LEGe GAMMA SPECTROMETRY

OF

NOPAL I SAMPLES

Supplemental Material, Technical Activity
Supporting Documentation: Experimental Data
for LEGe Gamma Spectrometry of Nopal I
Samples (01/26/1996 through 04/11/1996)

Gamma spectrometry calculations for Nopal I rock powders

Sample= **BL5D_2**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.07E+05	1.26724064
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.42E+05	1.10021742
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.43E+05	1.06312984
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.38E+05	1.01609848
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.16E+05	1.01829404
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.78E+06	1.01666769
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.15E+05	0.99563952
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.77E+04	0.99432888
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.07E+04	1.02752754

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.01569223	0.973788381
Eu154,155	42.9	1.01104185	0.989527848
Eu154,155	48.6	1.01004109	0.975609235
Eu155	86.4	1	0.986697569
Eu155	105	1.00459446	0.995391254
Eu154	123	1.00557648	0.997203894
Sb125	178	1.00579387	0.98717322
Eu154	248	0.99126626	0.991266264
Eu154	592	0.99571416	1.004273556
Sb125	600	1.01127875	#DIV/0!
Sb125	636	0.99536228	1.013826623

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.019logx+1.042
CF (DM1B) equation = y =0.032logx+0.928

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.01524344	0.973063679
231Pa	27.4	1.01468274	0.974008018
210Pb	46.5	1.01031839	0.981358494
227Ac	50	1.00971957	0.98236704
234U+214Pb	53.2	1.00920768	0.983229172
234Th->238U	63.3	1.00777333	0.985644919
230Th	67.6	1.00723101	0.986558294
234Th->238U	92.6	1.00463439	0.990931552
228Ac->228Ra	129	1.0018988	0.995538871
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.0155		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	1/27/96		1/23/96		1/25/96	
231Th->235U	25.6	2.88E+04	4.49E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	2.43E+04	3.93E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	3.29E+05	7.47E+02	2.28E+04	2.00E+02	0	0
227Ac	50	3.27E+04	5.00E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	6.17E+04	5.49E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	3.03E+05	1.04E+03	2.11E+04	2.05E+02	0	0
230Th	67.6	3.68E+04	5.46E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	4.12E+05	3.79E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0	0	0	0	4.92E+03	1.64E+02
235U+226Ra	186	2.85E+05	7.27E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	1.56E+04	4.51E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	0.00E+00	0.00E+00	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	2.20E+05	6.27E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	4.33E+05	7.80E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	6.49E+05	1.31E+03	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	3.20E+05	6.82E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.36	0.02675	0	6.0365615	±	0.5027136
231Pa	27.4	0.44395	0.30375	0.024125	0	5.64442829	±	0.4759418
210Pb	46.5	9.361	4.1125	0.285	0	135.81515	±	8.24130764
227Ac	50	0.44395	0.40875	0.030625	0	5.95419652	±	0.47770627
234U+214Pb	53.2	9.361	1.02125	0.072875	0	131.753741	±	8.59458242
234Th->238U	63.3	9.361	3.7875	0.26375	0	134.819261	±	8.20757541
230Th	67.6	9.361	0.46	0.03325	0	129.814791	±	10.6338903
234Th->238U	92.6	9.361	5.15	0.35125	0	137.223296	±	10.5925862
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	3.5625	0.24625	0	134.774442	±	8.19748482
227Th->227Ac	236	0.44395	0.19375	0.014125	0	6.06029797	±	0.50964371
212Pb->228Th	239	5.5494	0	0	0.71875	0	±	#DIV/0!
214Pb->226Ra	242	9.361	2.75	0.1825	0	140.377897	±	8.86923178
214Pb->226Ra	295	9.361	5.4125	0.3575	0	141.042751	±	8.52363618
214Pb->226Ra	352	9.361	8.1125	0.5325	0	141.926668	±	8.55754264
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	4	0.26625	0	139.958501	±	8.48201395

U(ppb) = 10839505.4

Th(ppb) = 0

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.615465957	0.0459457	125.941442	±	7.95712047
234U(295)	53.2	9.361	0.710397529	0.05234294	127.600612	±	7.71128744
234U(352)	53.2	9.361	0.780251411	0.05705599	128.570934	±	7.75225172
235U(63.3)	186	0.44395	0.175770155	0.0122401	6.34455105	±	0.38624586
235U(92.6)	186	0.44395	0.2371575	0.01617506	6.47786091	±	0.50004119
226Ra(63.3)	186	9.361	3.388085625	0.23410431	134.826069	±	8.20798986
226Ra(92.6)	186	9.361	3.3253425	0.23007494	134.646782	±	10.3936991

234U/238U =	0.944753706	±	0.061122899
230Th/234U =	1.019186432	±	0.086419308
226Ra/230Th =	1.038603285	±	0.085748529

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-113-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.56E+05	1.34656644
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.11E+05	1.1230862
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.32E+05	1.08742499
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.32E+05	1.02517628
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.27E+04	1.01392171
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.36E+04	0.99789621
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.81E+04	0.98323917
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.08E+04	1.02279897

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.07927179	1.034744874
Eu154,155	42.9	1.03205705	1.010095872
Eu154,155	48.6	1.03312303	0.997904323
Eu155	86.4	1.00893397	0.995512694
Eu155	105	1.00924582	1
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00813665	0.989472622
Eu154	248	1.0044445	1.004444503
Eu154	592	0.98521063	0.993679731
Sb125	600	1	#DIV/0!
Sb125	636	0.99078173	1.009161106

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.097logx+1.204
CF (DM1B) equation = y =-0.043logx+1.084

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.06740072	1.023445681
231Pa	27.4	1.0645382	1.022176726
210Pb	46.5	1.04225706	1.012299523
227Ac	50	1.03919991	1.01094429
234U+214Pb	53.2	1.03658657	1.0097858
234Th->238U	63.3	1.02926384	1.00653964
230Th	67.6	1.02649517	1.005312292
234Th->238U	92.6	1.01323873	0.999435728
228Ac->228Ra	129	0.9992728	0.993244642
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		60000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	1/26/96		1/23/96		1/25/96	
231Th->235U	25.6	1.75E+04	3.64E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.52E+04	3.33E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.79E+05	5.48E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.88E+04	3.46E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	4.57E+04	4.00E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.77E+05	7.78E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	2.10E+04	4.38E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	2.36E+05	5.83E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0	0	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.56E+05	5.36E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	6.78E+03	2.07E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.82E+03	1.50E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.18E+05	5.07E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.26E+05	5.86E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	3.40E+05	9.04E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.70E+05	4.98E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.21875	0.02675	0	3.87383515	±	0.32698545
231Pa	27.4	0.44395	0.19	0.024125	0	3.72080487	±	0.31852274
210Pb	46.5	9.361	2.2375	0.285	0	76.5721046	±	4.64908039
227Ac	50	0.44395	0.235	0.030625	0	3.53899731	±	0.28623901
234U+214Pb	53.2	9.361	0.57125	0.072875	0	76.038016	±	4.97842435
234Th->238U	63.3	9.361	2.2125	0.26375	0	80.7969709	±	4.9237875
230Th	67.6	9.361	0.2625	0.03325	0	75.8354244	±	6.31080756
234Th->238U	92.6	9.361	2.95	0.35125	0	79.6333562	±	6.41248385
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	1.975	0.24625	0	75.0530617	±	4.56809218
227Th->227Ac	236	0.44395	0.10975	0.014125	0	3.44830316	±	0.2839625
212Pb->228Th	239	5.5494	0.02025	0	0.71875	0.15629623	±	0.01711979
214Pb->226Ra	242	9.361	1.45	0.1825	0	74.3502933	±	4.72117275
214Pb->226Ra	295	9.361	2.825	0.3575	0	73.9468977	±	4.47068431
214Pb->226Ra	352	9.361	4.25	0.5325	0	74.6873191	±	4.50516554
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	2.125	0.26625	0	74.6873191	±	4.52882198

U(ppb) = 6496098.56

Th(ppb) = 38381.1635

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.357291141	0.0459457	75.432856	±	4.78991445
234U(295)	53.2	9.361	0.409003676	0.05234294	75.7970328	±	4.58253985
234U(352)	53.2	9.361	0.444994961	0.05705599	75.6548906	±	4.56352979
235U(63.3)	186	0.44395	0.10486719	0.01250112	3.72288978	±	0.22687383
235U(92.6)	186	0.44395	0.1358475	0.01617506	3.72730602	±	0.30014168
226Ra(63.3)	186	9.361	1.873114375	0.23410431	74.8742414	±	4.56285489
226Ra(92.6)	186	9.361	1.8391525	0.23007494	74.8041999	±	6.02361556

234U/238U =	0.936028404	±	0.060946608
230Th/234U =	1.002739248	±	0.086555286
226Ra/230Th =	0.98732541	±	0.082834232

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-114-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.79E+05	1.30911219
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.23E+05	1.11408162
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.35E+05	1.08065089
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.38E+05	1.01609848
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.15E+05	1.02064415
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.28E+04	1.01510533
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.14E+05	#DIV/0!
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.34E+04	1.00638304
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.9971537
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.09E+04	1.01812821

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.04925225	1.005963828
Eu154,155	42.9	1.02378232	1.001997214
Eu154,155	48.6	1.02668719	0.991687886
Eu155	86.4	1	0.986697569
Eu155	105	1.00691295	0.997688506
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00931351	0.990627703
Eu154	248	#DIV/0!	#DIV/0!
Eu154	592	0.99358957	1.002130697
Sb125	600	1.01415172	#DIV/0!
Sb125	636	0.98625718	1.004552621

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.062logx+1.132
CF (DM1B) equation = y = -0.009logx+1.015

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.04468912	1.00232584
231Pa	27.4	1.04285947	1.002060245
210Pb	46.5	1.02861792	0.999992923
227Ac	50	1.02666386	0.99970927
234U+214Pb	53.2	1.02499348	0.999466795
234Th->238U	63.3	1.02031297	0.998787367
230Th	67.6	1.0185433	0.99853048
234Th->238U	92.6	1.01007012	0.997300501
228Ac->228Ra	129	1.00114344	0.996004693
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.006		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	1/29/96		1/23/96		1/25/96	
231Th->235U	25.6	2.35E+04	3.78E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.98E+04	3.29E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.34E+05	6.28E+02	2.28E+04	2.00E+02	0	0
227Ac	50	2.50E+04	3.93E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	5.98E+04	4.58E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.31E+05	6.30E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	2.63E+04	5.03E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	3.11E+05	7.84E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0	0	0	0	4.92E+03	1.64E+02
235U+226Ra	186	2.06E+05	6.13E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	1.17E+04	1.93E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	9.71E+02	1.41E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.51E+05	9.33E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.96E+05	6.41E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	4.46E+05	1.07E+03	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.22E+05	5.69E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.29375	0.02675	0		5.08454671	±	0.4239098
231Pa	27.4	0.44395	0.2475	0.024125	0		4.74181655	±	0.40024151
210Pb	46.5	9.361	2.925	0.285	0		98.6584662	±	5.98823624
227Ac	50	0.44395	0.3125	0.030625	0		4.64315603	±	0.37290644
234U+214Pb	53.2	9.361	0.7475	0.072875	0		98.2546235	±	6.41952409
234Th->238U	63.3	9.361	2.8875	0.26375	0		104.390793	±	6.35610827
230Th	67.6	9.361	0.32875	0.03325	0		94.1137059	±	7.79179856
234Th->238U	92.6	9.361	3.8875	0.35125	0		104.47319	±	8.40831901
228Ac->228Ra	129	5.5494	0	0	0.0615		0	±	#DIV/0!
235U+226Ra	186	9.361	2.575	0.24625	0		97.7237803	±	5.94581115
227Th->227Ac	236	0.44395	0.14625	0.014125	0		4.58900465	±	0.3699073
212Pb->228Th	239	5.5494	0.0121375	0	0.71875		0.0935566	±	0.01428981
214Pb->226Ra	242	9.361	1.8875	0.1825	0		96.6547843	±	6.129703
214Pb->226Ra	295	9.361	3.7	0.3575	0		96.7219274	±	5.84635185
214Pb->226Ra	352	9.361	5.575	0.5325	0		97.8418203	±	5.90078777
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	#DIV/0!
214Bi->226Ra	609	9.361	2.775	0.26625	0		97.4030678	±	5.90462264

U(ppb) = 8393048.3

Th(ppb) = 22974.3939

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.468984589	0.0459457		97.7764151	±	6.20083516
234U(295)	53.2	9.361	0.53500039	0.05234294		97.9075825	±	5.91801871
234U(352)	53.2	9.361	0.581883096	0.05705599		97.6910754	±	5.89169642
235U(63.3)	186	0.44395	0.135670378	0.0123924		4.85222135	±	0.29544027
235U(92.6)	186	0.44395	0.179019375	0.01617506		4.9052952	±	0.39479303
226Ra(63.3)	186	9.361	2.442030625	0.23410431		97.4857094	±	5.93567408
226Ra(92.6)	186	9.361	2.395980625	0.23007494		97.3224993	±	7.83280972

234U/238U =	0.936784636	±	0.060855215	
230Th/234U =	0.962389595	±	0.08260384	
226Ra/230Th =	1.035829038	±	0.08642631	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-115-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.88E+05	1.29523441
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.38E+05	1.10309725
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.41E+05	1.06743809
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.35E+05	1.02061037
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.16E+05	1.01829404
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.78E+06	1.01666769
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.27E+04	1.01392171
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.32E+04	1.01069927
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.9971537
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.11E+04	1.00895538

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.03812921	0.99529969
Eu154,155	42.9	1.01368826	0.992117948
Eu154,155	48.6	1.0141342	0.979562816
Eu155	86.4	1.00444041	0.991078907
Eu155	105	1.00459446	0.995391254
Eu154	123	1.00557648	0.997203894
Sb125	178	1.00813665	0.989472622
Eu154	248	1	1
Eu154	592	0.99785093	1.006428696
Sb125	600	1.01415172	#DIV/0!
Sb125	636	0.9773715	0.995502108

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.045logx+1.094
CF (DM1B) equation = y =-0.007logx+0.979

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.0306292	0.98885768
231Pa	27.4	1.02930122	0.989064254
210Pb	46.5	1.01896462	0.990672171
227Ac	50	1.01754635	0.99089279
234U+214Pb	53.2	1.01633398	0.991081381
234Th->238U	63.3	1.01293683	0.991609826
230Th	67.6	1.0116524	0.991809627
234Th->238U	92.6	1.00550251	0.992766277
228Ac->228Ra	129	0.99902346	0.993774128
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	1/30/96		1/23/96		1/25/96	
231Th->235U	25.6	7.62E+03	2.21E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	7.27E+03	2.08E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.03E+05	4.06E+02	2.28E+04	2.00E+02	0	0
227Ac	50	8.70E+03	2.29E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	2.39E+04	2.86E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	7.28E+04	3.92E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	9.02E+03	2.81E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	9.75E+04	4.67E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0	0	0	0	4.92E+03	1.64E+02
235U+226Ra	186	7.75E+04	3.81E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	3.95E+03	9.70E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.17E+03	8.14E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.20E+04	5.82E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.21E+05	4.08E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	1.82E+05	6.04E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	9.02E+04	3.58E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.09775	0.02675	0	1.67197386	±	0.14470901
231Pa	27.4	0.44395	0.090875	0.024125	0	1.72128844	±	0.15071827
210Pb	46.5	9.361	1.2875	0.285	0	43.0907176	±	2.61844252
227Ac	50	0.44395	0.10875	0.030625	0	1.6041369	±	0.13321023
234U+214Pb	53.2	9.361	0.29875	0.072875	0	39.002104	±	2.57333485
234Th->238U	63.3	9.361	0.91	0.26375	0	32.7154978	±	1.99628556
230Th	67.6	9.361	0.11275	0.03325	0	32.1128212	±	2.77373402
234Th->238U	92.6	9.361	1.21875	0.35125	0	32.6590613	±	2.95166344
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.96875	0.24625	0	36.826269	±	2.24525144
227Th->227Ac	236	0.44395	0.049375	0.014125	0	1.55186062	±	0.1283311
212Pb->228Th	239	5.5494	0.014625	0	0.71875	0.11291823	±	0.0095036
214Pb->226Ra	242	9.361	0.775	0.1825	0	39.7521918	±	2.53662848
214Pb->226Ra	295	9.361	1.5125	0.3575	0	39.6042308	±	2.39608138
214Pb->226Ra	352	9.361	2.275	0.5325	0	39.9930047	±	2.41369941
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	1.1275	0.26625	0	39.6414178	±	2.4060833

U(ppb) = 2630334.97

Th(ppb) = 27728.9661

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.184392679	0.0459457	38.1818999	±	2.43642653
234U(295)	53.2	9.361	0.211883605	0.05234294	38.5121625	±	2.33001055
234U(352)	53.2	9.361	0.23116642	0.05705599	38.5462577	±	2.32638383
235U(63.3)	186	0.44395	0.042447624	0.01230281	1.5317327	±	0.09346567
235U(92.6)	186	0.44395	0.056123438	0.01617506	1.54039591	±	0.13921803
226Ra(63.3)	186	9.361	0.9268445	0.23410431	37.0612197	±	2.26145964
226Ra(92.6)	186	9.361	0.912626563	0.23007494	37.131803	±	3.35590127

234U/238U =	1.174166455	±	0.07697781
230Th/234U =	0.835978793	±	0.074936754
226Ra/230Th =	1.154094168	±	0.100505433

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-116-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.81E+05	1.30599223
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.14E+05	1.12081651
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.34E+05	1.08289622
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.23E+05	1.03920923
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.09E+05	1.03505621
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.72E+06	1.03409964
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.14E+04	1.02960319
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.09E+05	1.02259291
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.31E+04	1.01287601
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.74E+04	1.00286807
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.05E+04	1.03716299

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.0467516	1.003566347
Eu154,155	42.9	1.02997133	1.008054533
Eu154,155	48.6	1.02882041	0.993748378
Eu155	86.4	1.02274459	1.009139605
Eu155	105	1.02113112	1.011776425
Eu154	123	1.02281825	1.014302113
Sb125	178	1.02372866	1.00477597
Eu154	248	1.01810127	1.018101266
Eu154	592	1	1.008596234
Sb125	600	1.01996351	#DIV/0!
Sb125	636	1.00469611	1.023333602

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.034logx+1.090

CF (DM1B) equation = y =0.019logx+0.973

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.04211984	0.999756559
231Pa	27.4	1.04111648	1.000317261
210Pb	46.5	1.0333066	1.004681606
227Ac	50	1.03223502	1.00528043
234U+214Pb	53.2	1.031319	1.005792321
234Th->238U	63.3	1.02875227	1.00722667
230Th	67.6	1.02778181	1.007768987
234Th->238U	92.6	1.02313523	1.010365609
228Ac->228Ra	129	1.01823995	1.013101204
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =			80000		80000		80000	
Weight (g) =			3.002		3.001		2.994	
			Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV		2/6/96		1/23/96		1/25/96	
231Th->235U	25.6		7.63E+03	2.14E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4		6.22E+03	1.82E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5		6.16E+04	3.63E+02	2.28E+04	2.00E+02	0	0
227Ac	50		7.65E+03	2.19E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2		1.78E+04	2.53E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3		6.91E+04	3.64E+02	2.11E+04	2.05E+02	0	0
230Th	67.6		8.11E+03	2.84E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6		9.24E+04	4.98E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129		0	0	0	0	4.92E+03	1.64E+02
235U+226Ra	186		6.31E+04	3.41E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236		3.41E+03	1.07E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239		1.09E+03	8.92E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242		4.52E+04	5.03E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295		8.97E+04	3.50E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352		1.34E+05	4.23E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583		0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609		6.72E+04	3.09E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.095375	0.02675	0	1.64898915	±	0.14260502
231Pa	27.4	0.44395	0.07775	0.024125	0	1.4890928	±	0.13070625
210Pb	46.5	9.361	1.02	0.285	0	34.6068498	±	2.10412383
227Ac	50	0.44395	0.095625	0.030625	0	1.43041912	±	0.1198706
234U+214Pb	53.2	9.361	0.2225	0.072875	0	29.4660568	±	1.95724378
234Th->238U	63.3	9.361	0.86375	0.26375	0	31.5270948	±	1.92344803
230Th	67.6	9.361	0.101375	0.03325	0	29.3236278	±	2.54790637
234Th->238U	92.6	9.361	1.155	0.35125	0	31.4830096	±	2.94394456
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.78875	0.24625	0	29.9737227	±	1.82869783
227Th->227Ac	236	0.44395	0.042625	0.014125	0	1.33926125	±	0.11371918
212Pb->228Th	239	5.5494	0.013625	0	0.71875	0.10516228	±	0.00994331
214Pb->226Ra	242	9.361	0.565	0.1825	0	28.9709764	±	1.85675935
214Pb->226Ra	295	9.361	1.12125	0.3575	0	29.34972	±	1.7765982
214Pb->226Ra	352	9.361	1.675	0.5325	0	29.4355905	±	1.77627159
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	0.84	0.26625	0	29.5234579	±	1.79327225

U(ppb) = 2534787.05

Th(ppb) = 25824.3631

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.139129824	0.0459457	29.2244254	±	1.87300298
234U(295)	53.2	9.361	0.158104003	0.05234294	29.1511238	±	1.76457677
234U(352)	53.2	9.361	0.172740661	0.05705599	29.2189048	±	1.76319584
235U(63.3)	186	0.44395	0.040919329	0.0124949	1.45339934	±	0.08867097
235U(92.6)	186	0.44395	0.05318775	0.01617506	1.45933507	±	0.13646095
226Ra(63.3)	186	9.361	0.748974313	0.23410431	29.9388464	±	1.82655001
226Ra(92.6)	186	9.361	0.73556225	0.23007494	29.9176635	±	2.79757062

234U/238U	=	0.926128827	±	0.060978957
230Th/234U	=	1.004297411	±	0.090736865
226Ra/230Th	=	1.020980302	±	0.089426886

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-117-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.08E+05	1.26581373
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.45E+05	1.09807087
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.44E+05	1.06099322
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.35E+05	1.02061037
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.17E+05	1.01595835
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.78E+06	1.01666769
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.28E+04	1.01274177
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.36E+04	1.00211566
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.9971537
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.15E+04	0.9912535

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.01454857	0.972691896
Eu154,155	42.9	1.00906929	0.987597264
Eu154,155	48.6	1.00801116	0.97364851
Eu155	86.4	1.00444041	0.991078907
Eu155	105	1.00229019	0.993108096
Eu154	123	1.00557648	0.997203894
Sb125	178	1.00696344	0.988321134
Eu154	248	1	1
Eu154	592	0.98937644	0.99788135
Sb125	600	1.01415172	#DIV/0!
Sb125	636	0.96022374	0.978036255

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.015logx+1.038
CF (DM1B) equation = y =0.035logx+0.922

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.0138764	0.971288399
231Pa	27.4	1.01343374	0.97232127
210Pb	46.5	1.00998821	0.980360853
227Ac	50	1.00951545	0.98146395
234U+214Pb	53.2	1.00911133	0.982406907
234Th->238U	63.3	1.00797894	0.98504913
230Th	67.6	1.0075508	0.986048134
234Th->238U	92.6	1.00550084	0.990831385
228Ac->228Ra	129	1.00334115	0.99587064
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/6/96		1/23/96		1/25/96	
231Th->235U	25.6	2.55E+03	1.45E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	2.34E+03	1.37E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	3.57E+04	2.37E+02	2.28E+04	2.00E+02	0	0
227Ac	50	2.77E+03	1.36E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	8.01E+03	1.57E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.39E+04	2.20E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	3.17E+03	1.86E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	3.22E+04	1.06E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	1.36E+02	7.27E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	2.61E+04	2.25E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	1.38E+03	7.04E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.53E+03	7.57E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	2.18E+04	3.24E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	4.14E+04	2.40E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	6.12E+04	2.82E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0	0	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	3.06E+04	2.10E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.031875	0.02675	0		0.53634654	±	0.05343466
231Pa	27.4	0.44395	0.02925	0.024125	0		0.54549148	±	0.05529724
210Pb	46.5	9.361	0.44625	0.285	0		14.8037559	±	0.90303136
227Ac	50	0.44395	0.034625	0.030625	0		0.50671145	±	0.04702775
234U+214Pb	53.2	9.361	0.100125	0.072875	0		12.9785235	±	0.88451849
234Th->238U	63.3	9.361	0.29875	0.26375	0		10.6878205	±	0.65757466
230Th	67.6	9.361	0.039625	0.03325	0		11.2400132	±	1.11813663
234Th->238U	92.6	9.361	0.4025	0.35125	0		10.7858464	±	0.89836202
228Ac->228Ra	129	5.5494	0.0017	0	0.0615		0.15391058	±	0.08275084
235U+226Ra	186	9.361	0.32625	0.24625	0		12.4021371	±	0.76122615
227Th->227Ac	236	0.44395	0.01725	0.014125	0		0.54216903	±	0.05094054
212Pb->228Th	239	5.5494	0.019125	0	0.71875		0.1476623	±	0.0101836
214Pb->226Ra	242	9.361	0.27	0.1825	0		13.8491507	±	0.8984599
214Pb->226Ra	295	9.361	0.5175	0.3575	0		13.5505385	±	0.82229649
214Pb->226Ra	352	9.361	0.765	0.5325	0		13.4481972	±	0.81277726
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	#DIV/0!
214Bi->226Ra	609	9.361	0.3825	0.26625	0		13.4481972	±	0.81971952

U(ppb) = 859303.691

Th(ppb) = 36260.9556

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.060284385	0.0459457		12.3942808	±	0.80407561
234U(295)	53.2	9.361	0.070403771	0.05234294		12.7057149	±	0.77102949
234U(352)	53.2	9.361	0.077399093	0.05705599		12.8143322	±	0.77446796
235U(63.3)	186	0.44395	0.013867207	0.0122426		0.5028628	±	0.03093894
235U(92.6)	186	0.44395	0.018535125	0.01617506		0.50872562	±	0.04237218
226Ra(63.3)	186	9.361	0.312492563	0.23410431		12.4954677	±	0.76879125
226Ra(92.6)	186	9.361	0.307714875	0.23007494		12.5199162	±	1.04279412

234U/238U = 1.182477694 ± 0.079581254
230Th/234U = 0.889374585 ± 0.091738742
226Ra/230Th = 1.111695106 ± 0.111620604

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-118-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.02E+05	1.27444308
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.72E+05	1.07924928
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.43E+05	1.06312984
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.32E+05	1.02517628
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.15E+05	1.02064415
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.78E+06	1.01666769
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.26E+04	1.01510533
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.35E+04	1.0042433
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.80E+04	0.98598069
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.08E+04	1.02279897

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.02146499	0.979322972
Eu154,155	42.9	0.99177324	0.970669256
Eu154,155	48.6	1.01004109	0.975609235
Eu155	86.4	1.00893397	0.995512694
Eu155	105	1.00691295	0.997688506
Eu154	123	1.00557648	0.997203894
Sb125	178	1.00931351	0.990627703
Eu154	248	1.0044445	1.004444503
Eu154	592	0.99147703	1
Sb125	600	1.00278825	#DIV/0!
Sb125	636	0.99078173	1.009161106

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.010logx+1.025

CF (DM1B) equation = y =-0.041logx+0.912

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.0109176	0.969737839
231Pa	27.4	1.01062249	0.970947773
210Pb	46.5	1.00832547	0.980365571
227Ac	50	1.0080103	0.98165777
234U+214Pb	53.2	1.00774088	0.982762377
234Th->238U	63.3	1.00698596	0.985857552
230Th	67.6	1.00670053	0.987027815
234Th->238U	92.6	1.00533389	0.99263105
228Ac->228Ra	129	1.0038941	0.998534178
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/12/96		1/23/96		1/25/96	
231Th->235U	25.6	1.39E+03	1.23E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.24E+03	1.14E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.14E+04	1.91E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.56E+03	1.28E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	5.89E+03	1.85E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.48E+04	2.51E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	1.69E+03	1.32E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.98E+04	6.06E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.90E+04	1.93E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	7.52E+02	4.97E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.43E+03	6.40E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.60E+04	2.77E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	3.15E+04	3.07E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	4.69E+04	2.47E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	1.76E+02	8.17E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.32E+04	2.55E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.017375	0.02675	0	0.29141114	±	0.0351178
231Pa	27.4	0.44395	0.0155	0.024125	0	0.28816598	±	0.03564479
210Pb	46.5	9.361	0.2675	0.285	0	8.85639987	±	0.54281904
227Ac	50	0.44395	0.01975	0.030625	0	0.28849968	±	0.0325968
234U+214Pb	53.2	9.361	0.073625	0.072875	0	9.52737306	±	0.68680515
234Th->238U	63.3	9.361	0.185	0.26375	0	6.60967689	±	0.41709192
230Th	67.6	9.361	0.021125	0.03325	0	5.9852586	±	0.67159561
234Th->238U	92.6	9.361	0.2475	0.35125	0	6.62898057	±	0.54707226
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.2375	0.24625	0	9.02536818	±	0.55608299
227Th->227Ac	236	0.44395	0.0094	0.014125	0	0.29534442	±	0.03039806
212Pb->228Th	239	5.5494	0.017875	0	0.71875	0.13796519	±	0.00904337
214Pb->226Ra	242	9.361	0.2	0.1825	0	10.2552129	±	0.67118415
214Pb->226Ra	295	9.361	0.39375	0.3575	0	10.3067579	±	0.62626475
214Pb->226Ra	352	9.361	0.58625	0.5325	0	10.3024567	±	0.62321025
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.29	0.26625	0	10.1926224	±	0.62741251

U(ppb) = 531419.83

Th(ppb) = 33879.6691

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.044113433	0.0459457	9.05424958	±	0.59258339
234U(295)	53.2	9.361	0.051011021	0.05234294	9.1903555	±	0.55842931
234U(352)	53.2	9.361	0.056209231	0.05705599	9.29036679	±	0.56198749
235U(63.3)	186	0.44395	0.008578765	0.01223054	0.31129248	±	0.01964356
235U(92.6)	186	0.44395	0.011397375	0.01617506	0.31271466	±	0.02580751
226Ra(63.3)	186	9.361	0.22898075	0.23410431	9.15307692	±	0.57758867
226Ra(92.6)	186	9.361	0.226102625	0.23007494	9.19631512	±	0.7589476

234U/238U	=	1.388619158	±	0.096374251
230Th/234U	=	0.652108013	±	0.075558613
226Ra/230Th	=	1.529270084	±	0.17418055

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-119-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.46E+05	1.21597034
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.87E+05	1.08266887
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.50E+05	1.04841198
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.37E+05	1.01759651
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.17E+05	1.01595835
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.79E+06	1.01383823
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.34E+04	1.00638304
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.99152529
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.06E+04	1.03231513

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.97459913	0.934390634
Eu154,155	42.9	0.99491566	0.973744812
Eu154,155	48.6	0.99605818	0.962102998
Eu155	86.4	1.00147429	0.988152252
Eu155	105	1.00229019	0.993108096
Eu154	123	1.00277788	0.994428597
Sb125	178	1.00579387	0.98717322
Eu154	248	1.0044445	1.004444503
Eu154	592	0.99358957	1.002130697
Sb125	600	1.00842737	#DIV/0!
Sb125	636	1	1.018550375

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.037logx+0.926
CF (DM1B) equation = y =-0.086logx+0.820

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.98010488	0.941108637
231Pa	27.4	0.98119677	0.943646548
210Pb	46.5	0.98969576	0.963400954
227Ac	50	0.99086189	0.96611142
234U+214Pb	53.2	0.99185873	0.9684284
234Th->238U	63.3	0.99465194	0.974920719
230Th	67.6	0.99570803	0.977375416
234Th->238U	92.6	1.00076461	0.989128545
228Ac->228Ra	129	1.00609182	1.001510715
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		60000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/13/96		1/23/96		1/25/96	
231Th->235U	25.6	8.89E+02	8.80E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	8.19E+02	8.18E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.74E+04	1.87E+02	2.28E+04	2.00E+02	0	0
227Ac	50	9.85E+02	9.56E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	3.47E+03	1.05E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	7.03E+03	1.38E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	1.21E+03	1.08E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.09E+04	4.23E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.05E+04	1.46E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	4.34E+02	3.52E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.17E+03	5.63E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	9.18E+03	2.13E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.83E+04	1.83E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.71E+04	1.87E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	4.06E+01	6.82E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.35E+04	1.40E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0111125	0.02675	0	0.18069657	±	0.02320438
231Pa	27.4	0.44395	0.0102375	0.024125	0	0.18478728	±	0.02396827
210Pb	46.5	9.361	0.2175	0.285	0	7.06795317	±	0.43392067
227Ac	50	0.44395	0.0123125	0.030625	0	0.17679608	±	0.02209804
234U+214Pb	53.2	9.361	0.043375	0.072875	0	5.52444041	±	0.39551717
234Th->238U	63.3	9.361	0.097875	0.26375	0	3.45404501	±	0.21858995
230Th	67.6	9.361	0.015125	0.03325	0	4.23851081	±	0.5096224
234Th->238U	92.6	9.361	0.13625	0.35125	0	3.63270112	±	0.31207511
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.13125	0.24625	0	4.98770347	±	0.31083129
227Th->227Ac	236	0.44395	0.005425	0.014125	0	0.17045143	±	0.0192871
212Pb->228Th	239	5.5494	0.014625	0	0.71875	0.11288061	±	0.00762145
214Pb->226Ra	242	9.361	0.1145	0.1825	0	5.87110937	±	0.39491428
214Pb->226Ra	295	9.361	0.22875	0.3575	0	5.98773552	±	0.36560697
214Pb->226Ra	352	9.361	0.33875	0.5325	0	5.95301867	±	0.36108338
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.16875	0.26625	0	5.93105181	±	0.36444951

U(ppb) = 277706.163

Th(ppb) = 27719.7292

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.026479628	0.0459457	5.34926884	±	0.3598132
234U(295)	53.2	9.361	0.030237355	0.05234294	5.36182995	±	0.32738961
234U(352)	53.2	9.361	0.033311731	0.05705599	5.41905243	±	0.32869539
235U(63.3)	186	0.44395	0.004483039	0.01208073	0.16469055	±	0.01042248
235U(92.6)	186	0.44395	0.006274313	0.01617506	0.172151	±	0.01478901
226Ra(63.3)	186	9.361	0.126742856	0.23410431	5.06630847	±	0.32062238
226Ra(92.6)	186	9.361	0.124975688	0.23007494	5.08315994	±	0.43667994

234U/238U = 1.556643605 ± 0.111566856
230Th/234U = 0.788308321 ± 0.098423433
226Ra/230Th = 1.195303892 ± 0.145718082

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-120-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.48E+05	1.36031946
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.13E+05	1.12157169
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.37E+05	1.07619771
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.31E+05	1.02671044
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.32E+04	1.00805844
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.40E+04	0.99372379
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.66E+04	0.96982931
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.13E+04	#DIV/0!

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.09029482	1.045313132
Eu154,155	42.9	1.0306653	1.008733731
Eu154,155	48.6	1.02245639	0.987601312
Eu155	86.4	1.01044382	0.997002463
Eu155	105	1.00924582	1
Eu154	123	1.00839606	1
Sb125	178	1.00230683	0.983750737
Eu154	248	1.0044445	1.004444503
Eu154	592	0.98109125	0.989524945
Sb125	600	0.98636155	#DIV/0!
Sb125	636	#DIV/0!	#DIV/0!

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.107logx+1.221
CF (DM1B) equation = y =-0.052logx+1.100

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.07031832	1.026771522
231Pa	27.4	1.06716069	1.025236971
210Pb	46.5	1.04258253	1.013292446
227Ac	50	1.03921021	1.01165356
234U+214Pb	53.2	1.03632746	1.010252595
234Th->238U	63.3	1.0282498	1.006327007
230Th	67.6	1.0251957	1.004842772
234Th->238U	92.6	1.01057262	0.997736229
228Ac->228Ra	129	0.9951669	0.990249335
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/14/96		1/23/96		1/25/96	
231Th->235U	25.6	1.93E+03	1.12E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.74E+03	1.03E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.16E+04	1.91E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.80E+03	1.11E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	5.12E+03	1.34E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.88E+04	1.98E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	2.18E+03	1.25E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	2.47E+04	6.54E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.74E+04	1.81E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	9.84E+02	4.83E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.18E+03	5.85E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.21E+04	2.49E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.37E+04	1.84E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	3.55E+04	2.17E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	1.55E+01	8.38E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.83E+04	1.61E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.024125	0.02675	0	0.42839645	±	0.04296754
231Pa	27.4	0.44395	0.02175	0.024125	0	0.42698353	±	0.0434444
210Pb	46.5	9.361	0.2725	0.285	0	9.32845336	±	0.57153128
227Ac	50	0.44395	0.0225	0.030625	0	0.33884353	±	0.03389428
234U+214Pb	53.2	9.361	0.064	0.072875	0	8.51679047	±	0.59587404
234Th->238U	63.3	9.361	0.2325	0.26375	0	8.48216422	±	0.52340611
230Th	67.6	9.361	0.02725	0.03325	0	7.86247336	±	0.77746645
234Th->238U	92.6	9.361	0.30875	0.35125	0	8.31257766	±	0.67404213
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.2175	0.24625	0	8.26533718	±	0.50959189
227Th->227Ac	236	0.44395	0.0123	0.014125	0	0.38646131	±	0.03591139
212Pb->228Th	239	5.5494	0.014875	0	0.71875	0.11481019	±	0.00783727
214Pb->226Ra	242	9.361	0.15125	0.1825	0	7.75550473	±	0.51486305
214Pb->226Ra	295	9.361	0.29625	0.3575	0	7.7546083	±	0.47227904
214Pb->226Ra	352	9.361	0.44375	0.5325	0	7.79823479	±	0.47234653
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.22875	0.26625	0	8.03987023	±	0.49205564

U(ppb) = 681968.324

Th(ppb) = 28193.5707

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.041681878	0.0459457	8.79785911	±	0.58406161
234U(295)	53.2	9.361	0.046985673	0.05234294	8.70526251	±	0.53017674
234U(352)	53.2	9.361	0.050817489	0.05705599	8.63746972	±	0.52317979
235U(63.3)	186	0.44395	0.011009085	0.0124888	0.39121893	±	0.02414082
235U(92.6)	186	0.44395	0.014217938	0.01617506	0.39010364	±	0.03163234
226Ra(63.3)	186	9.361	0.206793375	0.23410431	8.26617813	±	0.51007833
226Ra(92.6)	186	9.361	0.203282063	0.23007494	8.26813004	±	0.670438

234U/238U =	1.027276791	±	0.07111944
230Th/234U =	0.902329247	±	0.093612513
226Ra/230Th =	1.051345773	±	0.105058845

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-121-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/24/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.42E+05	1.21981009
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.67E+05	1.08266887
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.49E+05	1.05048097
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.36E+05	1.01910046
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.17E+05	1.01595835
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.80E+06	1.01102971
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.31E+04	1.00922385
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.14E+05	#DIV/0!
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.38E+04	0.99789621
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.74E+04	1.00286807
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.08E+04	1.02279897

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.97767669	0.937341222
Eu154,155	42.9	0.99491566	0.973744812
Eu154,155	48.6	0.99802385	0.964001667
Eu155	86.4	1.00295442	0.989612685
Eu155	105	1.00229019	0.993108096
Eu154	123	1	0.99167385
Sb125	178	1.00346559	0.98488804
Eu154	248	#DIV/0!	#DIV/0!
Eu154	592	0.98521063	0.993679731
Sb125	600	1.01996351	#DIV/0!
Sb125	636	0.99078173	1.009161106

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.031logx+0.94

CF (DM1B) equation = y =0.061logx+0.831

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.98365544	0.945067437
231Pa	27.4	0.98457027	0.947457796
210Pb	46.5	0.99169104	0.966063689
227Ac	50	0.99266807	0.96861657
234U+214Pb	53.2	0.99350326	0.970798842
234Th->238U	63.3	0.99584352	0.976913701
230Th	67.6	0.99672835	0.979225682
234Th->238U	92.6	1.00096494	0.99029549
228Ac->228Ra	129	1.00542828	1.001957767
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/15/96		1/23/96		1/25/96	
231Th->235U	25.6	2.83E+02	6.52E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	2.28E+02	6.48E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	6.56E+03	1.18E+02	2.28E+04	2.00E+02	0	0
227Ac	50	3.10E+02	6.89E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	1.56E+03	7.30E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.78E+03	6.96E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	3.38E+02	7.57E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	3.84E+03	2.08E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	4.35E+03	1.03E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.68E+03	7.67E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	4.41E+03	1.14E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	6.47E+03	1.16E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	1.24E+04	1.33E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	3.01E+02	6.75E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	6.21E+03	9.80E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0035375	0.02675	0		0.05771124	±	0.01410932
231Pa	27.4	0.44395	0.00285	0.024125	0		0.05160229	±	0.01311723
210Pb	46.5	9.361	0.10725	0.285	0		3.49109558	±	0.21706894
227Ac	50	0.44395	0.003875	0.030625	0		0.05572427	±	0.01313979
234U+214Pb	53.2	9.361	0.0195	0.072875	0		2.48689958	±	0.1989495
234Th->238U	63.3	9.361	0.0345	0.26375	0		1.21857043	±	0.08396905
230Th	67.6	9.361	0.004225	0.03325	0		1.18479928	±	0.28199758
234Th->238U	92.6	9.361	0.048	0.35125	0		1.27960721	±	0.12009277
228Ac->228Ra	129	5.5494	0	0	0.0615		0	±	#DIV/0!
235U+226Ra	186	9.361	0.054375	0.24625	0		2.0656462	±	0.13472187
227Th->227Ac	236	0.44395	0	0.014125	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.021	0	0.71875		0.16203101	±	0.01065901
214Pb->226Ra	242	9.361	0.055125	0.1825	0		2.82565179	±	0.19272459
214Pb->226Ra	295	9.361	0.105875	0.3575	0		2.7704498	±	0.17159948
214Pb->226Ra	352	9.361	0.155	0.5325	0		2.7229834	±	0.16667058
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.077625	0.26625	0		2.72737531	±	0.17048287

U(ppb) = 97973.3958

Th(ppb) = 39789.4338

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.011365874	0.0459457		2.29911254	±	0.15681179
234U(295)	53.2	9.361	0.013419352	0.05234294		2.38273434	±	0.14758469
234U(352)	53.2	9.361	0.014895404	0.05705599		2.42634911	±	0.14851395
235U(63.3)	186	0.44395	0.001582121	0.0120952		0.05803251	±	0.00399889
235U(92.6)	186	0.44395	0.0022104	0.01617506		0.0606275	±	0.00568997
226Ra(63.3)	186	9.361	0.052786275	0.23410431		2.10932991	±	0.14534936
226Ra(92.6)	186	9.361	0.0521646	0.23007494		2.12099418	±	0.19905801

234U/238U	=	1.94440847	±	0.152895865
230Th/234U	=	0.500042184	±	0.120514445
226Ra/230Th	=	1.780326795	±	0.428013884

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-122-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.62E+05	1.33650581
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.15E+05	1.12006272
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.36E+05	1.07841809
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.26E+05	1.03135007
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.13E+05	1.02538823
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.22E+04	1.01987703
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.82E+04	0.98051783
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.11E+04	1.00895538

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.0712082	1.02701396
Eu154,155	42.9	1.02927864	1.007376577
Eu154,155	48.6	1.02456589	0.9896389
Eu155	86.4	1.01500995	1.001507851
Eu155	105	1.01159321	1.002325886
Eu154	123	1.01123689	1.00281718
Sb125	178	1.01405798	0.995284336
Eu154	248	1.0044445	1.004444503
Eu154	592	0.99571416	1.004273556
Sb125	600	0.99723227	#DIV/0!
Sb125	636	0.9773715	0.995502108

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.079logx+1.170
CF (DM1B) equation = y =-0.026logx+1.051

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.05874904	1.014385761
231Pa	27.4	1.05641771	1.013618485
210Pb	46.5	1.03827122	1.007646223
227Ac	50	1.03578137	1.00682678
234U+214Pb	53.2	1.03365298	1.006126298
234Th->238U	63.3	1.02768911	1.004163504
230Th	67.6	1.02543421	1.003421386
234Th->238U	92.6	1.01463773	0.999868114
228Ac->228Ra	129	1.00326341	0.996124668
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =			60000		80000		80000	
Weight (g) =			3.004		3.001		2.994	
			Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV		2/16/96		1/23/96		1/25/96	
231Th->235U	25.6		4.30E+02	6.46E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4		2.77E+02	4.52E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5		7.37E+03	1.11E+02	2.28E+04	2.00E+02	0	0
227Ac	50		4.02E+02	6.07E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2		1.09E+03	6.51E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3		3.74E+03	9.41E+01	2.11E+04	2.05E+02	0	0
230Th	67.6		5.98E+02	6.44E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6		4.87E+03	2.07E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129		6.77E+01	5.68E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186		3.71E+03	9.28E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236		1.44E+02	2.77E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239		1.58E+03	7.64E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242		2.85E+03	1.07E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295		5.42E+03	6.86E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352		6.10E+03	1.07E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583		2.04E+02	4.57E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609		3.98E+03	6.01E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.005375	0.02675	0	0.09435129	±	0.0161206
231Pa	27.4	0.44395	0.0034625	0.024125	0	0.06724473	±	0.01230323
210Pb	46.5	9.361	0.092125	0.285	0	3.13856963	±	0.19609863
227Ac	50	0.44395	0.005025	0.030625	0	0.07537515	±	0.0128365
234U+214Pb	53.2	9.361	0.013625	0.072875	0	1.80726158	±	0.15937885
234Th->238U	63.3	9.361	0.04675	0.26375	0	1.70348853	±	0.11206107
230Th	67.6	9.361	0.007475	0.03325	0	2.15583571	±	0.28993951
234Th->238U	92.6	9.361	0.060875	0.35125	0	1.64445488	±	0.14411956
228Ac->228Ra	129	5.5494	0.00122125	0	0.0615	0.11044766	±	0.06452573
235U+226Ra	186	9.361	0.046375	0.24625	0	1.76114858	±	0.11573699
227Th->227Ac	236	0.44395	0.0018	0.014125	0	0.05651766	±	0.01175081
212Pb->228Th	239	5.5494	0.019375	0	0.71875	0.14944313	±	0.01021549
214Pb->226Ra	242	9.361	0.035625	0.1825	0	1.82549361	±	0.13406224
214Pb->226Ra	295	9.361	0.06775	0.3575	0	1.77223605	±	0.11179391
214Pb->226Ra	352	9.361	0.10125	0.5325	0	1.77813091	±	0.10969752
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.04975	0.26625	0	1.74739779	±	0.11152336

U(ppb) = 136960.943

Th(ppb) = 36698.269

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.008368252	0.0459457	1.76056881	±	0.12929424
234U(295)	53.2	9.361	0.00973396	0.05234294	1.7976059	±	0.11339425
234U(352)	53.2	9.361	0.010617159	0.05705599	1.79874746	±	0.1109694
235U(63.3)	186	0.44395	0.002212448	0.01248199	0.07861208	±	0.00517136
235U(92.6)	186	0.44395	0.002803294	0.01617506	0.07686396	±	0.00673634
226Ra(63.3)	186	9.361	0.044222163	0.23410431	1.76652128	±	0.11620758
226Ra(92.6)	186	9.361	0.043571706	0.23007494	1.77102041	±	0.15521173

234U/238U =	1.04822586	±	0.085838531	
230Th/234U =	1.207317734	±	0.172718735	
226Ra/230Th =	0.819413684	±	0.112397595	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-123-GAM3**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/29/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.15E+05	1.25594916
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.42E+05	1.10021742
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.42E+05	1.0652781
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.31E+05	1.02671044
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.13E+05	1.02538823
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.18E+04	1.02470921
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.11E+05	1.01339339
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.35E+04	1.0042433
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.71E+04	1.01160576
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.13E+04	#DIV/0!

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.00664212	0.965111644
Eu154,155	42.9	1.01104185	0.989527848
Eu154,155	48.6	1.01208206	0.977580637
Eu155	86.4	1.01044382	0.997002463
Eu155	105	1.01159321	1.002325886
Eu154	123	1.00839606	1
Sb125	178	1.0188626	1
Eu154	248	1.00894215	1.008942155
Eu154	592	0.99147703	1
Sb125	600	1.02885014	#DIV/0!
Sb125	636	#DIV/0!	#DIV/0!

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.002logx+1.006
CF (DM1B) equation = y =-0.053logx+0.994

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.00881648	0.968636718
231Pa	27.4	1.0088755	0.97020078
210Pb	46.5	1.00933491	0.982375007
227Ac	50	1.00939794	0.98404541
234U+214Pb	53.2	1.00945182	0.985473317
234Th->238U	63.3	1.00960281	0.989474397
230Th	67.6	1.00965989	0.990987175
234Th->238U	92.6	1.00993322	0.998230382
228Ac->228Ra	129	1.01022118	1.005861255
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/17/96		1/23/96		1/25/96	
231Th->235U	25.6	0.00E+00	0.00E+00	2.14E+03	1.19E+02	0	0
231Pa	27.4	0.00E+00	0.00E+00	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.63E+03	7.72E+01	2.28E+04	2.00E+02	0	0
227Ac	50	0.00E+00	0.00E+00	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	4.40E+02	4.65E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.21E+03	6.94E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	1.98E+02	4.86E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.70E+03	1.24E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	9.22E+01	3.76E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.31E+03	6.53E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.72E+03	6.00E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.23E+03	6.38E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.29E+03	7.36E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	3.27E+03	7.29E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	3.21E+02	4.24E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.81E+03	5.90E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0	0.02675	0		0	±	#DIV/0!
231Pa	27.4	0.44395	0	0.024125	0		0	±	#DIV/0!
210Pb	46.5	9.361	0.032875	0.285	0		1.08915353	±	0.07337518
227Ac	50	0.44395	0	0.030625	0		0	±	#DIV/0!
234U+214Pb	53.2	9.361	0.0055	0.072875	0		0.71269322	±	0.0883818
234Th->238U	63.3	9.361	0.015125	0.26375	0		0.54160962	±	0.0452626
230Th	67.6	9.361	0.002475	0.03325	0		0.70305867	±	0.18162607
234Th->238U	92.6	9.361	0.02125	0.35125	0		0.57156835	±	0.06047412
228Ac->228Ra	129	5.5494	0.0011525	0	0.0615		0.10498784	±	0.04312751
235U+226Ra	186	9.361	0.016375	0.24625	0		0.62206817	±	0.04889383
227Th->227Ac	236	0.44395	0	0.014125	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.0215	0	0.71875		0.16588889	±	0.01101192
214Pb->226Ra	242	9.361	0.015375	0.1825	0		0.78810696	±	0.0643851
214Pb->226Ra	295	9.361	0.028625	0.3575	0		0.74903542	±	0.05123676
214Pb->226Ra	352	9.361	0.040875	0.5325	0		0.71807708	±	0.04613878
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.022625	0.26625	0		0.79493548	±	0.05467642

U(ppb) = 43545.5619

Th(ppb) = 40736.8013

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.003231298	0.0459457		0.66412638	±	0.0542564
234U(295)	53.2	9.361	0.003856	0.05234294		0.69566051	±	0.04758572
234U(352)	53.2	9.361	0.004285724	0.05705599		0.70931876	±	0.04557603
235U(63.3)	186	0.44395	0.000703195	0.01226232		0.02544179	±	0.00212618
235U(92.6)	186	0.44395	0.000978563	0.01617506		0.0268403	±	0.00283981
226Ra(63.3)	186	9.361	0.015678494	0.23410431		0.62650975	±	0.05235775
226Ra(92.6)	186	9.361	0.015396438	0.23007494		0.6260137	±	0.06623464

234U/238U =	1.273429888	±	0.137540984	
230Th/234U =	1.019366027	±	0.272420236	
226Ra/230Th =	0.891120151	±	0.235973662	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-466-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.29E+05	1.23684536
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.52E+05	1.0931061
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.46E+05	1.05675446
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.31E+05	1.02671044
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.23E+04	1.01867848
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.31E+04	1.01287601
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.79E+04	0.98874265
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.08E+04	1.02279897

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.99133044	0.950431674
Eu154,155	42.9	1.00450692	0.983131983
Eu154,155	48.6	1.00398407	0.969758702
Eu155	86.4	1.01044382	0.997002463
Eu155	105	1.00924582	1
Eu154	123	1.00839606	1
Sb125	178	1.01286628	0.994114693
Eu154	248	1.0044445	1.004444503
Eu154	592	1	1.008596234
Sb125	600	1.00559729	#DIV/0!
Sb125	636	0.99078173	1.009161106

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.024logx+0.961
CF (DM1B) equation = y =0.074logx+0.851

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.99479776	0.955209757
231Pa	27.4	0.99550601	0.957393542
210Pb	46.5	1.00101887	0.974391519
227Ac	50	1.00177528	0.97672378
234U+214Pb	53.2	1.00242188	0.978717461
234Th->238U	63.3	1.00423369	0.984303875
230Th	67.6	1.00491872	0.986416055
234Th->238U	92.6	1.00819866	0.996529213
228Ac->228Ra	129	1.01165415	1.007183639
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/23/96		1/23/96		1/25/96	
231Th->235U	25.6	1.39E+03	4.02E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.57E+03	4.36E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.27E+03	8.72E+01	2.28E+04	2.00E+02	0	0
227Ac	50	0.00E+00	0.00E+00	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	4.55E+02	4.76E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.31E+03	6.65E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	1.46E+03	4.63E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.72E+03	1.20E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	1.55E+02	4.91E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.33E+03	6.84E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.64E+03	7.75E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.19E+03	6.09E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.19E+03	1.01E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	3.42E+03	8.46E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	2.72E+02	4.02E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.69E+03	7.97E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0017375	0.02675	0		0.02868599	±	0.00862174
231Pa	27.4	0.44395	0.0019625	0.024125	0		0.03595177	±	0.01041793
210Pb	46.5	9.361	0.028375	0.285	0		0.93294388	±	0.06925465
227Ac	50	0.44395	0	0.030625	0		0	±	#DIV/0!
234U+214Pb	53.2	9.361	0.0056875	0.072875	0		0.73234484	±	0.09015418
234Th->238U	63.3	9.361	0.016375	0.26375	0		0.58364111	±	0.04679566
230Th	67.6	9.361	0.001825	0.03325	0		0.51632648	±	0.17580383
234Th->238U	92.6	9.361	0.0215	0.35125	0		0.5776842	±	0.05987197
228Ac->228Ra	129	5.5494	0.0020625	0	0.0615		0.18827686	±	0.05706728
235U+226Ra	186	9.361	0.016625	0.24625	0		0.63198629	±	0.05031309
227Th->227Ac	236	0.44395	0	0.014125	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.0205	0	0.71875		0.15827854	±	0.01058963
214Pb->226Ra	242	9.361	0.014875	0.1825	0		0.76298562	±	0.06199821
214Pb->226Ra	295	9.361	0.02725	0.3575	0		0.71353077	±	0.05431932
214Pb->226Ra	352	9.361	0.04275	0.5325	0		0.7515169	±	0.04982155
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.021125	0.26625	0		0.74272723	±	0.05701281

U(ppb) = 46924.9046

Th(ppb) = 38867.9524

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.003492577	0.0459457		0.71330287	±	0.05796112
234U(295)	53.2	9.361	0.004122469	0.05234294		0.73904699	±	0.0562618
234U(352)	53.2	9.361	0.004417523	0.05705599		0.72652468	±	0.0481647
235U(63.3)	186	0.44395	0.000757261	0.01219711		0.02756277	±	0.00220995
235U(92.6)	186	0.44395	0.000990075	0.01617506		0.02717416	±	0.00281637
226Ra(63.3)	186	9.361	0.015870931	0.23410431		0.63462217	±	0.05088327
226Ra(92.6)	186	9.361	0.015634925	0.23007494		0.63613419	±	0.06592981

234U/238U = 1.244414596 ± 0.138693811
230Th/234U = 0.710908051 ± 0.248234548
226Ra/230Th = 1.22911025 ± 0.42357404

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-467-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source SRM 4275C		Empty vial 1/24/96	Standard - DP1B 1/24/96		Standard - DM1B 1/24/96		Sample 1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.16E+05	1.25455734
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.42E+05	1.10021742
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.43E+05	1.06312984
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.26E+05	1.03135007
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.11E+05	1.03019182
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.26E+04	1.01510533
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.11E+05	1.01339339
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.74E+04	1.00286807
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.13E+04	#DIV/0!

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.00552658	0.964042126
Eu154,155	42.9	1.01104185	0.989527848
Eu154,155	48.6	1.01004109	0.975609235
Eu155	86.4	1.01500995	1.001507851
Eu155	105	1.01633218	1.007021444
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00931351	0.990627703
Eu154	248	1.00894215	1.008942155
Eu154	592	0.99571416	1.004273556
Sb125	600	1.01996351	#DIV/0!
Sb125	636	#DIV/0!	#DIV/0!

