	S95T002470	0		TOC-01	LIQUID	6.38E02	6.65E02	N/A	ug/mL

Final page for worklist # 2832

R. Wendland 10-18-95
Analyst Signature **Date**

[illegible] 10-18-95
Analyst Signature **Date**

Reviewed RW Schmoch 10/19/95

Data Entry Comments: SAM - .500(SAM) - 2mL (.5 H_2SO_4)
SPK .200(DILUTE) — .200(11N12-G) - .200(INJ)

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			STANDARD
	Sample Volume in mL	(SS)	0.200
STANDARD	H2SO4 Volume in mL	(VR)	2.000
	Volume Injected in mL	(VI)	0.200
2832	Dilution Factor	(DF)	11
	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	58.1
	µg of Carbon in Blank	(C2)	2.5
LIQUID	g of Carbon/L	=	3.06E+00

16N12b

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	3.06E+03	DETECTION LEVEL in µg/mL
		5.50E+01

Data Entry by:	[signature]	Date:	10/18/95
Approved by:	RW Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				BLANK
	Sample Volume in mL	(SS)		0.200 ~~0.500~~ RWS 10/19/95
BLANK	H2SO4 Volume in mL	(VR)		0.200 ~~2.000~~ RWS 10/19/95
	Volume Injected in mL	(VI)		0.200 ~~0.200~~ RWS 10/19/95
2832	Dilution Factor	(DF)		1 ~~5~~ RWS 10/19/95
	Digest Dilution Factor	(DDF)		1
TOC-01	µg of Carbon in Sample	(C1)		2.5
	µg of Carbon in Blank	(C2)		2.3
LIQUID	g of Carbon/L	=	<	5.00 E0 ~~2.50E-02~~ RWS 10/19/95

BLANK

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g\ C * DF * DDF}{VI}$

NOTE: Reported Result is Below Detection Level.

µg Carbon/mL =	< 5.00 E0 ~~2.50E+01~~ RWS 10/19/95	DETECTION LEVEL in µg/mL ~~2.50E+01~~ 5.00E0 RWS 10/19/95

Data Entry by:	[signature]	Date:	10/18/95
Approved by:	RW Schnoeden	Date:	10/19/95

Form 344105_C Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.500
SAMPLE	H2SO4 Volume in mL	(VR)	2.000
	Volume Injected in mL	(VI)	0.200
2832	Dilution Factor	(DF)	5
	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	33.6
	µg of Carbon in Blank	(C2)	2.3
LIQUID	g of Carbon/L	=	7.83E-01

S95T002445

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	7.83E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:	[illegible]	Date:	10/18/95
Approved by:	Ru Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				DUPLICATE
	Sample Volume in mL		(SS)	0.500
DUPLICATE	H2SO4 Volume in mL		(VR)	2.000
	Volume Injected in mL		(VI)	0.200
2832	Dilution Factor		(DF)	5
	Digest Dilution Factor		(DDF)	1
TOC-01	µg of Carbon in Sample		(C1)	31
	µg of Carbon in Blank		(C2)	2.3
LIQUID	g of Carbon/L	=		7.18E-01

S95T002445

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	7.18E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:		Date:	10/18/95
Approved by:	Ru Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.500
SAMPLE	H2SO4 Volume in mL	(VR)	2.000
	Volume Injected in mL	(VI)	0.200
2832	Dilution Factor	(DF)	5
	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	28.3
	µg of Carbon in Blank	(C2)	2.3
LIQUID	g of Carbon/L	=	6.50E-01

S95T002469

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	6.50E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:	[signature]	Date:	10/18/95
Approved by:	Ru Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				DUPLICATE
	Sample Volume in mL		(SS)	0.500
DUPLICATE	H2SO4 Volume in mL		(VR)	2.000
	Volume Injected in mL		(VI)	0.200
2832	Dilution Factor		(DF)	5
	Digest Dilution Factor		(DDF)	1
TOC-01	µg of Carbon in Sample		(C1)	26.6
	µg of Carbon in Blank		(C2)	2.3
LIQUID	g of Carbon/L	=		6.08E-01

S95T002469

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	6.08E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:	[illegible]	Date:	10/18/95
Approved by:	RW Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-150, REV. 0

TOC: LA-344-105 SPIKED SAMPLE

SPIKE

	>>>>>> Sample Vial Data <<<<<<		>>>>> Spiked Vial Data <<<<<	
SPIKE	Sample Volume in mL	0.500	Sample Size in mL (SS)	0.200
	H2SO4 Volume in mL	2.000	Spike Volume in mL	0.200
2832	Volume Injected in mL	0.200	H2SO4 Volume in mL	0.000
	µg of Carbon in Sample	28.3	Volume Injected in mL	0.200
TOC-01	µg of Carbon in Blank	2.5	Sample Pre-Spike Dil. Factor (PDF)	5
			Spike Value (µg/ml)	748
LIQUID			µg C in Sample + Spike	68.4
			µg C in Blank	2.5
S95T002469SPK				
WB39937				
R WENDLAND				
10/18/95				
07:10 AM				

PERCENT SPIKE REC = $\frac{\text{µg Carbon Recovered from Spike} * 100}{\text{µg Carbon in Spike}}$

WHERE : µg Carbon Recovered from Spike =

[(µgC in sample + spike - µgC in blank) * (Spike Correction Factor)]

- [(µgC sample - µgC blank) * (Sample Correction Factor) * (Sample Size Correction Factor) * (PDF)]

Spike Correction Factor = $\frac{\text{Total volume in spiked sample vial (mL)}}{\text{Volume injected (mL)}}$

Sample Correction Factor = $\frac{\text{Total volume in sample vial (mL)}}{\text{Volume injected (mL)}}$

Sample Size Correction Factor = $\frac{\text{Sample size in (mL) in spiked vial}}{\text{Sample size (mL) in sample}}$

Sample Pre-Spike Dilution Factor = $\frac{1}{\text{Dilution of Sample Before Added to Spike Vial}}$

WHERE : µg Carbon in Spike = Spike Value (µg/mL) * Spike Volume (mL)

Percent Spike Recovery 70.9%

RJ 10-18-95

Data Entry by:		Date: 18-Oct-95
Approved by:	Reid Johnsedler	Date: 10/19/95

Form X Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.500
SAMPLE	H2SO4 Volume in mL	(VR)	2.000
	Volume Injected in mL	(VI)	0.200
2832	Dilution Factor	(DF)	5
	Digest Dilution Factor	(DDF)	1
TOC-01	µg of Carbon in Sample	(C1)	27.8
	µg of Carbon in Blank	(C2)	2.3
LIQUID	g of Carbon/L	=	6.38E-01

S95T002470

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{VI}$

µg Carbon/mL =	6.38E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:	[illegible]	Date:	10/18/95
Approved by:	Ron Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TOC : LA-344-105 (C-0) LIQUIDS

				DUPLICATE
	Sample Volume in mL		(SS)	0.500
DUPLICATE	H2SO4 Volume in mL		(VR)	2.000
	Volume Injected in mL		(VI)	0.200
2832	Dilution Factor		(DF)	5
	Digest Dilution Factor		(DDF)	1
TOC-01	µg of Carbon in Sample		(C1)	29.1
	µg of Carbon in Blank		(C2)	2.5
LIQUID	g of Carbon/L	=		6.65E-01

S95T002470

WB39937

R WENDLAND

10/18/95

07:10 AM

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{VI * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 mL/L

Detection Level (µg/mL) = $\frac{1 \text{ µg C} * DF * DDF}{VI}$

µg Carbon/mL =	6.65E+02	DETECTION LEVEL in µg/mL
		2.50E+01

Data Entry by:	[illegible]	Date:	10/18/95
Approved by:	Reni Schroeder	Date:	10/19/95

Form 344105_C Rev. 1.1

P TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

WHC-SD-WM-DP-150, REV. 0

..mple: STD Date: 10/18/95 Time: 06:35:26

Sample Size = 200 uL Analyst : RA WENDLAND
Dil Factor = 11 Min Readings = 10
Blank ID # = BLK Max Readings = 10
Blank Value = .4995335 ug/minute C % Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	24.80	99.60
3	1.51	48.20	48.55
4	2.01	54.30	11.23
5	2.51	55.90	2.86
6	3.01	56.80	1.58
7	3.51	57.10	0.53
8	4.01	57.50	0.70
9	4.50	57.90	0.69
10	5.00	58.10	0.34

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 173 TO 182.

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(58.1 - 2.499908)(11)/(200) = +3.06E+00 g/L Carbon
(58.1 - 2.499908)(11)/(200)(12) = +2.55E-01 Molar Carbon

Sample Run By: RW 10/18/95
RA WENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
< < < BLANK ANALYSIS > > >

WHC-SD-WM-DP-150, REV. 0

Sample: BLK *Date: 10/18/95* *Time: 06:18:47*

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = 1/31 RWS *Min Readings = 10*
Blank ID # = BLK 10/19/95 *Max Readings = 10*
Blank Value = N/A *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.70	71.43
3	1.51	1.00	30.00
4	2.01	1.20	16.67
5	2.51	1.40	14.29
6	3.01	1.60	12.50
7	3.51	1.80	11.11
8	4.00	2.10	14.29
9	4.50	2.30	8.70
10	5.00	2.50	8.00

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND *00000*

P

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE *Date: 10/18/95* *Time: 06:25:37*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 µL *Analyst : RA WENDLAND*
Dil Factor = 1 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.40	50.00
3	1.51	0.60	33.33
4	2.01	0.90	33.33
5	2.51	1.10	18.18
6	3.01	1.30	15.38
7	3.51	1.60	18.75
8	4.01	1.80	11.11
9	4.50	2.00	10.00
10	5.00	2.30	13.04

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(2.3 - 2.5)(1)/(200) = < 5.00 E-3 g/L Carbon
(2.3 - 2.5)(1)/(200)(12) = < 4.17 E-4 Molar Carbon
< < < < WARNING- PERCENT DIFFERENCE EXCEEDS 10 PERCENT > > > >

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

..mple: 45-500 *Date: 10/18/95* *Time: 06:47:10*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = ~~1~~ 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	18.00	96.67
3	1.51	26.40	31.82
4	2.01	29.00	8.97
5	2.51	30.20	3.97
6	3.01	31.10	2.89
7	3.51	31.90	2.51
8	4.01	32.60	2.15
9	4.51	33.10	1.51
10	5.01	33.60	1.49

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(33.6 - 2.50093)(1)/(200) = +1.55E-01 g/L Carbon
(33.6 - 2.50093)(1)/(200)(12) = +1.30E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

.mple: 45D *Date: 10/18/95* *Time: 06:52:50*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = ~~1~~ 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	16.90	97.04
3	1.51	23.70	28.69
4	2.01	26.00	8.85
5	2.51	27.40	5.11
6	3.01	28.60	4.20
7	3.51	29.20	2.05
8	4.01	29.90	2.34
9	4.50	30.40	1.64
10	5.00	31.00	1.94

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(31 - 2.500015)(1)/(200) = +1.42E-01 g/L Carbon
(31 - 2.500015)(1)/(200)(12) = +1.19E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69-500 *Date: 10/18/95* *Time: 06:59:11*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = ~~1~~ 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	15.80	96.20
3	1.51	21.20	25.47
4	2.00	23.60	10.17
5	2.50	24.90	5.22
6	3.00	25.90	3.86
7	3.50	26.50	2.26
8	4.00	27.30	2.93
9	4.50	27.80	1.80
10	5.00	28.30	1.77

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(28.3 - 2.499085)(1)/(200) = +1.29E-01 g/L Carbon
(28.3 - 2.499085)(1)/(200)(12) = +1.08E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

..mple: 9D *Date: 10/18/95* *Time: 07:04:50*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.00	0.00
2	1.01	16.30	93.87
3	1.50	19.70	17.26
4	2.00	21.60	8.80
5	2.50	22.70	4.85
6	3.00	23.90	5.02
7	3.50	24.70	3.24
8	4.00	25.50	3.14
9	4.50	26.10	2.30
10	5.00	26.60	1.88

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(26.6 - 2.499512)(1)/(200) = +1.21E-01 g/L Carbon
(26.6 - 2.499512)(1)/(200)(12) = +1.00E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

.mple: 69-SPK *Date: 10/18/95* *Time: 07:24:07*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = 1 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.90	0.00
2	1.01	38.70	97.67
3	1.50	55.70	30.52
4	2.00	59.60	6.54
5	2.50	62.20	4.18
6	3.00	64.30	3.27
7	3.50	65.60	1.98
8	4.00	66.80	1.80
9	4.50	67.60	1.18
10	5.00	68.40	1.17

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(68.4 - 2.499573)(1)/(200) = +3.30E-01 g/L Carbon
(68.4 - 2.499573)(1)/(200)(12) = +2.75E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

.mple: 70-500 *Date: 10/18/95* *Time: 07:16:43*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = ~~1~~ 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.90	0.00
2	1.01	17.70	89.27
3	1.50	20.90	15.31
4	2.00	22.70	7.93
5	2.50	23.90	5.02
6	3.00	25.00	4.40
7	3.50	25.90	3.47
8	4.00	26.50	2.26
9	4.50	27.20	2.57
10	5.00	27.80	2.16

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(27.8 - 2.499573)(1)/(200) = +1.27E-01 g/L Carbon
(27.8 - 2.499573)(1)/(200)(12) = +1.05E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 70-D *Date: 10/18/95* *Time: 07:10:53*

