

APPENDIX E
Instrument Quality Control Data

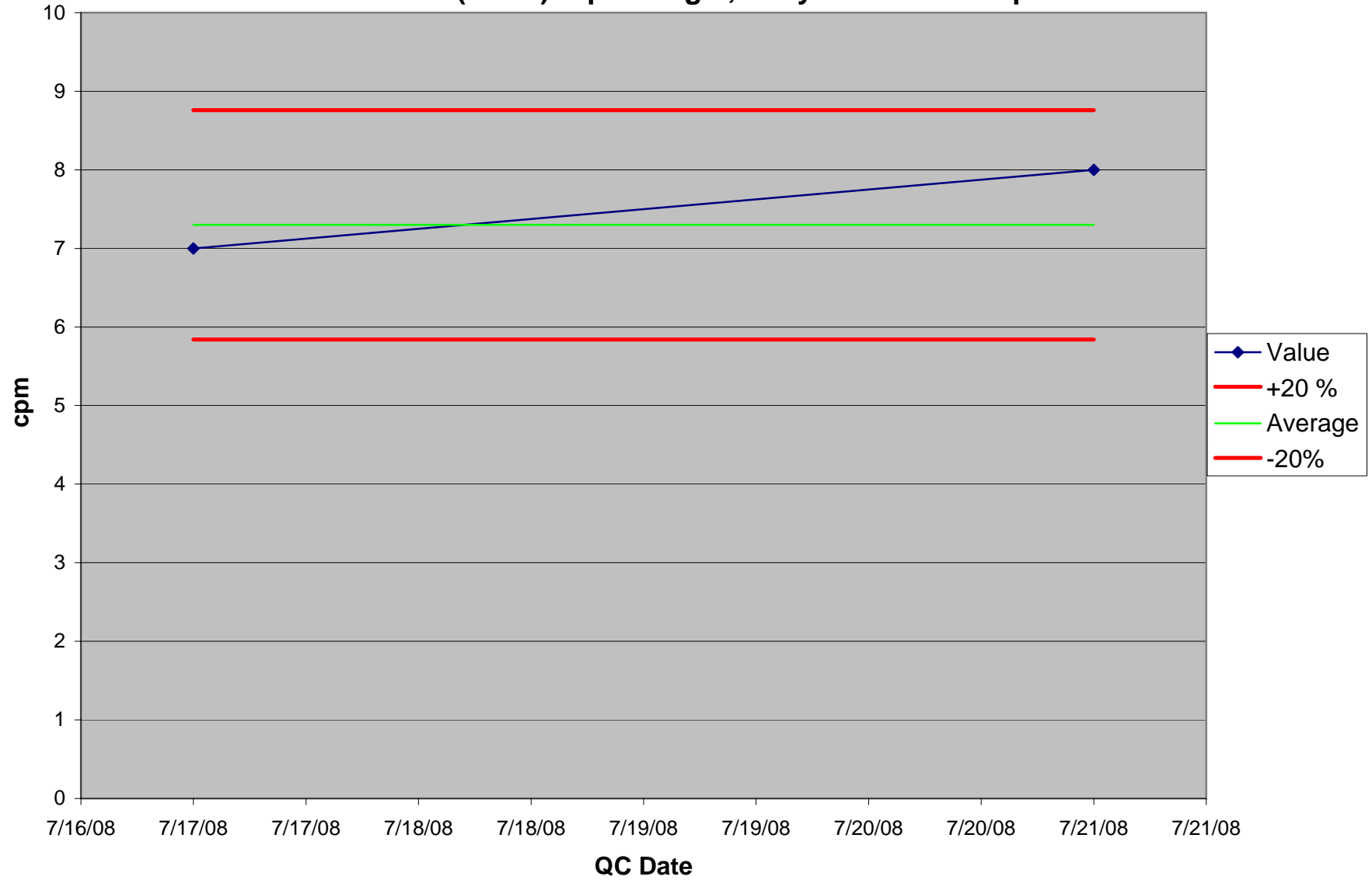
CABRERA ALPHA-BETA COUNTING INSTRUMENT (Rev 6)

Counting Instrument:		2929		Detector:		43-10-1		Calibration Date:		4/7/2008								
Serial #:		200051		Serial #:		PR125948		12 month calibration:		OK								
Detector Active Area or Area Covered by Smear (cm ²):						100												
	Efficiency (fraction)	Source Nuclide	Source Number	Original Source Activity (DPM)	Source Creation Date	T _{1/2} (yr)	Source Decayed Activity	Required MDA (DPM/100cm ²)	Control Chart & Daily Bkg Count Time	Control Chart & Daily Source-Sample Count Time	Control Chart bkg Average α/β cpm	Control Chart bkg 1 sigma, cpm	Control Chart Source-bkg Average α/β cpm	Control Chart source 1 sigma, cpm				
Alpha	0.3470	Th-230	3973-02	17,500	4/29/2002	7.54E+04	17,499	1000	20	1	0.73	0.26	6036.1	132.29				
Beta	0.3090	Tc-99	3975-02	17,700	4/29/2002	2.11E+05	17,700	5000	20	1	49.44	2.91	5881.8	125.88				
Date	Daily Bkg Counts		Daily Check Source Counts		Daily Bkg Rate (cpm)		Net Daily Source Rate (cpm)		Bkg QC Pass/Fail		Source QC Pass/Fail		MDA α (dpm)	MDA β (dpm)	α MDA OK?	β MDA OK?	H.P. Technician	Technician Initials
	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta						
6/16/2008	16	992	5996	5789	0.8	49.6	5995.2	5739.4	PASS	PASS	PASS	PASS	17.34	87	Yes	Yes	GT	GT
6/17/2008	14	947	6054	5919	0.7	47.4	6053.3	5871.7	PASS	PASS	PASS	PASS	16.77	85	Yes	Yes	GT	GT
6/18/2008	13	934	6127	5793	0.7	46.7	6126.4	5746.3	PASS	PASS	PASS	PASS	16.48	84	Yes	Yes	GT	GT
6/19/2008	16	990	6068	5814	0.8	49.5	6067.2	5764.5	PASS	PASS	PASS	PASS	17.34	86	Yes	Yes	GT	GT
6/23/2008	11	974	6021	5765	0.6	48.7	6020.5	5716.3	PASS	PASS	PASS	PASS	15.85	86	Yes	Yes	GT	GT
6/24/2008	11	968	5906	5716	0.6	48.4	5905.5	5667.6	PASS	PASS	PASS	PASS	15.85	86	Yes	Yes	MMD	MMD
6/25/2008	21	1059	6024	5838	1.1	53.0	6023.0	5785.1	PASS	PASS	PASS	PASS	18.60	89	Yes	Yes	MMD	MMD
6/26/2008	10	949	6067	5861	0.5	47.5	6066.5	5813.6	PASS	PASS	PASS	PASS	15.52	85	Yes	Yes	MMD	MMD
6/30/2008	9	1033	6069	5977	0.5	51.7	6068.6	5925.4	PASS	PASS	PASS	PASS	15.16	88	Yes	Yes	MMD	MMD
7/1/2008	15	1044	5939	5833	0.8	52.2	5938.3	5780.8	PASS	PASS	PASS	PASS	17.06	89	Yes	Yes	MMD	MMD
7/2/2008	15	937	6084	6064	0.8	46.9	6083.3	6017.2	PASS	PASS	PASS	PASS	17.06	84	Yes	Yes	MMD	MMD
7/7/2008	11	973	6017	5836	0.6	48.7	6016.5	5787.4	PASS	PASS	PASS	PASS	15.85	86	Yes	Yes	MMD	MMD
7/8/2008	12	1037	5943	6061	0.6	51.9	5942.4	6009.2	PASS	PASS	PASS	PASS	16.17	88	Yes	Yes	MMD	MMD
7/9/2008	26	1031	5959	5782	1.3	51.6	5957.7	5730.5	QUESTION	PASS	PASS	PASS	19.72	88	Yes	Yes	MMD	MMD
7/10/2008	9	1023	5924	5787	0.5	51.2	5923.6	5735.9	PASS	PASS	PASS	PASS	15.16	88	Yes	Yes	MMD	MMD
7/14/2008	22	1073	5860	6084	1.1	53.7	5858.9	6030.4	PASS	PASS	PASS	PASS	18.84	90	Yes	Yes	MMD	MMD
7/15/2008	13	980	6002	6022	0.7	49.0	6001.4	5973.0	PASS	PASS	PASS	PASS	16.48	86	Yes	Yes	MMD	MMD
7/16/2008	17	1069	5959	5898	0.9	53.5	5958.2	5844.6	PASS	PASS	PASS	PASS	17.60	89	Yes	Yes	MMD	MMD
7/17/2008	7	1020	5990	5965	0.4	51.0	5989.7	5914.0	PASS	PASS	PASS	PASS	14.39	88	Yes	Yes	MMD	MMD
7/21/2008	17	982	6168	5871	0.9	49.1	6167.2	5821.9	PASS	PASS	PASS	PASS	17.60	86	Yes	Yes	MMD	MMD
7/22/2008	25	1050	6086	5895	1.3	52.5	6084.8	5842.5	QUESTION	PASS	PASS	PASS	19.51	89	Yes	Yes	MMD	MMD
7/23/2008	11	1018	6045	5825	0.6	50.9	6044.5	5774.1	PASS	PASS	PASS	PASS	15.85	88	Yes	Yes	MMD	MMD
7/24/2008	18	1042	6028	5969	0.9	52.1	6027.1	5916.9	PASS	PASS	PASS	PASS	17.86	88	Yes	Yes	MMD	MMD
7/28/2008	16	944	5993	5778	0.8	47.2	5992.2	5730.8	PASS	PASS	PASS	PASS	17.34	85	Yes	Yes	MMD	MMD
7/29/2008	14	1072	6065	5866	0.7	53.6	6064.3	5812.4	PASS	PASS	PASS	PASS	16.77	90	Yes	Yes	MMD	MMD
7/30/2008	15	981	5907	5832	0.8	49.1	5906.3	5783.0	PASS	PASS	PASS	PASS	17.06	86	Yes	Yes	MMD	MMD
7/31/2008	20	1020	6048	5720	1.0	51.0	6047.0	5669.0	PASS	PASS	PASS	PASS	18.36	88	Yes	Yes	MMD	MMD
8/4/2008	16	1025	5891	5818	0.8	51.3	5890.2	5766.8	PASS	PASS	PASS	PASS	17.34	88	Yes	Yes	MMD	MMD
8/5/2008	18	1060	6091	5879	0.9	53.0	6090.1	5826.0	PASS	PASS	PASS	PASS	17.86	89	Yes	Yes	MMD	MMD
8/6/2008	15	1010	6049	5844	0.8	50.5	6048.3	5793.5	PASS	PASS	PASS	PASS	17.06	87	Yes	Yes	MMD	MMD
8/7/2008	23	1031	5969	5937	1.2	51.6	5967.9	5885.5	PASS	PASS	PASS	PASS	19.06	88	Yes	Yes	MMD	MMD
8/11/2008	18	955	6026	5587	0.9	47.8	6025.1	5539.3	PASS	PASS	PASS	QUESTION	17.86	85	Yes	Yes	MMD	MMD
8/12/2008	22	972	6030	5878	1.1	48.6	6028.9	5829.4	PASS	PASS	PASS	PASS	18.84	86	Yes	Yes	MMD	MMD
8/13/2008	14	987	6112	5779	0.7	49.4	6111.3	5729.7	PASS	PASS	PASS	PASS	16.77	86	Yes	Yes	MMD	MMD
8/14/2008	12	1017	5898	5888	0.6	50.9	5897.4	5837.2	PASS	PASS	PASS	PASS	16.17	88	Yes	Yes	MMD	MMD
8/18/2008	10	977	6143	5728	0.5	48.9	6142.5	5679.2	PASS	PASS	PASS	PASS	15.52	86	Yes	Yes	MMD	MMD
8/19/2008	16	1040	5964	5980	0.8	52.0	5963.2	5928.0	PASS	PASS	PASS	PASS	17.34	88	Yes	Yes	MMD	MMD
8/20/2008	13	1021	6002	6088	0.7	51.1	6001.4	6037.0	PASS	PASS	PASS	PASS	16.48	88	Yes	Yes	MMD	MMD

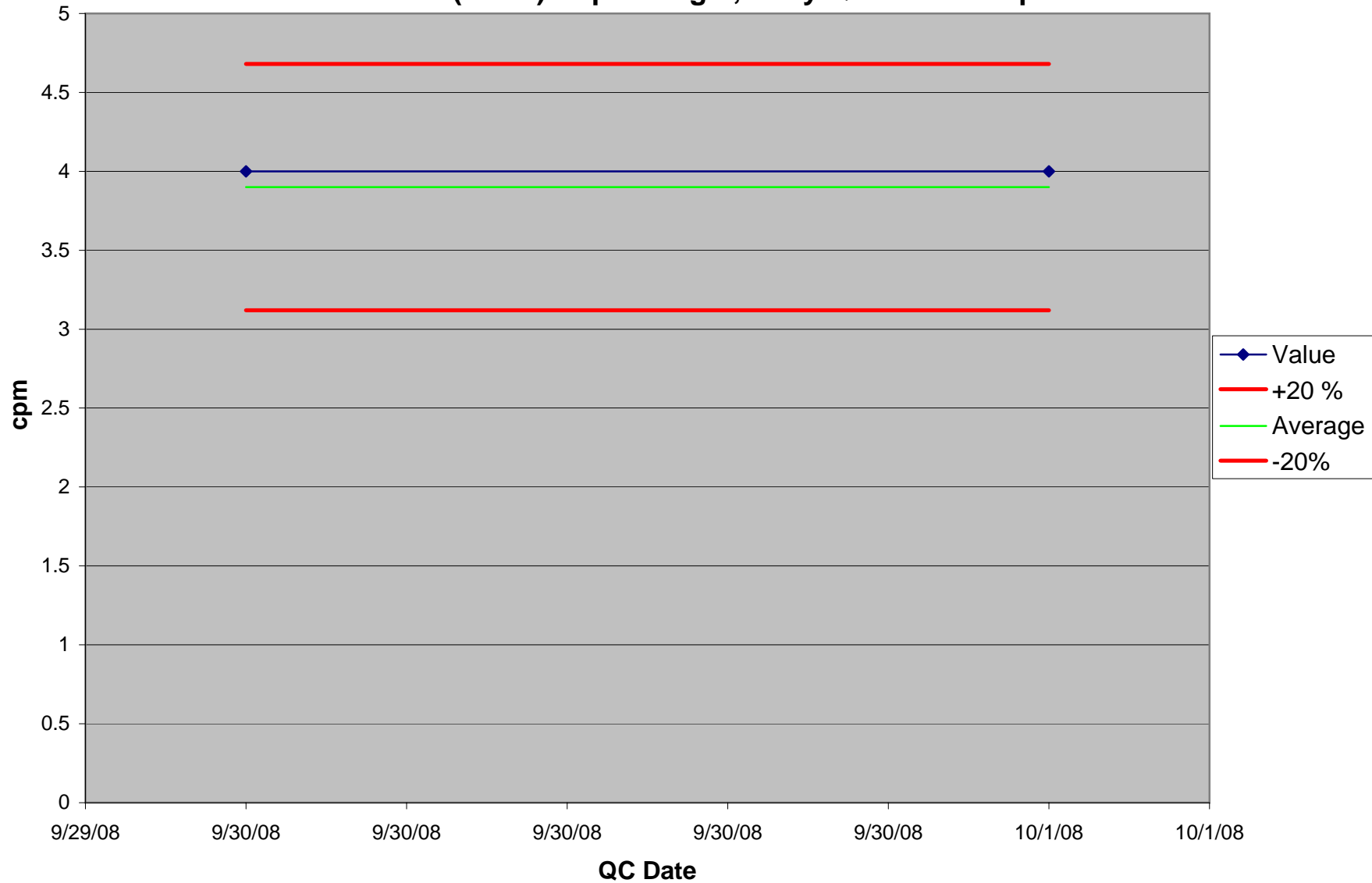
CABRERA ALPHA-BETA COUNTING INSTRUMENT (Rev 6)