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.012logx+0.990
CF (DM1B) equation = y =-0.062logx+0.878

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.00689888	0.965310878
231Pa	27.4	1.00725301	0.967140535
210Pb	46.5	1.01000944	0.981382083
227Ac	50	1.01038764	0.98333614
234U+214Pb	53.2	1.01071094	0.985006521
234Th->238U	63.3	1.01161684	0.98968703
230Th	67.6	1.01195936	0.991456695
234Th->238U	92.6	1.01359933	0.999929881
228Ac->228Ra	129	1.01532708	1.008856562
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/22/96		1/23/96		1/25/96	
231Th->235U	25.6	9.12E+01	4.39E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	6.86E+01	3.11E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.67E+03	8.78E+01	2.28E+04	2.00E+02	0	0
227Ac	50	8.36E+01	4.15E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	2.88E+02	4.06E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.07E+03	6.18E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	7.90E+01	3.80E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.43E+03	1.14E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	1.37E+02	4.06E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	8.79E+02	5.83E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	3.93E+01	2.29E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.59E+03	9.19E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	7.75E+02	5.43E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.50E+03	8.61E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.07E+03	8.31E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	2.44E+02	6.47E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.15E+03	5.02E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.00114	0.02675	0		0.01903758	±	0.00929532
231Pa	27.4	0.44395	0.0008575	0.024125	0		0.01588364	±	0.00731988
210Pb	46.5	9.361	0.020875	0.285	0		0.69205397	±	0.05050197
227Ac	50	0.44395	0.0010475	0.030625	0		0.01533242	±	0.00768845
234U+214Pb	53.2	9.361	0.00335	0.072875	0		0.43463642	±	0.07162944
234Th->238U	63.3	9.361	0.013375	0.26375	0		0.47989948	±	0.04017624
230Th	67.6	9.361	0.0009875	0.03325	0		0.28115217	±	0.13712136
234Th->238U	92.6	9.361	0.017875	0.35125	0		0.48253514	±	0.05336183
228Ac->228Ra	129	5.5494	0.0017125	0	0.0615		0.15678992	±	0.04722255
235U+226Ra	186	9.361	0.0109875	0.24625	0		0.41740299	±	0.03754789
227Th->227Ac	236	0.44395	0.00049	0.014125	0		0.01539049	±	0.00907251
212Pb->228Th	239	5.5494	0.019875	0	0.71875		0.15335077	±	0.01145915
214Pb->226Ra	242	9.361	0.0096875	0.1825	0		0.49657146	±	0.04682742
214Pb->226Ra	295	9.361	0.01875	0.3575	0		0.49063456	±	0.03668547
214Pb->226Ra	352	9.361	0.025875	0.5325	0		0.45456255	±	0.03069793
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.014375	0.26625	0		0.5050695	±	0.03770738

U(ppb) = 38584.0498

Th(ppb) = 37657.857

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.001920533	0.0459457		0.39521819	±	0.03726966
234U(295)	53.2	9.361	0.002273144	0.05234294		0.41060919	±	0.03070185
234U(352)	53.2	9.361	0.00258133	0.05705599		0.42776192	±	0.02888801
235U(63.3)	186	0.44395	0.000623074	0.01228678		0.02249811	±	0.0018835
235U(92.6)	186	0.44395	0.000823144	0.01617506		0.02257743	±	0.00249676
226Ra(63.3)	186	9.361	0.010371581	0.23410431		0.41444649	±	0.03469665
226Ra(92.6)	186	9.361	0.010164356	0.23007494		0.41327913	±	0.04570306

234U/238U =	0.856838666	±	0.105821983	
230Th/234U =	0.683741744	±	0.339198956	
226Ra/230Th =	1.474100296	±	0.724069842	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-468-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.52E+05	1.20713929
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.77E+05	1.07585872
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.53E+05	1.04227011
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.40E+05	1.01312003
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.19E+05	1.01132963
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.81E+06	1.00824188
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.30E+04	1.01039286
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.37E+04	#DIV/0!
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.86E+04	0.96982931
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.17E+04	0.98270778

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96752105	0.927604573
Eu154,155	42.9	0.98865749	0.967619809
Eu154,155	48.6	0.99022301	0.956466752
Eu155	86.4	0.99706874	0.9838053
Eu155	105	0.99772374	0.988583483
Eu154	123	0.99724259	0.988939395
Sb125	178	1.00462793	0.986028862
Eu154	248	1	1
Eu154	592	#DIV/0!	#DIV/0!
Sb125	600	0.98636155	#DIV/0!
Sb125	636	0.95194554	0.969604486

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.040logx+0.917
CF (DM1B) equation = y =0.089logx+0.809

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.9733296	0.934333357
231Pa	27.4	0.97451002	0.9369598
210Pb	46.5	0.98369812	0.957403313
227Ac	50	0.9849588	0.96020833
234U+214Pb	53.2	0.98603647	0.962606135
234Th->238U	63.3	0.98905615	0.96932493
230Th	67.6	0.99019787	0.971865256
234Th->238U	92.6	0.99566444	0.984028378
228Ac->228Ra	129	1.00142359	0.996842484
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/21/96		1/23/96		1/25/96	
231Th->235U	25.6	9.54E+01	3.49E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.11E+02	3.82E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.76E+03	8.81E+01	2.28E+04	2.00E+02	0	0
227Ac	50	7.03E+01	3.86E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	2.76E+02	5.32E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	7.62E+02	1.10E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	1.05E+02	2.08E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.23E+03	1.08E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	1.26E+02	3.92E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	8.61E+02	8.23E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.60E+03	7.57E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.64E+02	5.10E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.59E+03	8.63E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.37E+03	8.00E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	2.25E+02	4.03E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.23E+03	5.12E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0011925	0.02675	0		0.01925679	±	0.00721866
231Pa	27.4	0.44395	0.0013875	0.024125	0		0.02487375	±	0.00880417
210Pb	46.5	9.361	0.02225	0.285	0		0.71866178	±	0.05152687
227Ac	50	0.44395	0.00087875	0.030625	0		0.01254286	±	0.00695747
234U+214Pb	53.2	9.361	0.00345	0.072875	0		0.43682859	±	0.08884286
234Th->238U	63.3	9.361	0.009525	0.26375	0		0.33424969	±	0.05235392
230Th	67.6	9.361	0.0013125	0.03325	0		0.36576926	±	0.07821973
234Th->238U	92.6	9.361	0.015375	0.35125	0		0.40783955	±	0.0475334
228Ac->228Ra	129	5.5494	0.0016	0	0.0615		0.144532	±	0.04503956
235U+226Ra	186	9.361	0.0107625	0.24625	0		0.40899168	±	0.03864627
227Th->227Ac	236	0.44395	0	0.014125	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.02	0	0.71875		0.15436665	±	0.01033406
214Pb->226Ra	242	9.361	0.0108	0.1825	0		0.5537815	±	0.04785649
214Pb->226Ra	295	9.361	0.019875	0.3575	0		0.52024587	±	0.03818631
214Pb->226Ra	352	9.361	0.029625	0.5325	0		0.52061455	±	0.03595971
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.015375	0.26625	0		0.54038472	±	0.03971368

U(ppb) = 26873.7667

Th(ppb) = 37907.322

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.001856375	0.0459457		0.37281339	±	0.03221765
234U(295)	53.2	9.361	0.002308532	0.05234294		0.40695687	±	0.02987084
234U(352)	53.2	9.361	0.002569928	0.05705599		0.41561411	±	0.02870716
235U(63.3)	186	0.44395	0.000433826	0.01201277		0.01602736	±	0.00251038
235U(92.6)	186	0.44395	0.000708019	0.01617506		0.01942621	±	0.00226411
226Ra(63.3)	186	9.361	0.010323874	0.23410431		0.41267753	±	0.06463817
226Ra(92.6)	186	9.361	0.010054481	0.23007494		0.40894783	±	0.04766257

234U/238U	=	1.192107181	±	0.211106876
230Th/234U	=	0.917953923	±	0.210446486
226Ra/230Th	=	1.12824553	±	0.291308365

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-469-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.10E+05	1.26297329
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.36E+05	1.10454485
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.42E+05	1.0652781
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.29E+05	1.02979729
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.12E+05	1.02778251
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02528447
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.17E+04	1.02592686
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.11E+05	1.01339339
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.9971537
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.12E+04	1.00445106

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.01227196	0.970509212
Eu154,155	42.9	1.01501853	0.993419912
Eu154,155	48.6	1.01208206	0.977580637
Eu155	86.4	1.01348177	1
Eu155	105	1.01395528	1.004666316
Eu154	123	1.01409925	1.005655704
Sb125	178	1.0200733	1.001188288
Eu154	248	1.00894215	1.008942155
Eu154	592	0.99571416	1.004273556
Sb125	600	1.01415172	#DIV/0!
Sb125	636	0.97300818	0.991057843

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.002logx+1.010
CF (DM1B) equation = y =0.053logx+0.897

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.01281648	0.971636718
231Pa	27.4	1.0128755	0.97320078
210Pb	46.5	1.01333491	0.985375007
227Ac	50	1.01339794	0.98704541
234U+214Pb	53.2	1.01345182	0.988473317
234Th->238U	63.3	1.01360281	0.992474397
230Th	67.6	1.01365989	0.993987175
234Th->238U	92.6	1.01393322	1.001230382
228Ac->228Ra	129	1.01422118	1.008861255
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		2.999		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/20/96		1/23/96		1/25/96	
231Th->235U	25.6	1.79E+02	5.52E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.31E+02	4.15E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	3.62E+03	8.65E+01	2.28E+04	2.00E+02	0	0
227Ac	50	2.33E+02	4.93E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	5.97E+02	5.17E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.12E+03	7.41E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	3.08E+02	6.21E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	2.77E+03	1.45E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	9.33E+01	4.42E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.89E+03	1.21E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	6.24E+01	3.04E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.82E+03	9.28E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.84E+03	8.76E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	3.28E+03	8.37E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	4.72E+03	8.59E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	2.56E+02	4.25E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.56E+03	8.44E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0022375	0.02675	0		0.03763515	±	0.01200734
231Pa	27.4	0.44395	0.0016375	0.024125	0		0.03054173	±	0.01000011
210Pb	46.5	9.361	0.04525	0.285	0		1.50708762	±	0.09822604
227Ac	50	0.44395	0.0029125	0.030625	0		0.04281475	±	0.00966633
234U+214Pb	53.2	9.361	0.0074625	0.072875	0		0.97212175	±	0.1051941
234Th->238U	63.3	9.361	0.0265	0.26375	0		0.9539662	±	0.06688721
230Th	67.6	9.361	0.00385	0.03325	0		1.09944401	±	0.23871373
234Th->238U	92.6	9.361	0.034625	0.35125	0		0.93625592	±	0.08689644
228Ac->228Ra	129	5.5494	0.00116625	0	0.0615		0.10680333	±	0.05096995
235U+226Ra	186	9.361	0.023625	0.24625	0		0.89868471	±	0.07932759
227Th->227Ac	236	0.44395	0.00103	0.014125	0		0.03239458	±	0.01222166
212Pb->228Th	239	5.5494	0.02275	0	0.71875		0.17576771	±	0.012232
214Pb->226Ra	242	9.361	0.023	0.1825	0		1.18052922	±	0.09333141
214Pb->226Ra	295	9.361	0.041	0.3575	0		1.07428518	±	0.07044629
214Pb->226Ra	352	9.361	0.059	0.5325	0		1.03787291	±	0.06533395
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.032	0.26625	0		1.12582824	±	0.07383504

U(ppb) = 76699.143

Th(ppb) = 43162.7127

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.00406867	0.0459457		0.8406641	±	0.06646203
234U(295)	53.2	9.361	0.005107775	0.05234294		0.9263785	±	0.0607473
234U(352)	53.2	9.361	0.005709783	0.05705599		0.95002114	±	0.0598037
235U(63.3)	186	0.44395	0.001236925	0.0123109		0.04463515	±	0.00312959
235U(92.6)	186	0.44395	0.001594481	0.01617506		0.04379223	±	0.00406447
226Ra(63.3)	186	9.361	0.022404675	0.23410431		0.89648083	±	0.06285663
226Ra(92.6)	186	9.361	0.022030519	0.23007494		0.89694783	±	0.08324815

234U/238U =	0.949392042	±	0.08819225	
230Th/234U =	1.21393252	±	0.273754966	
226Ra/230Th =	0.815394713	±	0.179494572	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-470-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.23E+05	1.24493327
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.58E+05	1.09029626
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.47E+05	1.05465212
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.35E+05	1.02061037
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.16E+05	1.01829404
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.79E+06	1.01383823
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.36E+04	1.00211566
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.81E+04	0.98323917
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.16E+04	0.98695603

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.9978129	0.956646681
Eu154,155	42.9	1.00192482	0.980604827
Eu154,155	48.6	1.00198671	0.967829427
Eu155	86.4	1.00444041	0.991078907
Eu155	105	1.00459446	0.995391254
Eu154	123	1.00277788	0.994428597
Sb125	178	1.00579387	0.98717322
Eu154	248	1	1
Eu154	592	0.98937644	0.99788135
Sb125	600	1	#DIV/0!
Sb125	636	0.9560608	0.973796088

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.008logx+0.987
CF (DM1B) equation = y =-0.058logx+0.878

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.99826592	0.957677918
231Pa	27.4	0.998502	0.959389533
210Pb	46.5	1.00033962	0.972712271
227Ac	50	1.00059176	0.97454026
234U+214Pb	53.2	1.00080729	0.976102875
234Th->238U	63.3	1.00141123	0.980481415
230Th	67.6	1.00163957	0.982136908
234Th->238U	92.6	1.00273289	0.990063437
228Ac->228Ra	129	1.00388472	0.998414203
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/19/96		1/23/96		1/25/96	
231Th->235U	25.6	2.94E+02	4.90E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	2.90E+02	4.82E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	4.56E+03	9.43E+01	2.28E+04	2.00E+02	0	0
227Ac	50	4.09E+02	5.14E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	8.43E+02	6.96E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.82E+03	6.13E+01	2.11E+04	2.05E+02	0	0
230Th	67.6	3.21E+02	5.90E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	3.99E+03	1.08E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	9.47E+01	4.02E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	2.57E+03	8.09E+01	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	1.20E+02	3.24E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.70E+03	8.65E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	2.08E+03	9.29E+01	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	3.51E+03	8.08E+01	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	5.73E+03	9.18E+01	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	2.75E+02	4.48E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.98E+03	7.16E+01	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.003675	0.02675	0		0.06090579	±	0.01130782
231Pa	27.4	0.44395	0.003625	0.024125	0		0.06662979	±	0.01237112
210Pb	46.5	9.361	0.057	0.285	0		1.87346012	±	0.12002728
227Ac	50	0.44395	0.0051125	0.030625	0		0.07418104	±	0.01100198
234U+214Pb	53.2	9.361	0.0105375	0.072875	0		1.35511598	±	0.13003858
234Th->238U	63.3	9.361	0.03525	0.26375	0		1.25327419	±	0.08431053
230Th	67.6	9.361	0.0040125	0.03325	0		1.13188383	±	0.22714724
234Th->238U	92.6	9.361	0.049875	0.35125	0		1.33327219	±	0.11675122
228Ac->228Ra	129	5.5494	0.00118375	0	0.0615		0.10726536	±	0.05269382
235U+226Ra	186	9.361	0.032125	0.24625	0		1.22161367	±	0.08360624
227Th->227Ac	236	0.44395	0.0015	0.014125	0		0.04716085	±	0.01326599
212Pb->228Th	239	5.5494	0.02125	0	0.71875		0.16412391	±	0.01153668
214Pb->226Ra	242	9.361	0.026	0.1825	0		1.33406646	±	0.10315151
214Pb->226Ra	295	9.361	0.047625	0.3575	0		1.24745799	±	0.08054682
214Pb->226Ra	352	9.361	0.071625	0.5325	0		1.25954013	±	0.07853863
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.037375	0.26625	0		1.31449389	±	0.0856109

U(ppb) = 100763.588

Th(ppb) = 40303.3807

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.006700996	0.0459457		1.36682212	±	0.10568421
234U(295)	53.2	9.361	0.007802285	0.05234294		1.3969509	±	0.09019939
234U(352)	53.2	9.361	0.008409731	0.05705599		1.38133287	±	0.08613302
235U(63.3)	186	0.44395	0.001625553	0.01216283		0.05935338	±	0.00399283
235U(92.6)	186	0.44395	0.002296744	0.01617506		0.06305875	±	0.00552189
226Ra(63.3)	186	9.361	0.030501738	0.23410431		1.2200627	±	0.08207631
226Ra(92.6)	186	9.361	0.029828256	0.23007494		1.21401915	±	0.10630854

234U/238U	=	1.102473805	±	0.097126486
230Th/234U	=	0.819195354	±	0.170873565
226Ra/230Th	=	1.077904524	±	0.218786188

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-471-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.89E+05	1.29371776
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.27E+05	1.11112345
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.37E+05	1.07619771
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.33E+05	1.02364824
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.35E+04	1.0042433
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.79E+04	0.98874265
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.11E+04	1.00895538

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.03691363	0.994134254
Eu154,155	42.9	1.02106392	0.999336662
Eu154,155	48.6	1.02245639	0.987601312
Eu155	86.4	1.00743014	0.994028872
Eu155	105	1.00924582	1
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00579387	0.98717322
Eu154	248	1.0044445	1.004444503
Eu154	592	0.99147703	1
Sb125	600	1.00559729	#DIV/0!
Sb125	636	0.9773715	0.995502108

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.041logx+1.091
CF (DM1B) equation = y =0.011logx+0.970

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.03326216	0.99149064
231Pa	27.4	1.03205223	0.991815256
210Pb	46.5	1.02263443	0.994341982
227Ac	50	1.02134223	0.99468867
234U+214Pb	53.2	1.02023762	0.994985028
234Th->238U	63.3	1.01714245	0.995815441
230Th	67.6	1.01597219	0.996129414
234Th->238U	92.6	1.01036895	0.997632721
228Ac->228Ra	129	1.00446582	0.999216487
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/11/96		1/23/96		1/25/96	
231Th->235U	25.6	2.28E+04	3.72E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.94E+04	3.27E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	2.29E+05	6.18E+02	2.28E+04	2.00E+02	0	0
227Ac	50	2.46E+04	3.90E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	5.80E+04	4.31E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	2.23E+05	6.33E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	2.53E+04	4.47E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	2.99E+05	2.62E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.99E+05	6.05E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	1.12E+04	2.09E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.44E+03	1.51E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.47E+05	9.25E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	2.59E+05	6.32E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	4.33E+05	1.05E+03	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	1.55E+03	2.71E+02	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.16E+05	5.60E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.285	0.02675	0		4.88563442	±	0.40754498
231Pa	27.4	0.44395	0.2425	0.024125	0		4.60400158	±	0.38882757
210Pb	46.5	9.361	2.8625	0.285	0		96.1166439	±	5.83407418
227Ac	50	0.44395	0.3075	0.030625	0		4.55123939	±	0.36564388
234U+214Pb	53.2	9.361	0.725	0.072875	0		94.9813475	±	6.20316323
234Th->238U	63.3	9.361	2.7875	0.26375	0		100.596238	±	6.12592853
230Th	67.6	9.361	0.31625	0.03325	0		90.4270276	±	7.45802665
234Th->238U	92.6	9.361	3.7375	0.35125	0		100.605659	±	7.76087483
228Ac->228Ra	129	5.5494	0	0	0.0615		0	±	#DIV/0!
235U+226Ra	186	9.361	2.4875	0.24625	0		94.5288562	±	5.75172358
227Th->227Ac	236	0.44395	0.14	0.014125	0		4.39874663	±	0.35610685
212Pb->228Th	239	5.5494	0.018	0	0.71875		0.13892998	±	0.0159854
214Pb->226Ra	242	9.361	1.8375	0.1825	0		94.2197683	±	5.97633123
214Pb->226Ra	295	9.361	3.6125	0.3575	0		94.5604134	±	5.7157718
214Pb->226Ra	352	9.361	5.4125	0.5325	0		95.1164976	±	5.73652331
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	2.7	0.26625	0		94.896829	±	5.75281236

U(ppb) = 8087965.05

Th(ppb) = 34116.5898

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.45386248	0.0459457		94.3101296	±	5.98206282
234U(295)	53.2	9.361	0.517525718	0.05234294		94.3958033	±	5.70582183
234U(352)	53.2	9.361	0.564210494	0.05705599		94.410181	±	5.69392501
235U(63.3)	186	0.44395	0.130564855	0.01235389		4.69042046	±	0.28562878
235U(92.6)	186	0.44395	0.172111875	0.01617506		4.72230721	±	0.36428602
226Ra(63.3)	186	9.361	2.359135625	0.23410431		94.3020313	±	5.74263527
226Ra(92.6)	186	9.361	2.315388125	0.23007494		94.1742221	±	7.26474389

234U/238U	=	0.938126911	±	0.06096175
230Th/234U	=	0.958197254	±	0.081961426
226Ra/230Th	=	1.042852273	±	0.086692189

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-472-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	2.89E+05	1.47580518
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	6.83E+05	1.1448916
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.29E+05	1.09431524
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.29E+05	1.02979729
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.13E+05	1.02538823
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.23E+04	1.01867848
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.37E+04	#DIV/0!
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.82E+04	0.98051783
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.07E+04	1.02752754

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.18285653	1.134056072
Eu154,155	42.9	1.05209507	1.029707496
Eu154,155	48.6	1.0396692	1.004227338
Eu155	86.4	1.01348177	1
Eu155	105	1.01159321	1.002325886
Eu154	123	1.00839606	1
Sb125	178	1.01286628	0.994114693
Eu154	248	1.0044445	1.004444503
Eu154	592	#DIV/0!	#DIV/0!
Sb125	600	0.99723227	#DIV/0!
Sb125	636	0.99536228	1.013826623

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.225logx+1.458
CF (DM1B) equation = y =-0.116logx+1.327

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.13914601	1.163644164
231Pa	27.4	1.13250612	1.160220935
210Pb	46.5	1.08082309	1.133575457
227Ac	50	1.07373175	1.129919479
234U+214Pb	53.2	1.06766988	1.126794251
234Th->238U	63.3	1.05068417	1.11803717
230Th	67.6	1.04426199	1.114726183
234Th->238U	92.6	1.01351253	1.098873126
228Ac->228Ra	129	0.98111732	1.082171594
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/10/96		1/23/96		1/25/96	
231Th->235U	25.6	1.17E+03	9.35E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	9.36E+02	7.76E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.59E+04	1.66E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.13E+03	9.44E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	3.77E+03	1.12E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.17E+04	1.61E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	1.90E+03	1.04E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.58E+04	4.97E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.26E+04	1.53E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	6.18E+02	4.93E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	1.55E+03	7.27E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	9.80E+03	2.10E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.89E+04	1.86E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.79E+04	1.91E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	6.42E+01	7.75E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.38E+04	1.93E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.014625	0.02675	0		0.27649389	±	0.03162022
231Pa	27.4	0.44395	0.0117	0.024125	0		0.24383338	±	0.02854424
210Pb	46.5	9.361	0.19875	0.285	0		7.05568421	±	0.43406144
227Ac	50	0.44395	0.014125	0.030625	0		0.21985797	±	0.02524251
234U+214Pb	53.2	9.361	0.047125	0.072875	0		6.46296841	±	0.46121601
234Th->238U	63.3	9.361	0.14625	0.26375	0		5.45378281	±	0.33987833
230Th	67.6	9.361	0.02375	0.03325	0		6.98238323	±	0.68006387
234Th->238U	92.6	9.361	0.1975	0.35125	0		5.33460335	±	0.44195168
228Ac->228Ra	129	5.5494	0	0	0.0615		0	±	#DIV/0!
235U+226Ra	186	9.361	0.1575	0.24625	0		5.98723858	±	0.37103824
227Th->227Ac	236	0.44395	0.007725	0.014125	0		0.24279743	±	0.0272423
212Pb->228Th	239	5.5494	0.019375	0	0.71875		0.14959252	±	0.00997128
214Pb->226Ra	242	9.361	0.1225	0.1825	0		6.28341096	±	0.41882194
214Pb->226Ra	295	9.361	0.23625	0.3575	0		6.18611538	±	0.37760873
214Pb->226Ra	352	9.361	0.34875	0.5325	0		6.13079577	±	0.37182869
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.1725	0.26625	0		6.06487324	±	0.37699274

U(ppb) = 438485.63

Th(ppb) = 36734.955

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.029049165	0.0459457		6.31899581	±	0.42119386
234U(295)	53.2	9.361	0.033556613	0.05234294		6.40736132	±	0.39111388
234U(352)	53.2	9.361	0.03676466	0.05705599		6.44004015	±	0.39058415
235U(63.3)	186	0.44395	0.007076161	0.01276128		0.24617133	±	0.01534133
235U(92.6)	186	0.44395	0.009094875	0.01617506		0.24962313	±	0.02068033
226Ra(63.3)	186	9.361	0.150765188	0.23410431		6.02856438	±	0.37569857
226Ra(92.6)	186	9.361	0.148405125	0.23007494		6.03812128	±	0.50023548

234U/238U	=	1.171443623	±	0.082260457
230Th/234U	=	1.092910127	±	0.112168446
226Ra/230Th	=	0.863396377	±	0.085340715

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-473-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.52E+05	1.35339354
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.10E+05	1.12384555
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.34E+05	1.08289622
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.32E+05	1.02517628
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.18E+04	1.02470921
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.39E+04	0.99580418
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.80E+04	0.98598069
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.09E+04	1.01812821

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.08474371	1.039991039
Eu154,155	42.9	1.03275485	1.010778822
Eu154,155	48.6	1.02882041	0.993748378
Eu155	86.4	1.00893397	0.995512694
Eu155	105	1.00924582	1
Eu154	123	1.00839606	1
Sb125	178	1.0188626	1
Eu154	248	1.0044445	1.004444503
Eu154	592	0.98314519	0.991596539
Sb125	600	1.00278825	#DIV/0!
Sb125	636	0.98625718	1.004552621

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.105logx+1.217
CF (DM1B) equation = y = -0.050logx+1.097

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.0691348	1.026588002
231Pa	27.4	1.06603619	1.025112472
210Pb	46.5	1.04191744	1.013627352
227Ac	50	1.03860815	1.0120515
234U+214Pb	53.2	1.03577928	1.010704418
234Th->238U	63.3	1.02785261	1.006929814
230Th	67.6	1.0248556	1.005502665
234Th->238U	92.6	1.01050585	0.998669451
228Ac->228Ra	129	0.99538808	0.991470514
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/8/96		1/23/96		1/25/96	
231Th->235U	25.6	1.29E+04	2.68E+02	2.14E+03	1.19E+02	0	0
231Pa	27.4	1.32E+04	2.74E+02	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.26E+05	4.68E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.80E+04	2.90E+02	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	3.38E+04	3.40E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.34E+05	5.03E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	2.06E+04	3.89E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.81E+05	4.84E+03	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.22E+05	4.70E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	6.16E+03	1.77E+02	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	9.79E+02	1.27E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	6.54E+04	6.96E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.67E+05	4.86E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.45E+05	7.90E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	0.00E+00	0.00E+00	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.26E+05	4.30E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.16125	0.02675	0	2.86116211	±	0.24148954
231Pa	27.4	0.44395	0.165	0.024125	0	3.23685043	±	0.27616398
210Pb	46.5	9.361	1.575	0.285	0	53.9003085	±	3.27452367
227Ac	50	0.44395	0.225	0.030625	0	3.38760065	±	0.27233128
234U+214Pb	53.2	9.361	0.4225	0.072875	0	56.2131095	±	3.69302855
234Th->238U	63.3	9.361	1.675	0.26375	0	61.1048147	±	3.72111974
230Th	67.6	9.361	0.2575	0.03325	0	74.296868	±	6.14766035
234Th->238U	92.6	9.361	2.2625	0.35125	0	60.930302	±	4.94590419
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	1.525	0.24625	0	57.9716751	±	3.53002335
227Th->227Ac	236	0.44395	0.102	0.014125	0	3.20586903	±	0.26233209
212Pb->228Th	239	5.5494	0.0122375	0	0.71875	0.09448457	±	0.01304829
214Pb->226Ra	242	9.361	1.0675	0.1825	0	54.7554384	±	3.48467977
214Pb->226Ra	295	9.361	2.0875	0.3575	0	54.6603846	±	3.30565259
214Pb->226Ra	352	9.361	3.0625	0.5325	0	53.8367371	±	3.24893585
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	1.575	0.26625	0	55.3749296	±	3.35917404

U(ppb) = 4912843.82

Th(ppb) = 23202.2716

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.264982012	0.0459457	55.9192103	±	3.55874314
234U(295)	53.2	9.361	0.302610017	0.05234294	56.0550347	±	3.38999574
234U(352)	53.2	9.361	0.331522104	0.05705599	56.3379107	±	3.39987651
235U(63.3)	186	0.44395	0.079282126	0.01248398	2.8193981	±	0.1716938
235U(92.6)	186	0.44395	0.104188125	0.01617506	2.85960676	±	0.23212327
226Ra(63.3)	186	9.361	1.44786625	0.23410431	57.895029	±	3.52565238
226Ra(92.6)	186	9.361	1.420811875	0.23007494	57.8082085	±	4.69247405

234U/238U =	0.918160904	±	0.059912231
230Th/234U =	1.324269201	±	0.113887574
226Ra/230Th =	0.77923916	±	0.0649866

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-474-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.54E+05	1.2046485
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	8.12E+05	1.05290371
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.51E+05	1.0463539
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.36E+05	1.01609848
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.19E+05	1.01132963
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.80E+06	1.01102971
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.37E+04	1.00228485
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.30E+04	0.99789621
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.84E+04	0.97513468
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.16E+04	0.98695603

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96552469	0.925690569
Eu154,155	42.9	0.96756305	0.946974237
Eu154,155	48.6	0.99410287	0.960214348
Eu155	86.4	1	0.986697569
Eu155	105	0.99772374	0.988583483
Eu154	123	1	0.99167385
Sb125	178	0.99656618	0.978116362
Eu154	248	1	1
Eu154	592	0.98521063	0.993679731
Sb125	600	0.99175736	#DIV/0!
Sb125	636	0.9560608	0.973796088

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.056logx+0.887
CF (DM1B) equation = y =0.104logx+0.779

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.96586144	0.925456956
231Pa	27.4	0.96751403	0.928526059
210Pb	46.5	0.98037737	0.952415107
227Ac	50	0.98214232	0.95569288
234U+214Pb	53.2	0.98365105	0.95849481
234Th->238U	63.3	0.98787861	0.966345986
230Th	67.6	0.98947701	0.969314456
234Th->238U	92.6	0.99713022	0.983527543
228Ac->228Ra	129	1.00519302	0.99850133
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/8/96		1/23/96		1/25/96	
231Th->235U	25.6	1.09E+03	9.21E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	9.05E+02	7.83E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.82E+04	1.70E+02	2.28E+04	2.00E+02	0	0
227Ac	50	1.01E+03	9.41E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	3.33E+03	1.04E+02	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	1.03E+04	1.55E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	1.29E+03	1.08E+02	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.42E+04	5.08E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.03E+04	1.42E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	4.91E+02	3.76E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	9.20E+02	5.42E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.18E+03	2.12E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.62E+04	1.57E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	2.40E+04	1.80E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	1.52E+02	6.45E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.18E+04	1.32E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.013625	0.02675	0	0.21825906	±	0.02566903
231Pa	27.4	0.44395	0.0113125	0.024125	0	0.20127659	±	0.02409778
210Pb	46.5	9.361	0.2275	0.285	0	7.32087051	±	0.44915761
227Ac	50	0.44395	0.012625	0.030625	0	0.17962817	±	0.02191421
234U+214Pb	53.2	9.361	0.041625	0.072875	0	5.25593091	±	0.37848072
234Th->238U	63.3	9.361	0.12875	0.26375	0	4.51119145	±	0.28247597
230Th	67.6	9.361	0.016125	0.03325	0	4.48896989	±	0.52155701
234Th->238U	92.6	9.361	0.1775	0.35125	0	4.71375287	±	0.39869153
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.12875	0.24625	0	4.89107032	±	0.30478412
227Th->227Ac	236	0.44395	0.0060125	0.014125	0	0.18884755	±	0.02097488
212Pb->228Th	239	5.5494	0.0115	0	0.71875	0.08873127	±	0.00670722
214Pb->226Ra	242	9.361	0.10225	0.1825	0	5.24123167	±	0.35761238
214Pb->226Ra	295	9.361	0.2025	0.3575	0	5.29885322	±	0.32417657
214Pb->226Ra	352	9.361	0.3	0.5325	0	5.27029046	±	0.32004707
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.1475	0.26625	0	5.18245229	±	0.31919077

U(ppb) = 362701.027

Th(ppb) = 21789.4518

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.026537211	0.0459457	5.3147694	±	0.3626299
234U(295)	53.2	9.361	0.029994954	0.05234294	5.27307596	±	0.32259955
234U(352)	53.2	9.361	0.03271288	0.05705599	5.27583892	±	0.32038401
235U(63.3)	186	0.44395	0.005857071	0.01199846	0.2165706	±	0.01356094
235U(92.6)	186	0.44395	0.008173875	0.01617506	0.22419543	±	0.01896256
226Ra(63.3)	186	9.361	0.122821063	0.23410431	4.90790722	±	0.307317
226Ra(92.6)	186	9.361	0.120576125	0.23007494	4.90258259	±	0.41466284

234U/238U	=	1.172172544	±	0.084581955
230Th/234U	=	0.848914378	±	0.103223353
226Ra/230Th	=	1.09332594	±	0.128530308

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-475-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.57E+05	1.20093876
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.77E+05	1.07585872
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.51E+05	1.0463539
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.36E+05	1.01910046
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.17E+05	1.01595835
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.80E+06	1.01102971
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.31E+04	1.00922385
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.39E+04	0.99580418
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.87E+04	0.96720521
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.14E+04	0.99560115

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96255133	0.922839887
Eu154,155	42.9	0.98865749	0.967619809
Eu154,155	48.6	0.99410287	0.960214348
Eu155	86.4	1.00295442	0.989612685
Eu155	105	1.00229019	0.993108096
Eu154	123	1	0.99167385
Sb125	178	1.00346559	0.98488804
Eu154	248	1	1
Eu154	592	0.98314519	0.991596539
Sb125	600	0.98369271	#DIV/0!
Sb125	636	0.96443531	0.982325942

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.053logx+0.897
CF (DM1B) equation = y =0.101logx+0.789

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.97163672	0.931232236
231Pa	27.4	0.97320078	0.934212807
210Pb	46.5	0.98537501	0.957412748
227Ac	50	0.98704541	0.96059597
234U+214Pb	53.2	0.98847332	0.963317075
234Th->238U	63.3	0.9924744	0.970941775
230Th	67.6	0.99398717	0.973824616
234Th->238U	92.6	1.00123038	0.98762771
228Ac->228Ra	129	1.00886125	1.002169561
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		2.999		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/7/96		1/23/96		1/25/96	
231Th->235U	25.6	9.78E+02	8.83E+01	2.14E+03	1.19E+02	0	0
231Pa	27.4	6.73E+02	6.82E+01	1.93E+03	1.10E+02	0	0
210Pb	46.5	1.35E+04	1.44E+02	2.28E+04	2.00E+02	0	0
227Ac	50	9.16E+02	8.47E+01	2.45E+03	1.25E+02	0	0
234U+214Pb	53.2	2.35E+03	9.04E+01	5.83E+03	1.44E+02	0	0
234Th->238U	63.3	7.83E+03	1.33E+02	2.11E+04	2.05E+02	0	0
230Th	67.6	9.66E+02	9.13E+01	2.66E+03	1.43E+02	0	0
234Th->238U	92.6	1.07E+04	3.08E+02	2.81E+04	1.34E+03	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	7.49E+03	1.25E+02	1.97E+04	1.90E+02	0	0
227Th->227Ac	236	3.92E+02	3.55E+01	1.13E+03	5.79E+01	0	0
212Pb->228Th	239	9.23E+02	5.56E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	5.63E+03	1.65E+02	1.46E+04	2.86E+02	0	0
214Pb->226Ra	295	1.11E+04	1.31E+02	2.86E+04	2.00E+02	0	0
214Pb->226Ra	352	1.60E+04	1.50E+02	4.26E+04	2.39E+02	0	0
208Tl->228Th	583	7.34E+01	5.77E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	8.14E+03	1.15E+02	2.13E+04	1.76E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.012225	0.02675	0	0.19726616	±	0.02403395
231Pa	27.4	0.44395	0.0084125	0.024125	0	0.15075919	±	0.0197245
210Pb	46.5	9.361	0.16875	0.285	0	5.46527776	±	0.33649092
227Ac	50	0.44395	0.011475	0.030625	0	0.16429991	±	0.01993118
234U+214Pb	53.2	9.361	0.029375	0.072875	0	3.7322956	±	0.28153176
234Th->238U	63.3	9.361	0.097875	0.26375	0	3.44993088	±	0.21772634
230Th	67.6	9.361	0.012075	0.03325	0	3.3813338	±	0.4199239
234Th->238U	92.6	9.361	0.13375	0.35125	0	3.57127466	±	0.29237843
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.093625	0.24625	0	3.56145422	±	0.22444339
227Th->227Ac	236	0.44395	0.0049	0.014125	0	0.15411014	±	0.01851039
212Pb->228Th	239	5.5494	0.0115375	0	0.71875	0.08913934	±	0.00683054
214Pb->226Ra	242	9.361	0.070375	0.1825	0	3.61216279	±	0.25136727
214Pb->226Ra	295	9.361	0.13875	0.3575	0	3.63553827	±	0.22376095
214Pb->226Ra	352	9.361	0.2	0.5325	0	3.51821324	±	0.21456389
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.10175	0.26625	0	3.57978197	±	0.22263451

U(ppb) = 277375.386

Th(ppb) = 21889.6615

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.018990617	0.0459457	3.82711033	±	0.26632529
234U(295)	53.2	9.361	0.021406265	0.05234294	3.78668759	±	0.23306392
234U(352)	53.2	9.361	0.023433586	0.05705599	3.80289442	±	0.23192563
235U(63.3)	186	0.44395	0.004473225	0.01205428	0.16485529	±	0.01040408
235U(92.6)	186	0.44395	0.006159188	0.01617506	0.16916131	±	0.01384915
226Ra(63.3)	186	9.361	0.089117856	0.23410431	3.56588302	±	0.22504412
226Ra(92.6)	186	9.361	0.087465813	0.23007494	3.56107235	±	0.29154317

234U/238U	=	1.103084163	±	0.082052815
230Th/234U	=	0.888523671	±	0.1157575
226Ra/230Th	=	1.054578824	±	0.132582759

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-466-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]

T = transmitted intensity through sample or standards

I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.29E+05	1.23684536
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.52E+05	1.0931061
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.46E+05	1.05675446
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.31E+05	1.02671044
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.23E+04	1.01867848
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.31E+04	1.01287601
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.79E+04	0.98874265
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.08E+04	1.02279897

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.99133044	0.950431674
Eu154,155	42.9	1.00450692	0.983131983
Eu154,155	48.6	1.00398407	0.969758702
Eu155	86.4	1.01044382	0.997002463
Eu155	105	1.00924582	1
Eu154	123	1.00839606	1
Sb125	178	1.01286628	0.994114693
Eu154	248	1.0044445	1.004444503
Eu154	592	1	1.008596234
Sb125	600	1.00559729	#DIV/0!
Sb125	636	0.99078173	1.009161106

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.024logx+0.961

CF (DM1B) equation = y =0.074logx+0.851

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.99479776	0.955209757
231Pa	27.4	0.99550601	0.957393542
210Pb	46.5	1.00101887	0.974391519
227Ac	50	1.00177528	0.97672378
234U+214Pb	53.2	1.00242188	0.978717461
234Th->238U	63.3	1.00423369	0.984303875
230Th	67.6	1.00491872	0.986416055
234Th->238U	92.6	1.00819866	0.996529213
228Ac->228Ra	129	1.01165415	1.007183639
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/23/96		1/23/96		1/25/96	
231Th->235U	25.6	0.00E+00	0.00E+00	2.25E+03	1.31E+02	0	0
231Pa	27.4	1.56E+02	5.40E+01	1.75E+03	1.31E+02	0	0
210Pb	46.5	2.31E+03	7.72E+01	2.27E+04	2.08E+02	0	0
227Ac	50	0.00E+00	0.00E+00	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	5.13E+02	5.02E+01	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	1.28E+03	7.12E+01	2.11E+04	2.17E+02	0	0
230Th	67.6	8.50E+01	2.95E+01	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.67E+03	8.58E+01	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	1.81E+02	5.94E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.32E+03	7.98E+01	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.47E+03	8.18E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.18E+03	6.54E+01	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	2.28E+03	7.98E+01	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	3.41E+03	7.75E+01	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	2.47E+02	5.34E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.61E+03	6.79E+01	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0	0.028125	0		0	±	#DIV/0!
231Pa	27.4	0.44395	0.00195	0.021875	0		0.03939712	±	0.01415153
210Pb	46.5	9.361	0.028875	0.28375	0		0.95356573	±	0.06607083
227Ac	50	0.44395	0	0.030625	0		0	±	#DIV/0!
234U+214Pb	53.2	9.361	0.0064125	0.072875	0		0.82569868	±	0.097583
234Th->238U	63.3	9.361	0.016	0.26375	0		0.57027528	±	0.04702579
230Th	67.6	9.361	0.0010625	0.03125	0		0.3198395	±	0.11352537
234Th->238U	92.6	9.361	0.020875	0.3275	0		0.60156636	±	0.04779575
228Ac->228Ra	129	5.5494	0.0020125	0	0.0615		0.18371257	±	0.0686013
235U+226Ra	186	9.361	0.0165	0.24375	0		0.63366769	±	0.05436794
227Th->227Ac	236	0.44395	0	0.01425	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.018375	0	0.71875		0.14187162	±	0.01036697
214Pb->226Ra	242	9.361	0.01475	0.18125	0		0.76179172	±	0.06292274
214Pb->226Ra	295	9.361	0.02825	0.35625	0		0.74231088	±	0.05201494
214Pb->226Ra	352	9.361	0.042625	0.535	0		0.74581799	±	0.04804814
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.020125	0.26625	0		0.70756854	±	0.05227897

U(ppb) = 45850.2885

Th(ppb) = 34838.9573

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.004236022	0.04613014		0.86168035	±	0.07117337
234U(295)	53.2	9.361	0.004790037	0.05241473		0.85754762	±	0.06008977
234U(352)	53.2	9.361	0.005146236	0.05698172		0.84747512	±	0.05459723
235U(63.3)	186	0.44395	0.000739919	0.01219711		0.02693156	±	0.00222082
235U(92.6)	186	0.44395	0.000961294	0.01508138		0.02829758	±	0.0022483
226Ra(63.3)	186	9.361	0.0157632	0.23160431		0.63711817	±	0.05253776
226Ra(92.6)	186	9.361	0.015538706	0.22866863		0.63610751	±	0.05054011

234U/238U	=	1.500271405	±	0.163542005
230Th/234U	=	0.373833073	±	0.135340338
226Ra/230Th	=	1.991993377	±	0.715970571

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-467-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.16E+05	1.25455734
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.42E+05	1.10021742
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.43E+05	1.06312984
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.28E+05	1.03135007
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.11E+05	1.03019182
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.25E+04	1.01510533
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.11E+05	1.01339339
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.74E+04	1.00286807
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.13E+04	#DIV/0!

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.00552658	0.964042126
Eu154,155	42.9	1.01104185	0.989527848
Eu154,155	48.6	1.01004109	0.975609235
Eu155	86.4	1.01500995	1.001507851
Eu155	105	1.01633218	1.007021444
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00931351	0.990627703
Eu154	248	1.00894215	1.008942155
Eu154	592	0.99571416	1.004273556
Sb125	600	1.01996351	#DIV/0!
Sb125	636	#DIV/0!	#DIV/0!

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.012logx+0.990
CF (DM1B) equation = y =-0.062logx+0.878

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.00689888	0.965310878
231Pa	27.4	1.00725301	0.967140535
210Pb	46.5	1.01000944	0.981382083
227Ac	50	1.01038764	0.98333614
234U+214Pb	53.2	1.01071094	0.985006521
234Th->238U	63.3	1.01161684	0.98968703
230Th	67.6	1.01195936	0.991456695
234Th->238U	92.6	1.01359933	0.999929881
228Ac->228Ra	129	1.01532708	1.008856562
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/22/96		1/23/96		1/25/96	
231Th->235U	25.6	0.00E+00	0.00E+00	2.25E+03	1.31E+02	0	0
231Pa	27.4	0.00E+00	0.00E+00	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.56E+03	7.15E+01	2.27E+04	2.08E+02	0	0
227Ac	50	0.00E+00	0.00E+00	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	2.18E+02	5.09E+01	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	1.11E+03	5.71E+01	2.11E+04	2.17E+02	0	0
230Th	67.6	6.00E+01	2.60E+01	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.49E+03	8.40E+01	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	1.83E+02	4.88E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	8.59E+02	7.11E+01	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.41E+03	7.72E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.25E+02	5.57E+01	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.53E+03	7.04E+01	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	2.05E+03	7.48E+01	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	2.70E+02	4.60E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.10E+03	5.75E+01	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0	0.028125	0		0	±	#DIV/0!
231Pa	27.4	0.44395	0	0.021875	0		0	±	#DIV/0!
210Pb	46.5	9.361	0.01975	0.28375	0		0.65764204	±	0.04978923
227Ac	50	0.44395	0	0.030625	0		0	±	#DIV/0!
234U+214Pb	53.2	9.361	0.002725	0.072875	0		0.35354754	±	0.08580879
234Th->238U	63.3	9.361	0.013875	0.26375	0		0.49783965	±	0.04270996
230Th	67.6	9.361	0.001	0.03125	0		0.30293256	±	0.10100019
234Th->238U	92.6	9.361	0.018625	0.3275	0		0.53924261	±	0.04467439
228Ac->228Ra	129	5.5494	0.0022875	0	0.0615		0.2094347	±	0.05467974
235U+226Ra	186	9.361	0.0107375	0.24375	0		0.41208942	±	0.04237907
227Th->227Ac	236	0.44395	0	0.01425	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.017625	0	0.71875		0.13599031	±	0.00984489
214Pb->226Ra	242	9.361	0.0103125	0.18125	0		0.5322539	±	0.0485169
214Pb->226Ra	295	9.361	0.019125	0.35625	0		0.5022032	±	0.03817185
214Pb->226Ra	352	9.361	0.025625	0.535	0		0.44806704	±	0.03155008
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.01375	0.26625	0		0.48310996	±	0.03868757

U(ppb) = 40026.4442

Th(ppb) = 33394.7034

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.00120331	0.04613014		0.24663377	±	0.02248157
234U(295)	53.2	9.361	0.001626607	0.05241473		0.29341956	±	0.02230246
234U(352)	53.2	9.361	0.001963756	0.05698172		0.32584566	±	0.02294401
235U(63.3)	186	0.44395	0.000646366	0.01228678		0.02333916	±	0.00200228
235U(92.6)	186	0.44395	0.000857681	0.01508138		0.02523072	±	0.00209028
226Ra(63.3)	186	9.361	0.010098556	0.23160431		0.40789235	±	0.03499332
226Ra(92.6)	186	9.361	0.009879819	0.22866863		0.40418045	±	0.03348496

234U/238U =	0.579771009	±	0.072423696	
230Th/234U =	1.049542379	±	0.36267031	
226Ra/230Th =	1.346479039	±	0.456456444	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-468-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.52E+05	1.20713929
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.77E+05	1.07585872
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.53E+05	1.04227011
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.40E+05	1.01312003
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.19E+05	1.01132963
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.81E+06	1.00824188
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.30E+04	1.01039286
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.37E+04	#DIV/0!
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.86E+04	0.96982931
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.17E+04	0.98270778

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96752105	0.927604573
Eu154,155	42.9	0.98865749	0.967619809
Eu154,155	48.6	0.99022301	0.956466752
Eu155	86.4	0.99706874	0.9838053
Eu155	105	0.99772374	0.988583483
Eu154	123	0.99724259	0.988939395
Sb125	178	1.00462793	0.986028862
Eu154	248	1	1
Eu154	592	#DIV/0!	#DIV/0!
Sb125	600	0.98636155	#DIV/0!
Sb125	636	0.95194554	0.969604486

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.049logx+0.917
CF (DM1B) equation = y =0.089logx+0.809

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.9733296	0.934333357
231Pa	27.4	0.97451002	0.9369598
210Pb	46.5	0.98369812	0.957403313
227Ac	50	0.9849588	0.96020833
234U+214Pb	53.2	0.98603647	0.962606135
234Th->238U	63.3	0.98905615	0.96932493
230Th	67.6	0.99019787	0.971865256
234Th->238U	92.6	0.99566444	0.984028378
228Ac->228Ra	129	1.00142359	0.996842484
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/21/96		1/23/96		1/25/96	
231Th->235U	25.6	7.26E+01	4.56E+01	2.25E+03	1.31E+02	0	0
231Pa	27.4	1.17E+02	4.52E+01	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.73E+03	7.12E+01	2.27E+04	2.08E+02	0	0
227Ac	50	0.00E+00	0.00E+00	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	3.41E+02	4.86E+01	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	8.29E+02	6.49E+01	2.11E+04	2.17E+02	0	0
230Th	67.6	1.07E+02	2.75E+01	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.16E+03	7.98E+01	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	6.35E+01	4.76E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	8.36E+02	7.32E+01	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	0.00E+00	0.00E+00	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.51E+03	7.17E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	9.67E+02	6.10E+01	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.64E+03	6.95E+01	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	2.36E+03	7.07E+01	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	2.13E+02	4.05E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.26E+03	5.41E+01	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0009075	0.028125	0		0.01393809	±	0.00881269
231Pa	27.4	0.44395	0.0014625	0.021875	0		0.02891502	±	0.01150986
210Pb	46.5	9.361	0.021625	0.28375	0		0.70155163	±	0.05144714
227Ac	50	0.44395	0	0.030625	0		0	±	#DIV/0!
234U+214Pb	53.2	9.361	0.0042625	0.072875	0		0.53970489	±	0.08482787
234Th->238U	63.3	9.361	0.0103625	0.26375	0		0.3636391	±	0.03606199
230Th	67.6	9.361	0.0013375	0.03125	0		0.39659141	±	0.10611307
234Th->238U	92.6	9.361	0.01475	0.3275	0		0.41963458	±	0.03813539
228Ac->228Ra	129	5.5494	0.00079375	0	0.0615		0.07170142	±	0.05379381
235U+226Ra	186	9.361	0.010475	0.24375	0		0.40214897	±	0.04285321
227Th->227Ac	236	0.44395	0	0.01425	0		0	±	#DIV/0!
212Pb->228Th	239	5.5494	0.018875	0	0.71875		0.14568352	±	0.00977038
214Pb->226Ra	242	9.361	0.0120875	0.18125	0		0.62407391	±	0.05486883
214Pb->226Ra	295	9.361	0.0205	0.35625	0		0.53848863	±	0.03977543
214Pb->226Ra	352	9.361	0.0295	0.535	0		0.51599535	±	0.03473421
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.015625	0.26625	0		0.54917146	±	0.0409255

U(ppb) = 29236.6832

Th(ppb) = 35775.0352

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.002478895	0.04613014		0.49584257	±	0.04359468
234U(295)	53.2	9.361	0.003085137	0.05241473		0.54311481	±	0.04011714
234U(352)	53.2	9.361	0.003386141	0.05698172		0.54832758	±	0.03691066
235U(63.3)	186	0.44395	0.000471971	0.01201277		0.01743659	±	0.00172918
235U(92.6)	186	0.44395	0.000679238	0.01508138		0.01998803	±	0.00181647
226Ra(63.3)	186	9.361	0.009997807	0.23160431		0.40395748	±	0.04006036
226Ra(92.6)	186	9.361	0.009795763	0.22866863		0.40087523	±	0.03643059

234U/238U =	1.455000252	±	0.188319808	
230Th/234U =	0.749565631	±	0.210021731	
226Ra/230Th =	1.018573436	±	0.28415176	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-469-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.10E+05	1.26297329
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.36E+05	1.10454485
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.42E+05	1.0652781
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.29E+05	1.02979729
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.12E+05	1.02778251
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.75E+06	1.02528447
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.17E+04	1.02592686
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.11E+05	1.01339339
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.33E+04	1.00853499
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.76E+04	0.9971537
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.12E+04	1.00445106

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.01227196	0.970509212
Eu154,155	42.9	1.01501853	0.993419912
Eu154,155	48.6	1.01208206	0.977580637
Eu155	86.4	1.01348177	1
Eu155	105	1.01395528	1.004666316
Eu154	123	1.01409925	1.005655704
Sb125	178	1.0200733	1.001188288
Eu154	248	1.00894215	1.008942155
Eu154	592	0.99571416	1.004273556
Sb125	600	1.01415172	#DIV/0!
Sb125	636	0.97300818	0.991057843

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.002logx+1.010
CF (DM1B) equation = y =-0.053logx+0.897

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.01281648	0.971636718
231Pa	27.4	1.0128755	0.97320078
210Pb	46.5	1.01333491	0.985375007
227Ac	50	1.01339794	0.98704541
234U+214Pb	53.2	1.01345182	0.988473317
234Th->238U	63.3	1.01360281	0.992474397
230Th	67.6	1.01365989	0.993987175
234Th->238U	92.6	1.01393322	1.001230382
228Ac->228Ra	129	1.01422118	1.008861255
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =			80000		80000		80000	
Weight (g) =			2.999		3.001		2.994	
			Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV		2/20/96		1/23/96		1/25/96	
231Th->235U	25.6		2.01E+02	5.56E+01	2.25E+03	1.31E+02	0	0
231Pa	27.4		1.46E+02	2.85E+01	1.75E+03	1.31E+02	0	0
210Pb	46.5		3.66E+03	8.93E+01	2.27E+04	2.08E+02	0	0
227Ac	50		2.31E+02	5.97E+01	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2		6.20E+02	6.17E+01	5.83E+03	1.64E+02	0	0
234Th->238U	63.3		2.09E+03	6.13E+01	2.11E+04	2.17E+02	0	0
230Th	67.6		2.77E+02	3.53E+01	2.50E+03	1.10E+02	0	0
234Th->238U	92.6		2.54E+03	9.47E+01	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129		6.48E+01	8.28E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186		2.01E+03	8.58E+01	1.95E+04	2.18E+02	0	0
227Th->227Ac	236		5.31E+01	3.93E+01	1.14E+03	1.41E+02	0	0
212Pb->228Th	239		1.58E+03	6.14E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242		1.88E+03	7.23E+01	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295		3.27E+03	8.95E+01	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352		4.70E+03	9.59E+01	4.28E+04	2.49E+02	0	0
208Tl->228Th	583		2.59E+02	4.52E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609		2.63E+03	7.20E+01	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0025125	0.028125	0	0.04019462	±	0.01161525
231Pa	27.4	0.44395	0.001825	0.021875	0	0.03754002	±	0.00770699
210Pb	46.5	9.361	0.04575	0.28375	0	1.53045303	±	0.10011628
227Ac	50	0.44395	0.0028875	0.030625	0	0.04244724	±	0.01153119
234U+214Pb	53.2	9.361	0.00775	0.072875	0	1.00957368	±	0.1207054
234Th->238U	63.3	9.361	0.026125	0.26375	0	0.94046667	±	0.06794142
230Th	67.6	9.361	0.0034625	0.03125	0	1.05206797	±	0.15525096
234Th->238U	92.6	9.361	0.03175	0.3275	0	0.92077507	±	0.06559753
228Ac->228Ra	129	5.5494	0.001185	0	0.0615	0.10852042	±	0.07216049
235U+226Ra	186	9.361	0.025125	0.24375	0	0.96554656	±	0.07191296
227Th->227Ac	236	0.44395	0.00066375	0.01425	0	0.02069251	±	0.01557674
212Pb->228Th	239	5.5494	0.01975	0	0.71875	0.15258955	±	0.01067838
214Pb->226Ra	242	9.361	0.02325	0.18125	0	1.20159114	±	0.08716009
214Pb->226Ra	295	9.361	0.040875	0.35625	0	1.07476785	±	0.07136692
214Pb->226Ra	352	9.361	0.05875	0.535	0	1.02864582	±	0.06546407
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.032875	0.26625	0	1.1566126	±	0.07698105

U(ppb) = 75613.7778

Th(ppb) = 37470.9265

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.00431928	0.04613014	0.88887662	±	0.06447664
234U(295)	53.2	9.361	0.005402454	0.05241473	0.97848134	±	0.06497329
234U(352)	53.2	9.361	0.00600471	0.05698172	1.00039465	±	0.06366614
235U(63.3)	186	0.44395	0.001219421	0.0123109	0.04400352	±	0.00317891
235U(92.6)	186	0.44395	0.001462088	0.01508138	0.04306813	±	0.00306824
226Ra(63.3)	186	9.361	0.023921944	0.23160431	0.96752367	±	0.06989607
226Ra(92.6)	186	9.361	0.023662913	0.22866863	0.96933388	±	0.06905694

234U/238U	=	1.016428931	±	0.091704304
230Th/234U	=	1.100584445	±	0.172960695
226Ra/230Th	=	0.919639887	±	0.140663076

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-470-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.23E+05	1.24493327
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.56E+05	1.09029626
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.47E+05	1.05465212
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.35E+05	1.02061037
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.16E+05	1.01829404
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.79E+06	1.01383823
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.36E+04	1.00211566
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.81E+04	0.98323917
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.16E+04	0.98695603

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.9978129	0.956646681
Eu154,155	42.9	1.00192482	0.980604827
Eu154,155	48.6	1.00198671	0.967829427
Eu155	86.4	1.00444041	0.991078907
Eu155	105	1.00459446	0.995391254
Eu154	123	1.00277788	0.994428597
Sb125	178	1.00579387	0.98717322
Eu154	248	1	1
Eu154	592	0.98937644	0.99788135
Sb125	600	1	#DIV/0!
Sb125	636	0.9560608	0.973796088

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.008logx+0.987
CF (DM1B) equation = y =-0.058logx+0.878

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.99826592	0.957677918
231Pa	27.4	0.998502	0.959389533
210Pb	46.5	1.00033962	0.972712271
227Ac	50	1.00059176	0.97454026
234U+214Pb	53.2	1.00080729	0.976102875
234Th->238U	63.3	1.00141123	0.980481415
230Th	67.6	1.00163957	0.982136908
234Th->238U	92.6	1.00273289	0.990063437
228Ac->228Ra	129	1.00388472	0.998414203
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/19/96		1/23/96		1/25/96	
231Th->235U	25.6	3.35E+02	6.44E+01	2.25E+03	1.31E+02	0	0
231Pa	27.4	3.15E+02	5.95E+01	1.75E+03	1.31E+02	0	0
210Pb	46.5	4.45E+03	9.90E+01	2.27E+04	2.08E+02	0	0
227Ac	50	4.00E+02	6.20E+01	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	8.60E+02	6.35E+01	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	2.94E+03	6.63E+01	2.11E+04	2.17E+02	0	0
230Th	67.6	3.34E+02	3.67E+01	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	3.61E+03	1.07E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	1.30E+02	5.29E+01	0	0	4.92E+03	1.64E+02
235U+226Ra	186	2.50E+03	9.67E+01	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	1.26E+02	4.52E+01	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.58E+03	6.17E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	2.05E+03	7.87E+01	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	3.77E+03	9.86E+01	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	5.66E+03	1.06E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	2.96E+02	4.95E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.91E+03	8.00E+01	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.0041875	0.028125	0		0.0660066	±	0.0138371
231Pa	27.4	0.44395	0.0039375	0.021875	0		0.07981789	±	0.01690983
210Pb	46.5	9.361	0.055625	0.28375	0		1.83632104	±	0.11870787
227Ac	50	0.44395	0.005	0.030625	0		0.0725487	±	0.01278006
234U+214Pb	53.2	9.361	0.01075	0.072875	0		1.38244335	±	0.13715657
234Th->238U	63.3	9.361	0.03675	0.26375	0		1.30660501	±	0.08830379
230Th	67.6	9.361	0.004175	0.03125	0		1.25309766	±	0.16628784
234Th->238U	92.6	9.361	0.045125	0.3275	0		1.29377322	±	0.08740239
228Ac->228Ra	129	5.5494	0.001625	0	0.0615		0.14724917	±	0.06051681
235U+226Ra	186	9.361	0.03125	0.24375	0		1.20052825	±	0.08674698
227Th->227Ac	236	0.44395	0.001575	0.01425	0		0.04908451	±	0.0188567
212Pb->228Th	239	5.5494	0.0195	0	0.71875		0.15060782	±	0.01063461
214Pb->226Ra	242	9.361	0.025625	0.18125	0		1.32389287	±	0.09569198
214Pb->226Ra	295	9.361	0.047125	0.35625	0		1.23869241	±	0.08164246
214Pb->226Ra	352	9.361	0.071	0.535	0		1.24271503	±	0.0784203
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	0
214Bi->226Ra	609	9.361	0.036375	0.26625	0		1.27932348	±	0.08520897

U(ppb) = 105051.4

Th(ppb) = 36984.2787

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.006968831	0.04613014		1.4157695	±	0.10233289
234U(295)	53.2	9.361	0.008043502	0.05241473		1.43816666	±	0.09478985
234U(352)	53.2	9.361	0.008640798	0.05698172		1.4211364	±	0.0896794
235U(63.3)	186	0.44395	0.001694726	0.01216283		0.06187906	±	0.00418195
235U(92.6)	186	0.44395	0.002078006	0.01508138		0.0611906	±	0.0041338
226Ra(63.3)	186	9.361	0.029557663	0.23160431		1.19506198	±	0.08076542
226Ra(92.6)	186	9.361	0.029171994	0.22866863		1.19461102	±	0.08070337

234U/238U	=	1.090631202	±	0.093299579
230Th/234U	=	0.879351851	±	0.125474741
226Ra/230Th	=	0.953686229	±	0.129985289

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-471-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source SRM 4275C		Empty vial 1/24/96	Standard - DP1B 1/24/96		Standard - DM1B 1/24/96		Sample 1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.89E+05	1.29371776
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.27E+05	1.11112345
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.37E+05	1.07619771
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.33E+05	1.02364824
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.76E+06	1.02239054
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.29E+04	1.01156549
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.35E+04	1.0042433
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.79E+04	0.98874265
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.11E+04	1.00895538

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.03691363	0.994134254
Eu154,155	42.9	1.02106392	0.999336662
Eu154,155	48.6	1.02245639	0.987601312
Eu155	86.4	1.00743014	0.994028872
Eu155	105	1.00924582	1
Eu154	123	1.01123689	1.00281718
Sb125	178	1.00579387	0.98717322
Eu154	248	1.0044445	1.004444503
Eu154	592	0.99147703	1
Sb125	600	1.00559729	#DIV/0!
Sb125	636	0.9773715	0.995502108

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.041logx+1.091
CF (DM1B) equation = y =-0.011logx+0.976