WHC-SD-WM-DP-150, REV. 0

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor =~~1~~ 5 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .4995335 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.90	0.00
2	1.01	17.80	94.94
3	1.51	21.90	18.72
4	2.00	23.70	7.59
5	2.50	25.20	5.95
6	3.00	26.30	4.18
7	3.50	27.20	3.31
8	4.00	28.00	2.86
9	4.50	28.60	2.10
10	5.00	29.10	1.72

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.004669 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(29.1 - 2.499497)(1)/(200) = +1.33E-01 g/L Carbon
(29.1 - 2.499497)(1)/(200)(12) = +1.11E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND *00000*

THE FOLLOWING ANALYSES ARE INCLUDED IN THE DATA PACKAGE BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

LABCORE Data Entry Template for Worklist# 2675

Analyst: RAW **Instrument:** TOC01 WC39937 **Book #** 16N12-B
SPK 11N12-G

Method: LA-344-105 Rev/Mod C-0

Worklist Comment: TOC combustion AY-102 - Assure sufficient H+

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TOC-01	LIQUID	1	<5.00	N/A	ug/mL
		2	STD				TOC-01	LIQUID	3.00E03	3.03E03	N/A	ug/mL
95000139	AY-102 GRAB	3	SAMPLE	S95T002444	0		TOC-01	LIQUID	N/A	6.44E02	5.50E1	ug/mL
95000139	AY-102 GRAB	4	DUP	S95T002444	0		TOC-01	LIQUID	6.44E02	6.60E02	N/A	ug/mL
95000139	AY-102 GRAB	5	SAMPLE	S95T002445	0		TOC-01	LIQUID	N/A	7.09E02	5.50E1	ug/mL
95000139	AY-102 GRAB	6	DUP	S95T002445	0		TOC-01	LIQUID	7.09E02	6.82E02	N/A	ug/mL
95000140	AY-102 GRAB	7	SAMPLE	S95T002469	0		TOC-01	LIQUID	N/A	6.16E02	5.50E1	ug/mL
95000140	AY-102 GRAB	8	DUP	S95T002469	0		TOC-01	LIQUID	6.16E02	5.56E02	N/A	ug/mL
95000140	AY-102 GRAB	9	SPK	S95T002469	0		TOC-01	LIQUID	100	~~92.9~~ 93.7 10395	N/A	ug/mL
95000140	AY-102 GRAB	10	SAMPLE	S95T002470	0		TOC-01	LIQUID	N/A	8.31E02	5.50E1	ug/mL
95000140	AY-102 GRAB	11	DUP	S95T002470	0		TOC-01	LIQUID	8.31E02	7.54E02	N/A	ug/mL

Final page for worklist # 2675

R. Wendland 10-2-95
Analyst Signature **Date**

Gary J. Hammond 10-04-95
Analyst Signature **Date**

Reviewed by Robert W. Schroeder 10/5/95

DATA NOT USED IN PACKAGE

Data Entry Comments: SAM = .200 – 2mL H_2SO_4

SPK = .200 – .200 – .200
SAM DIL. SPK INJ

All results to be rejected due to unoptimized detector.
RW Schroeder 10/5/95

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-150, REV. 0

DATA NOT USED IN PACKAGE

TOC: LA-344-105 SPIKED SAMPLE

SPIKE

	>>>>>> Sample Vial Data <<<<<<		>>>>> Spiked Vial Data <<<<<	
SPIKE	Sample Volume in mL	0.200	Sample Size in mL (SS)	0.200
	H2SO4 Volume in mL	2.000	Spike Volume in mL	0.200
2675	Volume Injected in mL	0.200	H2SO4 Volume in mL	0.000
	µg of Carbon in Sample	12.7	Volume Injected in mL	0.200
TOC-01	µg of Carbon in Blank	1.5	Sample Pre-Spike Dil. Factor (PDF)	11
			Spike Value (µg/ml)	748
LIQUID			µg C in Sample + Spike	77.2
			µg C in Blank	1.5
S95T002469				
TOC01				
R. WENDLAND				
10/02/95				
08:17 AM				

PERCENT SPIKE REC = $\frac{\text{µg Carbon Recovered from Spike} * 100}{\text{µg Carbon in Spike}}$

WHERE : µg Carbon Recovered from Spike =

[(µgC in sample + spike - µgC in blank) * (Spike Correction Factor)]

- [(µgC sample - µgC blank) * (Sample Correction Factor) * (Sample Size Correction Factor) * (PDF)]

Spike Correction Factor = $\frac{\text{Total volume in spiked sample vial (mL)}}{\text{Volume injected (mL)}}$

Sample Correction Factor = $\frac{\text{Total volume in sample vial (mL)}}{\text{Volume injected (mL)}}$

Sample Size Correction Factor = $\frac{\text{Sample size in (mL) in spiked vial}}{\text{Sample size (mL) in sample}}$

Sample Pre-Spike Dilution Factor = $\frac{1}{\text{Dilution of Sample Before Added to Spike Vial}}$

WHERE : µg Carbon in Spike = Spike Value (µg/mL) * Spike Volume (mL)

Percent Spike Recovery 93.7%

Data Entry by:	[signature]	Date:	03-Oct-95
Approved by:		Date:	

Form X Rev. 1.1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 10/02/95 Time: 07:29:34

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	15.70	99.36
3	1.51	43.80	64.16
4	2.01	52.50	16.57
5	2.51	54.60	3.85
6	3.01	55.50	1.62
7	3.51	55.90	0.72
8	4.00	56.10	0.36
9	4.50	56.30	0.36
10	5.00	56.50	0.35

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(56.5 - 1.499753)(11)/(200) = +3.03E+00 g/L Carbon
(56.5 - 1.499753)(11)/(200)(12) = +2.52E-01 Molar Carbon

Sample Run By: RW. 10-2-95
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 10/02/95 Time: 07:13:04

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.20	100.00
3	1.51	0.60	66.67
4	2.01	0.80	25.00
5	2.51	0.80	0.00
6	3.01	0.90	11.11
7	3.51	1.00	10.00
8	4.01	1.10	9.09
9	4.51	1.30	15.38
10	5.01	1.50	13.33

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/02/95 Time: 07:18:27

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.20	100.00
3	1.51	0.30	33.33
4	2.01	0.40	25.00
5	2.51	0.60	33.33
6	3.01	0.70	14.29
7	3.51	1.00	30.00
8	4.01	1.00	0.00
9	4.51	1.10	9.09
10	5.01	1.20	8.33

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(1.2 - 1.500046)(1)/(200) = < 5.00 E-3 g/L Carbon
(1.2 - 1.500046)(1)/(200)(12) = < 4.17 E-4 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44 Date: 10/02/95 Time: 07:42:22

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	5.80	94.83
3	1.51	9.90	41.41
4	2.01	11.20	11.61
5	2.51	11.80	5.08
6	3.00	12.20	3.28
7	3.51	12.50	2.40
8	4.01	12.70	1.57
9	4.50	13.00	2.31
10	5.00	13.20	1.52

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(13.2 - 1.499753)(11)/(200) = +6.44E-01 g/L Carbon
(13.2 - 1.499753)(11)/(200)(12) = +5.36E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44D Date: 10/02/95 Time: 07:48:45

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	6.60	100.00
3	1.51	9.60	31.25
4	2.01	10.80	11.11
5	2.51	11.50	6.09
6	3.01	12.00	4.17
7	3.51	12.50	4.00
8	4.01	12.80	2.34
9	4.51	13.20	3.03
10	5.01	13.50	2.22

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(13.5 - 1.500009)(11)/(200) = +6.60E-01 g/L Carbon
(13.5 - 1.500009)(11)/(200)(12) = +5.50E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 45 Date: 10/02/95 Time: 07:55:25

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	7.20	100.00
3	1.51	10.20	29.41
4	2.01	11.50	11.30
5	2.51	12.50	8.00
6	3.01	13.00	3.85
7	3.51	13.50	3.70
8	4.01	13.80	2.17
9	4.51	14.10	2.13
10	5.01	14.40	2.08

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(14.4 - 1.500009)(11)/(200) = +7.09E-01 g/L Carbon
(14.4 - 1.500009)(11)/(200)(12) = +5.91E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 45D Date: 10/02/95 Time: 08:00:44

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	7.90	97.47
3	1.51	9.80	19.39
4	2.01	10.90	10.09
5	2.51	11.60	6.03
6	3.01	12.20	4.92
7	3.51	12.70	3.94
8	4.01	13.20	3.79
9	4.51	13.60	2.94
10	5.01	13.90	2.16

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(13.9 - 1.500009)(11)/(200) = +6.82E-01 g/L Carbon
(13.9 - 1.500009)(11)/(200)(12) = +5.68E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69 Date: 10/02/95 Time: 08:06:11

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	7.00	97.14
3	1.50	8.70	19.54
4	2.00	9.60	9.38
5	2.51	10.30	6.80
6	3.01	10.90	5.50
7	3.51	11.40	4.39
8	4.00	11.80	3.39
9	4.50	12.30	4.07
10	5.00	12.70	3.15

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(12.7 - 1.499744)(11)/(200) = +6.16E-01 g/L Carbon
(12.7 - 1.499744)(11)/(200)(12) = +5.13E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69D Date: 10/02/95 Time: 08:11:58

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	6.50	93.85
3	1.50	8.00	18.75
4	2.00	8.90	10.11
5	2.50	9.60	7.29
6	3.01	10.10	4.95
7	3.51	10.50	3.81
8	4.00	10.90	3.67
9	4.50	11.40	4.39
10	5.00	11.60	1.72

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(11.6 - 1.499753)(11)/(200) = +5.56E-01 g/L Carbon
(11.6 - 1.499753)(11)/(200)(12) = +4.63E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69SPK Date: 10/02/95 Time: 08:17:59

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	39.70	99.75
3	1.51	61.60	35.55
4	2.00	66.60	7.51
5	2.50	69.90	4.72
6	3.01	72.10	3.05
7	3.51	74.00	2.57
8	4.01	75.20	1.60
9	4.50	76.20	1.31
10	5.00	77.20	1.30

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(77.2 - 1.499762)(1)/(200) = +3.79E-01 g/L Carbon
(77.2 - 1.499762)(1)/(200)(12) = +3.15E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 70 Date: 10/02/95 Time: 08:23:30

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	9.70	94.85
3	1.50	11.60	16.38
4	2.00	12.80	9.37
5	2.50	13.90	7.91
6	3.00	14.40	3.47
7	3.50	15.00	4.00
8	4.00	15.70	4.46
9	4.50	16.30	3.68
10	5.00	16.60	1.81

DATA NOT USED IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(16.6 - 1.499442)(11)/(200) = +8.31E-01 g/L Carbon
(16.6 - 1.499442)(11)/(200)(12) = +6.92E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 70D Date: 10/02/95 Time: 08:32:13

Sample Size = 200 uL
Dil Factor = 11
Blank ID # = BLK
Blank Value = .2996708 ug/minute C

Analyst : RA WQENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	8.80	96.59
3	1.51	10.90	19.27
4	2.00	11.80	7.63
5	2.50	12.80	7.81
6	3.00	13.30	3.76
7	3.51	14.00	5.00
8	4.01	14.50	3.45
9	4.50	14.90	2.68
10	5.00	15.20	1.97

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 1.5 micrograms carbon
BLANK FACTOR = 1.5 / 5.005493 = +3.0E-01 ug/min Carbon

SAMPLE RESULTS:
(15.2 - 1.499753)(11)/(200) = +7.54E-01 g/L Carbon
(15.2 - 1.499753)(11)/(200)(12) = +6.28E-02 Molar Carbon

Sample Run By: _____
RA WQENDLAND 00000

LABCORE Data Entry Template for Worklist# 2673

Analyst: RAN **Instrument:** TIC01 WC59937 **Book #** 17N12-A

Method: LA-622-102 Rev/Mod C-0

Worklist Comment: TIC AY-102

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TIC-01	LIQUID	1	<5.00	N/A	ug/mL
		2	STD				TIC-01	LIQUID	600	581 E02	N/A	ug/mL
95000139	AY-102 GRAB	3	SAMPLE	S95T002444	0		TIC-01	LIQUID	N/A	~~2.32~~ 7.48E02 E3	2.00 E1	ug/mL
95000139	AY-102 GRAB	4	DUP	S95T002444	0		TIC-01	LIQUID	7.48 E2	6.00 E2	N/A	ug/mL
95000139	AY-102 GRAB	5	SAMPLE	S95T002445	0		TIC-01	LIQUID	N/A	6.04 E2	2.00 E1	ug/mL
95000139	AY-102 GRAB	6	DUP	S95T002445	0		TIC-01	LIQUID	6.04 E2	6.00 E2	N/A	ug/mL
95000139	AY-102 GRAB	7	SPK	S95T002445	0		TIC-01	LIQUID	100	111.3	N/A	ug/mL
95000140	AY-102 GRAB	8	SAMPLE	S95T002469	0		TIC-01	LIQUID	N/A	5.86 E2	2.00 E1	ug/mL
95000140	AY-102 GRAB	9	DUP	S95T002469	0		TIC-01	LIQUID	5.86 E2	5.96 E2	N/A	ug/mL
95000140	AY-102 GRAB	10	SAMPLE	S95T002470	0		TIC-01	LIQUID	N/A	6.24 E2	2.00 E	ug/mL
95000140	AY-102 GRAB	11	DUP	S95T002470	0		TIC-01	LIQUID	6.24 E2	6.18 E2	N/A	ug/mL

RWS 11/10/95

Final page for worklist # 2673

R. Wendland 10-5-95
Analyst Signature **Date**

RLSchroeder 10/11/95
Analyst Signature **Date**

Reviewed by Robert W. Schroeder 10/11/95

Result for AY-102 S95T002444 rejected due to high RPD.
RWS 10/11/95

Data Entry Comments:

.050 INJ (ALL)

SPIKE .250 – .250 SAM – .050 INJ
(17N12-A)

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			BLANK
	Sample Volume in mL	(SS)	0.200
BLANK	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	2.5
	µg of Carbon in Blank	(C2)	2.3
TIC-01			
LIQUID	g of Carbon/L	= <	5.00E-03
BLNK			
WC39937			
R. WENDLAND			
10/05/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

NOTE: Reported Result is Below Detection Level.