Counting Instrument:		2929		Detector:		43-10-1		Calibration Date:		4/7/2008								
Serial #:		200051		Serial #:		PR125948		12 month calibration:		OK								
Detector Active Area or Area Covered by Smear (cm ²):						100												
	Efficiency (fraction)	Source Nuclide	Source Number	Original Source Activity (DPM)	Source Creation Date	T _{1/2} (yr)	Source Decayed Activity	Required MDA (DPM/100cm ²)	Control Chart & Daily Bkg Count Time	Control Chart & Daily Source-Sample Count Time	Control Chart bkg Average α/β cpm	Control Chart bkg 1 sigma, cpm	Control Chart Source-bkg Average α/β cpm	Control Chart source 1 sigma, cpm				
Alpha	0.3450	Th-230	3973-02	17,500	4/29/2002	7.54E+04	17,499	100	20	4	0.73	0.26	6033.3	37.33				
Beta	0.3260	Tc-99	3975-02	17,700	4/29/2002	2.11E+05	17,700	1000	20	4	49.44	2.91	5764.4	44.10				
Date	Daily Bkg Counts		Daily Check Source Counts		Daily Bkg Rate (cpm)		Net Daily Source Rate (cpm)		Bkg QC Pass/Fail		Source QC Pass/Fail		MDA α (dpm)	MDA β (dpm)	α MDA OK?	β MDA OK?	H.P. Technician	Technician Initials
	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta						
7/15/2008	13	980	23872	23481	0.7	49.0	5967.4	5821.3	PASS	PASS	PASS	PASS	6.38	41	Yes	Yes	MMD	MMD
7/16/2008	17	1069	23824	23329	0.9	53.5	5955.2	5778.8	PASS	PASS	QUESTION	PASS	6.99	43	Yes	Yes	MMD	MMD
7/17/2008	7	1020	24139	23670	0.4	51.0	6034.4	5866.5	PASS	PASS	PASS	QUESTION	5.26	42	Yes	Yes	MMD	MMD
7/21/2008	17	982	24142	23407	0.9	49.1	6034.7	5802.7	PASS	PASS	PASS	PASS	6.99	41	Yes	Yes	MMD	MMD
7/22/2008	25	1050	24032	23555	1.3	52.5	6006.8	5836.3	QUESTION	PASS	PASS	PASS	8.01	42	Yes	Yes	MMD	MMD
7/23/2008	11	1018	24157	23726	0.6	50.9	6038.7	5880.6	PASS	PASS	PASS	QUESTION	6.05	42	Yes	Yes	MMD	MMD
7/24/2008	18	1042	23765	23206	0.9	52.1	5940.4	5749.4	PASS	PASS	QUESTION	PASS	7.13	42	Yes	Yes	MMD	MMD
7/28/2008	16	944	23954	23528	0.8	47.2	5987.7	5834.8	PASS	PASS	PASS	PASS	6.85	40	Yes	Yes	MMD	MMD
7/29/2008	14	1072	24078	23566	0.7	53.6	6018.8	5837.9	PASS	PASS	PASS	PASS	6.54	43	Yes	Yes	MMD	MMD
7/30/2008	15	981	24354	23220	0.8	49.1	6087.8	5756.0	PASS	PASS	PASS	PASS	6.70	41	Yes	Yes	MMD	MMD
7/31/2008	20	1020	24352	23188	1.0	51.0	6087.0	5746.0	PASS	PASS	PASS	PASS	7.40	42	Yes	Yes	MMD	MMD
8/4/2008	16	1025	23868	23562	0.8	51.3	5966.2	5839.3	PASS	PASS	PASS	PASS	6.85	42	Yes	Yes	MMD	MMD
8/5/2008	18	1060	23994	23045	0.9	53.0	5997.6	5708.3	PASS	PASS	PASS	PASS	7.13	43	Yes	Yes	MMD	MMD
8/6/2008	15	1010	24050	23210	0.8	50.5	6011.8	5752.0	PASS	PASS	PASS	PASS	6.70	42	Yes	Yes	MMD	MMD
8/7/2008	23	1031	24263	23151	1.2	51.6	6064.6	5736.2	PASS	PASS	PASS	PASS	7.78	42	Yes	Yes	MMD	MMD
8/11/2008	18	955	24117	23329	0.9	47.8	6028.4	5784.5	PASS	PASS	PASS	PASS	7.13	40	Yes	Yes	MMD	MMD
8/12/2008	22	972	24221	23522	1.1	48.6	6054.2	5831.9	PASS	PASS	PASS	PASS	7.65	41	Yes	Yes	MMD	MMD
8/13/2008	14	987	24190	23586	0.7	49.4	6046.8	5847.2	PASS	PASS	PASS	PASS	6.54	41	Yes	Yes	MMD	MMD
8/14/2008	12	1017	23931	23572	0.6	50.9	5982.2	5842.2	PASS	PASS	PASS	PASS	6.22	42	Yes	Yes	MMD	MMD
8/18/2008	10	977	23915	23468	0.5	48.9	5978.3	5818.2	PASS	PASS	PASS	PASS	5.87	41	Yes	Yes	MMD	MMD
8/19/2008	16	1040	23938	23370	0.8	52.0	5983.7	5790.5	PASS	PASS	PASS	PASS	6.85	42	Yes	Yes	MMD	MMD
8/20/2008	13	1021	23861	23507	0.7	51.1	5964.6	5825.7	PASS	PASS	PASS	PASS	6.38	42	Yes	Yes	MMD	MMD
8/21/2008	21	981	24099	23322	1.1	49.1	6023.7	5781.5	PASS	PASS	PASS	PASS	7.53	41	Yes	Yes	MMD	MMD
8/25/2008	16	968	24152	23571	0.8	48.4	6037.2	5844.4	PASS	PASS	PASS	PASS	6.85	41	Yes	Yes	MMD	MMD
8/26/2008	16	951	24108	23607	0.8	47.6	6026.2	5854.2	PASS	PASS	PASS	QUESTION	6.85	40	Yes	Yes	MMD	MMD
8/27/2008	14	939	24013	23503	0.7	47.0	6002.6	5828.8	PASS	PASS	PASS	PASS	6.54	40	Yes	Yes	MMD	MMD
8/28/2008	20	1005	23944	23533	1.0	50.3	5985.0	5833.0	PASS	PASS	PASS	PASS	7.40	41	Yes	Yes	MMD	MMD
9/2/2008	15	1022	24210	23597	0.8	51.1	6051.8	5848.2	PASS	PASS	PASS	PASS	6.70	42	Yes	Yes	MMD	MMD
9/3/2008	8	991	23934	23431	0.4	49.6	5983.1	5808.2	PASS	PASS	PASS	PASS	5.48	41	Yes	Yes	MMD	MMD
9/4/2008	18	987	24053	23512	0.9	49.4	6012.4	5828.7	PASS	PASS	PASS	PASS	7.13	41	Yes	Yes	MMD	MMD
9/8/2008	21	973	24049	23401	1.1	48.7	6011.2	5801.6	PASS	PASS	PASS	PASS	7.53	41	Yes	Yes	MMD	MMD
9/9/2008	18	923	24166	23456	0.9	46.2	6040.6	5817.9	PASS	PASS	PASS	PASS	7.13	40	Yes	Yes	MMD	MMD
9/10/2008	16	953	24133	23122	0.8	47.7	6032.5	5732.9	PASS	PASS	PASS	PASS	6.85	40	Yes	Yes	MMD	MMD
9/11/2008	9	978	24144	23471	0.5	48.9	6035.6	5818.9	PASS	PASS	PASS	PASS	5.68	41	Yes	Yes	MMD	MMD
9/12/2008	12	971	24103	23413	0.6	48.6	6025.2	5804.7	PASS	PASS	PASS	PASS	6.22	41	Yes	Yes	MMD	MMD
9/15/2008	14	1022	24041	23242	0.7	51.1	6009.6	5759.4	PASS	PASS	PASS	PASS	6.54	42	Yes	Yes	MMD	MMD
9/16/2008	16	907	24028	23542	0.8	45.4	6006.2	5840.2	PASS	PASS	PASS	PASS	6.85	40	Yes	Yes	MMD	MMD
9/17/2008	19	1031	24051	23652	1.0	51.6	6011.8	5861.5	PASS	PASS	PASS	QUESTION	7.26	42	Yes	Yes	MMD	MMD

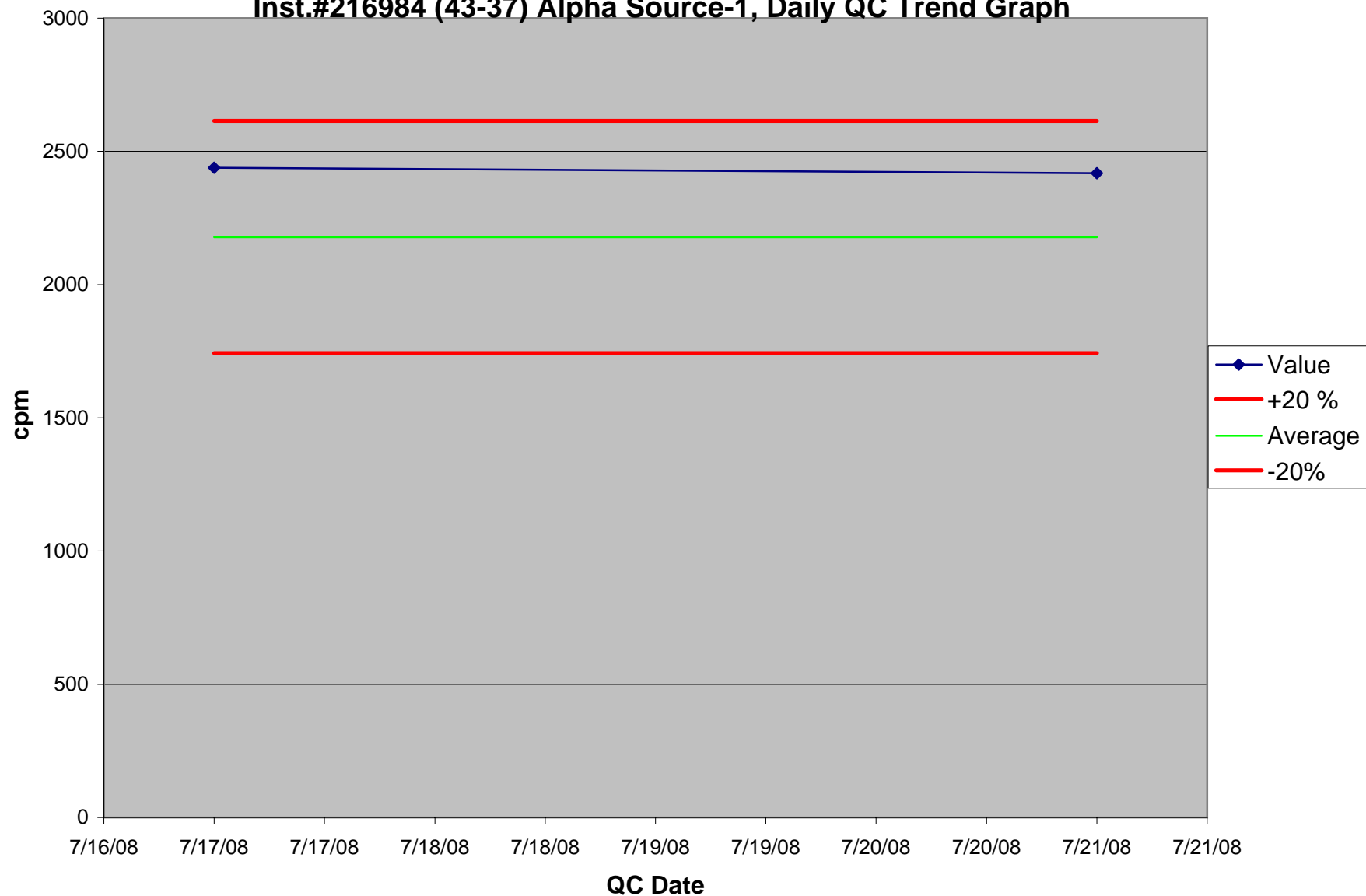
Inst.#216984 (43-37) Alpha Bkg-1, Daily QC Trend Graph



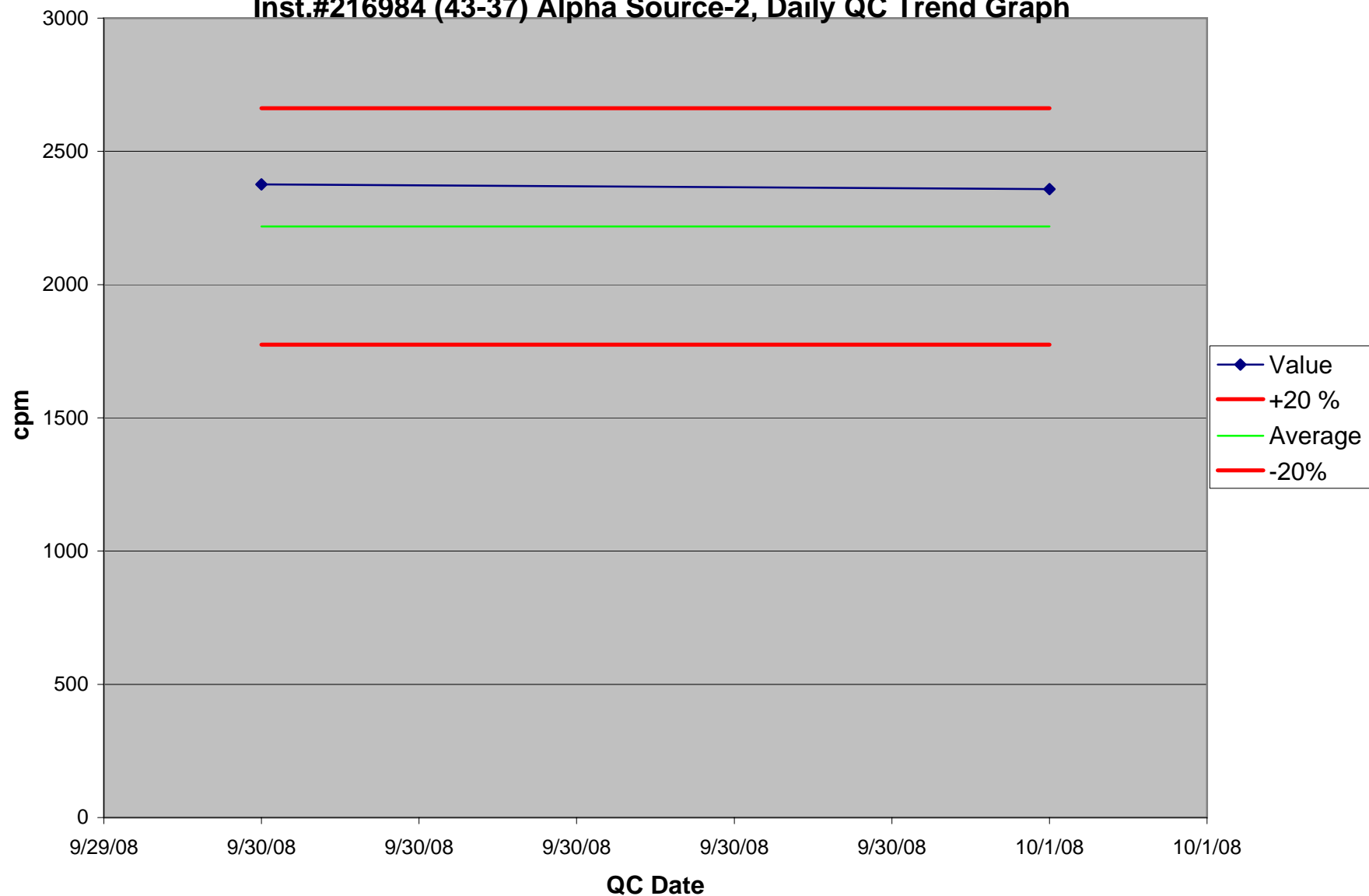
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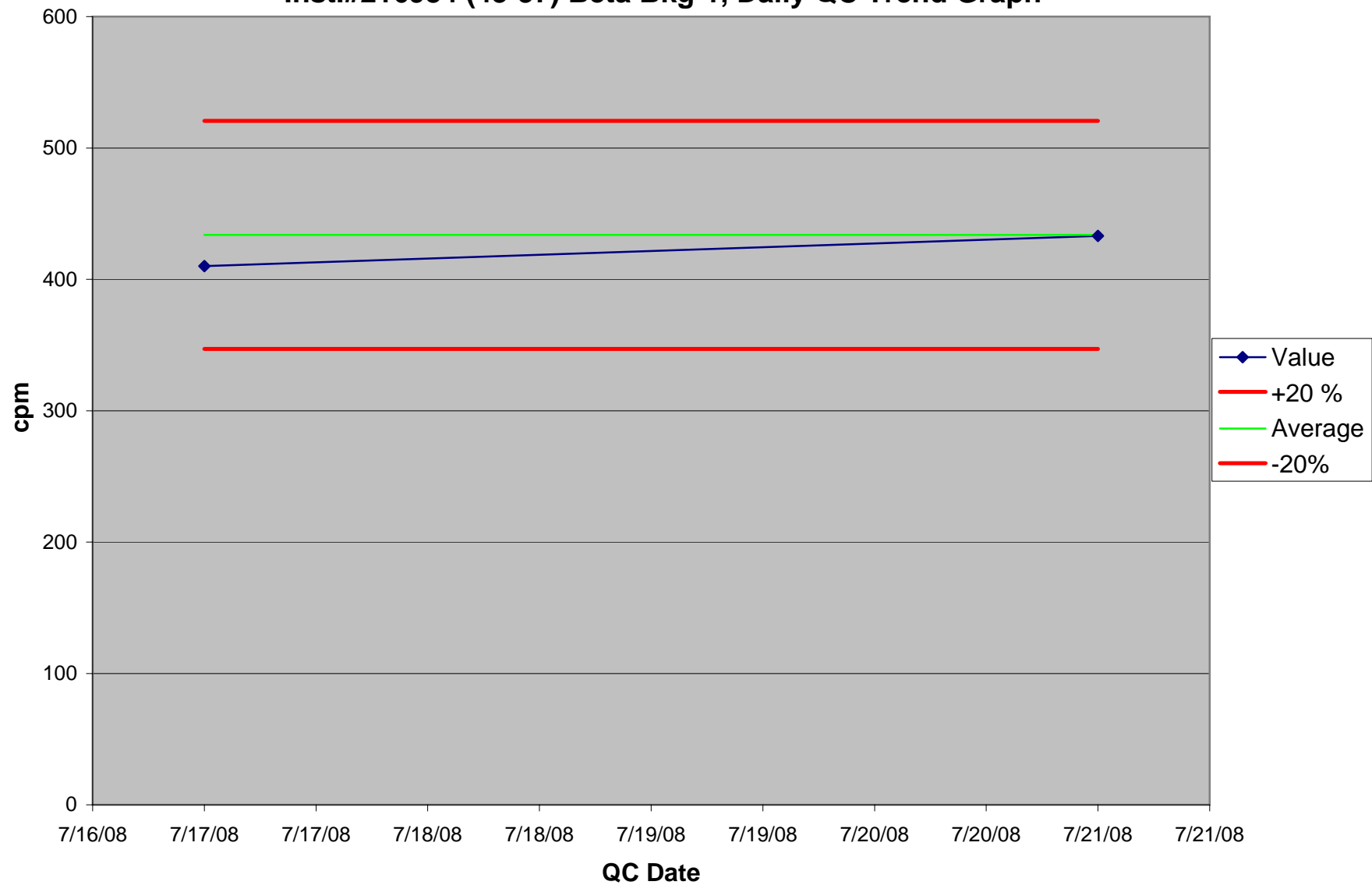
Inst.#216984 (43-37) Alpha Source-1, Daily QC Trend Graph