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.03326216	0.99149064
231Pa	27.4	1.03205223	0.991815256
210Pb	46.5	1.02263443	0.994341982
227Ac	50	1.02134223	0.99468867
234U+214Pb	53.2	1.02023762	0.994985028
234Th->238U	63.3	1.01714245	0.995815441
230Th	67.6	1.01597219	0.996129414
234Th->238U	92.6	1.01036895	0.997632721
228Ac->228Ra	129	1.00446582	0.999216487
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.002		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/11/96		1/23/96		1/25/96	
231Th->235U	25.6	2.31E+04	4.48E+02	2.25E+03	1.31E+02	0	0
231Pa	27.4	2.01E+04	4.35E+02	1.75E+03	1.31E+02	0	0
210Pb	46.5	2.28E+05	8.44E+02	2.27E+04	2.08E+02	0	0
227Ac	50	2.42E+04	4.50E+02	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	5.80E+04	5.13E+02	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	2.24E+05	6.65E+02	2.11E+04	2.17E+02	0	0
230Th	67.6	2.51E+04	2.52E+02	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	2.74E+05	7.81E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.99E+05	6.75E+02	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	1.08E+04	4.40E+02	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.70E+03	3.22E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	1.46E+05	5.59E+02	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	2.89E+05	8.83E+02	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	4.33E+05	7.98E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	0.00E+00	0.00E+00	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	2.16E+05	8.11E+02	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.28875	0.028125	0	4.70792304	±	0.40405808
231Pa	27.4	0.44395	0.25125	0.021875	0	5.26076681	±	0.51737599
210Pb	46.5	9.361	2.85	0.28375	0	96.1184929	±	5.840287
227Ac	50	0.44395	0.3025	0.030625	0	4.4772355	±	0.38390885
234U+214Pb	53.2	9.361	0.725	0.072875	0	94.9813475	±	6.34994752
234Th->238U	63.3	9.361	2.8	0.26375	0	101.047342	±	6.1590155
230Th	67.6	9.361	0.31375	0.03125	0	95.4537696	±	7.1665368
234Th->238U	92.6	9.361	3.425	0.3275	0	98.8796261	±	6.00894452
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	2.4875	0.24375	0	95.4983829	±	5.83751106
227Th->227Ac	236	0.44395	0.135	0.01425	0	4.20444109	±	0.60282935
212Pb->228Th	239	5.5494	0.02125	0	0.71875	0.16401456	±	0.03202275
214Pb->226Ra	242	9.361	1.825	0.18125	0	94.2241886	±	5.78183165
214Pb->226Ra	295	9.361	3.6125	0.35625	0	94.8922044	±	5.74526322
214Pb->226Ra	352	9.361	5.4125	0.535	0	94.6720279	±	5.70962816
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	#DIV/0!
214Bi->226Ra	609	9.361	2.6875	0.26625	0	94.4574918	±	5.73667784

U(ppb) = 8124233.95

Th(ppb) = 40276.5296

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.455706953	0.04613014	94.3147777	±	5.78739043
234U(295)	53.2	9.361	0.517525718	0.05241473	94.2665131	±	5.70738064
234U(352)	53.2	9.361	0.564210494	0.05698172	94.5332314	±	5.7012574
235U(63.3)	186	0.44395	0.131150347	0.01235389	4.71145374	±	0.2871715
235U(92.6)	186	0.44395	0.15772125	0.01508138	4.6412893	±	0.28205254
226Ra(63.3)	186	9.361	2.35856	0.23160431	95.2966952	±	5.80850333
226Ra(92.6)	186	9.361	2.32977875	0.22866863	95.3423061	±	5.79398052

234U/238U =	0.933933594	±	0.05894471	
230Th/234U =	1.011468103	±	0.077725998	
226Ra/230Th =	0.998354445	±	0.075716599	

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-472-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source SRM 4275C		Empty vial 1/24/96	Standard - DP1B 1/24/96		Standard - DM1B 1/24/96		Sample 1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	2.89E+05	1.47580518
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	6.83E+05	1.1448916
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.29E+05	1.09431524
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.29E+05	1.02979729
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.13E+05	1.02538823
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.23E+04	1.01867848
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.37E+04	#DIV/0!
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.82E+04	0.98051783
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.07E+04	1.02752754

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.18285653	1.134056072
Eu154,155	42.9	1.05209507	1.029707496
Eu154,155	48.6	1.0396692	1.004227338
Eu155	86.4	1.01348177	1
Eu155	105	1.01159321	1.002325886
Eu154	123	1.00839606	1
Sb125	178	1.01286628	0.994114693
Eu154	248	1.0044445	1.004444503
Eu154	592	#DIV/0!	#DIV/0!
Sb125	600	0.99723227	#DIV/0!
Sb125	636	0.99536228	1.013826623

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.225logx+1.458
CF (DM1B) equation = y =-0.116logx+1.327

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.13914601	1.163644164
231Pa	27.4	1.13250612	1.160220935
210Pb	46.5	1.08082309	1.133575457
227Ac	50	1.07373175	1.129919479
234U+214Pb	53.2	1.06766988	1.126794251
234Th->238U	63.3	1.05068417	1.11803717
230Th	67.6	1.04426199	1.114726183
234Th->238U	92.6	1.01351253	1.098873126
228Ac->228Ra	129	0.98111732	1.082171594
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws
As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/10/96		1/23/96		1/25/96	
231Th->235U	25.6	1.21E+03	1.04E+02	2.25E+03	1.31E+02	0	0
231Pa	27.4	8.45E+02	1.12E+02	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.59E+04	1.71E+02	2.27E+04	2.08E+02	0	0
227Ac	50	1.18E+03	1.15E+02	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	3.73E+03	1.33E+02	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	1.19E+04	1.70E+02	2.11E+04	2.17E+02	0	0
230Th	67.6	1.75E+03	1.40E+02	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.44E+04	1.90E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.25E+04	1.75E+02	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	5.65E+02	9.93E+01	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.19E+03	1.33E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	9.96E+03	1.46E+02	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.86E+04	1.82E+02	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	2.79E+04	2.06E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	2.42E+02	7.97E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.38E+04	1.56E+02	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.015125	0.028125	0	0.27196706	±	0.03261031
231Pa	27.4	0.44395	0.0105625	0.021875	0	0.24276903	±	0.03972194
210Pb	46.5	9.361	0.19875	0.28375	0	7.08676652	±	0.43683604
227Ac	50	0.44395	0.01475	0.030625	0	0.2295862	±	0.02949511
234U+214Pb	53.2	9.361	0.046625	0.072875	0	6.3943958	±	0.48118528
234Th->238U	63.3	9.361	0.14875	0.26375	0	5.54700987	±	0.34684782
230Th	67.6	9.361	0.021875	0.03125	0	6.84273556	±	0.74758256
234Th->238U	92.6	9.361	0.18	0.3275	0	5.21449875	±	0.32394626
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.15625	0.24375	0	6.00064103	±	0.37574656
227Th->227Ac	236	0.44395	0.0070625	0.01425	0	0.22002785	±	0.04909463
212Pb->228Th	239	5.5494	0.014875	0	0.71875	0.11484845	±	0.01394096
214Pb->226Ra	242	9.361	0.1245	0.18125	0	6.43003862	±	0.40521998
214Pb->226Ra	295	9.361	0.235	0.35625	0	6.17497544	±	0.3783325
214Pb->226Ra	352	9.361	0.34875	0.535	0	6.1021472	±	0.37059494
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.1725	0.26625	0	6.06487324	±	0.37426695

U(ppb) = 445981.111

Th(ppb) = 28202.9655

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.02825405	0.04613014	6.12146181	±	0.38577352
234U(295)	53.2	9.361	0.033128403	0.05241473	6.31693427	±	0.38703013
234U(352)	53.2	9.361	0.03626466	0.05698172	6.36073502	±	0.38629946
235U(63.3)	186	0.44395	0.007197121	0.01276128	0.25037938	±	0.01565592
235U(92.6)	186	0.44395	0.008289	0.01508138	0.24400305	±	0.01515848
226Ra(63.3)	186	9.361	0.149400063	0.23160431	6.03846263	±	0.37757777
226Ra(92.6)	186	9.361	0.147961	0.22866863	6.0570746	±	0.37629056

234U/238U = 1.129685576 ± 0.075979744
230Th/234U = 1.091976356 ± 0.122329192
226Ra/230Th = 0.882463244 ± 0.097654236

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-473-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	3.52E+05	1.35339354
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.10E+05	1.12384555
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.34E+05	1.08289622
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.32E+05	1.02517628
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.14E+05	1.02300883
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.77E+06	1.01951837
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.18E+04	1.02470921
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.12E+05	1.00887589
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.39E+04	0.99580418
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.80E+04	0.98598069
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.09E+04	1.01812821

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	1.08474371	1.039991039
Eu154,155	42.9	1.03275485	1.010778822
Eu154,155	48.6	1.02882041	0.993748378
Eu155	86.4	1.00893397	0.995512694
Eu155	105	1.00924582	1
Eu154	123	1.00839606	1
Sb125	178	1.0188626	1
Eu154	248	1.0044445	1.004444503
Eu154	592	0.98314519	0.991596539
Sb125	600	1.00278825	#DIV/0!
Sb125	636	0.98625718	1.004552621

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = -0.105logx+1.217
CF (DM1B) equation = y =-0.050logx+1.097

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	1.0691348	1.026588002
231Pa	27.4	1.06603619	1.025112472
210Pb	46.5	1.04191744	1.013627352
227Ac	50	1.03860815	1.0120515
234U+214Pb	53.2	1.03577928	1.010704418
234Th->238U	63.3	1.02785261	1.006929814
230Th	67.6	1.0248556	1.005502665
234Th->238U	92.6	1.01050585	0.998669451
228Ac->228Ra	129	0.99538808	0.991470514
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.001		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/9/96		1/23/96		1/25/96	
231Th->235U	25.6	1.27E+04	3.44E+02	2.25E+03	1.31E+02	0	0
231Pa	27.4	1.29E+04	3.30E+02	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.26E+05	4.88E+02	2.27E+04	2.08E+02	0	0
227Ac	50	1.76E+04	3.52E+02	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	3.32E+04	3.97E+02	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	1.35E+05	5.29E+02	2.11E+04	2.17E+02	0	0
230Th	67.6	2.07E+04	5.17E+02	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.62E+05	5.96E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.21E+05	5.26E+02	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	8.70E+03	3.40E+02	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	1.25E+03	2.48E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.59E+04	4.40E+02	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.68E+05	5.17E+02	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	2.53E+05	6.02E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	0.00E+00	0.00E+00	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.26E+05	4.59E+02	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)		As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.15875	0.028125	0		2.67909264	±	0.23544807
231Pa	27.4	0.44395	0.16125	0.021875	0		3.48865217	±	0.34701449
210Pb	46.5	9.361	1.575	0.28375	0		54.1377548	±	3.29260855
227Ac	50	0.44395	0.22	0.030625	0		3.31232063	±	0.28506647
234U+214Pb	53.2	9.361	0.415	0.072875	0		55.2152436	±	3.71804334
234Th->238U	63.3	9.361	1.6875	0.26375	0		61.5608208	±	3.75527206
230Th	67.6	9.361	0.25875	0.03125	0		79.4356145	±	6.23445239
234Th->238U	92.6	9.361	2.025	0.3275	0		58.4890812	±	3.5571993
228Ac->228Ra	129	5.5494	0	0	0.0615		0	±	#DIV/0!
235U+226Ra	186	9.361	1.5125	0.24375	0		58.0862051	±	3.55413454
227Th->227Ac	236	0.44395	0.10875	0.01425	0		3.38803947	±	0.48420604
212Pb->228Th	239	5.5494	0.015625	0	0.71875		0.12063913	±	0.02460734
214Pb->226Ra	242	9.361	1.07375	0.18125	0		55.4558552	±	3.40813751
214Pb->226Ra	295	9.361	2.1	0.35625	0		55.1806316	±	3.3426898
214Pb->226Ra	352	9.361	3.1625	0.535	0		55.3348832	±	3.3382614
208Tl->228Th	583	5.5494	0	0	0.112125		0	±	#DIV/0!
214Bi->226Ra	609	9.361	1.575	0.26625	0		55.3749296	±	3.36544748

U(ppb) = 4949506.83

Th(ppb) = 29624.9637

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)		As (Bq/g)		
234U(242)	53.2	9.361	0.256559776	0.04613014		53.9253825	±	3.31407961
234U(295)	53.2	9.361	0.294392113	0.05241473		54.4580709	±	3.29891908
234U(352)	53.2	9.361	0.321051397	0.05698172		54.6296584	±	3.29571636
235U(63.3)	186	0.44395	0.079873784	0.01248398		2.84043839	±	0.1732696
235U(92.6)	186	0.44395	0.09325125	0.01508138		2.74503435	±	0.16694799
226Ra(63.3)	186	9.361	1.434790625	0.23160431		57.9914722	±	3.5375382
226Ra(92.6)	186	9.361	1.41924875	0.22866863		58.0997395	±	3.53352025

234U/238U	=	0.882666982	±	0.055874743
230Th/234U	=	1.46188758	±	0.117369051
226Ra/230Th	=	0.730043729	±	0.057857592

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-474-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source		Empty vial	Standard - DP1B		Standard - DM1B		Sample	
SRM 4275C		1/24/96	1/24/96		1/24/96		1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.54E+05	1.2046485
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	8.12E+05	1.05290371
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.51E+05	1.0463539
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.38E+05	1.01609848
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.19E+05	1.01132963
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.80E+06	1.01102971
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.37E+04	1.00228485
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.38E+04	0.99789621
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.84E+04	0.97513468
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.16E+04	0.98695603

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96552469	0.925690569
Eu154,155	42.9	0.96756305	0.946974237
Eu154,155	48.6	0.99410287	0.960214348
Eu155	86.4	1	0.986697569
Eu155	105	0.99772374	0.988583483
Eu154	123	1	0.99167385
Sb125	178	0.99656618	0.978116362
Eu154	248	1	1
Eu154	592	0.98521063	0.993679731
Sb125	600	0.99175736	#DIV/0!
Sb125	636	0.9560608	0.973796088

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.056logx+0.887
CF (DM1B) equation = y =0.104logx+0.779

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.96586144	0.925456956
231Pa	27.4	0.96751403	0.928526059
210Pb	46.5	0.98037737	0.952415107
227Ac	50	0.98214232	0.95569288
234U+214Pb	53.2	0.98365105	0.95849481
234Th->238U	63.3	0.98787861	0.966345986
230Th	67.6	0.98947701	0.969314456
234Th->238U	92.6	0.99713022	0.983527543
228Ac->228Ra	129	1.00519302	0.99850133
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		3.003		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/8/96		1/23/96		1/25/96	
231Th->235U	25.6	1.14E+03	1.11E+02	2.25E+03	1.31E+02	0	0
231Pa	27.4	9.65E+02	1.08E+02	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.83E+04	1.76E+02	2.27E+04	2.08E+02	0	0
227Ac	50	1.12E+03	1.07E+02	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	3.29E+03	1.25E+02	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	1.04E+04	1.69E+02	2.11E+04	2.17E+02	0	0
230Th	67.6	1.19E+03	1.37E+02	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	1.25E+04	1.80E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	1.01E+04	1.85E+02	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	4.51E+02	9.39E+01	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	9.02E+02	1.13E+02	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.45E+03	1.39E+02	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.62E+04	1.69E+02	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	2.33E+04	1.82E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	1.52E+02	7.32E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	1.19E+04	1.46E+02	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.01425	0.028125	0	0.21711103	±	0.02786342
231Pa	27.4	0.44395	0.0120625	0.021875	0	0.23669619	±	0.03489084
210Pb	46.5	9.361	0.22875	0.28375	0	7.39352281	±	0.45429022
227Ac	50	0.44395	0.014	0.030625	0	0.19919163	±	0.02530112
234U+214Pb	53.2	9.361	0.041125	0.072875	0	5.1927966	±	0.39665812
234Th->238U	63.3	9.361	0.13	0.26375	0	4.55498943	±	0.28589608
230Th	67.6	9.361	0.014875	0.03125	0	4.40601094	±	0.60396121
234Th->238U	92.6	9.361	0.15625	0.3275	0	4.45034323	±	0.27766274
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.12625	0.24375	0	4.84528883	±	0.30613126
227Th->227Ac	236	0.44395	0.0056375	0.01425	0	0.17551588	±	0.04378996
212Pb->228Th	239	5.5494	0.011275	0	0.71875	0.08699522	±	0.01165136
214Pb->226Ra	242	9.361	0.105625	0.18125	0	5.45157028	±	0.34570391
214Pb->226Ra	295	9.361	0.2025	0.35625	0	5.31744569	±	0.32644783
214Pb->226Ra	352	9.361	0.29125	0.535	0	5.09266443	±	0.30955946
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.14875	0.26625	0	5.22637137	±	0.32348392

U(ppb) = 366222.396

Th(ppb) = 21363.1365

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.025539204	0.04613014	5.09444087	±	0.32305703
234U(295)	53.2	9.361	0.029494954	0.05241473	5.17807465	±	0.31789158
234U(352)	53.2	9.361	0.032472816	0.05698172	5.24394808	±	0.31875529
235U(63.3)	186	0.44395	0.005913935	0.01199846	0.21867322	±	0.01372513
235U(92.6)	186	0.44395	0.007195313	0.01508138	0.21166714	±	0.01320619
226Ra(63.3)	186	9.361	0.1202635	0.23160431	4.85758161	±	0.30488843
226Ra(92.6)	186	9.361	0.119054688	0.22866863	4.87049192	±	0.30387637

234U/238U	=	1.135492104	±	0.077218592
230Th/234U	=	0.851871482	±	0.118881456
226Ra/230Th	=	1.102489683	±	0.152484776

Gamma spectrometry calculations for Nopal I rock powders

Sample= **NOPI-475-GAM1**

Self attenuation correction

A/O = [ln(T/I)]/[(T/I)-1]
T = transmitted intensity through sample or standards
I = intensity through empty vial

Point source SRM 4275C		Empty vial 1/24/96	Standard - DP1B 1/24/96		Standard - DM1B 1/24/96		Sample 1/25/96	
Isotope	keV	I	T	A/O	T	A/O	T	A/O
Sb125	27.3	6.67E+05	4.21E+05	1.24766203	3.84E+05	1.30135116	4.57E+05	1.20093876
Eu154,155	42.9	9.01E+05	7.59E+05	1.08820166	7.26E+05	1.11186099	7.77E+05	1.07585872
Eu154,155	48.6	2.75E+05	2.48E+05	1.05256099	2.31E+05	1.08970867	2.51E+05	1.0463539
Eu155	86.4	3.49E+05	3.38E+05	1.01609848	3.29E+05	1.02979729	3.36E+05	1.01910046
Eu155	105	2.24E+05	2.18E+05	1.01363693	2.14E+05	1.02300883	2.17E+05	1.01595835
Eu154	123	1.84E+06	1.80E+06	1.01102971	1.77E+06	1.01951837	1.80E+06	1.01102971
Sb125	178	4.39E+04	4.34E+04	1.00573837	4.18E+04	1.02470921	4.31E+04	1.00922385
Eu154	248	1.14E+05	1.13E+05	1.00441178	1.13E+05	1.00441178	1.13E+05	1.00441178
Eu154	592	2.37E+04	2.31E+04	1.01287601	2.35E+04	1.0042433	2.39E+04	0.99580418
Sb125	600	1.75E+04	1.81E+04	0.98323917	1.75E+04	#DIV/0!	1.87E+04	0.96720521
Sb125	636	1.13E+04	1.06E+04	1.03231513	1.10E+04	1.01351406	1.14E+04	0.99560115

Sample correction factor (CF) relative to each normalization standard

CF= (A/O of sample)/(A/O of DP1B and DM1B)

Isotope	keV	CF (DP1B)	CF (DM1B)
Sb125	27.3	0.96255133	0.922839887
Eu154,155	42.9	0.98865749	0.967619809
Eu154,155	48.6	0.99410287	0.960214348
Eu155	86.4	1.00295442	0.989612685
Eu155	105	1.00229019	0.993108096
Eu154	123	1	0.99167385
Sb125	178	1.00346559	0.98488804
Eu154	248	1	1
Eu154	592	0.98314519	0.991596539
Sb125	600	0.98369271	#DIV/0!
Sb125	636	0.96443531	0.982325942

Fit a polynomial curve through plot of CF versus keV for peaks < 200 keV using cricket graph.
Calculate CFs for natural series gamma peaks using polynomial equation.

CF (DP1B) equation = y = 0.053logx+0.897
CF (DM1B) equation = y =0.101logx+0.789

Isotope	keV	CF (DP1B)	CF (DM1B)
231Th->235U	25.6	0.97163672	0.931232236
231Pa	27.4	0.97320078	0.934212807
210Pb	46.5	0.98537501	0.957412748
227Ac	50	0.98704541	0.96059597
234U+214Pb	53.2	0.98847332	0.963317075
234Th->238U	63.3	0.9924744	0.970941775
230Th	67.6	0.99398717	0.973824616
234Th->238U	92.6	1.00123038	0.98762771
228Ac->228Ra	129	1.00886125	1.002169561
235U+226Ra	186	1	1
227Th->227Ac	236	1	1
212Pb->228Th	239	1	1
214Pb->226Ra	242	1	1
214Pb->226Ra	295	1	1
214Pb->226Ra	352	1	1
208Tl->228Th	583	1	1
214Bi->226Ra	609	1	1

Sample activity calculations

As (Bq/g) = Is * CFs * An * Wn / In * Ws

As = radionuclide activity of sample (Bq/g)
Is = peak intensity (cps)
CFs = correction factor relative to normalization standard n
Ws = weight of sample (g)
An = nominal radionuclide activity of the normalization standard (Bq/g)
In = peak intensity (cps)
Wn = weight of normalization standard (g)
* note Is and In should be background-corrected values

Counting time (sec) =		80000		80000		80000	
Weight (g) =		2.999		3.001		2.994	
		Sample counts	Uncertainty	DP1B counts	Uncertainty	DM1B counts	Uncertainty
Isotope	keV	2/7/96		1/23/96		1/25/96	
231Th->235U	25.6	1.14E+03	8.61E+01	2.25E+03	1.31E+02	0	0
231Pa	27.4	7.49E+02	9.03E+01	1.75E+03	1.31E+02	0	0
210Pb	46.5	1.34E+04	1.52E+02	2.27E+04	2.08E+02	0	0
227Ac	50	8.22E+02	9.30E+01	2.45E+03	1.43E+02	0	0
234U+214Pb	53.2	9.24E+03	1.04E+02	5.83E+03	1.64E+02	0	0
234Th->238U	63.3	7.74E+03	1.37E+02	2.11E+04	2.17E+02	0	0
230Th	67.6	1.08E+03	1.23E+02	2.50E+03	1.10E+02	0	0
234Th->238U	92.6	9.99E+03	1.54E+02	2.62E+04	2.42E+02	0	0
228Ac->228Ra	129	0.00E+00	0.00E+00	0	0	4.92E+03	1.64E+02
235U+226Ra	186	7.57E+03	1.38E+02	1.95E+04	2.18E+02	0	0
227Th->227Ac	236	2.71E+02	8.81E+01	1.14E+03	1.41E+02	0	0
212Pb->228Th	239	9.81E+02	8.59E+01	0	0	5.75E+04	3.36E+02
214Pb->226Ra	242	8.73E+03	1.18E+02	1.45E+04	1.78E+02	0	0
214Pb->226Ra	295	1.11E+04	1.43E+02	2.85E+04	2.21E+02	0	0
214Pb->226Ra	352	1.56E+04	1.50E+02	4.28E+04	2.49E+02	0	0
208Tl->228Th	583	1.65E+02	5.33E+01	0	0	8.97E+03	1.28E+02
214Bi->226Ra	609	8.12E+03	1.26E+02	2.13E+04	1.91E+02	0	0

Isotope	keV	An (Bq/g)	Is	In (DP1B)	In (DM1B)	As (Bq/g)		Uncertainty
231Th->235U	25.6	0.44395	0.01425	0.028125	0	0.21870053	±	0.02464053
231Pa	27.4	0.44395	0.0093625	0.021875	0	0.18504178	±	0.02850994
210Pb	46.5	9.361	0.1675	0.28375	0	5.44869199	±	0.33643767
227Ac	50	0.44395	0.010275	0.030625	0	0.14711822	±	0.02070508
234U+214Pb	53.2	9.361	0.028	0.072875	0	3.5575924	±	0.28785582
234Th->238U	63.3	9.361	0.09675	0.26375	0	3.4102765	±	0.21619828
230Th	67.6	9.361	0.0135	0.03125	0	4.02231708	±	0.54719302
234Th->238U	92.6	9.361	0.124875	0.3275	0	3.57610277	±	0.2239837
228Ac->228Ra	129	5.5494	0	0	0.0615	0	±	#DIV/0!
235U+226Ra	186	9.361	0.094625	0.24375	0	3.63641167	±	0.23162853
227Th->227Ac	236	0.44395	0.0033875	0.01425	0	0.10560586	±	0.03727494
212Pb->228Th	239	5.5494	0.0122625	0	0.71875	0.09474073	±	0.0094316
214Pb->226Ra	242	9.361	0.071625	0.18125	0	3.70167593	±	0.23917478
214Pb->226Ra	295	9.361	0.13875	0.35625	0	3.64829454	±	0.22566697
214Pb->226Ra	352	9.361	0.1975	0.535	0	3.45800083	±	0.21102239
208Tl->228Th	583	5.5494	0	0	0.112125	0	±	0
214Bi->226Ra	609	9.361	0.1015	0.26625	0	3.57098644	±	0.22361317

U(ppb) = 274187.163

Th(ppb) = 23265.1765

Interference Correction

Isotope	keV	An (Bq/g)	Is	In (DP1B)	As (Bq/g)		
234U(242)	53.2	9.361	0.01743117	0.04613014	3.49879478	±	0.22606611
234U(295)	53.2	9.361	0.020031265	0.05241473	3.53860194	±	0.21888189
234U(352)	53.2	9.361	0.022132854	0.05698172	3.59648789	±	0.21947348
235U(63.3)	186	0.44395	0.004421808	0.01205428	0.16296041	±	0.01033106
235U(92.6)	186	0.44395	0.005750494	0.01508138	0.16939001	±	0.01060948
226Ra(63.3)	186	9.361	0.090169663	0.23160431	3.64691446	±	0.2312002
226Ra(92.6)	186	9.361	0.088874506	0.22866863	3.64067906	±	0.22802833

234U/238U	=	1.039396132	±	0.07308312
230Th/234U	=	1.134764168	±	0.158182779
226Ra/230Th	=	0.90667006	±	0.124731395

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************
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```
Report Generated On              :  1-26-96  9:04:26 AM

Sample Title                     : Empty vial attenuation
Spectrum Description             : Empty vial attenuation
Sample Identification            : JDPATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  8:55:37 AM