µg Carbon/mL =	< 5.00E+00	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	[illegible]	Date:	10/10/95
Approved by:	Ron Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			STANDARD
	Sample Volume in mL	(SS)	0.200
STANDARD	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	118.7
	µg of Carbon in Blank	(C2)	2.5
TIC-01			
LIQUID	g of Carbon/L	=	5.81E-01
17N12A			
WC39937			
R. WENDLAND			
10/05/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.81E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:		Date:	10/10/95
Approved by:	RW Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	39.9
	µg of Carbon in Blank	(C2)	2.5
TIC-01			
LIQUID	g of Carbon/L	=	7.48E-01
S95T002444			
WC39937			
R. WENDLAND			
10/05/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	7.48E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	ct Stub	Date:	10/10/95
Approved by:	RW Schroeder	Date:	10/11/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE/DUP
	Sample Volume in mL	(SS)	0.050
SAMPLE/DUP	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	32.5
	µg of Carbon in Blank	(C2)	2.5
TIC-01			
LIQUID	g of Carbon/L	=	6.00E-01
S95T002444/DUP	g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$		
WC39937	µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m		
R. WENDLAND			
10/05/95	Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$		

µg Carbon/mL =	6.00E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	[illegible]	Date:	10/10/95
Approved by:	Ru Schroeder	Date:	10/11/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			STANDARD
	Sample Volume in mL	(SS)	0.200
STANDARD	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	118.7
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	5.80E-01
17N12A			
WC39937			
R. WENDLAND			
10/05/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.80E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	[illegible]	Date:	10/10/95
Approved by:	RW Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	32.9
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	6.04E-01
S95T002445			
WC39937			
R. WENDLAND			
10/05/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	6.04E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	R Hale	Date:	10/10/95
Approved by:	Ron Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	32.7
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	6.00E-01
S95T002445/DUP	g of Carbon/L =	$\frac{(C1-C2) * DF * DDF}{SS * 1000}$	
WC39937	µg of Carbon/mL =	g of Carbon/L * 1000000 µg/g / 1000 m	
R. WENDLAND			
10/05/95	Detection Level (µg/mL) =	$\frac{1 \mu g C * DF * DDF}{SS}$	

µg Carbon/mL =	6.00E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	RLTh	Date:	10/11/95
Approved by:	R.W. Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) SPIKED SAMPLE

SPIKE

	>>>>>> Sample Vial Data <<<<<<		>>>>> Spiked Vial Data <<<<<	
SPIKE	Sample Volume in mL	0.050	Sample Volume in mL	0.250
	µg of Carbon in Sample	32.9	Spike Volume in mL	0.250
2673	µg of Carbon in Blank	2.7	Volume Injected in mL	0.050
			Spike Value (µg/mL)	600
RIC-01			µg C in Sample + Spike	34.5
			µg C in Blank	2.7
LIQUID				
S95T002445/SPK				
WC39937				
R. WENDLAND				
10/05/95				

PERCENT SPIKE RECOVERY = $\frac{\text{µg Carbon Recovered from Spike} * 100}{\text{µg Carbon in Spike}}$

WHERE : µg Carbon Recovered from Spike =
[(µgC in sample + spike - µgC in blank) * (Spike Correction Factor)]
- [(µgC sample - µgC blank) * (Sample Size Correction Factor)]

Spike Correction Factor = $\frac{\text{Total volume in spiked sample vial (mL)}}{\text{Volume injected (mL)}}$

Sample Size Correction Factor = $\frac{\text{Sample size in (mL) in spiked vial}}{\text{Sample size (mL) in sample}}$

WHERE : µg Carbon in Spike =
[Spike Value (µg/mL) * Spike Volume (mL)]

Percent Spike Recovery = 111.3%

Data Entry by:	RHS	Date:	10/11/95
Approved by:	RW Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	32
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	5.86E-01
S95T002469			
WC39937			
R. WENDLAND			
10/06/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.86E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	RHHolmes	Date:	10/11/95
Approved by:	RW Schneider	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	32.5
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	5.96E-01
S95T002469/DUP			
WC39937			
R. WENDLAND			
10/06/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.96E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	R/ [illegible]	Date:	10/11/95
Approved by:	Rw Schroeder	Date:	10/11/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.050
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	33.9
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	6.24E-01
S95T002470			
WC39937			
R. WENDLAND			
10/06/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	6.24E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	[illegible]	Date:	10/11/95
Approved by:	Ron Schroeder	Date:	10/11/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE/DUP
	Sample Volume in mL	(SS)	0.050
SAMPLE/DUP	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
2673	µg of Carbon in Sample	(C1)	33.6
	µg of Carbon in Blank	(C2)	2.7
TIC-01			
LIQUID	g of Carbon/L	=	6.18E-01
S95T002470/DUP			
WC39937			
R. WENDLAND			
10/06/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	6.18E+02	DETECTION LEVEL in µg/mL
		2.00E+01

Data Entry by:	RT Steele	Date:	10/11/95
Approved by:	Ron Schroeder	Date:	10/11/95

Form 622102_C Rev. 1.1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: SD Date: 10/04/95 Time: 12:10:56

Sample Size = 200 uL Analyst : RA WENDLAND
Dil Factor = 1 Min Readings = 10
Blank ID # = BLK Max Readings = 10
Blank Value = .4997194 ug/minute C % Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	21.30	99.06
3	1.51	70.60	69.83
4	2.01	99.60	29.12
5	2.51	111.40	10.59
6	3.01	115.70	3.72
7	3.51	117.30	1.36
8	4.01	117.90	0.51
9	4.50	118.40	0.42
10	5.00	118.70	0.25

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 211 **TO** 225.

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.002808 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(118.7 - 2.500945)(1)/(200) = +5.810E-01 g/L Carbon
(118.7 - 2.500945)(1)/(200)(12) = +4.842E-02 Molar Carbon

Sample Run By: RW 10-5-95
RA WENDLAND 00000

P^^PP

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 10/04/95 Time: 11:57:20

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	0.40	75.00
3	1.51	0.70	42.86
4	2.00	1.10	36.36
5	2.50	1.40	21.43
6	3.00	1.50	6.67
7	3.50	1.80	16.67
8	4.00	2.00	10.00
9	4.50	2.20	9.09
10	5.00	2.50	12.00

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.002808 = +5.0E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/04/95 Time: 12:02:59

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .4997194 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.40	50.00
3	1.51	0.70	42.86
4	2.01	0.90	22.22
5	2.51	1.10	18.18
6	3.01	1.40	21.43
7	3.51	1.70	17.65
8	4.01	1.90	10.53
9	4.50	2.10	9.52
10	5.00	2.30	8.70

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.002808 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(2.3 - 2.500854)(1)/(200) = < 5.00 E-3 g/L Carbon
(2.3 - 2.500854)(1)/(200)(12) = < 4.17 E-4 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

P

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44 Date: 10/04/95 Time: 13:00:02

Sample Size = 50 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .4997194 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.30	0.00
2	1.01	17.10	80.70
3	1.51	30.20	43.38
4	2.01	35.50	14.93
5	2.51	37.30	4.83
6	3.01	38.30	2.61
7	3.51	38.70	1.03
8	4.01	39.20	1.28
9	4.50	39.60	1.01
10	5.00	39.90	0.75

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.002808 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(39.9 - 2.500854)(1)/(50) = +7.48E-01 g/L Carbon
(39.9 - 2.500854)(1)/(50)(12) = +6.23E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

P^^^^^^^^^^^^

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 44D Date: 10/04/95 Time: 12:53:32

Sample Size = 50 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .4997194 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	11.90	99.16
3	1.50	24.30	51.03
4	2.00	28.70	15.33
5	2.50	30.30	5.28
6	3.00	31.00	2.26
7	3.50	31.40	1.27
8	4.00	31.80	1.26
9	4.50	32.10	0.93
10	5.00	32.50	1.23

BLANK VALUE = 2.5 micrograms carbon
BLANK FACTOR = 2.5 / 5.002808 = +5.0E-01 ug/min Carbon

SAMPLE RESULTS:
(32.5 - 2.500396)(1)/(50) = +6.00E-01 g/L Carbon
(32.5 - 2.500396)(1)/(50)(12) = +5.00E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 10/06/95 Time: 07:50:11

Sample Size = 200 uL Analyst : RA WENDLAND
Dil Factor = 1 Min Readings = 10
Blank ID # = BLK Max Readings = 10
Blank Value = .5394074 ug/minute C % Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	9.40	97.87
3	1.51	54.70	82.82
4	2.01	89.80	39.09
5	2.51	106.90	16.00
6	3.01	114.20	6.39
7	3.51	116.60	2.06
8	4.00	117.70	0.93
9	4.50	118.40	0.59
10	5.00	118.70	0.25

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(118.7 - 2.699029)(1)/(200) = +5.800E-01 g/L Carbon
(118.7 - 2.699029)(1)/(200)(12) = +4.833E-02 Molar Carbon

Sample Run By: RW
RA WENDLAND 00000

< ^^

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 10/06/95 Time: 07:36:22

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.60	66.67
3	1.51	0.90	33.33
4	2.01	1.20	25.00
5	2.51	1.40	14.29
6	3.01	1.80	22.22
7	3.51	2.00	10.00
8	4.01	2.20	9.09
9	4.51	2.50	12.00
10	5.01	2.70	7.41

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BASE Date: 10/06/95 Time: 07:42:08

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.50	60.00
3	1.51	0.60	16.67
4	2.01	0.80	25.00
5	2.51	1.10	27.27
6	3.01	1.30	15.38
7	3.51	1.50	13.33
8	4.01	1.80	16.67
9	4.51	1.90	5.26
10	5.01	2.20	13.64

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(2.2 - 2.7)(1)/(200) = < 5.00 E-3 g/L Carbon
(2.2 - 2.7)(1)/(200)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING- PERCENT DIFFERENCE EXCEEDS 10 PERCENT >>>>

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 45 Date: 10/06/95 Time: 08:05:27

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	7.80	97.44
3	1.51	22.60	65.49
4	2.01	28.70	21.25
5	2.51	30.70	6.51
6	3.01	31.50	2.54
7	3.51	32.00	1.56
8	4.01	32.30	0.93
9	4.50	32.60	0.92
10	5.00	32.90	0.91

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(32.9 - 2.699572)(1)/(200) = +1.51E-01 g/L Carbon
(32.9 - 2.699572)(1)/(200)(12) = +1.26E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 45D Date: 10/06/95 Time: 08:10:45

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	6.90	97.10
3	1.51	21.90	68.49
4	2.01	28.10	22.06
5	2.51	30.20	6.95
6	3.01	31.20	3.21
7	3.51	31.60	1.27
8	4.01	32.00	1.25
9	4.51	32.40	1.23
10	5.01	32.70	0.92

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(32.7 - 2.700016)(1)/(200) = +1.50E-01 g/L Carbon
(32.7 - 2.700016)(1)/(200)(12) = +1.25E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 45SPK Date: 10/06/95 Time: 08:37:25

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	9.20	96.74
3	1.51	24.00	61.67
4	2.00	29.90	19.73
5	2.50	32.10	6.85
6	3.01	33.00	2.73
7	3.51	33.60	1.79
8	4.01	33.80	0.59
9	4.50	34.20	1.17
10	5.00	34.50	0.87

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(34.5 - 2.699572)(1)/(200) = +1.59E-01 g/L Carbon
(34.5 - 2.699572)(1)/(200)(12) = +1.33E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69 Date: 10/06/95 Time: 08:16:02

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	6.90	97.10
3	1.51	21.80	68.35
4	2.01	27.70	21.30
5	2.51	29.70	6.73
6	3.01	30.40	2.30
7	3.51	30.90	1.62
8	4.01	31.30	1.28
9	4.51	31.70	1.26
10	5.01	32.00	0.94

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(32 - 2.7)(1)/(200) = +1.47E-01 g/L Carbon
(32 - 2.7)(1)/(200)(12) = +1.22E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 69D Date: 10/06/95 Time: 08:21:17

Sample Size = 200 uL Analyst : RA WENDLAND
Dil Factor = 1 Min Readings = 10
Blank ID # = BLK Max Readings = 10
Blank Value = .5394074 ug/minute C % Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	8.20	97.56
3	1.50	22.70	63.88
4	2.00	28.10	19.22
5	2.51	30.10	6.64
6	3.01	31.00	2.90
7	3.51	31.50	1.59
8	4.00	31.80	0.94
9	4.50	32.20	1.24
10	5.00	32.50	0.92