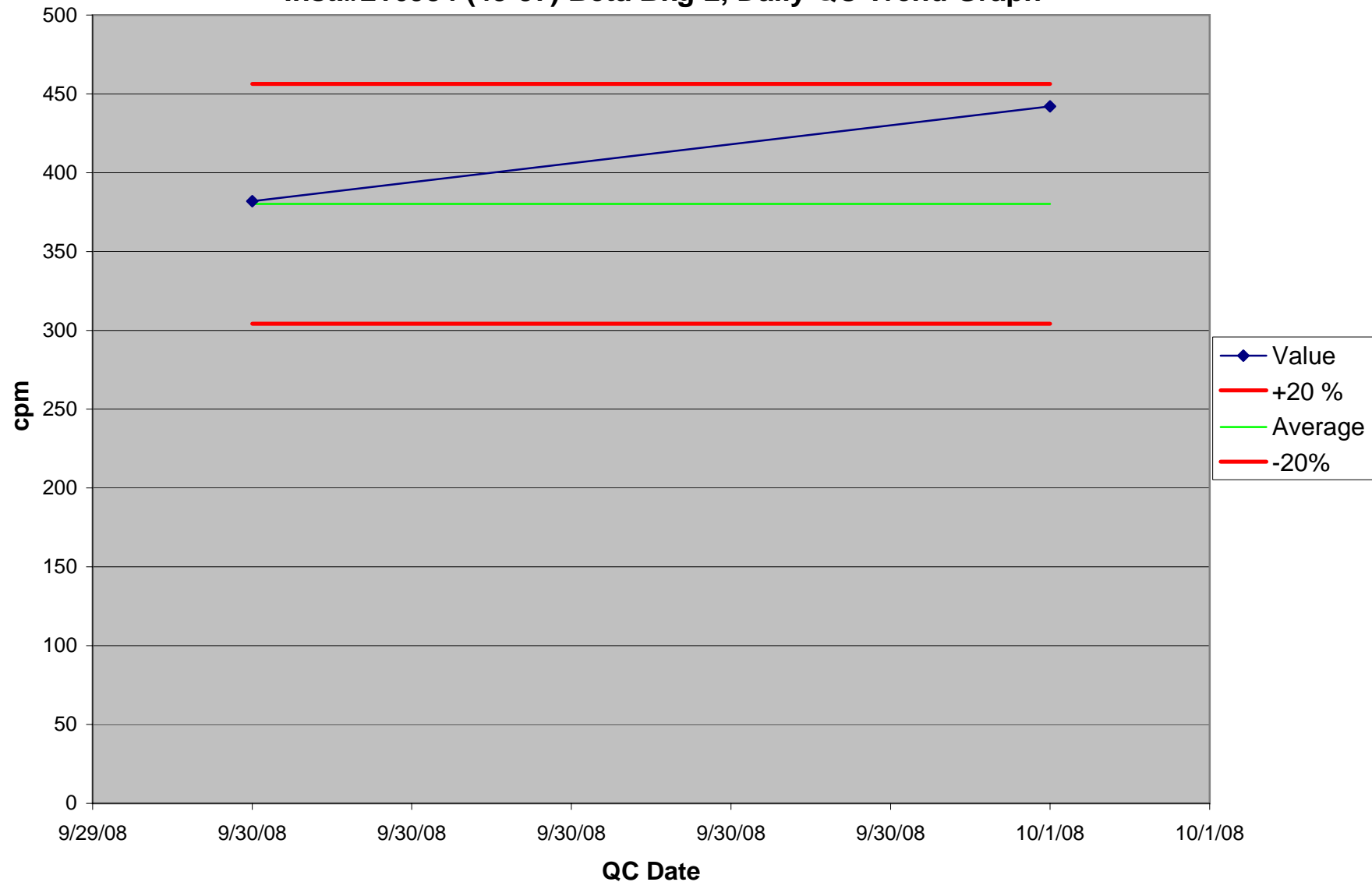
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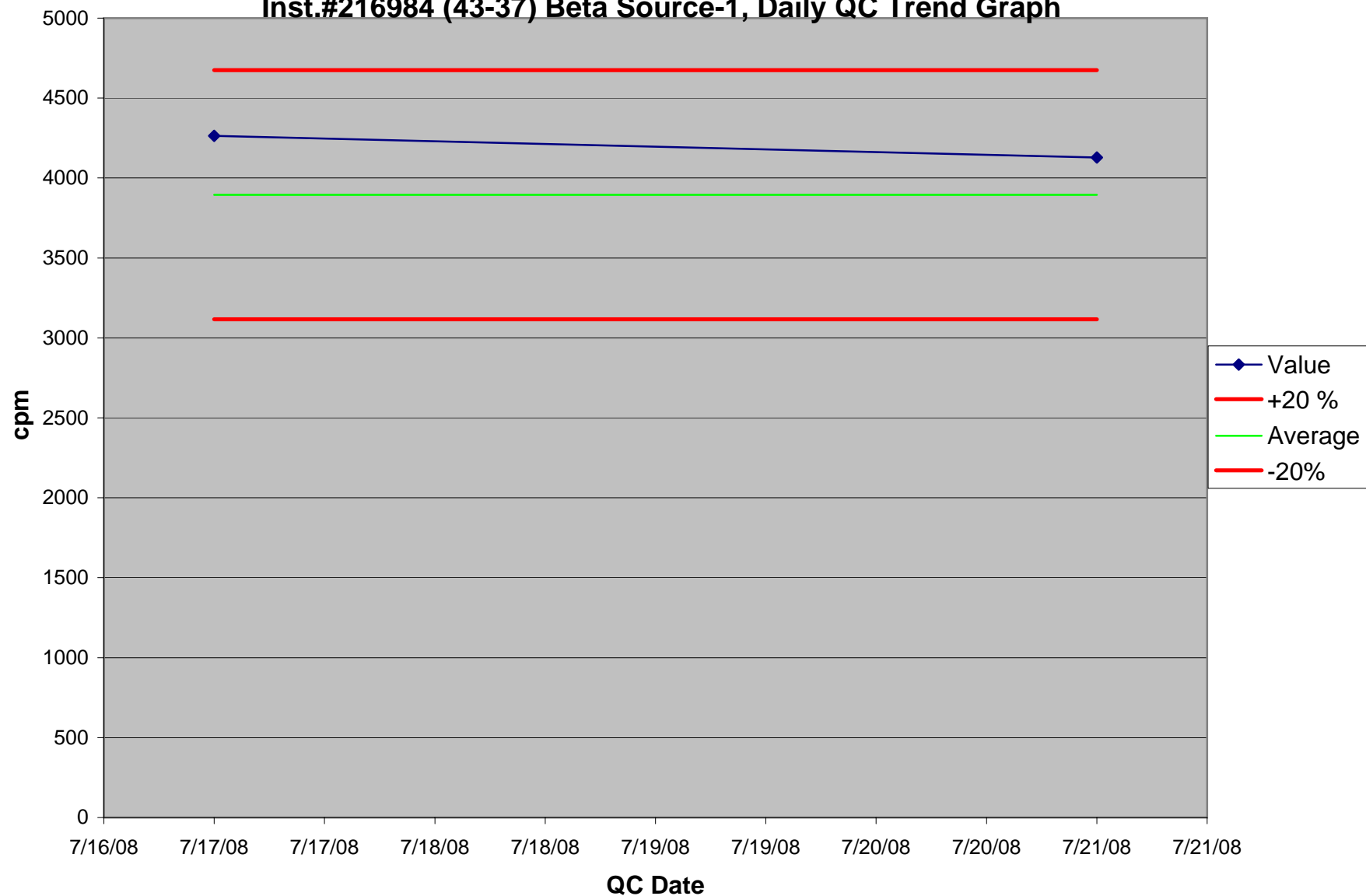
Inst.#216984 (43-37) Beta Bkg-1, Daily QC Trend Graph



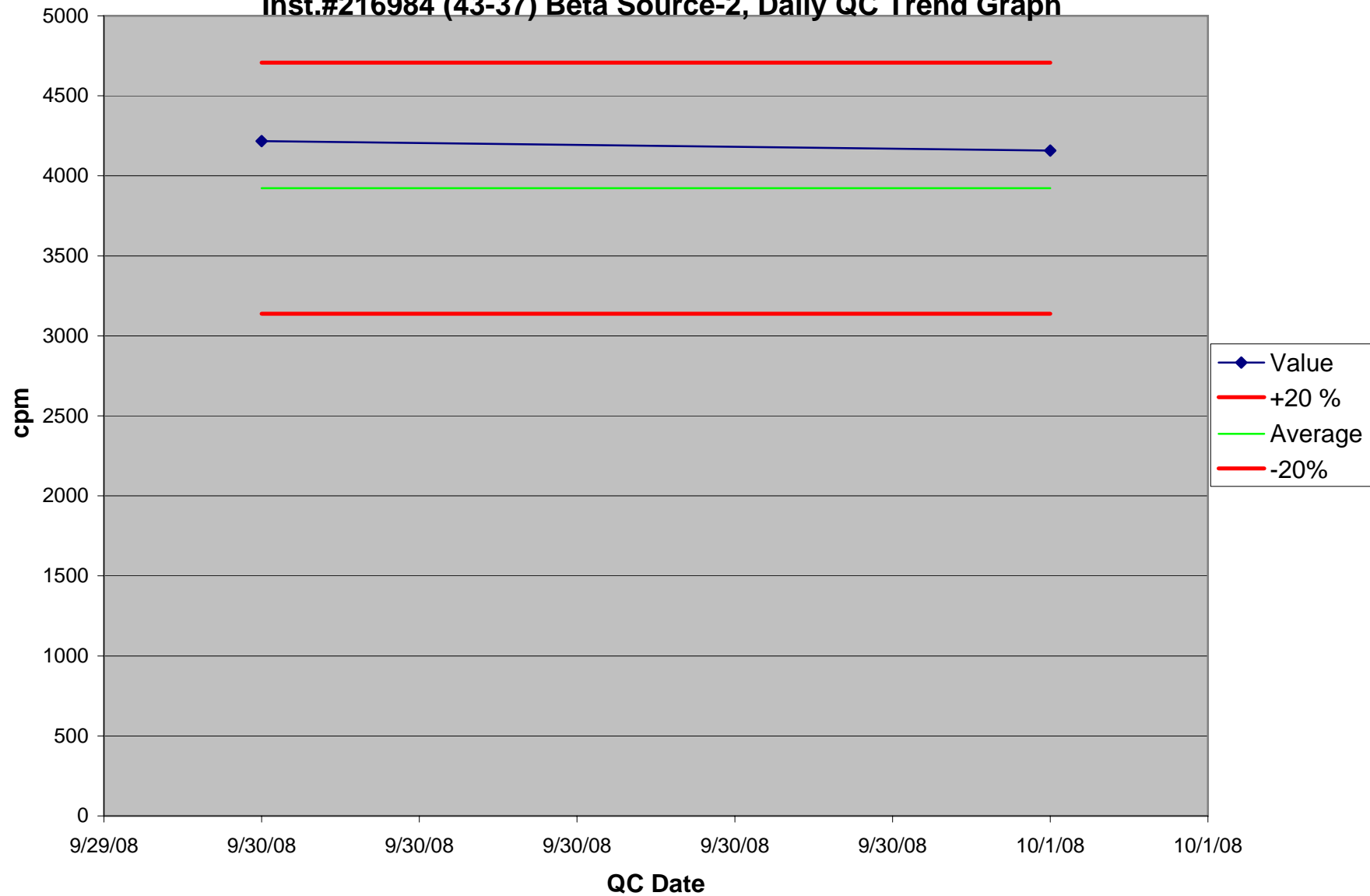
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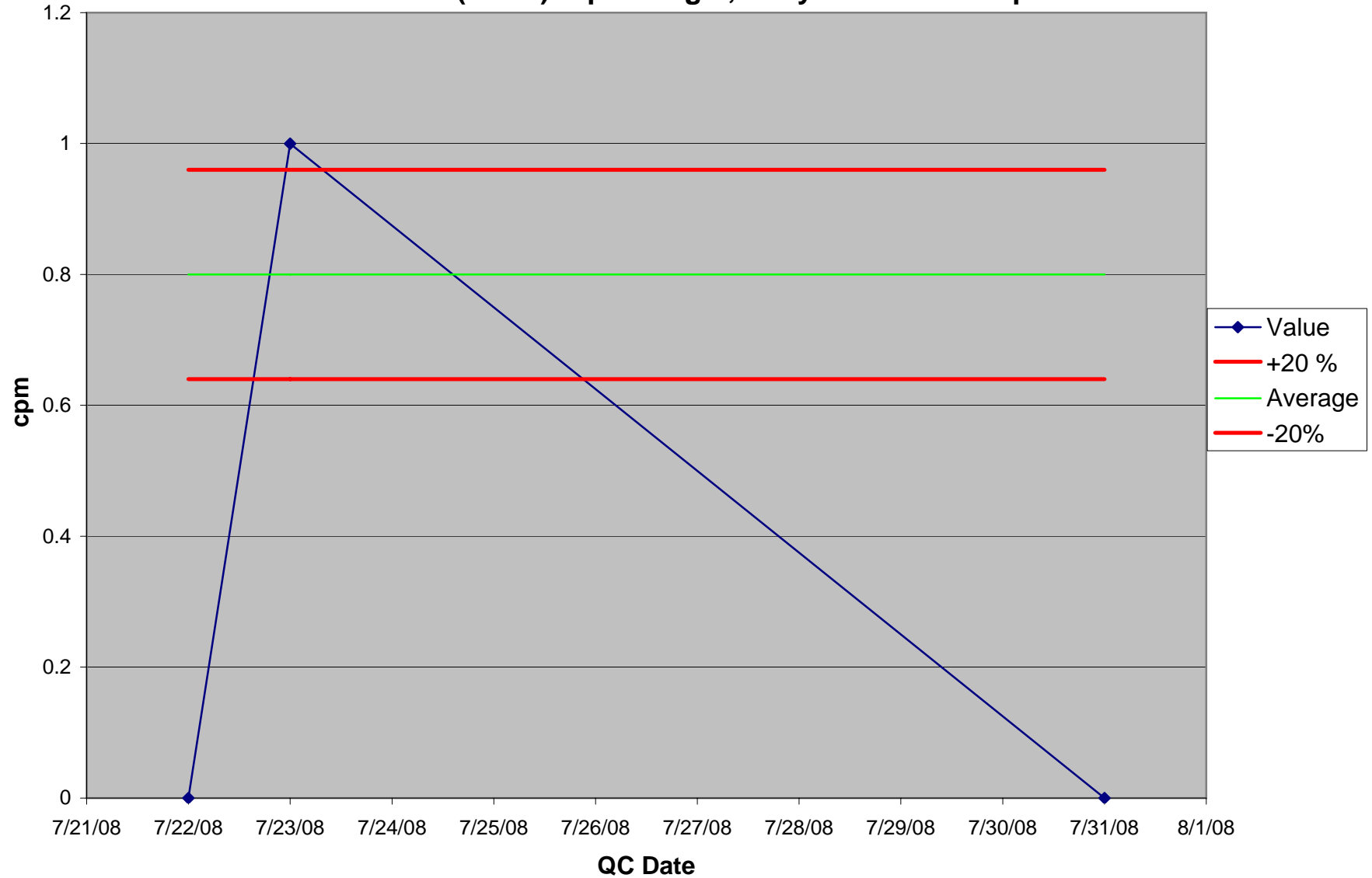
Inst.#216984 (43-37) Beta Source-1, Daily QC Trend Graph