Live Time                        :     1800.0 seconds
Real Time                        :     2003.0 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
```

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: Empty vial attenuation
Peak Locate Performed on: 1-26-96 9:04:15 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	30.00	<NA>	5.12	<NA>
2	95.48	0.2101	16.48	5.17
3	101.87	0.0474	17.54	20.63
4	116.00	<NA>	20.02	<NA>
5	122.45	0.0371	21.14	13.67
6	139.99	0.3678	25.88	3.45
7	148.54	0.1044	26.72	4.76
8	158.82	0.0039	27.43	229.88
9	179.40	0.0092	31.03	121.09
10	184.00	0.0000	31.77	29.01
11	191.70	0.0423	33.13	26.34
12	205.45	0.0126	35.55	87.84
13	218.68	0.3147	38.14	3.95
14	224.07	0.0895	38.90	10.61
15	232.43	0.1575	40.30	3.37
16	244.39	0.0031	42.34	185.83
17	248.75	0.0028	43.03	362.71
18	261.91	0.0210	45.34	44.32
19	281.14	0.0041	48.69	208.41
20	288.89	0.0086	50.01	99.78
21	316.52	0.0870	54.81	12.29
22	336.34	0.2135	58.30	7.30
23	346.76	0.0269	60.04	50.16
24	442.19	0.2591	76.60	5.58
25	499.63	0.0040	86.57	286.02
26	529.35	0.4189	91.72	3.21
27	607.76	0.0048	105.32	240.34
28	653.13	0.1976	113.19	8.31
29	675.25	0.1348	117.12	8.98
30	681.23	0.4678	118.15	3.15
31	710.26	0.0015	123.09	713.99
32	759.08	0.1621	131.56	5.06
33	777.13	0.3626	134.69	3.61
34	866.93	0.3488	150.27	4.45
35	956.38	0.3601	165.78	5.80
36	996.84	0.1677	172.80	6.96
37	1017.26	0.0124	176.34	104.86
38	1086.01	0.0457	188.26	28.70
39	1177.67	0.1382	204.16	8.92
40	1200.31	0.1545	208.08	6.90
41	1430.26	0.0083	247.96	179.11

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1676.71	0.1832	290.70	9.33
43	1710.54	0.3731	296.57	4.20
44	1838.56	0.3128	316.94	3.33
45	1854.05	0.4884	321.48	5.56
46	2140.01	0.0691	371.05	23.76
47	2194.78	0.0923	380.55	17.85
48	2314.54	0.2020	401.32	9.30
49	2353.73	0.4330	408.12	3.39
50	2468.29	0.0173	427.99	103.77
51	2564.12	0.0822	444.61	17.76
52	2626.06	0.1180	455.34	12.28
53	2645.26	0.3743	458.84	3.86
54	2673.10	0.0255	463.51	56.92
55	2759.29	0.1980	478.45	8.93
56	3216.70	0.2753	557.78	7.08
57	3336.19	0.4044	578.36	3.44
58	3357.46	0.0685	582.21	23.63
59	3413.83	0.0276	591.97	66.04
60	3464.73	0.0329	600.80	56.52
61	3500.12	0.0762	606.93	23.61
62	3537.95	0.4349	613.49	3.42
63	3606.47	0.2247	625.36	7.17
64	3622.74	0.2291	628.11	6.64
65	3668.67	0.0464	636.17	39.89
66	3873.61	0.1850	671.75	9.51
67	3903.76	0.3545	676.91	5.11
68	3994.32	0.0554	692.64	31.44
69	4028.91	0.0997	698.64	21.43

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: Empty vial attenuation
Peak Analysis Performed on: 1-26-96 9:04:25 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	28-	32	30.00	5.12	-1.89E+01	0.00	1.20E+04
M	2	91-	105	95.54	16.48	6.11E+03	0.00	2.36E+04
m	3	91-	105	101.64	17.54	2.78E+04	0.00	2.10E+04
M	4	112-	126	115.95	20.02	5.51E+02	0.00	1.87E+04
m	5	112-	126	122.39	21.14	3.29E+03	0.00	1.88E+04
M	6	134-	163	149.70	25.88	1.92E+04	0.00	2.40E+04
m	7	134-	163	154.55	26.72	3.60E+04	0.00	2.56E+04
m	8	134-	163	158.63	27.43	6.67E+05	0.00	2.90E+04
M	9	174-	196	179.39	31.03	1.31E+05	0.00	2.99E+04
m	10	174-	196	183.66	31.77	2.98E+04	0.00	2.86E+04
m	11	174-	196	191.50	33.13	1.21E+04	0.00	3.10E+04
	12	199-	210	205.45	35.55	6.50E+04	0.00	3.94E+04
M	13	212-	254	220.39	38.14	7.80E+03	0.00	3.71E+04
m	14	212-	254	224.81	38.90	1.32E+04	0.00	3.33E+04
m	15	212-	254	232.83	40.30	1.43E+04	0.00	3.31E+04
m	16	212-	254	244.63	42.34	5.10E+05	0.00	3.53E+04
m	17	212-	254	248.63	43.03	9.01E+05	0.00	3.35E+04
	18	258-	267	261.91	45.34	1.20E+04	0.00	3.05E+04
M	19	275-	294	281.21	48.69	2.75E+05	0.00	2.58E+04
m	20	275-	294	288.85	50.01	7.54E+04	0.00	1.91E+04
	21	310-	322	316.52	54.81	5.72E+03	0.00	1.98E+04
M	22	331-	352	336.63	58.30	2.59E+03	0.00	1.50E+04
m	23	331-	352	346.67	60.04	1.49E+04	0.00	1.47E+04
	24	439-	446	442.19	76.60	3.84E+02	0.00	1.48E+04
	25	492-	506	499.63	86.57	3.49E+05	0.00	3.94E+04
	26	525-	533	529.35	91.72	4.14E+02	0.00	2.37E+04
	27	599-	615	607.76	105.32	2.24E+05	0.00	3.98E+04
	28	645-	658	653.13	113.19	2.44E+03	0.00	3.20E+04
M	29	667-	689	675.82	117.12	6.51E+03	0.00	4.68E+04
m	30	667-	689	681.76	118.15	5.13E+03	0.00	4.28E+04
	31	702-	718	710.26	123.09	1.84E+06	0.00	3.92E+04
	32	754-	765	759.08	131.56	3.05E+02	0.00	1.79E+04
	33	772-	784	777.13	134.69	3.36E+01	0.00	1.86E+04
	34	857-	873	866.93	150.27	9.87E+02	0.00	2.27E+04
	35	947-	964	956.38	165.78	2.98E+03	0.00	2.21E+04
	36	987-	1005	996.84	172.80	1.73E+03	0.00	2.10E+04
	37	1008-	1026	1017.26	176.34	4.39E+04	0.00	2.03E+04
	38	1077-	1094	1086.01	188.26	5.74E+03	0.00	1.95E+04
	39	1169-	1183	1177.67	204.16	1.41E+03	0.00	1.70E+04
	40	1194-	1210	1200.31	208.08	1.32E+03	0.00	1.91E+04
	41	1422-	1440	1430.26	247.96	1.14E+05	0.00	2.05E+04
	42	1667-	1687	1676.71	290.70	2.92E+03	0.00	1.64E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1701-	1721	1710.54	296.57	9.25E+02	0.00	1.59E+04
M	44	1827-	1864	1828.00	316.94	1.27E+02	0.00	1.03E+04
m	45	1827-	1864	1854.18	321.48	1.70E+03	0.00	2.00E+04
	46	2130-	2149	2140.01	371.05	4.32E+03	0.00	1.31E+04
	47	2182-	2203	2194.78	380.55	3.22E+03	0.00	1.42E+04
	48	2305-	2326	2314.54	401.32	1.35E+03	0.00	1.52E+04
	49	2340-	2363	2353.73	408.12	1.17E+02	0.00	1.67E+04
	50	2455-	2478	2468.29	427.99	4.63E+04	0.00	1.53E+04
	51	2551-	2576	2564.12	444.61	4.06E+03	0.00	1.61E+04
M	52	2615-	2683	2626.02	455.34	2.03E+03	0.00	1.35E+04
m	53	2615-	2683	2646.17	458.84	2.31E+02	0.00	1.39E+04
m	54	2615-	2683	2673.11	463.51	1.52E+04	0.00	1.42E+04
	55	2748-	2769	2759.29	478.45	1.08E+03	0.00	1.32E+04
	56	3205-	3228	3216.70	557.78	1.48E+03	0.00	1.16E+04
M	57	3324-	3370	3335.36	578.36	4.00E+01	0.00	1.07E+04
m	58	3324-	3370	3357.55	582.21	3.98E+03	0.00	1.19E+04
	59	3399-	3428	3413.83	591.97	2.37E+04	0.00	1.33E+04
	60	3451-	3479	3464.73	600.80	1.75E+04	0.00	1.27E+04
	61	3487-	3513	3500.12	606.93	4.79E+03	0.00	1.15E+04
	62	3522-	3548	3537.95	613.49	3.20E+02	0.00	1.14E+04
M	63	3591-	3633	3606.39	625.36	1.36E+03	0.00	1.17E+04
m	64	3591-	3633	3622.20	628.11	8.29E+02	0.00	1.37E+04
	65	3653-	3680	3668.67	636.17	1.13E+04	0.00	1.20E+04
M	66	3861-	3915	3873.86	671.75	1.50E+03	0.00	1.06E+04
m	67	3861-	3915	3903.58	676.91	6.11E+02	0.00	1.28E+04
	68	3980-	4006	3994.32	692.64	7.05E+03	0.00	1.02E+04
	69	4012-	4044	4028.91	698.64	4.42E+03	0.00	3.76E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On              :  1-25-96  4:56:46 PM

Sample Title                     : DP1B attenuation
Spectrum Description             : DP1B attenuation
Sample Identification            : DP1BAT_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  9:32:39 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1994.8 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: DP1B attenuation
Peak Locate Performed on: 1-25-96 4:56:34 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	20.00	<NA>	3.38	<NA>
2	30.00	0.0000	5.12	3.60
3	95.40	0.1127	16.48	5.01
4	101.73	0.0671	17.53	15.10
5	122.37	0.1025	21.14	9.90
6	139.82	0.3086	25.87	3.66
7	147.87	0.2018	26.71	3.59
8	158.76	0.0078	27.42	179.94
9	179.34	0.0104	31.02	104.70
10	184.00	<NA>	31.77	<NA>
11	191.58	0.0514	33.12	21.12
12	205.37	0.0132	35.53	79.69
13	224.07	0.1509	38.77	5.49
14	244.36	0.0034	42.34	177.16
15	248.70	0.0031	43.03	333.42
16	261.85	0.0229	45.33	40.10
17	281.11	0.0043	48.68	198.04
18	288.86	0.0092	50.00	94.67
19	316.12	0.2184	54.74	6.59
20	335.63	0.3592	58.23	3.60
21	346.70	0.0276	60.03	47.63
22	499.60	0.0041	86.56	279.22
23	607.76	0.0048	105.32	237.40
24	630.56	0.1937	109.27	5.15
25	653.16	0.1427	113.19	8.65
26	674.90	0.1031	117.09	7.67
27	681.46	0.3098	118.12	4.68
28	710.27	0.0015	123.10	705.53
29	759.44	0.3492	131.62	3.82
30	778.05	0.3294	134.85	3.82
31	842.16	0.3228	145.97	3.85
32	901.62	0.2986	156.28	3.66
33	956.49	0.4139	165.80	5.86
34	996.53	0.1552	172.74	6.12
35	1017.29	0.0126	176.34	102.21
36	1086.07	0.0480	188.27	26.40
37	1177.33	0.1973	204.10	7.67
38	1200.64	0.2249	208.14	6.18
39	1315.62	0.3079	228.08	5.14
40	1430.35	0.0082	247.98	177.63
41	1676.71	0.2311	290.70	7.29

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1703.13	0.5019	295.34	3.13
43	1711.83	0.2865	296.78	4.57
44	1739.22	0.4136	301.54	3.38
45	1853.72	0.6700	321.40	4.36
46	2030.91	0.4793	352.13	3.43
47	2116.63	0.4159	367.04	3.14
48	2140.26	0.0668	371.08	24.44
49	2195.02	0.0944	380.59	17.32
50	2315.11	0.1538	401.42	9.97
51	2399.95	0.4404	416.13	3.14
52	2468.56	0.0170	428.03	104.72
53	2564.40	0.1042	444.65	17.00
54	2626.52	0.1850	455.43	10.12
55	2673.23	0.0317	463.53	55.53
56	2759.36	0.2064	478.47	8.70
57	2932.35	0.5201	508.47	3.03
58	3217.59	0.2034	557.94	8.32
59	3357.84	0.0891	582.26	21.52
60	3414.09	0.0274	592.01	66.83
61	3465.03	0.0315	600.85	57.51
62	3500.44	0.0643	606.99	24.63
63	3539.66	0.5086	613.79	3.64
64	3607.01	0.2152	625.51	8.68
65	3623.15	0.5029	628.31	3.68
66	3668.96	0.0434	636.22	41.17
67	3873.31	0.1910	671.71	11.08
68	3902.80	0.4618	676.87	3.95
69	3994.41	0.0555	692.66	32.19
70	4028.71	0.1072	698.61	19.19

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: DP1B attenuation
Peak Analysis Performed on: 1-25-96 4:56:45 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	18-	22	20.00	3.38	4.11E+03	0.00	7.92E+03
	2	28-	32	30.00	5.12	1.83E+02	0.00	1.16E+04
M	3	91-	105	95.49	16.48	4.09E+03	0.00	2.16E+04
m	4	91-	105	101.55	17.53	1.79E+04	0.00	1.93E+04
	5	118-	126	122.37	21.14	2.12E+03	0.00	2.04E+04
M	6	134-	163	149.63	25.87	1.39E+04	0.00	2.30E+04
m	7	134-	163	154.49	26.71	2.60E+04	0.00	2.43E+04
m	8	134-	163	158.58	27.42	4.21E+05	0.00	2.70E+04
M	9	174-	196	179.34	31.02	9.53E+04	0.00	2.89E+04
m	10	174-	196	183.66	31.77	2.27E+04	0.00	2.83E+04
m	11	174-	196	191.44	33.12	1.04E+04	0.00	3.11E+04
	12	199-	210	205.37	35.53	5.10E+04	0.00	4.02E+04
	13	218-	227	224.07	38.77	4.53E+03	0.00	5.58E+04
M	14	238-	254	244.61	42.34	4.23E+05	0.00	6.12E+04
m	15	238-	254	248.60	43.03	7.59E+05	0.00	4.47E+04
	16	257-	266	261.85	45.33	7.97E+03	0.00	3.30E+04
M	17	275-	294	281.17	48.68	2.48E+05	0.00	2.62E+04
m	18	275-	294	288.81	50.00	6.85E+04	0.00	1.85E+04
	19	310-	322	316.12	54.74	2.54E+03	0.00	1.90E+04
M	20	329-	352	336.27	58.23	1.53E+03	0.00	1.45E+04
m	21	329-	352	346.63	60.03	1.44E+04	0.00	1.44E+04
	22	492-	506	499.60	86.56	3.38E+05	0.00	4.16E+04
	23	599-	615	607.76	105.32	2.18E+05	0.00	4.48E+04
	24	625-	635	630.56	109.27	5.43E+02	0.00	2.77E+04
	25	645-	658	653.16	113.19	2.50E+03	0.00	3.73E+04
M	26	666-	689	675.67	117.09	5.41E+03	0.00	5.22E+04
m	27	666-	689	681.58	118.12	5.36E+03	0.00	5.07E+04
	28	702-	718	710.27	123.10	1.80E+06	0.00	4.22E+04
	29	753-	764	759.44	131.62	5.96E+02	0.00	1.75E+04
	30	773-	783	778.05	134.85	1.74E+02	0.00	1.56E+04
	31	836-	847	842.16	145.97	-3.58E+01	0.00	1.69E+04
	32	896-	906	901.62	156.28	2.99E+02	0.00	1.39E+04
	33	947-	965	956.49	165.80	2.24E+03	0.00	2.36E+04
	34	987-	1002	996.53	172.74	1.59E+03	0.00	1.83E+04
	35	1009-	1025	1017.29	176.34	4.34E+04	0.00	1.89E+04
	36	1078-	1093	1086.07	188.27	5.41E+03	0.00	1.84E+04
	37	1170-	1183	1177.33	204.10	1.38E+03	0.00	1.62E+04
	38	1193-	1210	1200.64	208.14	1.54E+03	0.00	2.07E+04
	39	1305-	1322	1315.62	228.08	8.84E+02	0.00	1.95E+04
	40	1421-	1440	1430.35	247.98	1.13E+05	0.00	2.21E+04
	41	1665-	1685	1676.71	290.70	2.26E+03	0.00	1.70E+04
M	42	1694-	1722	1703.42	295.34	4.12E+02	0.00	1.10E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1694-	1722	1711.73	296.78	6.35E+02	0.00	1.08E+04
	44	1728-	1750	1739.22	301.54	4.09E+00	0.00	1.72E+04
	45	1843-	1862	1853.72	321.40	1.47E+03	0.00	1.42E+04
	46	2022-	2040	2030.91	352.13	4.20E+02	0.00	1.28E+04
M	47	2107-	2149	2116.87	367.04	2.14E+02	0.00	1.21E+04
m	48	2107-	2149	2140.18	371.08	4.45E+03	0.00	1.25E+04
	49	2186-	2204	2195.02	380.59	2.75E+03	0.00	1.29E+04
	50	2305-	2324	2315.11	401.42	1.19E+03	0.00	1.41E+04
	51	2387-	2412	2399.95	416.13	2.53E+02	0.00	1.81E+04
	52	2455-	2481	2468.56	428.03	4.81E+04	0.00	1.73E+04
	53	2551-	2576	2564.40	444.65	4.25E+03	0.00	1.61E+04
	54	2616-	2636	2626.52	455.43	1.46E+03	0.00	1.30E+04
	55	2661-	2684	2673.23	463.53	1.62E+04	0.00	1.44E+04
	56	2749-	2770	2759.36	478.47	1.20E+03	0.00	1.32E+04
	57	2922-	2944	2932.35	508.47	-1.52E+02	0.00	1.42E+04
	58	3206-	3229	3217.59	557.94	1.33E+03	0.00	1.19E+04
	59	3344-	3369	3357.84	582.26	4.24E+03	0.00	1.22E+04
	60	3402-	3426	3414.09	592.01	2.31E+04	0.00	1.16E+04
	61	3450-	3476	3465.03	600.85	1.81E+04	0.00	1.19E+04
	62	3487-	3514	3500.44	606.99	4.56E+03	0.00	1.24E+04
	63	3527-	3550	3539.66	613.79	3.58E+02	0.00	1.02E+04
M	64	3596-	3636	3607.23	625.51	1.32E+03	0.00	9.91E+03
m	65	3596-	3636	3623.39	628.31	5.75E+02	0.00	1.22E+04
	66	3654-	3680	3668.96	636.22	1.06E+04	0.00	1.20E+04
M	67	3861-	3917	3873.61	671.71	1.60E+03	0.00	1.05E+04
m	68	3861-	3917	3903.39	676.87	6.08E+02	0.00	1.18E+04
	69	3981-	4008	3994.41	692.66	6.93E+03	0.00	1.10E+04
	70	4014-	4044	4028.71	698.61	3.66E+03	0.00	3.56E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  1-26-96  9:05:28 AM

Sample Title                     : DM1B attenuation
Spectrum Description             : DM1B attenuation
Sample Identification            : DM1BAT_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96 10:07:03 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1989.7 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: DM1B attenuation
Peak Locate Performed on: 1-26-96 9:05:16 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	27.00	<NA>	4.60	<NA>
2	101.86	0.0693	17.58	16.90
3	122.51	0.0544	21.16	8.54
4	148.36	0.2829	26.70	3.51
5	158.87	0.0051	27.44	174.01
6	179.47	0.0053	31.03	92.34
7	184.00	<NA>	31.78	<NA>
8	191.96	0.0406	33.20	22.49
9	200.01	0.1840	34.66	6.58
10	205.49	0.0067	35.55	70.60
11	218.09	0.4482	38.76	3.95
12	225.34	0.3452	39.47	6.15
13	232.29	0.2026	40.45	3.50
14	244.44	0.0033	42.35	156.14
15	248.84	0.0030	43.05	329.10
16	261.99	0.0232	45.35	40.14
17	281.21	0.0048	48.70	184.36
18	288.95	0.0093	50.03	92.02
19	316.29	0.2197	54.77	4.62
20	336.44	0.3986	58.30	3.97
21	346.86	0.0176	60.06	48.61
22	420.72	0.3781	72.88	3.12
23	443.19	0.2270	76.78	5.46
24	499.82	0.0044	86.60	286.08
25	519.02	0.4114	89.93	3.28
26	539.25	0.2028	93.44	4.52
27	607.97	0.0054	105.35	237.55
28	653.42	0.1285	113.24	8.92
29	675.23	0.1673	117.22	7.68
30	681.58	0.4747	118.28	4.18
31	710.46	0.0015	123.13	666.67
32	759.68	0.3373	131.66	4.12
33	778.83	0.4961	134.99	3.21
34	956.42	0.4821	165.79	4.45
35	997.31	0.1262	172.88	8.62
36	1017.57	0.0135	176.39	101.09
37	1086.34	0.0521	188.32	25.08
38	1178.43	0.1867	204.29	8.12
39	1201.09	0.1844	208.22	7.32
40	1315.20	0.4036	228.01	3.96
41	1339.47	0.2886	232.22	3.54

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1376.33	0.4212	238.61	3.70
43	1430.75	0.0084	248.05	177.10
44	1456.27	0.5267	252.47	3.81
45	1555.76	0.3180	269.73	3.46
46	1678.24	0.2756	290.97	7.22
47	1760.75	0.6406	305.28	3.03
48	1854.55	0.7116	321.55	4.53
49	2140.80	0.0706	371.19	23.74
50	2195.36	0.0828	380.65	16.33
51	2315.76	0.1614	401.53	9.87
52	2390.39	0.4261	414.48	3.09
53	2469.10	0.0140	428.13	105.15
54	2564.93	0.1064	444.75	16.59
55	2626.95	0.1728	455.50	8.84
56	2673.96	0.0265	463.65	53.84
57	2759.57	0.2185	478.50	7.98
58	3077.00	0.3374	533.55	4.72
59	3218.03	0.2354	558.01	8.08
60	3358.64	0.0731	582.40	21.24
61	3414.89	0.0273	592.15	67.59
62	3465.92	0.0322	601.00	56.46
63	3500.98	0.0764	607.08	24.02
64	3607.66	0.1827	625.59	8.70
65	3669.83	0.0449	636.37	40.11
66	3750.10	0.3693	650.29	3.82
67	3874.74	0.2120	671.89	9.33
68	3904.69	0.4721	676.95	4.00
69	3995.74	0.0656	693.09	30.96
70	4028.60	0.2242	697.49	17.89

Errors quoted at 0.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: DM1B attenuation
Peak Analysis Performed on: 1-26-96 9:05:28 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	25-	29	27.00	4.60	-1.85E+02	0.00	1.17E+04
	2	97-	105	101.86	17.58	1.39E+04	0.00	2.19E+04
	3	118-	126	122.51	21.16	2.12E+03	0.00	1.97E+04
M	4	143-	163	154.45	26.70	2.17E+04	0.00	2.83E+04
m	5	143-	163	158.69	27.44	3.84E+05	0.00	2.89E+04
M	6	174-	210	179.44	31.03	8.63E+04	0.00	2.94E+04
m	7	174-	210	183.72	31.78	1.98E+04	0.00	3.05E+04
m	8	174-	210	191.91	33.20	1.17E+04	0.00	3.13E+04
m	9	174-	210	200.35	34.66	8.05E+03	0.00	3.20E+04
m	10	174-	210	205.45	35.55	5.10E+04	0.00	3.65E+04
M	11	212-	254	224.00	38.76	1.15E+04	0.00	3.44E+04
m	12	212-	254	228.09	39.47	1.23E+04	0.00	3.42E+04
m	13	212-	254	233.74	40.45	1.44E+04	0.00	3.78E+04
m	14	212-	254	244.69	42.35	4.11E+05	0.00	3.52E+04
m	15	212-	254	248.71	43.05	7.26E+05	0.00	3.23E+04
	16	258-	267	261.99	45.35	9.31E+03	0.00	2.95E+04
M	17	275-	294	281.30	48.70	2.31E+05	0.00	2.25E+04
m	18	275-	294	288.95	50.03	6.35E+04	0.00	1.84E+04
	19	310-	321	316.29	54.77	1.93E+03	0.00	1.71E+04
M	20	330-	352	336.64	58.30	1.37E+03	0.00	1.42E+04
m	21	330-	352	346.79	60.06	1.36E+04	0.00	1.41E+04
	22	417-	423	420.72	72.88	1.43E+02	0.00	1.26E+04
	23	438-	450	443.19	76.78	1.24E+03	0.00	2.52E+04
	24	492-	506	499.82	86.60	3.29E+05	0.00	4.06E+04
	25	514-	523	519.02	89.93	2.10E+02	0.00	2.66E+04
	26	532-	546	539.25	93.44	1.11E+03	0.00	3.96E+04
	27	600-	615	607.97	105.35	2.14E+05	0.00	4.13E+04
	28	645-	660	653.42	113.24	2.11E+03	0.00	4.23E+04
M	29	667-	689	676.39	117.22	5.14E+03	0.00	5.53E+04
m	30	667-	689	682.48	118.28	4.93E+03	0.00	5.07E+04
	31	702-	718	710.46	123.13	1.77E+06	0.00	4.20E+04
	32	753-	767	759.68	131.66	1.29E+03	0.00	2.08E+04
	33	770-	784	778.83	134.99	5.66E+02	0.00	2.04E+04
	34	947-	965	956.42	165.79	2.76E+03	0.00	2.28E+04
	35	988-	1004	997.31	172.88	1.58E+03	0.00	1.93E+04
	36	1008-	1026	1017.57	176.39	4.18E+04	0.00	2.11E+04
	37	1080-	1094	1086.34	188.32	5.33E+03	0.00	1.69E+04
	38	1169-	1184	1178.43	204.29	1.68E+03	0.00	1.80E+04
	39	1191-	1208	1201.09	208.22	1.03E+03	0.00	2.08E+04
	40	1306-	1325	1315.20	228.01	1.01E+03	0.00	2.10E+04
	41	1329-	1349	1339.47	232.22	8.60E+02	0.00	2.21E+04
	42	1366-	1383	1376.33	238.61	7.81E+02	0.00	1.98E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1422-	1440	1430.75	248.05	1.13E+05	0.00	2.07E+04
	44	1447-	1463	1456.27	252.47	6.31E+02	0.00	1.65E+04
	45	1548-	1562	1555.76	269.73	-3.49E+01	0.00	1.35E+04
	46	1667-	1687	1678.24	290.97	2.19E+03	0.00	1.67E+04
	47	1752-	1769	1760.75	305.28	1.58E+02	0.00	1.30E+04
	48	1846-	1865	1854.55	321.55	1.56E+03	0.00	1.40E+04
	49	2131-	2149	2140.80	371.19	3.78E+03	0.00	1.31E+04
	50	2183-	2206	2195.36	380.65	3.16E+03	0.00	1.58E+04
	51	2303-	2324	2315.76	401.53	1.56E+03	0.00	1.49E+04
	52	2380-	2402	2390.39	414.48	-3.63E+01	0.00	1.60E+04
	53	2457-	2479	2469.10	428.13	4.71E+04	0.00	1.53E+04
	54	2551-	2575	2564.93	444.75	4.39E+03	0.00	1.53E+04
	55	2616-	2638	2626.95	455.50	1.56E+03	0.00	1.39E+04
	56	2663-	2685	2673.96	463.65	1.56E+04	0.00	1.39E+04
	57	2749-	2769	2759.57	478.50	7.93E+02	0.00	1.28E+04
	58	3067-	3091	3077.00	533.55	3.15E+02	0.00	1.49E+04
	59	3207-	3230	3218.03	558.01	1.20E+03	0.00	1.20E+04
	60	3344-	3372	3358.64	582.40	4.68E+03	0.00	1.33E+04
	61	3401-	3429	3414.89	592.15	2.35E+04	0.00	1.34E+04
	62	3451-	3478	3465.92	601.00	1.75E+04	0.00	1.26E+04
	63	3486-	3511	3500.98	607.08	4.84E+03	0.00	1.13E+04
	64	3593-	3618	3607.66	625.59	1.08E+03	0.00	1.14E+04
	65	3654-	3681	3669.83	636.37	1.10E+04	0.00	1.19E+04
	66	3736-	3762	3750.10	650.29	5.46E+02	0.00	1.11E+04
M	67	3862-	3916	3874.68	671.89	1.56E+03	0.00	1.08E+04
m	68	3862-	3916	3903.86	676.95	3.17E+02	0.00	1.37E+04
M	69	3982-	4044	3996.90	693.09	1.13E+04	0.00	7.53E+03
m	70	3982-	4044	4022.26	697.49	6.97E+03	0.00	8.25E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  1-26-96  9:06:22 AM

Sample Title                     : BL5D attenuation
Spectrum Description             : BL5D attenuation
Sample Identification            : BL5DAT_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96 10:44:10 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1997.6 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: BL5D attenuation
Peak Locate Performed on: 1-26-96 9:06:07 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	75.66	0.3721	13.05	3.35
2	79.20	0.2224	13.60	3.84
3	94.97	0.1525	16.41	4.14
4	101.78	0.1044	17.52	12.30
5	110.00	0.0000	18.99	3.06
6	122.56	0.0567	21.17	9.09
7	140.58	0.1696	25.85	3.15
8	148.46	0.1007	26.70	4.98
9	158.92	0.0047	27.45	182.68
10	179.50	0.0051	31.05	89.85
11	184.00	<NA>	31.80	<NA>
12	191.94	0.0454	33.16	23.50
13	205.51	0.0064	35.56	72.65
14	224.45	0.2005	38.84	6.75
15	244.49	0.0031	42.37	143.76
16	248.94	0.0028	43.07	345.57
17	262.08	0.0226	45.36	41.31
18	269.22	0.0634	46.64	14.79
19	281.29	0.0073	48.72	186.63
20	289.02	0.0092	50.04	93.59
21	307.61	0.2707	53.26	4.54
22	316.71	0.2327	54.79	5.31
23	335.93	0.4042	58.25	3.86
24	346.91	0.0177	60.07	46.96
25	365.77	0.0730	63.35	19.40
26	420.82	0.3000	72.88	3.99
27	432.42	0.0461	74.91	25.13
28	445.36	0.0348	77.14	32.59
29	457.78	0.2241	79.33	4.00
30	468.37	0.2916	81.18	4.14
31	483.71	0.2224	83.80	4.78
32	499.93	0.0027	86.62	293.12
33	518.83	0.1910	90.01	4.34
34	534.52	0.0933	92.59	10.27
35	546.63	0.1214	94.70	8.57
36	568.49	0.0697	98.51	14.75
37	608.10	0.0052	105.38	239.21
38	643.38	0.5558	111.49	3.61
39	653.52	0.1377	113.25	7.50
40	675.22	0.1925	117.15	6.80
41	682.06	0.2497	118.21	6.52

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	710.58	0.0015	123.15	677.53
43	759.01	0.1431	131.55	5.77
44	777.43	0.4947	134.74	3.72
45	842.82	0.3324	146.08	4.11
46	957.51	0.2069	165.97	7.04
47	996.90	0.2089	172.81	7.68
48	1017.75	0.0128	176.42	102.38
49	1073.73	0.1386	186.12	10.01
50	1086.74	0.0489	188.37	26.01
51	1178.03	0.1638	204.22	7.61
52	1200.92	0.2424	208.19	5.63
53	1339.19	0.4584	232.17	3.22
54	1396.80	0.0922	242.18	13.76
55	1417.88	0.4160	245.81	3.11
56	1430.98	0.0063	248.08	180.97
57	1456.76	0.3401	252.56	3.58
58	1494.68	0.3619	259.13	3.02
59	1678.18	0.2209	290.96	7.71
60	1703.88	0.0578	295.42	25.89
61	1761.32	0.4449	305.38	3.80
62	1854.52	0.3905	321.54	4.12
63	2031.32	0.0476	352.20	35.09
64	2141.09	0.0711	371.24	22.74
65	2195.95	0.0969	380.75	15.56
66	2316.07	0.1791	401.59	8.92
67	2358.22	1.0387	408.90	3.12
68	2469.45	0.0171	428.19	103.94
69	2565.36	0.0967	444.82	17.36
70	2626.93	0.1720	455.50	8.03
71	2648.26	0.4881	459.00	3.49
72	2674.29	0.0321	463.72	54.25
73	2759.80	0.2005	478.54	8.96
74	3218.45	0.1918	558.08	8.50
75	3358.86	0.0852	582.44	22.26
76	3415.28	0.0279	592.22	65.69
77	3466.38	0.0324	601.08	57.00
78	3501.42	0.0681	607.18	23.92
79	3516.97	0.0831	609.80	20.81
80	3540.73	0.4148	613.87	3.75
81	3608.81	0.2392	625.78	7.93
82	3670.32	0.0453	636.45	38.87
83	3874.97	0.1905	672.04	8.89
84	3903.64	0.3100	677.02	5.23
85	3996.03	0.0556	693.20	30.39
86	4028.51	0.2772	697.55	18.99

Errors quoted at 0.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: BL5D attenuation
Peak Analysis Performed on: 1-26-96 9:06:21 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	72-	82	75.74	13.05	2.62E+03	217.13	2.00E+04
m	2	72-	82	78.88	13.60	2.44E+03	212.05	2.01E+04
M	3	90-	112	95.09	16.41	6.93E+03	587.49	2.79E+04
m	4	90-	112	101.51	17.52	1.91E+04	679.81	3.00E+04
	6	118-	126	122.56	21.17	2.42E+03	220.93	2.17E+04
M	7	135-	163	149.57	25.85	1.32E+04	2906.03	2.36E+04
m	8	135-	163	154.45	26.70	2.30E+04	3958.61	2.49E+04
m	9	135-	163	158.76	27.45	4.07E+05	4868.11	2.77E+04
M	10	174-	196	179.53	31.05	9.11E+04	2089.43	3.23E+04
m	11	174-	196	183.83	31.80	2.09E+04	1731.51	2.87E+04
m	12	174-	196	191.70	33.16	9.95E+03	1400.85	3.16E+04
	13	199-	210	205.51	35.56	5.01E+04	386.80	3.98E+04
	14	218-	227	224.45	38.84	4.99E+03	362.35	5.47E+04
M	15	238-	254	244.82	42.37	4.14E+05	7985.11	5.40E+04
m	16	238-	254	248.81	43.07	7.42E+05	8010.89	3.91E+04
M	17	258-	295	262.06	45.36	1.09E+04	1049.15	3.30E+04
m	18	258-	295	269.42	46.64	2.94E+03	877.68	3.18E+04
m	19	258-	295	281.39	48.72	2.43E+05	2064.89	2.44E+04
m	20	258-	295	289.04	50.04	6.71E+04	1643.21	1.93E+04
M	21	301-	321	307.61	53.26	1.19E+03	167.79	1.87E+04
m	22	301-	321	316.39	54.79	1.53E+03	208.28	1.71E+04
M	23	330-	352	336.35	58.25	1.47E+03	198.15	1.53E+04
m	24	330-	352	346.87	60.07	1.40E+04	403.13	1.52E+04
	25	359-	371	365.77	63.35	3.60E+03	241.91	2.09E+04
M	26	413-	472	420.70	72.88	7.34E+02	175.01	2.15E+04
m	27	413-	472	432.45	74.91	6.30E+03	448.73	2.47E+04
m	28	413-	472	445.27	77.14	9.42E+03	641.07	2.40E+04
m	29	413-	472	457.92	79.33	1.74E+02	184.23	2.53E+04
m	30	413-	472	468.60	81.18	2.89E+02	192.96	2.38E+04
	31	476-	487	483.71	83.80	9.76E+02	287.28	3.24E+04
	32	492-	506	499.93	86.62	3.38E+05	680.30	4.35E+04
M	33	513-	553	519.49	90.01	1.50E+03	210.99	4.12E+04
m	34	513-	553	534.38	92.59	5.42E+03	455.86	4.37E+04
m	35	513-	553	546.56	94.70	4.02E+03	357.01	4.07E+04
	36	562-	573	568.49	98.51	4.28E+03	293.32	3.26E+04
	37	600-	616	608.10	105.38	2.16E+05	596.96	4.48E+04
M	38	635-	658	643.36	111.49	5.14E+02	168.66	2.73E+04
m	39	635-	658	653.48	113.25	1.44E+03	392.34	2.77E+04
M	40	667-	690	675.97	117.15	4.73E+03	366.04	4.95E+04
m	41	667-	690	682.07	118.21	5.54E+03	396.72	5.09E+04
	42	702-	718	710.58	123.15	1.78E+06	1382.33	4.27E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	754-	766	759.01	131.55	6.52E+02	229.01	1.97E+04
	44	772-	782	777.43	134.74	3.91E+02	197.47	1.62E+04
	45	837-	847	842.82	146.08	4.06E+02	193.67	1.56E+04
	46	948-	963	957.51	165.97	2.35E+03	254.15	2.07E+04
	47	987-	1005	996.90	172.81	1.66E+03	280.12	2.27E+04
	48	1008-	1026	1017.75	176.42	4.29E+04	341.99	2.19E+04
M	49	1064-	1094	1073.66	186.12	3.22E+03	214.29	1.73E+04
m	50	1064-	1094	1086.66	188.37	6.16E+03	321.64	1.86E+04
	51	1170-	1188	1178.03	204.22	1.66E+03	279.11	2.25E+04
	52	1194-	1206	1200.92	208.19	5.70E+02	205.75	1.58E+04
	53	1332-	1346	1339.19	232.17	2.53E+02	219.99	1.67E+04
M	54	1389-	1440	1396.94	242.18	2.74E+03	171.05	1.71E+04
m	55	1389-	1440	1417.83	245.81	9.65E+02	154.27	1.68E+04
m	56	1389-	1440	1430.96	248.08	1.15E+05	789.91	1.59E+04
	57	1449-	1463	1456.76	252.56	4.01E+01	211.46	1.55E+04
	58	1484-	1501	1494.68	259.13	1.93E+02	240.19	1.77E+04
	59	1668-	1689	1678.18	290.96	1.99E+03	266.76	1.84E+04
	60	1694-	1714	1703.88	295.42	5.64E+03	258.97	1.69E+04
	61	1750-	1772	1761.32	305.38	3.63E+02	260.36	1.74E+04
	62	1846-	1865	1854.52	321.54	1.80E+03	227.28	1.42E+04
	63	2020-	2040	2031.32	352.20	7.56E+03	245.38	1.45E+04
	64	2130-	2153	2141.09	371.24	4.71E+03	262.18	1.60E+04
	65	2186-	2204	2195.95	380.75	2.67E+03	215.87	1.30E+04
	66	2306-	2325	2316.07	401.59	1.05E+03	227.32	1.44E+04
	67	2349-	2371	2358.22	408.90	2.90E+02	252.38	1.63E+04
	68	2456-	2482	2469.45	428.19	4.78E+04	356.18	1.81E+04
	69	2553-	2575	2565.36	444.82	4.15E+03	247.27	1.47E+04
M	70	2615-	2687	2626.93	455.50	1.49E+03	107.92	1.44E+04
m	71	2615-	2687	2647.12	459.00	3.20E+02	87.33	1.43E+04
m	72	2615-	2687	2674.31	463.72	1.61E+04	637.54	1.42E+04
	73	2749-	2770	2759.80	478.54	1.53E+03	228.06	1.34E+04
	74	3204-	3229	3218.45	558.08	1.11E+03	239.29	1.32E+04
	75	3346-	3369	3358.86	582.44	4.19E+03	222.60	1.13E+04
	76	3401-	3428	3415.28	592.22	2.33E+04	285.94	1.30E+04
	77	3452-	3478	3466.38	601.08	1.77E+04	270.42	1.27E+04
M	78	3486-	3551	3501.54	607.18	4.56E+03	302.50	1.22E+04
m	79	3486-	3551	3516.66	609.80	3.73E+03	251.40	1.27E+04
m	80	3486-	3551	3540.10	613.87	1.43E+02	74.43	1.32E+04
	81	3596-	3619	3608.81	625.78	1.00E+03	209.61	1.07E+04
	82	3655-	3681	3670.32	636.45	1.07E+04	251.94	1.21E+04
M	83	3860-	3918	3875.54	672.04	2.21E+03	330.87	1.27E+04
m	84	3860-	3918	3904.26	677.02	9.30E+02	159.50	1.65E+04
M	85	3983-	4044	3997.52	693.20	1.09E+04	562.33	7.78E+03
m	86	3983-	4044	4022.60	697.55	6.91E+03	545.59	8.57E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************

Report Generated On              :  1-26-96  9:14:40 AM

Sample Title                     : NOPI-113-GAM3 attenuation
Spectrum Description             : NOPI-113-GAM3 attenuation
Sample Identification            : NP113ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96 11:23:02 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1991.1 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-113-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:14:26 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	76.00	<NA>	13.10	<NA>
2	94.65	0.2390	16.43	4.68
3	101.79	0.1154	17.53	13.10
4	122.34	0.1143	21.13	10.46
5	148.53	0.1072	26.69	4.54
6	158.91	0.0052	27.45	167.17
7	179.49	0.0054	31.04	86.93
8	184.00	<NA>	31.77	<NA>
9	188.00	<NA>	32.43	<NA>
10	191.90	0.0465	33.17	24.74
11	205.50	0.0067	35.55	68.45
12	224.43	0.2775	38.84	5.24
13	244.48	0.0032	42.37	135.40
14	248.91	0.0029	43.06	337.10
15	262.05	0.0232	45.36	40.05
16	269.17	0.1052	46.66	9.00
17	281.26	0.0049	48.71	183.70
18	289.02	0.0093	50.04	92.57
19	307.86	0.2351	53.37	3.55
20	316.54	0.2993	54.85	4.51
21	335.48	0.2225	58.20	5.36
22	346.90	0.0172	60.07	49.63
23	365.77	0.0705	63.35	12.74
24	432.37	0.0953	74.89	11.86
25	445.21	0.0608	77.10	20.00
26	468.13	0.2745	81.10	3.37
27	499.93	0.0027	86.62	291.58
28	534.61	0.2115	92.64	6.36
29	546.35	0.1200	94.69	9.17
30	568.39	0.0971	98.49	10.88
31	576.92	0.2829	99.97	3.09
32	608.06	0.0053	105.37	238.36
33	631.05	0.2647	109.36	3.41
34	653.59	0.1502	113.27	6.95
35	675.39	0.2164	117.22	5.78
36	681.86	0.5161	118.30	4.61
37	710.55	0.0015	123.14	671.02
38	759.49	0.2402	131.63	4.61
39	831.12	0.4187	144.05	3.65
40	956.40	0.3950	165.78	4.12
41	997.05	0.2629	172.83	5.51

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1017.75	0.0127	176.42	104.73
43	1073.67	0.2596	186.10	5.04
44	1086.46	0.0354	188.34	26.31
45	1178.07	0.1504	204.23	7.93
46	1200.55	0.1375	208.12	7.17
47	1315.29	0.3800	228.02	3.72
48	1339.36	0.3357	232.20	4.57
49	1396.37	0.2794	242.08	5.86
50	1430.94	0.0063	248.08	179.78
51	1457.39	0.3725	252.67	4.55
52	1645.30	0.3265	285.26	3.34
53	1677.72	0.2614	290.88	7.36
54	1703.81	0.1093	295.40	14.08
55	1821.43	0.3827	315.80	3.40
56	1855.85	0.6173	321.77	3.51
57	2031.17	0.0780	352.18	20.75
58	2141.00	0.0687	371.23	23.40
59	2195.62	0.1012	380.70	15.35
60	2316.16	0.2095	401.60	8.22
61	2401.28	0.4230	416.36	3.28
62	2469.34	0.0171	428.17	104.49
63	2565.31	0.1027	444.81	16.43
64	2626.96	0.1971	455.47	7.28
65	2648.34	0.3690	459.16	3.94
66	2674.15	0.0326	463.69	54.37
67	2700.32	0.3771	468.20	4.49
68	2760.46	0.2009	478.66	9.69
69	3217.61	0.2373	557.94	8.62
70	3358.75	0.0872	582.42	21.60
71	3415.27	0.0278	592.22	66.07
72	3466.25	0.0318	601.06	57.36
73	3501.51	0.0674	607.19	23.52
74	3517.32	0.1560	609.80	10.91
75	3539.42	0.3345	613.81	5.31
76	3608.75	0.2097	625.72	8.24
77	3624.76	0.5392	628.43	3.18
78	3670.29	0.0448	636.45	39.80
79	3875.12	0.1748	672.01	9.89
80	3904.62	0.3362	677.08	5.39
81	3996.07	0.0560	693.12	30.37
82	4028.55	0.2429	697.66	19.07

Errors quoted at 0.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: NOPI-113-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:14:39 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	73-	79	76.00	13.10	1.84E+03	174.19	1.51E+04
M	2	90-	105	95.20	16.43	5.49E+03	564.40	2.53E+04
m	3	90-	105	101.54	17.53	1.72E+04	621.85	2.25E+04
	4	118-	126	122.34	21.13	1.85E+03	214.68	2.07E+04
M	5	143-	163	154.39	26.69	1.92E+04	4561.84	2.83E+04
m	6	143-	163	158.74	27.45	3.56E+05	4621.76	2.88E+04
M	7	174-	196	179.49	31.04	7.96E+04	848.00	3.16E+04
m	8	174-	196	183.70	31.77	1.88E+04	567.96	2.83E+04
m	9	174-	196	187.50	32.43	6.00E+03	445.33	3.14E+04
m	10	174-	196	191.78	33.17	8.56E+03	454.58	2.82E+04
	11	199-	210	205.50	35.55	4.62E+04	380.83	3.95E+04
	12	218-	227	224.43	38.84	4.41E+03	357.02	5.33E+04
M	13	238-	254	244.80	42.37	3.96E+05	7726.91	5.28E+04
m	14	238-	254	248.78	43.06	7.11E+05	7752.58	3.78E+04
M	15	258-	295	262.05	45.36	1.03E+04	960.46	3.19E+04
m	16	258-	295	269.52	46.66	1.03E+03	769.60	3.08E+04
m	17	258-	295	281.36	48.71	2.32E+05	1903.40	2.35E+04
m	18	258-	295	289.02	50.04	6.42E+04	1509.36	1.86E+04
M	19	303-	322	308.24	53.37	8.78E+02	149.29	1.76E+04
m	20	303-	322	316.75	54.85	1.39E+03	213.96	1.75E+04
M	21	329-	352	336.07	58.20	1.28E+03	192.76	1.31E+04
m	22	329-	352	346.84	60.07	1.36E+04	407.58	1.46E+04
	23	358-	369	365.77	63.35	2.06E+03	218.67	1.83E+04
M	24	425-	450	432.33	74.89	3.14E+03	206.02	2.30E+04
m	25	425-	450	445.08	77.10	5.63E+03	326.08	2.23E+04
	26	463-	472	468.13	81.10	1.58E+01	226.99	2.27E+04
	27	492-	506	499.93	86.62	3.32E+05	670.97	4.09E+04
M	28	528-	553	534.65	92.64	2.48E+03	301.79	3.54E+04
m	29	528-	553	546.51	94.69	2.44E+03	297.86	3.76E+04
	30	562-	580	568.39	98.49	2.20E+03	418.16	5.10E+04
	32	600-	616	608.06	105.37	2.14E+05	592.91	4.40E+04
	33	623-	636	631.05	109.36	4.60E+02	314.19	3.56E+04
	34	648-	660	653.59	113.27	1.35E+03	308.63	3.56E+04
M	35	667-	689	676.42	117.22	4.68E+03	344.25	5.86E+04
m	36	667-	689	682.63	118.30	5.44E+03	373.14	5.11E+04
	37	702-	718	710.55	123.14	1.76E+06	1375.56	4.24E+04
	38	752-	766	759.49	131.63	1.12E+03	250.25	2.13E+04
	39	826-	837	831.12	144.05	1.09E+01	204.14	1.66E+04
	40	947-	965	956.40	165.78	2.47E+03	286.48	2.35E+04
	41	988-	1006	997.05	172.83	1.55E+03	276.57	2.21E+04
	42	1008-	1026	1017.75	176.42	4.27E+04	338.36	2.13E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	43	1064-	1093	1073.55	186.10	1.61E+03	150.13	1.59E+04
m	44	1064-	1093	1086.49	188.34	5.76E+03	343.51	1.60E+04
	45	1172-	1184	1178.07	204.23	1.47E+03	204.13	1.53E+04
	46	1191-	1210	1200.55	208.12	1.47E+03	288.19	2.33E+04
	47	1308-	1322	1315.29	228.02	2.18E+02	219.05	1.66E+04
	48	1332-	1347	1339.36	232.20	2.79E+02	227.75	1.72E+04
	49	1389-	1403	1396.37	242.08	9.55E+02	225.71	1.73E+04
	50	1422-	1440	1430.94	248.08	1.12E+05	427.52	2.10E+04
	51	1450-	1464	1457.39	252.67	1.49E+02	209.21	1.51E+04
	52	1638-	1653	1645.30	285.26	1.01E+02	200.33	1.33E+04
	53	1669-	1685	1677.72	290.88	2.00E+03	212.57	1.38E+04
	54	1694-	1714	1703.81	295.40	2.77E+03	253.46	1.69E+04
	55	1813-	1831	1821.43	315.80	1.92E+01	213.70	1.35E+04
	56	1844-	1866	1855.85	321.77	1.86E+03	254.42	1.62E+04
	57	2021-	2042	2031.17	352.18	3.74E+03	244.73	1.49E+04
	58	2129-	2150	2141.00	371.23	4.01E+03	246.13	1.51E+04
	59	2185-	2207	2195.62	380.70	3.07E+03	248.14	1.51E+04
	60	2307-	2328	2316.16	401.60	1.54E+03	242.49	1.52E+04
	61	2391-	2410	2401.28	416.36	-1.32E+02	219.96	1.38E+04
	62	2457-	2482	2469.34	428.17	4.75E+04	347.50	1.72E+04
	63	2552-	2576	2565.31	444.81	4.26E+03	261.79	1.56E+04
M	64	2614-	2710	2626.78	455.47	1.17E+03	108.58	1.43E+04
m	65	2614-	2710	2648.04	459.16	2.74E+02	87.55	1.41E+04
m	66	2614-	2710	2674.19	463.69	1.54E+04	800.83	1.38E+04
m	67	2614-	2710	2700.18	468.20	5.22E+02	91.89	1.36E+04
	68	2749-	2770	2760.46	478.66	1.32E+03	224.67	1.31E+04
	69	3206-	3228	3217.61	557.94	1.13E+03	214.54	1.16E+04
	70	3347-	3372	3358.75	582.42	4.43E+03	236.85	1.21E+04
	71	3400-	3430	3415.27	592.22	2.38E+04	304.25	1.41E+04
	72	3455-	3481	3466.25	601.06	1.81E+04	269.77	1.24E+04
M	73	3489-	3550	3501.59	607.19	4.81E+03	337.75	1.09E+04
m	74	3489-	3550	3516.66	609.80	1.95E+03	149.57	1.30E+04
m	75	3489-	3550	3539.76	613.81	4.87E+02	74.34	1.25E+04
M	76	3594-	3636	3608.44	625.72	1.32E+03	275.19	1.14E+04
m	77	3594-	3636	3624.08	628.43	3.92E+02	105.70	1.33E+04
	78	3656-	3681	3670.29	636.45	1.08E+04	242.66	1.13E+04
M	79	3863-	3918	3875.32	672.01	1.35E+03	328.25	1.00E+04
m	80	3863-	3918	3904.60	677.08	4.75E+02	128.53	1.15E+04
M	81	3984-	4044	3997.04	693.12	1.08E+04	671.92	7.14E+03
m	82	3984-	4044	4023.26	697.66	7.06E+03	660.05	7.91E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On              :  1-26-96  9:16:21 AM

Sample Title                     : NOPI-114-GAM3 attenuation
Spectrum Description             : NOPI-114-GAM3 attenuation
Sample Identification            : NP114ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96 11:57:29 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1993.2 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-114-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:16:08 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	79.38	0.1873	13.68	3.11
2	95.14	0.1695	16.43	5.26
3	101.71	0.1058	17.53	13.24
4	116.94	0.2945	20.20	3.88
5	122.42	0.0636	21.15	8.42
6	148.59	0.1269	26.69	4.30
7	158.94	0.0050	27.45	172.80
8	179.50	0.0053	31.05	86.40
9	184.00	<NA>	31.82	<NA>
10	191.93	0.0453	33.15	23.15
11	205.53	0.0066	35.56	73.17
12	224.48	0.2152	38.85	6.86
13	244.50	0.0032	42.38	144.71
14	248.96	0.0029	43.07	340.69
15	262.05	0.0236	45.37	38.99
16	269.16	0.0797	46.63	12.78
17	281.32	0.0074	48.72	182.82
18	289.05	0.0092	50.05	93.88
19	307.82	0.2171	53.39	4.21
20	316.84	0.1882	54.83	4.62
21	336.76	0.3491	58.36	3.47
22	346.96	0.0167	60.08	51.08
23	365.91	0.0566	63.37	14.74
24	432.25	0.0680	74.89	18.02
25	445.43	0.0446	77.15	24.68
26	458.48	0.3007	79.40	3.62
27	484.23	0.3229	84.02	3.83
28	499.96	0.0027	86.61	292.49
29	518.79	0.4086	89.96	3.90
30	534.68	0.1613	92.64	7.27
31	546.66	0.1527	94.70	7.46
32	568.50	0.0737	98.51	14.87
33	608.13	0.0051	105.38	237.93
34	653.51	0.1467	113.25	7.43
35	675.17	0.1406	117.20	6.20
36	682.35	0.3360	118.32	4.01
37	710.61	0.0015	123.16	682.56
38	759.74	0.2094	131.68	5.14
39	830.90	0.3669	143.97	3.52
40	842.84	0.4584	146.10	3.04
41	867.70	0.6474	150.40	3.91

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	956.91	0.2482	165.87	6.01
43	997.31	0.1457	172.88	7.47
44	1017.82	0.0125	176.43	102.61
45	1073.81	0.1644	186.13	8.75
46	1086.61	0.0498	188.37	27.00
47	1178.17	0.1421	204.24	8.45
48	1201.13	0.2023	208.23	7.42
49	1291.65	0.4562	223.92	3.29
50	1314.83	0.4798	227.94	3.59
51	1339.63	0.4151	232.24	3.77
52	1396.88	0.1388	242.21	8.93
53	1417.65	0.3560	245.78	3.17
54	1431.03	0.0063	248.10	179.55
55	1456.73	0.5165	252.55	3.37
56	1677.60	0.3251	290.86	6.92
57	1704.12	0.0787	295.46	19.24
58	1855.02	0.6240	321.63	3.94
59	2031.28	0.0605	352.20	28.34
60	2141.12	0.0741	371.25	22.06
61	2195.98	0.1017	380.76	16.12
62	2316.26	0.2027	401.62	8.01
63	2469.62	0.0172	428.22	104.41
64	2565.36	0.0981	444.82	18.82
65	2627.68	0.2541	455.59	6.30
66	2649.21	0.5590	459.37	3.00
67	2674.37	0.0324	463.73	53.13
68	2759.94	0.2574	478.57	7.80
69	2991.62	0.4466	518.75	3.83
70	3217.83	0.2622	557.98	7.41
71	3359.02	0.0877	582.46	21.26
72	3415.50	0.0232	592.26	65.76
73	3466.54	0.0268	601.11	57.40
74	3501.41	0.0679	607.20	23.08
75	3517.29	0.1162	609.84	13.98
76	3539.76	0.6031	613.92	3.21
77	3608.77	0.2304	625.79	7.49
78	3624.28	0.3933	628.46	4.86
79	3670.46	0.0464	636.48	38.84
80	3875.29	0.1848	672.00	9.52
81	3996.25	0.0556	693.18	30.77
82	4028.52	0.1209	697.69	19.52

Errors quoted at 0.000 sigma

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*****                P E A K   A N A L Y S I S   R E P O R T            *****
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Detector Name: DET01
Sample Title: NOPI-114-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:16:20 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	76-	82	79.38	13.68	2.33E+03	0.00	1.59E+04
M	2	91-	105	95.22	16.43	6.67E+03	0.00	2.40E+04
m	3	91-	105	101.54	17.53	1.90E+04	0.00	2.28E+04
M	4	112-	126	116.98	20.20	1.44E+03	0.00	2.03E+04
m	5	112-	126	122.43	21.15	2.76E+03	0.00	2.02E+04
M	6	143-	163	154.41	26.69	2.07E+04	0.00	2.82E+04
m	7	143-	163	158.78	27.45	3.79E+05	0.00	2.90E+04
M	8	174-	196	179.55	31.05	8.79E+04	0.00	3.16E+04
m	9	174-	196	183.98	31.82	2.15E+04	0.00	2.82E+04
m	10	174-	196	191.63	33.15	1.00E+04	0.00	3.11E+04
	11	199-	210	205.53	35.56	4.79E+04	0.00	3.97E+04
	12	218-	227	224.48	38.85	4.41E+03	0.00	5.36E+04
M	13	238-	254	244.84	42.38	4.03E+05	0.00	5.28E+04
m	14	238-	254	248.83	43.07	7.23E+05	0.00	3.85E+04
M	15	258-	295	262.07	45.37	9.77E+03	0.00	3.29E+04
m	16	258-	295	269.38	46.63	1.40E+03	0.00	3.18E+04
m	17	258-	295	281.41	48.72	2.35E+05	0.00	2.44E+04
m	18	258-	295	289.07	50.05	6.49E+04	0.00	1.94E+04
M	19	302-	322	308.36	53.39	8.85E+02	0.00	1.82E+04
m	20	302-	322	316.63	54.83	1.58E+03	0.00	1.79E+04
M	21	330-	352	337.01	58.36	1.35E+03	0.00	1.34E+04
m	22	330-	352	346.93	60.08	1.36E+04	0.00	1.33E+04
	23	358-	370	365.91	63.37	3.15E+03	0.00	1.94E+04
M	24	425-	462	432.31	74.89	4.18E+03	0.00	2.14E+04
m	25	425-	462	445.37	77.15	7.27E+03	0.00	2.48E+04
m	26	425-	462	458.30	79.40	4.70E+02	0.00	2.17E+04
M	27	477-	506	484.93	84.02	2.23E+03	0.00	2.71E+04
m	28	477-	506	499.91	86.61	3.38E+05	0.00	2.89E+04
M	29	514-	553	519.21	89.96	1.34E+03	0.00	3.50E+04
m	30	514-	553	534.67	92.64	4.17E+03	0.00	4.05E+04
m	31	514-	553	546.55	94.70	2.91E+03	0.00	4.05E+04
	32	561-	575	568.50	98.51	4.28E+03	0.00	3.96E+04
	33	600-	616	608.13	105.38	2.15E+05	0.00	4.43E+04
	34	648-	658	653.51	113.25	9.72E+02	0.00	3.02E+04
M	35	668-	690	676.25	117.20	4.19E+03	0.00	5.29E+04
m	36	668-	690	682.76	118.32	5.33E+03	0.00	5.42E+04
	37	702-	718	710.61	123.16	1.76E+06	0.00	4.29E+04
	38	754-	767	759.74	131.68	1.48E+03	0.00	2.00E+04
M	39	823-	848	830.65	143.97	3.68E+02	0.00	1.50E+04
m	40	823-	848	842.92	146.10	3.44E+02	0.00	1.51E+04
	41	860-	872	867.70	150.40	5.22E+02	0.00	1.74E+04
	42	947-	963	956.91	165.87	2.88E+03	0.00	2.15E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	988-	1006	997.31	172.88	1.25E+03	0.00	2.24E+04
	44	1008-	1026	1017.82	176.43	4.26E+04	0.00	2.14E+04
M	45	1065-	1095	1073.72	186.13	2.28E+03	0.00	1.59E+04
m	46	1065-	1095	1086.65	188.37	5.88E+03	0.00	1.58E+04
	47	1171-	1185	1178.17	204.24	1.64E+03	0.00	1.75E+04
	48	1195-	1207	1201.13	208.23	6.28E+02	0.00	1.58E+04
	49	1283-	1300	1291.65	223.92	-2.71E+01	0.00	1.97E+04
	50	1307-	1324	1314.83	227.94	9.47E+02	0.00	1.94E+04
	51	1329-	1348	1339.63	232.24	9.45E+02	0.00	2.13E+04
M	52	1388-	1441	1397.11	242.21	1.97E+03	0.00	1.68E+04
m	53	1388-	1441	1417.65	245.78	8.12E+02	0.00	1.77E+04
m	54	1388-	1441	1431.03	248.10	1.14E+05	0.00	1.60E+04
	55	1449-	1466	1456.73	252.55	3.95E+02	0.00	1.79E+04
	56	1666-	1688	1677.60	290.86	2.29E+03	0.00	1.88E+04
	57	1696-	1713	1704.12	295.46	3.21E+03	0.00	1.47E+04
	58	1844-	1866	1855.02	321.63	1.72E+03	0.00	1.63E+04
	59	2021-	2040	2031.28	352.20	5.40E+03	0.00	1.35E+04
	60	2131-	2150	2141.12	371.25	3.96E+03	0.00	1.35E+04
	61	2183-	2204	2195.98	380.76	3.10E+03	0.00	1.50E+04
	62	2307-	2326	2316.26	401.62	1.18E+03	0.00	1.43E+04
	63	2456-	2482	2469.62	428.22	4.81E+04	0.00	1.73E+04
	64	2554-	2577	2565.36	444.82	4.62E+03	0.00	1.47E+04
M	65	2614-	2687	2627.47	455.59	1.43E+03	0.00	1.55E+04
m	66	2614-	2687	2649.23	459.37	5.20E+02	0.00	1.45E+04
m	67	2614-	2687	2674.40	463.73	1.66E+04	0.00	1.45E+04
	68	2749-	2769	2759.94	478.57	1.11E+03	0.00	1.26E+04
	69	2981-	3001	2991.62	518.75	3.94E+01	0.00	1.34E+04
	70	3206-	3228	3217.83	557.98	1.64E+03	0.00	1.12E+04
	71	3348-	3373	3359.02	582.46	3.92E+03	0.00	1.27E+04
	72	3402-	3427	3415.50	592.26	2.34E+04	0.00	1.21E+04
	73	3452-	3478	3466.54	601.11	1.76E+04	0.00	1.24E+04
M	74	3489-	3550	3501.63	607.20	4.75E+03	0.00	1.10E+04
m	75	3489-	3550	3516.85	609.84	2.66E+03	0.00	1.31E+04
m	76	3489-	3550	3540.37	613.92	2.28E+02	0.00	1.19E+04
M	77	3595-	3636	3608.83	625.79	9.99E+02	0.00	1.08E+04
m	78	3595-	3636	3624.21	628.46	4.39E+02	0.00	1.12E+04
	79	3656-	3682	3670.46	636.48	1.09E+04	0.00	1.18E+04
	80	3863-	3889	3875.29	672.00	1.68E+03	0.00	1.17E+04
M	81	3980-	4044	3997.44	693.18	1.15E+04	0.00	8.01E+03
m	82	3980-	4044	4023.43	697.69	7.28E+03	0.00	8.71E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On              :  1-26-96  9:17:25 AM

Sample Title                     : NOPI-115-GAM3 attenuation
Spectrum Description             : NOPI-115-GAM3 attenuation
Sample Identification            : NP115ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96 12:31:45 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1993.8 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-115-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:17:12 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.45	0.2440	16.48	4.58
2	101.99	0.1177	17.55	16.38
3	122.49	0.0471	21.16	9.94
4	127.00	<NA>	21.91	<NA>
5	140.05	0.3507	24.20	3.02
6	158.97	0.0048	27.48	178.67
7	179.51	0.0051	31.06	91.68
8	184.06	0.0518	31.81	22.05
9	191.94	0.0444	33.16	25.39
10	205.56	0.0148	35.56	74.72
11	224.43	0.1489	38.84	7.06
12	244.52	0.0032	42.38	151.77
13	249.00	0.0028	43.07	343.84
14	262.13	0.0233	45.38	39.72
15	269.33	0.2347	46.62	5.29
16	281.40	0.0072	48.73	181.36
17	289.07	0.0092	50.05	93.92
18	316.74	0.2673	54.85	4.38
19	336.63	0.2624	58.32	4.29
20	346.99	0.0167	60.09	50.49
21	366.00	0.1229	63.39	6.80
22	432.37	0.1557	74.88	8.14
23	445.12	0.1515	77.09	10.10
24	499.99	0.0027	86.63	294.98
25	546.17	0.4001	94.64	3.48
26	568.42	0.1847	98.49	6.87
27	608.20	0.0049	105.39	237.19
28	631.05	0.2231	109.36	3.81
29	653.48	0.1504	113.25	7.86
30	675.32	0.1843	117.23	6.93
31	682.62	0.2431	118.34	5.87
32	710.66	0.0015	123.16	693.07
33	759.21	0.3050	131.58	5.41
34	778.23	0.2164	134.88	4.19
35	842.25	0.2581	145.98	4.20
36	867.99	0.8224	150.45	3.01
37	957.56	0.6146	165.98	5.01
38	997.20	0.1802	172.86	7.55
39	1017.90	0.0120	176.45	109.90
40	1074.36	0.3144	186.19	3.27
41	1086.66	0.0504	188.37	26.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1178.14	0.1306	204.24	9.95
43	1201.78	0.2934	208.34	5.30
44	1316.21	0.4094	228.18	3.18
45	1396.40	0.1810	242.09	5.53
46	1431.09	0.0063	248.11	179.68
47	1457.31	0.4003	252.65	3.48
48	1678.74	0.1693	291.06	8.58
49	1704.01	0.1340	295.44	9.18
50	1760.42	0.4981	305.22	3.23
51	1854.97	0.5210	321.62	3.67
52	2031.29	0.1353	352.20	12.10
53	2141.11	0.0676	371.24	24.67
54	2174.09	0.4088	376.96	3.01
55	2196.00	0.0948	380.76	16.83
56	2315.88	0.2020	401.55	8.68
57	2469.80	0.0139	428.25	106.03
58	2565.61	0.0995	444.86	18.91
59	2627.75	0.1982	455.64	9.13
60	2674.48	0.0314	463.75	54.71
61	2700.43	0.4080	468.30	3.34
62	2760.46	0.1837	478.66	9.63
63	3218.78	0.2009	558.14	8.30
64	3359.28	0.0728	582.51	22.31
65	3415.68	0.0277	592.29	66.59
66	3466.66	0.0323	601.13	57.51
67	3502.03	0.0748	607.27	25.38
68	3517.45	0.2284	609.88	7.18
69	3539.21	0.6656	613.72	3.28
70	3608.94	0.3199	625.82	6.24
71	3625.11	0.4299	628.39	3.23
72	3670.67	0.0451	636.51	40.56
73	3747.83	0.3645	649.89	4.23
74	3875.05	0.1758	672.03	10.49
75	3905.58	0.4338	677.21	4.57
76	3996.40	0.0660	693.25	30.17
77	4028.42	0.1248	697.56	17.94

Errors quoted at 0.000 sigma