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(32.5 - 2.699457)(1)/(200) = +1.49E-01 g/L Carbon
(32.5 - 2.699457)(1)/(200)(12) = +1.24E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 70 Date: 10/06/95 Time: 08:26:31

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	9.30	96.77
3	1.51	24.40	61.89
4	2.01	29.70	17.85
5	2.51	31.50	5.71
6	3.01	32.30	2.48
7	3.51	32.90	1.82
8	4.01	33.20	0.90
9	4.51	33.50	0.90
10	5.01	33.90	1.18

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(33.9 - 2.7)(1)/(200) = +1.56E-01 g/L Carbon
(33.9 - 2.7)(1)/(200)(12) = +1.30E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 70D Date: 10/06/95 Time: 08:31:58

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .5394074 ug/minute C

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	9.20	96.74
3	1.51	24.10	61.83
4	2.00	29.60	18.58
5	2.50	31.40	5.73
6	3.01	32.20	2.48
7	3.51	32.70	1.53
8	4.01	33.00	0.91
9	4.50	33.40	1.20
10	5.00	33.60	0.60

BLANK VALUE = 2.7 micrograms carbon
BLANK FACTOR = 2.7 / 5.005493 = +5.4E-01 ug/min Carbon

SAMPLE RESULTS:
(33.6 - 2.699555)(1)/(200) = +1.55E-01 g/L Carbon
(33.6 - 2.699555)(1)/(200)(12) = +1.29E-02 Molar Carbon

Sample Run By: _____
RA WENDLAND 00000

LABCORE Data Entry Template for Worklist# 3349

Analyst: RK (Kay Kim) **Instrument:** TIC01 **Book #** 17N12-A

Method: LA-622-102 Rev/Mod C-0

Worklist Comment: SY-102 TIC AY102

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TIC-01	LIQUID	1	~~<5.00~~ 0.1 HLA 11-14-95	N/A	ug/mL
		2	STD				TIC-01	LIQUID	6.00E+2	5.81E+2	N/A	ug/mL
95000172	SY-102 GRAB	3	SAMPLE	S95T003139	0		TIC-01	LIQUID	N/A	1.41E+3	1.75E+1	ug/mL
95000172	SY-102 GRAB	4	DUP	S95T003139	0		TIC-01	LIQUID	1.41E+3	1.44E+3	N/A	ug/mL
95000172	SY-102 GRAB	5	SPK	S95T003139	0		TIC-01	LIQUID	100	~~2.58E+3~~ 97.8 HLA 11-14-95	N/A	ug/mL
95000172	SY-102 GRAB	6	SAMPLE	S95T003140	0		TIC-01	LIQUID	N/A	1.65E+3	2.00E+1	ug/mL
95000172	SY-102 GRAB	7	DUP	S95T003140	0		TIC-01	LIQUID	1.65E+3	1.58E+3	N/A	ug/mL
95000139	AY-102 GRAB	8	SAMPLE	S95T002911	0		TIC-01	LIQUID	N/A	5.31E+2	5.00	ug/mL
000139	AY-102 GRAB	9	DUP	S95T002911	0		TIC-01	LIQUID	5.31E+2	5.36E+2	N/A	ug/mL

Final page for worklist # 3349

for Rob King
Heather Anastos 11-8-95
Analyst Signature **Date**

[illegible] 11/14/95
Analyst Signature **Date**

Reviewed RW Schroeder 11/15/95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 3349

Analyst: RK **Instrument:** TIC01 _____ **Book #** 17712-A

Method: LA-622-102 Rev/Mod _____

Worklist Comment: SY-102 TIC

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TIC-01	LIQUID			N/A	ug/mL
		2	STD				TIC-01	LIQUID			N/A	ug/mL
95000172	SY-102 GRAB	3	SAMPLE	S95T003139	0		TIC-01	LIQUID	N/A			ug/mL
95000172	SY-102 GRAB	4	DUP	S95T003139	0		TIC-01	LIQUID			N/A	ug/mL
95000172	SY-102 GRAB	5	SPK	S95T003139	0		TIC-01	LIQUID			N/A	ug/mL
95000172	SY-102 GRAB	6	SAMPLE	S95T003140	0		TIC-01	LIQUID	N/A			ug/mL
95000172	SY-102 GRAB	7	DUP	S95T003140	0		TIC-01	LIQUID			N/A	ug/mL

Final page for worklist # 3349

Nol Kney 11/7/95
Analyst Signature **Date**

Analyst Signature **Date**

Needed only for Signature

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 3350

Analyst: RK **Instrument:** TIC01 _____ **Book #** 17112-A

Method: LA-622-102 Rev/Mod _____

Worklist Comment: AY-102 TIC

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				TIC-01	LIQUID			N/A	ug/mL
		2	STD				TIC-01	LIQUID			N/A	ug/mL
95000139	AY-102 GRAB	3	SAMPLE	S95T002911	0		TIC-01	LIQUID	N/A			ug/mL
95000139	AY-102 GRAB	4	DUP	S95T002911	0		TIC-01	LIQUID			N/A	ug/mL

Final page for worklist # 3350

Rob Kim 11/7/95
Analyst Signature **Date**

Analyst Signature **Date**

Needed only for signature!

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			BLANK
	Sample Volume in mL	(SS)	0.200
BLANK	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
3349	µg of Carbon in Sample	(C1)	1.8
	µg of Carbon in Blank	(C2)	1.7
TIC-01			
LIQUID	g of Carbon/L	= <	5.00E-03
17N12-A			
TIC01			
R. KING			
11/07/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

NOTE: Reported Result is Below Detection Level.

µg Carbon/mL =	< 5.00E+00	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	H. Linartz	Date:	11/13/95
Approved by:	Ron Schroeder	Date:	11/15/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			STANDARD
	Sample Volume in mL	(SS)	0.200
STANDARD	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
3349	µg of Carbon in Sample	(C1)	117.9
	µg of Carbon in Blank	(C2)	1.7
TIC-01			
LIQUID	g of Carbon/L	=	5.81E-01
17N12-A			
TIC01			
R. KING			
11/07/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.81E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	H. Anastor	Date:	11/13/95
Approved by:	Ru Schroeder	Date:	11/15/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE
	Sample Volume in mL	(SS)	0.200
SAMPLE	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
3349	µg of Carbon in Sample	(C1)	107.8
	µg of Carbon in Blank	(C2)	1.7
TIC-01			
LIQUID	g of Carbon/L	=	5.31E-01
S95T002911			
TIC01			
R. KING			
11/07/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.31E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	H. Angston	Date:	11/13/95
Approved by:	Ra Schroeder	Date:	11/15/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			SAMPLE/DUP
	Sample Volume in mL	(SS)	0.200
SAMPLE/DUP	Dilution Factor	(DF)	1.000
	Digest Dilution Factor	(DDF)	1.000
3349	µg of Carbon in Sample	(C1)	108.8
	µg of Carbon in Blank	(C2)	1.7
TIC-01			
LIQUID	g of Carbon/L	=	5.36E-01
S95T002911			
TIC01			
R. KING			
11/07/95			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

µg Carbon/mL =	5.36E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	H. Knaster	Date:	11/13/95
Approved by:	Ron Schroeder	Date:	11/15/95

^P^

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 11/07/95 Time: 13:51:57

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RW KING
Min Readings = 14
Max Readings = 14
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	0.20	50.00
3	1.50	0.30	33.33
4	2.00	0.40	25.00
5	2.50	0.50	20.00
6	3.01	0.70	28.57
7	3.51	0.80	12.50
8	4.00	1.10	27.27
9	4.50	1.10	0.00
10	5.00	1.30	15.38
11	5.50	1.30	0.00
12	6.00	1.40	7.14
13	6.50	1.60	12.50
14	7.00	1.70	5.88

.200 Acid direct

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 233 TO 237.

BLANK VALUE = 1.7 micrograms carbon
BLANK FACTOR = 1.7 / 7.003845 = +2.4E-01 ug/min Carbon

Sample Run By: Rob King 11-08-95
RW KING 00000

WHC-SD-WM-DP-150, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: REAGENT BLK Date: 11/07/95 Time: 14:11:26

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2427238 ug/minute C

Analyst : RW KING
Min Readings = 14
Max Readings = 14
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.20	100.00
3	1.51	0.30	33.33
4	2.01	0.50	40.00
5	2.51	0.60	16.67
6	3.01	0.80	25.00
7	3.51	1.00	20.00
8	4.01	1.10	9.09
9	4.50	1.20	8.33
10	5.00	1.30	7.69
11	5.50	1.40	7.14
12	6.00	1.50	6.67
13	6.50	1.70	11.76
14	7.00	1.80	5.56

1 200 ml direct

BLANK VALUE = 1.7 micrograms carbon
BLANK FACTOR = 1.7 / 7.003845 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(1.8 - 1.700045)(1)/(200) = < 5.00 E-3 g/L Carbon
(1.8 - 1.700045)(1)/(200)(12) = < 4.17 E-4 Molar Carbon

Sample Run By: Rob King
RW KING 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 11/07/95 Time: 14:02:29

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2427238 ug/minute C

Analyst : RW KING
Min Readings = 14
Max Readings = 14
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	1.00	100.00
3	1.51	13.50	92.59
4	2.01	36.80	63.32
5	2.51	61.20	39.87
6	3.01	81.80	25.18
7	3.51	95.70	14.52
8	4.01	104.70	8.60
9	4.51	110.30	5.08
10	5.01	113.80	3.08
11	5.51	115.70	1.64
12	6.01	116.90	1.03
13	6.51	117.40	0.43
14	7.01	117.90	0.42

.200 ml 17N12-A direct

BLANK VALUE = 1.7 micrograms carbon
BLANK FACTOR = 1.7 / 7.003845 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(117.9 - 1.700445)(1)/(200) = +5.810E-01 g/L Carbon
(117.9 - 1.700445)(1)/(200)(12) = +4.842E-02 Molar Carbon

Sample Run By: Rob King
RW KING 00000

$\frac{0.581}{0.600} \times 100 = 96.8\%$

WHC-SD-WM-DP-150, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S95T2911 Date: 11/07/95 Time: 14:20:29

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2427238 ug/minute C

Analyst : RW KING
Min Readings = 14
Max Readings = 14
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	3.70	97.30
3	1.51	39.50	90.63
4	2.00	73.20	46.04
5	2.51	91.80	20.26
6	3.01	100.90	9.02
7	3.51	104.60	3.54
8	4.01	105.80	1.13
9	4.50	106.70	0.84
10	5.00	106.90	0.19
11	5.50	107.20	0.28
12	6.01	107.40	0.19
13	6.51	107.60	0.19
14	7.00	107.80	0.19

.200 ml sample direct

BLANK VALUE = 1.7 micrograms carbon
BLANK FACTOR = 1.7 / 7.003845 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(107.8 - 1.700237)(1)/(200) = +5.305E-01 g/L Carbon
(107.8 - 1.700237)(1)/(200)(12) = +4.421E-02 Molar Carbon

Sample Run By: Rob King
RW KING 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S95T2911-DUP Date: 11/07/95 Time: 14:29:32

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = .2427238 ug/minute C

Analyst : RW KING
Min Readings = 14
Max Readings = 14
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	29.40	99.66
3	1.51	74.80	60.70
4	2.01	95.30	21.51
5	2.51	103.40	7.83
6	3.01	106.20	2.64
7	3.51	107.10	0.84
8	4.01	107.50	0.37
9	4.51	107.90	0.37
10	5.01	108.00	0.09
11	5.51	108.20	0.18
12	6.00	108.40	0.18
13	6.50	108.50	0.09
14	7.00	108.80	0.28

.200 ml sample direct

BLANK VALUE = 1.7 micrograms carbon
BLANK FACTOR = 1.7 / 7.003845 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(108.8 - 1.7)(1)/(200) = +5.355E-01 g/L Carbon
(108.8 - 1.7)(1)/(200)(12) = +4.463E-02 Molar Carbon

Sample Run By: Rob King
RW KING 00000

THE FOLLOWING ANALYSES ARE INCLUDED IN THE DATA PACKAGE BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

LABCORE Data Entry Template for Worklist# 2921

Analyst: RAW **Instrument:** TIC01 WB39437 **Book #** 17N12-A

Method: LA-622-102 Rev/Mod C-0

Worklist Comment: AW-102, AY-102 TIC

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK				TIC-01	LIQUID	1	<5.00E00	N/A	ug/mL
		2 STD				TIC-01	LIQUID	600	581	N/A	ug/mL
95000127	AW-102 GRAB	3 SAMPLE	S95T002157	0		TIC-01	LIQUID	N/A	1.86E03	5.50E01	ug/mL
95000127	AW-102 GRAB	4 DUP	S95T002157	0		TIC-01	LIQUID	1.86E03	1.86E03	N/A	ug/mL
95000127	AW-102 GRAB	5 SPK	S95T002157	0		TIC-01	LIQUID	100	96.9	N/A	ug/mL
95000139	AY-102 GRAB	6 SAMPLE	S95T002444	0		TIC-01	LIQUID	N/A	I.S.		ug/mL
95000139	AY-102 GRAB	7 DUP	S95T002444	0		TIC-01	LIQUID	I.S.	I.S.	N/A	ug/mL