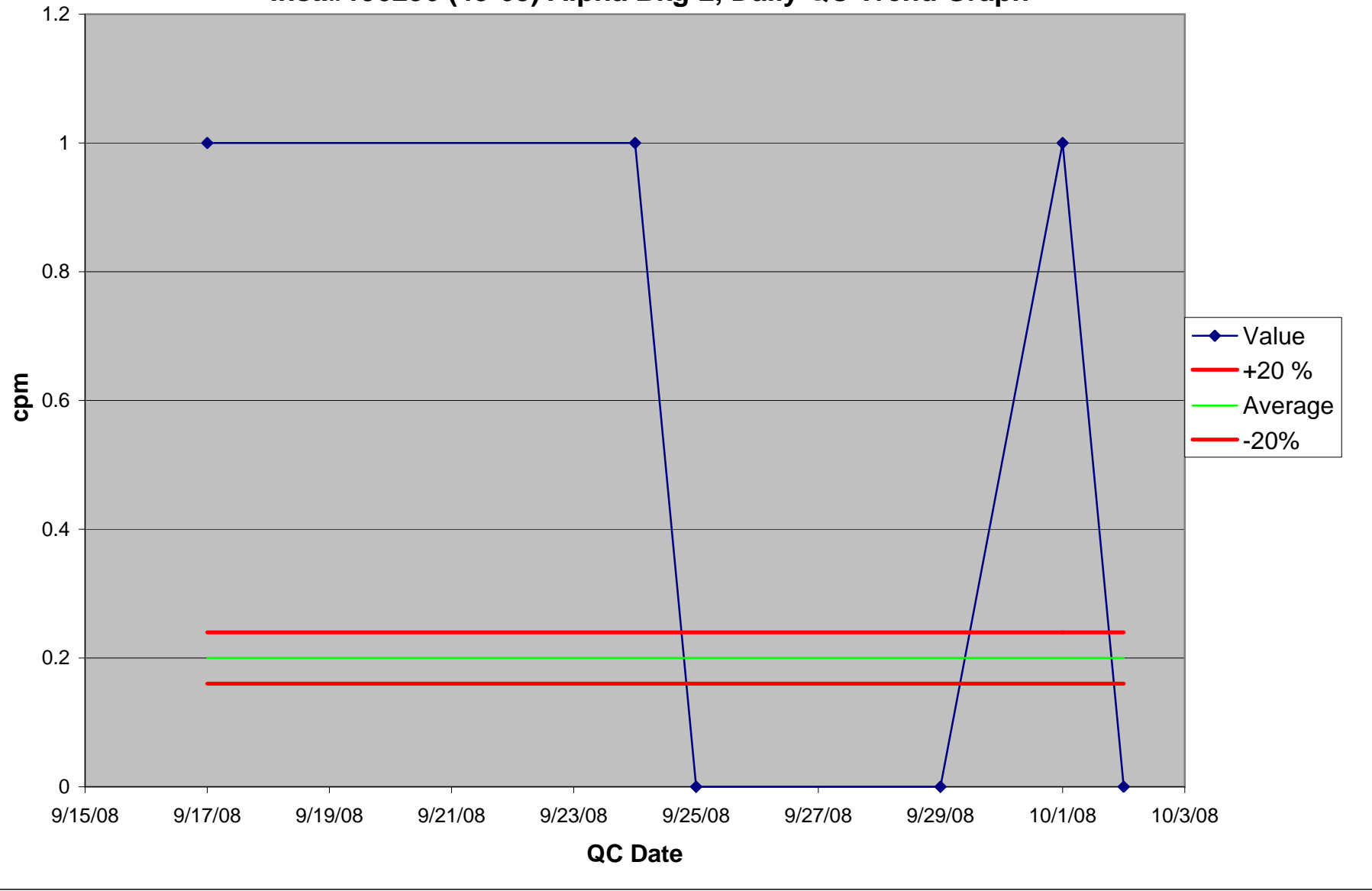
Inst.#216984 (43-37) Beta Source-2, Daily QC Trend Graph



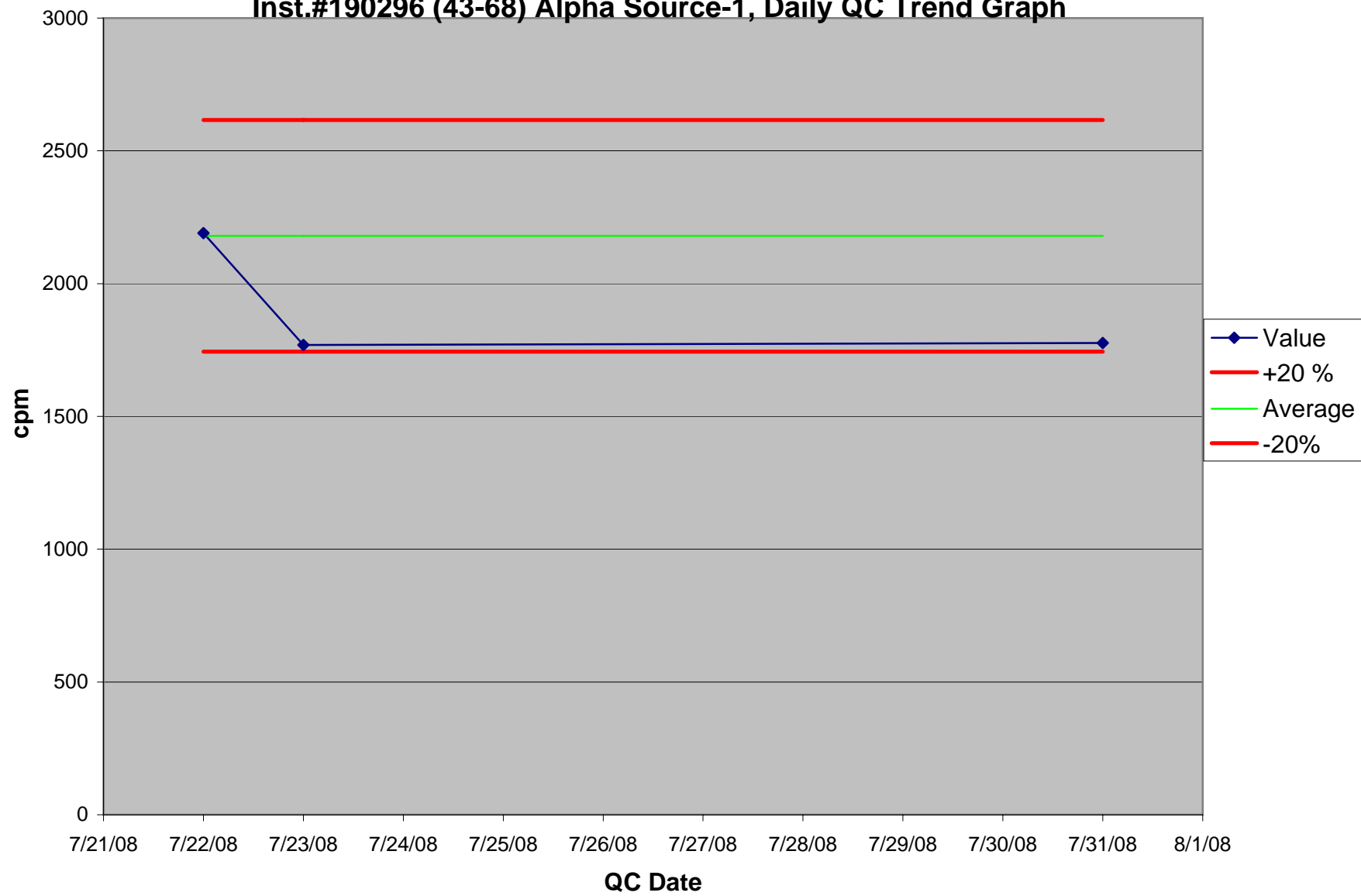
Inst.#190296 (43-68) Alpha Bkg-1, Daily QC Trend Graph



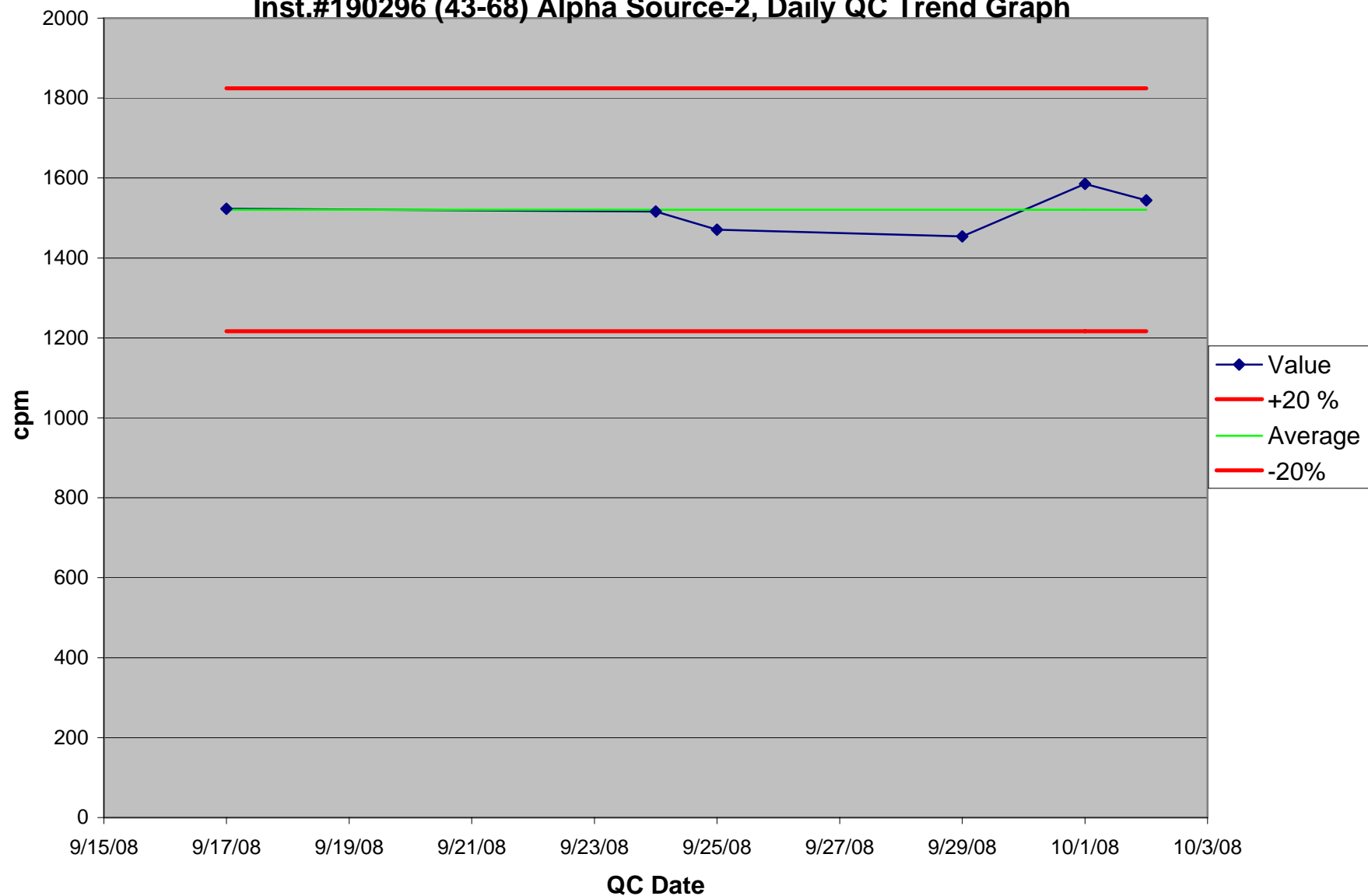
Inst.#190296 (43-68) Alpha Bkg-2, Daily QC Trend Graph



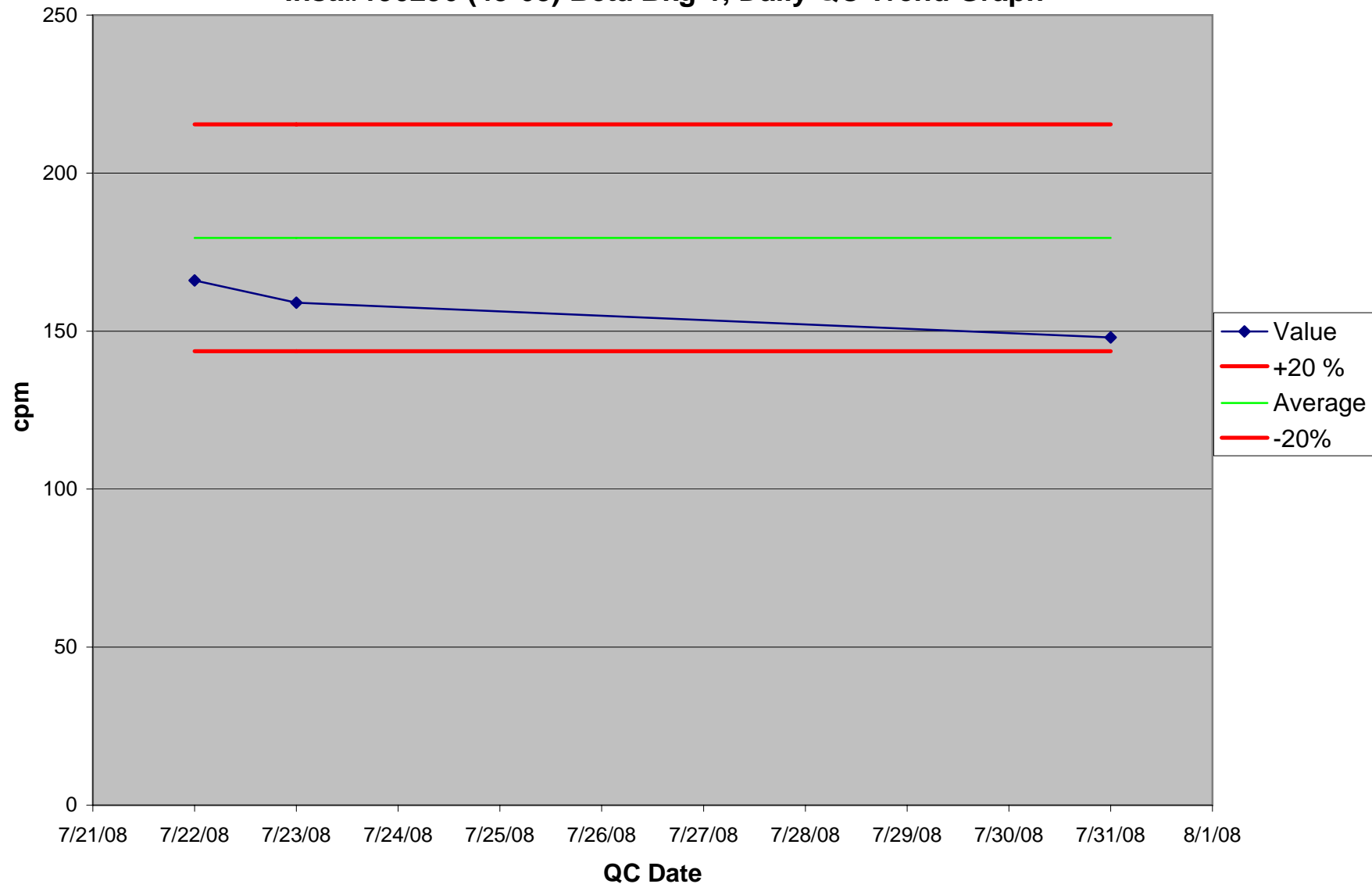
Inst.#190296 (43-68) Alpha Source-1, Daily QC Trend Graph