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*****                P E A K   A N A L Y S I S   R E P O R T            *****
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Detector Name: DET01
Sample Title: NOPI-115-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:17:25 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.51	16.48	4.38E+03	0.00	2.49E+04
m	2	91-	105	101.67	17.55	1.74E+04	0.00	1.99E+04
M	3	118-	129	122.48	21.16	2.13E+03	0.00	1.80E+04
m	4	118-	129	126.80	21.91	3.30E+02	0.00	1.33E+04
	5	135-	142	140.05	24.20	-1.55E+03	0.00	2.24E+04
	6	153-	163	158.97	27.48	3.88E+05	0.00	4.72E+04
M	7	174-	196	179.58	31.06	9.03E+04	0.00	3.19E+04
m	8	174-	196	183.90	31.81	2.12E+04	0.00	2.84E+04
m	9	174-	196	191.70	33.16	9.96E+03	0.00	3.14E+04
	10	199-	210	205.56	35.56	4.95E+04	0.00	3.97E+04
	11	218-	227	224.43	38.84	4.55E+03	0.00	5.53E+04
M	12	238-	254	244.88	42.38	4.12E+05	0.00	5.47E+04
m	13	238-	254	248.86	43.07	7.38E+05	0.00	3.91E+04
M	14	258-	295	262.17	45.38	1.08E+04	0.00	3.22E+04
m	16	258-	295	281.45	48.73	2.41E+05	0.00	2.37E+04
m	17	258-	295	289.10	50.05	6.60E+04	0.00	1.86E+04
	18	310-	322	316.74	54.85	1.73E+03	0.00	1.95E+04
M	19	330-	351	336.75	58.32	1.38E+03	0.00	1.47E+04
m	20	330-	351	346.96	60.09	1.35E+04	0.00	1.33E+04
	21	358-	369	366.00	63.39	1.40E+03	0.00	1.78E+04
M	22	425-	451	432.23	74.88	1.90E+03	0.00	2.50E+04
m	23	425-	451	444.97	77.09	3.30E+03	0.00	2.62E+04
	24	492-	506	499.99	86.63	3.35E+05	0.00	4.20E+04
	25	542-	553	546.17	94.64	1.26E+03	0.00	3.20E+04
	26	561-	572	568.42	98.49	1.43E+03	0.00	3.16E+04
	27	600-	616	608.20	105.39	2.16E+05	0.00	4.43E+04
	28	627-	635	631.05	109.36	6.03E+02	0.00	2.32E+04
	29	645-	660	653.48	113.25	1.92E+03	0.00	4.34E+04
M	30	667-	690	676.45	117.23	4.78E+03	0.00	5.31E+04
m	31	667-	690	682.83	118.34	5.88E+03	0.00	5.19E+04
	32	702-	718	710.66	123.16	1.78E+06	0.00	4.37E+04
	33	754-	767	759.21	131.58	7.07E+02	0.00	2.04E+04
	34	773-	783	778.23	134.88	8.30E+01	0.00	1.55E+04
	35	837-	848	842.25	145.98	5.09E+02	0.00	1.64E+04
	36	861-	876	867.99	150.45	8.77E+02	0.00	2.09E+04
	37	948-	965	957.56	165.98	2.71E+03	0.00	2.23E+04
	38	991-	1004	997.20	172.86	1.17E+03	0.00	1.66E+04
	39	1010-	1025	1017.90	176.45	4.27E+04	0.00	1.86E+04
M	40	1065-	1094	1074.09	186.19	6.98E+02	0.00	1.57E+04
m	41	1065-	1094	1086.64	188.37	5.96E+03	0.00	1.59E+04
	42	1169-	1185	1178.14	204.24	2.01E+03	0.00	1.95E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1192-	1208	1201.78	208.34	1.28E+03	0.00	1.99E+04
	44	1306-	1323	1316.21	228.18	1.10E+03	0.00	1.94E+04
	45	1389-	1404	1396.40	242.09	4.52E+02	0.00	1.85E+04
	46	1422-	1441	1431.09	248.11	1.13E+05	0.00	2.23E+04
	47	1450-	1466	1457.31	252.65	3.35E+02	0.00	1.71E+04
	48	1667-	1689	1678.74	291.06	2.61E+03	0.00	1.85E+04
	49	1693-	1715	1704.01	295.44	2.46E+03	0.00	1.78E+04
	50	1752-	1768	1760.42	305.22	-5.47E+00	0.00	1.27E+04
	51	1843-	1865	1854.97	321.62	1.75E+03	0.00	1.61E+04
	52	2023-	2043	2031.29	352.20	2.35E+03	0.00	1.40E+04
	53	2132-	2153	2141.11	371.24	4.08E+03	0.00	1.50E+04
	55	2165-	2206	2196.00	380.76	2.37E+03	0.00	2.88E+04
	56	2303-	2324	2315.88	401.55	1.38E+03	0.00	1.54E+04
	57	2458-	2481	2469.80	428.25	4.75E+04	0.00	1.62E+04
	58	2552-	2576	2565.61	444.86	4.25E+03	0.00	1.55E+04
	59	2617-	2638	2627.75	455.64	1.44E+03	0.00	1.36E+04
M	60	2661-	2713	2674.49	463.75	1.65E+04	0.00	1.37E+04
m	61	2661-	2713	2700.73	468.30	6.67E+02	0.00	1.42E+04
	62	2750-	2770	2760.46	478.66	1.62E+03	0.00	1.24E+04
	63	3204-	3232	3218.78	558.14	1.73E+03	0.00	1.40E+04
	64	3345-	3370	3359.28	582.51	4.02E+03	0.00	1.24E+04
	65	3401-	3428	3415.68	592.29	2.32E+04	0.00	1.31E+04
	66	3453-	3477	3466.66	601.13	1.76E+04	0.00	1.17E+04
M	67	3489-	3550	3502.06	607.27	5.17E+03	0.00	1.07E+04
m	68	3489-	3550	3517.12	609.88	1.30E+03	0.00	1.23E+04
m	69	3489-	3550	3539.26	613.72	4.33E+02	0.00	1.22E+04
M	70	3593-	3637	3609.01	625.82	1.39E+03	0.00	1.27E+04
m	71	3593-	3637	3623.85	628.39	6.24E+02	0.00	1.63E+04
	72	3655-	3685	3670.67	636.51	1.11E+04	0.00	1.32E+04
	73	3735-	3762	3747.83	649.89	7.53E+01	0.00	1.20E+04
M	74	3863-	3919	3875.49	672.03	1.56E+03	0.00	1.06E+04
m	75	3863-	3919	3905.31	677.21	6.91E+02	0.00	1.21E+04
M	76	3984-	4044	3997.85	693.25	1.11E+04	0.00	7.18E+03
m	77	3984-	4044	4022.67	697.56	6.76E+03	0.00	7.94E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:18:10 AM

Sample Title                     : NOPI-116-GAM3 attenuation
Spectrum Description             : NOPI-116-GAM3 attenuation
Sample Identification            : NP116ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  2:09:56 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1986.6 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-116-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:17:59 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	33.00	<NA>	5.64	<NA>
2	69.00	<NA>	11.88	<NA>
3	101.93	0.0692	17.59	16.15
4	122.25	0.1108	21.12	9.40
5	148.30	0.3475	26.68	3.03
6	158.90	0.0050	27.44	173.74
7	179.47	0.0053	31.04	91.89
8	184.00	<NA>	31.79	<NA>
9	191.82	0.0469	33.15	23.16
10	205.50	0.0067	35.55	69.49
11	224.19	0.1629	38.80	5.35
12	244.48	0.0032	42.37	138.22
13	248.90	0.0029	43.06	339.50
14	262.05	0.0232	45.36	39.10
15	281.26	0.0048	48.71	185.06
16	288.99	0.0091	50.03	93.73
17	316.56	0.3655	54.82	4.78
18	335.88	0.5318	58.21	4.19
19	346.90	0.0174	60.07	49.07
20	365.52	0.2502	63.31	4.83
21	407.95	0.3719	70.67	3.03
22	432.27	0.1264	74.90	7.04
23	445.45	0.1901	77.10	8.22
24	467.18	0.2793	80.94	3.06
25	499.92	0.0027	86.62	289.96
26	568.78	0.1972	98.56	6.50
27	608.07	0.0053	105.37	236.19
28	631.35	0.3254	109.41	3.69
29	653.49	0.1257	113.25	8.21
30	674.94	0.1178	117.13	7.12
31	682.51	0.2860	118.32	5.72
32	710.56	0.0015	123.15	667.78
33	759.72	0.2260	131.67	5.24
34	842.72	0.4454	146.07	3.86
35	956.07	0.4927	165.72	3.48
36	997.26	0.1572	172.87	7.71
37	1017.77	0.0126	176.43	105.80
38	1074.15	0.2724	186.18	4.63
39	1086.68	0.0497	188.37	25.76
40	1178.56	0.1876	204.31	8.27
41	1201.09	0.2050	208.22	5.97

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1315.38	0.2853	228.04	4.90
43	1396.00	0.4269	242.02	3.10
44	1430.97	0.0064	248.09	178.45
45	1678.06	0.3565	290.94	6.59
46	1703.74	0.1803	295.39	7.08
47	1855.33	0.6083	321.68	4.93
48	2031.29	0.1230	352.20	11.47
49	2141.12	0.0731	371.25	21.82
50	2195.92	0.1009	380.75	16.42
51	2315.49	0.2046	401.49	7.82
52	2469.48	0.0174	428.19	101.50
53	2564.83	0.1037	444.73	16.29
54	2627.41	0.2553	455.58	6.86
55	2674.27	0.0328	463.71	53.59
56	2760.13	0.2335	478.60	7.64
57	3218.00	0.2748	558.01	6.58
58	3263.74	0.4953	565.94	3.14
59	3359.04	0.0854	582.47	22.78
60	3415.37	0.0232	592.24	65.90
61	3466.40	0.0273	601.09	56.17
62	3501.60	0.0643	607.21	24.41
63	3517.00	0.3747	609.72	4.97
64	3540.03	0.4769	613.78	3.06
65	3608.72	0.1781	625.77	9.27
66	3670.40	0.0452	636.47	40.06
67	3783.87	0.5165	656.14	3.30
68	3874.76	0.1793	671.93	10.72
69	3905.47	0.4521	677.22	4.29
70	3996.04	0.0547	693.17	30.66
71	4028.67	0.1793	697.59	19.73

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-116-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:18:09 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	31-	35	33.00	5.64	2.35E+02	136.15	1.11E+04
	2	66-	71	69.00	11.88	-3.38E+01	146.99	1.22E+04
	3	97-	105	101.93	17.59	1.39E+04	248.74	2.24E+04
	4	118-	126	122.25	21.12	2.39E+03	210.23	1.96E+04
M	5	143-	163	154.34	26.68	2.14E+04	5079.15	2.78E+04
m	6	143-	163	158.73	27.44	3.81E+05	5134.83	2.85E+04
M	7	174-	196	179.48	31.04	8.60E+04	2120.48	3.10E+04
m	8	174-	196	183.78	31.79	1.99E+04	1760.18	2.78E+04
m	9	174-	196	191.62	33.15	9.22E+03	1428.14	3.09E+04
	10	199-	210	205.50	35.55	4.76E+04	379.44	3.85E+04
	11	218-	226	224.19	38.80	3.28E+03	329.62	4.82E+04
M	12	238-	254	244.79	42.37	4.00E+05	7923.72	5.27E+04
m	13	238-	254	248.77	43.06	7.14E+05	7948.64	3.79E+04
	14	258-	266	262.05	45.36	8.94E+03	260.28	2.75E+04
M	15	275-	294	281.35	48.71	2.34E+05	1509.87	2.28E+04
m	16	275-	294	289.00	50.03	6.46E+04	1424.45	1.81E+04
	17	311-	322	316.56	54.82	1.72E+03	211.26	1.71E+04
M	18	329-	352	336.13	58.21	1.46E+03	221.75	1.38E+04
m	19	329-	352	346.85	60.07	1.37E+04	411.09	1.38E+04
	20	359-	369	365.52	63.31	7.87E+02	196.65	1.59E+04
	21	404-	411	407.95	70.67	-1.88E+02	169.92	1.44E+04
M	22	425-	452	432.37	74.90	1.33E+03	207.89	2.60E+04
m	23	425-	452	445.04	77.10	2.75E+03	356.68	2.50E+04
	24	463-	471	467.18	80.94	2.43E+01	205.10	1.96E+04
	25	492-	506	499.92	86.62	3.23E+05	662.54	4.04E+04
	26	561-	572	568.78	98.56	1.08E+03	279.54	3.07E+04
	27	600-	615	608.07	105.37	2.09E+05	575.49	4.08E+04
	28	625-	635	631.35	109.41	4.87E+01	255.78	2.74E+04
	29	647-	658	653.49	113.25	1.61E+03	284.00	3.15E+04
M	30	666-	690	675.88	117.13	4.35E+03	378.97	5.41E+04
m	31	666-	690	682.74	118.32	6.22E+03	444.99	5.03E+04
	32	702-	718	710.56	123.15	1.72E+06	1362.03	4.19E+04
	33	753-	767	759.72	131.67	1.15E+03	245.71	2.06E+04
	34	836-	849	842.72	146.07	5.20E+02	225.82	1.83E+04
	35	948-	963	956.07	165.72	2.17E+03	245.87	1.94E+04
	36	988-	1006	997.26	172.87	1.63E+03	269.27	2.10E+04
	37	1009-	1025	1017.77	176.43	4.14E+04	313.53	1.82E+04
M	38	1066-	1094	1074.04	186.18	4.44E+02	105.42	1.43E+04
m	39	1066-	1094	1086.63	188.37	5.18E+03	374.97	1.55E+04
	40	1172-	1185	1178.56	204.31	1.30E+03	211.46	1.57E+04
	41	1194-	1207	1201.09	208.22	8.58E+02	211.87	1.60E+04
	42	1307-	1324	1315.38	228.04	7.11E+02	249.17	1.88E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1388-	1402	1396.00	242.02	9.05E+01	221.02	1.69E+04
	44	1422-	1439	1430.97	248.09	1.09E+05	414.93	1.95E+04
	45	1668-	1687	1678.06	290.94	1.84E+03	238.85	1.57E+04
	46	1695-	1714	1703.74	295.39	8.15E+02	235.13	1.55E+04
	47	1847-	1865	1855.33	321.68	1.25E+03	213.05	1.31E+04
	48	2022-	2040	2031.29	352.20	1.66E+03	207.12	1.22E+04
	49	2132-	2150	2141.12	371.25	3.84E+03	213.41	1.23E+04
	50	2183-	2204	2195.92	380.75	2.78E+03	239.28	1.45E+04
	51	2303-	2324	2315.49	401.49	1.39E+03	240.18	1.50E+04
	52	2456-	2481	2469.48	428.19	4.64E+04	338.42	1.60E+04
	53	2553-	2573	2564.83	444.73	3.89E+03	225.05	1.29E+04
	54	2617-	2637	2627.41	455.58	9.81E+02	217.09	1.27E+04
	55	2661-	2684	2674.27	463.71	1.52E+04	267.61	1.41E+04
	56	2750-	2770	2760.13	478.60	1.18E+03	211.88	1.20E+04
	57	3203-	3228	3218.00	558.01	1.09E+03	234.60	1.27E+04
	58	3252-	3274	3263.74	565.94	-5.32E+02	207.98	1.13E+04
	59	3346-	3370	3359.04	582.47	4.26E+03	224.62	1.12E+04
	60	3400-	3429	3415.37	592.24	2.31E+04	293.60	1.33E+04
	61	3451-	3479	3466.40	601.09	1.74E+04	275.31	1.26E+04
M	62	3490-	3551	3501.71	607.21	4.52E+03	402.39	9.72E+03
m	63	3490-	3551	3516.18	609.72	7.36E+02	100.08	1.18E+04
m	64	3490-	3551	3539.56	613.78	3.67E+02	84.65	1.17E+04
	65	3593-	3619	3608.72	625.77	1.02E+03	227.35	1.16E+04
	66	3657-	3684	3670.40	636.47	1.05E+04	252.69	1.18E+04
	67	3770-	3797	3783.87	656.14	-2.45E+02	228.05	1.16E+04
M	68	3862-	3917	3874.91	671.93	1.60E+03	298.48	1.03E+04
m	69	3862-	3917	3905.42	677.22	7.25E+02	146.19	1.15E+04
M	70	3981-	4044	3997.38	693.17	1.13E+04	440.45	7.42E+03
m	71	3981-	4044	4022.86	697.59	6.77E+03	416.59	8.21E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************

Report Generated On              :  1-26-96  9:19:36 AM

Sample Title                     : NOPI-117-GAM3 attenuation
Spectrum Description             : NOPI-117-GAM3 attenuation
Sample Identification            : NP117ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  2:44:12 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1992.4 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-117-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:19:26 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	47.00	0.0000	8.07	3.54
2	95.21	0.2299	16.48	4.54
3	101.89	0.0638	17.55	15.20
4	122.44	0.0513	21.15	10.05
5	148.32	0.1894	26.69	3.47
6	158.88	0.0049	27.44	179.51
7	179.48	0.0051	31.04	94.70
8	184.00	<NA>	31.79	<NA>
9	191.85	0.0437	33.15	24.32
10	205.49	0.0065	35.55	72.27
11	224.24	0.1285	38.80	7.87
12	244.46	0.0031	42.36	156.85
13	248.88	0.0029	43.06	344.76
14	262.01	0.0227	45.36	39.90
15	281.25	0.0047	48.71	189.60
16	289.00	0.0091	50.03	94.33
17	316.74	0.1969	54.85	5.50
18	335.47	0.3612	58.15	5.57
19	346.88	0.0173	60.06	49.58
20	432.41	0.2067	74.95	6.54
21	444.67	0.3490	77.01	4.76
22	499.91	0.0045	86.61	294.67
23	608.05	0.0053	105.37	240.62
24	653.69	0.1371	113.28	7.85
25	675.34	0.1675	117.21	7.85
26	682.71	0.4862	118.38	5.23
27	710.54	0.0015	123.14	674.54
28	759.32	0.3213	131.60	3.56
29	778.89	0.3443	135.00	3.89
30	842.27	0.2365	145.99	5.17
31	956.33	0.4338	165.77	5.08
32	996.89	0.2224	172.80	7.30
33	1017.73	0.0125	176.42	107.82
34	1086.53	0.0518	188.35	26.40
35	1178.33	0.2049	204.27	6.98
36	1201.25	0.1972	208.25	7.10
37	1315.63	0.3406	228.08	3.86
38	1430.96	0.0062	248.08	181.47
39	1677.43	0.1876	290.83	8.41
40	1823.20	0.4324	316.11	3.06
41	1855.67	0.5221	321.74	3.25

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	2015.38	0.3345	349.44	3.06
43	2031.73	0.3019	352.27	4.87
44	2141.00	0.0685	371.22	24.24
45	2195.83	0.1009	380.73	15.84
46	2316.00	0.1638	401.58	9.44
47	2469.50	0.0171	428.20	104.19
48	2565.19	0.0796	444.79	18.25
49	2627.67	0.1559	455.63	10.03
50	2674.30	0.0318	463.71	55.04
51	2723.46	0.2422	472.24	3.94
52	2760.00	0.1722	478.58	8.87
53	3217.85	0.2190	557.98	8.54
54	3359.24	0.0906	582.50	20.96
55	3415.40	0.0232	592.24	65.76
56	3466.48	0.0266	601.10	57.64
57	3501.70	0.0642	607.21	24.67
58	3608.43	0.2274	625.74	8.19
59	3624.84	0.4137	628.41	3.92
60	3670.32	0.0438	636.45	41.23
61	3875.16	0.1734	671.97	10.49
62	3905.29	0.3544	677.14	5.42
63	3996.12	0.0556	693.20	30.26
64	4028.15	0.2234	697.57	18.55

Errors quoted at 0.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-117-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:19:36 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	45-	49	47.00	8.07	4.26E+02	0.00	1.04E+04
M	2	91-	105	95.53	16.48	4.25E+03	0.00	2.16E+04
m	3	91-	105	101.69	17.55	1.75E+04	0.00	1.91E+04
	4	118-	126	122.44	21.15	1.80E+03	0.00	2.01E+04
M	5	143-	163	154.41	26.69	2.24E+04	0.00	2.83E+04
m	6	143-	163	158.71	27.44	4.08E+05	0.00	2.91E+04
M	7	174-	196	179.47	31.04	9.18E+04	0.00	3.17E+04
m	8	174-	196	183.77	31.79	2.17E+04	0.00	2.82E+04
m	9	174-	196	191.61	33.15	1.00E+04	0.00	3.12E+04
	10	199-	210	205.49	35.55	5.01E+04	0.00	3.93E+04
	11	218-	227	224.24	38.80	4.69E+03	0.00	5.46E+04
M	12	238-	254	244.77	42.36	4.15E+05	0.00	5.36E+04
m	13	238-	254	248.76	43.06	7.45E+05	0.00	4.50E+04
	14	258-	266	262.01	45.36	9.44E+03	0.00	2.80E+04
M	15	275-	294	281.35	48.71	2.44E+05	0.00	2.31E+04
m	16	275-	294	288.99	50.03	6.67E+04	0.00	1.80E+04
	17	310-	322	316.74	54.85	2.11E+03	0.00	1.89E+04
M	18	329-	352	335.81	58.15	1.65E+03	0.00	1.42E+04
m	19	329-	352	346.82	60.06	1.44E+04	0.00	1.42E+04
M	20	425-	450	432.65	74.95	1.04E+03	0.00	2.28E+04
m	21	425-	450	444.52	77.01	1.44E+03	0.00	2.36E+04
	22	492-	506	499.91	86.61	3.35E+05	0.00	4.09E+04
	23	600-	616	608.05	105.37	2.17E+05	0.00	4.33E+04
	24	645-	660	653.69	113.28	2.25E+03	0.00	4.22E+04
M	25	667-	690	676.32	117.21	4.61E+03	0.00	5.82E+04
m	26	667-	690	683.08	118.38	5.51E+03	0.00	5.40E+04
	27	702-	718	710.54	123.14	1.78E+06	0.00	4.24E+04
	28	754-	766	759.32	131.60	8.36E+02	0.00	1.86E+04
	29	773-	783	778.89	135.00	3.83E+02	0.00	1.51E+04
	30	837-	851	842.27	145.99	6.93E+02	0.00	2.00E+04
	31	947-	965	956.33	165.77	2.45E+03	0.00	2.32E+04
	32	987-	1005	996.89	172.80	1.23E+03	0.00	2.19E+04
	33	1010-	1025	1017.73	176.42	4.28E+04	0.00	1.79E+04
	34	1080-	1094	1086.53	188.35	5.28E+03	0.00	1.70E+04
	35	1170-	1185	1178.33	204.27	1.51E+03	0.00	1.84E+04
	36	1195-	1207	1201.25	208.25	8.04E+02	0.00	1.52E+04
	37	1305-	1323	1315.63	228.08	8.50E+02	0.00	2.04E+04
	38	1422-	1440	1430.96	248.08	1.13E+05	0.00	2.07E+04
	39	1670-	1687	1677.43	290.83	2.04E+03	0.00	1.45E+04
	40	1815-	1833	1823.20	316.11	7.67E+01	0.00	1.35E+04
	41	1844-	1866	1855.67	321.74	1.55E+03	0.00	1.62E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	2007-	2042	2031.73	352.27	2.78E+02	0.00	2.44E+04
	44	2132-	2150	2141.00	371.22	4.12E+03	0.00	1.26E+04
	45	2185-	2207	2195.83	380.73	3.20E+03	0.00	1.51E+04
	46	2307-	2325	2316.00	401.58	1.08E+03	0.00	1.33E+04
	47	2456-	2480	2469.50	428.20	4.75E+04	0.00	1.63E+04
	48	2552-	2578	2565.19	444.79	4.34E+03	0.00	1.66E+04
	49	2614-	2637	2627.67	455.63	1.63E+03	0.00	1.44E+04
	50	2661-	2686	2674.30	463.71	1.59E+04	0.00	1.56E+04
	51	2713-	2734	2723.46	472.24	-5.13E+01	0.00	1.31E+04
	52	2750-	2773	2760.00	478.58	1.77E+03	0.00	1.41E+04
	53	3203-	3228	3217.85	557.98	1.25E+03	0.00	1.28E+04
	54	3347-	3371	3359.24	582.50	4.21E+03	0.00	1.17E+04
	55	3402-	3429	3415.40	592.24	2.36E+04	0.00	1.30E+04
	56	3452-	3479	3466.48	601.10	1.76E+04	0.00	1.26E+04
	57	3488-	3512	3501.70	607.21	4.44E+03	0.00	1.12E+04
M	58	3597-	3635	3608.57	625.74	1.32E+03	0.00	1.02E+04
m	59	3597-	3635	3623.92	628.41	4.36E+02	0.00	1.29E+04
	60	3655-	3682	3670.32	636.45	1.15E+04	0.00	1.18E+04
M	61	3860-	3920	3875.11	671.97	1.70E+03	0.00	1.13E+04
m	62	3860-	3920	3904.94	677.14	6.60E+02	0.00	1.28E+04
M	63	3980-	4044	3997.53	693.20	1.16E+04	0.00	7.96E+03
m	64	3980-	4044	4022.76	697.57	7.06E+03	0.00	8.66E+03

C [illegible] or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:20:22 AM

Sample Title                     : NOPI-118-GAM3 attenuation
Spectrum Description             : NOPI-118-GAM3 attenuation
Sample Identification            : NP118ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  3:18:47 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1992.2 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-118-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:20:11 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	47.00	<NA>	8.07	<NA>
2	95.38	0.1342	16.47	4.33
3	101.92	0.0631	17.55	14.28
4	122.48	0.0491	21.16	9.76
5	148.02	0.2412	26.70	4.42
6	158.89	0.0049	27.44	179.06
7	179.48	0.0051	31.04	92.49
8	184.00	<NA>	31.79	<NA>
9	191.87	0.0437	33.15	24.68
10	205.50	0.0065	35.56	71.84
11	224.34	0.1482	38.92	7.05
12	231.63	0.1575	40.18	3.80
13	244.47	0.0032	42.36	138.30
14	248.90	0.0028	43.06	343.95
15	262.02	0.0227	45.36	40.42
16	281.26	0.0048	48.71	187.64
17	289.01	0.0091	50.04	94.09
18	316.94	0.2212	54.88	6.17
19	336.00	0.2258	58.24	6.03
20	346.92	0.0170	60.07	50.14
21	443.92	0.3434	76.90	3.37
22	499.93	0.0027	86.62	293.94
23	608.07	0.0053	105.37	239.03
24	631.16	0.4688	109.38	3.15
25	653.40	0.1162	113.23	9.72
26	675.23	0.1743	117.14	7.00
27	682.83	0.3092	118.36	4.03
28	710.56	0.0015	123.15	677.07
29	759.29	0.2306	131.60	4.75
30	901.24	0.3143	156.22	3.68
31	957.15	0.3380	165.91	4.25
32	997.48	0.3428	172.91	5.03
33	1017.77	0.0125	176.43	106.00
34	1086.64	0.0510	188.37	25.84
35	1178.33	0.1270	204.27	10.58
36	1201.06	0.2024	208.21	6.89
37	1315.65	0.4185	228.09	4.00
38	1339.24	0.4347	232.18	3.37
39	1430.97	0.0063	248.09	180.07
40	1501.04	0.2489	260.24	3.16
41	1677.79	0.2271	290.89	7.60

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1854.20	0.6817	321.49	3.22
43	2031.12	0.4181	352.17	3.86
44	2141.00	0.0736	371.22	22.33
45	2195.81	0.0958	380.73	17.12
46	2316.28	0.2100	401.62	8.91
47	2469.45	0.0171	428.19	104.82
48	2565.19	0.0764	444.79	19.47
49	2627.77	0.1993	455.59	9.15
50	2648.95	0.3044	459.33	3.91
51	2674.35	0.0314	463.72	55.34
52	2760.16	0.1579	478.60	9.37
53	2988.49	0.4342	518.20	3.91
54	3218.44	0.1956	558.08	8.41
55	3359.05	0.0876	582.47	20.85
56	3415.39	0.0228	592.24	67.41
57	3466.31	0.0324	601.07	56.70
58	3501.66	0.0796	607.20	23.63
59	3584.64	0.6543	621.61	3.00
60	3608.81	0.2118	625.75	9.03
61	3670.29	0.0447	636.45	40.55
62	3749.25	0.3229	650.14	5.63
63	3875.12	0.1790	672.02	10.70
64	3904.28	0.3849	677.08	4.88
65	3996.17	0.0565	693.16	30.80
66	4028.88	0.2146	697.52	20.40

Errors quoted at 0.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-118-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:20:22 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	45-	49	47.00	8.07	6.41E+02	0.00	1.02E+04
M	2	91-	105	95.46	16.47	3.77E+03	0.00	2.14E+04
m	3	91-	105	101.68	17.55	1.70E+04	0.00	1.89E+04
	4	118-	126	122.48	21.16	2.12E+03	0.00	1.99E+04
M	5	143-	163	154.46	26.70	2.20E+04	0.00	2.84E+04
m	6	143-	163	158.73	27.44	4.02E+05	0.00	2.93E+04
M	7	174-	196	179.48	31.04	9.09E+04	0.00	3.17E+04
m	8	174-	196	183.80	31.79	2.12E+04	0.00	2.82E+04
m	9	174-	196	191.65	33.15	1.02E+04	0.00	3.11E+04
	10	199-	210	205.50	35.56	5.01E+04	0.00	3.92E+04
M	11	218-	254	224.90	38.92	1.06E+04	0.00	3.79E+04
m	12	218-	254	232.16	40.18	1.29E+04	0.00	3.75E+04
m	13	218-	254	244.75	42.36	4.37E+05	0.00	3.82E+04
m	14	218-	254	248.76	43.06	7.72E+05	0.00	3.41E+04
	15	258-	267	262.02	45.36	1.04E+04	0.00	3.02E+04
M	16	275-	295	281.36	48.71	2.43E+05	0.00	2.32E+04
m	17	275-	295	289.01	50.04	6.70E+04	0.00	1.84E+04
	18	311-	322	316.94	54.88	1.71E+03	0.00	1.77E+04
M	19	330-	352	336.31	58.24	1.57E+03	0.00	1.44E+04
m	20	330-	352	346.87	60.07	1.33E+04	0.00	1.30E+04
	21	438-	449	443.92	76.90	1.22E+03	0.00	2.36E+04
	22	492-	506	499.93	86.62	3.32E+05	0.00	4.15E+04
	23	600-	616	608.07	105.37	2.15E+05	0.00	4.39E+04
	24	624-	635	631.16	109.38	3.24E+02	0.00	3.05E+04
	25	645-	659	653.40	113.23	2.39E+03	0.00	3.97E+04
M	26	667-	690	675.92	117.14	4.49E+03	0.00	5.56E+04
m	27	667-	690	682.94	118.36	5.48E+03	0.00	5.17E+04
	28	702-	718	710.56	123.15	1.78E+06	0.00	4.28E+04
	29	754-	767	759.29	131.60	9.82E+02	0.00	1.97E+04
	30	896-	906	901.24	156.22	1.25E+02	0.00	1.36E+04
	31	948-	966	957.15	165.91	2.78E+03	0.00	2.29E+04
	32	988-	1004	997.48	172.91	1.70E+03	0.00	1.95E+04
	33	1008-	1026	1017.77	176.43	4.26E+04	0.00	2.10E+04
	34	1079-	1094	1086.64	188.37	5.34E+03	0.00	1.82E+04
	35	1170-	1184	1178.33	204.27	1.60E+03	0.00	1.73E+04
	36	1193-	1207	1201.06	208.21	9.74E+02	0.00	1.76E+04
	37	1306-	1322	1315.65	228.09	5.72E+02	0.00	1.84E+04
	38	1330-	1348	1339.24	232.18	4.19E+02	0.00	1.99E+04
	39	1422-	1440	1430.97	248.09	1.12E+05	0.00	2.09E+04
	40	1492-	1510	1501.04	260.24	-5.29E+01	0.00	1.83E+04
	41	1667-	1685	1677.79	290.89	2.49E+03	0.00	1.53E+04
	42	1845-	1863	1854.20	321.49	1.43E+03	0.00	1.35E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	2022-	2043	2031.12	352.17	5.70E+02	0.00	1.47E+04
	44	2128-	2149	2141.00	371.22	4.21E+03	0.00	1.46E+04
	45	2184-	2207	2195.81	380.73	3.22E+03	0.00	1.58E+04
	46	2307-	2325	2316.28	401.62	1.46E+03	0.00	1.32E+04
	47	2458-	2480	2469.45	428.19	4.70E+04	0.00	1.50E+04
	48	2552-	2576	2565.19	444.79	4.00E+03	0.00	1.55E+04
M	49	2614-	2684	2627.46	455.59	1.46E+03	0.00	1.35E+04
m	50	2614-	2684	2649.04	459.33	4.31E+02	0.00	1.41E+04
m	51	2614-	2684	2674.32	463.72	1.60E+04	0.00	1.40E+04
	52	2750-	2770	2760.16	478.60	1.27E+03	0.00	1.25E+04
	53	2978-	3001	2988.49	518.20	3.61E+01	0.00	1.53E+04
	54	3204-	3229	3218.44	558.08	1.18E+03	0.00	1.31E+04
	55	3348-	3370	3359.05	582.47	4.06E+03	0.00	1.08E+04
	56	3400-	3428	3415.39	592.24	2.35E+04	0.00	1.33E+04
	57	3452-	3480	3466.31	601.07	1.80E+04	0.00	1.29E+04
	58	3487-	3512	3501.66	607.20	4.71E+03	0.00	1.16E+04
M	59	3573-	3619	3584.76	621.61	8.87E+01	0.00	8.81E+03
m	60	3573-	3619	3608.62	625.75	6.01E+02	0.00	9.37E+03
	61	3655-	3684	3670.29	636.45	1.08E+04	0.00	1.30E+04
	62	3737-	3762	3749.25	650.14	1.42E+02	0.00	1.11E+04
M	63	3860-	3916	3875.41	672.02	2.09E+03	0.00	1.22E+04
m	64	3860-	3916	3904.57	677.08	9.20E+02	0.00	1.46E+04
M	65	3983-	4044	3997.33	693.16	1.10E+04	0.00	7.41E+03
m	66	3983-	4044	4022.46	697.52	6.89E+03	0.00	8.18E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***********************************************************************

Report Generated On              :  1-26-96  9:21:07 AM

Sample Title                     : NOPI-119-GAM3 attenuation
Spectrum Description             : NOPI-119-GAM3 attenuation
Sample Identification            : NP119ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  3:53:58 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1994.7 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-119-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:20:56 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	47.05	0.3604	8.07	3.26
2	95.53	0.1363	16.50	3.57
3	101.98	0.0591	17.56	17.67
4	122.49	0.0497	21.16	9.43
5	139.93	0.3602	25.86	3.04
6	148.61	0.1286	26.69	4.50
7	158.90	0.0046	27.44	191.51
8	179.49	0.0049	31.04	95.96
9	184.00	0.0000	31.77	23.91
10	188.00	<NA>	32.44	<NA>
11	191.86	0.0423	33.17	23.83
12	205.51	0.0063	35.56	74.49
13	224.44	0.1939	38.84	6.48
14	244.48	0.0031	42.37	143.91
15	248.91	0.0028	43.06	351.16
16	262.03	0.0227	45.36	40.52
17	281.27	0.0047	48.71	190.98
18	289.01	0.0089	50.04	97.19
19	316.65	0.1965	54.83	5.52
20	335.92	0.3022	58.24	4.80
21	346.89	0.0171	60.07	49.73
22	442.96	0.3364	76.74	4.27
23	499.93	0.0027	86.62	296.03
24	560.99	0.3064	97.21	3.31
25	608.09	0.0052	105.37	241.18
26	647.32	0.3107	112.24	3.11
27	653.48	0.1339	113.22	8.43
28	675.26	0.2108	117.22	6.62
29	683.14	0.4737	118.46	3.98
30	710.56	0.0015	123.15	682.63
31	759.49	0.2787	131.63	3.47
32	843.25	0.6152	146.16	3.13
33	868.06	0.3594	150.46	3.72
34	956.60	0.4004	165.82	5.83
35	996.60	0.2134	172.75	6.63
36	1017.75	0.0124	176.42	107.21
37	1086.56	0.0532	188.35	25.00
38	1178.41	0.1826	204.28	8.62
39	1200.88	0.2211	208.18	5.93
40	1275.27	0.2765	221.08	3.17
41	1316.59	0.3668	228.25	4.68

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1338.74	0.3608	232.09	3.99
43	1430.98	0.0062	248.09	182.09
44	1457.66	0.3080	252.71	4.63
45	1677.96	0.2434	290.92	8.12
46	1854.82	0.5131	321.59	5.19
47	2141.03	0.0667	371.23	25.01
48	2195.79	0.0951	380.73	16.81
49	2316.29	0.1689	401.61	9.72
50	2329.94	0.3646	403.90	3.25
51	2469.47	0.0171	428.19	104.69
52	2565.24	0.0826	444.80	19.23
53	2627.39	0.1773	455.55	9.04
54	2648.83	0.3746	459.27	3.38
55	2674.30	0.0315	463.71	55.53
56	2700.05	0.4188	468.16	4.28
57	2760.37	0.1820	478.64	10.02
58	3218.25	0.2293	558.05	8.24
59	3359.11	0.0853	582.48	22.26
60	3415.42	0.0230	592.25	65.94
61	3466.35	0.0265	601.08	58.49
62	3501.66	0.0793	607.20	23.35
63	3538.42	0.5511	613.58	3.16
64	3608.29	0.2399	625.68	7.61
65	3623.74	0.4006	628.21	3.88
66	3670.34	0.0449	636.45	40.05
67	3749.83	0.6873	650.24	3.18
68	3874.90	0.2066	672.01	9.04
69	3905.62	0.3041	677.24	5.41
70	3996.22	0.0543	693.19	32.17
71	4028.66	0.1719	697.60	20.38

Errors quoted at 0.000 sigma

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*  ***********************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T          *****
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Detector Name: DET01
Sample Title: NOPI-119-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:21:06 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	45-	49	47.05	8.07	3.21E+02	131.45	1.03E+04
M	2	91-	105	95.61	16.50	4.27E+03	426.90	2.14E+04
m	3	91-	105	101.74	17.56	1.93E+04	505.82	1.90E+04
	4	118-	126	122.49	21.16	2.55E+03	213.97	2.03E+04
M	5	134-	163	149.63	25.86	1.44E+04	3007.37	2.26E+04
m	6	134-	163	154.40	26.69	2.61E+04	4150.25	2.40E+04
m	7	134-	163	158.74	27.44	4.45E+05	5082.70	2.70E+04
M	8	174-	196	179.50	31.04	9.48E+04	926.54	3.23E+04
m	9	174-	196	183.66	31.77	2.13E+04	628.17	2.88E+04
m	10	174-	196	187.56	32.44	5.78E+03	470.99	3.20E+04
m	11	174-	196	191.76	33.17	9.68E+03	496.73	2.87E+04
	12	199-	210	205.51	35.56	5.22E+04	390.58	4.01E+04
	13	218-	227	224.44	38.84	4.96E+03	364.19	5.53E+04
M	14	238-	254	244.80	42.37	4.29E+05	8366.99	5.50E+04
m	15	238-	254	248.79	43.06	7.67E+05	8392.29	3.95E+04
	16	258-	266	262.03	45.36	9.85E+03	264.25	2.81E+04
M	17	275-	295	281.37	48.71	2.50E+05	1699.09	2.35E+04
m	18	275-	295	289.02	50.04	6.83E+04	1617.22	1.86E+04
	19	310-	322	316.65	54.83	2.18E+03	231.25	1.95E+04
M	20	329-	352	336.30	58.24	1.77E+03	229.36	1.44E+04
m	21	329-	352	346.85	60.07	1.43E+04	415.76	1.42E+04
	22	439-	449	442.96	76.74	5.21E+02	229.49	2.19E+04
	23	492-	506	499.93	86.62	3.37E+05	674.30	4.10E+04
	24	556-	564	560.99	97.21	2.26E+02	224.72	2.35E+04
	25	600-	616	608.09	105.37	2.17E+05	595.54	4.42E+04
M	26	639-	657	647.67	112.24	7.32E+02	146.66	2.59E+04
m	27	639-	657	653.32	113.22	1.65E+03	294.66	2.39E+04
M	28	667-	691	676.41	117.22	5.29E+03	408.64	5.95E+04
m	29	667-	691	683.52	118.46	6.93E+03	456.29	5.52E+04
	30	702-	718	710.56	123.15	1.79E+06	1387.18	4.27E+04
	31	752-	765	759.49	131.63	5.44E+02	237.83	2.03E+04
	32	838-	850	843.25	146.16	5.70E+02	216.77	1.76E+04
	33	863-	876	868.06	150.46	2.50E+02	226.33	1.85E+04
	34	947-	963	956.60	165.82	3.01E+03	261.03	2.08E+04
	35	987-	1005	996.60	172.75	1.48E+03	274.05	2.18E+04
	36	1009-	1026	1017.75	176.42	4.29E+04	327.97	1.99E+04
	37	1077-	1093	1086.56	188.35	5.51E+03	255.21	1.91E+04
	38	1172-	1185	1178.41	204.28	1.65E+03	214.66	1.61E+04
	39	1194-	1206	1200.88	208.18	6.10E+02	203.03	1.54E+04
	40	1268-	1281	1275.27	221.08	2.14E+01	206.52	1.54E+04
	41	1306-	1323	1316.59	228.25	1.03E+03	251.49	1.91E+04
	42	1328-	1348	1338.74	232.09	8.02E+02	284.28	2.20E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1422-	1440	1430.98	248.09	1.12E+05	428.11	2.10E+04
	44	1450-	1466	1457.66	252.71	5.03E+02	228.82	1.66E+04
	45	1670-	1685	1677.96	290.92	2.26E+03	202.71	1.29E+04
	46	1843-	1865	1854.82	321.59	1.79E+03	254.20	1.62E+04
	47	2132-	2151	2141.03	371.23	4.03E+03	227.32	1.36E+04
	48	2186-	2204	2195.79	380.73	2.62E+03	214.97	1.29E+04
M	49	2305-	2338	2316.20	401.61	1.49E+03	300.91	1.31E+04
m	50	2305-	2338	2329.42	403.90	2.96E+02	83.80	1.31E+04
	51	2457-	2482	2469.47	428.19	4.69E+04	344.42	1.69E+04
	52	2552-	2577	2565.24	444.80	4.17E+03	268.48	1.60E+04
M	53	2614-	2711	2627.20	455.55	1.70E+03	119.34	1.38E+04
m	54	2614-	2711	2648.65	459.27	4.76E+02	86.07	1.32E+04
m	55	2614-	2711	2674.30	463.71	1.64E+04	784.69	1.38E+04
m	56	2614-	2711	2699.93	468.16	3.80E+02	87.38	1.38E+04
	57	2749-	2772	2760.37	478.64	1.47E+03	240.35	1.40E+04
	58	3207-	3229	3218.25	558.05	1.32E+03	214.16	1.15E+04
	59	3345-	3371	3359.11	582.48	4.48E+03	243.30	1.25E+04
	60	3400-	3428	3415.42	592.25	2.34E+04	291.29	1.33E+04
	61	3451-	3478	3466.35	601.08	1.78E+04	271.41	1.24E+04
	62	3486-	3512	3501.66	607.20	4.87E+03	236.57	1.17E+04
	63	3527-	3552	3538.42	613.58	3.43E+02	217.97	1.11E+04
M	64	3596-	3634	3608.22	625.68	1.28E+03	248.11	1.07E+04
m	65	3596-	3634	3622.81	628.21	4.19E+02	104.50	1.33E+04
	66	3655-	3683	3670.34	636.45	1.06E+04	263.00	1.27E+04
	67	3736-	3763	3749.83	650.24	6.12E+02	230.00	1.16E+04
M	68	3862-	3919	3875.37	672.01	1.94E+03	321.19	1.14E+04
m	69	3862-	3919	3905.48	677.24	8.51E+02	161.55	1.52E+04
M	70	3984-	4044	3997.45	693.19	1.13E+04	584.81	7.19E+03
m	71	3984-	4044	4022.92	697.60	6.63E+03	567.31	8.08E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On              :  1-26-96  9:22:09 AM

Sample Title                     : NOPI-120-GAM3 attenuation
Spectrum Description             : NOPI-120-GAM3 attenuation
Sample Identification            : NP120ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  4:28:16 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1989.6 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
** PEAK LOCATE REPORT *****
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Detector Name: DET01
Sample Title: NOPI-120-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:21:58 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.49	0.3228	16.49	3.46
2	101.95	0.0699	17.55	13.93
3	122.47	0.0543	21.15	9.04
4	158.91	0.0052	27.47	168.70
5	179.49	0.0053	31.04	88.94
6	184.00	0.0000	31.77	22.27
7	188.00	0.0000	32.45	3.73
8	191.91	0.0455	33.17	22.69
9	205.51	0.0066	35.56	70.47
10	224.06	0.1248	38.77	7.74
11	244.48	0.0032	42.37	139.23
12	248.92	0.0029	43.06	338.68
13	262.03	0.0235	45.36	38.91
14	281.28	0.0049	48.71	185.59
15	289.00	0.0093	50.04	92.31
16	316.52	0.2444	54.81	3.17
17	335.92	0.5474	58.21	3.71
18	346.92	0.0174	60.07	48.12
19	432.56	0.4655	74.92	4.28
20	443.83	0.4454	76.91	3.71
21	499.93	0.0027	86.62	292.64
22	608.09	0.0052	105.38	239.22
23	631.25	0.2331	109.39	3.88
24	653.43	0.1231	113.24	9.03
25	675.13	0.0970	117.16	8.54
26	683.35	0.2269	118.44	5.77
27	710.57	0.0015	123.15	679.08
28	759.30	0.2919	131.60	5.06
29	842.80	0.5177	146.08	3.09
30	901.69	0.3241	156.29	3.29
31	957.20	0.2761	165.92	5.96
32	997.20	0.1951	172.86	7.15
33	1017.74	0.0125	176.41	107.31
34	1031.47	0.3460	178.77	3.22
35	1086.62	0.0492	188.37	27.75
36	1178.29	0.1308	204.26	9.54
37	1201.11	0.2286	208.22	5.84
38	1417.94	0.3003	245.80	4.26
39	1430.97	0.0063	248.08	181.27
40	1456.65	0.4260	252.54	3.56
41	1677.63	0.1398	290.86	9.07

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1854.88	0.6313	321.60	3.96
43	2117.09	0.3950	367.09	3.17
44	2140.98	0.0705	371.22	23.68
45	2195.80	0.1019	380.73	16.12
46	2316.34	0.1726	401.63	9.75
47	2469.50	0.0170	428.20	105.50
48	2543.08	0.4229	440.87	3.03
49	2565.20	0.0938	444.77	18.69
50	2627.45	0.2560	455.59	7.08
51	2674.25	0.0316	463.71	55.53
52	2699.95	0.4043	468.26	4.40
53	2760.15	0.1461	478.60	10.84
54	3092.93	0.5189	536.32	3.00
55	3218.15	0.1845	558.03	9.22
56	3359.08	0.0870	582.47	21.74
57	3415.40	0.0229	592.24	66.61
58	3466.37	0.0324	601.08	56.45
59	3501.74	0.0755	607.21	24.92
60	3540.32	0.5380	613.91	3.03
61	3608.46	0.2119	625.74	8.71
62	3624.99	0.4889	628.56	3.84
63	3670.32	0.0450	636.45	40.68
64	3875.22	0.1681	672.03	10.94
65	3904.99	0.3559	677.17	4.99
66	3996.24	0.0552	693.17	30.94
67	4028.47	0.2075	697.56	18.56

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-120-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:22:08 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.59	16.49	3.62E+03	0.00	2.34E+04
m	2	91-	105	101.71	17.55	1.57E+04	0.00	1.86E+04
	3	118-	126	122.47	21.15	2.15E+03	0.00	1.95E+04
	4	153-	163	158.91	27.47	3.48E+05	0.00	4.50E+04
M	5	174-	196	179.50	31.04	7.98E+04	0.00	3.18E+04
m	6	174-	196	183.68	31.77	1.85E+04	0.00	2.89E+04
m	7	174-	196	187.58	32.45	4.89E+03	0.00	2.90E+04
m	8	174-	196	191.75	33.17	8.28E+03	0.00	2.91E+04
	9	199-	210	205.51	35.56	4.84E+04	0.00	3.94E+04
	10	218-	227	224.06	38.77	5.14E+03	0.00	5.40E+04
M	11	238-	254	244.81	42.37	3.98E+05	0.00	5.30E+04
m	12	238-	254	248.79	43.06	7.13E+05	0.00	3.75E+04
	13	258-	266	262.03	45.36	9.78E+03	0.00	2.70E+04
M	14	275-	295	281.37	48.71	2.37E+05	0.00	2.31E+04
m	15	275-	295	289.02	50.04	6.49E+04	0.00	1.83E+04
	16	310-	322	316.52	54.81	1.78E+03	0.00	1.86E+04
M	17	329-	352	336.11	58.21	1.36E+03	0.00	1.42E+04
m	18	329-	352	346.86	60.07	1.36E+04	0.00	1.41E+04
M	19	427-	450	432.48	74.92	8.87E+02	0.00	2.25E+04
m	20	427-	450	443.93	76.91	1.08E+03	0.00	2.52E+04
	21	492-	506	499.93	86.62	3.31E+05	0.00	4.10E+04
	22	600-	616	608.09	105.38	2.14E+05	0.00	4.37E+04
	23	624-	635	631.25	109.39	4.95E+02	0.00	3.04E+04
	24	645-	658	653.43	113.24	2.42E+03	0.00	3.71E+04
M	25	667-	691	676.07	117.16	4.55E+03	0.00	5.54E+04
m	26	667-	691	683.43	118.44	6.11E+03	0.00	5.44E+04
	27	702-	718	710.57	123.15	1.77E+06	0.00	4.33E+04
	28	754-	767	759.30	131.60	7.89E+02	0.00	1.97E+04
	29	836-	849	842.80	146.08	3.66E+02	0.00	1.88E+04
	30	896-	906	901.69	156.29	-5.63E-01	0.00	1.39E+04
	31	948-	966	957.20	165.92	3.09E+03	0.00	2.24E+04
	32	991-	1006	997.20	172.86	8.20E+02	0.00	1.85E+04
M	33	1008-	1037	1017.70	176.41	4.32E+04	0.00	1.54E+04
m	34	1008-	1037	1031.32	178.77	1.97E+02	0.00	1.43E+04
	35	1080-	1093	1086.62	188.37	5.38E+03	0.00	1.58E+04
	36	1172-	1184	1178.29	204.26	1.28E+03	0.00	1.49E+04
	37	1191-	1211	1201.11	208.22	1.42E+03	0.00	2.39E+04
M	38	1407-	1440	1417.80	245.80	3.41E+02	0.00	1.74E+04
m	39	1407-	1440	1430.96	248.08	1.12E+05	0.00	1.62E+04
	40	1449-	1463	1456.65	252.54	3.38E+02	0.00	1.49E+04
	41	1670-	1687	1677.63	290.86	1.93E+03	0.00	1.45E+04
	42	1845-	1865	1854.88	321.60	1.92E+03	0.00	1.44E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	43	2108-	2150	2117.19	367.09	6.66E+01	0.00	1.20E+04
m	44	2108-	2150	2140.96	371.22	4.06E+03	0.00	1.20E+04
	45	2186-	2206	2195.80	380.73	2.69E+03	0.00	1.43E+04
	46	2307-	2325	2316.34	401.63	1.60E+03	0.00	1.32E+04
	47	2458-	2481	2469.50	428.20	4.77E+04	0.00	1.55E+04
M	48	2534-	2574	2542.58	440.87	2.18E+02	0.00	1.20E+04
m	49	2534-	2574	2565.05	444.77	4.12E+03	0.00	1.41E+04
	50	2614-	2640	2627.45	455.59	1.22E+03	0.00	1.67E+04
M	51	2661-	2711	2674.30	463.71	1.58E+04	0.00	1.39E+04
m	52	2661-	2711	2700.50	468.26	5.24E+02	0.00	1.35E+04
	53	2748-	2770	2760.15	478.60	1.66E+03	0.00	1.34E+04
	54	3082-	3104	3092.93	536.32	-2.21E+02	0.00	1.35E+04
	55	3207-	3229	3218.15	558.03	1.35E+03	0.00	1.12E+04
	56	3348-	3370	3359.08	582.47	3.88E+03	0.00	1.09E+04
	57	3400-	3429	3415.40	592.24	2.40E+04	0.00	1.33E+04
	58	3451-	3481	3466.37	601.08	1.86E+04	0.00	1.32E+04
	59	3486-	3513	3501.74	607.21	4.92E+03	0.00	1.23E+04
	60	3525-	3551	3540.32	613.91	5.32E+02	0.00	1.12E+04
M	61	3594-	3638	3608.55	625.74	1.37E+03	0.00	1.10E+04
m	62	3594-	3638	3624.81	628.56	6.00E+02	0.00	1.21E+04
	63	3655-	3685	3670.32	636.45	1.13E+04	0.00	1.31E+04
M	64	3862-	3918	3875.48	672.03	1.51E+03	0.00	1.10E+04
m	65	3862-	3918	3905.08	677.17	5.81E+02	0.00	1.08E+04
M	66	3983-	4044	3997.39	693.17	1.07E+04	0.00	7.50E+03
m	67	3983-	4044	4022.69	697.56	6.78E+03	0.00	8.38E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:22:55 AM

Sample Title                     : NOPI-121-GAM3 attenuation
Spectrum Description             : NOPI-121-GAM3 attenuation
Sample Identification            : NP121ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-24-96  5:02:28 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1995.3 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-121-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:22:45 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.71	0.3399	16.51	5.13
2	101.91	0.0594	17.55	16.69
3	122.35	0.1004	21.13	9.20
4	140.06	0.3456	25.88	3.75
5	148.49	0.1226	26.70	3.84
6	158.87	0.0046	27.44	189.55
7	179.47	0.0049	31.04	100.04
8	184.00	0.0000	31.78	23.94
9	191.78	0.0445	33.14	24.36
10	205.49	0.0062	35.55	74.88
11	224.41	0.2086	38.83	6.09
12	244.46	0.0031	42.36	161.75
13	248.87	0.0028	43.06	350.95
14	262.03	0.0224	45.36	41.17
15	281.24	0.0046	48.71	193.43
16	288.98	0.0089	50.03	96.84
17	316.62	0.1728	54.83	5.94
18	336.32	0.3354	58.22	4.87
19	346.85	0.0172	60.06	49.63
20	443.03	0.2310	76.75	3.66
21	499.90	0.0045	86.61	294.97
22	608.04	0.0053	105.37	242.92
23	631.06	0.1585	109.36	5.04
24	653.33	0.1466	113.22	7.61
25	674.83	0.1102	117.12	7.50
26	682.92	0.2438	118.36	4.99
27	710.53	0.0015	123.14	676.57
28	902.85	0.2887	156.49	3.05
29	956.49	0.2713	165.80	5.75
30	988.81	0.3492	171.46	3.87
31	997.41	0.2229	172.84	6.24
32	1017.71	0.0125	176.41	107.98
33	1086.50	0.0507	188.34	27.11
34	1178.06	0.1400	204.22	8.87
35	1200.74	0.1759	208.16	7.71
36	1315.75	0.3270	228.10	5.18
37	1417.87	0.3642	245.90	3.47
38	1430.94	0.0062	248.08	181.92
39	1622.39	0.4571	281.28	3.08
40	1677.72	0.2055	290.88	8.23
41	1854.56	0.5384	321.55	5.05

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	2141.01	0.0680	371.23	24.15
43	2196.03	0.0939	380.77	17.17
44	2315.60	0.1397	401.50	9.35
45	2469.37	0.0171	428.17	105.27
46	2521.92	0.4877	437.29	3.03
47	2564.99	0.0777	444.76	18.24
48	2627.24	0.1741	455.55	10.80
49	2674.15	0.0323	463.69	54.50
50	2759.73	0.2043	478.53	8.51
51	3218.10	0.2244	558.02	8.30
52	3316.46	0.5055	575.08	3.03
53	3358.99	0.0848	582.46	22.33
54	3415.38	0.0226	592.24	68.58
55	3466.28	0.0320	601.07	58.07
56	3501.54	0.0607	607.18	25.63
57	3539.30	0.4460	613.73	3.22
58	3608.86	0.1903	625.80	9.03
59	3624.57	0.3531	628.43	4.37
60	3670.34	0.0458	636.45	38.82
61	3749.53	0.4300	650.19	3.82
62	3875.51	0.1851	672.06	9.89
63	3903.83	0.4641	677.07	4.03
64	3996.16	0.0567	693.16	29.50
65	4028.52	0.2740	697.49	19.34

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-121-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:22:54 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.67	16.51	4.20E+03	0.00	2.15E+04
m	2	91-	105	101.68	17.55	1.90E+04	0.00	1.93E+04
	3	118-	126	122.35	21.13	2.34E+03	0.00	2.01E+04
M	4	135-	163	149.71	25.88	1.45E+04	0.00	2.34E+04
m	5	135-	163	154.44	26.70	2.63E+04	0.00	2.47E+04
m	6	135-	163	158.70	27.44	4.42E+05	0.00	2.74E+04
M	7	174-	196	179.46	31.04	9.83E+04	0.00	3.26E+04
m	8	174-	196	183.76	31.78	2.21E+04	0.00	2.90E+04
m	9	174-	196	191.59	33.14	1.04E+04	0.00	3.20E+04
	10	199-	210	205.49	35.55	5.24E+04	0.00	4.04E+04
	11	218-	227	224.41	38.83	5.08E+03	0.00	5.56E+04
M	12	238-	254	244.77	42.36	4.29E+05	0.00	5.50E+04
m	13	238-	254	248.75	43.06	7.67E+05	0.00	4.58E+04
	14	258-	266	262.03	45.36	1.00E+04	0.00	2.79E+04
M	15	275-	294	281.33	48.71	2.49E+05	0.00	2.40E+04
m	16	275-	294	288.99	50.03	6.81E+04	0.00	1.89E+04
	17	310-	322	316.62	54.83	2.43E+03	0.00	1.91E+04
M	18	330-	352	336.20	58.22	1.69E+03	0.00	1.45E+04
m	19	330-	352	346.79	60.06	1.44E+04	0.00	1.44E+04
	20	439-	450	443.03	76.75	2.86E+02	0.00	2.41E+04
	21	492-	506	499.90	86.61	3.36E+05	0.00	4.14E+04
	22	600-	616	608.04	105.37	2.17E+05	0.00	4.42E+04
	23	625-	635	631.06	109.36	4.26E+02	0.00	2.79E+04
	24	645-	660	653.33	113.22	2.58E+03	0.00	4.21E+04
M	25	666-	690	675.79	117.12	4.42E+03	0.00	5.77E+04
m	26	666-	690	682.95	118.36	6.10E+03	0.00	5.39E+04
	27	702-	718	710.53	123.14	1.80E+06	0.00	4.33E+04
	28	897-	908	902.85	156.49	1.38E+02	0.00	1.50E+04
	29	947-	965	956.49	165.80	3.00E+03	0.00	2.30E+04
M	30	980-	1003	989.15	171.46	5.56E+02	0.00	1.64E+04
m	31	980-	1003	997.12	172.84	1.18E+03	0.00	1.50E+04
	32	1009-	1025	1017.71	176.41	4.31E+04	0.00	1.92E+04
	33	1077-	1093	1086.50	188.34	5.68E+03	0.00	1.91E+04
	34	1170-	1188	1178.06	204.22	1.74E+03	0.00	2.17E+04
	35	1194-	1206	1200.74	208.16	8.96E+02	0.00	1.52E+04
	36	1305-	1322	1315.75	228.10	7.64E+02	0.00	1.96E+04
M	37	1409-	1440	1418.37	245.90	4.46E+02	0.00	1.86E+04
m	38	1409-	1440	1430.91	248.08	1.14E+05	0.00	1.60E+04
	39	1615-	1632	1622.39	281.28	1.28E+02	0.00	1.51E+04
	40	1668-	1685	1677.72	290.88	2.16E+03	0.00	1.46E+04
	41	1845-	1864	1854.56	321.55	1.58E+03	0.00	1.39E+04
	42	2131-	2150	2141.01	371.23	4.09E+03	0.00	1.36E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	2184-	2206	2196.03	380.77	3.20E+03	0.00	1.52E+04
	44	2303-	2326	2315.60	401.50	1.28E+03	0.00	1.69E+04
	45	2458-	2482	2469.37	428.17	4.78E+04	0.00	1.60E+04
	46	2508-	2530	2521.92	437.29	2.22E+02	0.00	1.42E+04
	47	2554-	2575	2564.99	444.76	4.10E+03	0.00	1.39E+04
	48	2614-	2638	2627.24	455.55	1.86E+03	0.00	1.54E+04
	49	2661-	2684	2674.15	463.69	1.59E+04	0.00	1.45E+04
	50	2746-	2770	2759.73	478.53	1.41E+03	0.00	1.49E+04
	51	3204-	3229	3218.10	558.02	1.26E+03	0.00	1.29E+04
	52	3302-	3327	3316.46	575.08	3.04E+02	0.00	1.20E+04
	53	3345-	3371	3358.99	582.46	4.43E+03	0.00	1.25E+04
	54	3400-	3430	3415.38	592.24	2.38E+04	0.00	1.39E+04
	55	3454-	3477	3466.28	601.07	1.74E+04	0.00	1.12E+04
	56	3490-	3512	3501.54	607.18	4.81E+03	0.00	1.03E+04
	57	3525-	3551	3539.30	613.73	3.86E+02	0.00	1.16E+04
M	58	3597-	3635	3608.89	625.80	1.43E+03	0.00	1.00E+04
m	59	3597-	3635	3624.07	628.43	5.80E+02	0.00	1.27E+04
	60	3656-	3685	3670.34	636.45	1.08E+04	0.00	1.31E+04
	61	3737-	3761	3749.53	650.19	1.41E+02	0.00	1.06E+04
M	62	3863-	3917	3875.63	672.06	1.74E+03	0.00	1.07E+04
m	63	3863-	3917	3904.51	677.07	7.40E+02	0.00	1.32E+04
M	64	3982-	4044	3997.28	693.16	1.14E+04	0.00	7.34E+03
m	65	3982-	4044	4022.29	697.49	7.04E+03	0.00	8.06E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:23:41 AM

Sample Title                     : NOPI-122-GAM3 attenuation
Spectrum Description             : NOPI-122-GAM3 attenuation
Sample Identification            : NP122ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  8:49:59 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1988.9 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-122-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:23:30 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.53	0.1453	16.45	3.36
2	101.89	0.0703	17.55	15.73
3	122.38	0.1052	21.14	9.97
4	139.93	0.3453	25.85	3.80
5	148.51	0.1102	26.69	4.23
6	158.85	0.0052	27.43	171.82
7	179.46	0.0053	31.03	93.87
8	184.00	<NA>	31.76	<NA>
9	188.00	<NA>	32.43	<NA>
10	191.82	0.0450	33.16	23.89
11	205.47	0.0066	35.55	73.84
12	224.32	0.1383	38.82	8.39
13	244.43	0.0032	42.35	165.32
14	248.80	0.0030	43.04	338.09
15	261.95	0.0234	45.34	39.69
16	281.18	0.0045	48.69	193.72
17	288.93	0.0091	50.02	94.16
18	316.41	0.2406	54.79	4.81
19	346.82	0.0178	60.06	48.68
20	443.10	0.3007	76.76	3.99
21	499.71	0.0042	86.58	286.05
22	607.85	0.0050	105.33	239.90
23	631.41	0.4820	109.42	3.15
24	653.20	0.1349	113.20	8.28
25	675.02	0.0976	117.12	8.19
26	683.50	0.2684	118.45	5.44
27	710.33	0.0015	123.11	697.52
28	759.09	0.2436	131.56	5.12
29	778.15	0.3412	134.87	3.66
30	842.59	0.2163	146.04	4.36
31	866.93	0.4398	150.27	3.03
32	956.70	0.3548	165.83	5.47
33	996.71	0.1991	172.77	7.51
34	1017.40	0.0130	176.36	101.53
35	1086.19	0.0471	188.29	28.14
36	1178.00	0.1438	204.21	8.49
37	1200.22	0.2953	208.07	5.08
38	1316.04	0.2412	228.15	5.39
39	1339.09	0.3559	232.15	3.86
40	1417.70	0.3852	245.77	3.60
41	1430.42	0.0081	247.99	177.96

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1542.35	0.4018	267.40	3.36
43	1676.96	0.1902	290.75	8.01
44	1854.21	0.6379	321.49	4.70
45	2140.36	0.0570	371.11	23.48
46	2195.26	0.0920	380.63	16.65
47	2291.36	0.4680	397.21	3.30
48	2315.06	0.1862	401.39	8.61
49	2468.59	0.0169	428.04	106.72
50	2564.21	0.1031	444.62	17.17
51	2625.98	0.2613	455.33	7.45
52	2673.30	0.0313	463.54	56.93
53	2759.14	0.1840	478.43	9.53
54	3216.86	0.3308	557.81	6.04
55	3357.95	0.0859	582.28	22.34
56	3414.06	0.0274	592.01	66.59
57	3465.18	0.0313	600.88	59.18
58	3500.27	0.0756	606.96	24.38
59	3607.09	0.1758	625.51	9.85
60	3623.65	0.7804	628.28	3.34
61	3669.00	0.0427	636.22	42.26
62	3873.73	0.1738	671.80	11.15
63	3903.44	0.9012	676.83	3.74
64	3994.60	0.0637	692.69	30.62
65	4028.67	0.2412	698.60	19.96

Errors quoted at 1.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-122-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:23:40 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.35	16.45	3.36E+03	285.15	2.12E+04