Final page for worklist # 2921

R. WENDLAND 10-18-95
Analyst Signature Date

10-20-95
Analyst Signature Date

10/23/95

DATA NOT USED IN PACKAGE

2444 — USED IN PROCESS

Data Entry Comments:
.200 + 2ml H_2O — .200 inj. for S95T002157
SPK .200 — .200 — .200
DIL SPK
~~16N12~~ 3 KW
17N12-A

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			STANDARD
Type	Sample Volume in mL	(SS)	0.200
STANDARD	Dilution Factor	(DF)	1.000
Work List	Digest Dilution Factor	(DDF)	1.000
2921	µg of Carbon in Sample	(C1)	118.9
Test Code	µg of Carbon in Blank	(C2)	2.8
TIC01			
Matrix			
LIQUID	g of Carbon/L	=	5.81E-01
Sample #			
17N12A			
Instrument Code			
WB39937			
Analyst			
R WENDLAND			
Date			
10/18/95			
Time			
08:21 AM			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

DATA NOT USED IN PACKAGE

µg Carbon/mL =	5.81E+02	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	[signature]	Date:	10/20/95
Approved by:	[signature]	Date:	10/23/95

Form 622102_C Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-150, REV. 0

TIC : LA-622-102 (C-0) LIQUIDS

			BLANK
Type	Sample Volume in mL	(SS)	0.200
BLANK	Dilution Factor	(DF)	1.000
Work List	Digest Dilution Factor	(DDF)	1.000
2921	µg of Carbon in Sample	(C1)	2 ~~2.8~~ DWB 10/23/95
Test Code	µg of Carbon in Blank	(C2)	2.8 ~~2~~ DWB 10/23/95
TIC01			
Matrix			
LIQUID	g of Carbon/L	= <	5.00E-03
Sample #			
BLANK			
Instrument Code			
WB39937			
Analyst			
R WENDLAND			
Date			
10/18/95			
Time			
08:21 AM			

g of Carbon/L = $\frac{(C1-C2) * DF * DDF}{SS * 1000}$

µg of Carbon/mL = g of Carbon/L * 1000000 µg/g / 1000 m

Detection Level (µg/mL) = $\frac{1 \mu g C * DF * DDF}{SS}$

DATA NOT USED IN PACKAGE

NOTE: Reported Result is Below Detection Level.

µg Carbon/mL =	< 5.00E+00	DETECTION LEVEL in µg/mL
		5.00E+00

Data Entry by:	[signature]	Date:	10/20/95
Approved by:	[signature]	Date:	10/23/95

Form 622102_C Rev. 1.1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

WHC-SD-WM-DP-150, REV. 0

Sample: STD *Date: 10/18/95* *Time: 07:54:32*

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = 1 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .5594775 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	9.20	97.83
3	1.51	45.10	79.60
4	2.00	79.00	42.91
5	2.50	99.70	20.76
6	3.00	110.10	9.45
7	3.50	115.30	4.51
8	4.00	117.30	1.71
9	4.50	118.40	0.93
10	5.00	118.90	0.42

DATA NOT USED IN PACKAGE

BLANK VALUE = 2.8 micrograms carbon
BLANK FACTOR = 2.8 / 5.004669 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(118.9 - 2.798975)(1)/(200) = +5.805E-01 g/L Carbon
(118.9 - 2.798975)(1)/(200)(12) = +4.838E-02 Molar Carbon

Sample Run By: RW
RA WENDLAND *00000*

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
< < < BLANK ANALYSIS > > >

WHC-SD-WM-DP-150, REV. 0

BASE
Sample: ~~BLK~~ Date: 10/18/95 Time: 07:41:42

Sample Size = 200 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : RA WENDLAND
Min Readings = 10
Max Readings = 10
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.50	60.00
3	1.50	0.90	44.44
4	2.00	1.30	30.77
5	2.50	1.70	23.53
6	3.00	1.90	10.53
7	3.51	2.20	13.64
8	4.00	2.40	8.33
9	4.50	2.70	11.11
10	5.00	2.80	3.57

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 2.8 micrograms carbon
BLANK FACTOR = 2.8 / 5.004669 = +5.6E-01 ug/min Carbon

Sample Run By: _____
RA WENDLAND 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

WHC-SD-WM-DP-150, REV. 0

Sample: ~~BASE~~ BLK *Date: 10/18/95 Time: 07:48:21*

Sample Size = 200 uL *Analyst : RA WENDLAND*
Dil Factor = 1 *Min Readings = 10*
Blank ID # = BLK *Max Readings = 10*
Blank Value = .5594775 ug/minute C *% Difference = 10*

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.30	33.33
3	1.51	0.50	40.00
4	2.01	0.70	28.57
5	2.51	1.00	30.00
6	3.01	1.20	16.67
7	3.51	1.40	14.29
8	4.01	1.60	12.50
9	4.50	1.80	11.11
10	5.00	2.00	10.00

DATA
NOT USED
IN PACKAGE

BLANK VALUE = 2.8 micrograms carbon
BLANK FACTOR = 2.8 / 5.004669 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(2 - 2.800017)(1)/(200) = < 5.00 E-3 g/L Carbon
(2 - 2.800017)(1)/(200)(12) = < 4.17 E-4 Molar Carbon
< < < < WARNING- PERCENT DIFFERENCE EXCEEDS 10 PERCENT > > > >

Sample Run By: _____
RA WENDLAND 00000

RADIOCHEMICAL ANALYSES

LABCORE Data Entry Template for Worklist# 2632

Analyst: RY RAG **Instrument:** GEA00 2 **Book#** 144B52

Method: LA-548-121 Rev/Mod D-1

Worklist Comment: GEA AY-102; use 0.100 mL sample size. -R(0), PPB

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@GEA-01	LIQUID		
2	BLNK				@GEA-01	LIQUID		
3	SAMPLE	S95T002448	0		@GEA-01	LIQUID	95000139	AY-102 GRAB
	Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E							
4	DUP	S95T002448	0		@GEA-01	LIQUID		
5	SAMPLE	S95T002449	0		@GEA-01	LIQUID	95000139	AY-102 GRAB
	Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E							
6	DUP	S95T002449	0		@GEA-01	LIQUID		
7	SAMPLE	S95T002471	0		@GEA-01	LIQUID	95000140	AY-102 GRAB
	Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E							
8	DUP	S95T002471	0		@GEA-01	LIQUID		
9	SAMPLE	S95T002472	0		@GEA-01	LIQUID	95000140	AY-102 GRAB
	Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E							
10	DUP	S95T002472	0		@GEA-01	LIQUID		

Final page for worklist # 2632

Rae Ann Green 10-2-95
Analyst Signature **Date**

N. Ojima 10/3/95
Analyst Signature **Date**
Sue Hogan 10/6/95

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 16:36:14.88                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               WRKLST2632-STD
Sample Size:             1.00000E-03 L
Dilution Factor:         1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2
File Number:             NI3AF:1.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:07.68 sec
Dead Time:               0.3%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 08:28:20.65
Decayed to:              2-OCT-1995 08:28:20.65
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Removed by: Raymond

Verified by: B Bachelor 10/3/95

Post-NID Peak Search Report

T	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.40*	18451	1.51	1322.82	1314	16	1.6		CS-137	25.6
0	1172.85	11088	1.84	2345.75	2336	20	2.1		CO-60	21.8
0	1332.05	9986	1.93	2664.26	2654	20	2.1		CO-60	21.7

Sample ID : WRKLST2632-STD Acquisition date : 2-OCT-1995 08:28:20

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.000	2.176E+01	2.176E+01	0.032E+01	1.47	
CS-137	30.00Y	1.000	2.560E+01	2.560E+01	0.042E+01	1.65	
		Total Activity :	4.736E+01	4.736E+01			
		Grand Total Activity :	**4.736E+01**	**4.736E+01**			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WRKLST2632-STD Acquisition date : 2-OCT-1995 08:28:20

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
7	968.	477.59	1.2621E+00
NA-22	74.	1274.53	8.4187E-02
NA-24	17.	1368.55	4.3027E-02
K-40	124.	1460.75	1.1371E+00
SC-46	419.	1120.55	1.7903E-01
CR-51	1004.	320.08	9.5892E-01
MN-54	557.	834.83	1.5801E-01
CO-56	574.	846.76	1.6253E-01
CO-57	1169.	122.06	7.6454E-02
CO-58	543.	810.78	1.5314E-01
FE-59	573.	1099.25	3.6420E-01
ZN-65	507.	1115.55	3.8699E-01
SE-75	1194.	264.66	1.5784E-01
KR-85	666.	514.00	2.6584E+01
SR-85	666.	514.01	1.2019E-01
Y-88	8.	1836.06	3.7259E-02
Y-90	10.	1760.70	1.3904E-01
Y-91	169.	1204.67	4.0413E+01
NB-94	636.	871.09	1.7513E-01
NB-95	459.	765.78	1.3361E-01
ZR-95	506.	756.73	2.5435E-01
RU-103	735.	497.08	1.2948E-01
RURH-106	523.	621.93	2.4090E+00
AG-108m	421.	722.94	1.3395E-01
CD-109	987.	88.03	2.4118E+00
AG-110M	1147.	657.76	1.9590E-01
SN-113	941.	391.69	1.6884E-01
123m	1180.	159.00	7.6867E-02
SB-124	556.	602.73	1.2281E-01
SB-125	1005.	427.89	4.0943E-01
TE-125m	1059.	109.27	2.4119E+01
I-129	965.	39.60	0.0000E+00
I-131	954.	364.48	1.2733E-01
XE-131m	1153.	163.93	3.2977E+00
BA-133	945.	356.02	1.6286E-01
CS-134	543.	604.70	1.2188E-01
CS-136	510.	818.51	1.4930E-01
CS-138	12.	1435.86	7.8605E-02
CE-139	1138.	165.85	8.0731E-02
BA-140	572.	537.31	4.5526E-01
LA-140	13.	1596.21	4.5284E-02
CE-141	1093.	145.44	1.2650E-01
CE-144	1175.	133.51	5.7335E-01
CEPR-144	1175.	133.51	1.1456E+00
EU-152	18.	1408.01	2.1614E-01
EU-154	75.	1274.51	2.4485E-01
EU-155	1017.	86.54	2.7736E-01
HF-181	881.	482.18	1.5616E-01
TA-182	982.	67.75	3.7756E-01
HG-203	1111.	279.20	1.1326E-01
BI-207	506.	569.70	1.1193E-01

Sample ID : WRKLST2632-STD Acquisition date : 2-OCT-1995 08:28:20

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
[illegible]208	1110.	277.36	1.4552E+00
PB-210	944.	46.50	0.0000E+00
BI-212	458.	727.18	1.9160E+00
PB-212	1296.	238.63	2.0541E-01
BI-214	570.	609.31	2.7384E-01
PB-214	1023.	351.92	5.2004E-01
RA-224	1310.	240.99	2.2924E+00
RA-226	1324.	186.10	2.1230E+00
AC-228	722.	911.21	7.2922E-01
TH-228	1003.	84.37	7.4679E+00
TH-229	992.	88.47	3.5046E-01
U-232	954.	57.78	1.3909E+02
PA-233	1019.	312.17	2.4774E-01
PA-234M	587.	1001.03	3.2350E-01
TH-234	943.	63.29	4.2180E+00
U-235	1321.	185.71	1.2885E-01
NP-237	1020.	86.48	7.3592E-01
U-237	979.	59.54	7.1326E-01
NP-238	575.	984.45	6.7301E-01
NP-239	1043.	106.12	3.0507E-01
PU-239	1175.	129.30	1.0007E+03
AM-241	979.	59.54	6.8417E-01
AM-243	1013.	74.67	2.0394E-01

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 10:10:42.22                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               WORKLIST#2132BLK
Sample Size:             1.00000E-03 L
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2
File Number:             dka300:[spec.GEA2]2g2126.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:00.48 sec
Dead Time:               0.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 09:19:50.06
Decayed to:              2-OCT-1995 09:19:50.06
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Removed by: A Johnson

Verified by: B Bachelor 10/3/95

Post-NID Peak Search Report

	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	609.14*	18	1.40	1218.32	1215	10	88.4			
0	1123.06	38	9.68	2246.16	2232	31	53.5			
0	1460.53*	14	2.26	2921.32	2911	22	163.8		K-40	3.02