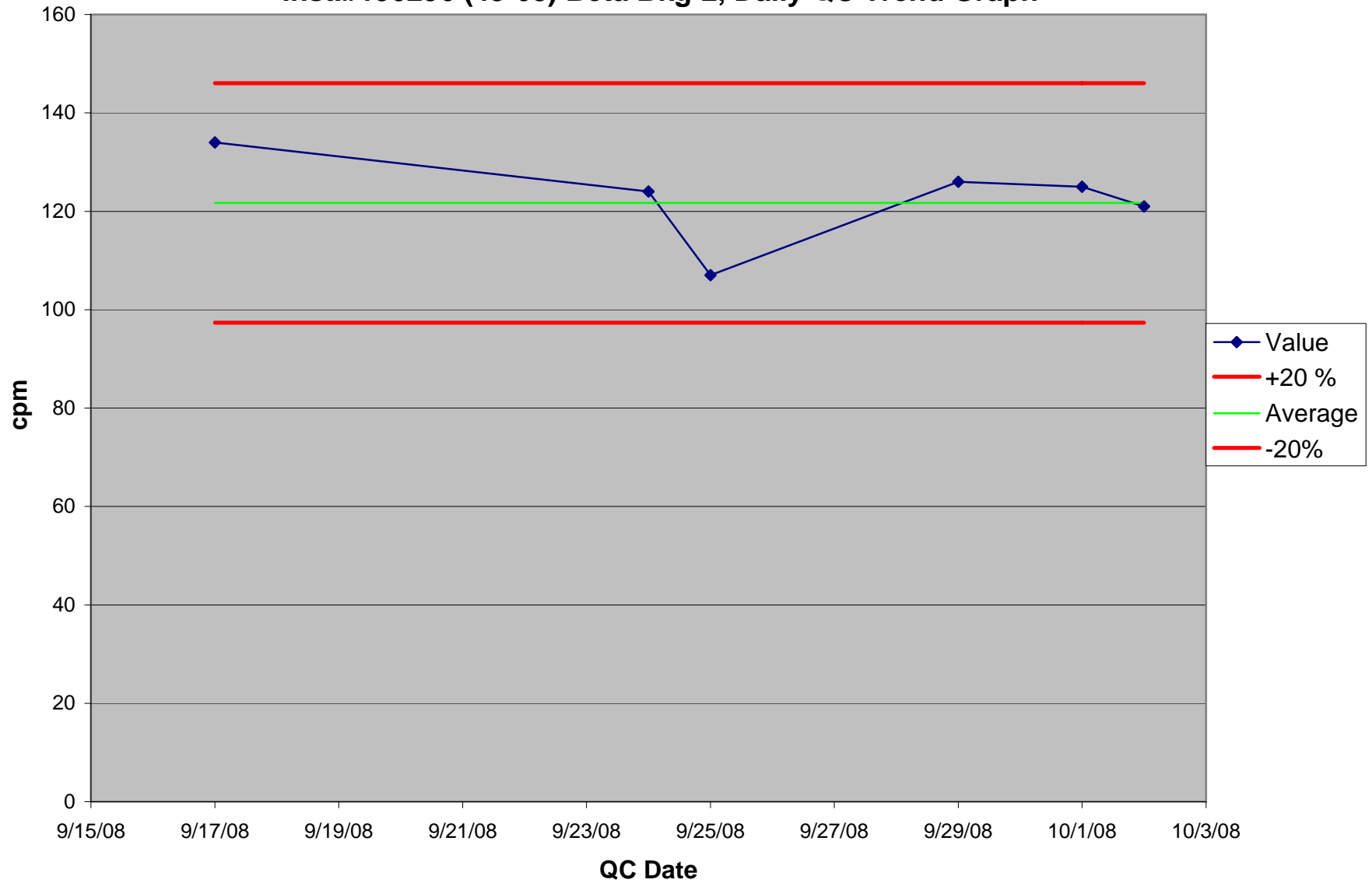
Inst.#190296 (43-68) Alpha Source-2, Daily QC Trend Graph



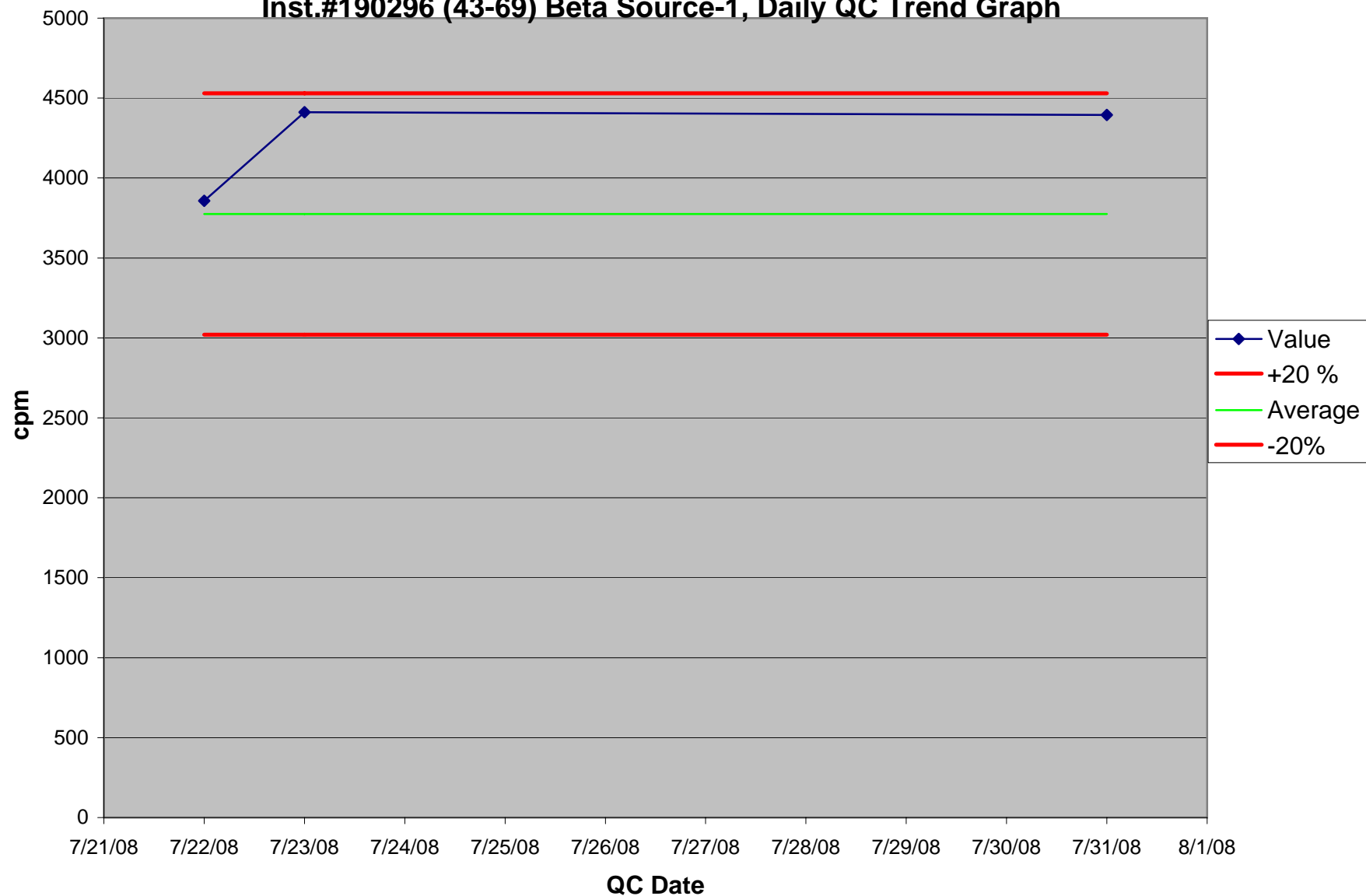
Inst.#190296 (43-68) Beta Bkg-1, Daily QC Trend Graph



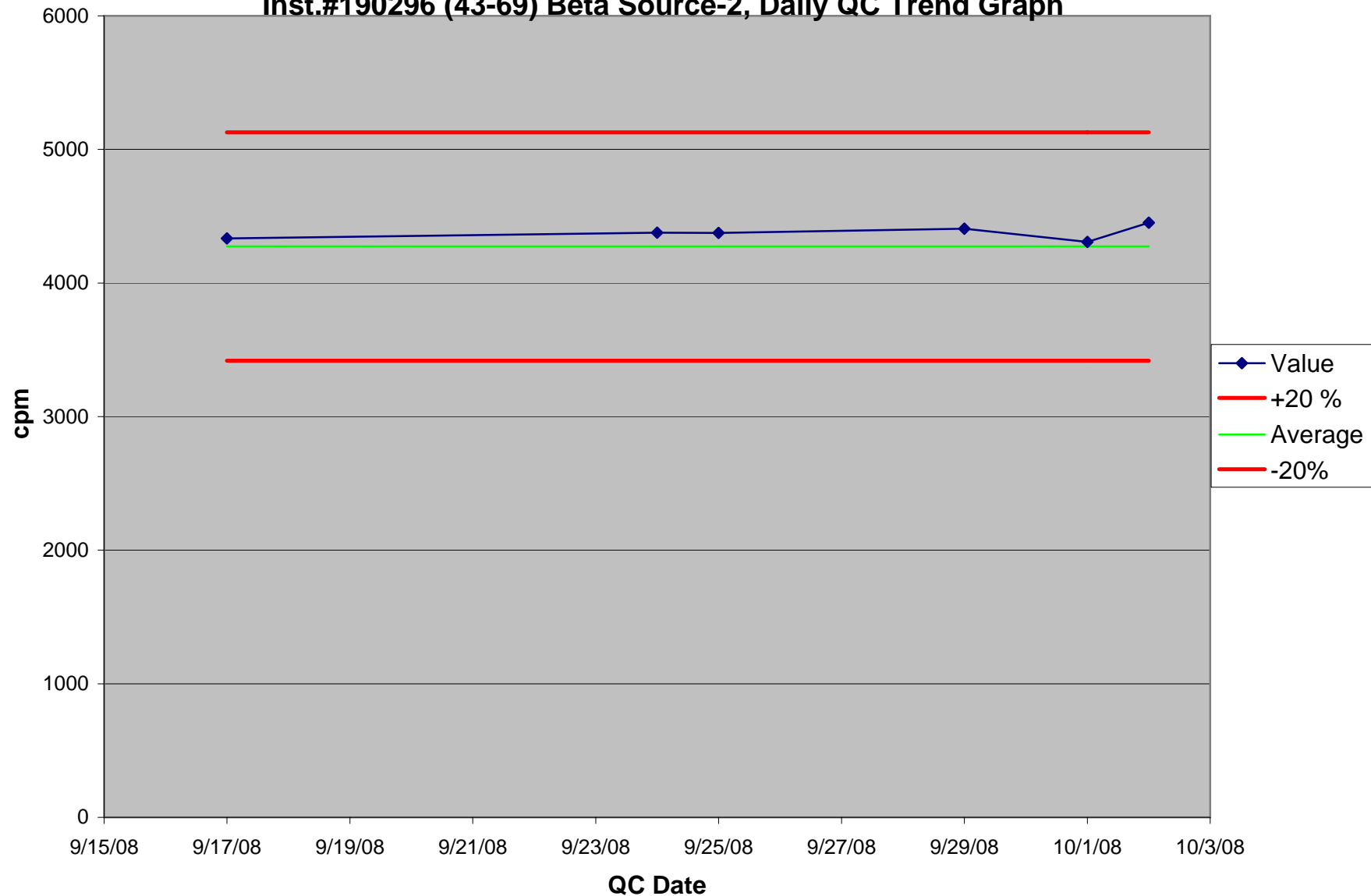
Inst.#190296 (43-68) Beta Bkg-2, Daily QC Trend Graph



Inst.#190296 (43-69) Beta Source-1, Daily QC Trend Graph



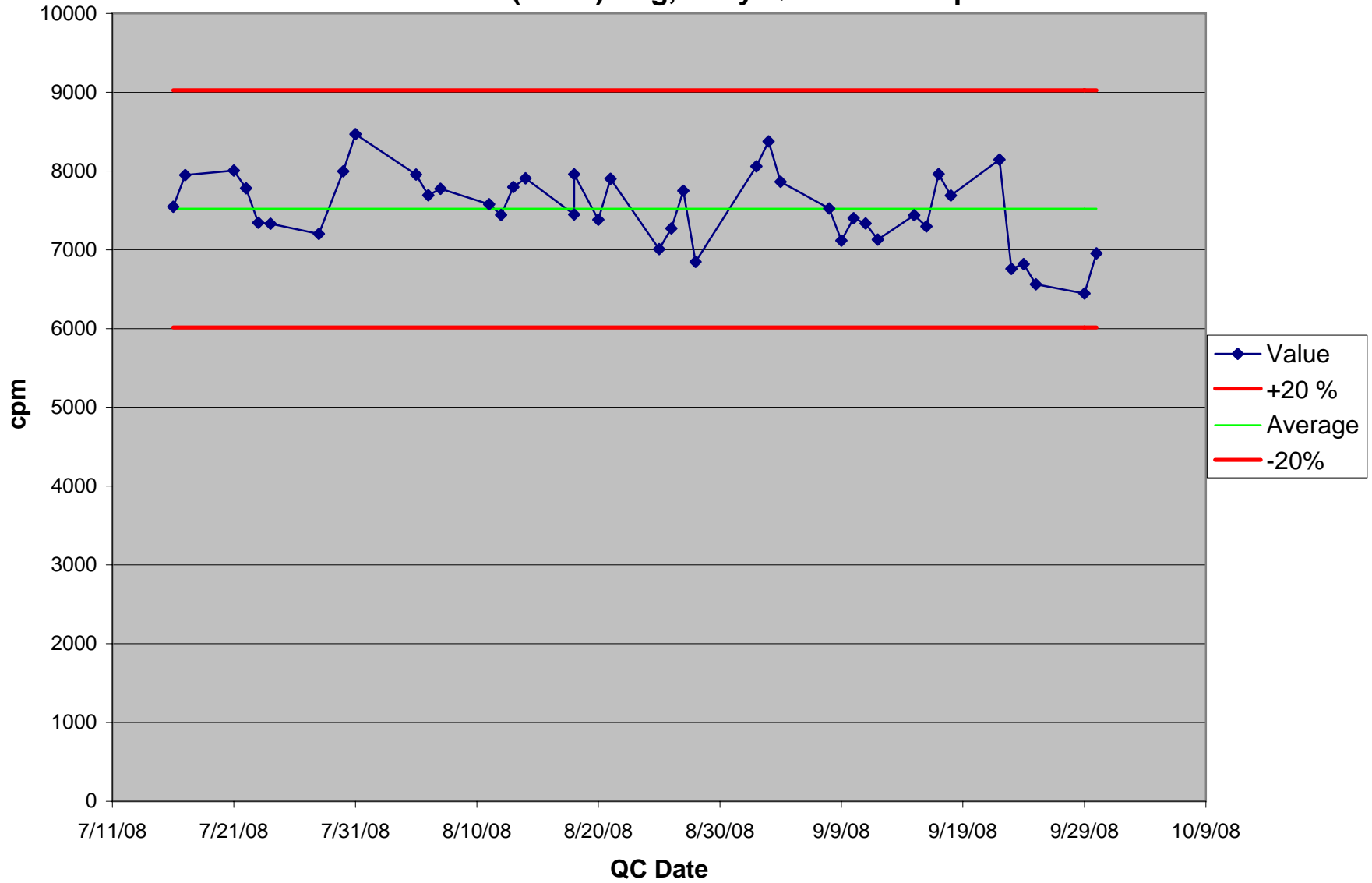
Inst.#190296 (43-69) Beta Source-2, Daily QC Trend Graph