m	2	91-	105	101.68	17.55	1.51E+04	388.77	1.90E+04
	3	118-	126	122.38	21.14	2.33E+03	208.77	1.93E+04
M	4	134-	163	149.57	25.85	1.31E+04	2525.29	2.26E+04
m	5	134-	163	154.38	26.69	2.30E+04	3393.64	2.38E+04
m	6	134-	163	158.66	27.43	3.62E+05	4200.14	2.62E+04
M	7	174-	196	179.41	31.03	8.20E+04	810.42	2.84E+04
m	8	174-	196	183.60	31.76	1.88E+04	528.58	2.83E+04
m	9	174-	196	187.51	32.43	5.39E+03	404.45	3.15E+04
m	10	174-	196	191.71	33.16	8.90E+03	426.69	2.83E+04
	11	199-	210	205.47	35.55	4.69E+04	382.30	3.96E+04
	12	218-	227	224.32	38.82	4.90E+03	362.62	5.48E+04
M	13	238-	254	244.70	42.35	4.00E+05	8196.85	5.34E+04
m	14	238-	254	248.68	43.04	7.15E+05	8221.02	4.41E+04
	15	258-	266	261.95	45.34	9.73E+03	258.47	2.67E+04
M	16	275-	294	281.25	48.69	2.36E+05	1625.34	2.28E+04
m	17	275-	294	288.92	50.02	6.46E+04	1545.61	1.79E+04
	18	310-	322	316.41	54.79	1.96E+03	225.24	1.85E+04
	19	341-	352	346.82	60.06	1.19E+04	239.77	1.82E+04
	20	438-	447	443.10	76.76	4.19E+02	211.20	1.95E+04
	21	492-	506	499.71	86.58	3.28E+05	667.15	4.08E+04
	22	600-	615	607.85	105.33	2.13E+05	581.17	4.17E+04
	23	626-	636	631.41	109.42	7.85E+02	259.89	2.80E+04
	24	645-	659	653.20	113.20	2.64E+03	341.55	3.95E+04
M	25	667-	691	675.82	117.12	4.33E+03	352.25	5.61E+04
m	26	667-	691	683.45	118.45	5.99E+03	419.44	5.58E+04
	27	702-	718	710.33	123.11	1.76E+06	1374.24	4.26E+04
	28	754-	766	759.09	131.56	6.72E+02	220.65	1.82E+04
	29	773-	783	778.15	134.87	2.48E+02	190.63	1.51E+04
	30	837-	847	842.59	146.04	5.53E+02	188.83	1.47E+04
	31	859-	872	866.93	150.27	2.14E+02	225.82	1.84E+04
	32	947-	964	956.70	165.83	2.53E+03	270.88	2.18E+04
	33	987-	1005	996.71	172.77	1.66E+03	272.29	2.14E+04
	34	1009-	1026	1017.40	176.36	4.22E+04	326.31	1.97E+04
	35	1077-	1095	1086.19	188.29	6.04E+03	275.95	2.07E+04
	36	1170-	1184	1178.00	204.21	1.22E+03	225.43	1.72E+04
	37	1194-	1206	1200.22	208.07	9.41E+02	201.16	1.50E+04
	38	1306-	1323	1316.04	228.15	1.02E+03	251.76	1.91E+04
	39	1332-	1346	1339.09	232.15	3.79E+02	214.81	1.59E+04
M	40	1410-	1440	1417.60	245.77	3.62E+02	109.12	1.75E+04
m	41	1410-	1440	1430.43	247.99	1.12E+05	547.30	1.73E+04
	42	1535-	1552	1542.35	267.40	-5.75E+01	229.54	1.62E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1669-	1684	1676.96	290.75	1.96E+03	202.90	1.30E+04
	44	1846-	1865	1854.21	321.49	1.79E+03	224.35	1.38E+04
	45	2130-	2149	2140.36	371.11	4.28E+03	224.74	1.32E+04
	46	2185-	2204	2195.26	380.63	3.01E+03	220.98	1.31E+04
M	47	2279-	2324	2290.82	397.21	4.23E+02	123.78	1.26E+04
m	48	2279-	2324	2314.93	401.39	1.35E+03	355.31	1.39E+04
	49	2455-	2478	2468.59	428.04	4.73E+04	332.45	1.57E+04
	50	2551-	2577	2564.21	444.62	4.30E+03	276.93	1.65E+04
	51	2615-	2635	2625.98	455.33	1.29E+03	218.82	1.28E+04
	52	2660-	2683	2673.30	463.54	1.59E+04	272.07	1.45E+04
	53	2746-	2769	2759.14	478.43	1.41E+03	240.46	1.41E+04
	54	3203-	3227	3216.86	557.81	1.42E+03	227.90	1.22E+04
	55	3346-	3369	3357.95	582.28	4.48E+03	220.39	1.10E+04
	56	3399-	3426	3414.06	592.01	2.33E+04	285.45	1.29E+04
	57	3450-	3480	3465.18	600.88	1.82E+04	290.36	1.36E+04
	58	3488-	3511	3500.27	606.96	5.02E+03	214.74	1.03E+04
M	59	3596-	3636	3607.25	625.51	1.52E+03	261.91	9.54E+03
m	60	3596-	3636	3623.18	628.28	4.39E+02	95.05	1.27E+04
	61	3653-	3681	3669.00	636.22	1.11E+04	262.20	1.25E+04
M	62	3858-	3916	3874.15	671.80	2.08E+03	324.85	1.21E+04
m	63	3858-	3916	3903.15	676.83	8.69E+02	152.87	1.40E+04
	64	3978-	4006	3994.60	692.69	7.07E+03	240.93	1.10E+04
	65	4016-	4044	4028.67	698.60	3.47E+03	148.33	3.00E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:24:57 AM

Sample Title                     : NOPI-123-GAM3 attenuation
Spectrum Description             : NOPI-123-GAM3 attenuation
Sample Identification            : NP123ATT
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  9:32:30 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1990.9 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-123-GAM3 attenuation
Peak Locate Performed on: 1-26-96 9:24:47 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.35	0.2497	16.46	4.00
2	101.69	0.0735	17.53	16.61
3	122.26	0.0917	21.12	11.10
4	148.37	0.2148	26.72	5.79
5	158.72	0.0078	27.41	178.96
6	179.30	0.0102	31.01	103.16
7	184.00	<NA>	31.75	<NA>
8	191.66	0.0491	33.12	23.25
9	205.35	0.0132	35.53	79.41
10	224.24	0.1412	38.80	7.26
11	244.35	0.0034	42.33	180.26
12	248.66	0.0032	43.02	330.64
13	261.82	0.0235	45.32	40.51
14	281.09	0.0043	48.67	199.75
15	288.84	0.0093	50.00	94.00
16	316.59	0.1843	54.82	5.30
17	346.71	0.0285	60.04	47.09
18	442.72	0.2984	76.69	3.18
19	499.58	0.0041	86.56	278.47
20	607.74	0.0048	105.31	236.40
21	653.07	0.0810	113.17	9.89
22	674.46	0.1682	117.04	6.79
23	683.31	0.2569	118.40	5.61
24	710.24	0.0016	123.09	708.93
25	759.22	0.3055	131.59	5.13
26	841.90	0.3518	145.92	4.76
27	955.99	0.3889	165.71	5.05
28	996.45	0.1936	172.73	5.32
29	1017.30	0.0127	176.34	103.09
30	1086.05	0.0470	188.27	28.60
31	1177.78	0.1714	204.18	8.50
32	1200.19	0.1984	208.06	7.12
33	1315.23	0.3920	228.01	4.26
34	1430.29	0.0083	247.97	178.45
35	1455.99	0.3891	252.42	3.11
36	1676.85	0.2393	290.73	6.34
37	1709.90	0.3469	296.46	3.79
38	1803.57	0.3246	312.70	3.01
39	1854.47	0.4182	321.53	3.84
40	2140.19	0.0721	371.08	22.02
41	2194.83	0.0978	380.56	16.05

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	2290.71	0.4439	397.21	3.48
43	2315.20	0.1667	401.41	10.12
44	2468.49	0.0169	428.02	106.45
45	2564.06	0.0780	444.60	18.70
46	2625.88	0.2314	455.32	7.68
47	2673.17	0.0265	463.53	54.65
48	2699.92	0.4771	468.06	3.36
49	2759.63	0.1986	478.51	8.01
50	2812.73	0.3683	487.72	4.21
51	3216.35	0.1869	557.72	8.22
52	3357.70	0.0735	582.24	21.51
53	3414.08	0.0273	592.01	68.43
54	3464.99	0.0318	600.84	56.99
55	3500.35	0.0805	606.97	23.32
56	3607.14	0.2172	625.49	7.94
57	3668.89	0.0442	636.20	40.26
58	3747.05	0.6238	649.76	3.24
59	3873.69	0.1583	671.76	11.65
60	3904.31	0.3300	676.99	5.29
61	3994.64	0.0654	692.70	30.35
62	4028.49	0.1219	698.57	19.32

Errors quoted at 0.000 sigma

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*  ***************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-123-GAM3 attenuation
Peak Analysis Performed on: 1-26-96 9:24:56 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.40	16.46	4.08E+03	0.00	2.10E+04
m	2	91-	105	101.55	17.53	1.75E+04	0.00	1.86E+04
	3	118-	126	122.26	21.12	2.09E+03	0.00	1.97E+04
M	4	143-	163	154.54	26.72	2.53E+04	0.00	2.91E+04
m	5	143-	163	158.56	27.41	4.15E+05	0.00	2.96E+04
M	6	174-	196	179.30	31.01	9.22E+04	0.00	2.90E+04
m	7	174-	196	183.58	31.75	2.10E+04	0.00	3.20E+04
m	8	174-	196	191.48	33.12	9.80E+03	0.00	3.18E+04
	9	199-	210	205.35	35.53	5.04E+04	0.00	3.99E+04
	10	218-	226	224.24	38.80	3.87E+03	0.00	4.95E+04
M	11	238-	254	244.58	42.33	4.17E+05	0.00	6.10E+04
m	12	238-	254	248.57	43.02	7.42E+05	0.00	4.41E+04
	13	257-	266	261.82	45.32	8.31E+03	0.00	3.19E+04
M	14	275-	294	281.14	48.67	2.42E+05	0.00	2.61E+04
m	15	275-	294	288.79	50.00	6.62E+04	0.00	1.84E+04
	16	310-	321	316.59	54.82	2.22E+03	0.00	1.72E+04
	17	341-	352	346.71	60.04	1.17E+04	0.00	1.83E+04
	18	439-	447	442.72	76.69	2.84E+02	0.00	1.77E+04
	19	492-	506	499.58	86.56	3.31E+05	0.00	4.03E+04
	20	599-	615	607.74	105.31	2.13E+05	0.00	4.41E+04
	21	645-	660	653.07	113.17	2.06E+03	0.00	4.24E+04
M	22	667-	691	675.36	117.04	3.73E+03	0.00	5.52E+04
m	23	667-	691	683.22	118.40	6.09E+03	0.00	5.72E+04
	24	702-	718	710.24	123.09	1.77E+06	0.00	4.22E+04
	25	754-	765	759.22	131.59	5.18E+02	0.00	1.69E+04
	26	833-	846	841.90	145.92	3.23E+02	0.00	1.88E+04
	27	949-	964	955.99	165.71	2.17E+03	0.00	1.96E+04
	28	987-	1003	996.45	172.73	1.28E+03	0.00	1.94E+04
	29	1009-	1025	1017.30	176.34	4.18E+04	0.00	1.90E+04
	30	1078-	1093	1086.05	188.27	5.66E+03	0.00	1.78E+04
	31	1168-	1186	1177.78	204.18	1.49E+03	0.00	2.16E+04
	32	1192-	1207	1200.19	208.06	1.27E+03	0.00	1.84E+04
	33	1307-	1323	1315.23	228.01	9.00E+02	0.00	1.80E+04
	34	1422-	1439	1430.29	247.97	1.11E+05	0.00	2.00E+04
	35	1448-	1464	1455.99	252.42	5.26E+02	0.00	1.65E+04
	36	1668-	1683	1676.85	290.73	2.01E+03	0.00	1.29E+04
	37	1701-	1717	1709.90	296.46	1.44E+02	0.00	1.35E+04
	38	1792-	1813	1803.57	312.70	2.13E+02	0.00	1.55E+04
	39	1843-	1864	1854.47	321.53	1.80E+03	0.00	1.49E+04
	40	2129-	2150	2140.19	371.08	4.35E+03	0.00	1.46E+04
	41	2183-	2203	2194.83	380.56	2.92E+03	0.00	1.38E+04
M	42	2279-	2324	2290.85	397.21	1.45E+02	0.00	1.22E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	2279-	2324	2315.05	401.41	1.06E+03	0.00	1.16E+04
	44	2458-	2480	2468.49	428.02	4.73E+04	0.00	1.47E+04
	45	2551-	2574	2564.06	444.60	4.41E+03	0.00	1.45E+04
	46	2615-	2636	2625.88	455.32	1.37E+03	0.00	1.34E+04
M	47	2661-	2712	2673.22	463.53	1.55E+04	0.00	1.39E+04
m	48	2661-	2712	2699.37	468.06	2.95E+02	0.00	1.38E+04
	49	2746-	2772	2759.63	478.51	1.67E+03	0.00	1.56E+04
	50	2802-	2823	2812.73	487.72	2.77E+01	0.00	1.29E+04
	51	3205-	3227	3216.35	557.72	1.25E+03	0.00	1.14E+04
	52	3344-	3371	3357.70	582.24	4.41E+03	0.00	1.28E+04
	53	3399-	3427	3414.08	592.01	2.35E+04	0.00	1.29E+04
	54	3453-	3476	3464.99	600.84	1.71E+04	0.00	1.09E+04
	55	3486-	3514	3500.35	606.97	4.73E+03	0.00	1.24E+04
	56	3593-	3618	3607.14	625.49	7.48E+02	0.00	1.16E+04
	57	3653-	3680	3668.89	636.20	1.13E+04	0.00	1.17E+04
	58	3735-	3762	3747.05	649.76	9.31E+02	0.00	1.12E+04
M	59	3859-	3919	3873.88	671.76	1.64E+03	0.00	1.11E+04
m	60	3859-	3919	3904.06	676.99	6.20E+02	0.00	1.10E+04
	61	3978-	4006	3994.64	692.70	7.13E+03	0.00	1.07E+04
	62	4012-	4044	4028.49	698.57	4.35E+03	0.00	3.72E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************

Report Generated On              :  1-26-96  9:38:00 AM

Sample Title                     : NOPI-466-GAM1 attenuation
Spectrum Description             : NOPI-466-GAM1 attenuation
Sample Identification            : NP466AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96 10:06:49 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1991.7 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:37:49 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.31	0.2461	16.47	4.02
2	101.80	0.0634	17.53	16.14
3	122.36	0.1021	21.14	10.36
4	139.65	0.3574	25.88	3.01
5	148.28	0.2682	26.72	4.86
6	158.76	0.0077	27.42	183.68
7	179.36	0.0104	31.02	104.32
8	184.00	<NA>	31.74	<NA>
9	188.00	<NA>	32.42	<NA>
10	191.60	0.0508	33.15	23.33
11	205.40	0.0137	35.54	79.77
12	224.58	0.2457	38.86	5.38
13	244.38	0.0033	42.34	179.85
14	248.71	0.0030	43.03	340.84
15	261.86	0.0233	45.33	39.63
16	281.13	0.0043	48.68	200.84
17	288.86	0.0092	50.01	93.85
18	316.58	0.1872	54.82	5.79
19	335.94	0.3242	58.24	4.54
20	346.76	0.0276	60.04	49.62
21	442.60	0.3641	76.67	3.67
22	499.67	0.0041	86.57	284.73
23	588.16	0.2967	101.92	3.43
24	607.83	0.0050	105.33	240.52
25	630.79	0.2552	109.31	3.39
26	653.34	0.1538	113.22	7.08
27	674.66	0.1661	117.11	7.22
28	683.36	0.5620	118.42	4.09
29	710.33	0.0015	123.11	700.92
30	758.76	0.3121	131.51	3.91
31	778.74	0.4165	134.97	3.35
32	842.59	0.3219	146.04	3.24
33	956.31	0.4024	165.77	4.96
34	996.84	0.2183	172.80	6.49
35	1017.47	0.0132	176.37	102.10
36	1086.27	0.0495	188.30	26.75
37	1177.83	0.1444	204.18	9.38
38	1200.50	0.1474	208.12	6.40
39	1315.11	0.5058	227.99	3.47
40	1430.54	0.0081	248.01	176.76
41	1456.78	0.3986	252.56	3.23

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1677.90	0.2388	290.91	7.77
43	1761.67	0.9321	305.44	3.21
44	1852.82	0.5081	321.25	6.25
45	2140.56	0.0536	371.15	23.47
46	2195.07	0.0999	380.60	16.59
47	2315.45	0.1330	401.48	10.17
48	2468.86	0.0138	428.08	107.15
49	2564.55	0.0970	444.68	16.83
50	2626.39	0.2031	455.44	9.05
51	2646.47	0.4127	459.05	3.14
52	2673.73	0.0316	463.60	55.41
53	2759.04	0.1677	478.41	9.01
54	2989.94	0.5353	518.46	3.21
55	3217.85	0.2426	557.98	8.06
56	3358.36	0.0725	582.35	22.09
57	3414.51	0.0228	592.09	66.15
58	3465.45	0.0264	600.92	57.38
59	3501.07	0.0745	607.10	23.51
60	3536.99	0.5423	613.33	3.50
61	3607.84	0.2515	625.63	7.38
62	3624.00	0.5084	628.35	3.49
63	3669.35	0.0451	636.28	40.74
64	3874.45	0.2025	671.87	9.30
65	3904.31	0.2918	676.93	5.84
66	3995.10	0.0545	692.78	30.86
67	4028.93	0.1359	698.65	18.92

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-466-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:38:00 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.46	16.47	4.20E+03	0.00	2.10E+04
m	2	91-	105	101.59	17.53	1.85E+04	0.00	1.86E+04
	3	118-	126	122.36	21.14	2.28E+03	0.00	1.96E+04
M	4	134-	163	149.71	25.88	1.47E+04	0.00	2.22E+04
m	5	134-	163	154.54	26.72	2.73E+04	0.00	2.37E+04
m	6	134-	163	158.58	27.42	4.29E+05	0.00	2.67E+04
M	7	174-	196	179.33	31.02	9.15E+04	0.00	2.90E+04
m	8	174-	196	183.50	31.74	2.07E+04	0.00	3.19E+04
m	9	174-	196	187.45	32.42	5.52E+03	0.00	2.86E+04
m	10	174-	196	191.61	33.15	9.37E+03	0.00	2.85E+04
	11	199-	210	205.40	35.54	5.13E+04	0.00	4.01E+04
	12	218-	227	224.58	38.86	5.45E+03	0.00	5.49E+04
M	13	238-	254	244.62	42.34	4.22E+05	0.00	6.13E+04
m	14	238-	254	248.61	43.03	7.52E+05	0.00	4.46E+04
	15	257-	266	261.86	45.33	8.55E+03	0.00	3.19E+04
M	16	275-	294	281.18	48.68	2.46E+05	0.00	2.33E+04
m	17	275-	294	288.83	50.01	6.68E+04	0.00	1.86E+04
	18	310-	321	316.58	54.82	2.50E+03	0.00	1.72E+04
M	19	331-	352	336.32	58.24	1.54E+03	0.00	1.44E+04
m	20	331-	352	346.66	60.04	1.43E+04	0.00	1.41E+04
	21	438-	446	442.60	76.67	3.06E+02	0.00	1.76E+04
	22	492-	506	499.67	86.57	3.31E+05	0.00	4.09E+04
	23	584-	592	588.16	101.92	3.00E+01	0.00	2.39E+04
	24	599-	615	607.83	105.33	2.14E+05	0.00	4.37E+04
	25	622-	636	630.79	109.31	4.50E+02	0.00	3.73E+04
	26	645-	660	653.34	113.22	3.07E+03	0.00	4.13E+04
M	27	666-	691	675.73	117.11	4.36E+03	0.00	5.94E+04
m	28	666-	691	683.30	118.42	6.06E+03	0.00	5.88E+04
	29	702-	718	710.33	123.11	1.77E+06	0.00	4.15E+04
	30	753-	765	758.76	131.51	7.19E+02	0.00	1.84E+04
	31	772-	784	778.74	134.97	2.54E+02	0.00	1.80E+04
	32	835-	850	842.59	146.04	3.53E+02	0.00	2.15E+04
	33	947-	963	956.31	165.77	2.74E+03	0.00	2.04E+04
	34	987-	1002	996.84	172.80	1.53E+03	0.00	1.82E+04
	35	1009-	1026	1017.47	176.37	4.23E+04	0.00	1.99E+04
	36	1078-	1094	1086.27	188.30	5.65E+03	0.00	1.89E+04
	37	1169-	1185	1177.83	204.18	1.82E+03	0.00	1.91E+04
	38	1194-	1206	1200.50	208.12	7.60E+02	0.00	1.51E+04
	39	1306-	1322	1315.11	227.99	1.10E+03	0.00	1.80E+04
	40	1422-	1440	1430.54	248.01	1.12E+05	0.00	2.11E+04
	41	1447-	1463	1456.78	252.56	7.98E+02	0.00	1.63E+04
	42	1666-	1684	1677.90	290.91	1.93E+03	0.00	1.55E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1753-	1770	1761.67	305.44	5.42E+02	0.00	1.28E+04
	44	1841-	1863	1852.82	321.25	2.05E+03	0.00	1.57E+04
	45	2131-	2149	2140.56	371.15	4.09E+03	0.00	1.25E+04
	46	2185-	2207	2195.07	380.60	3.18E+03	0.00	1.51E+04
	47	2304-	2324	2315.45	401.48	1.24E+03	0.00	1.47E+04
	48	2457-	2480	2468.86	428.08	4.70E+04	0.00	1.54E+04
	49	2551-	2573	2564.55	444.68	4.03E+03	0.00	1.43E+04
M	50	2616-	2684	2626.57	455.44	1.32E+03	0.00	1.33E+04
m	51	2616-	2684	2647.42	459.05	1.68E+02	0.00	1.43E+04
m	52	2616-	2684	2673.67	463.60	1.54E+04	0.00	1.33E+04
	53	2747-	2769	2759.04	478.41	1.59E+03	0.00	1.32E+04
	54	2978-	2999	2989.94	518.46	2.12E+02	0.00	1.38E+04
	55	3206-	3229	3217.85	557.98	8.95E+02	0.00	1.21E+04
	56	3344-	3369	3358.36	582.35	3.98E+03	0.00	1.20E+04
	57	3402-	3426	3414.51	592.09	2.31E+04	0.00	1.13E+04
	58	3452-	3477	3465.45	600.92	1.79E+04	0.00	1.17E+04
	59	3490-	3512	3501.07	607.10	4.71E+03	0.00	9.94E+03
	60	3521-	3547	3536.99	613.33	6.67E+02	0.00	1.08E+04
M	61	3596-	3635	3607.90	625.63	8.09E+02	0.00	9.95E+03
m	62	3596-	3635	3623.63	628.35	3.08E+02	0.00	1.09E+04
	63	3654-	3683	3669.35	636.28	1.08E+04	0.00	1.27E+04
M	64	3859-	3916	3874.56	671.87	1.69E+03	0.00	1.17E+04
m	65	3859-	3916	3903.70	676.93	6.95E+02	0.00	1.36E+04
	66	3982-	4008	3995.10	692.78	7.04E+03	0.00	1.01E+04
	67	4016-	4044	4028.93	698.65	3.31E+03	0.00	3.07E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:38:51 AM

Sample Title                     : NOPI-467-GAM1 attenuation
Spectrum Description             : NOPI-467-GAM1 attenuation
Sample Identification            : NP467AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96 10:41:05 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1990.1 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-467-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:38:40 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.66	0.1118	16.47	5.71
2	101.84	0.0620	17.55	17.09
3	116.00	<NA>	20.04	<NA>
4	122.50	0.0481	21.15	9.61
5	127.00	<NA>	21.87	<NA>
6	139.63	0.1876	25.87	3.16
7	148.26	0.1723	26.69	4.35
8	158.84	0.0049	27.43	183.76
9	179.47	0.0050	31.03	97.63
10	184.00	<NA>	31.75	<NA>
11	188.00	<NA>	32.44	<NA>
12	191.80	0.0454	33.17	23.21
13	205.48	0.0064	35.55	75.76
14	223.89	0.1411	38.74	6.82
15	244.43	0.0032	42.35	166.65
16	248.81	0.0029	43.05	345.01
17	261.97	0.0222	45.35	41.85
18	281.20	0.0045	48.70	193.93
19	288.94	0.0091	50.02	95.12
20	316.78	0.1789	54.85	7.75
21	335.89	0.4111	58.19	3.81
22	346.82	0.0175	60.05	49.64
23	442.50	0.3540	76.66	3.26
24	499.80	0.0043	86.59	290.41
25	607.95	0.0053	105.35	240.22
26	630.49	0.2591	109.26	4.16
27	653.49	0.1516	113.25	6.34
28	675.16	0.1586	117.17	7.84
29	682.76	0.2882	118.43	5.19
30	710.44	0.0015	123.13	677.43
31	759.21	0.2221	131.58	5.48
32	779.41	0.3122	135.09	3.58
33	842.67	0.2415	146.06	4.31
34	865.64	0.5112	150.04	3.68
35	956.13	0.3697	165.74	4.30
36	989.21	0.2654	171.55	3.22
37	997.23	0.2280	172.84	5.93
38	1017.56	0.0133	176.39	104.06
39	1086.35	0.0512	188.32	25.48
40	1178.05	0.1266	204.22	10.33
41	1200.35	0.3772	208.09	4.77

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1315.12	0.4402	227.99	3.64
43	1430.74	0.0083	248.05	179.60
44	1677.57	0.2028	290.85	8.15
45	1711.19	0.4706	296.68	3.22
46	1761.36	0.5637	305.38	3.31
47	1855.37	0.3885	321.69	4.96
48	2140.69	0.0701	371.17	24.16
49	2195.47	0.1004	380.67	16.22
50	2315.48	0.1454	401.48	9.20
51	2355.12	0.5588	408.36	3.02
52	2469.13	0.0139	428.13	106.11
53	2564.91	0.0813	444.74	18.22
54	2627.37	0.1388	455.57	10.92
55	2673.89	0.0259	463.64	55.03
56	2700.30	0.6977	468.31	3.53
57	2759.82	0.1625	478.55	9.59
58	3105.18	0.4525	538.44	3.19
59	3217.43	0.2442	557.91	7.33
60	3248.94	0.4929	563.37	3.24
61	3358.69	0.0877	582.41	21.00
62	3414.95	0.0273	592.16	67.14
63	3465.89	0.0321	601.00	56.83
64	3501.12	0.0747	607.11	25.76
65	3538.37	0.5313	613.57	3.37
66	3608.18	0.2256	625.64	8.31
67	3622.89	0.4154	628.15	3.94
68	3669.81	0.0434	636.36	41.86
69	3748.97	1.0282	650.09	3.02
70	3874.47	0.1982	671.91	9.62
71	3903.29	0.3535	676.92	4.53
72	3995.58	0.0665	692.86	30.23
73	4028.74	0.1262	698.61	19.73

Errors quoted at 0.000 sigma

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*  ***********************************************************************
*[redacted]**          P E A K   A N A L Y S I S   R E P O R T          *****
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Detector Name: DET01
Sample Title: NOPI-467-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:38:51 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.48	16.47	4.01E+03	0.00	2.10E+04
m	2	91-	105	101.68	17.55	1.75E+04	0.00	1.89E+04
M	3	112-	130	116.06	20.04	4.85E+02	0.00	1.68E+04
m	4	112-	130	122.46	21.15	2.32E+03	0.00	1.70E+04
m	5	112-	130	126.59	21.87	3.78E+02	0.00	1.71E+04
M	6	134-	163	149.67	25.87	1.43E+04	0.00	2.21E+04
m	7	134-	163	154.36	26.69	2.58E+04	0.00	2.35E+04
m	8	134-	163	158.66	27.43	4.16E+05	0.00	2.64E+04
M	9	174-	196	179.43	31.03	8.93E+04	0.00	2.88E+04
m	10	174-	196	183.58	31.75	2.00E+04	0.00	2.83E+04
m	11	174-	196	187.56	32.44	5.43E+03	0.00	2.81E+04
m	12	174-	196	191.74	33.17	9.30E+03	0.00	2.80E+04
[redacted]	13	199-	210	205.48	35.55	5.05E+04	0.00	3.94E+04
[redacted]	14	217-	227	223.89	38.74	5.75E+03	0.00	5.89E+04
M	15	238-	254	244.71	42.35	4.14E+05	0.00	5.44E+04
m	16	238-	254	248.69	43.05	7.42E+05	0.00	4.49E+04
	17	258-	266	261.97	45.35	1.07E+04	0.00	2.67E+04
M	18	275-	294	281.27	48.70	2.43E+05	0.00	2.32E+04
m	19	275-	294	288.91	50.02	6.63E+04	0.00	1.87E+04
	20	310-	322	316.78	54.85	2.33E+03	0.00	1.86E+04
M	21	329-	352	336.03	58.19	1.44E+03	0.00	1.27E+04
m	22	329-	352	346.75	60.05	1.39E+04	0.00	1.41E+04
	23	438-	448	442.50	76.66	4.43E+02	0.00	2.13E+04
	24	492-	506	499.80	86.59	3.28E+05	0.00	4.03E+04
	25	599-	615	607.95	105.35	2.11E+05	0.00	4.40E+04
	26	622-	635	630.49	109.26	7.11E+02	0.00	3.47E+04
	27	645-	661	653.49	113.25	2.38E+03	0.00	4.46E+04
M	28	668-	690	676.10	117.17	4.35E+03	0.00	5.18E+04
m	29	668-	690	683.39	118.43	5.33E+03	0.00	5.09E+04
	30	702-	718	710.44	123.13	1.76E+06	0.00	4.17E+04
	31	754-	767	759.21	131.58	5.56E+02	0.00	1.97E+04
	32	771-	787	779.41	135.09	7.95E+02	0.00	2.31E+04
	33	837-	847	842.67	146.06	3.00E+02	0.00	1.49E+04
	34	860-	873	865.64	150.04	5.19E+02	0.00	1.80E+04
	35	947-	964	956.13	165.74	2.74E+03	0.00	2.14E+04
M	36	980-	1004	989.63	171.55	5.04E+02	0.00	1.58E+04
m	37	980-	1004	997.07	172.84	1.10E+03	0.00	1.57E+04
	38	1008-	1025	1017.56	176.39	4.26E+04	0.00	1.95E+04
[redacted]	39	1080-	1094	1086.35	188.32	4.95E+03	0.00	1.67E+04
	40	1171-	1184	1178.05	204.22	1.37E+03	0.00	1.60E+04
	41	1192-	1210	1200.35	208.09	1.57E+03	0.00	2.14E+04
	42	1308-	1322	1315.12	227.99	7.27E+02	0.00	1.60E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1422-	1440	1430.74	248.05	1.11E+05	0.00	2.03E+04
	44	1670-	1688	1677.57	290.85	1.93E+03	0.00	1.52E+04
	45	1703-	1720	1711.19	296.68	7.45E+02	0.00	1.39E+04
	46	1753-	1769	1761.36	305.38	8.28E+00	0.00	1.24E+04
	47	1844-	1864	1855.37	321.69	1.99E+03	0.00	1.42E+04
	48	2129-	2149	2140.69	371.17	4.33E+03	0.00	1.34E+04
	49	2186-	2204	2195.47	380.67	2.75E+03	0.00	1.25E+04
	50	2306-	2327	2315.48	401.48	1.39E+03	0.00	1.50E+04
	51	2346-	2368	2355.12	408.36	6.47E+02	0.00	1.53E+04
	52	2456-	2482	2469.13	428.13	4.77E+04	0.00	1.68E+04
	53	2554-	2577	2564.91	444.74	4.31E+03	0.00	1.45E+04
	54	2614-	2638	2627.37	455.57	1.85E+03	0.00	1.51E+04
M	55	2660-	2710	2673.89	463.64	1.65E+04	0.00	1.39E+04
m	56	2660-	2710	2700.79	468.31	4.63E+02	0.00	1.36E+04
	57	2748-	2769	2759.82	478.55	1.14E+03	0.00	1.31E+04
	58	3095-	3116	3105.18	538.44	-1.72E+02	0.00	1.18E+04
	59	3206-	3231	3217.43	557.91	1.20E+03	0.00	1.27E+04
	60	3237-	3262	3248.94	563.37	1.39E+02	0.00	1.22E+04
	61	3346-	3369	3358.69	582.41	4.20E+03	0.00	1.09E+04
	62	3399-	3429	3414.95	592.16	2.33E+04	0.00	1.41E+04
	63	3454-	3478	3465.89	601.00	1.74E+04	0.00	1.14E+04
	64	3490-	3516	3501.12	607.11	4.69E+03	0.00	1.14E+04
	65	3527-	3550	3538.37	613.57	1.97E+02	0.00	1.00E+04
M	66	3597-	3636	3607.99	625.64	1.61E+03	0.00	9.92E+03
m	67	3597-	3636	3622.45	628.15	6.32E+02	0.00	1.36E+04
	68	3654-	3682	3669.81	636.36	1.13E+04	0.00	1.24E+04
	69	3733-	3761	3748.97	650.09	5.19E+02	0.00	1.19E+04
M	70	3861-	3918	3874.79	671.91	1.61E+03	0.00	1.09E+04
m	71	3861-	3918	3903.66	676.92	6.73E+02	0.00	1.30E+04
	72	3982-	4010	3995.58	692.86	7.17E+03	0.00	1.06E+04
	73	4015-	4044	4028.74	698.61	3.51E+03	0.00	3.16E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:39:34 AM

Sample Title                     : NOPI-468-GAM1 attenuation
Spectrum Description             : NOPI-468-GAM1 attenuation
Sample Identification            : NP468AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96 11:15:18 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1996.8 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-468-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:39:24 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.45	0.1056	16.47	4.86
2	101.92	0.0592	17.55	17.35
3	122.36	0.1070	21.14	10.10
4	158.89	0.0045	27.47	193.83
5	179.48	0.0048	31.04	99.97
6	184.00	<NA>	31.77	<NA>
7	188.00	<NA>	32.46	<NA>
8	191.89	0.0418	33.18	24.29
9	205.50	0.0061	35.55	75.41
10	224.41	0.2193	38.83	5.02
11	244.47	0.0030	42.37	162.57
12	248.88	0.0028	43.06	356.36
13	262.02	0.0220	45.36	41.31
14	281.24	0.0045	48.71	195.57
15	288.99	0.0088	50.03	97.66
16	316.42	0.1542	54.79	7.45
17	336.23	0.2841	58.27	4.00
18	346.89	0.0168	60.06	50.48
19	499.87	0.0044	86.61	297.80
20	608.00	0.0031	105.36	244.19
21	653.20	0.1270	113.20	9.34
22	674.99	0.1807	117.14	7.71
23	683.36	0.2482	118.45	7.14
24	710.49	0.0015	123.13	678.03
25	759.32	0.3116	131.60	4.66
26	777.71	0.3259	134.79	3.70
27	843.02	0.3972	146.12	4.94
28	867.28	1.0007	150.33	3.13
29	902.18	0.3403	156.38	3.31
30	956.55	0.3932	165.81	5.12
31	990.24	0.3034	171.65	3.45
32	997.15	0.2203	172.87	6.58
33	1017.63	0.0127	176.40	107.06
34	1086.40	0.0680	188.33	24.91
35	1177.98	0.1439	204.21	8.65
36	1200.80	0.1863	208.17	7.43
37	1314.89	0.3519	227.95	3.80
38	1430.79	0.0083	248.05	181.62
39	1457.59	0.4677	252.70	3.38
40	1677.57	0.2256	290.85	6.99
41	1711.10	0.3993	296.67	3.96

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1760.93	0.4667	305.31	3.01
43	1854.94	0.5435	321.61	4.68
44	2140.87	0.0647	371.20	25.05
45	2195.43	0.0762	380.66	17.05
46	2315.66	0.2142	401.52	8.67
47	2469.15	0.0138	428.14	106.73
48	2564.95	0.0971	444.75	18.38
49	2626.96	0.1518	455.50	10.12
50	2673.97	0.0253	463.65	56.70
51	2700.12	0.4626	468.08	3.84
52	2759.47	0.2071	478.48	8.88
53	3217.53	0.1971	557.93	8.66
54	3358.59	0.0704	582.39	22.99
55	3414.86	0.0272	592.15	67.86
56	3465.83	0.0318	600.99	59.10
57	3501.19	0.0750	607.12	23.57
58	3607.78	0.2560	625.61	6.63
59	3624.30	0.2566	628.40	5.11
60	3669.82	0.0452	636.37	38.98
61	3794.73	0.5118	658.03	3.18
62	3827.06	0.6385	663.63	3.58
63	3874.40	0.2251	671.91	8.97
64	3905.64	0.3132	677.25	6.17
65	3995.48	0.0636	693.08	31.68
66	4028.11	0.3314	697.55	18.77

Errors quoted at 1.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-468-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:39:34 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.49	16.47	4.48E+03	305.85	2.14E+04
m	2	91-	105	101.71	17.55	1.94E+04	407.81	1.92E+04
	3	118-	126	122.36	21.14	2.29E+03	213.96	2.04E+04
	4	153-	163	158.89	27.47	4.52E+05	754.41	4.90E+04
M	5	174-	196	179.48	31.04	9.65E+04	908.26	2.98E+04
m	6	174-	196	183.66	31.77	2.16E+04	608.65	2.94E+04
m	7	174-	196	187.64	32.46	5.38E+03	450.08	2.92E+04
m	8	174-	196	191.78	33.18	9.46E+03	479.93	2.91E+04
	9	199-	210	205.50	35.55	5.40E+04	393.42	4.03E+04
	10	218-	227	224.41	38.83	5.18E+03	368.03	5.64E+04
M	11	238-	254	244.77	42.37	4.35E+05	8577.93	5.58E+04
m	12	238-	254	248.76	43.06	7.77E+05	8602.82	3.94E+04
	13	258-	267	262.02	45.36	1.03E+04	282.62	3.07E+04
M	14	275-	294	281.33	48.71	2.53E+05	1736.41	2.36E+04
m	15	275-	294	288.98	50.03	6.88E+04	1657.03	1.90E+04
	16	310-	322	316.42	54.79	2.80E+03	230.75	1.92E+04
M	17	330-	352	336.46	58.27	1.75E+03	206.07	1.46E+04
m	18	330-	352	346.81	60.06	1.45E+04	396.28	1.44E+04
	19	492-	506	499.87	86.61	3.40E+05	677.02	4.12E+04
	20	600-	615	608.00	105.36	2.19E+05	587.29	4.19E+04
	21	648-	660	653.20	113.20	1.81E+03	306.37	3.49E+04
M	22	666-	691	675.93	117.14	4.46E+03	370.32	5.41E+04
m	23	666-	691	683.47	118.45	6.81E+03	454.12	5.32E+04
	24	702-	718	710.49	123.13	1.81E+06	1394.58	4.27E+04
	25	753-	764	759.32	131.60	5.88E+02	212.55	1.78E+04
	26	772-	785	777.71	134.79	4.60E+02	232.92	1.95E+04
	27	836-	848	843.02	146.12	7.94E+02	217.72	1.77E+04
	28	860-	874	867.28	150.33	7.85E+02	240.83	1.98E+04
	29	897-	910	902.18	156.38	1.97E+02	221.24	1.77E+04
	30	947-	965	956.55	165.81	3.17E+03	286.50	2.33E+04
M	31	981-	1003	990.25	171.65	7.53E+02	162.44	1.70E+04
m	32	981-	1003	997.28	172.87	1.74E+03	259.08	1.56E+04
	33	1009-	1025	1017.63	176.40	4.30E+04	318.94	1.88E+04
	34	1080-	1095	1086.40	188.33	5.69E+03	244.12	1.79E+04
	35	1170-	1183	1177.98	204.21	1.21E+03	214.58	1.63E+04
	36	1194-	1206	1200.80	208.17	8.86E+02	203.52	1.54E+04
	37	1306-	1322	1314.89	227.95	5.05E+02	241.72	1.85E+04
	38	1422-	1439	1430.79	248.05	1.13E+05	423.75	2.03E+04
	39	1450-	1464	1457.59	252.70	1.81E+02	209.15	1.51E+04
	40	1668-	1687	1677.57	290.85	2.21E+03	243.92	1.63E+04
	41	1701-	1722	1711.10	296.67	5.32E+02	256.59	1.74E+04
	42	1752-	1768	1760.93	305.31	1.44E+02	198.51	1.25E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1846-	1865	1854.94	321.61	1.84E+03	227.06	1.42E+04
	44	2128-	2150	2140.87	371.20	4.37E+03	253.97	1.55E+04
	45	2184-	2205	2195.43	380.66	3.08E+03	241.54	1.47E+04
	46	2306-	2324	2315.66	401.52	1.31E+03	214.91	1.33E+04
	47	2458-	2482	2469.15	428.14	4.84E+04	338.45	1.60E+04
	48	2551-	2576	2564.95	444.75	4.21E+03	271.72	1.64E+04
	49	2615-	2636	2626.96	455.50	1.62E+03	229.29	1.36E+04
M	50	2661-	2710	2673.94	463.65	1.65E+04	488.39	1.36E+04
m	51	2661-	2710	2699.49	468.08	3.19E+02	87.69	1.39E+04
	52	2749-	2772	2759.47	478.48	1.70E+03	241.83	1.42E+04
	53	3206-	3228	3217.53	557.93	1.02E+03	215.85	1.18E+04
	54	3345-	3370	3358.59	582.39	4.28E+03	236.88	1.22E+04
	55	3400-	3429	3414.86	592.15	2.37E+04	297.83	1.37E+04
	56	3450-	3480	3465.83	600.99	1.86E+04	289.61	1.34E+04
	57	3487-	3512	3501.19	607.12	5.19E+03	231.05	1.13E+04
M	58	3594-	3636	3607.82	625.61	1.19E+03	266.00	1.12E+04
m	59	3594-	3636	3623.90	628.40	4.22E+02	112.56	1.37E+04
	60	3654-	3681	3669.82	636.37	1.17E+04	252.88	1.16E+04
	61	3782-	3806	3794.73	658.03	1.46E+02	208.67	1.05E+04
	62	3815-	3839	3827.06	663.63	5.15E+02	210.66	1.06E+04
M	63	3862-	3917	3874.78	671.91	1.66E+03	321.29	1.08E+04
m	64	3862-	3917	3905.56	677.25	6.47E+02	141.19	1.35E+04
M	65	3983-	4044	3996.84	693.08	1.12E+04	455.24	7.34E+03
m	66	3983-	4044	4022.62	697.55	7.01E+03	435.05	8.09E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:40:49 AM

Sample Title                     : NOPI-469-GAM1 attenuation
Spectrum Description             : NOPI-469-GAM1 attenuation
Sample Identification            : NP469AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96 11:49:43 AM

Live Time                        :     1800.0 seconds
Real Time                        :     1989.2 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-469-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:40:40 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.40	0.2300	16.47	4.75
2	101.93	0.0622	17.56	16.07
3	116.00	<NA>	20.07	<NA>
4	122.43	0.1202	21.15	8.97
5	148.46	0.1240	26.69	4.04
6	158.88	0.0048	27.44	182.18
7	179.47	0.0051	31.04	95.56
8	184.00	<NA>	31.76	<NA>
9	188.00	0.0000	32.45	3.99
10	191.76	0.0474	33.16	23.92
11	205.49	0.0063	35.55	74.89
12	224.69	0.2479	38.88	5.67
13	244.46	0.0031	42.36	160.67
14	248.88	0.0029	43.05	346.02
15	261.99	0.0224	45.35	40.99
16	281.23	0.0046	48.70	191.44
17	288.97	0.0090	50.03	95.16
18	316.39	0.2014	54.79	5.26
19	336.61	0.2730	58.31	3.80
20	346.88	0.0174	60.06	49.10
21	442.87	0.1891	76.72	4.48
22	499.86	0.0044	86.60	292.07
23	608.00	0.0055	105.36	238.22
24	630.68	0.2723	109.29	4.26
25	653.34	0.1467	113.22	8.31
26	675.22	0.1838	117.10	6.28
27	683.52	0.2699	118.47	5.71
28	710.48	0.0015	123.13	667.51
29	758.57	0.2721	131.47	3.95
30	777.75	0.3574	134.80	3.87
31	842.66	0.1950	146.06	5.82
32	956.65	0.3507	165.82	5.77
33	989.33	0.3343	171.54	3.44
34	997.31	0.2554	172.83	4.96
35	1017.65	0.0130	176.40	104.90
36	1086.36	0.0494	188.32	26.95
37	1177.99	0.1508	204.21	8.91
38	1200.59	0.2123	208.13	6.71
39	1430.80	0.0084	248.06	178.43
40	1543.15	0.3475	267.54	4.04
41	1677.88	0.1747	290.91	9.74

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1711.60	0.5437	296.76	3.21
43	1855.05	0.4765	321.63	4.57
44	2140.73	0.0707	371.18	22.45
45	2195.57	0.0792	380.69	16.31
46	2315.74	0.2916	401.51	7.44
47	2329.76	0.4191	403.92	3.07
48	2469.16	0.0139	428.14	105.48
49	2564.67	0.0962	444.70	16.81
50	2626.60	0.2094	455.44	7.90
51	2673.96	0.0260	463.65	55.14
52	2759.51	0.2235	478.49	7.35
53	2932.70	0.5466	508.53	3.01
54	3218.02	0.1995	558.01	9.23
55	3358.75	0.0698	582.42	22.79
56	3414.84	0.0274	592.14	67.65
57	3465.90	0.0319	601.00	57.66
58	3501.15	0.0781	607.11	23.83
59	3608.38	0.2210	625.71	7.22
60	3669.96	0.0442	636.39	41.31
61	3875.03	0.2202	671.95	9.31
62	3902.76	0.3429	676.82	5.09
63	3995.58	0.0646	692.86	31.16
64	4028.71	0.1055	698.61	19.90

Errors quoted at 0.000 sigma

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*  ***********************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T            *****
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Detector Name: DET01
Sample Title: NOPI-469-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:40:49 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.47	16.47	3.87E+03	320.11	2.09E+04
m	2	91-	105	101.73	17.56	1.70E+04	414.94	1.87E+04
M	3	112-	126	116.22	20.07	4.31E+02	132.71	1.87E+04
m	4	112-	126	122.42	21.15	2.45E+03	287.94	1.89E+04
M	5	143-	163	154.41	26.69	2.29E+04	5321.97	2.81E+04
m	6	143-	163	158.71	27.44	4.10E+05	5377.92	2.87E+04
M	7	174-	196	179.47	31.04	8.81E+04	872.39	2.84E+04
m	8	174-	196	183.62	31.76	1.99E+04	582.17	2.83E+04
m	9	174-	196	187.61	32.45	5.17E+03	435.24	2.83E+04
m	10	174-	196	191.71	33.16	8.87E+03	463.21	2.82E+04
	11	199-	210	205.49	35.55	5.03E+04	385.16	3.92E+04
	12	218-	227	224.69	38.88	4.99E+03	361.33	5.42E+04
M	13	238-	254	244.76	42.36	4.14E+05	8192.58	5.36E+04
m	14	238-	254	248.75	43.05	7.36E+05	8217.20	3.81E+04
	15	258-	267	261.99	45.35	1.00E+04	279.46	3.01E+04
M	16	275-	294	281.32	48.70	2.42E+05	1620.55	2.27E+04
m	17	275-	294	288.97	50.03	6.63E+04	1539.06	1.82E+04
	18	310-	322	316.39	54.79	2.42E+03	227.12	1.87E+04
M	19	330-	352	336.72	58.31	1.51E+03	188.34	1.40E+04
m	20	330-	352	346.81	60.06	1.35E+04	383.76	1.39E+04
	21	438-	447	442.87	76.72	5.18E+02	209.77	1.92E+04
	22	492-	506	499.86	86.60	3.29E+05	665.69	3.98E+04
	23	599-	615	608.00	105.36	2.12E+05	588.83	4.31E+04
	24	622-	634	630.68	109.29	6.45E+02	290.93	3.19E+04
	25	645-	659	653.34	113.22	2.61E+03	337.62	3.86E+04
M	26	667-	691	675.70	117.10	4.46E+03	350.07	5.33E+04
m	27	667-	691	683.57	118.47	6.44E+03	422.24	5.28E+04
	28	702-	718	710.48	123.13	1.75E+06	1372.03	4.17E+04
	29	753-	764	758.57	131.47	4.51E+02	207.95	1.70E+04
	30	772-	785	777.75	134.80	2.81E+02	229.92	1.91E+04
	31	836-	847	842.66	146.06	3.94E+02	200.84	1.59E+04
	32	947-	965	956.65	165.82	3.18E+03	279.16	2.21E+04
M	33	980-	1003	989.59	171.54	8.09E+02	152.73	1.68E+04
m	34	980-	1003	997.06	172.83	1.26E+03	217.31	1.55E+04
	35	1009-	1025	1017.65	176.40	4.17E+04	316.49	1.87E+04
	36	1078-	1093	1086.36	188.32	5.42E+03	241.15	1.76E+04
	37	1169-	1184	1177.99	204.21	1.22E+03	236.77	1.82E+04
	38	1192-	1206	1200.59	208.13	9.02E+02	225.25	1.73E+04
	39	1422-	1440	1430.80	248.06	1.11E+05	423.87	2.03E+04
	40	1536-	1552	1543.15	267.54	1.36E+02	219.02	1.53E+04
	41	1669-	1687	1677.88	290.91	2.25E+03	228.92	1.48E+04
	42	1703-	1722	1711.60	296.76	5.63E+02	232.98	1.53E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1847-	1866	1855.05	321.63	1.40E+03	223.60	1.39E+04
	44	2129-	2152	2140.73	371.18	4.62E+03	256.67	1.53E+04
	45	2183-	2204	2195.57	380.69	2.96E+03	238.20	1.43E+04
M	46	2303-	2340	2315.62	401.51	1.62E+03	383.46	1.66E+04
m	47	2303-	2340	2329.51	403.92	6.35E+01	99.22	1.75E+04
	48	2456-	2480	2469.16	428.14	4.72E+04	335.76	1.59E+04
	49	2553-	2574	2564.67	444.70	4.11E+03	233.34	1.34E+04
	50	2613-	2637	2626.60	455.44	1.53E+03	252.49	1.51E+04
	51	2662-	2686	2673.96	463.65	1.62E+04	274.92	1.44E+04
	52	2748-	2769	2759.51	478.49	1.30E+03	222.41	1.28E+04
	53	2920-	2942	2932.70	508.53	-1.26E+02	231.61	1.38E+04
	54	3206-	3230	3218.02	558.01	1.07E+03	226.31	1.21E+04
	55	3345-	3372	3358.75	582.42	4.27E+03	248.54	1.28E+04
	56	3399-	3426	3414.84	592.14	2.33E+04	282.46	1.25E+04
	57	3450-	3479	3465.90	601.00	1.76E+04	283.13	1.32E+04
	58	3490-	3512	3501.15	607.11	4.41E+03	207.09	9.91E+03
	59	3595-	3619	3608.38	625.71	7.78E+02	213.70	1.09E+04
	60	3654-	3684	3669.96	636.39	1.12E+04	273.55	1.31E+04
M	61	3863-	3914	3875.00	671.95	1.63E+03	319.22	1.00E+04
m	62	3863-	3914	3903.06	676.82	4.66E+02	111.31	1.33E+04
	63	3979-	4007	3995.58	692.86	7.17E+03	238.23	1.07E+04
	64	4016-	4044	4028.71	698.61	3.14E+03	149.15	2.99E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:41:55 AM

Sample Title                     : NOPI-470-GAM1 attenuation
Spectrum Description             : NOPI-470-GAM1 attenuation
Sample Identification            : NP470AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96 12:23:56 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1994.0 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-470-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:41:44 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.57	0.2686	16.51	6.13
2	102.03	0.0617	17.57	16.55
3	122.45	0.0530	21.15	9.59
4	140.15	0.3088	25.86	3.05
5	148.12	0.2332	26.68	3.36
6	158.94	0.0046	27.45	187.16
7	179.51	0.0049	31.05	95.52
8	184.01	0.0508	31.78	25.02
9	188.00	<NA>	32.46	<NA>
10	192.02	0.0419	33.19	25.81
11	205.53	0.0063	35.56	77.51
12	224.16	0.1561	38.79	5.86
13	244.51	0.0030	42.38	155.30
14	248.96	0.0028	43.07	354.41
15	262.09	0.0220	45.37	42.11
16	281.34	0.0072	48.72	188.56
17	289.05	0.0089	50.05	96.66
18	316.85	0.2172	54.87	5.46
19	336.28	0.2197	58.30	5.15
20	346.94	0.0167	60.08	51.39
21	442.87	0.1622	76.72	4.78
22	499.96	0.0026	86.62	299.60
23	587.15	0.2998	101.74	3.24
24	608.11	0.0051	105.38	243.12
25	653.38	0.1321	113.23	8.34
26	675.22	0.1906	117.13	5.98
27	683.38	0.3498	118.48	6.19
28	710.59	0.0015	123.15	694.26
29	759.73	0.3139	131.67	4.38
30	841.91	0.3169	145.93	4.10
31	957.92	0.1942	166.05	7.39
32	997.00	0.2046	172.82	7.45
33	1017.78	0.0123	176.43	109.12
34	1086.59	0.0507	188.36	27.01
35	1178.50	0.0995	204.30	9.29
36	1201.17	0.2018	208.23	6.18
37	1315.19	0.2564	228.01	5.19
38	1430.97	0.0062	248.09	182.61
39	1457.29	0.3386	252.65	4.38
40	1678.27	0.1855	290.97	9.20
41	1740.16	0.4513	301.91	3.08

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1760.73	0.4877	305.24	3.17
43	1854.65	0.4281	321.56	5.44
44	2140.94	0.0694	371.21	22.80
45	2195.79	0.0992	380.73	15.43
46	2316.10	0.1627	401.59	10.07
47	2469.45	0.0170	428.19	105.34
48	2565.33	0.0998	444.82	16.37
49	2627.12	0.1540	455.50	10.67
50	2648.75	0.4470	459.32	3.19
51	2674.27	0.0312	463.71	56.02
52	2699.32	0.3215	468.04	4.32
53	2760.17	0.2396	478.61	7.82
54	3088.15	0.4805	535.49	3.07
55	3178.13	0.4797	551.09	3.07
56	3217.78	0.2020	557.97	8.45
57	3359.08	0.0849	582.47	22.43
58	3415.35	0.0227	592.23	68.14
59	3466.25	0.0316	601.06	58.61
60	3501.56	0.0605	607.18	25.93
61	3539.16	0.4083	613.70	4.46
62	3608.28	0.2752	625.66	6.86
63	3623.72	0.3863	628.35	5.02
64	3670.14	0.0429	636.42	42.60
65	3875.17	0.2081	672.01	10.08
66	3905.62	0.3141	677.21	5.65
67	3996.22	0.0542	693.17	31.99
68	4028.43	0.2688	697.59	19.47

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: NOPI-470-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:41:55 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	106	95.69	16.51	4.04E+03	0.00	2.33E+04
m	2	91-	106	101.79	17.57	1.81E+04	0.00	2.08E+04
	3	118-	126	122.45	21.15	2.38E+03	0.00	2.01E+04
M	4	135-	163	149.62	25.86	1.39E+04	0.00	2.33E+04
m	5	135-	163	154.33	26.68	2.41E+04	0.00	2.46E+04
m	6	135-	163	158.78	27.45	4.23E+05	0.00	2.75E+04
M	7	174-	196	179.55	31.05	9.10E+04	0.00	2.90E+04
m	8	174-	196	183.73	31.78	2.08E+04	0.00	2.87E+04
m	9	174-	196	187.67	32.46	5.48E+03	0.00	2.85E+04
m	10	174-	196	191.87	33.19	9.63E+03	0.00	2.84E+04
	11	199-	210	205.53	35.56	5.16E+04	0.00	4.01E+04
	12	218-	227	224.16	38.79	4.86E+03	0.00	5.54E+04
M	13	238-	254	244.85	42.38	4.23E+05	0.00	5.50E+04
m	14	238-	254	248.83	43.07	7.56E+05	0.00	3.90E+04
	15	258-	266	262.09	45.37	1.04E+04	0.00	2.74E+04
M	16	275-	295	281.42	48.72	2.47E+05	0.00	2.36E+04
m	17	275-	295	289.07	50.05	6.78E+04	0.00	1.86E+04
	18	310-	322	316.85	54.87	2.40E+03	0.00	1.88E+04
M	19	331-	352	336.64	58.30	1.63E+03	0.00	1.45E+04
m	20	331-	352	346.91	60.08	1.40E+04	0.00	1.29E+04
	21	438-	447	442.87	76.72	5.83E+02	0.00	1.96E+04
	22	492-	506	499.96	86.62	3.35E+05	0.00	4.10E+04
	23	583-	591	587.15	101.74	-2.67E+01	0.00	2.43E+04
	24	600-	615	608.11	105.38	2.16E+05	0.00	4.16E+04
	25	648-	660	653.38	113.23	1.10E+03	0.00	3.53E+04
M	26	667-	691	675.87	117.13	3.66E+03	0.00	5.57E+04
m	27	667-	691	683.64	118.48	5.90E+03	0.00	5.48E+04
	28	702-	718	710.59	123.15	1.79E+06	0.00	4.29E+04
	29	754-	767	759.73	131.67	8.78E+02	0.00	2.00E+04
	30	833-	850	841.91	145.93	8.18E+02	0.00	2.42E+04
	31	948-	963	957.92	166.05	2.35E+03	0.00	2.00E+04
	32	987-	1005	997.00	172.82	2.01E+03	0.00	2.14E+04
	33	1008-	1026	1017.78	176.43	4.29E+04	0.00	2.12E+04
	34	1077-	1094	1086.59	188.36	6.12E+03	0.00	1.97E+04
	35	1169-	1184	1178.50	204.30	1.79E+03	0.00	1.82E+04
	36	1195-	1211	1201.17	208.23	1.46E+03	0.00	1.95E+04
	37	1308-	1323	1315.19	228.01	8.70E+02	0.00	1.71E+04
	38	1422-	1440	1430.97	248.09	1.13E+05	0.00	2.12E+04
	39	1449-	1466	1457.29	252.65	2.18E+02	0.00	1.76E+04
	40	1667-	1687	1678.27	290.97	2.27E+03	0.00	1.70E+04
M	41	1732-	1768	1741.31	301.91	9.47E+01	0.00	8.99E+03
m	42	1732-	1768	1760.50	305.24	3.00E+02	0.00	8.71E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1846-	1865	1854.65	321.56	1.59E+03	0.00	1.40E+04
	44	2131-	2152	2140.94	371.21	4.33E+03	0.00	1.48E+04
	45	2186-	2206	2195.79	380.73	2.68E+03	0.00	1.43E+04
	46	2306-	2325	2316.10	401.59	1.30E+03	0.00	1.40E+04
	47	2457-	2481	2469.45	428.19	4.75E+04	0.00	1.64E+04
	48	2552-	2574	2565.33	444.82	3.99E+03	0.00	1.45E+04
M	49	2615-	2711	2626.92	455.50	1.30E+03	0.00	1.41E+04
m	50	2615-	2711	2648.97	459.32	1.10E+02	0.00	1.46E+04
m	51	2615-	2711	2674.29	463.71	1.53E+04	0.00	1.42E+04
m	52	2615-	2711	2699.25	468.04	5.25E+02	0.00	1.39E+04
	53	2750-	2771	2760.17	478.61	1.39E+03	0.00	1.31E+04
	54	3077-	3102	3088.15	535.49	1.54E+02	0.00	1.51E+04
	55	3164-	3192	3178.13	551.09	3.32E+02	0.00	1.45E+04
	56	3205-	3228	3217.78	557.97	1.41E+03	0.00	1.18E+04
	57	3347-	3370	3359.08	582.47	4.48E+03	0.00	1.10E+04
	58	3403-	3430	3415.35	592.23	2.36E+04	0.00	1.28E+04
	59	3454-	3481	3466.25	601.06	1.81E+04	0.00	1.23E+04
	60	3487-	3512	3501.56	607.18	4.72E+03	0.00	1.14E+04
	61	3525-	3550	3539.16	613.70	4.24E+02	0.00	1.09E+04
M	62	3593-	3634	3608.07	625.66	1.53E+03	0.00	1.16E+04
m	63	3593-	3634	3623.58	628.35	6.37E+02	0.00	1.44E+04
	64	3655-	3685	3670.14	636.42	1.16E+04	0.00	1.28E+04
M	65	3860-	3918	3875.34	672.01	2.29E+03	0.00	1.26E+04
m	66	3860-	3918	3905.31	677.21	9.90E+02	0.00	1.62E+04
M	67	3982-	4044	3997.36	693.17	1.14E+04	0.00	7.67E+03
m	68	3982-	4044	4022.85	697.59	6.94E+03	0.00	8.41E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On              :  1-26-96  9:42:39 AM

Sample Title                     : NOPI-471-GAM1 attenuation
Spectrum Description             : NOPI-471-GAM1 attenuation
Sample Identification            : NP471AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  2:00:47 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1993.0 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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* ** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:42:28 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.00	<NA>	10.84	<NA>
2	91.00	0.0000	15.60	3.12
3	95.04	0.1763	16.42	5.76
4	101.60	0.1078	17.51	12.85
5	122.46	0.0499	21.15	10.03
6	148.39	0.1344	26.70	4.31
7	158.87	0.0050	27.44	176.41
8	179.47	0.0052	31.04	94.78
9	184.00	<NA>	31.80	<NA>
10	191.87	0.0462	33.14	24.18
11	205.49	0.0065	35.55	72.44
12	224.34	0.2055	38.82	6.85
13	244.45	0.0031	42.36	160.85
14	248.85	0.0029	43.05	342.84
15	262.01	0.0229	45.35	39.55
16	269.11	0.0760	46.63	12.48
17	281.22	0.0046	48.70	191.14
18	288.96	0.0091	50.03	94.78
19	307.56	0.1135	53.25	4.52
20	316.78	0.2259	54.83	4.19
21	336.56	0.2373	58.29	4.34
22	346.86	0.0172	60.06	49.92
23	365.79	0.1022	63.35	13.75
24	432.24	0.0757	74.88	16.12
25	445.21	0.0498	77.11	23.84
26	458.42	0.2872	79.38	3.44
27	483.82	0.2079	83.82	4.31
28	499.83	0.0044	86.60	291.17
29	534.51	0.1165	92.62	8.03
30	546.48	0.1463	94.71	7.23
31	568.35	0.0856	98.48	12.63
32	607.98	0.0054	105.36	240.53
33	653.26	0.1129	113.21	10.54
34	675.22	0.1540	117.18	7.91
35	683.54	0.3438	118.48	4.48
36	710.46	0.0015	123.13	673.38
37	759.54	0.2283	131.64	4.98
38	867.51	0.3176	150.37	3.17
39	956.79	0.3876	165.85	4.56
40	997.30	0.1586	172.88	6.83
41	1017.58	0.0131	176.39	104.76

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1073.89	0.1628	186.12	8.93
43	1086.38	0.0520	188.34	25.33
44	1178.32	0.2109	204.27	7.42
45	1201.07	0.2165	208.20	6.81
46	1209.09	0.4456	209.54	3.00
47	1396.63	0.1410	242.13	9.50
48	1430.77	0.0084	248.05	178.14
49	1457.27	0.3023	252.65	4.39
50	1677.84	0.2181	290.90	9.13
51	1703.66	0.0754	295.38	19.63
52	1854.80	0.4536	321.59	5.01
53	2030.93	0.0638	352.14	24.95
54	2140.70	0.0734	371.17	22.54
55	2195.44	0.1205	380.67	15.39
56	2315.20	0.2169	401.44	8.48
57	2469.09	0.0138	428.12	107.81
58	2564.83	0.1014	444.73	17.97
59	2626.66	0.2292	455.45	7.54
60	2673.99	0.0259	463.65	55.90
61	2699.04	0.4011	467.99	3.00
62	2760.11	0.1804	478.60	8.64
63	2867.38	0.5037	497.20	3.23
64	3217.38	0.1845	557.90	9.54
65	3289.01	0.4133	570.32	3.14
66	3358.60	0.0702	582.39	22.47
67	3414.84	0.0275	592.14	66.34
68	3465.83	0.0316	600.99	58.76
69	3501.02	0.0808	607.12	24.66
70	3516.58	0.1077	609.73	16.03
71	3607.88	0.2181	625.66	8.22
72	3625.00	0.4380	628.47	3.48
73	3669.63	0.0454	636.33	40.09
74	3747.27	0.5696	649.80	3.36
75	3874.33	0.1858	671.88	9.42
76	3904.70	0.4357	677.03	4.17
77	3995.36	0.0653	692.82	30.80
78	4029.14	0.1140	698.68	19.89

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T          *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:42:39 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.00	10.84	4.88E+02	0.00	1.43E+04
M	2	87-	105	90.46	15.60	2.55E+03	0.00	2.18E+04
m	3	87-	105	95.20	16.42	7.47E+03	0.00	2.62E+04
m	4	87-	105	101.43	17.51	1.95E+04	0.00	2.18E+04
	5	119-	126	122.46	21.15	1.90E+03	0.00	1.88E+04
M	6	143-	163	154.45	26.70	2.12E+04	0.00	2.88E+04
m	7	143-	163	158.70	27.44	3.89E+05	0.00	2.93E+04
M	8	174-	196	179.45	31.04	8.98E+04	0.00	3.17E+04
m	9	174-	196	183.83	31.80	2.14E+04	0.00	2.83E+04
m	10	174-	196	191.60	33.14	9.72E+03	0.00	3.13E+04
	11	199-	210	205.49	35.55	4.85E+04	0.00	4.01E+04