Sample ID : WORKLIST#212BLK Acquisition date : 2-OCT-1995 09:19:50

Total number of lines in spectrum	3	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	2	66.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
~~K-40~~	~~1.28E+09Y~~	~~1.000~~	~~3.022E+00~~	~~3.022E+00~~	~~4.951E+00~~	~~163.81~~	BKG
			---	---			
	Total Activity :		3.022E+00	3.022E+00			
	Grand Total Activity :		3.022E+00	3.022E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WORKLIST#212BLK Acquisition date : 2-OCT-1995 09:19:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
7	24.	477.59	2.0043E+00
NA-22	9.	1274.53	2.9556E-01
NA-24	3.	1368.55	1.8247E-01
SC-46	23.	1120.55	4.1852E-01
CR-51	54.	320.08	2.2164E+00
MN-54	14.	834.83	2.5062E-01
CO-56	16.	846.76	2.7148E-01
CO-57	67.	122.06	1.8275E-01
CO-58	13.	810.78	2.3566E-01
FE-59	12.	1099.25	5.3591E-01
CO-60	13.	1332.50	3.6548E-01*
ZN-65	13.	1115.55	6.1524E-01
SE-75	57.	264.66	3.4431E-01
KR-85	39.	514.00	6.4516E+01
SR-85	39.	514.01	2.9136E-01
Y-88	2.	1836.06	2.0136E-01
Y-90	6.	1760.70	1.0676E+00
Y-91	15.	1204.67	1.1980E+02
NB-94	14.	871.09	2.5991E-01
NB-95	19.	765.78	2.7062E-01
ZR-95	15.	756.73	4.3213E-01
RU-103	30.	497.08	2.5968E-01
RURH-106	19.	621.93	4.6175E+00
AG-108m	18.	722.94	2.7566E-01
CD-109	82.	88.03	6.9693E+00
AG-110M	25.	657.76	2.8683E-01
SN-113	47.	391.69	3.7769E-01
123m	66.	159.00	1.8185E-01
SB-124	26.	602.73	2.6775E-01
SB-125	33.	427.89	7.4553E-01
TE-125m	81.	109.27	6.6754E+01
I-129	74.	39.60	0.0000E+00
I-131	47.	364.48	2.8117E-01
XE-131m	75.	163.93	8.3856E+00
BA-133	36.	356.02	3.1731E-01
CS-134	23.	604.70	2.4894E-01
CS-136	21.	818.51	3.0189E-01
CS-137	105.	661.66	6.6025E-01*
CS-138	5.	1435.86	4.9686E-01
CE-139	75.	165.85	2.0726E-01
BA-140	26.	537.31	9.6423E-01
LA-140	2.	1596.21	1.7446E-01
CE-141	61.	145.44	2.9838E-01
CE-144	73.	133.51	1.4289E+00
CEPR-144	73.	133.51	2.8551E+00
EU-152	5.	1408.01	1.1326E+00
EU-154	9.	1274.51	8.6243E-01
EU-155	79.	86.54	7.7520E-01
HF-181	28.	482.18	2.7880E-01
TA-182	71.	67.75	1.0182E+00
HG-203	67.	279.20	2.7730E-01

µCi/ml

Co60 < 3.6548 E-4

Cs137 < 6.6025 E-4

Sample ID : WORKLIST#212BLK Acquisition date : 2-OCT-1995 09:19:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
207	25.	569.70	2.4908E-01
TL-208	54.	277.36	3.1954E+00
PB-210	68.	46.50	0.0000E+00
BI-212	17.	727.18	3.6780E+00
PB-212	94.	238.63	5.5419E-01
BI-214	45.	609.31	7.6719E-01
PB-214	71.	351.92	1.3728E+00
RA-224	86.	240.99	5.8683E+00
RA-226	70.	186.10	4.8922E+00
AC-228	30.	911.21	1.4912E+00
TH-228	62.	84.37	1.8615E+01
TH-229	76.	88.47	9.6875E-01
U-232	67.	57.78	3.6980E+02
PA-233	61.	312.17	6.0551E-01
PA-234M	11.	1001.03	4.3655E-01
TH-234	55.	63.29	1.0215E+01
U-235	72.	185.71	3.0115E-01
NP-237	81.	86.48	2.0718E+00
U-237	62.	59.54	1.7997E+00
NP-238	19.	984.45	1.2181E+00
NP-239	81.	106.12	8.4915E-01
PU-239	72.	129.30	2.4812E+03
AM-241	62.	59.54	1.7263E+00
AM-243	78.	74.67	5.6697E-01

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 11:10:48.35                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2448-SAM
Sample Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2
File Number:             dka300:[spec.GEA2]2g2127.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.61 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 10:19:17.14
Decayed to:              2-OCT-1995 10:19:17.14
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
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Removed by: [signature]

Verified by: [signature] 10/3/95

Post-NID Peak Search Report

T	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.38*	219770	1.52	1322.77	1314	18	0.4		CS-137	3.050E+03
0	795.57	42	1.63	1591.13	1588	9	57.8			

Sample ID : S95T2448-SAM Acquisition date : 2-OCT-1995 10:19:17

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/LI	Wtd Mean Decay Corr uCi/LI	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.050E+03	3.050E+03	0.013E+03	0.44	
		Total Activity :	3.050E+03	3.050E+03			
		Grand Total Activity :	3.050E+03	3.050E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

µCi/ml

Co-60 <3.6163 E-4

Cs-137 3.050 E0

WHC-SD-WM-DP-150, REV. 0

Sample JD : S95T2448-SAM Acquisition date : 2-OCT-1995 10:19:17

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
7	6723.	477.59	3.3259E+01
NA-22	19.	1274.53	4.2502E-01
NA-24	8.	1368.55	2.8925E-01
K-40	94.	1460.75	9.8918E+00
SC-46	18.	1120.55	3.6910E-01
CR-51	5712.	320.08	2.2872E+01
MN-54	49.	834.83	4.6772E-01
CO-56	39.	846.76	4.2362E-01
CO-57	6296.	122.06	1.7743E+00
CO-58	44.	810.78	4.3783E-01
FE-59	29.	1099.25	8.1856E-01
CO-60	13.	1332.50	3.6163E-01
ZN-65	16.	1115.55	6.9115E-01
SE-75	6346.	264.66	3.6389E+00
KR-85	3534.	514.00	6.1251E+02
SR-85	3534.	514.01	2.7695E+00
Y-88	3.	1836.06	2.2817E-01
Y-90	3.	1760.70	7.7147E-01
Y-91	16.	1204.67	1.2431E+02
NB-94	50.	871.09	4.9078E-01
NB-95	64.	765.78	4.9728E-01
ZR-95	43.	756.73	7.4411E-01
RU-103	4374.	497.08	3.1596E+00
RURH-106	1493.	621.93	4.0700E+01
AG-108m	84.	722.94	5.9682E-01
CD-109	5708.	88.03	5.8005E+01
AG-110M	9024.	657.76	5.4947E+00
113	6194.	391.69	4.3312E+00
TE-123m	6559.	159.00	1.8120E+00
SB-124	1576.	602.73	2.0675E+00
SB-125	7113.	427.89	1.0892E+01
TE-125m	5924.	109.27	5.7046E+02
I-129	5260.	39.60	0.0000E+00
I-131	5775.	364.48	3.1326E+00
XE-131m	6545.	163.93	7.8567E+01
BA-133	5714.	356.02	4.0057E+00
CS-134	1572.	604.70	2.0748E+00
CS-136	57.	818.51	4.9990E-01
CS-138	8.	1435.86	6.6488E-01
CE-139	6427.	165.85	1.9183E+00
BA-140	2532.	537.31	9.5810E+00
LA-140	5.	1596.21	2.7587E-01
CE-141	6536.	145.44	3.0931E+00
CE-144	6530.	133.51	1.3514E+01
CEPR-144	6529.	133.51	2.7004E+01
EU-152	13.	1408.01	1.8263E+00
EU-154	19.	1274.51	1.2361E+00
EU-155	5729.	86.54	6.5840E+00
HF-181	5535.	482.18	3.9132E+00
TA-182	5300.	67.75	8.7699E+00
HG-203	6030.	279.20	2.6392E+00

Sample ID : S95T2448-SAM Acquisition date : 2-OCT-1995 10:19:17

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
207	1666.	569.70	2.0310E+00
TL-208	6101.	277.36	3.4113E+01
PB-210	5166.	46.50	0.0000E+00
BI-212	79.	727.18	7.9741E+00
PB-212	7304.	238.63	4.8768E+00
BI-214	1546.	609.31	4.5097E+00
PB-214	5830.	351.92	1.2461E+01
RA-224	7157.	240.99	5.3577E+01
RA-226	8274.	186.10	5.3063E+01
AC-228	42.	911.21	1.7627E+00
TH-228	5614.	84.37	1.7665E+02
TH-229	5687.	88.47	8.3930E+00
U-232	5250.	57.78	3.2635E+03
PA-233	5764.	312.17	5.8914E+00
PA-234M	28.	1001.03	7.1101E-01
TH-234	5153.	63.29	9.8584E+01
U-235	8213.	185.71	3.2133E+00
NP-237	5735.	86.48	1.7447E+01
U-237	5252.	59.54	1.6519E+01
NP-238	19.	984.45	1.2193E+00
NP-239	5933.	106.12	7.2770E+00
PU-239	6227.	129.30	2.3040E+04
AM-241	5252.	59.54	1.5845E+01
AM-243	5563.	74.67	4.7791E+00

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 12:05:39.41                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2448-DUP
   ple Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2
File Number:             dka300:[spec.GEA2]2g2128.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.84 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 11:14:09.62
Decayed to:              2-OCT-1995 11:14:09.62
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
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Removed by:

Verified by:

D Machelor 10/3/95

Post-NID Peak Search Report

*	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.36*	220728	1.52	1322.75	1314	17	0.4		CS-137	3.063E+03
0	1092.67	23	4.39	2185.36	2180	12	72.5			

Sample ID : S95T2448-DUP Acquisition date : 2-OCT-1995 11:14:09

Total number of lines in spectrum	2	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	1	50.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/LI	Wtd Mean Decay Corr uCi/LI	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.063E+03	3.063E+03	0.013E+03	0.44	
		Total Activity :	3.063E+03	3.063E+03			
		Grand Total Activity :	3.063E+03	3.063E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

µCi/ml

Co-60 < 3.1996 E-4

Cs-137 3.063 E ∅

WHC-SD-WM-DP-150, REV. 0

Sample ID : S95T2448-DUP Acquisition date : 2-OCT-1995 11:14:09

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
7	6893.	477.59	3.3677E+01
NA-22	22.	1274.53	4.6106E-01
NA-24	10.	1368.55	3.2538E-01
K-40	118.	1460.75	1.1102E+01
SC-46	27.	1120.55	4.5475E-01
CR-51	5710.	320.08	2.2868E+01
MN-54	60.	834.83	5.1786E-01
CO-56	57.	846.76	5.1179E-01
CO-57	6419.	122.06	1.7915E+00
CO-58	59.	810.78	5.0570E-01
FE-59	17.	1099.25	6.3306E-01
CO-60	10.	1332.50	3.1996E-01
ZN-65	33.	1115.55	9.8436E-01
SE-75	6429.	264.66	3.6627E+00
KR-85	3574.	514.00	6.1596E+02
SR-85	3573.	514.01	2.7849E+00
Y-88	6.	1836.06	3.2268E-01
Y-90	8.	1760.70	1.2549E+00
Y-91	12.	1204.67	1.0808E+02
NB-94	41.	871.09	4.4480E-01
NB-95	59.	765.78	4.7996E-01
ZR-95	63.	756.73	8.9693E-01
RU-103	4315.	497.08	3.1384E+00
RURH-106	1475.	621.93	4.0456E+01
AG-108m	63.	722.94	5.1682E-01
CD-109	5752.	88.03	5.8231E+01
AG-110M	9443.	657.76	5.6208E+00
113	6285.	391.69	4.3626E+00
TE-123m	6476.	159.00	1.8006E+00
SB-124	1645.	602.73	2.1127E+00
SB-125	7214.	427.89	1.0969E+01
TE-125m	6042.	109.27	5.7613E+02
I-129	5366.	39.60	0.0000E+00
I-131	5919.	364.48	3.1714E+00
XE-131m	6432.	163.93	7.7891E+01
BA-133	5857.	356.02	4.0557E+00
CS-134	1646.	604.70	2.1230E+00
CS-136	54.	818.51	4.8716E-01
CS-138	4.	1435.86	4.7854E-01
CE-139	6550.	165.85	1.9365E+00
BA-140	2646.	537.31	9.7955E+00
LA-140	3.	1596.21	2.0289E-01
CE-141	6591.	145.44	3.1059E+00
CE-144	6632.	133.51	1.3620E+01
CEPR-144	6632.	133.51	2.7216E+01
EU-152	9.	1408.01	1.4858E+00
EU-154	22.	1274.51	1.3383E+00
EU-155	5747.	86.54	6.5940E+00
HF-181	5564.	482.18	3.9233E+00
TA-182	5367.	67.75	8.8252E+00
HG-203	6228.	279.20	2.6822E+00

Sample ID : S95T2448-DUP Acquisition date : 2-OCT-1995 11:14:09

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
207	1773.	569.70	2.0951E+00
TL-208	6227.	277.36	3.4462E+01
PB-210	5315.	46.50	0.0000E+00
BI-212	82.	727.18	8.1310E+00
PB-212	7197.	238.63	4.8408E+00
BI-214	1492.	609.31	4.4305E+00
PB-214	5650.	351.92	1.2268E+01
RA-224	7244.	240.99	5.3902E+01
RA-226	8409.	186.10	5.3493E+01
AC-228	54.	911.21	1.9908E+00
TH-228	5515.	84.37	1.7508E+02
TH-229	5744.	88.47	8.4352E+00
U-232	5270.	57.78	3.2698E+03
PA-233	5662.	312.17	5.8393E+00
PA-234M	28.	1001.03	7.0380E-01
TH-234	5209.	63.29	9.9120E+01
U-235	8358.	185.71	3.2416E+00
NP-237	5734.	86.48	1.7446E+01
U-237	5304.	59.54	1.6600E+01
NP-238	32.	984.45	1.5855E+00
NP-239	5913.	106.12	7.2646E+00
PU-239	6537.	129.30	2.3606E+04
AM-241	5304.	59.54	1.5923E+01
AM-243	5400.	74.67	4.7084E+00