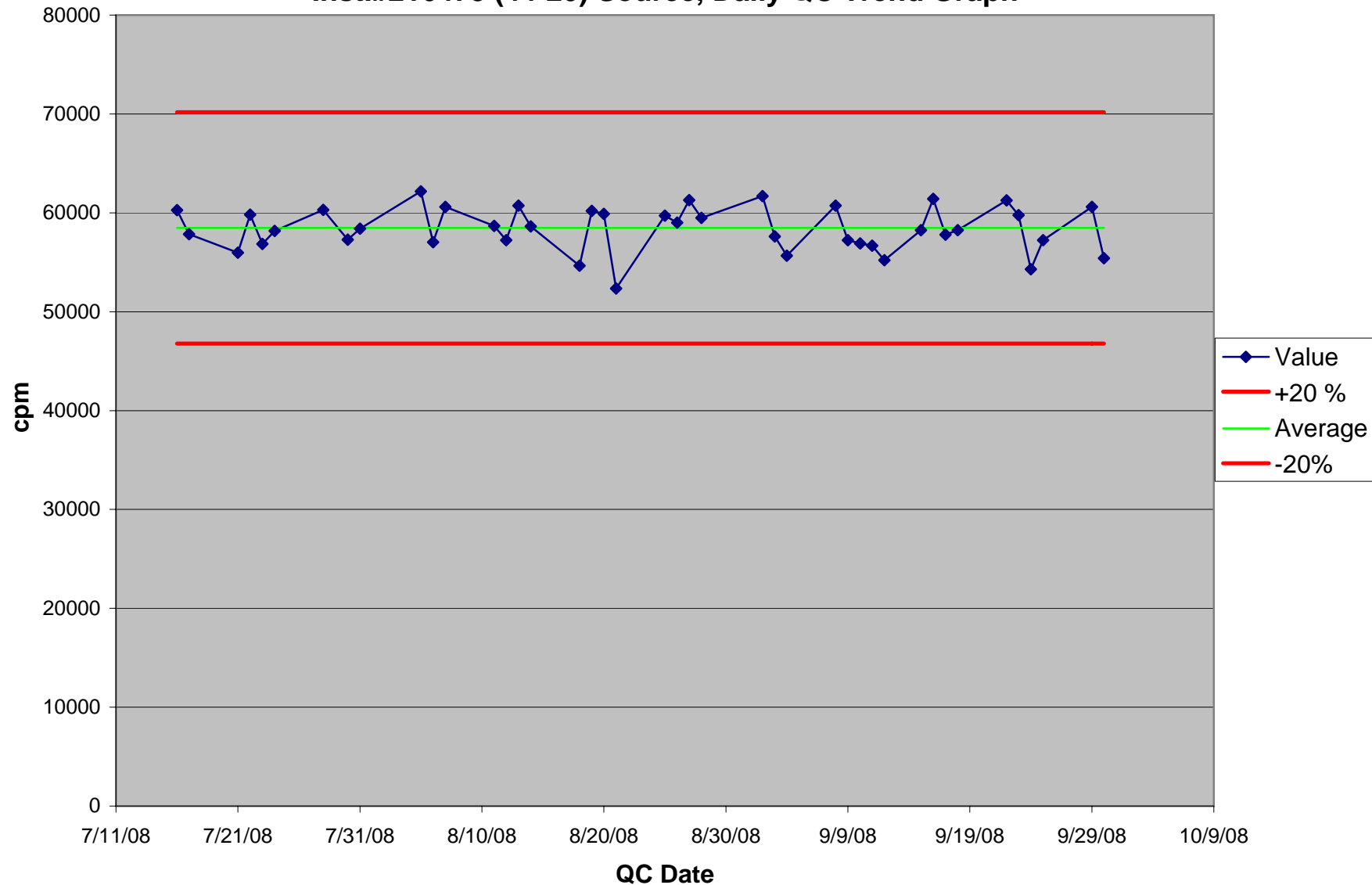
CABRERA ALPHA-BETA COUNTING INSTRUMENT (Rev 6)

Counting Instrument:		2224-1		Detector:		43-93		Calibration Date:		10/26/2007								
Serial #:		227224		Serial #:		PR244545		12 month calibration:		OK								
Detector Active Area or Area Covered by Smear (cm ²):						100												
	Efficiency (fraction)	Source Nuclide	Source Number	Original Source Activity (DPM)	Source Creation Date	T _{1/2} (yr)	Source Decayed Activity	Required MDA (DPM/100cm ²)	Control Chart & Daily Bkg Count Time	Control Chart & Daily Source-Sample Count Time	Control Chart bkg Average α/β cpm	Control Chart bkg 1 sigma, cpm	Control Chart Source-bkg Average α/β cpm	Control Chart source 1 sigma, cpm				
Alpha	0.1500	Th-230	3973-02	17,500	4/29/2002	7.54E+04	17,499	100	1	1	1.10	1.10	3615.7	67.89				
Beta	0.1000	Tc-99	3975-02	17,700	4/29/2002	2.11E+05	17,700	1000	1	1	138.50	8.22	2622.5	153.78				
Date	Daily Bkg Counts		Daily Check Source Counts		Daily Bkg Rate (cpm)		Net Daily Source Rate (cpm)		Bkg QC Pass/Fail		Source QC Pass/Fail		MDA α (dpm)	MDA β (dpm)	α MDA OK?	β MDA OK?	H.P. Technician	Technician Initials
	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta						
5/7/2008	1	136	3537	2832	1.0	136.0	3536.0	2696.0	PASS	PASS	PASS	PASS	51.02	573	Yes	Yes	GMT	GMT
5/8/2008	1	149	3580	2967	1.0	149.0	3579.0	2818.0	PASS	PASS	PASS	PASS	51.02	598	Yes	Yes	GMT	GMT
5/9/2008	0	152	3519	2847	0.0	152.0	3519.0	2695.0	PASS	PASS	PASS	PASS	20.00	604	Yes	Yes	GMT	GMT
5/12/2008	1	143	3627	2950	1.0	143.0	3626.0	2807.0	PASS	PASS	PASS	PASS	51.02	586	Yes	Yes	GMT	GMT
5/13/2008	1	129	3626	2636	1.0	129.0	3625.0	2507.0	PASS	PASS	PASS	PASS	51.02	558	Yes	Yes	GMT	GMT
5/14/2008	1	135	3536	2811	1.0	135.0	3535.0	2676.0	PASS	PASS	PASS	PASS	51.02	571	Yes	Yes	GMT	GMT
5/15/2008	0	133	3671	2914	0.0	133.0	3671.0	2781.0	PASS	PASS	PASS	PASS	20.00	567	Yes	Yes	GMT	GMT
5/19/2008	1	143	3653	2655	1.0	143.0	3652.0	2512.0	PASS	PASS	PASS	PASS	51.02	586	Yes	Yes	GMT	GMT
5/20/2008	0	139	3695	2754	0.0	139.0	3695.0	2615.0	PASS	PASS	PASS	PASS	20.00	579	Yes	Yes	GMT	GMT
5/21/2008	1	148	3683	2729	1.0	148.0	3682.0	2581.0	PASS	PASS	PASS	PASS	51.02	596	Yes	Yes	GMT	GMT
5/22/2008	1	139	3648	2848	1.0	139.0	3647.0	2709.0	PASS	PASS	PASS	PASS	51.02	579	Yes	Yes	GMT	GMT
5/27/2008	0	128	3703	2772	0.0	128.0	3703.0	2644.0	PASS	PASS	PASS	PASS	20.00	556	Yes	Yes	GMT	GMT
5/28/2008	1	135	3654	2794	1.0	135.0	3653.0	2659.0	PASS	PASS	PASS	PASS	51.02	571	Yes	Yes	GMT	GMT
5/29/2008	1	133	3686	2833	1.0	133.0	3685.0	2700.0	PASS	PASS	PASS	PASS	51.02	567	Yes	Yes	GMT	GMT
6/2/2008	1	140	3710	2802	1.0	140.0	3709.0	2662.0	PASS	PASS	PASS	PASS	51.02	581	Yes	Yes	GMT	GMT
6/3/2008	0	147	3673	2927	0.0	147.0	3673.0	2780.0	PASS	PASS	PASS	PASS	20.00	594	Yes	Yes	GMT	GMT
6/16/2008	1	154	3726	2877	1.0	154.0	3725.0	2723.0	PASS	PASS	PASS	PASS	51.02	607	Yes	Yes	GMT	GMT
7/22/2008	0	138	3578	2757	0.0	138.0	3578.0	2619.0	PASS	PASS	PASS	PASS	20.00	577	Yes	Yes	MMD	MMD
8/4/2008	0	135	3559	2707	0.0	135.0	3559.0	2572.0	PASS	PASS	PASS	PASS	20.00	571	Yes	Yes	MMD	MMD
8/5/2008	1	146	3516	2582	1.0	146.0	3515.0	2436.0	PASS	PASS	PASS	PASS	51.02	592	Yes	Yes	MMD	MMD
8/6/2008	1	149	3570	2603	1.0	149.0	3569.0	2454.0	PASS	PASS	PASS	PASS	51.02	598	Yes	Yes	MMD	MMD
8/7/2008	0	134	3577	2577	0.0	134.0	3577.0	2443.0	PASS	PASS	PASS	PASS	20.00	569	Yes	Yes	MMD	MMD
8/13/2008	0	132	3497	2554	0.0	132.0	3497.0	2422.0	PASS	PASS	PASS	PASS	20.00	565	Yes	Yes	GB	GB
8/27/2008	3	124	3488	2629	3.0	124.0	3485.0	2505.0	PASS	PASS	PASS	PASS	73.73	548	Yes	Yes	MMD	MMD
8/28/2008	0	123	3577	2645	0.0	123.0	3577.0	2522.0	PASS	PASS	PASS	PASS	20.00	546	Yes	Yes	MMD	MMD
9/22/2008	1	142	3550	2721	1.0	142.0	3549.0	2579.0	PASS	PASS	PASS	PASS	51.02	584	Yes	Yes	MMD	MMD
9/23/2008	0	145	3531	2649	0.0	145.0	3531.0	2504.0	PASS	PASS	PASS	PASS	20.00	590	Yes	Yes	MMD	MMD
9/24/2008	1	132	3511	2672	1.0	132.0	3510.0	2540.0	PASS	PASS	PASS	PASS	51.02	565	Yes	Yes	MMD	MMD
9/29/2008	0	126	3463	2640	0.0	126.0	3463.0	2514.0	PASS	PASS	QUESTION	PASS	20.00	552	Yes	Yes	MMD	MMD
9/30/2008	1	152	3558	2667	1.0	152.0	3557.0	2515.0	PASS	PASS	PASS	PASS	51.02	604	Yes	Yes	MMD	MMD
10/1/2008	2	154	3482	2608	2.0	154.0	3480.0	2454.0	PASS	PASS	PASS	PASS	63.87	607	Yes	Yes	MMD	MMD

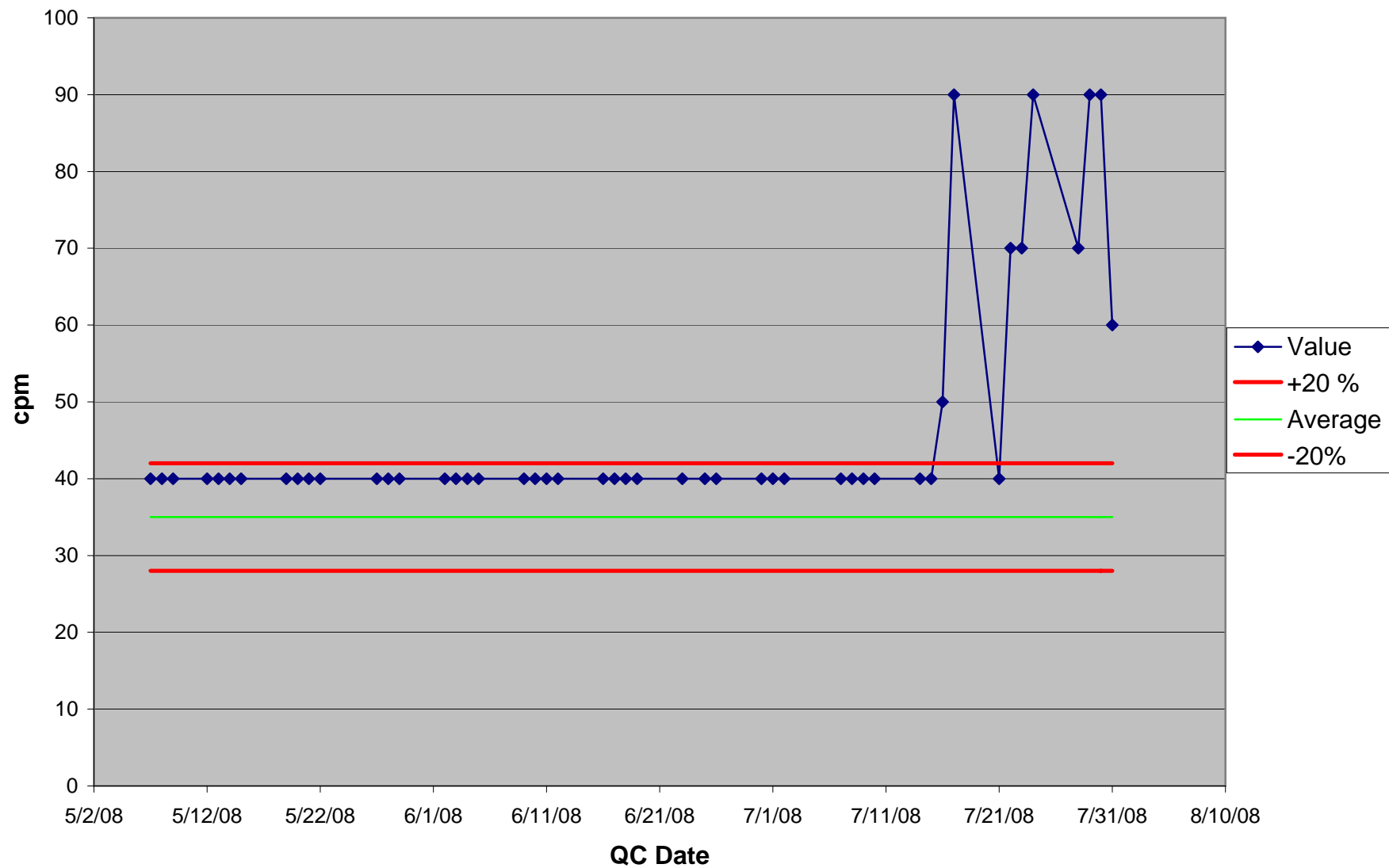
Inst.#216473 (44-20) Bkg, Daily QC Trend Graph



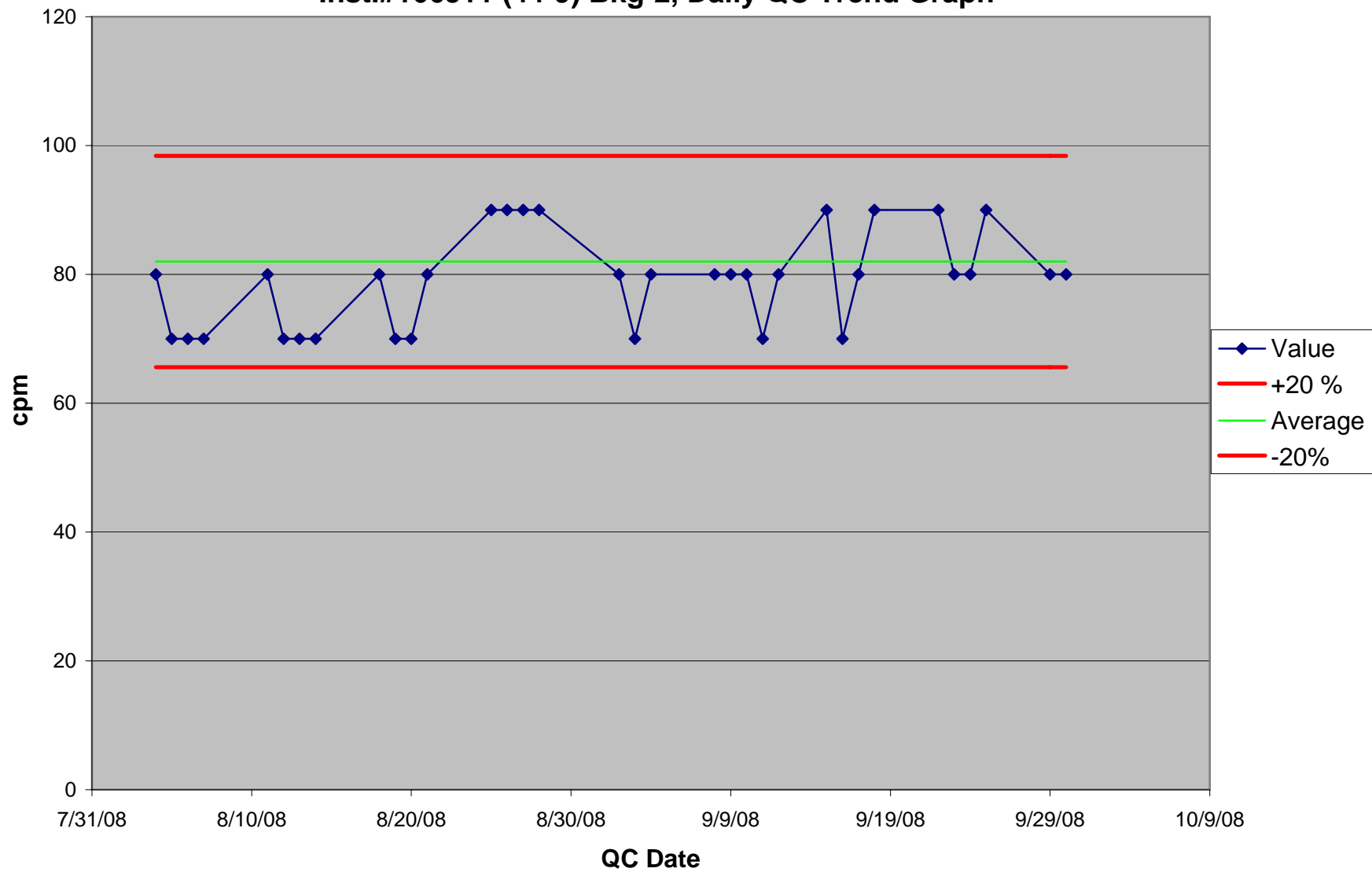
Inst.#216473 (44-20) Source, Daily QC Trend Graph