	12	218-	227	224.34	38.82	4.55E+03	0.00	5.42E+04
M	13	238-	254	244.75	42.36	4.06E+05	0.00	5.25E+04
m	14	238-	254	248.73	43.05	7.27E+05	0.00	3.75E+04
M	15	258-	294	262.01	45.35	1.11E+04	0.00	3.14E+04
m	16	258-	294	269.35	46.63	2.21E+03	0.00	3.03E+04
m	17	258-	294	281.31	48.70	2.37E+05	0.00	2.33E+04
m	18	258-	294	288.95	50.03	6.56E+04	0.00	1.87E+04
M	19	302-	321	307.52	53.25	7.55E+02	0.00	1.82E+04
m	20	302-	321	316.67	54.83	1.56E+03	0.00	1.65E+04
M	21	330-	352	336.57	58.29	1.62E+03	0.00	1.46E+04
m	22	330-	352	346.80	60.06	1.38E+04	0.00	1.48E+04
	23	359-	370	365.79	63.35	2.57E+03	0.00	1.84E+04
M	24	426-	462	432.25	74.88	3.73E+03	0.00	2.38E+04
m	25	426-	462	445.10	77.11	6.82E+03	0.00	2.28E+04
m	26	426-	462	458.22	79.38	2.80E+02	0.00	2.15E+04
	27	476-	488	483.82	83.82	1.12E+03	0.00	3.40E+04
	28	492-	506	499.83	86.60	3.33E+05	0.00	4.12E+04
M	29	528-	553	534.53	92.62	3.10E+03	0.00	3.86E+04
m	30	528-	553	546.61	94.71	2.54E+03	0.00	3.75E+04
	31	561-	575	568.35	98.48	4.17E+03	0.00	3.95E+04
	32	600-	615	607.98	105.36	2.14E+05	0.00	4.16E+04
	33	648-	659	653.26	113.21	1.65E+03	0.00	3.25E+04
M	34	667-	691	676.14	117.18	3.87E+03	0.00	5.46E+04
m	35	667-	691	683.65	118.48	5.56E+03	0.00	5.34E+04
	36	702-	718	710.46	123.13	1.76E+06	0.00	4.23E+04
	37	752-	766	759.54	131.64	7.34E+02	0.00	2.20E+04
	38	861-	872	867.51	150.37	5.02E+02	0.00	1.61E+04
	39	949-	964	956.79	165.85	2.07E+03	0.00	1.99E+04
	40	990-	1006	997.30	172.88	8.90E+02	0.00	2.02E+04
	41	1009-	1025	1017.58	176.39	4.29E+04	0.00	1.92E+04
M	42	1065-	1095	1073.68	186.12	2.42E+03	0.00	1.71E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1065-	1095	1086.45	188.34	5.93E+03	0.00	1.60E+04
	44	1168-	1188	1178.32	204.27	2.02E+03	0.00	2.40E+04
M	45	1192-	1218	1200.99	208.20	1.21E+03	0.00	1.71E+04
m	46	1192-	1218	1208.71	209.54	5.02E+02	0.00	1.59E+04
	47	1386-	1404	1396.63	242.13	1.65E+03	0.00	2.17E+04
	48	1422-	1440	1430.77	248.05	1.12E+05	0.00	2.11E+04
	49	1450-	1465	1457.27	252.65	3.85E+02	0.00	1.58E+04
	50	1667-	1684	1677.84	290.90	2.42E+03	0.00	1.46E+04
	51	1695-	1714	1703.66	295.38	3.48E+03	0.00	1.61E+04
	52	1845-	1865	1854.80	321.59	1.51E+03	0.00	1.51E+04
	53	2022-	2040	2030.93	352.14	5.23E+03	0.00	1.27E+04
	54	2129-	2151	2140.70	371.17	4.09E+03	0.00	1.55E+04
	55	2185-	2207	2195.44	380.67	3.17E+03	0.00	1.54E+04
	56	2306-	2324	2315.20	401.44	1.31E+03	0.00	1.34E+04
	57	2456-	2482	2469.09	428.12	4.79E+04	0.00	1.73E+04
	58	2551-	2577	2564.83	444.73	4.63E+03	0.00	1.66E+04
	59	2616-	2638	2626.66	455.45	1.15E+03	0.00	1.44E+04
M	60	2661-	2709	2673.92	463.65	1.58E+04	0.00	1.39E+04
m	61	2661-	2709	2698.94	467.99	2.00E+02	0.00	1.40E+04
	62	2749-	2771	2760.11	478.60	1.38E+03	0.00	1.35E+04
	63	2855-	2877	2867.38	497.20	5.73E+01	0.00	1.40E+04
	64	3203-	3228	3217.38	557.90	1.10E+03	0.00	1.31E+04
	65	3278-	3300	3289.01	570.32	-2.91E+02	0.00	1.12E+04
	66	3347-	3369	3358.60	582.39	3.96E+03	0.00	1.09E+04
	67	3403-	3428	3414.84	592.14	2.35E+04	0.00	1.22E+04
	68	3451-	3478	3465.83	600.99	1.79E+04	0.00	1.27E+04
M	69	3488-	3528	3501.19	607.12	4.76E+03	0.00	1.10E+04
m	70	3488-	3528	3516.26	609.73	2.83E+03	0.00	1.25E+04
M	71	3593-	3636	3608.08	625.66	1.07E+03	0.00	1.12E+04
m	72	3593-	3636	3624.28	628.47	3.46E+02	0.00	1.14E+04
	73	3654-	3684	3669.63	636.33	1.11E+04	0.00	1.32E+04
	74	3735-	3759	3747.27	649.80	1.74E+02	0.00	1.05E+04
M	75	3862-	3916	3874.61	671.88	1.91E+03	0.00	1.08E+04
m	76	3862-	3916	3904.31	677.03	8.96E+02	0.00	1.49E+04
	77	3981-	4010	3995.36	692.82	6.75E+03	0.00	1.16E+04
	78	4017-	4045	4029.14	698.68	3.19E+03	0.00	2.94E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:43:23 AM

Sample Title                     : NOPI-472-GAM1 attenuation
Spectrum Description             : NOPI-472-GAM1 attenuation
Sample Identification            : NP472AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  2:35:07 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1985.2 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-472-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:43:14 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.57	0.1340	16.47	3.92
2	101.82	0.0773	17.56	13.06
3	122.47	0.1503	21.15	7.07
4	158.89	0.0057	27.47	154.19
5	179.48	0.0057	31.04	83.58
6	184.00	<NA>	31.76	<NA>
7	188.00	<NA>	32.46	<NA>
8	191.82	0.0473	33.17	23.78
9	205.49	0.0069	35.55	67.46
10	224.17	0.1331	38.79	7.22
11	244.45	0.0033	42.36	155.34
12	248.85	0.0030	43.05	334.73
13	261.98	0.0236	45.35	38.72
14	281.24	0.0048	48.70	186.32
15	288.96	0.0092	50.03	94.90
16	335.55	0.3630	58.25	3.25
17	346.88	0.0173	60.06	49.45
18	499.83	0.0044	86.60	290.60
19	607.97	0.0054	105.35	239.84
20	631.17	0.3250	109.38	3.80
21	653.28	0.1275	113.21	8.88
22	674.98	0.1032	117.11	8.05
23	683.58	0.2624	118.43	5.39
24	710.46	0.0015	123.13	675.62
25	759.04	0.4382	131.55	3.75
26	842.72	0.2920	146.07	3.82
27	901.31	0.5166	156.23	3.47
28	956.61	0.5065	165.82	4.70
29	997.11	0.2248	172.84	6.96
30	1017.56	0.0132	176.39	104.36
31	1031.97	0.2541	178.84	3.12
32	1086.40	0.0496	188.33	26.15
33	1178.26	0.1470	204.26	8.82
34	1200.96	0.2067	208.20	6.00
35	1315.58	0.4002	228.07	3.77
36	1430.75	0.0083	248.05	181.31
37	1509.19	0.3592	261.65	3.37
38	1677.75	0.2897	290.88	7.17
39	1854.77	0.4662	321.58	4.28
40	2140.71	0.0697	371.17	23.66
41	2195.50	0.0704	380.68	18.31

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	2315.22	0.1799	401.44	9.04
43	2469.07	0.0136	428.12	107.81
44	2564.90	0.0763	444.74	19.98
45	2627.21	0.3110	455.55	5.96
46	2673.87	0.0258	463.64	55.69
47	2698.18	0.4167	467.95	3.38
48	2759.66	0.1919	478.52	8.62
49	2989.39	0.4433	518.36	3.21
50	3217.39	0.2491	557.90	7.49
51	3358.65	0.0941	582.40	19.65
52	3414.79	0.0276	592.14	66.70
53	3465.81	0.0318	600.98	57.88
54	3500.97	0.0773	607.08	24.00
55	3539.09	0.4938	613.69	3.87
56	3608.02	0.2077	625.65	9.56
57	3669.64	0.0444	636.33	40.41
58	3816.65	0.4757	661.83	3.03
59	3874.99	0.1926	672.01	8.73
60	3903.11	0.5682	676.84	3.67
61	3995.57	0.0641	692.86	31.33
62	4028.69	0.1289	698.60	19.17

F[illegible]rs quoted at 1.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-472-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:43:23 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.48	16.47	2.71E+03	206.94	2.07E+04
m	2	91-	105	101.72	17.56	1.23E+04	330.06	1.83E+04
	3	118-	126	122.47	21.15	1.83E+03	205.34	1.89E+04
	4	153-	163	158.89	27.47	2.89E+05	621.92	4.11E+04
M	5	174-	196	179.45	31.04	7.02E+04	745.41	2.68E+04
m	6	174-	196	183.64	31.76	1.62E+04	477.20	2.69E+04
m	7	174-	196	187.65	32.46	5.07E+03	372.62	2.70E+04
m	8	174-	196	191.73	33.17	8.35E+03	396.48	2.70E+04
	9	199-	210	205.49	35.55	4.29E+04	371.29	3.79E+04
	10	218-	227	224.17	38.79	4.44E+03	351.89	5.17E+04
M	11	238-	254	244.75	42.36	3.79E+05	7750.86	5.01E+04
m	12	238-	254	248.73	43.05	6.83E+05	7775.45	3.58E+04
	13	258-	266	261.98	45.35	9.31E+03	254.74	2.60E+04
M	14	275-	294	281.31	48.70	2.29E+05	1588.90	2.23E+04
m	15	275-	294	288.96	50.03	6.29E+04	1509.66	1.78E+04
M	16	331-	352	336.34	58.25	9.96E+02	172.32	1.41E+04
m	17	331-	352	346.81	60.06	1.36E+04	376.12	1.36E+04
	18	492-	506	499.83	86.60	3.29E+05	666.30	4.01E+04
	19	600-	615	607.97	105.35	2.13E+05	578.80	4.07E+04
	20	626-	639	631.17	109.38	6.13E+02	311.70	3.50E+04
	21	648-	661	653.28	113.21	1.50E+03	322.86	3.72E+04
M	22	666-	691	675.76	117.11	3.65E+03	331.79	5.49E+04
m	23	666-	691	683.36	118.43	5.32E+03	415.04	5.46E+04
	24	702-	718	710.46	123.13	1.77E+06	1377.76	4.17E+04
	25	752-	767	759.04	131.55	8.17E+02	259.91	2.22E+04
	26	837-	847	842.72	146.07	4.05E+02	186.95	1.45E+04
	27	896-	908	901.31	156.23	1.69E+02	205.23	1.59E+04
	28	947-	965	956.61	165.82	2.57E+03	281.36	2.27E+04
	29	989-	1006	997.11	172.84	9.00E+02	260.43	2.05E+04
M	30	1008-	1037	1017.54	176.39	4.23E+04	460.50	1.53E+04
m	31	1008-	1037	1031.69	178.84	1.05E+02	90.20	1.43E+04
	32	1079-	1094	1086.40	188.33	5.48E+03	242.29	1.77E+04
	33	1172-	1185	1178.26	204.26	1.56E+03	212.27	1.58E+04
	34	1194-	1207	1200.96	208.20	1.14E+03	214.51	1.63E+04
	35	1308-	1322	1315.58	228.07	7.22E+02	215.57	1.59E+04
	36	1422-	1440	1430.75	248.05	1.12E+05	427.90	2.10E+04
	37	1502-	1517	1509.19	261.65	2.05E+02	213.22	1.50E+04
	38	1666-	1687	1677.75	290.88	2.09E+03	260.60	1.75E+04
	39	1846-	1863	1854.77	321.58	1.54E+03	205.23	1.25E+04
	40	2131-	2149	2140.71	371.17	4.02E+03	215.75	1.26E+04
	41	2186-	2204	2195.50	380.68	3.06E+03	212.73	1.25E+04
	42	2306-	2324	2315.22	401.44	1.31E+03	214.18	1.32E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	2456-	2482	2469.07	428.12	4.82E+04	351.25	1.72E+04
	44	2552-	2577	2564.90	444.74	4.44E+03	267.97	1.58E+04
	45	2616-	2637	2627.21	455.55	1.16E+03	224.59	1.31E+04
M	46	2662-	2711	2673.87	463.64	1.61E+04	479.75	1.36E+04
m	47	2662-	2711	2698.70	467.95	4.73E+02	84.43	1.41E+04
	48	2746-	2769	2759.66	478.52	1.86E+03	239.11	1.38E+04
	49	2979-	2999	2989.39	518.36	4.26E+01	219.19	1.32E+04
	50	3203-	3229	3217.39	557.90	1.45E+03	241.97	1.30E+04
	51	3346-	3369	3358.65	582.40	4.06E+03	221.07	1.12E+04
	52	3400-	3429	3414.79	592.14	2.37E+04	294.33	1.32E+04
	53	3453-	3480	3465.81	600.98	1.82E+04	271.04	1.22E+04
	54	3487-	3512	3500.97	607.08	4.87E+03	230.51	1.14E+04
	55	3524-	3550	3539.09	613.69	5.21E+02	221.94	1.11E+04
	56	3597-	3619	3608.02	625.65	1.12E+03	199.10	9.91E+03
	57	3657-	3683	3669.64	636.33	1.07E+04	248.99	1.17E+04
	58	3801-	3828	3816.65	661.83	-2.38E+02	233.99	1.22E+04
M	59	3861-	3916	3875.34	672.01	1.43E+03	316.51	1.14E+04
m	60	3861-	3916	3903.23	676.84	5.51E+02	134.34	1.31E+04
	61	3980-	4009	3995.57	692.86	7.38E+03	245.94	1.12E+04
	62	4016-	4044	4028.69	698.60	3.21E+03	148.02	2.97E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:44:42 AM

Sample Title                     : NOPI-473-GAM1 attenuation
Spectrum Description             : NOPI-473-GAM1 attenuation
Sample Identification            : NP473AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  3:09:17 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1989.7 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* ** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-473-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:44:31 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	94.64	0.4611	16.41	4.45
2	101.75	0.1149	17.52	13.14
3	117.00	<NA>	20.14	<NA>
4	122.32	0.1205	21.12	8.48
5	148.36	0.1210	26.70	5.05
6	158.85	0.0053	27.43	168.28
7	179.46	0.0054	31.03	92.24
8	184.00	<NA>	31.76	<NA>
9	188.00	<NA>	32.43	<NA>
10	191.75	0.0462	33.16	23.58
11	205.48	0.0066	35.55	72.01
12	224.00	0.1382	38.76	6.25
13	244.43	0.0032	42.36	163.40
14	248.81	0.0030	43.05	337.19
15	261.94	0.0227	45.34	40.85
16	269.10	0.1280	46.67	7.42
17	281.20	0.0046	48.70	190.61
18	288.95	0.0092	50.02	93.42
19	316.32	0.2485	54.77	5.45
20	335.61	0.3263	58.19	4.00
21	346.81	0.0183	60.05	47.60
22	365.50	0.1354	63.30	9.36
23	432.24	0.0800	74.86	11.02
24	445.21	0.0821	77.09	14.66
25	467.78	0.2045	81.04	4.09
26	499.79	0.0043	86.59	289.93
27	534.83	0.1676	92.64	6.87
28	546.68	0.2490	94.70	4.35
29	568.26	0.1386	98.47	8.98
30	607.94	0.0053	105.35	240.99
31	653.28	0.1380	113.21	8.27
32	675.00	0.1218	117.12	6.46
33	683.68	0.3064	118.47	6.04
34	710.43	0.0015	123.12	683.09
35	759.48	0.4746	131.63	3.66
36	778.40	0.2836	134.91	3.86
37	841.86	0.4269	145.92	3.16
38	956.78	0.5210	165.85	4.67
39	997.17	0.2437	172.85	6.37
40	1017.51	0.0092	176.38	98.41
41	1073.09	0.3453	186.03	4.35

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1086.47	0.0346	188.33	26.90
43	1178.09	0.1372	204.23	9.85
44	1201.07	0.1906	208.21	7.41
45	1315.78	0.3295	228.11	3.64
46	1396.02	0.2262	242.02	5.83
47	1430.69	0.0082	248.04	179.03
48	1458.29	0.4718	252.82	3.19
49	1677.56	0.3190	290.85	6.63
50	1703.27	0.1399	295.31	10.87
51	1759.15	0.4164	305.00	3.17
52	1853.55	0.4348	321.37	4.00
53	2030.72	0.0931	352.10	17.75
54	2140.56	0.0545	371.15	24.13
55	2195.48	0.0749	380.67	17.22
56	2315.08	0.1922	401.41	7.85
57	2469.00	0.0137	428.11	107.34
58	2489.36	0.3417	431.64	3.00
59	2564.93	0.0992	444.75	18.03
60	2627.30	0.2240	455.56	7.12
61	2673.84	0.0318	463.64	55.75
62	2759.70	0.1879	478.52	8.71
63	3217.49	0.1921	557.92	8.69
64	3358.40	0.0731	582.36	21.56
65	3414.70	0.0276	592.12	67.33
66	3465.66	0.0317	600.96	57.64
67	3500.91	0.0751	607.09	25.60
68	3516.62	0.2224	609.66	7.67
69	3607.60	0.2074	625.57	8.80
70	3669.68	0.0446	636.34	40.20
71	3749.18	0.5406	650.13	3.48
72	3874.78	0.2112	671.89	9.24
73	3904.51	0.3592	677.01	5.54
74	3944.91	0.4671	684.07	3.53
75	3995.42	0.0645	692.83	31.12
76	4028.91	0.1077	698.64	19.74

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-473-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:44:42 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	90-	105	95.13	16.41	4.61E+03	454.04	2.46E+04
m	2	90-	105	101.53	17.52	1.62E+04	525.94	2.17E+04
M	3	113-	126	116.60	20.14	8.66E+02	131.30	1.75E+04
m	4	113-	126	122.27	21.12	2.20E+03	235.43	1.98E+04
M	5	143-	163	154.45	26.70	1.97E+04	4530.60	2.79E+04
m	6	143-	163	158.67	27.43	3.52E+05	4589.88	2.83E+04
M	7	174-	196	179.43	31.03	7.91E+04	731.34	2.79E+04
m	8	174-	196	183.60	31.76	1.84E+04	461.35	2.76E+04
m	9	174-	196	187.51	32.43	5.49E+03	351.33	3.06E+04
m	10	174-	196	191.67	33.16	9.02E+03	372.13	2.75E+04
	11	199-	210	205.48	35.55	4.60E+04	377.76	3.87E+04
	12	218-	226	224.00	38.76	3.87E+03	328.31	4.76E+04
M	13	238-	254	244.72	42.36	3.96E+05	7540.30	5.20E+04
m	14	238-	254	248.70	43.05	7.10E+05	7566.46	4.33E+04
M	15	258-	294	261.92	45.34	1.08E+04	942.55	3.07E+04
m	16	258-	294	269.59	46.67	9.22E+02	739.98	2.97E+04
m	17	258-	294	281.27	48.70	2.34E+05	1871.22	2.27E+04
m	18	258-	294	288.94	50.02	6.41E+04	1486.60	1.82E+04
	19	312-	322	316.32	54.77	1.20E+03	200.68	1.64E+04
M	20	330-	352	336.04	58.19	1.09E+03	149.29	1.32E+04
m	21	330-	352	346.76	60.05	1.32E+04	380.69	1.44E+04
	22	358-	371	365.50	63.30	1.87E+03	242.71	2.07E+04
M	23	425-	451	432.14	74.86	2.61E+03	217.57	2.47E+04
m	24	425-	451	445.02	77.09	4.74E+03	340.77	2.58E+04
	25	463-	471	467.78	81.04	-9.25E+01	207.98	2.03E+04
	26	492-	506	499.79	86.59	3.32E+05	670.67	4.09E+04
M	27	528-	553	534.64	92.64	2.31E+03	340.04	3.75E+04
m	28	528-	553	546.56	94.70	1.60E+03	247.78	3.69E+04
	29	561-	574	568.26	98.47	2.26E+03	321.62	3.67E+04
	30	599-	615	607.94	105.35	2.14E+05	592.57	4.39E+04
	31	645-	658	653.28	113.21	2.07E+03	322.94	3.71E+04
M	32	667-	691	675.81	117.12	3.73E+03	336.79	5.44E+04
m	33	667-	691	683.62	118.47	5.68E+03	421.62	5.36E+04
	34	702-	718	710.43	123.12	1.77E+06	1376.82	4.18E+04
	35	753-	767	759.48	131.63	9.90E+02	248.87	2.11E+04
	36	773-	784	778.40	134.91	3.84E+02	205.98	1.67E+04
	37	836-	849	841.86	145.92	6.68E+01	229.25	1.90E+04
	38	947-	965	956.78	165.85	2.55E+03	283.43	2.30E+04
	39	991-	1003	997.17	172.85	7.13E+02	203.66	1.55E+04
	40	1008-	1026	1017.51	176.38	4.18E+04	339.64	2.18E+04
M	41	1064-	1095	1073.17	186.03	1.20E+03	136.91	1.46E+04
m	42	1064-	1095	1086.43	188.33	5.78E+03	376.19	1.58E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1169-	1184	1178.09	204.23	1.43E+03	239.37	1.86E+04
	44	1191-	1207	1201.07	208.21	1.13E+03	251.90	1.99E+04
	45	1307-	1322	1315.78	228.11	5.22E+02	229.18	1.73E+04
	46	1386-	1404	1396.02	242.02	9.22E+02	270.41	2.13E+04
	47	1422-	1440	1430.69	248.04	1.12E+05	427.58	2.09E+04
	48	1448-	1465	1458.29	252.82	5.10E+02	241.17	1.77E+04
	49	1668-	1684	1677.56	290.85	1.73E+03	212.10	1.38E+04
	50	1692-	1714	1703.27	295.31	2.31E+03	268.33	1.80E+04
	51	1748-	1769	1759.15	305.00	1.93E+02	246.72	1.62E+04
	52	1845-	1864	1853.55	321.37	1.44E+03	226.09	1.42E+04
	53	2020-	2039	2030.72	352.10	3.03E+03	224.12	1.35E+04
	54	2131-	2152	2140.56	371.15	4.07E+03	243.73	1.47E+04
	55	2185-	2207	2195.48	380.67	3.32E+03	248.62	1.51E+04
	56	2305-	2325	2315.08	401.41	1.29E+03	233.91	1.47E+04
M	57	2455-	2498	2469.01	428.11	4.82E+04	492.80	1.40E+04
m	58	2455-	2498	2489.34	431.64	1.20E+02	84.11	1.31E+04
	59	2553-	2574	2564.93	444.75	4.21E+03	233.83	1.34E+04
	60	2614-	2638	2627.30	455.56	1.28E+03	254.67	1.54E+04
	61	2662-	2683	2673.84	463.64	1.58E+04	255.42	1.32E+04
	62	2749-	2769	2759.70	478.52	1.10E+03	216.29	1.26E+04
	63	3206-	3229	3217.49	557.92	1.05E+03	220.58	1.19E+04
	64	3344-	3372	3358.40	582.36	4.38E+03	256.66	1.33E+04
	65	3399-	3429	3414.70	592.12	2.39E+04	303.92	1.41E+04
	66	3451-	3479	3465.66	600.96	1.80E+04	279.29	1.30E+04
M	67	3489-	3527	3501.04	607.09	4.77E+03	265.80	1.05E+04
m	68	3489-	3527	3515.85	609.66	1.31E+03	100.68	1.17E+04
	69	3596-	3618	3607.60	625.57	1.17E+03	199.99	1.00E+04
	70	3654-	3682	3669.68	636.34	1.09E+04	261.68	1.25E+04
	71	3737-	3762	3749.18	650.13	2.11E+02	216.40	1.09E+04
M	72	3860-	3919	3874.65	671.89	1.62E+03	340.81	1.14E+04
m	73	3860-	3919	3904.20	677.01	6.06E+02	141.18	1.41E+04
	74	3932-	3956	3944.91	684.07	6.15E+01	197.03	9.39E+03
	75	3979-	4010	3995.42	692.83	7.31E+03	258.07	1.19E+04
	76	4016-	4044	4028.91	698.64	3.35E+03	147.66	2.96E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:45:52 AM

Sample Title                     : NOPI-474-GAM1 attenuation
Spectrum Description             : NOPI-474-GAM1 attenuation
Sample Identification            : NP474AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  3:52:07 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1995.9 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-474-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:45:41 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.25	0.2927	16.50	4.70
2	101.82	0.0607	17.54	16.35
3	122.49	0.0503	21.16	9.33
4	148.46	0.3568	26.70	3.38
5	158.85	0.0047	27.43	190.79
6	179.45	0.0111	31.03	101.00
7	184.00	<NA>	31.76	<NA>
8	188.00	<NA>	32.44	<NA>
9	191.80	0.0440	33.16	23.50
10	205.48	0.0062	35.54	77.53
11	218.40	0.2804	38.07	3.52
12	224.41	0.1474	38.93	7.04
13	232.03	0.2909	40.21	3.69
14	244.43	0.0031	42.35	169.67
15	248.82	0.0028	43.04	351.64
16	261.94	0.0223	45.34	39.72
17	281.20	0.0044	48.70	197.73
18	288.95	0.0089	50.02	95.82
19	316.62	0.1737	54.83	6.06
20	335.93	0.3050	58.23	5.25
21	346.84	0.0175	60.06	49.86
22	443.36	0.2651	76.81	4.28
23	499.78	0.0042	86.59	293.09
24	607.93	0.0052	105.35	242.60
25	653.55	0.1327	113.26	8.34
26	675.12	0.1370	117.13	9.44
27	683.47	0.2798	118.46	4.96
28	710.41	0.0015	123.12	691.78
29	759.31	0.2191	131.60	4.90
30	778.17	0.4402	134.87	3.41
31	867.50	1.1595	150.36	4.08
32	955.67	0.4807	165.65	3.84
33	997.17	0.2273	172.85	6.78
34	1017.50	0.0089	176.38	103.04
35	1086.29	0.0457	188.31	28.84
36	1178.06	0.1400	204.22	9.58
37	1200.60	0.1370	208.13	7.08
38	1314.79	0.3191	227.94	4.95
39	1430.65	0.0082	248.03	178.51
40	1456.76	0.4150	252.56	3.19
41	1566.74	0.3484	271.63	3.29

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1677.16	0.1778	290.78	8.06
43	1718.97	0.3777	298.03	3.24
44	1760.09	0.5377	305.16	3.03
45	1853.26	0.5900	321.32	4.98
46	2140.68	0.0689	371.17	24.09
47	2195.59	0.0766	380.69	17.45
48	2315.34	0.2212	401.46	8.48
49	2468.94	0.0137	428.10	107.55
50	2564.86	0.0794	444.73	19.29
51	2626.71	0.1747	455.46	9.47
52	2645.35	0.4386	458.88	3.60
53	2673.70	0.0319	463.61	54.78
54	2700.65	0.4268	468.32	3.63
55	2759.64	0.1726	478.51	9.46
56	2912.65	0.4434	505.05	3.13
57	3217.71	0.2087	557.96	8.09
58	3358.42	0.0880	582.36	21.21
59	3414.61	0.0228	592.10	66.94
60	3465.62	0.0266	600.95	57.45
61	3501.01	0.0727	607.09	25.31
62	3539.08	0.6340	613.69	3.69
63	3607.69	0.1868	625.61	8.75
64	3622.65	0.3895	628.09	3.77
65	3669.56	0.0518	636.32	39.61
66	3748.24	0.3871	649.96	3.73
67	3874.14	0.1838	671.86	9.83
68	3904.27	0.5163	676.99	4.01
69	3995.31	0.0552	692.81	31.22
70	4028.62	0.1787	698.59	18.95

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-474-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:45:51 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.60	16.50	4.38E+03	0.00	2.18E+04
m	2	91-	105	101.65	17.54	1.93E+04	0.00	1.93E+04
	3	118-	126	122.49	21.16	2.47E+03	0.00	2.03E+04
M	4	143-	163	154.43	26.70	2.47E+04	0.00	2.95E+04
m	5	143-	163	158.67	27.43	4.54E+05	0.00	2.99E+04
M	6	174-	196	179.42	31.03	9.59E+04	0.00	2.94E+04
m	7	174-	196	183.60	31.76	2.19E+04	0.00	2.89E+04
m	8	174-	196	187.57	32.44	5.85E+03	0.00	3.19E+04
m	9	174-	196	191.71	33.16	9.79E+03	0.00	2.86E+04
M	10	199-	254	205.43	35.54	5.85E+04	0.00	3.10E+04
m	11	199-	254	219.98	38.07	1.04E+04	0.00	2.79E+04
m	12	199-	254	224.98	38.93	1.60E+04	0.00	2.79E+04
m	13	199-	254	232.36	40.21	1.86E+04	0.00	3.10E+04
m	14	199-	254	244.66	42.35	4.63E+05	0.00	3.09E+04
m	15	199-	254	248.68	43.04	8.12E+05	0.00	3.09E+04
	16	257-	266	261.94	45.34	8.59E+03	0.00	3.27E+04
M	17	275-	294	281.28	48.70	2.51E+05	0.00	2.39E+04
m	18	275-	294	288.93	50.02	6.82E+04	0.00	1.90E+04
	19	310-	322	316.62	54.83	2.71E+03	0.00	1.92E+04
M	20	331-	352	336.25	58.23	1.51E+03	0.00	1.48E+04
m	21	331-	352	346.77	60.06	1.39E+04	0.00	1.44E+04
	22	437-	447	443.36	76.81	4.57E+02	0.00	2.19E+04
	23	492-	506	499.78	86.59	3.38E+05	0.00	4.12E+04
	24	599-	615	607.93	105.35	2.19E+05	0.00	4.43E+04
	25	645-	658	653.55	113.26	2.12E+03	0.00	3.66E+04
M	26	667-	691	675.89	117.13	4.89E+03	0.00	5.39E+04
m	27	667-	691	683.52	118.46	6.51E+03	0.00	5.32E+04
	28	702-	718	710.41	123.12	1.80E+06	0.00	4.28E+04
	29	754-	764	759.31	131.60	6.47E+02	0.00	1.61E+04
	30	772-	784	778.17	134.87	5.41E+02	0.00	1.80E+04
	31	859-	872	867.50	150.36	8.87E+02	0.00	1.83E+04
	32	947-	964	955.67	165.65	2.60E+03	0.00	2.27E+04
	33	989-	1004	997.17	172.85	1.24E+03	0.00	1.87E+04
	34	1008-	1026	1017.50	176.38	4.37E+04	0.00	2.11E+04
	35	1079-	1095	1086.29	188.31	5.58E+03	0.00	1.93E+04
	36	1172-	1187	1178.06	204.22	1.35E+03	0.00	1.87E+04
	37	1194-	1210	1200.60	208.13	1.32E+03	0.00	1.96E+04
	38	1306-	1322	1314.79	227.94	1.11E+03	0.00	1.83E+04
	39	1422-	1440	1430.65	248.03	1.13E+05	0.00	2.08E+04
	40	1449-	1465	1456.76	252.56	-1.95E+02	0.00	1.72E+04
	41	1559-	1573	1566.74	271.63	-2.44E+02	0.00	1.33E+04
	42	1668-	1688	1677.16	290.78	2.11E+03	0.00	1.72E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1710-	1726	1718.97	298.03	1.73E+02	0.00	1.35E+04
	44	1752-	1769	1760.09	305.16	1.26E+02	0.00	1.34E+04
	45	1842-	1864	1853.26	321.32	1.44E+03	0.00	1.64E+04
	46	2131-	2150	2140.68	371.17	4.30E+03	0.00	1.35E+04
	47	2186-	2204	2195.59	380.69	2.51E+03	0.00	1.29E+04
	48	2306-	2324	2315.34	401.46	1.20E+03	0.00	1.33E+04
	49	2455-	2481	2468.94	428.10	4.82E+04	0.00	1.76E+04
	50	2553-	2574	2564.86	444.73	3.57E+03	0.00	1.41E+04
M	51	2616-	2657	2626.68	455.46	1.43E+03	0.00	1.33E+04
m	52	2616-	2657	2646.44	458.88	3.47E+02	0.00	1.37E+04
M	53	2662-	2713	2673.68	463.61	1.60E+04	0.00	1.40E+04
m	54	2662-	2713	2700.86	468.32	5.19E+02	0.00	1.43E+04
	55	2748-	2769	2759.64	478.51	1.06E+03	0.00	1.33E+04
	56	2902-	2924	2912.65	505.05	-1.67E+02	0.00	1.44E+04
	57	3206-	3228	3217.71	557.96	1.27E+03	0.00	1.15E+04
	58	3345-	3369	3358.42	582.36	4.53E+03	0.00	1.14E+04
	59	3399-	3427	3414.61	592.10	2.38E+04	0.00	1.32E+04
	60	3450-	3477	3465.62	600.95	1.84E+04	0.00	1.26E+04
	61	3488-	3512	3501.01	607.09	5.13E+03	0.00	1.07E+04
	62	3528-	3550	3539.08	613.69	1.39E+02	0.00	9.98E+03
M	63	3596-	3633	3607.82	625.61	1.00E+03	0.00	9.61E+03
m	64	3596-	3633	3622.11	628.09	3.52E+02	0.00	1.10E+04
	65	3654-	3682	3669.56	636.32	1.16E+04	0.00	1.24E+04
	66	3733-	3760	3748.24	649.96	1.76E+02	0.00	1.20E+04
M	67	3862-	3916	3874.49	671.86	1.93E+03	0.00	1.09E+04
m	68	3862-	3916	3904.08	676.99	7.92E+02	0.00	1.49E+04
	69	3979-	4009	3995.31	692.81	7.34E+03	0.00	1.17E+04
	70	4016-	4044	4028.62	698.59	3.37E+03	0.00	2.97E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  1-26-96  9:46:35 AM

Sample Title                     : NOPI-475-GAM1 attenuation
Spectrum Description             : NOPI-475-GAM1 attenuation
Sample Identification            : NP475AT2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  4:26:31 PM

Live Time                        :     1800.0 seconds
Real Time                        :     1995.4 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
* * P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-475-GAM1 attenuation
Peak Locate Performed on: 1-26-96 9:46:25 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	95.36	0.2390	16.47	4.80
2	101.85	0.0604	17.55	18.45
3	122.43	0.1092	21.15	10.23
4	139.76	0.1787	25.85	4.37
5	147.89	0.1916	26.70	6.12
6	158.85	0.0046	27.43	192.33
7	179.46	0.0048	31.03	104.03
8	184.00	0.0000	31.76	26.20
9	188.00	<NA>	32.45	<NA>
10	191.73	0.0464	33.16	24.56
11	205.48	0.0061	35.55	78.29
12	224.10	0.1267	38.78	7.71
13	244.43	0.0031	42.35	171.85
14	248.82	0.0028	43.05	354.19
15	262.00	0.0219	45.35	42.20
16	281.20	0.0045	48.70	197.25
17	288.94	0.0089	50.02	96.05
18	316.93	0.1808	54.88	7.43
19	336.36	0.2942	58.30	4.33
20	346.86	0.0174	60.06	48.75
21	443.45	0.3651	76.82	3.56
22	499.79	0.0042	86.59	293.39
23	510.45	0.1503	88.44	3.40
24	607.94	0.0052	105.35	242.42
25	630.94	0.3951	109.34	3.44
26	653.34	0.1152	113.22	9.48
27	674.98	0.0892	117.13	9.20
28	684.07	0.3719	118.56	5.68
29	710.42	0.0015	123.12	690.93
30	759.18	0.1924	131.58	6.69
31	867.38	0.2807	150.34	3.69
32	956.53	0.5503	165.80	5.11
33	997.13	0.1900	172.84	8.06
34	1017.54	0.0088	176.38	105.58
35	1086.32	0.0493	188.31	27.72
36	1177.81	0.1540	204.18	8.39
37	1200.71	0.1974	208.15	6.87
38	1259.02	0.2433	218.27	3.22
39	1315.80	0.4907	228.11	4.09
40	1430.68	0.0082	248.04	180.23
41	1455.77	1.5076	252.39	3.53

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1677.14	0.2708	290.78	7.00
43	1852.13	0.2572	321.16	4.97
44	1859.02	0.3870	322.24	3.68
45	1904.91	0.4487	330.28	3.02
46	2104.90	0.3638	364.96	3.26
47	2140.61	0.0678	371.16	24.45
48	2195.46	0.0990	380.67	16.28
49	2315.14	0.1918	401.43	8.92
50	2468.99	0.0137	428.11	107.93
51	2564.73	0.1042	444.71	17.14
52	2626.92	0.1429	455.50	10.72
53	2646.96	0.5387	459.11	3.33
54	2673.82	0.0258	463.63	56.37
55	2700.32	0.4639	468.22	3.86
56	2759.57	0.2137	478.50	8.64
57	2870.14	0.5948	497.68	3.07
58	2917.96	0.3949	505.97	3.09
59	3217.81	0.2640	557.97	6.86
60	3358.56	0.0722	582.38	21.45
61	3414.59	0.0228	592.10	66.84
62	3465.64	0.0267	600.95	57.84
63	3501.06	0.0739	607.10	25.77
64	3607.70	0.1896	625.60	8.42
65	3624.83	0.4495	628.42	3.59
66	3669.68	0.0449	636.34	39.67
67	3748.71	0.4684	650.05	3.55
68	3874.66	0.1409	671.88	11.61
69	3903.70	0.6440	677.00	4.13
70	3995.38	0.0560	692.83	31.81
71	4029.00	0.1127	698.66	19.42

Errors quoted at 0.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: NOPI-475-GAM1 attenuation
Peak Analysis Performed on: 1-26-96 9:46:35 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	91-	105	95.44	16.47	3.89E+03	0.00	2.18E+04
m	2	91-	105	101.66	17.55	1.93E+04	0.00	1.94E+04
	3	118-	126	122.43	21.15	1.96E+03	0.00	2.04E+04
M	4	134-	163	149.54	25.85	1.46E+04	0.00	2.29E+04
m	5	134-	163	154.42	26.70	2.71E+04	0.00	2.43E+04
m	6	134-	163	158.66	27.43	4.57E+05	0.00	2.73E+04
M	7	174-	196	179.42	31.03	9.60E+04	0.00	2.95E+04
m	8	174-	196	183.61	31.76	2.15E+04	0.00	2.90E+04
m	9	174-	196	187.60	32.45	5.61E+03	0.00	2.88E+04
m	10	174-	196	191.69	33.16	9.43E+03	0.00	2.87E+04
	11	199-	210	205.48	35.55	5.39E+04	0.00	4.02E+04
	12	218-	227	224.10	38.78	5.22E+03	0.00	5.56E+04
M	13	238-	254	244.71	42.35	4.34E+05	0.00	5.45E+04
m	14	238-	254	248.70	43.05	7.77E+05	0.00	4.52E+04
	15	257-	267	262.00	45.35	8.24E+03	0.00	3.61E+04
M	16	275-	294	281.28	48.70	2.51E+05	0.00	2.35E+04
m	17	275-	294	288.92	50.02	6.89E+04	0.00	1.87E+04
	18	310-	322	316.93	54.88	2.48E+03	0.00	1.94E+04
M	19	331-	352	336.67	58.30	1.48E+03	0.00	1.49E+04
m	20	331-	352	346.78	60.06	1.34E+04	0.00	1.47E+04
	21	437-	447	443.45	76.82	5.47E+02	0.00	2.17E+04
	22	492-	514	499.79	86.59	3.36E+05	0.00	6.30E+04
	24	599-	615	607.94	105.35	2.17E+05	0.00	4.45E+04
	25	625-	638	630.94	109.34	7.34E+02	0.00	3.50E+04
	26	645-	658	653.34	113.22	2.78E+03	0.00	3.60E+04
M	27	666-	692	675.88	117.13	4.49E+03	0.00	5.96E+04
m	28	666-	692	684.09	118.56	6.80E+03	0.00	5.60E+04
	29	702-	718	710.42	123.12	1.80E+06	0.00	4.20E+04
	30	754-	765	759.18	131.58	7.11E+02	0.00	1.74E+04
	31	859-	875	867.38	150.34	5.00E+02	0.00	2.23E+04
	32	947-	965	956.53	165.80	3.14E+03	0.00	2.27E+04
	33	991-	1003	997.13	172.84	7.29E+02	0.00	1.54E+04
	34	1008-	1026	1017.54	176.38	4.31E+04	0.00	2.12E+04
	35	1078-	1095	1086.32	188.31	5.36E+03	0.00	2.02E+04
	36	1167-	1183	1177.81	204.18	1.39E+03	0.00	1.95E+04
	37	1193-	1206	1200.71	208.15	9.33E+02	0.00	1.65E+04
	38	1253-	1266	1259.02	218.27	1.07E+02	0.00	1.56E+04
	39	1307-	1322	1315.80	228.11	8.93E+02	0.00	1.70E+04
	40	1422-	1440	1430.68	248.04	1.13E+05	0.00	2.10E+04
	41	1445-	1462	1455.77	252.39	4.63E+02	0.00	1.78E+04
	42	1667-	1686	1677.14	290.78	2.42E+03	0.00	1.61E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	43	1842-	1870	1852.31	321.16	9.60E+02	0.00	1.10E+04
m	44	1842-	1870	1858.56	322.24	7.87E+02	0.00	1.11E+04
	45	1896-	1912	1904.91	330.28	1.76E+02	0.00	1.16E+04
	46	2096-	2114	2104.90	364.96	-3.47E+01	0.00	1.28E+04
	47	2131-	2149	2140.61	371.16	4.17E+03	0.00	1.27E+04
	48	2186-	2207	2195.46	380.67	3.00E+03	0.00	1.46E+04
	49	2306-	2327	2315.14	401.43	1.26E+03	0.00	1.53E+04
	50	2456-	2480	2468.99	428.11	4.76E+04	0.00	1.64E+04
	51	2551-	2574	2564.73	444.71	4.20E+03	0.00	1.50E+04
M	52	2616-	2710	2626.96	455.50	1.58E+03	0.00	1.39E+04
m	53	2616-	2710	2647.74	459.11	4.77E+02	0.00	1.37E+04
m	54	2616-	2710	2673.79	463.63	1.57E+04	0.00	1.40E+04
m	55	2616-	2710	2700.31	468.22	5.63E+02	0.00	1.37E+04
	56	2749-	2772	2759.57	478.50	1.35E+03	0.00	1.45E+04
	57	2860-	2882	2870.14	497.68	3.49E+02	0.00	1.38E+04
	58	2907-	2927	2917.96	505.97	-5.24E+02	0.00	1.33E+04
	59	3206-	3228	3217.81	557.97	1.18E+03	0.00	1.13E+04
	60	3347-	3369	3358.56	582.38	4.43E+03	0.00	1.07E+04
	61	3400-	3426	3414.59	592.10	2.39E+04	0.00	1.22E+04
	62	3450-	3480	3465.64	600.95	1.87E+04	0.00	1.34E+04
	63	3486-	3512	3501.06	607.10	5.06E+03	0.00	1.15E+04
M	64	3596-	3636	3607.73	625.60	1.31E+03	0.00	1.02E+04
m	65	3596-	3636	3624.02	628.42	3.94E+02	0.00	1.28E+04
	66	3654-	3684	3669.68	636.34	1.14E+04	0.00	1.32E+04
	67	3736-	3760	3748.71	650.05	1.52E+02	0.00	1.07E+04
M	68	3862-	3915	3874.61	671.88	1.72E+03	0.00	1.02E+04
m	69	3862-	3915	3904.14	677.00	7.14E+02	0.00	1.23E+04
	70	3980-	4010	3995.38	692.83	7.34E+03	0.00	1.18E+04
	71	4016-	4044	4029.00	698.66	3.30E+03	0.00	3.13E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 0.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	1-26-96 4:27:11 PM
Sample Title	:	DP1B standard
Spectrum Description	:	DP1B standard
Sample Identification	:	DP1B
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	1-23-96 8:56:07 AM
Live Time	:	80000.0 seconds
Real Time	:	80027.6 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

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***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: DP1B standard
Peak Locate Performed on: 1-26-96 4:26:25 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.33	0.5134	5.41	3.32
2	37.00	<NA>	6.34	<NA>
3	63.41	0.0413	10.91	13.49
4	76.01	0.0767	13.10	14.96
5	88.68	0.0691	15.42	9.69
6	94.38	0.0323	16.21	18.20
7	98.00	<NA>	16.82	<NA>
8	103.62	0.1051	17.91	5.63
9	110.40	0.0592	19.04	9.59
10	114.00	<NA>	19.76	<NA>
11	148.81	0.0702	25.73	15.48
12	158.61	0.0834	27.44	13.09
13	212.10	0.2521	36.70	3.82
14	269.31	0.0140	46.62	68.84
15	289.91	0.0659	50.19	14.05
16	307.95	0.0276	53.32	33.29
17	365.98	0.0113	63.39	73.08
18	391.22	0.0490	67.76	18.28
19	409.55	0.5397	71.01	3.11
20	420.70	0.1882	72.95	4.96
21	432.48	0.0138	74.92	80.22
22	445.67	0.0106	77.20	108.85
23	458.35	0.0465	79.42	24.81
24	468.61	0.0425	81.18	27.02
25	484.47	0.0337	83.95	30.20
26	493.90	0.2408	86.97	4.39
27	504.41	0.0435	87.45	32.96
28	519.19	0.0414	89.97	29.43
29	534.88	0.0243	92.69	47.72
30	547.53	0.0719	94.81	14.04
31	568.63	0.0906	98.53	12.63
32	630.41	0.3311	109.24	3.33
33	651.69	0.0956	112.94	11.64
34	707.06	0.1880	122.54	4.38
35	752.37	0.4211	130.40	3.04
36	830.61	0.0704	143.97	19.09
37	890.50	0.0869	154.35	10.83
38	943.53	0.1047	163.55	9.15
39	1074.29	0.0284	186.23	48.71
40	1094.85	0.4307	189.79	3.02
41	1133.01	0.1969	196.41	4.01

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1186.01	0.2864	205.60	6.19
43	1362.84	0.1282	236.25	11.57
44	1378.15	0.2240	238.90	6.39
45	1397.39	0.0242	242.26	60.89
46	1479.60	0.2042	256.50	8.07
47	1494.53	0.1456	259.11	10.19
48	1555.86	0.0912	269.76	13.17
49	1566.24	0.1093	271.52	11.68
50	1586.70	0.1832	275.04	7.05
51	1651.70	0.5523	286.37	3.39
52	1704.73	0.0156	295.56	89.27
53	1732.34	0.2379	300.35	5.86
54	1871.20	0.4051	324.43	3.44
55	1904.53	0.2829	330.21	5.60
56	1952.63	0.5623	338.56	3.37
57	2032.16	0.0150	352.35	105.69
58	2233.36	0.3993	387.26	3.39
59	2245.02	0.4563	389.14	3.34
60	2774.40	0.3287	481.07	4.14
61	2812.91	0.5422	487.75	3.55
62	2984.09	0.3767	517.44	3.16
63	3081.44	0.3662	534.32	4.33
64	3130.87	0.5286	542.90	3.03
65	3518.31	0.0263	610.09	67.49
66	3842.43	0.2547	666.30	7.33
67	4028.18	0.5034	698.51	7.26

Errors quoted at 1.000 sigma

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*************************************************************************
[redacted]**          P E A K   A N A L Y S I S   R E P O R T          *****
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Detector Name: DET01
Sample Title: DP1B standard
Peak Analysis Performed on: 1-26-96 4:26:41 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	31.69	5.41	1.09E+03	171.14	5.44E+03
m	2	29-	39	37.02	6.34	1.42E+03	178.73	4.86E+03
	3	60-	66	63.41	10.91	4.18E+03	116.50	4.97E+03
	4	73-	79	76.01	13.10	1.42E+04	164.04	6.72E+03
M	5	84-	118	89.42	15.42	9.35E+03	771.59	8.19E+03
m	6	84-	118	93.97	16.21	1.53E+04	953.31	8.40E+03
m	7	84-	118	97.45	16.82	5.00E+03	722.96	8.06E+03
m	8	84-	118	103.75	17.91	1.67E+03	484.60	7.60E+03
m	9	84-	118	110.29	19.04	4.07E+03	604.41	7.31E+03
m	10	84-	118	114.43	19.76	2.42E+03	520.94	6.47E+03
M	11	144-	163	148.87	25.73	2.14E+03	119.02	4.70E+03
m	12	144-	163	158.72	27.44	1.91E+03	109.27	4.00E+03
[redacted]	13	207-	216	212.10	36.70	4.83E+02	104.35	4.60E+03
[redacted]	14	263-	275	269.31	46.62	2.28E+04	196.89	6.07E+03
	15	283-	294	289.91	50.19	2.44E+03	123.58	5.13E+03
	16	301-	313	307.95	53.32	5.83E+03	144.45	5.73E+03
	17	359-	372	365.98	63.39	2.12E+04	203.27	7.32E+03
	18	384-	396	391.22	67.76	2.66E+03	142.75	6.74E+03
M	19	406-	473	409.91	71.01	2.20E+02	183.71	5.46E+03
m	20	406-	473	421.10	72.95	5.30E+02	190.75	5.96E+03
m	21	406-	473	432.48	74.92	3.26E+04	577.96	6.34E+03
m	22	406-	473	445.62	77.20	5.70E+04	697.47	5.98E+03
m	23	406-	473	458.43	79.42	4.79E+03	270.46	5.74E+03
m	24	406-	473	468.56	81.18	4.63E+03	270.47	5.20E+03
M	25	477-	554	484.56	83.95	9.58E+03	611.55	6.42E+03
m	26	477-	554	501.97	86.97	5.89E+03	1832.34	6.54E+03
m	27	477-	554	504.72	87.45	1.39E+04	1687.56	6.45E+03
m	28	477-	554	519.27	89.97	7.99E+03	540.84	6.14E+03
m	29	477-	554	534.96	92.69	2.84E+04	1337.77	5.71E+03
m	30	477-	554	547.19	94.81	3.43E+03	358.57	5.38E+03
	31	561-	574	568.63	98.53	2.27E+03	124.02	4.74E+03
	32	622-	634	630.41	109.24	2.87E+02	108.51	4.36E+03
	33	647-	658	651.69	112.94	1.01E+03	109.14	4.34E+03
	34	702-	714	707.06	122.54	1.60E+02	103.28	3.99E+03
	35	745-	757	752.37	130.40	9.60E+01	104.39	4.10E+03
	36	822-	838	830.61	143.97	3.04E+03	138.61	5.17E+03
	37	885-	897	890.50	154.35	9.83E+02	110.43	4.25E+03
	38	936-	949	943.53	163.55	8.12E+02	108.72	4.00E+03
[redacted]	39	1065-	1082	1074.29	186.23	1.98E+04	187.75	4.75E+03
	40	1088-	1100	1094.85	189.79	-1.38E+02	94.37	3.44E+03
	41	1127-	1139	1133.01	196.41	6.59E+01	96.02	3.48E+03
	42	1176-	1194	1186.01	205.60	6.93E+02	122.46	4.23E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	43	1352-	1406	1362.73	236.25	1.13E+03	57.85	2.53E+03
m	44	1352-	1406	1377.99	238.90	5.30E+02	47.89	2.50E+03
m	45	1352-	1406	1397.38	242.26	1.46E+04	285.55	2.53E+03
M	46	1469-	1504	1479.46	256.50	6.34E+02	73.93	2.29E+03
m	47	1469-	1504	1494.57	259.11	1.03E+03	111.42	2.32E+03
M	48	1544-	1595	1555.93	269.76	1.35E+03	115.02	2.21E+03
m	49	1544-	1595	1566.12	271.52	1.08E+03	96.35	2.20E+03
m	50	1544-	1595	1586.37	275.04	6.26E+02	66.40	2.18E+03
	51	1644-	1660	1651.70	286.37	3.10E+02	89.22	2.44E+03
	52	1694-	1713	1704.73	295.56	2.86E+04	195.74	2.76E+03
	53	1724-	1742	1732.34	300.35	2.40E+02	92.71	2.47E+03
	54	1863-	1880	1871.20	324.43	6.24E+01	87.05	2.31E+03
	55	1895-	1916	1904.53	330.21	3.00E+02	100.44	2.61E+03
	56	1944-	1961	1952.63	338.56	2.23E+02	88.58	2.34E+03
	57	2020-	2044	2032.16	352.35	4.27E+04	238.15	3.42E+03
M	58	2222-	2257	2233.48	387.26	2.98E+02	89.47	2.41E+03
m	59	2222-	2257	2244.31	389.14	2.42E+02	74.23	2.51E+03
	60	2764-	2784	2774.40	481.07	2.74E+02	79.15	1.65E+03
	61	2801-	2822	2812.91	487.75	4.58E+02	78.57	1.52E+03
	62	2974-	2994	2984.09	517.44	-5.71E+01	72.58	1.47E+03
	63	3071-	3092	3081.44	534.32	9.61E+01	77.60	1.57E+03
	64	3119-	3141	3130.87	542.90	-6.83E+01	78.01	1.59E+03
	65	3503-	3533	3518.31	610.09	2.13E+04	174.73	1.89E+03
	66	3827-	3857	3842.43	666.30	6.20E+02	92.01	1.61E+03
	67	4016-	4044	4028.18	698.51	4.76E+02	56.77	4.38E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: DP1B standard
Peak Analysis Performed on: 1-26-96 4:26:25 PM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.41	1.09E+03	171.14	4.00E+01	3.04E+01	1.05E+03	1.74E+02
m	2	6.34	1.42E+03	178.73	4.00E+01	3.04E+01	1.38E+03	1.81E+02
	3	10.91	4.18E+03	116.50	1.57E+02	3.08E+01	4.02E+03	1.21E+02
	4	13.10	1.42E+04	164.04			1.42E+04	1.64E+02
M	5	15.42	9.35E+03	771.59			9.35E+03	7.72E+02
m	6	16.21	1.53E+04	953.31			1.53E+04	9.53E+02
m	7	16.82	5.00E+03	722.96			5.00E+03	7.23E+02
m	8	17.91	1.67E+03	484.60			1.67E+03	4.85E+02
m	9	19.04	4.07E+03	604.41	-1.92E-01	1.63E+01	4.07E+03	6.05E+02
m	10	19.76	2.42E+03	520.94	-1.92E-01	1.63E+01	2.42E+03	5.21E+02
M	11	25.73	2.14E+03	119.02			2.14E+03	1.19E+02
m	12	27.44	1.91E+03	109.27	-1.27E+01	1.34E+01	1.93E+03	1.10E+02
	13	36.70	4.83E+02	104.35			4.83E+02	1.04E+02
	14	46.62	2.28E+04	196.89	1.16E+01	3.50E+01	2.28E+04	2.00E+02
	15	50.19	2.44E+03	123.58	-1.20E+01	1.73E+01	2.45E+03	1.25E+02
	16	53.32	5.83E+03	144.45			5.83E+03	1.44E+02
	17	63.39	2.12E+04	203.27	7.25E+01	2.49E+01	2.11E+04	2.05E+02
	18	67.76	2.66E+03	142.75			2.66E+03	1.43E+02
M	19	71.01	2.20E+02	183.71			2.20E+02	1.84E+02
m	20	72.95	5.30E+02	190.75			5.30E+02	1.91E+02
m	21	74.92	3.26E+04	577.96	4.70E+01	1.89E+01	3.26E+04	5.78E+02
m	22	77.20	5.70E+04	697.47	6.88E+01	2.55E+01	5.70E+04	6.98E+02
m	23	79.42	4.79E+03	270.46			4.79E+03	2.70E+02
m	24	81.18	4.63E+03	270.47			4.63E+03	2.70E+02
M	25	83.95	9.58E+03	611.55	-3.10E+01	1.96E+01	9.61E+03	6.12E+02
m	26	86.97	5.89E+03	1832.34			5.89E+03	1.83E+03
m	27	87.45	1.39E+04	1687.56			1.39E+04	1.69E+03
m	28	89.97	7.99E+03	540.84			7.99E+03	5.41E+02
m	29	92.69	2.84E+04	1337.77	2.61E+02	4.01E+01	2.81E+04	1.34E+03
m	30	94.81	3.43E+03	358.57	2.42E+01	1.36E+01	3.40E+03	3.59E+02
	31	98.53	2.27E+03	124.02			2.27E+03	1.24E+02
	32	109.24	2.87E+02	108.51	9.22E+01	2.46E+01	1.95E+02	1.11E+02
	33	112.94	1.01E+03	109.14			1.01E+03	1.09E+02
	34	122.54	1.60E+02	103.28			1.60E+02	1.03E+02
	35	130.40	9.60E+01	104.39			9.60E+01	1.04E+02
	36	143.97	3.04E+03	138.61	4.83E+01	2.07E+01	2.99E+03	1.40E+02
	37	154.35	9.83E+02	110.43			9.83E+02	1.10E+02
	38	163.55	8.12E+02	108.72			8.12E+02	1.09E+02
	39	186.23	1.98E+04	187.75	1.65E+02	2.92E+01	1.97E+04	1.90E+02
	40	189.79	-1.38E+02	94.37			-1.38E+02	9.44E+01
	41	196.41	6.59E+01	96.02	5.02E+01	2.63E+01	1.57E+01	9.96E+01
	42	205.60	6.93E+02	122.46	-8.75E+00	2.28E+01	7.02E+02	1.25E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	43	236.25	1.13E+03	57.85			1.13E+03	5.79E+01
m	44	238.90	5.30E+02	47.89	7.88E+01	2.53E+01	4.52E+02	5.42E+01
m	45	242.26	1.46E+04	285.55			1.46E+04	2.86E+02
M	46	256.50	6.34E+02	73.93			6.34E+02	7.39E+01
m	47	259.11	1.03E+03	111.42			1.03E+03	1.11E+02
M	48	269.76	1.35E+03	115.02			1.35E+03	1.15E+02
m	49	271.52	1.08E+03	96.35			1.08E+03	9.64E+01
m	50	275.04	6.26E+02	66.40			6.26E+02	6.64E+01
	51	286.37	3.10E+02	89.22			3.10E+02	8.92E+01
	52	295.56	2.86E+04	195.74	1.05E+01	4.02E+01	2.86E+04	2.00E+02
	53	300.35	2.40E+02	92.71			2.40E+02	9.27E+01
	54	324.43	6.24E+01	87.05	-2.18E+01	1.99E+01	8.42E+01	8.93E+01
	55	330.21	3.00E+02	100.44	-2.16E+01	3.90E+01	3.21E+02	1.08E+02
	56	338.56	2.23E+02	88.58			2.23E+02	8.86E+01
	57	352.35	4.27E+04	238.15	8.80E+01	2.36E+01	4.26E+04	2.39E+02
M	58	387.26	2.98E+02	89.47			2.98E+02	8.95E+01
m	59	389.14	2.42E+02	74.23			2.42E+02	7.42E+01
	60	481.07	2.74E+02	79.15			2.74E+02	7.91E+01
	61	487.75	4.58E+02	78.57			4.58E+02	7.86E+01
	62	517.44	-5.71E+01	72.58			-5.71E+01	7.26E+01
	63	534.32	9.61E+01	77.60			9.61E+01	7.76E+01
	64	542.90	-6.83E+01	78.01			-6.83E+01	7.80E+01
	65	610.09	2.13E+04	174.73	4.28E+01	1.95E+01	2.13E+04	1.76E+02
	66	666.30	6.20E+02	92.01			6.20E+02	9.20E+01
	67	698.51	4.76E+02	56.77	4.50E+01	1.05E+01	4.31E+02	5.77E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: DP1B standard
Peak Analysis Performed on: 1-26-96 4:26:25 PM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.41	1.09E+03	171.14	4.00E+01	3.04E+01	1.05E+03	1.74E+02
m	2	6.34	1.42E+03	178.73	4.00E+01	3.04E+01	1.38E+03	1.81E+02
	3	10.91	4.18E+03	116.50	1.57E+02	3.08E+01	4.02E+03	1.21E+02
	4	13.10	1.42E+04	164.04			1.42E+04	1.64E+02
M	5	15.42	9.35E+03	771.59			9.35E+03	7.72E+02
m	6	16.21	1.53E+04	953.31			1.53E+04	9.53E+02
m	7	16.82	5.00E+03	722.96			5.00E+03	7.23E+02
m	8	17.91	1.67E+03	484.60			1.67E+03	4.85E+02
m	9	19.04	4.07E+03	604.41	-1.92E-01	1.63E+01	4.07E+03	6.05E+02
[illegible]	10	19.76	2.42E+03	520.94	-1.92E-01	1.63E+01	2.42E+03	5.21E+02
M	11	25.73	2.14E+03	119.02			2.14E+03	1.19E+02
m	12	27.44	1.91E+03	109.27	-1.27E+01	1.34E+01	1.93E+03	1.10E+02
	13	36.70	4.83E+02	104.35			4.83E+02	1.04E+02
	14	46.62	2.28E+04	196.89	1.16E+01	3.50E+01	2.28E+04	2.00E+02
	15	50.19	2.44E+03	123.58	-1.20E+01	1.73E+01	2.45E+03	1.25E+02
	16	53.32	5.83E+03	144.45			5.83E+03	1.44E+02
	17	63.39	2.12E+04	203.27	7.25E+01	2.49E+01	2.11E+04	2.05E+02
	18	67.76	2.66E+03	142.75			2.66E+03	1.43E+02
M	19	71.01	2.20E+02	183.71			2.20E+02	1.84E+02
m	20	72.95	5.30E+02	190.75			5.30E+02	1.91E+02
m	21	74.92	3.26E+04	577.96	4.70E+01	1.89E+01	3.26E+04	5.78E+02
m	22	77.20	5.70E+04	697.47	6.88E+01	2.55E+01	5.70E+04	6.98E+02
m	23	79.42	4.79E+03	270.46			4.79E+03	2.70E+02
m	24	81.18	4.63E+03	270.47			4.63E+03	2.70E+02
M	25	83.95	9.58E+03	611.55	-3.10E+01	1.96E+01	9.61E+03	6.12E+02
m	26	86.97	5.89E+03	1832.34			5.89E+03	1.83E+03
m	27	87.45	1.39E+04	1687.56			1.39E+04	1.69E+03
m	28	89.97	7.99E+03	540.84			7.99E+03	5.41E+02
m	29	92.69	2.84E+04	1337.77	2.61E+02	4.01E+01	2.81E+04	1.34E+03
m	30	94.81	3.43E+03	358.57	2.42E+01	1.36E+01	3.40E+03	3.59E+02
	31	98.53	2.27E+03	124.02			2.27E+03	1.24E+02
	32	109.24	2.87E+02	108.51	9.22E+01	2.46E+01	1.95E+02	1.11E+02
	33	112.94	1.01E+03	109.14			1.01E+03	1.09E+02
	34	122.54	1.60E+02	103.28			1.60E+02	1.03E+02
	35	130.40	9.60E+01	104.39			9.60E+01	1.04E+02
[illegible]	36	143.97	3.04E+03	138.61	4.83E+01	2.07E+01	2.99E+03	1.40E+02
	37	154.35	9.83E+02	110.43			9.83E+02	1.10E+02
	38	163.55	8.12E+02	108.72			8.12E+02	1.09E+02
	39	186.23	1.98E+04	187.75	1.65E+02	2.92E+01	1.97E+04	1.90E+02
	40	189.79	-1.38E+02	94.37			-1.38E+02	9.44E+01

41	196.41	6.59E+01	96.02	5.02E+01	2.63E+01	1.57E+01	9.96E+01
42	205.60	6.93E+02	122.46	-8.75E+00	2.28E+01	7.02E+02	1.25E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	43	236.25	1.13E+03	57.85			1.13E+03	5.79E+01
m	44	238.90	5.30E+02	47.89	7.88E+01	2.53E+01	4.52E+02	5.42E+01
m	45	242.26	1.46E+04	285.55			1.46E+04	2.86E+02
M	46	256.50	6.34E+02	73.93			6.34E+02	7.39E+01
m	47	259.11	1.03E+03	111.42			1.03E+03	1.11E+02
M	48	269.76	1.35E+03	115.02			1.35E+03	1.15E+02
m	49	271.52	1.08E+03	96.35			1.08E+03	9.64E+01
m	50	275.04	6.26E+02	66.40			6.26E+02	6.64E+01
	51	286.37	3.10E+02	89.22			3.10E+02	8.92E+01
	52	295.56	2.86E+04	195.74	1.05E+01	4.02E+01	2.86E+04	2.00E+02
	53	300.35	2.40E+02	92.71			2.40E+02	9.27E+01
	54	324.43	6.24E+01	87.05	-2.18E+01	1.99E+01	8.42E+01	8.93E+01
	55	330.21	3.00E+02	100.44	-2.16E+01	3.90E+01	3.21E+02	1.08E+02
	56	338.56	2.23E+02	88.58			2.23E+02	8.86E+01
	57	352.35	4.27E+04	238.15	8.80E+01	2.36E+01	4.26E+04	2.39E+02
M	58	387.26	2.98E+02	89.47			2.98E+02	8.95E+01
m	59	389.14	2.42E+02	74.23			2.42E+02	7.42E+01
	60	481.07	2.74E+02	79.15			2.74E+02	7.91E+01
	61	487.75	4.58E+02	78.57			4.58E+02	7.86E+01
	62	517.44	-5.71E+01	72.58			-5.71E+01	7.26E+01
	63	534.32	9.61E+01	77.60			9.61E+01	7.76E+01
	64	542.90	-6.83E+01	78.01			-6.83E+01	7.80E+01
	65	610.09	2.13E+04	174.73	4.28E+01	1.95E+01	2.13E+04	1.76E+02
	66	666.30	6.20E+02	92.01			6.20E+02	9.20E+01
	67	698.51	4.76E+02	56.77	4.50E+01	1.05E+01	4.31E+02	5.77E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************

Report Generated On              :  1-26-96  4:29:20 PM

Sample Title                     : DM1B standard
Spectrum Description             : DM1B standard
Sample Identification            : DM1B_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-25-96  5:13:35 PM

Live Time                        :    80000.0 seconds
Real Time                        :    80019.6 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: DM1B standard
Peak Locate Performed on: 1-26-96 4:28:45 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.63	0.4308	5.38	3.54
2	37.49	0.0992	6.40	4.74
3	47.00	<NA>	8.07	<NA>
4	63.35	0.1482	10.88	4.17
5	71.89	0.1749	12.40	5.95
6	75.58	0.0534	13.03	10.16
7	88.62	0.0582	15.35	10.14
8	94.38	0.0288	16.26	20.36
9	103.80	0.1061	17.94	8.10
10	110.40	0.0501	19.07	11.32
11	200.84	0.2145	34.75	7.22
12	230.87	0.0381	39.95	24.34
13	269.50	0.1279	46.65	8.45
14	307.96	0.4263	53.32	3.78
15	334.06	0.0589	57.85	14.74
16	367.49	0.2557	63.65	5.43
17	420.90	0.0496	72.91	16.31
18	432.50	0.0132	74.93	82.25
19	445.70	0.0105	77.21	112.84
20	458.30	0.1470	79.36	6.90
21	468.11	0.1351	81.13	7.07
22	487.61	0.0467	84.48	25.48
23	504.40	0.0412	87.33	34.70
24	519.52	0.0238	90.03	43.87
25	539.37	0.0238	93.46	45.75