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 13:19:44.36                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2449-SAM
   ple Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2
File Number:             dka300:[spec.GEA2]2g2129.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.92 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 12:28:34.49
Decayed to:              2-OCT-1995 12:28:34.49
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:      21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:  21-MAR-1994 09:43:42.61
*****************************************************************************
```

Removed by:

Verified by:

B J Machelor 10/3/95

Post-NID Peak Search Report

T	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.37*	222005	1.51	1322.75	1314	18	0.4		CS-137	3.081E+03
0	794.96	72	0.61	1589.90	1583	15	49.6			
0	1332.39	15	0.73	2664.93	2656	19	114.7			

Sample ID : S95T2449-SAM
Acquisition date : 2-OCT-1995 12:28:34

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/LI	Wtd Mean Decay Corr uCi/LI	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.081E+03	3.081E+03	0.013E+03	0.44	
		Total Activity :	3.081E+03	3.081E+03			
		Grand Total Activity :	3.081E+03	3.081E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Co-60 < 4.2276 E-4

Cs 137 3.081 E0

Sample ID : S95T2449-SAM Acquisition date : 2-OCT-1995 12:28:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
7	6947.	477.59	3.3807E+01
NA-22	11.	1274.53	3.2183E-01
NA-24	11.	1368.55	3.4947E-01
K-40	90.	1460.75	9.6577E+00
SC-46	28.	1120.55	4.6371E-01
CR-51	5931.	320.08	2.3305E+01
MN-54	46.	834.83	4.5540E-01
CO-56	38.	846.76	4.1828E-01
CO-57	6400.	122.06	1.7889E+00
CO-58	38.	810.78	4.0729E-01
FE-59	27.	1099.25	7.8980E-01
CO-60	17.	1332.50	4.2276E-01
ZN-65	21.	1115.55	7.8197E-01
SE-75	6396.	264.66	3.6533E+00
KR-85	3606.	514.00	6.1871E+02
SR-85	3605.	514.01	2.7974E+00
Y-88	1.	1836.06	1.3173E-01
Y-90	4.	1760.70	9.1196E-01
Y-91	20.	1204.67	1.3936E+02
NB-94	45.	871.09	4.6727E-01
NB-95	51.	765.78	4.4756E-01
ZR-95	54.	756.73	8.3176E-01
RU-103	4326.	497.08	3.1424E+00
RURH-106	1490.	621.93	4.0658E+01
AG-108m	66.	722.94	5.3003E-01
CD-109	5560.	88.03	5.7250E+01
A 110M	9455.	657.76	5.6242E+00
113	6401.	391.69	4.4029E+00
TE-123m	6582.	159.00	1.8152E+00
SB-124	1630.	602.73	2.1028E+00
SB-125	7311.	427.89	1.1042E+01
TE-125m	5938.	109.27	5.7113E+02
I-129	5415.	39.60	0.0000E+00
I-131	5872.	364.48	3.1590E+00
XE-131m	6604.	163.93	7.8920E+01
BA-133	5809.	356.02	4.0391E+00
CS-134	1600.	604.70	2.0932E+00
CS-136	39.	818.51	4.1069E-01
CS-138	4.	1435.86	4.7854E-01
CE-139	6486.	165.85	1.9270E+00
BA-140	2561.	537.31	9.6366E+00
LA-140	2.	1596.21	1.6107E-01
CE-141	6615.	145.44	3.1116E+00
CE-144	6525.	133.51	1.3509E+01
CEPR-144	6525.	133.51	2.6995E+01
EU-152	8.	1408.01	1.4327E+00
EU-154	11.	1274.51	9.3157E-01
EU-155	5536.	86.54	6.4720E+00
HF-181	5580.	482.18	3.9288E+00
TA-182	5238.	67.75	8.7186E+00
HG-203	6107.	279.20	2.6560E+00

Sample ID : S95T2449-SAM Acquisition date : 2-OCT-1995 12:28:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
207	1676.	569.70	2.0371E+00
TL-208	6109.	277.36	3.4134E+01
PB-210	5229.	46.50	0.0000E+00
BI-212	68.	727.18	7.3682E+00
PB-212	7272.	238.63	4.8662E+00
BI-214	1604.	609.31	4.5938E+00
PB-214	5871.	351.92	1.2506E+01
RA-224	7151.	240.99	5.3555E+01
RA-226	8388.	186.10	5.3426E+01
AC-228	41.	911.21	1.7340E+00
TH-228	5443.	84.37	1.7393E+02
TH-229	5569.	88.47	8.3052E+00
U-232	5359.	57.78	3.2974E+03
PA-233	5820.	312.17	5.9200E+00
PA-234M	25.	1001.03	6.6505E-01
TH-234	5159.	63.29	9.8638E+01
U-235	8334.	185.71	3.2369E+00
NP-237	5538.	86.48	1.7145E+01
U-237	5334.	59.54	1.6648E+01
NP-238	29.	984.45	1.5241E+00
NP-239	5831.	106.12	7.2142E+00
PU-239	6467.	129.30	2.3480E+04
AM-241	5334.	59.54	1.5968E+01
AM-243	5415.	74.67	4.7151E+00

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-OCT-1995 14:20:49.11                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2449-DUP                    Removed by:
   ple Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2                            Verified by:
File Number:             dka300:[spec.GEA2]2g2130.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:30.58 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       2-OCT-1995 13:29:41.37
Decayed to:              2-OCT-1995 13:29:41.37
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Post-NID Peak Search Report

T	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.36*	227779	1.52	1322.74	1314	17	0.4		CS-137	3.161E+03
0	1236.90	15	1.66	2473.89	2470	10	97.1			

Sample ID : S95T2449-DUP Acquisition date : 2-OCT-1995 13:29:41

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/LI	Wtd Mean Decay Corr uCi/LI	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.161E+03	3.161E+03	0.014E+03	0.43	
		Total Activity :	3.161E+03	3.161E+03			
		Grand Total Activity :	3.161E+03	3.161E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

µCi/ml

Co-60 < 2.6860 E-4

Cs137 3.161 E0

Sample ID : S95T2449-DUP Acquisition date : 2-OCT-1995 13:29:41

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
7	7069.	477.59	3.4104E+01
NA-22	13.	1274.53	3.5074E-01
NA-24	3.	1368.55	1.8153E-01
K-40	105.	1460.75	1.0478E+01
SC-46	24.	1120.55	4.3096E-01
CR-51	5916.	320.08	2.3275E+01
MN-54	61.	834.83	5.2514E-01
CO-56	58.	846.76	5.1661E-01
CO-57	6468.	122.06	1.7984E+00
CO-58	51.	810.78	4.6704E-01
FE-59	23.	1099.25	7.3510E-01
CO-60	7.	1332.50	2.6860E-01
ZN-65	21.	1115.55	7.9473E-01
SE-75	6691.	264.66	3.7367E+00
KR-85	3650.	514.00	6.2248E+02
SR-85	3649.	514.01	2.8144E+00
Y-88	4.	1836.06	2.5230E-01
Y-90	4.	1760.70	9.4388E-01
Y-91	14.	1204.67	1.1510E+02
NB-94	28.	871.09	3.6813E-01
NB-95	74.	765.78	5.3845E-01
ZR-95	67.	756.73	9.2636E-01
RU-103	4402.	497.08	3.1698E+00
RURH-106	1501.	621.93	4.0811E+01
AG-108m	87.	722.94	6.1043E-01
CD-109	5717.	88.03	5.8050E+01
AG-110M	9695.	657.76	5.6954E+00
113	6413.	391.69	4.4069E+00
TE-123m	6578.	159.00	1.8146E+00
SB-124	1594.	602.73	2.0795E+00
SB-125	7532.	427.89	1.1208E+01
TE-125m	5930.	109.27	5.7076E+02
I-129	5533.	39.60	0.0000E+00
I-131	5994.	364.48	3.1916E+00
XE-131m	6742.	163.93	7.9745E+01
BA-133	5962.	356.02	4.0917E+00
CS-134	1605.	604.70	2.0959E+00
CS-136	62.	818.51	5.1997E-01
CS-138	1.	1435.86	2.3084E-01
CE-139	6673.	165.85	1.9547E+00
BA-140	2702.	537.31	9.8973E+00
LA-140	2.	1596.21	1.7447E-01
CE-141	6660.	145.44	3.1223E+00
CE-144	6623.	133.51	1.3610E+01
CEPR-144	6622.	133.51	2.7195E+01
EU-152	9.	1408.01	1.4803E+00
EU-154	13.	1274.51	1.0221E+00
EU-155	5568.	86.54	6.4909E+00
HF-181	5641.	482.18	3.9503E+00
TA-182	5414.	67.75	8.8639E+00
HG-203	6290.	279.20	2.6956E+00

Sample ID : S95T2449-DUP Acquisition date : 2-OCT-1995 13:29:41

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
207	1654.	569.70	2.0236E+00
TL-208	6242.	277.36	3.4504E+01
PB-210	5409.	46.50	0.0000E+00
BI-212	84.	727.18	8.2041E+00
PB-212	7334.	238.63	4.8867E+00
BI-214	1648.	609.31	4.6557E+00
PB-214	5953.	351.92	1.2595E+01
RA-224	7269.	240.99	5.3995E+01
RA-226	8454.	186.10	5.3636E+01
AC-228	47.	911.21	1.8684E+00
TH-228	5627.	84.37	1.7684E+02
TH-229	5676.	88.47	8.3847E+00
U-232	5360.	57.78	3.2976E+03
PA-233	5950.	312.17	5.9855E+00
PA-234M	23.	1001.03	6.3892E-01
TH-234	5323.	63.29	1.0020E+02
U-235	8341.	185.71	3.2383E+00
NP-237	5571.	86.48	1.7195E+01
U-237	5345.	59.54	1.6665E+01
NP-238	24.	984.45	1.3612E+00
NP-239	5972.	106.12	7.3007E+00
PU-239	6595.	129.30	2.3710E+04
AM-241	5345.	59.54	1.5985E+01
AM-243	5399.	74.67	4.7081E+00

```
*****************************************************************************
* 222-S Laboratory Counting Room    5-OCT-1995 14:33:23.68                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2471-SAM                    Removed by:
Sample Size:             1.00000E-03 L
Dilution Factor:         1.00000E+01                     Em Baela

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2                            Verified by:
File Number:             dka300:[spec.GEA2]2g2160.cnf
Geometry:                42                              RBrachelor 10/6/95
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:28.29 sec
Dead Time:               0.9%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       5-OCT-1995 13:42:15.43
Decayed to:              5-OCT-1995 13:42:15.43
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 CJO
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Post-NID Peak Search Report

I	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.38*	209372	1.51	1322.78	1314	17	0.4		CS-137	2.906E+03

Sample ID : S95T2471-SAM Acquisition date : 5-OCT-1995 13:42:15

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	2.906E+03	2.906E+03	0.013E+03	0.45	
		Total Activity :	2.906E+03	2.906E+03			
		Grand Total Activity :	2.906E+03	2.906E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T2471-SAM Acquisition date : 5-OCT-1995 13:42:15

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
[illegible]	6503.	477.59	3.2710E+01
N[illegible] 22	17.	1274.53	4.0197E-01
NA-24	3.	1368.55	1.8250E-01
K-40	104.	1460.75	1.0405E+01
SC-46	26.	1120.55	4.5014E-01
CR-51	5506.	320.08	2.2456E+01
MN-54	36.	834.83	4.0429E-01
CO-56	46.	846.76	4.6001E-01
CO-57	6224.	122.06	1.7640E+00
CO-58	45.	810.78	4.3839E-01
FE-59	18.	1099.25	6.4769E-01
CO-60	10.	1332.50	3.2572E-01
ZN-65	19.	1115.55	7.4473E-01
SE-75	6083.	264.66	3.5628E+00
KR-85	3390.	514.00	5.9988E+02
SR-85	3389.	514.01	2.7124E+00
Y-88	7.	1836.06	3.5681E-01
Y-90	4.	1760.70	8.9081E-01
Y-91	13.	1204.67	1.1246E+02
NB-94	36.	871.09	4.1675E-01
NB-95	48.	765.78	4.3193E-01
ZR-95	51.	756.73	8.0445E-01
RU-103	4132.	497.08	3.0709E+00
RURH-106	1370.	621.93	3.8983E+01
AG-108m	67.	722.94	5.3403E-01
CD-109	5280.	88.03	5.5788E+01
A[illegible]-110M	8476.	657.76	5.3250E+00
[illegible] .13	6031.	391.69	4.2738E+00
TE-123m	6168.	159.00	1.7572E+00
SB-124	1484.	602.73	2.0064E+00
SB-125	6859.	427.89	1.0696E+01
TE-125m	5613.	109.27	5.5531E+02
I-129	5006.	39.60	0.0000E+00
I-131	5593.	364.48	3.0828E+00
XE-131m	6075.	163.93	7.5697E+01
BA-133	5464.	356.02	3.9171E+00
CS-134	1514.	604.70	2.0361E+00
CS-136	51.	818.51	4.7445E-01
CS-138	9.	1435.86	7.0657E-01
CE-139	6169.	165.85	1.8794E+00
BA-140	2445.	537.31	9.4147E+00
LA-140	6.	1596.21	2.9466E-01
CE-141	6053.	145.44	2.9764E+00
CE-144	6073.	133.51	1.3033E+01
CEPR-144	6073.	133.51	2.6043E+01
EU-152	7.	1408.01	1.3017E+00
EU-154	17.	1274.51	1.1692E+00
EU-155	5264.	86.54	6.3109E+00
HF-181	5288.	482.18	3.8248E+00
TA-182	4903.	67.75	8.4348E+00
HG-203	5848.	279.20	2.5991E+00