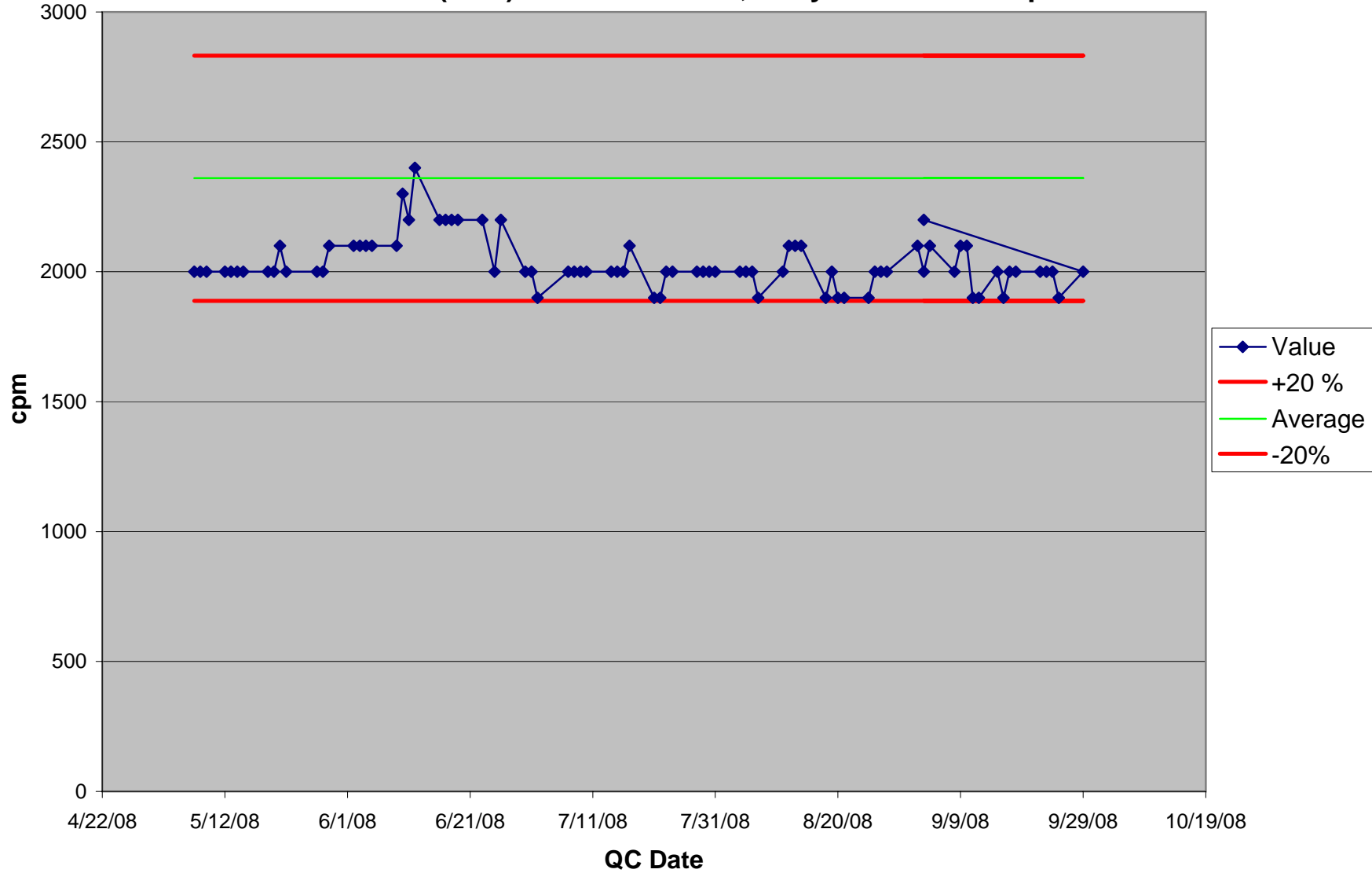
Inst.#166511 (44-9) Bkg-1, Daily QC Trend Graph



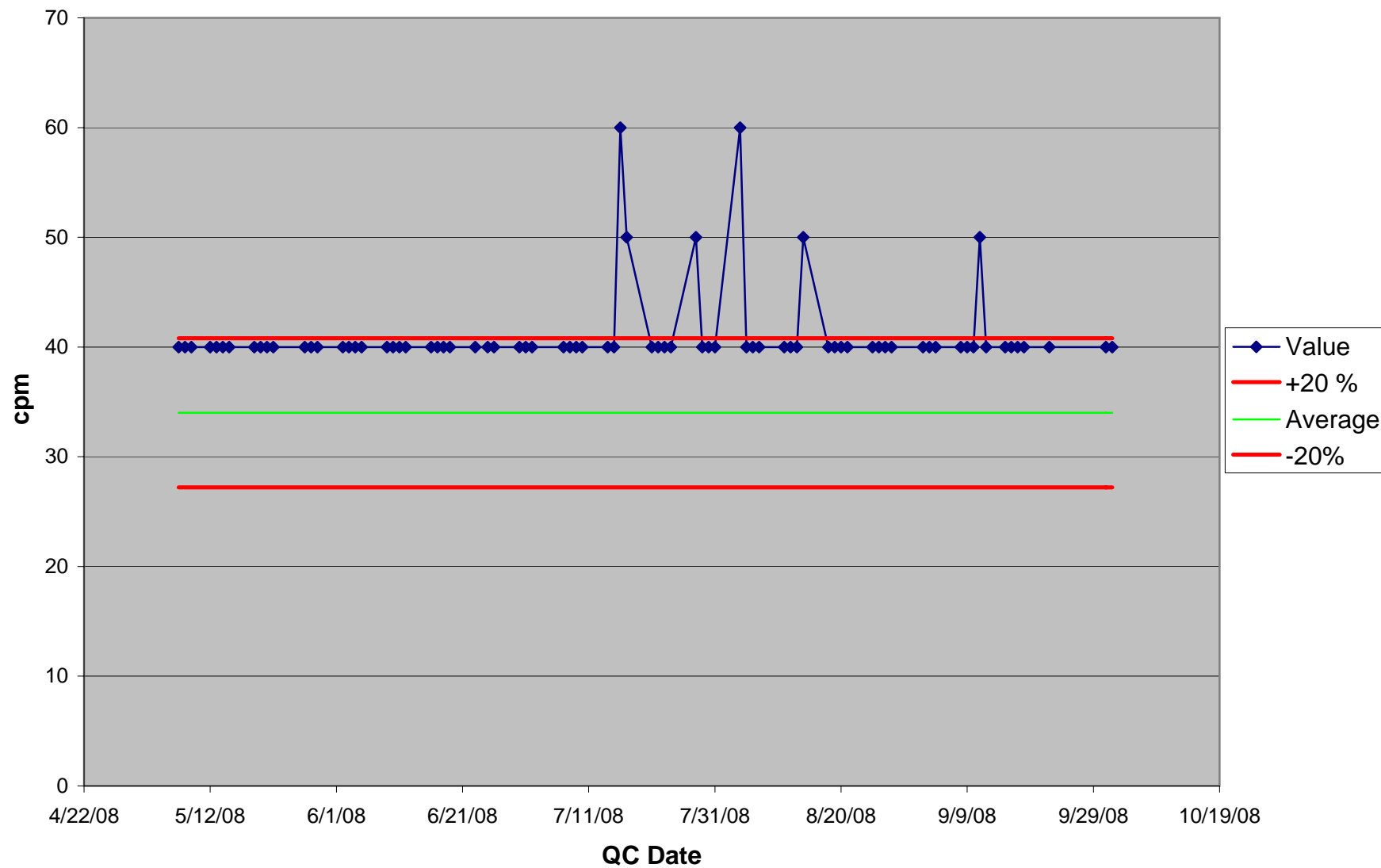
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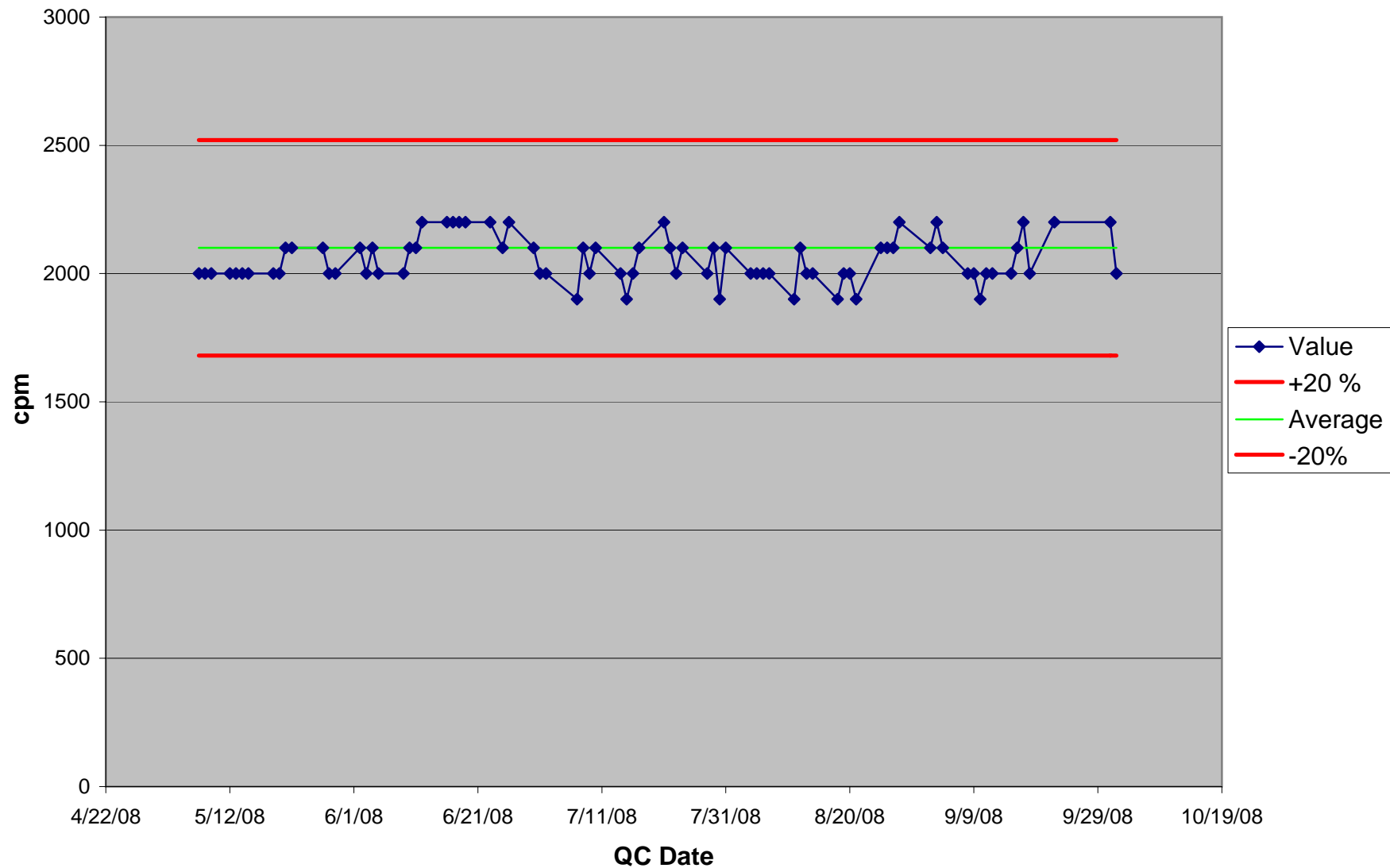
Inst.#166511 (44-9) Gamma Source, Daily QC Trend Graph



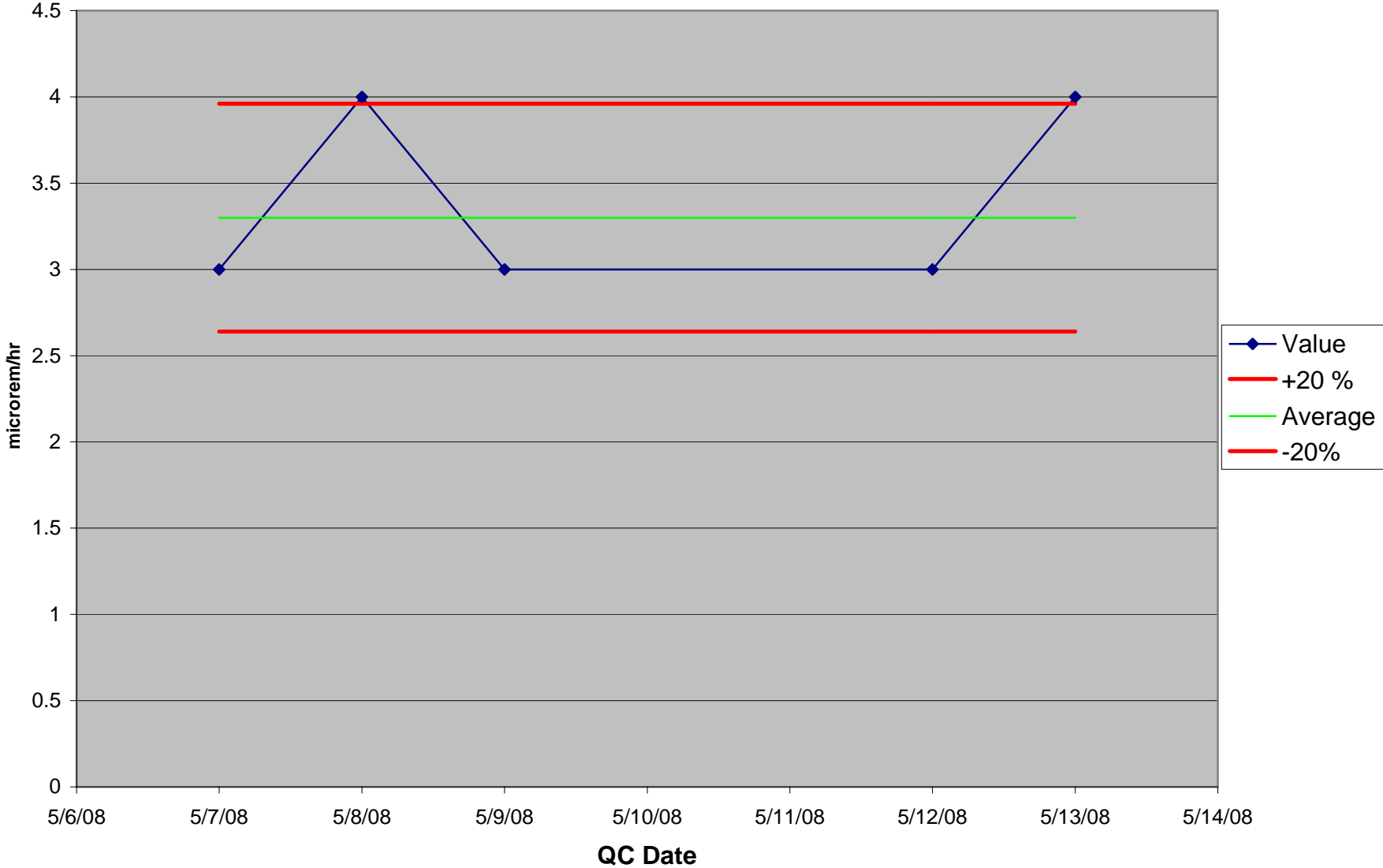
Inst.#79498 (44-9) Bkg, Daily QC Trend Graph