Sample ID : S95T2471-SAM Acquisition date : 5-OCT-1995 13:42:15

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
I 207	1657.	569.70	2.0256E+00
TL-208	5966.	277.36	3.3732E+01
PB-210	5029.	46.50	0.0000E+00
BI-212	65.	727.18	7.2421E+00
PB-212	7055.	238.63	4.7929E+00
BI-214	1544.	609.31	4.5070E+00
PB-214	5622.	351.92	1.2235E+01
RA-224	6860.	240.99	5.2455E+01
RA-226	7852.	186.10	5.1693E+01
AC-228	44.	911.21	1.7921E+00
TH-228	5304.	84.37	1.7170E+02
TH-229	5284.	88.47	8.0905E+00
U-232	4938.	57.78	3.1651E+03
PA-233	5563.	312.17	5.7877E+00
PA-234M	31.	1001.03	7.3946E-01
TH-234	4878.	63.29	9.5916E+01
U-235	7775.	185.71	3.1265E+00
NP-237	5271.	86.48	1.6727E+01
U-237	4927.	59.54	1.6000E+01
NP-238	28.	984.45	1.4808E+00
NP-239	5531.	106.12	7.0261E+00
PU-239	6175.	129.30	2.2943E+04
AM-241	4927.	59.54	1.5347E+01
AM-243	5218.	74.67	4.6283E+00

```
*****************************************************************************
* 222-S Laboratory Counting Room    5-OCT-1995 15:39:54.97                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2471-DUP                    Removed by:
Sample Size:             1.00000E-03 L
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2                            Verified by:
File Number:             dka300:[spec.GEA2]2g2162.cnt
Geometry:                42                              Machelor 10/6/95
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.59 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       5-OCT-1995 14:48:45.58
Decayed to:              5-OCT-1995 14:48:45.58
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 CJO
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Post-NID Peak Search Report

I	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.38*	219290	1.51	1322.78	1314	17	0.4		CS-137	3.043E+03
0	796.17	68	1.46	1592.34	1587	12	48.3			
0	1069.32	18	1.31	2138.66	2136	6	56.4			

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Sample ID : S95T2471-DUP Acquisition date : 5-OCT-1995 14:48:45

Total number of lines in spectrum	3	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	2	66.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.043E+03	3.043E+03	0.013E+03	0.44	
		Total Activity :	3.043E+03	3.043E+03			
		Grand Total Activity :	3.043E+03	3.043E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T2471-DUP Acquisition date : 5-OCT-1995 14:48:45

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
I [illegible]	6831.	477.59	3.3525E+01
NA 22	16.	1274.53	3.8994E-01
NA-24	10.	1368.55	3.3267E-01
K-40	111.	1460.75	1.0759E+01
SC-46	28.	1120.55	4.5927E-01
CR-51	5760.	320.08	2.2966E+01
MN-54	51.	834.83	4.7891E-01
CO-56	46.	846.76	4.5999E-01
CO-57	6244.	122.06	1.7669E+00
CO-58	41.	810.78	4.1915E-01
FE-59	15.	1099.25	5.8015E-01
CO-60	10.	1332.50	3.1996E-01
ZN-65	22.	1115.55	8.1246E-01
SE-75	6380.	264.66	3.6488E+00
KR-85	3489.	514.00	6.0860E+02
SR-85	3489.	514.01	2.7519E+00
Y-88	1.	1836.06	1.3173E-01
Y-90	4.	1760.70	8.6199E-01
Y-91	13.	1204.67	1.1320E+02
NB-94	33.	871.09	4.0004E-01
NB-95	50.	765.78	4.4329E-01
ZR-95	57.	756.73	8.5078E-01
RU-103	4301.	497.08	3.1331E+00
RURH-106	1486.	621.93	4.0606E+01
AG-108m	64.	722.94	5.2225E-01
CD-109	5664.	88.03	5.7781E+01
AG-110M	8996.	657.76	5.4861E+00
[illegible] 13	6133.	391.69	4.3097E+00
TE-123m	6398.	159.00	1.7896E+00
SB-124	1598.	602.73	2.0822E+00
SB-125	7317.	427.89	1.1047E+01
TE-125m	5846.	109.27	5.6671E+02
I-129	5356.	39.60	0.0000E+00
I-131	5841.	364.48	3.1504E+00
XE-131m	6471.	163.93	7.8127E+01
BA-133	5680.	356.02	3.9937E+00
CS-134	1578.	604.70	2.0786E+00
CS-136	36.	818.51	3.9767E-01
CS-138	3.	1435.86	3.9976E-01
CE-139	6421.	165.85	1.9173E+00
BA-140	2489.	537.31	9.5000E+00
LA-140	4.	1596.21	2.4674E-01
CE-141	6396.	145.44	3.0597E+00
CE-144	6485.	133.51	1.3468E+01
CEPR-144	6485.	133.51	2.6912E+01
EU-152	10.	1408.01	1.6133E+00
EU-154	16.	1274.51	1.1343E+00
EU-155	5634.	86.54	6.5292E+00
HF-181	5553.	482.18	3.9194E+00
TA-182	5129.	67.75	8.6277E+00
HG-203	6197.	279.20	2.6756E+00

Sample ID : S95T2471-DUP Acquisition date : 5-OCT-1995 14:48:45

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
[illegible] 207	1641.	569.70	2.0157E+00
TL-208	6276.	277.36	3.4599E+01
PB-210	5293.	46.50	0.0000E+00
BI-212	54.	727.18	6.6033E+00
PB-212	7346.	238.63	4.8909E+00
BI-214	1545.	609.31	4.5084E+00
PB-214	5929.	351.92	1.2567E+01
RA-224	7214.	240.99	5.3792E+01
RA-226	8268.	186.10	5.3044E+01
AC-228	47.	911.21	1.8611E+00
TH-228	5504.	84.37	1.7490E+02
TH-229	5662.	88.47	8.3746E+00
U-232	5138.	57.78	3.2286E+03
PA-233	5806.	312.17	5.9127E+00
PA-234M	31.	1001.03	7.3982E-01
TH-234	5078.	63.29	9.7863E+01
U-235	8208.	185.71	3.2124E+00
NP-237	5622.	86.48	1.7275E+01
U-237	5084.	59.54	1.6252E+01
NP-238	27.	984.45	1.4454E+00
NP-239	5825.	106.12	7.2104E+00
PU-239	6413.	129.30	2.3381E+04
AM-241	5084.	59.54	1.5589E+01
AM-243	5386.	74.67	4.7024E+00

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*****************************************************************************
* 222-S Laboratory Counting Room    5-OCT-1995 16:36:21.54                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2472-SAM                    Removed by:
Sample Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2                            Verified by:
File Number:             dka300:[spec.GEA2]2g2163.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.88 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       5-OCT-1995 15:45:11.64
Decayed to:              5-OCT-1995 15:45:11.64
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 EMB
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Post-NID Peak Search Report

I*	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.38*	221705	1.52	1322.78	1314	17	0.4		CS-137	3.077E+03
0	795.67	57	2.45	1591.33	1587	9	47.8			
0	1120.83*	19	1.33	2241.70	2234	16	75.3			

Sample ID : S95T2472-SAM Acquisition date : 5-OCT-1995 15:45:11

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/LI	Wtd Mean Decay Corr uCi/LI	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.000	3.077E+03	3.077E+03	0.013E+03	0.44	
		Total Activity :	3.077E+03	3.077E+03			
		Grand Total Activity :	3.077E+03	3.077E+03			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

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Sample ID : S95T2472-SAM Acquisition date : 5-OCT-1995 15:45:11

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
F-7	6788.	477.59	3.3419E+01
NA-22	13.	1274.53	3.4539E-01
NA-24	6.	1368.55	2.4792E-01
K-40	119.	1460.75	1.1139E+01
SC-46	28.	1120.55	4.6235E-01
CR-51	5712.	320.08	2.2871E+01
MN-54	50.	834.83	4.7257E-01
CO-56	48.	846.76	4.6986E-01
CO-57	6197.	122.06	1.7603E+00
CO-58	40.	810.78	4.1754E-01
FE-59	15.	1099.25	5.9716E-01
CO-60	16.	1332.50	4.1048E-01
ZN-65	**15.**	**1115.55**	**6.6148E-01**
SE-75	6448.	264.66	3.6682E+00
KR-85	3654.	514.00	6.2282E+02
SR-85	3653.	514.01	2.8159E+00
Y-88	2.	1836.06	1.8630E-01
Y-90	11.	1760.70	1.4588E+00
Y-91	22.	1204.67	1.4603E+02
NB-94	32.	871.09	3.9420E-01
NB-95	61.	765.78	4.8888E-01
ZR-95	50.	756.73	7.9964E-01
RU-103	4291.	497.08	3.1295E+00
RURH-106	1500.	621.93	4.0799E+01
AG-108m	68.	722.94	5.3635E-01
CD-109	5550.	88.03	5.7198E+01
AG-110M	9041.	657.76	5.4997E+00
S[illegible]-113	6172.	391.69	4.3235E+00
TE-123m	6554.	159.00	1.8113E+00
SB-124	1524.	602.73	2.0336E+00
SB-125	7268.	427.89	1.1010E+01
TE-125m	5913.	109.27	5.6993E+02
I-129	5331.	39.60	0.0000E+00
I-131	**5858.**	**364.48**	**3.1552E+00**
XE-131m	**6541.**	**163.93**	**7.8545E+01**
BA-133	**5832.**	**356.02**	**4.0469E+00**
CS-134	1514.	604.70	2.0360E+00
CS-136	40.	818.51	4.2060E-01
CS-138	5.	1435.86	5.1611E-01
CE-139	6575.	165.85	1.9401E+00
BA-140	2510.	537.31	9.5397E+00
LA-140	6.	1596.21	3.0505E-01
CE-141	6573.	145.44	3.1018E+00
CE-144	6416.	133.51	1.3397E+01
CEPR-144	6416.	133.51	2.6768E+01
EU-152	9.	1408.01	1.4873E+00
EU-154	13.	1274.51	1.0035E+00
EU-155	5549.	86.54	6.4796E+00
HF-181	5576.	482.18	3.9276E+00
TA-182	5263.	67.75	8.7392E+00
HG-203	6278.	279.20	2.6931E+00

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Sample ID : S95T2472-SAM Acquisition date : 5-OCT-1995 15:45:11

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/LI)
207	1758.	569.70	2.0864E+00
TL-208	6323.	277.36	3.4729E+01
PB-210	5322.	46.50	0.0000E+00
BI-212	71.	727.18	7.5341E+00
PB-212	7217.	238.63	4.8477E+00
BI-214	1514.	609.31	4.4621E+00
PB-214	5847.	351.92	1.2480E+01
RA-224	7205.	240.99	5.3756E+01
RA-226	8301.	186.10	5.3149E+01
AC-228	39.	911.21	1.6989E+00
TH-228	5570.	84.37	1.7594E+02
TH-229	5542.	88.47	8.2855E+00
U-232	5174.	57.78	3.2398E+03
PA-233	5830.	312.17	5.9250E+00
PA-234M	26.	1001.03	6.7987E-01
TH-234	5320.	63.29	1.0017E+02
U-235	8219.	185.71	3.2146E+00
NP-237	5541.	86.48	1.7150E+01
U-237	5138.	59.54	1.6339E+01
NP-238	30.	984.45	1.5295E+00
NP-239	5735.	106.12	7.1547E+00
PU-239	6589.	129.30	2.3700E+04
AM-241	5138.	59.54	1.5672E+01
AM-243	5395.	74.67	4.7063E+00

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*****************************************************************************
* 222-S Laboratory Counting Room    5-OCT-1995 18:03:32.37                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Worklist #:              2632
Sample ID:               S95T2472-DUP                    Removed by:
Sample Size:             1.00000E-03 LI
Dilution Factor:         1.00000E+01

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:             GEA2                            Verified by:
File Number:             dka300:[spec.GEA2]2g2164.cnf
Geometry:                42
Count Time:              0 00:50:00.00 sec
Real Time:               0 00:50:29.88 sec
Dead Time:               1.0%

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:       5-OCT-1995 17:12:19.61
Decayed to:              5-OCT-1995 17:12:19.61
Standard Deviations:     2
Analysis Library:        ENVGEA
Analyst:                 ALJ
Background Subtract:     DKA300:[SPEC.GEA2]2GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       21-MAR-1994 09:31:55.15
 Date of last efficiency calibration:   21-MAR-1994 09:43:42.61
*****************************************************************************
```

Post-NID Peak Search Report

J	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/LI
0	661.38*	221637	1.52	1322.77	1314	18	0.4		CS-137	3.076E+03