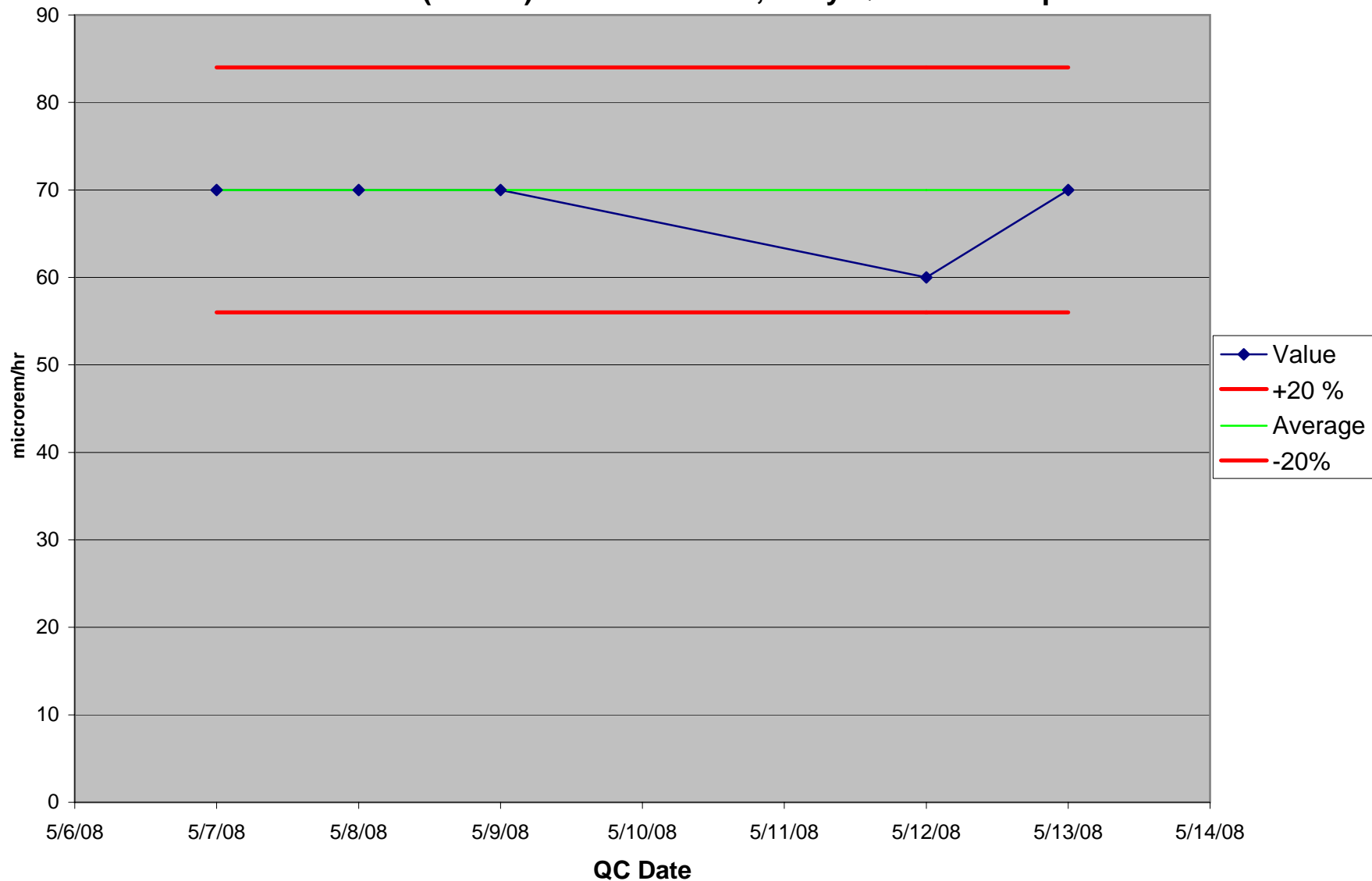
Inst.#79498 (44-9) Gamma Source, Daily QC Trend Graph



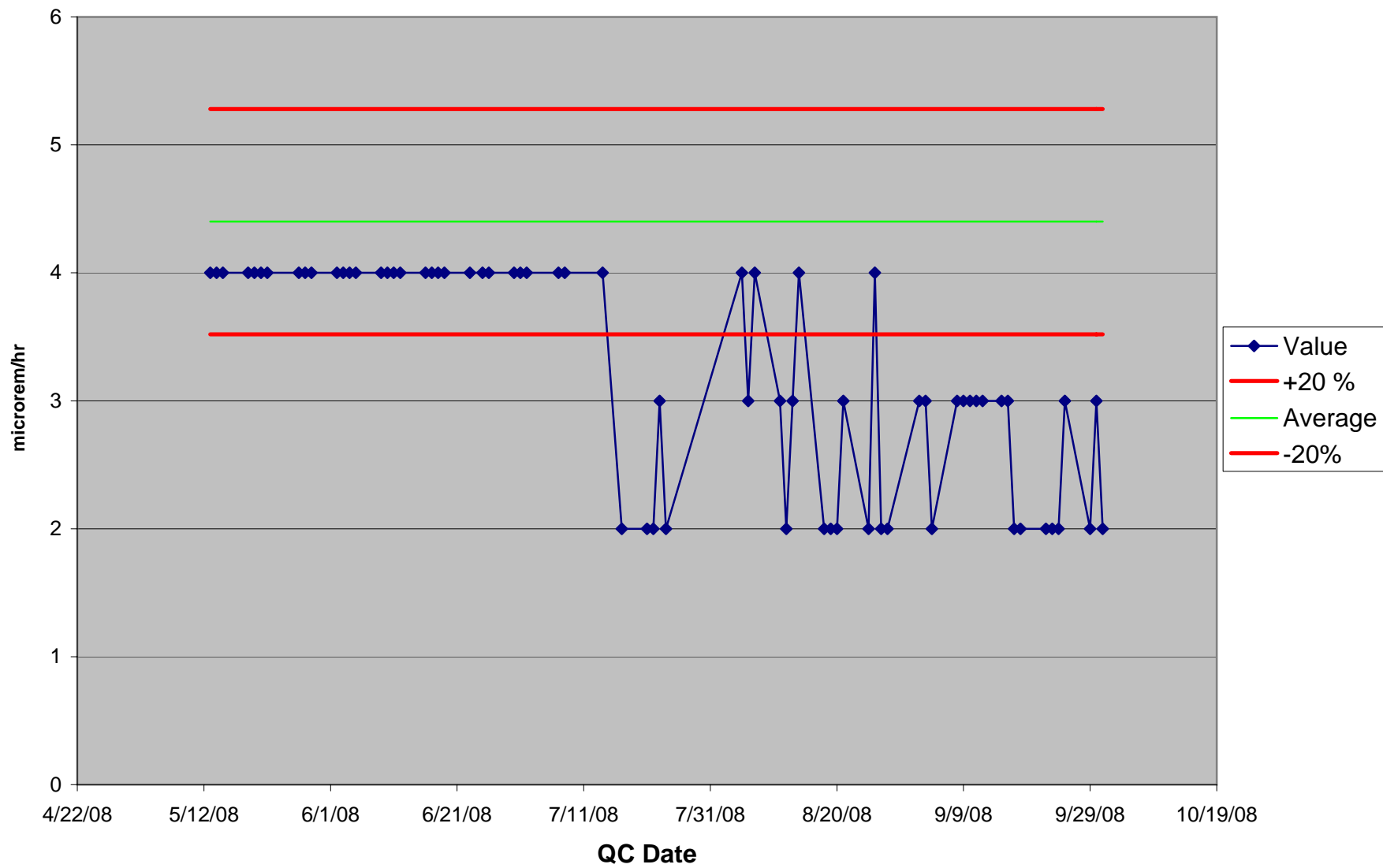
Inst.#C854F (Bicron) Bkg, Daily QC Trend Graph



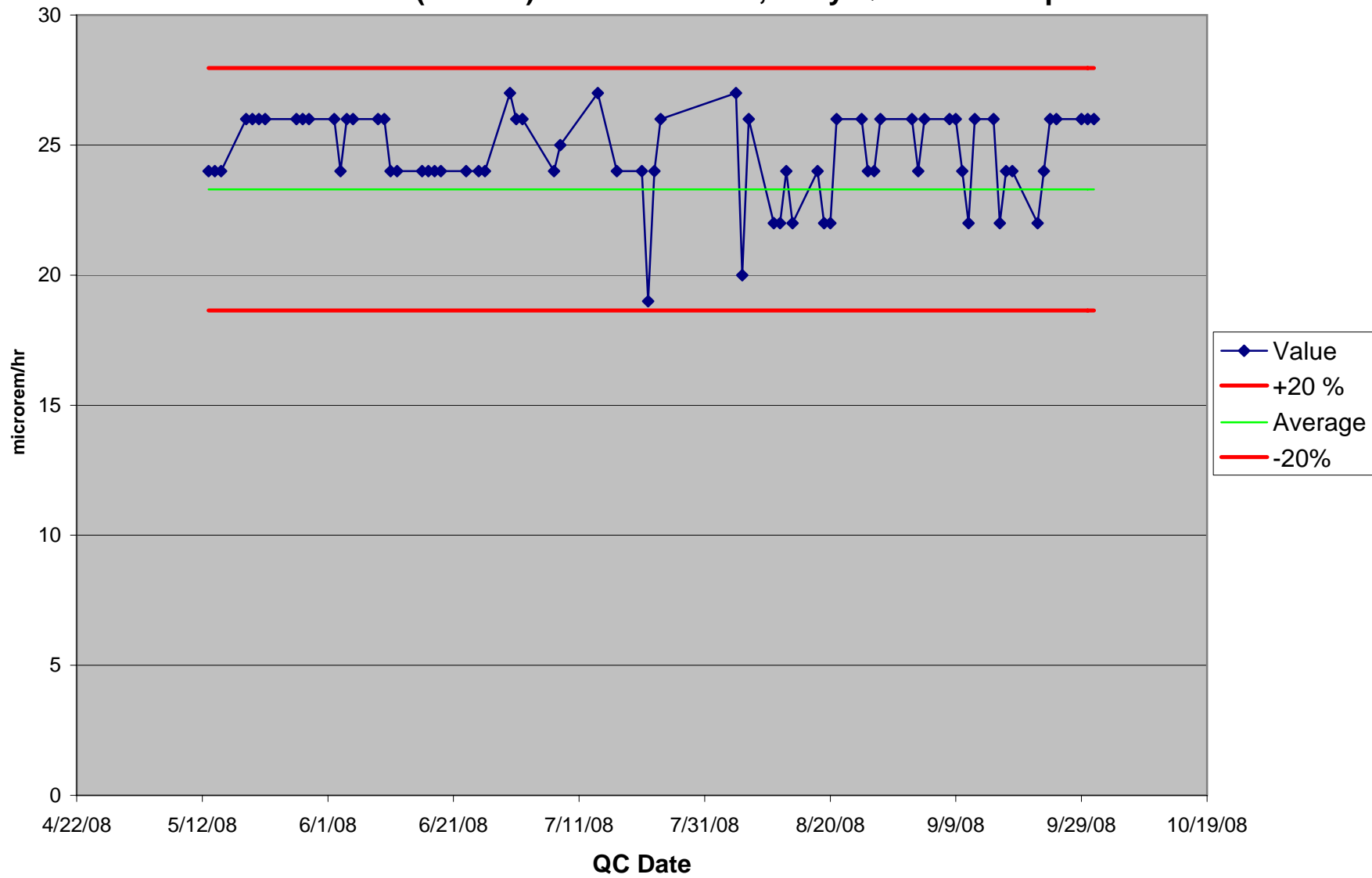
Inst.#C854F (Bicron) Gamma Source, Daily QC Trend Graph



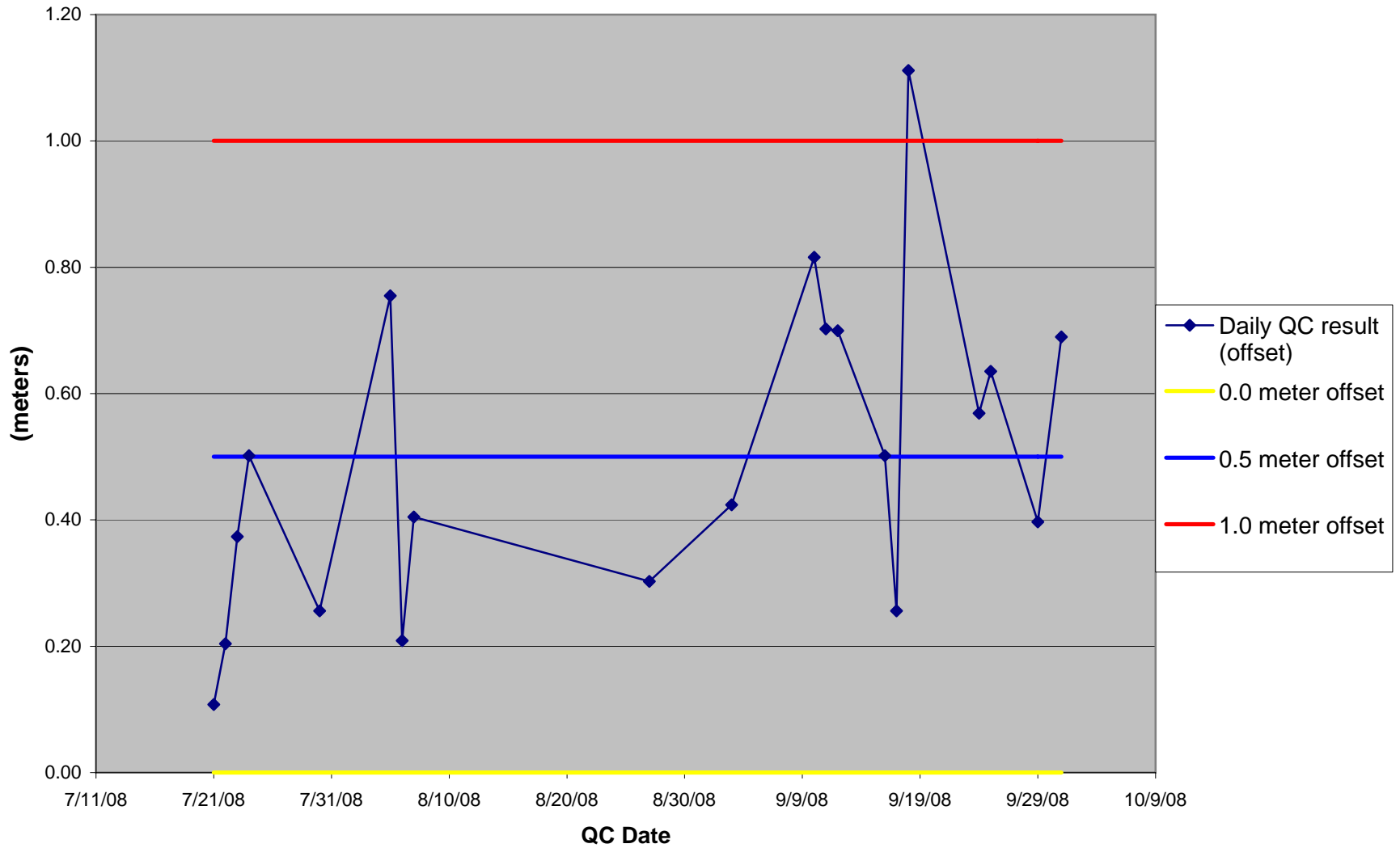
Inst.#87139 (Mod 19) Bkg, Daily QC Trend Graph



Inst.#87139 (Mod 19) Gamma Source, Daily QC Trend Graph



Daily QC Trend Graph
Trimble #0224022532, Antenna # 0220240863, Handset # 0220151251



Instrument Efficiency Calculator (Rev 2)

PROJECT NAME
R-14

ISOTOPE	SOURCE ID #:	SOURCE CREATION DATE:
230Th	3973-02	4/29/2002

Initial Source					DPM on Date
DPM	half life, yrs	Decay-to-Date	lamda, yr-1	decay, yrs	Efficiency Performed
17500	7.54E+04	11/12/2004	9.193E-06	2.54	17500

Source μ Ci	half life, yrs	Decay-to-Date	lamda, yr-1	decay, yrs	μ Ci on Date

Average background counts, cpm	Average Source plus background counts, cpm	DPM Based Calculated Efficiency, cpm/dpm	μ Ci Based Calculated Efficiency, cpm/dpm
0.2	6072.9	0.347	

For:
Instrument/Probe Ludlum 2929 w 43-10-1
Serial numbers 200051

By:

Name	Date Performed
Nick Berliner	8/27/2004

Background Counts, cpm	Source plus Background Counts, cpm
0	5921
0	6053
0	5954
0	5856
0	6008
0	6240
0	6220
0	6057
0	6132
0	6288
Average	0.2 6072.9

Instrument Efficiency Calculator (Rev 2)

PROJECT NAME
R-14

ISOTOPE	SOURCE ID #:	SOURCE CREATION DATE:
T-cc	3973-02	4/29/2002

Initial Source					DPM on Date
DPM	half life, yrs	Decay-to-Date	lamda, yr-1	decay, yrs	Efficiency Performed
17700	7.54E+04	11/12/2004	9.193E-06	2.54	17700

Source μ Ci	half life, yrs	Decay-to-Date	lamda, yr-1	decay, yrs	μ Ci on Date

Average background counts, cpm	Average Source plus background counts, cpm	DPM Based Calculated Efficiency, cpm/dpm	μ Ci Based Calculated Efficiency, cpm/dpm
42.8	5513.3	0.309	

For:
Instrument/Probe Ludlum 2929 w 43-10-1
Serial numbers 200051

Background Counts, cpm	Source plus Background Counts, cpm
44	5572
41	5514
39	5497
43	5404
41	5596
45	5625
45	5509
44	5516
41	5478
44	5422
Average	42.8 5513.3

By:

Name	Date Performed
Nick Berliner	8/27/2004