26	574.71	0.0539	99.59	21.30
27	605.13	0.2422	104.93	4.42
28	610.24	0.0869	105.77	14.88
29	627.54	0.1353	108.75	8.14
30	665.43	0.0716	115.32	14.51
31	745.41	0.0291	129.19	34.66
32	760.58	0.1785	131.80	6.14
33	841.98	0.2925	145.94	4.16
34	889.23	0.0854	154.13	16.07
35	1074.18	0.2161	186.21	6.96
36	1151.22	0.2090	199.57	6.33
37	1178.53	0.2613	204.31	3.85
38	1208.31	0.0362	209.47	34.76
39	1247.21	0.1881	216.22	5.96
40	1283.67	0.4021	222.54	3.24
41	1377.95	0.0088	238.89	131.52

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1391.51	0.0451	241.26	33.81
43	1458.53	0.2448	252.87	5.51
44	1560.55	0.0556	270.56	25.06
45	1601.54	0.0729	277.67	19.62
46	1663.73	0.2591	288.45	5.54
47	1704.71	0.0907	295.56	15.90
48	1732.91	0.0793	300.45	21.78
49	1856.10	0.3849	321.81	3.72
50	1893.85	0.0801	328.36	20.89
51	1918.72	0.2886	332.68	5.49
52	1953.46	0.0278	338.70	45.47
53	1968.47	0.2695	341.26	5.87
54	2032.27	0.0662	352.37	20.55
55	2178.36	0.4213	377.70	3.41
56	2364.50	0.1589	409.99	11.34
57	2615.60	0.5210	453.53	3.49
58	2673.48	0.0899	463.57	18.73
59	2743.49	0.4501	475.71	3.41
60	2948.92	0.0588	511.34	23.52
61	3247.55	0.2687	563.13	6.04
62	3367.36	0.0418	583.91	44.19
63	3518.15	0.1579	610.06	11.48
64	3738.68	0.4242	648.31	3.19
65	4028.34	0.4124	698.54	6.66

Errors quoted at 1.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T          *****
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Detector Name: DET01
Sample Title: DM1B standard
Peak Analysis Performed on: 1-26-96 4:28:59 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	31.51	5.38	7.21E+02	120.93	3.27E+03
m	2	29-	39	37.38	6.40	1.18E+03	133.88	2.59E+03
	3	45-	49	47.00	8.07	1.08E+02	60.67	2.15E+03
M	4	60-	78	63.20	10.88	8.54E+02	115.31	3.70E+03
m	5	60-	78	72.01	12.40	1.71E+03	140.85	4.72E+03
m	6	60-	78	75.65	13.03	4.16E+03	192.87	3.94E+03
M	7	84-	114	89.00	15.35	6.25E+03	500.03	4.61E+03
m	8	84-	114	94.22	16.26	9.90E+03	572.44	4.36E+03
m	9	84-	114	103.94	17.94	1.57E+03	344.45	4.11E+03
m	10	84-	114	110.42	19.07	3.33E+03	417.71	3.98E+03
	11	196-	205	200.84	34.75	8.68E+02	98.83	3.93E+03
	12	224-	236	230.87	39.95	3.73E+03	117.32	3.82E+03
	13	263-	274	269.50	46.65	8.24E+02	94.79	3.26E+03
	14	303-	313	307.96	53.32	2.66E+02	84.16	2.86E+03
	15	328-	338	334.06	57.85	1.24E+03	95.32	3.29E+03
	16	360-	373	367.49	63.65	1.48E+03	125.84	5.21E+03
M	17	414-	474	420.87	72.91	2.09E+03	231.49	4.43E+03
m	18	414-	474	432.51	74.93	3.56E+04	623.81	4.55E+03
m	19	414-	474	445.67	77.21	5.60E+04	687.64	3.62E+03
m	20	414-	474	458.08	79.36	4.87E+02	168.21	3.34E+03
m	21	414-	474	468.28	81.13	4.97E+02	169.00	3.30E+03
	22	480-	494	487.61	84.48	5.67E+03	140.63	4.90E+03
M	23	497-	526	504.01	87.33	1.90E+04	733.78	4.75E+03
m	24	497-	526	519.62	90.03	1.30E+04	724.21	3.89E+03
	25	532-	546	539.37	93.46	1.19E+04	156.55	4.35E+03
	26	569-	581	574.71	99.59	2.56E+03	105.99	3.29E+03
M	27	598-	618	605.55	104.93	1.35E+03	118.91	3.32E+03
m	28	598-	618	610.36	105.77	2.73E+03	147.17	3.37E+03
	29	620-	635	627.54	108.75	1.40E+03	116.51	4.06E+03
	30	658-	673	665.43	115.32	1.51E+03	110.47	3.56E+03
M	31	739-	765	745.43	129.19	4.92E+03	163.89	2.58E+03
m	32	739-	765	760.49	131.80	4.71E+02	40.87	2.16E+03
	33	836-	848	841.98	145.94	2.56E+02	83.92	2.58E+03
	34	882-	897	889.23	154.13	1.57E+03	102.08	2.94E+03
	35	1065-	1083	1074.18	186.21	1.05E+03	103.80	2.87E+03
	36	1145-	1157	1151.22	199.57	3.28E+02	72.56	1.88E+03
	37	1172-	1186	1178.53	204.31	1.06E+02	81.37	2.26E+03
	38	1198-	1216	1208.31	209.47	4.96E+03	115.81	2.50E+03
	39	1239-	1253	1247.21	216.22	4.37E+02	77.24	1.91E+03
	40	1277-	1289	1283.67	222.54	8.26E+01	66.47	1.65E+03
M	41	1368-	1401	1377.92	238.89	5.76E+04	335.03	1.99E+03
m	42	1368-	1401	1391.61	241.26	5.40E+03	202.96	1.62E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1448-	1468	1458.53	252.87	1.97E+02	89.19	2.14E+03
	44	1549-	1571	1560.55	270.56	3.03E+03	108.68	2.26E+03
	45	1590-	1608	1601.54	277.67	1.59E+03	91.74	2.02E+03
	46	1656-	1670	1663.73	288.45	2.78E+02	66.13	1.42E+03
	47	1695-	1715	1704.71	295.56	1.29E+03	89.15	1.84E+03
	48	1722-	1742	1732.91	300.45	2.30E+03	95.39	1.87E+03
	49	1848-	1864	1856.10	321.81	1.38E+02	69.84	1.51E+03
	50	1884-	1901	1893.85	328.36	2.12E+03	86.84	1.67E+03
	51	1910-	1928	1918.72	332.68	2.71E+02	78.42	1.74E+03
M	52	1943-	1978	1953.47	338.70	8.28E+03	156.56	1.46E+03
m	53	1943-	1978	1968.24	341.26	3.14E+02	33.59	1.45E+03
	54	2020-	2040	2032.27	352.37	1.89E+03	89.02	1.66E+03
	55	2169-	2189	2178.36	377.70	8.96E+01	82.16	1.84E+03
	56	2354-	2377	2364.50	409.99	9.56E+02	85.49	1.58E+03
	57	2605-	2625	2615.60	453.53	1.51E+02	69.01	1.27E+03
	58	2660-	2683	2673.48	463.57	1.88E+03	85.00	1.33E+03
	59	2730-	2755	2743.49	475.71	1.17E+02	78.64	1.41E+03
	60	2922-	2996	2948.92	511.34	3.11E+03	216.48	4.11E+03
	61	3236-	3258	3247.55	563.13	3.16E+02	70.15	1.19E+03
	62	3353-	3381	3367.36	583.91	8.99E+03	126.57	1.52E+03
	63	3505-	3531	3518.15	610.06	9.00E+02	80.05	1.26E+03
	64	3726-	3750	3738.68	648.31	-2.66E+01	69.65	1.18E+03
	65	4016-	4044	4028.34	698.54	3.89E+02	58.46	4.50E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: DM1B standard
Peak Analysis Performed on: 1-26-96 4:28:45 PM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.38	7.21E+02	120.93	4.00E+01	3.04E+01	6.81E+02	1.25E+02
m	2	6.40	1.18E+03	133.88	4.00E+01	3.04E+01	1.14E+03	1.37E+02
	3	8.07	1.08E+02	60.67			1.08E+02	6.07E+01
M	4	10.88	8.54E+02	115.31	1.57E+02	3.08E+01	6.97E+02	1.19E+02
m	5	12.40	1.71E+03	140.85			1.71E+03	1.41E+02
m	6	13.03	4.16E+03	192.87			4.16E+03	1.93E+02
M	7	15.35	6.25E+03	500.03			6.25E+03	5.00E+02
m	8	16.26	9.90E+03	572.44			9.90E+03	5.72E+02
m	9	17.94	1.57E+03	344.45			1.57E+03	3.44E+02
m	10	19.07	3.33E+03	417.71	-1.92E-01	1.63E+01	3.33E+03	4.18E+02
	11	34.75	8.68E+02	98.83	1.36E+01	1.75E+01	8.54E+02	1.00E+02
	12	39.95	3.73E+03	117.32			3.73E+03	1.17E+02
	13	46.65	8.24E+02	94.79	1.16E+01	3.50E+01	8.13E+02	1.01E+02
	14	53.32	2.66E+02	84.16			2.66E+02	8.42E+01
	15	57.85	1.24E+03	95.32			1.24E+03	9.53E+01
[illegible]	16	63.65	1.48E+03	125.84	7.25E+01	2.49E+01	1.41E+03	1.28E+02
M	17	72.91	2.09E+03	231.49			2.09E+03	2.31E+02
m	18	74.93	3.56E+04	623.81	4.70E+01	1.89E+01	3.56E+04	6.24E+02
m	19	77.21	5.60E+04	687.64	6.88E+01	2.55E+01	5.59E+04	6.88E+02
m	20	79.36	4.87E+02	168.21			4.87E+02	1.68E+02
m	21	81.13	4.97E+02	169.00			4.97E+02	1.69E+02
	22	84.48	5.67E+03	140.63			5.67E+03	1.41E+02
M	23	87.33	1.90E+04	733.78			1.90E+04	7.34E+02
m	24	90.03	1.30E+04	724.21			1.30E+04	7.24E+02
	25	93.46	1.19E+04	156.55	2.61E+02	4.01E+01	1.17E+04	1.62E+02
	26	99.59	2.56E+03	105.99			2.56E+03	1.06E+02
M	27	104.93	1.35E+03	118.91			1.35E+03	1.19E+02
m	28	105.77	2.73E+03	147.17			2.73E+03	1.47E+02
	29	108.75	1.40E+03	116.51			1.40E+03	1.17E+02
	30	115.32	1.51E+03	110.47			1.51E+03	1.10E+02
M	31	129.19	4.92E+03	163.89			4.92E+03	1.64E+02
m	32	131.80	4.71E+02	40.87			4.71E+02	4.09E+01
	33	145.94	2.56E+02	83.92			2.56E+02	8.39E+01
	34	154.13	1.57E+03	102.08			1.57E+03	1.02E+02
	35	186.21	1.05E+03	103.80	1.65E+02	2.92E+01	8.82E+02	1.08E+02
	36	199.57	3.28E+02	72.56			3.28E+02	7.26E+01
	37	204.31	1.06E+02	81.37			1.06E+02	8.14E+01
	38	209.47	4.96E+03	115.81	-2.56E+01	2.49E+01	4.98E+03	1.18E+02
	39	216.22	4.37E+02	77.24			4.37E+02	7.72E+01
	40	222.54	8.26E+01	66.47			8.26E+01	6.65E+01
M	41	238.89	5.76E+04	335.03	7.88E+01	2.53E+01	5.75E+04	3.36E+02
[illegible]	42	241.26	5.40E+03	202.96			5.40E+03	2.03E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	252.87	1.97E+02	89.19			1.97E+02	8.92E+01
	44	270.56	3.03E+03	108.68			3.03E+03	1.09E+02
	45	277.67	1.59E+03	91.74			1.59E+03	9.17E+01
	46	288.45	2.78E+02	66.13			2.78E+02	6.61E+01
	47	295.56	1.29E+03	89.15	1.05E+01	4.02E+01	1.27E+03	9.78E+01
	48	300.45	2.30E+03	95.39			2.30E+03	9.54E+01
	49	321.81	1.38E+02	69.84			1.38E+02	6.98E+01
	50	328.36	2.12E+03	86.84			2.12E+03	8.68E+01
	51	332.68	2.71E+02	78.42	0.00E+00	0.00E+00	2.71E+02	7.84E+01
M	52	338.70	8.28E+03	156.56			8.28E+03	1.57E+02
m	53	341.26	3.14E+02	33.59			3.14E+02	3.36E+01
	54	352.37	1.89E+03	89.02	8.80E+01	2.36E+01	1.80E+03	9.21E+01
	55	377.70	8.96E+01	82.16			8.96E+01	8.22E+01
	56	409.99	9.56E+02	85.49			9.56E+02	8.55E+01
	57	453.53	1.51E+02	69.01			1.51E+02	6.90E+01
	58	463.57	1.88E+03	85.00			1.88E+03	8.50E+01
	59	475.71	1.17E+02	78.64			1.17E+02	7.86E+01
	60	511.34	3.11E+03	216.48	3.07E+02	7.27E+01	2.81E+03	2.28E+02
	61	563.13	3.16E+02	70.15			3.16E+02	7.01E+01
	62	583.91	8.99E+03	126.57	2.12E+01	1.69E+01	8.97E+03	1.28E+02
	63	610.06	9.00E+02	80.05	4.28E+01	1.95E+01	8.57E+02	8.24E+01
	64	648.31	-2.66E+01	69.65			-2.66E+01	6.97E+01
	65	698.54	3.89E+02	58.46	4.50E+01	1.05E+01	3.44E+02	5.94E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: DM1B standard
Peak Analysis Performed on: 1-26-96 4:28:45 PM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.38	7.21E+02	120.93	4.00E+01	3.04E+01	6.81E+02	1.25E+02
m	2	6.40	1.18E+03	133.88	4.00E+01	3.04E+01	1.14E+03	1.37E+02
	3	8.07	1.08E+02	60.67			1.08E+02	6.07E+01
M	4	10.88	8.54E+02	115.31	1.57E+02	3.08E+01	6.97E+02	1.19E+02
m	5	12.40	1.71E+03	140.85			1.71E+03	1.41E+02
m	6	13.03	4.16E+03	192.87			4.16E+03	1.93E+02
M	7	15.35	6.25E+03	500.03			6.25E+03	5.00E+02
m	8	16.26	9.90E+03	572.44			9.90E+03	5.72E+02
m	9	17.94	1.57E+03	344.45			1.57E+03	3.44E+02
	10	19.07	3.33E+03	417.71	-1.92E-01	1.63E+01	3.33E+03	4.18E+02
	11	34.75	8.68E+02	98.83	1.36E+01	1.75E+01	8.54E+02	1.00E+02
	12	39.95	3.73E+03	117.32			3.73E+03	1.17E+02
	13	46.65	8.24E+02	94.79	1.16E+01	3.50E+01	8.13E+02	1.01E+02
	14	53.32	2.66E+02	84.16			2.66E+02	8.42E+01
	15	57.85	1.24E+03	95.32			1.24E+03	9.53E+01
	16	63.65	1.48E+03	125.84	7.25E+01	2.49E+01	1.41E+03	1.28E+02
M	17	72.91	2.09E+03	231.49			2.09E+03	2.31E+02
m	18	74.93	3.56E+04	623.81	4.70E+01	1.89E+01	3.56E+04	6.24E+02
m	19	77.21	5.60E+04	687.64	6.88E+01	2.55E+01	5.59E+04	6.88E+02
m	20	79.36	4.87E+02	168.21			4.87E+02	1.68E+02
m	21	81.13	4.97E+02	169.00			4.97E+02	1.69E+02
	22	84.48	5.67E+03	140.63			5.67E+03	1.41E+02
M	23	87.33	1.90E+04	733.78			1.90E+04	7.34E+02
m	24	90.03	1.30E+04	724.21			1.30E+04	7.24E+02
	25	93.46	1.19E+04	156.55	2.61E+02	4.01E+01	1.17E+04	1.62E+02
	26	99.59	2.56E+03	105.99			2.56E+03	1.06E+02
M	27	104.93	1.35E+03	118.91			1.35E+03	1.19E+02
m	28	105.77	2.73E+03	147.17			2.73E+03	1.47E+02
	29	108.75	1.40E+03	116.51			1.40E+03	1.17E+02
	30	115.32	1.51E+03	110.47			1.51E+03	1.10E+02
M	31	129.19	4.92E+03	163.89			4.92E+03	1.64E+02
m	32	131.80	4.71E+02	40.87			4.71E+02	4.09E+01
	33	145.94	2.56E+02	83.92			2.56E+02	8.39E+01
	34	154.13	1.57E+03	102.08			1.57E+03	1.02E+02
	35	186.21	1.05E+03	103.80	1.65E+02	2.92E+01	8.82E+02	1.08E+02
	36	199.57	3.28E+02	72.56			3.28E+02	7.26E+01
	37	204.31	1.06E+02	81.37			1.06E+02	8.14E+01
	38	209.47	4.96E+03	115.81	-2.56E+01	2.49E+01	4.98E+03	1.18E+02
	39	216.22	4.37E+02	77.24			4.37E+02	7.72E+01
	40	222.54	8.26E+01	66.47			8.26E+01	6.65E+01

M 41	238.89	5.76E+04	335.03	7.88E+01	2.53E+01	5.75E+04	3.36E+02
42	241.26	5.40E+03	202.96			5.40E+03	2.03E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	252.87	1.97E+02	89.19			1.97E+02	8.92E+01
	44	270.56	3.03E+03	108.68			3.03E+03	1.09E+02
	45	277.67	1.59E+03	91.74			1.59E+03	9.17E+01
	46	288.45	2.78E+02	66.13			2.78E+02	6.61E+01
	47	295.56	1.29E+03	89.15	1.05E+01	4.02E+01	1.27E+03	9.78E+01
	48	300.45	2.30E+03	95.39			2.30E+03	9.54E+01
	49	321.81	1.38E+02	69.84			1.38E+02	6.98E+01
	50	328.36	2.12E+03	86.84			2.12E+03	8.68E+01
	51	332.68	2.71E+02	78.42	0.00E+00	0.00E+00	2.71E+02	7.84E+01
M	52	338.70	8.28E+03	156.56			8.28E+03	1.57E+02
m	53	341.26	3.14E+02	33.59			3.14E+02	3.36E+01
	54	352.37	1.89E+03	89.02	8.80E+01	2.36E+01	1.80E+03	9.21E+01
	55	377.70	8.96E+01	82.16			8.96E+01	8.22E+01
	56	409.99	9.56E+02	85.49			9.56E+02	8.55E+01
	57	453.53	1.51E+02	69.01			1.51E+02	6.90E+01
	58	463.57	1.88E+03	85.00			1.88E+03	8.50E+01
	59	475.71	1.17E+02	78.64			1.17E+02	7.86E+01
	60	511.34	3.11E+03	216.48	3.07E+02	7.27E+01	2.81E+03	2.28E+02
	61	563.13	3.16E+02	70.15			3.16E+02	7.01E+01
	62	583.91	8.99E+03	126.57	2.12E+01	1.69E+01	8.97E+03	1.28E+02
	63	610.06	9.00E+02	80.05	4.28E+01	1.95E+01	8.57E+02	8.24E+01
	64	648.31	-2.66E+01	69.65			-2.66E+01	6.97E+01
	65	698.54	3.89E+02	58.46	4.50E+01	1.05E+01	3.44E+02	5.94E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	1-29-96 8:42:17 AM
Sample Title	:	BL5D
Spectrum Description	:	BL5D standard
Sample Identification	:	BL5D_2
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	1-27-96 1:52:46 PM
Live Time	:	80000.0 seconds
Real Time	:	80374.5 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

$-0.019 \log x + 1.042$

$0.032 \log x + 0.928$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: BL5D
Peak Locate Performed on: 1-29-96 8:41:26 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.60	0.0472	5.46	11.96
2	37.29	0.0284	6.35	24.66
3	46.98	0.1859	8.06	6.78
4	53.29	0.1057	9.16	6.65
5	63.42	0.0089	10.91	60.04
6	72.00	<NA>	12.55	<NA>
7	76.02	0.0174	13.12	60.94
8	88.69	0.0171	15.43	40.02
9	94.35	0.0078	16.23	79.04
10	98.00	<NA>	16.85	<NA>
11	103.82	0.0412	17.92	21.92
12	110.39	0.0146	19.05	38.88
13	114.00	<NA>	19.69	<NA>
14	117.42	0.0773	20.26	7.02
15	121.61	0.0829	20.97	6.89
16	148.87	0.0187	25.74	55.94
17	158.82	0.0216	27.47	48.06
18	173.93	0.2947	30.08	3.44
19	212.45	0.0400	36.76	12.57
20	269.36	0.0038	46.63	255.84
21	290.03	0.0181	50.21	51.99
22	307.99	0.0075	53.33	117.96
23	338.96	0.1843	58.70	5.37
24	366.00	0.0030	63.39	282.48
25	375.52	0.2036	65.08	5.40
26	391.22	0.0208	67.76	65.68
27	409.58	0.1849	70.96	5.33
28	421.03	0.0457	72.99	18.56
29	432.53	0.0036	74.93	311.56
30	445.73	0.0028	77.21	428.25
31	458.43	0.0119	79.43	93.60
32	468.68	0.0115	81.19	103.43
33	484.47	0.0090	83.96	116.26
34	493.73	0.0961	85.57	12.41
35	504.42	0.0113	87.34	127.00
36	519.26	0.0101	89.98	117.13
37	534.89	0.0064	92.70	186.20
38	547.54	0.0182	94.80	55.94
39	562.97	0.1433	97.60	8.61
40	568.78	0.0204	98.52	59.61
41	578.92	0.1674	100.12	5.06

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	590.64	0.2802	102.35	3.44
43	594.93	0.2031	102.88	4.44
44	604.82	0.3373	104.81	3.42
45	610.32	0.1377	105.75	9.39
46	630.64	0.0856	109.25	13.59
47	643.11	0.0503	111.39	15.98
48	651.75	0.0233	112.95	48.37
49	661.29	0.1735	114.66	6.85
50	698.52	0.1434	121.05	7.94
51	706.54	0.0776	122.46	13.66
52	739.34	0.1509	128.15	6.88
53	752.83	0.0950	130.51	12.36
54	759.34	0.3738	131.50	3.08
55	830.77	0.0184	143.99	69.09
56	890.61	0.0234	154.37	42.69
57	916.16	0.1999	158.80	6.05
58	943.44	0.0397	163.53	35.96
59	1074.30	0.0075	186.23	183.88
60	1125.24	0.3054	195.19	3.60
61	1133.37	0.1377	196.54	7.57
62	1147.35	0.2920	198.88	4.63
63	1166.90	0.2054	202.25	6.81
64	1185.75	0.0445	205.54	28.09
65	1216.19	0.2891	210.84	5.13
66	1362.80	0.0256	236.26	48.03
67	1397.41	0.0061	242.27	242.32
68	1479.82	0.0396	256.53	30.70
69	1494.81	0.0395	259.14	37.26
70	1555.89	0.0229	269.76	51.45
71	1566.44	0.0385	271.55	41.07
72	1586.94	0.0714	275.07	22.29
73	1623.34	0.3192	281.50	4.94
74	1638.30	0.2048	284.02	7.57
75	1652.10	0.0912	286.42	16.64
76	1704.75	0.0040	295.57	348.82
77	1732.42	0.0741	300.37	18.30
78	1747.49	0.1373	303.00	11.22
79	1758.29	0.2074	304.87	7.20
80	1806.31	0.3355	313.23	3.45
81	1815.60	0.3118	314.80	5.47
82	1870.38	0.0854	324.29	15.98
83	1904.96	0.1092	330.26	16.95
84	1927.04	0.5630	334.11	4.68
85	1953.60	0.1313	338.72	10.93
86	2015.27	0.2030	349.63	5.36
87	2032.20	0.0038	352.34	422.02
88	2233.59	0.1039	387.33	13.01
89	2245.82	0.0827	389.38	17.35
90	2320.39	0.0703	402.30	18.96
91	2338.96	0.2672	405.61	7.69

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	2465.16	0.4123	427.44	4.24
93	2487.89	0.4372	431.38	3.03
94	2626.31	0.1383	455.39	11.26
95	2667.06	0.2188	462.46	6.83
96	2712.29	0.2796	470.29	5.99
97	2738.89	0.4024	474.91	4.20
98	2774.39	0.1124	481.07	16.00
99	2812.71	0.1251	487.72	13.46
100	2942.12	0.3856	510.16	4.51
101	3081.32	0.1392	534.30	12.42
102	3350.15	0.1835	580.93	9.74
103	3518.38	0.0067	610.10	267.80
104	3842.35	0.0608	666.29	29.26
105	3974.58	0.4527	689.22	3.84
106	4028.83	0.0905	698.63	28.12

Errors quoted at 1.000 sigma

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** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: BL5D
Peak Analysis Performed on: 1-29-96 8:41:53 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	31.99	5.46	1.92E+04	1980.02	7.70E+04
m	2	29-	39	37.08	6.35	2.51E+04	1989.15	7.03E+04
	4	44-	55	53.29	9.16	-6.94E+03	516.47	1.09E+05
M	5	60-	79	63.37	10.91	9.91E+04	9823.16	9.01E+04
m	6	60-	79	72.87	12.55	6.57E+04	10454.0	1.18E+05
m	7	60-	79	76.14	13.12	2.44E+05	12091.4	1.03E+05
M	8	84-	125	89.45	15.43	1.56E+05	11936.0	1.31E+05
m	9	84-	125	94.06	16.23	2.59E+05	14503.3	1.27E+05
m	10	84-	125	97.63	16.85	8.17E+04	10437.4	1.14E+05
m	11	84-	125	103.80	17.92	2.75E+04	7047.46	1.05E+05
m	12	84-	125	110.31	19.05	6.03E+04	8866.52	9.71E+04
m	13	84-	125	114.02	19.69	3.42E+04	8421.68	9.19E+04
m	14	84-	125	117.31	20.26	1.76E+04	7516.65	8.87E+04
m	15	84-	125	121.38	20.97	5.74E+03	5844.94	7.80E+04
M	16	144-	163	148.90	25.74	2.88E+04	449.23	6.69E+04
m	17	144-	163	158.86	27.47	2.43E+04	392.99	6.41E+04
	18	169-	177	173.93	30.08	1.08E+03	366.10	6.22E+04
	19	208-	216	212.45	36.76	3.88E+03	364.10	6.02E+04
	20	263-	275	269.36	46.63	3.29E+05	745.90	8.65E+04
	21	284-	296	290.03	50.21	3.26E+04	499.69	8.20E+04
	22	301-	313	307.99	53.33	8.17E+04	548.66	8.36E+04
	23	332-	341	338.96	58.70	3.48E+02	397.03	6.93E+04
M	24	358-	379	366.00	63.39	3.04E+05	1040.85	6.99E+04
m	25	358-	379	375.75	65.08	1.14E+03	364.76	6.81E+04
	26	384-	396	391.22	67.76	3.68E+04	546.30	9.96E+04
M	27	402-	475	409.66	70.96	2.94E+03	2504.31	8.54E+04
m	28	402-	475	421.34	72.99	1.07E+04	2672.81	8.50E+04
m	29	402-	475	432.52	74.93	4.88E+05	7553.89	9.08E+04
m	30	402-	475	445.68	77.21	8.55E+05	8355.86	7.92E+04
m	31	402-	475	458.51	79.43	7.15E+04	3748.29	8.38E+04
m	32	402-	475	468.63	81.19	6.69E+04	3713.53	8.31E+04
M	33	477-	617	484.61	83.96	1.44E+05	2571.62	9.79E+04
m	34	477-	617	493.88	85.57	5.56E+03	1441.38	9.56E+04
m	35	477-	617	504.10	87.34	2.80E+05	3242.21	9.18E+04
m	36	477-	617	519.35	89.98	1.22E+05	2371.49	8.65E+04
m	37	477-	617	534.99	92.70	4.12E+05	3792.89	8.00E+04
m	38	477-	617	547.12	94.80	5.80E+04	1847.99	7.49E+04
m	39	477-	617	563.25	97.60	8.19E+03	1383.75	7.75E+04
m	40	477-	617	568.55	98.52	3.68E+04	1673.90	7.68E+04
m	41	477-	617	577.80	100.12	2.08E+03	1232.72	7.57E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	477-	617	593.71	102.88	1.94E+03	1231.70	7.42E+04
m	45	477-	617	610.27	105.75	4.28E+03	1268.26	6.82E+04
M	46	622-	669	630.43	109.25	8.26E+03	935.03	6.25E+04
m	47	622-	669	642.80	111.39	1.12E+04	970.14	6.17E+04
m	48	622-	669	651.76	112.95	2.59E+04	1294.36	6.11E+04
m	49	622-	669	661.63	114.66	4.87E+03	901.83	6.04E+04
M	50	692-	713	698.49	121.05	2.59E+03	245.25	5.03E+04
m	51	692-	713	706.60	122.46	4.71E+03	402.86	5.00E+04
M	52	731-	767	739.40	128.15	2.82E+03	337.53	5.48E+04
m	53	731-	767	752.99	130.51	4.84E+03	522.40	5.49E+04
m	54	731-	767	758.72	131.50	1.89E+03	275.09	5.49E+04
	55	822-	838	830.77	143.99	4.27E+04	527.71	7.54E+04
	56	881-	897	890.61	154.37	1.60E+04	513.57	7.92E+04
	57	911-	925	916.16	158.80	1.52E+03	434.00	6.48E+04
	58	935-	952	943.44	163.53	1.17E+04	497.80	7.25E+04
	59	1065-	1083	1074.30	186.23	2.86E+05	726.63	7.18E+04
M	60	1119-	1194	1125.98	195.19	2.00E+03	581.80	6.12E+04
m	61	1119-	1194	1133.78	196.54	4.12E+03	596.04	7.05E+04
m	62	1119-	1194	1147.23	198.88	3.32E+03	547.06	6.41E+04
m	63	1119-	1194	1166.68	202.25	5.51E+03	599.65	6.34E+04
m	64	1119-	1194	1185.67	205.54	1.48E+04	1062.85	5.65E+04
	65	1210-	1223	1216.19	210.84	1.20E+03	329.67	3.90E+04
	66	1352-	1372	1362.80	236.26	1.55E+04	450.85	5.18E+04
	67	1387-	1407	1397.41	242.27	2.20E+05	626.85	4.77E+04
M	68	1469-	1501	1479.68	256.53	8.29E+03	342.84	3.41E+04
m	69	1469-	1501	1494.68	259.14	1.28E+04	445.24	3.10E+04
M	70	1545-	1597	1555.93	269.76	1.82E+04	601.59	3.26E+04
m	71	1545-	1597	1566.25	271.55	1.37E+04	520.23	3.07E+04
m	72	1545-	1597	1586.56	275.07	7.99E+03	424.51	3.07E+04
M	73	1615-	1660	1623.64	281.50	8.47E+02	153.28	3.19E+04
m	74	1615-	1660	1638.16	284.02	1.72E+03	239.03	3.27E+04
m	75	1615-	1660	1652.01	286.42	3.95E+03	501.78	3.14E+04
	76	1693-	1715	1704.75	295.57	4.33E+05	779.03	4.50E+04
M	77	1724-	1768	1732.43	300.37	4.23E+03	394.50	2.89E+04
m	78	1724-	1768	1747.59	303.00	2.21E+03	226.13	2.83E+04
m	79	1724-	1768	1758.42	304.87	1.85E+03	198.91	2.78E+04
M	80	1798-	1823	1806.61	313.23	4.10E+02	139.90	2.74E+04
m	81	1798-	1823	1815.66	314.80	1.22E+03	337.90	2.72E+04
	82	1862-	1881	1870.38	324.29	3.49E+03	351.65	3.42E+04
M	83	1892-	1938	1904.82	330.26	2.51E+03	614.20	2.64E+04
m	84	1892-	1938	1927.00	334.11	7.21E+02	224.40	2.81E+04
	85	1945-	1961	1953.60	338.72	2.01E+03	323.55	3.28E+04
M	86	2007-	2042	2016.49	349.63	1.22E+03	779.18	4.13E+04
m	87	2007-	2042	2032.12	352.34	6.49E+05	1306.16	3.66E+04
M	88	2224-	2256	2233.87	387.33	3.54E+03	274.99	3.36E+04
m	89	2224-	2256	2245.66	389.38	4.33E+03	323.99	3.20E+04
M	90	2309-	2350	2320.20	402.30	4.81E+03	429.52	3.77E+04
m	91	2309-	2350	2339.25	405.61	3.66E+03	349.47	3.81E+04
	92	2455-	2499	2465.16	427.44	2.24E+03	697.88	7.32E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	94	2613-	2636	2626.31	455.39	2.69E+03	352.50	3.04E+04
	95	2655-	2677	2667.06	462.46	1.61E+03	335.84	2.87E+04
M	96	2702-	2749	2712.24	470.29	9.49E+02	431.06	2.19E+04
m	97	2702-	2749	2738.83	474.91	4.80E+02	227.49	2.17E+04
	98	2764-	2784	2774.39	481.07	3.15E+03	303.97	2.46E+04
	99	2799-	2823	2812.71	487.72	4.66E+03	342.66	2.73E+04
	100	2916-	2990	2942.12	510.16	2.10E+03	886.78	7.56E+04
	101	3067-	3091	3081.32	534.30	2.50E+03	321.54	2.44E+04
	102	3336-	3361	3350.15	580.93	2.53E+03	327.71	2.46E+04
	103	3503-	3533	3518.38	610.10	3.20E+05	681.41	2.96E+04
	104	3829-	3857	3842.35	666.29	7.92E+03	339.04	2.31E+04
	105	3959-	3986	3974.58	689.22	7.25E+02	315.45	2.19E+04
	106	4012-	4044	4028.83	698.63	8.69E+03	230.38	7.49E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: BL5D
Peak Analysis Performed on: 1-29-96 8:41:26 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.46	1.92E+04	1980.02	4.00E+01	3.04E+01	1.92E+04	1.98E+03
m	2	6.35	2.51E+04	1989.15	4.00E+01	3.04E+01	2.51E+04	1.99E+03
	3	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
	4	9.16	-6.94E+03	516.47			-6.94E+03	5.16E+02
M	5	10.91	9.91E+04	9823.16	1.57E+02	3.08E+01	9.89E+04	9.82E+03
m	6	12.55	6.57E+04	10454.0			6.57E+04	1.05E+04
m	7	13.12	2.44E+05	12091.4			2.44E+05	1.21E+04
M	8	15.43	1.56E+05	11936.0			1.56E+05	1.19E+04
m	9	16.23	2.59E+05	14503.3			2.59E+05	1.45E+04
m	10	16.85	8.17E+04	10437.4			8.17E+04	1.04E+04
m	11	17.92	2.75E+04	7047.46			2.75E+04	7.05E+03
m	12	19.05	6.03E+04	8866.52	-1.92E-01	1.63E+01	6.03E+04	8.87E+03
m	13	19.69	3.42E+04	8421.68	-1.92E-01	1.63E+01	3.42E+04	8.42E+03
m	14	20.26	1.76E+04	7516.65	-1.92E-01	1.63E+01	1.76E+04	7.52E+03
m	15	20.97	5.74E+03	5844.94			5.74E+03	5.84E+03
[illegible]	16	25.74	2.88E+04	449.23			2.88E+04	4.49E+02
m	17	27.47	2.43E+04	392.99	-1.27E+01	1.34E+01	2.43E+04	3.93E+02
	18	30.08	1.08E+03	366.10			1.08E+03	3.66E+02
	19	36.76	3.88E+03	364.10			3.88E+03	3.64E+02
	20	46.63	3.29E+05	745.90	1.16E+01	3.50E+01	3.29E+05	7.47E+02
	21	50.21	3.26E+04	499.69	-1.20E+01	1.73E+01	3.27E+04	5.00E+02
	22	53.33	8.17E+04	548.66			8.17E+04	5.49E+02
	23	58.70	3.48E+02	397.03			3.48E+02	3.97E+02
M	24	63.39	3.04E+05	1040.85	7.25E+01	2.49E+01	3.03E+05	1.04E+03
m	25	65.08	1.14E+03	364.76			1.14E+03	3.65E+02
	26	67.76	3.68E+04	546.30			3.68E+04	5.46E+02
M	27	70.96	2.94E+03	2504.31			2.94E+03	2.50E+03
m	28	72.99	1.07E+04	2672.81			1.07E+04	2.67E+03
m	29	74.93	4.88E+05	7553.89	4.70E+01	1.89E+01	4.88E+05	7.55E+03
m	30	77.21	8.55E+05	8355.86	6.88E+01	2.55E+01	8.55E+05	8.36E+03
m	31	79.43	7.15E+04	3748.29			7.15E+04	3.75E+03
m	32	81.19	6.69E+04	3713.53			6.69E+04	3.71E+03
M	33	83.96	1.44E+05	2571.62	-3.10E+01	1.96E+01	1.44E+05	2.57E+03
m	34	85.57	5.56E+03	1441.38			5.56E+03	1.44E+03
m	35	87.34	2.80E+05	3242.21			2.80E+05	3.24E+03
m	36	89.98	1.22E+05	2371.49			1.22E+05	2.37E+03
m	37	92.70	4.12E+05	3792.89	2.61E+02	4.01E+01	4.12E+05	3.79E+03
m	38	94.80	5.80E+04	1847.99	2.42E+01	1.36E+01	5.80E+04	1.85E+03
m	39	97.60	8.19E+03	1383.75			8.19E+03	1.38E+03
m	40	98.52	3.68E+04	1673.90			3.68E+04	1.67E+03
m	41	100.12	2.08E+03	1232.72			2.08E+03	1.23E+03
[illegible]	42	102.35	0.00E+00	0.00			0.00E+00	0.00E+00

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	102.88	1.94E+03	1231.70			1.94E+03	1.23E+03
m	44	104.81	0.00E+00	0.00			0.00E+00	0.00E+00
m	45	105.75	4.28E+03	1268.26			4.28E+03	1.27E+03
M	46	109.25	8.26E+03	935.03	9.22E+01	2.46E+01	8.16E+03	9.35E+02
m	47	111.39	1.12E+04	970.14			1.12E+04	9.70E+02
m	48	112.95	2.59E+04	1294.36			2.59E+04	1.29E+03
m	49	114.66	4.87E+03	901.83			4.87E+03	9.02E+02
M	50	121.05	2.59E+03	245.25	6.68E+00	2.29E+01	2.59E+03	2.46E+02
m	51	122.46	4.71E+03	402.86			4.71E+03	4.03E+02
M	52	128.15	2.82E+03	337.53			2.82E+03	3.38E+02
m	53	130.51	4.84E+03	522.40			4.84E+03	5.22E+02
m	54	131.50	1.89E+03	275.09			1.89E+03	2.75E+02
	55	143.99	4.27E+04	527.71	4.83E+01	2.07E+01	4.27E+04	5.28E+02
	56	154.37	1.60E+04	513.57			1.60E+04	5.14E+02
	57	158.80	1.52E+03	434.00			1.52E+03	4.34E+02
	58	163.53	1.17E+04	497.80			1.17E+04	4.98E+02
	59	186.23	2.86E+05	726.63	1.65E+02	2.92E+01	2.85E+05	7.27E+02
M	60	195.19	2.00E+03	581.80			2.00E+03	5.82E+02
m	61	196.54	4.12E+03	596.04	5.02E+01	2.63E+01	4.07E+03	5.97E+02
m	62	198.88	3.32E+03	547.06			3.32E+03	5.47E+02
m	63	202.25	5.51E+03	599.65			5.51E+03	6.00E+02
m	64	205.54	1.48E+04	1062.85	-8.75E+00	2.28E+01	1.48E+04	1.06E+03
	65	210.84	1.20E+03	329.67	-2.56E+01	2.49E+01	1.22E+03	3.31E+02
	66	236.26	1.55E+04	450.85			1.55E+04	4.51E+02
	67	242.27	2.20E+05	626.85			2.20E+05	6.27E+02
M	68	256.53	8.29E+03	342.84			8.29E+03	3.43E+02
m	69	259.14	1.28E+04	445.24	1.45E+01	2.66E+01	1.28E+04	4.46E+02
M	70	269.76	1.82E+04	601.59			1.82E+04	6.02E+02
m	71	271.55	1.37E+04	520.23			1.37E+04	5.20E+02
m	72	275.07	7.99E+03	424.51			7.99E+03	4.25E+02
M	73	281.50	8.47E+02	153.28			8.47E+02	1.53E+02
m	74	284.02	1.72E+03	239.03			1.72E+03	2.39E+02
m	75	286.42	3.95E+03	501.78			3.95E+03	5.02E+02
	76	295.57	4.33E+05	779.03	1.05E+01	4.02E+01	4.33E+05	7.80E+02
M	77	300.37	4.23E+03	394.50			4.23E+03	3.94E+02
m	78	303.00	2.21E+03	226.13			2.21E+03	2.26E+02
m	79	304.87	1.85E+03	198.91			1.85E+03	1.99E+02
M	80	313.23	4.10E+02	139.90			4.10E+02	1.40E+02
m	81	314.80	1.22E+03	337.90			1.22E+03	3.38E+02
	82	324.29	3.49E+03	351.65	-2.18E+01	1.99E+01	3.51E+03	3.52E+02
M	83	330.26	2.51E+03	614.20	-2.16E+01	3.90E+01	2.53E+03	6.15E+02
m	84	334.11	7.21E+02	224.40			7.21E+02	2.24E+02
	85	338.72	2.01E+03	323.55			2.01E+03	3.24E+02
M	86	349.63	1.22E+03	779.18			1.22E+03	7.79E+02
m	87	352.34	6.49E+05	1306.16	8.80E+01	2.36E+01	6.49E+05	1.31E+03
M	88	387.33	3.54E+03	274.99			3.54E+03	2.75E+02
m	89	389.38	4.33E+03	323.99			4.33E+03	3.24E+02
M	90	402.30	4.81E+03	429.52			4.81E+03	4.30E+02
m	91	405.61	3.66E+03	349.47			3.66E+03	3.49E+02
	92	427.44	2.24E+03	697.88			2.24E+03	6.98E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	93	431.38	0.00E+00	0.00			0.00E+00	0.00E+00
	94	455.39	2.69E+03	352.50			2.69E+03	3.52E+02
	95	462.46	1.61E+03	335.84			1.61E+03	3.36E+02
M	96	470.29	9.49E+02	431.06			9.49E+02	4.31E+02
m	97	474.91	4.80E+02	227.49			4.80E+02	2.27E+02
	98	481.07	3.15E+03	303.97			3.15E+03	3.04E+02
	99	487.72	4.66E+03	342.66			4.66E+03	3.43E+02
	100	510.16	2.10E+03	886.78			2.10E+03	8.87E+02
	101	534.30	2.50E+03	321.54			2.50E+03	3.22E+02
	102	580.93	2.53E+03	327.71			2.53E+03	3.28E+02
	103	610.10	3.20E+05	681.41	4.28E+01	1.95E+01	3.20E+05	6.82E+02
	104	666.29	7.92E+03	339.04			7.92E+03	3.39E+02
	105	689.22	7.25E+02	315.45	-5.15E+01	1.92E+01	7.77E+02	3.16E+02
	106	698.63	8.69E+03	230.38	4.50E+01	1.05E+01	8.64E+03	2.31E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: BL5D
Peak Analysis Performed on: 1-29-96 8:41:26 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.46	1.92E+04	1980.02	4.00E+01	3.04E+01	1.92E+04	1.98E+03
m	2	6.35	2.51E+04	1989.15	4.00E+01	3.04E+01	2.51E+04	1.99E+03
	3	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
	4	9.16	-6.94E+03	516.47			-6.94E+03	5.16E+02
M	5	10.91	9.91E+04	9823.16	1.57E+02	3.08E+01	9.89E+04	9.82E+03
m	6	12.55	6.57E+04	10454.0			6.57E+04	1.05E+04
m	7	13.12	2.44E+05	12091.4			2.44E+05	1.21E+04
M	8	15.43	1.56E+05	11936.0			1.56E+05	1.19E+04
m	9	16.23	2.59E+05	14503.3			2.59E+05	1.45E+04
m	10	16.85	8.17E+04	10437.4			8.17E+04	1.04E+04
m	11	17.92	2.75E+04	7047.46			2.75E+04	7.05E+03
m	12	19.05	6.03E+04	8866.52	-1.92E-01	1.63E+01	6.03E+04	8.87E+03
m	13	19.69	3.42E+04	8421.68	-1.92E-01	1.63E+01	3.42E+04	8.42E+03
m	14	20.26	1.76E+04	7516.65	-1.92E-01	1.63E+01	1.76E+04	7.52E+03
m	15	20.97	5.74E+03	5844.94			5.74E+03	5.84E+03
M	16	25.74	2.88E+04	449.23			2.88E+04	4.49E+02
m	17	27.47	2.43E+04	392.99	-1.27E+01	1.34E+01	2.43E+04	3.93E+02
	18	30.08	1.08E+03	366.10			1.08E+03	3.66E+02
	19	36.76	3.88E+03	364.10			3.88E+03	3.64E+02
	20	46.63	3.29E+05	745.90	1.16E+01	3.50E+01	3.29E+05	7.47E+02
	21	50.21	3.26E+04	499.69	-1.20E+01	1.73E+01	3.27E+04	5.00E+02
	22	53.33	8.17E+04	548.66			8.17E+04	5.49E+02
	23	58.70	3.48E+02	397.03			3.48E+02	3.97E+02
M	24	63.39	3.04E+05	1040.85	7.25E+01	2.49E+01	3.03E+05	1.04E+03
m	25	65.08	1.14E+03	364.76			1.14E+03	3.65E+02
	26	67.76	3.68E+04	546.30			3.68E+04	5.46E+02
M	27	70.96	2.94E+03	2504.31			2.94E+03	2.50E+03
m	28	72.99	1.07E+04	2672.81			1.07E+04	2.67E+03
m	29	74.93	4.88E+05	7553.89	4.70E+01	1.89E+01	4.88E+05	7.55E+03
m	30	77.21	8.55E+05	8355.86	6.88E+01	2.55E+01	8.55E+05	8.36E+03
m	31	79.43	7.15E+04	3748.29			7.15E+04	3.75E+03
m	32	81.19	6.69E+04	3713.53			6.69E+04	3.71E+03
M	33	83.96	1.44E+05	2571.62	-3.10E+01	1.96E+01	1.44E+05	2.57E+03
m	34	85.57	5.56E+03	1441.38			5.56E+03	1.44E+03
m	35	87.34	2.80E+05	3242.21			2.80E+05	3.24E+03
	36	89.98	1.22E+05	2371.49			1.22E+05	2.37E+03
m	37	92.70	4.12E+05	3792.89	2.61E+02	4.01E+01	4.12E+05	3.79E+03
m	38	94.80	5.80E+04	1847.99	2.42E+01	1.36E+01	5.80E+04	1.85E+03
m	39	97.60	8.19E+03	1383.75			8.19E+03	1.38E+03
m	40	98.52	3.68E+04	1673.90			3.68E+04	1.67E+03

m 41	100.12	2.08E+03	1232.72		2.08E+03	1.23E+03
m 42	102.35	0.00E+00	0.00		0.00E+00	0.00E+00

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	102.88	1.94E+03	1231.70			1.94E+03	1.23E+03
m	44	104.81	0.00E+00	0.00			0.00E+00	0.00E+00
m	45	105.75	4.28E+03	1268.26			4.28E+03	1.27E+03
M	46	109.25	8.26E+03	935.03	9.22E+01	2.46E+01	8.16E+03	9.35E+02
m	47	111.39	1.12E+04	970.14			1.12E+04	9.70E+02
m	48	112.95	2.59E+04	1294.36			2.59E+04	1.29E+03
m	49	114.66	4.87E+03	901.83			4.87E+03	9.02E+02
M	50	121.05	2.59E+03	245.25	6.68E+00	2.29E+01	2.59E+03	2.46E+02
m	51	122.46	4.71E+03	402.86			4.71E+03	4.03E+02
M	52	128.15	2.82E+03	337.53			2.82E+03	3.38E+02
m	53	130.51	4.84E+03	522.40			4.84E+03	5.22E+02
m	54	131.50	1.89E+03	275.09			1.89E+03	2.75E+02
	55	143.99	4.27E+04	527.71	4.83E+01	2.07E+01	4.27E+04	5.28E+02
	56	154.37	1.60E+04	513.57			1.60E+04	5.14E+02
	57	158.80	1.52E+03	434.00			1.52E+03	4.34E+02
	58	163.53	1.17E+04	497.80			1.17E+04	4.98E+02
	59	186.23	2.86E+05	726.63	1.65E+02	2.92E+01	2.85E+05	7.27E+02
M	60	195.19	2.00E+03	581.80			2.00E+03	5.82E+02
m	61	196.54	4.12E+03	596.04	5.02E+01	2.63E+01	4.07E+03	5.97E+02
m	62	198.88	3.32E+03	547.06			3.32E+03	5.47E+02
m	63	202.25	5.51E+03	599.65			5.51E+03	6.00E+02
m	64	205.54	1.48E+04	1062.85	-8.75E+00	2.28E+01	1.48E+04	1.06E+03
	65	210.84	1.20E+03	329.67	-2.56E+01	2.49E+01	1.22E+03	3.31E+02
	66	236.26	1.55E+04	450.85			1.55E+04	4.51E+02
	67	242.27	2.20E+05	626.85			2.20E+05	6.27E+02
M	68	256.53	8.29E+03	342.84			8.29E+03	3.43E+02
m	69	259.14	1.28E+04	445.24	1.45E+01	2.66E+01	1.28E+04	4.46E+02
M	70	269.76	1.82E+04	601.59			1.82E+04	6.02E+02
m	71	271.55	1.37E+04	520.23			1.37E+04	5.20E+02
m	72	275.07	7.99E+03	424.51			7.99E+03	4.25E+02
M	73	281.50	8.47E+02	153.28			8.47E+02	1.53E+02
m	74	284.02	1.72E+03	239.03			1.72E+03	2.39E+02
m	75	286.42	3.95E+03	501.78			3.95E+03	5.02E+02
	76	295.57	4.33E+05	779.03	1.05E+01	4.02E+01	4.33E+05	7.80E+02
M	77	300.37	4.23E+03	394.50			4.23E+03	3.94E+02
m	78	303.00	2.21E+03	226.13			2.21E+03	2.26E+02
m	79	304.87	1.85E+03	198.91			1.85E+03	1.99E+02
M	80	313.23	4.10E+02	139.90			4.10E+02	1.40E+02
m	81	314.80	1.22E+03	337.90			1.22E+03	3.38E+02
	82	324.29	3.49E+03	351.65	-2.18E+01	1.99E+01	3.51E+03	3.52E+02
M	83	330.26	2.51E+03	614.20	-2.16E+01	3.90E+01	2.53E+03	6.15E+02
m	84	334.11	7.21E+02	224.40			7.21E+02	2.24E+02
	85	338.72	2.01E+03	323.55			2.01E+03	3.24E+02
M	86	349.63	1.22E+03	779.18			1.22E+03	7.79E+02
m	87	352.34	6.49E+05	1306.16	8.80E+01	2.36E+01	6.49E+05	1.31E+03
M	88	387.33	3.54E+03	274.99			3.54E+03	2.75E+02
m	89	389.38	4.33E+03	323.99			4.33E+03	3.24E+02
M	90	402.30	4.81E+03	429.52			4.81E+03	4.30E+02
m	91	405.61	3.66E+03	349.47			3.66E+03	3.49E+02
	92	427.44	2.24E+03	697.88			2.24E+03	6.98E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	93	431.38	0.00E+00	0.00			0.00E+00	0.00E+00
	94	455.39	2.69E+03	352.50			2.69E+03	3.52E+02
	95	462.46	1.61E+03	335.84			1.61E+03	3.36E+02
M	96	470.29	9.49E+02	431.06			9.49E+02	4.31E+02
m	97	474.91	4.80E+02	227.49			4.80E+02	2.27E+02
	98	481.07	3.15E+03	303.97			3.15E+03	3.04E+02
	99	487.72	4.66E+03	342.66			4.66E+03	3.43E+02
	100	510.16	2.10E+03	886.78			2.10E+03	8.87E+02
	101	534.30	2.50E+03	321.54			2.50E+03	3.22E+02
	102	580.93	2.53E+03	327.71			2.53E+03	3.28E+02
	103	610.10	3.20E+05	681.41	4.28E+01	1.95E+01	3.20E+05	6.82E+02
	104	666.29	7.92E+03	339.04			7.92E+03	3.39E+02
	105	689.22	7.25E+02	315.45	-5.15E+01	1.92E+01	7.77E+02	3.16E+02
	106	698.63	8.69E+03	230.38	4.50E+01	1.05E+01	8.64E+03	2.31E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	1-29-96 8:44:39 AM
Sample Title	:	NOPI-113-GAM3
Spectrum Description	:	NOPI-113-GAM3
Sample Identification	:	NP113
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	1-26-96 3:31:39 PM
Live Time	:	80000.0 seconds
Real Time	:	80200.2 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

-0.097 log x + 1.204

-0.043 log x + 1.084

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-113-GAM3
Peak Locate Performed on: 1-29-96 8:43:51 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	26.00	0.0000	4.42	4.80
2	31.64	0.0581	5.40	10.53
3	37.30	0.0348	6.38	20.10
4	41.00	<NA>	7.03	<NA>
5	47.00	0.0000	8.07	5.36
6	53.15	0.1846	9.13	5.12
7	63.51	0.0126	10.92	37.68
8	72.00	<NA>	12.54	<NA>
9	76.12	0.0239	13.13	44.69
10	88.77	0.0254	15.43	31.87
11	94.40	0.0099	16.23	57.30
12	98.00	<NA>	16.84	<NA>
13	103.88	0.0538	17.94	18.76
14	110.45	0.0181	19.05	28.12
15	114.00	0.0000	19.69	18.69
16	117.31	0.1071	20.27	6.30
17	121.84	0.2726	20.95	4.20
18	148.97	0.0218	25.75	47.91
19	158.94	0.0246	27.48	42.91
20	186.73	0.4764	32.30	3.98
21	205.87	0.3188	35.67	3.11
22	212.31	0.1162	36.74	8.62
23	269.46	0.0078	46.65	180.39
24	290.11	0.0219	50.23	42.97
25	308.06	0.0100	53.34	90.18
26	338.88	0.3042	58.69	3.25
27	366.07	0.0039	63.41	217.02
28	375.09	0.2497	65.05	3.89
29	391.36	0.0261	67.79	47.92
30	410.12	0.1441	71.02	5.76
31	421.14	0.0920	73.03	9.00
32	432.65	0.0049	74.94	236.56
33	445.85	0.0040	77.23	319.38
34	458.55	0.0156	79.45	70.41
35	468.84	0.0157	81.21	81.88
36	484.56	0.0115	83.98	90.34
37	493.81	0.0896	85.69	11.21
38	504.52	0.0158	87.36	95.69
39	519.35	0.0132	90.00	85.05
40	535.01	0.0084	92.72	141.27
41	547.74	0.0268	94.82	41.01

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	563.42	0.0851	97.66	6.28
43	568.89	0.0338	98.54	38.31
44	578.58	0.3378	100.11	3.49
45	591.82	0.4862	102.66	4.28
46	610.61	0.1715	105.81	6.70
47	630.75	0.1047	109.26	11.59
48	643.51	0.1210	111.48	9.85
49	651.91	0.0419	112.98	38.81
50	698.31	0.2105	121.03	5.37
51	706.72	0.1008	122.48	11.23
52	739.61	0.2216	128.16	4.89
53	752.66	0.1247	130.47	9.34
54	830.92	0.0234	144.02	54.81
55	890.79	0.0421	154.41	33.93
56	904.53	0.7579	156.78	3.00
57	915.72	0.4617	158.75	3.67
58	943.50	0.0349	163.54	26.52
59	1074.45	0.0098	186.25	136.71
60	1124.60	0.2959	195.05	3.56
61	1133.66	0.3771	196.52	3.76
62	1167.36	0.2310	202.29	6.20
63	1185.87	0.0519	205.58	24.86
64	1216.55	0.1851	210.90	5.33
65	1363.08	0.0335	236.30	35.79
66	1378.18	0.1304	238.92	9.48
67	1397.67	0.0085	242.30	176.26
68	1480.05	0.0497	256.59	23.92
69	1495.00	0.0383	259.17	30.36
70	1556.09	0.0289	269.80	40.39
71	1566.65	0.0385	271.58	31.59
72	1587.49	0.0887	275.16	16.95
73	1623.14	0.3805	281.44	3.41
74	1638.32	0.2311	284.01	6.07
75	1652.20	0.1109	286.45	13.83
76	1705.00	0.0071	295.61	254.65
77	1732.80	0.0938	300.43	15.74
78	1747.47	0.1874	303.02	8.54
79	1758.38	0.3457	304.88	5.34
80	1816.57	0.2506	314.96	5.49
81	1870.67	0.1049	324.34	12.82
82	1905.09	0.1471	330.31	11.72
83	1953.76	0.2072	338.75	7.67
84	2015.24	0.3265	349.62	4.30
85	2032.48	0.0042	352.39	297.88
86	2148.63	0.4802	372.55	3.13
87	2233.52	0.1426	387.29	10.06
88	2246.16	0.1400	389.44	11.42
89	2320.95	0.1192	402.42	12.85
90	2339.91	0.4814	405.75	3.84
91	2467.84	0.4932	427.91	3.29

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	2626.95	0.3014	455.50	6.42
93	2668.94	0.3862	462.78	4.16
94	2713.01	0.4641	470.43	3.24
95	2741.75	0.5099	475.41	3.37
96	2774.81	0.2008	481.14	9.42
97	2812.91	0.1561	487.75	11.42
98	3081.98	0.2384	534.42	8.18
99	3349.82	0.2533	580.87	7.52
100	3518.73	0.0092	610.16	198.12
101	3553.21	0.5204	616.14	3.12
102	3842.64	0.0814	666.34	22.03
103	3945.40	0.5762	684.16	3.09
104	4029.06	0.1217	698.67	22.20

Errors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-113-GAM3
Peak Analysis Performed on: 1-29-96 8:44:14 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	3	23-	55	37.30	6.38	-2.77E+04	1009.23	2.03E+05
M	7	60-	79	63.45	10.92	4.71E+04	4502.27	4.75E+04
m	8	60-	79	72.82	12.54	3.11E+04	4701.66	5.99E+04
m	9	60-	79	76.21	13.13	1.25E+05	5557.32	5.15E+04
M	10	84-	125	89.46	15.43	8.54E+04	6519.50	6.50E+04
m	11	84-	125	94.10	16.23	1.45E+05	7958.70	6.38E+04
m	12	84-	125	97.61	16.84	4.64E+04	5762.56	5.32E+04
m	13	84-	125	103.95	17.94	1.80E+04	3983.77	5.37E+04
m	14	84-	125	110.36	19.05	3.79E+04	5065.21	5.01E+04
m	15	84-	125	114.03	19.69	2.23E+04	4718.79	4.77E+04
m	16	84-	125	117.35	20.27	1.07E+04	4140.11	4.61E+04
m	17	84-	125	121.31	20.95	3.49E+03	3179.57	4.07E+04
[redacted]	18	144-	163	148.97	25.75	1.75E+04	363.81	3.63E+04
[redacted]	19	144-	163	158.96	27.48	1.52E+04	332.77	3.42E+04
	20	181-	191	186.73	32.30	2.02E+03	311.33	3.98E+04
M	21	203-	217	206.17	35.67	5.43E+02	110.58	2.81E+04
m	22	203-	217	212.34	36.74	3.04E+03	345.64	3.12E+04
	23	263-	275	269.46	46.65	1.79E+05	546.60	4.56E+04
	24	284-	295	290.11	50.23	1.88E+04	345.28	4.00E+04
	25	302-	314	308.06	53.34	4.57E+04	399.85	4.34E+04
	26	332-	341	338.88	58.69	2.91E+02	287.19	3.62E+04
M	27	359-	380	366.10	63.41	1.77E+05	777.74	3.61E+04
m	28	359-	380	375.59	65.05	3.40E+02	293.13	3.94E+04
	29	384-	398	391.36	67.79	2.10E+04	437.54	5.91E+04
M	30	403-	474	409.99	71.02	1.97E+03	1412.39	4.37E+04
m	31	403-	474	421.60	73.03	4.57E+03	1468.62	4.35E+04
m	32	403-	474	432.62	74.94	2.61E+05	4323.01	4.27E+04
m	33	403-	474	445.78	77.23	4.59E+05	4813.04	4.10E+04
m	34	403-	474	458.63	79.45	4.00E+04	2159.33	4.35E+04
m	35	403-	474	468.76	81.21	3.87E+04	2157.46	3.95E+04
M	36	477-	598	484.72	83.98	8.34E+04	4004.81	5.19E+04
m	37	477-	598	494.61	85.69	2.91E+03	2114.26	5.05E+04
m	38	477-	598	504.19	87.36	1.49E+05	4893.19	4.85E+04
m	39	477-	598	519.45	90.00	6.63E+04	3594.71	4.85E+04
m	40	477-	598	535.13	92.72	2.37E+05	5848.56	4.17E+04
m	41	477-	598	547.24	94.82	3.11E+04	2736.24	3.86E+04
m	42	477-	598	563.58	97.66	5.04E+03	2450.92	3.99E+04

[redacted]

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	477-	598	568.67	98.54	1.73E+04	2761.16	3.95E+04
m	44	477-	598	577.71	100.11	1.83E+03	1834.28	3.89E+04
m	45	477-	598	592.46	102.66	1.61E+03	1828.03	3.34E+04
	46	602-	616	610.61	105.81	2.59E+03	325.23	3.58E+04
M	47	622-	657	630.52	109.26	3.78E+03	388.86	2.92E+04
m	48	622-	657	643.27	111.48	3.63E+03	385.67	2.95E+04
m	49	622-	657	651.91	112.98	1.24E+04	619.24	2.97E+04
M	50	690-	711	698.33	121.03	1.13E+03	157.26	2.48E+04
m	51	690-	711	706.73	122.48	2.23E+03	295.16	2.25E+04
M	52	732-	757	739.48	128.16	7.50E+02	225.22	2.26E+04
m	53	732-	757	752.77	130.47	1.08E+03	312.17	2.14E+04
	54	823-	838	830.92	144.02	2.47E+04	367.55	3.68E+04
M	55	884-	924	890.84	154.41	9.84E+03	656.46	3.10E+04
m	56	884-	924	904.48	156.78	8.43E+02	120.00	2.77E+04
m	57	884-	924	915.84	158.75	1.14E+03	130.26	2.92E+04
	58	937-	952	943.50	163.54	7.37E+03	328.13	3.33E+04
	59	1065-	1083	1074.45	186.25	1.58E+05	535.04	3.79E+04
M	60	1118-	1141	1125.14	195.05	8.77E+02	208.34	3.04E+04
m	61	1118-	1141	1133.62	196.52	1.15E+03	261.29	3.05E+04
M	62	1157-	1195	1166.93	202.29	1.33E+03	177.61	2.33E+04
m	63	1157-	1195	1185.91	205.58	5.90E+03	532.45	2.28E+04
	64	1210-	1224	1216.55	210.90	6.33E+02	253.73	2.21E+04
M	65	1353-	1406	1362.99	236.30	8.78E+03	206.95	1.89E+04
[illegible]	66	1353-	1406	1378.11	238.92	1.70E+03	158.38	1.87E+04
m	67	1353-	1406	1397.61	242.30	1.16E+05	806.79	1.79E+04
M	68	1470-	1505	1479.98	256.59	5.21E+03	249.76	1.87E+04
m	69	1470-	1505	1494.91	259.17	7.67E+03	324.79	1.79E+04
M	70	1546-	1597	1556.18	269.80	1.04E+04	395.39	1.59E+04
m	71	1546-	1597	1566.42	271.58	7.71E+03	331.87	1.60E+04
m	72	1546-	1597	1587.06	275.16	4.24E+03	255.92	1.71E+04
M	73	1616-	1659	1623.30	281.44	3.74E+02	98.81	1.58E+04
m	74	1616-	1659	1638.13	284.01	9.97E+02	176.38	1.62E+04
m	75	1616-	1659	1652.17	286.45	2.16E+03	353.45	1.66E+04
	76	1693-	1715	1705.00	295.61	2.26E+05	564.38	2.37E+04
M	77	1724-	1767	1732.82	300.43	2.32E+03	306.94	1.45E+04
m	78	1724-	1767	1747.72	303.02	9.61E+02	154.01	1.41E+04
m	79	1724-	1767	1758.46	304.88	9.55E+02	153.53	1.47E+04
	80	1808-	1824	1816.57	314.96	8.17E+02	221.85	1.55E+04
	81	1860-	1878	1870.67	324.34	2.43E+03	243.77	1.69E+04
	82	1897-	1916	1905.09	330.31	1.70E+03	258.94	1.86E+04
	83	1945-	1962	1953.76	338.75	1.57E+03	245.59	1.80E+04
M	84	2007-	2044	2016.43	349.62	8.01E+02	478.95	2.15E+04
m	85	2007-	2044	2032.40	352.39	3.40E+05	904.08	1.89E+04
	86	2139-	2157	2148.63	372.55	1.07E+02	235.65	1.64E+04
M	87	2221-	2256	2233.63	387.29	1.98E+03	201.49	1.94E+04
m	88	2221-	2256	2246.01	389.44	2.62E+03	256.62	1.93E+04
M	89	2311-	2350	2320.87	402.42	2.26E+03	308.79	1.98E+04
m	90	2311-	2350	2340.08	405.75	1.56E+03	230.69	2.18E+04
	91	2458-	2479	2467.84	427.91	1.02E+03	274.90	1.99E+04
[illegible]	92	2615-	2638	2626.95	455.50	1.51E+03	259.04	1.64E+04

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	2658-	2678	2668.94	462.78	1.00E+03	227.37	1.40E+04
94	2703-	2723	2713.01	470.43	4.74E+02	222.23	1.35E+04
95	2728-	2752	2741.75	475.41	5.16E+02	255.57	1.57E+04
96	2764-	2787	2774.81	481.14	1.66E+03	246.26	1.47E+04
97	2802-	2822	2812.91	487.75	1.87E+03	216.68	1.24E+04
98	3071-	3092	3081.98	534.42	1.11E+03	209.72	1.14E+04
99	3336-	3360	3349.82	580.87	9.27E+02	232.25	1.28E+04
100	3503-	3533	3518.73	610.16	1.70E+05	497.61	1.60E+04
101	3541-	3564	3553.21	616.14	2.29E+02	209.85	1.09E+04
102	3827-	3857	3842.64	666.34	4.66E+03	259.54	1.29E+04
103	3932-	3959	3945.40	684.16	9.46E+01	231.75	1.19E+04
104	4017-	4045	4029.06	698.67	3.58E+03	156.34	3.17E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-113-GAM3
Peak Analysis Performed on: 1-29-96 8:43:51 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	4.42	0.00E+00	0.00			0.00E+00	0.00E+00
	2	5.40	0.00E+00	0.00	4.00E+01	3.04E+01	-4.00E+01	3.04E+01
	3	6.38	-2.77E+04	1009.23	4.00E+01	3.04E+01	-2.78E+04	1.01E+03
	4	7.03	0.00E+00	0.00	4.00E+01	3.04E+01	-4.00E+01	3.04E+01
	5	8.07	0.00E+00	0.00			0.00E+00	0.00E+00
	6	9.13	0.00E+00	0.00			0.00E+00	0.00E+00
M	7	10.92	4.71E+04	4502.27	1.57E+02	3.08E+01	4.70E+04	4.50E+03
m	8	12.54	3.11E+04	4701.66			3.11E+04	4.70E+03
m	9	13.13	1.25E+05	5557.32			1.25E+05	5.56E+03
M	10	15.43	8.54E+04	6519.50			8.54E+04	6.52E+03
m	11	16.23	1.45E+05	7958.70			1.45E+05	7.96E+03
m	12	16.84	4.64E+04	5762.56			4.64E+04	5.76E+03
m	13	17.94	1.80E+04	3983.77			1.80E+04	3.98E+03
m	14	19.05	3.79E+04	5065.21	-1.92E-01	1.63E+01	3.79E+04	5.07E+03
m	15	19.69	2.23E+04	4718.79	-1.92E-01	1.63E+01	2.23E+04	4.72E+03
[illegible]	16	20.27	1.07E+04	4140.11	-1.92E-01	1.63E+01	1.07E+04	4.14E+03
m	17	20.95	3.49E+03	3179.57			3.49E+03	3.18E+03
M	18	25.75	1.75E+04	363.81			1.75E+04	3.64E+02
m	19	27.48	1.52E+04	332.77	-1.27E+01	1.34E+01	1.52E+04	3.33E+02
	20	32.30	2.02E+03	311.33			2.02E+03	3.11E+02
M	21	35.67	5.43E+02	110.58			5.43E+02	1.11E+02
m	22	36.74	3.04E+03	345.64			3.04E+03	3.46E+02
	23	46.65	1.79E+05	546.60	1.16E+01	3.50E+01	1.79E+05	5.48E+02
	24	50.23	1.88E+04	345.28	-1.20E+01	1.73E+01	1.88E+04	3.46E+02
	25	53.34	4.57E+04	399.85			4.57E+04	4.00E+02
	26	58.69	2.91E+02	287.19			2.91E+02	2.87E+02
M	27	63.41	1.77E+05	777.74	7.25E+01	2.49E+01	1.77E+05	7.78E+02
m	28	65.05	3.40E+02	293.13			3.40E+02	2.93E+02
	29	67.79	2.10E+04	437.54			2.10E+04	4.38E+02
M	30	71.02	1.97E+03	1412.39			1.97E+03	1.41E+03
m	31	73.03	4.57E+03	1468.62			4.57E+03	1.47E+03
m	32	74.94	2.61E+05	4323.01	4.70E+01	1.89E+01	2.61E+05	4.32E+03
m	33	77.23	4.59E+05	4813.04	6.88E+01	2.55E+01	4.59E+05	4.81E+03
m	34	79.45	4.00E+04	2159.33			4.00E+04	2.16E+03
m	35	81.21	3.87E+04	2157.46			3.87E+04	2.16E+03
M	36	83.98	8.34E+04	4004.81	-3.10E+01	1.96E+01	8.34E+04	4.00E+03
m	37	85.69	2.91E+03	2114.26			2.91E+03	2.11E+03
m	38	87.36	1.49E+05	4893.19			1.49E+05	4.89E+03
m	39	90.00	6.63E+04	3594.71			6.63E+04	3.59E+03
m	40	92.72	2.37E+05	5848.56	2.61E+02	4.01E+01	2.36E+05	5.85E+03
m	41	94.82	3.11E+04	2736.24	2.42E+01	1.36E+01	3.10E+04	2.74E+03
[illegible]	42	97.66	5.04E+03	2450.92			5.04E+03	2.45E+03

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	98.54	1.73E+04	2761.16			1.73E+04	2.76E+03
m	44	100.11	1.83E+03	1834.28			1.83E+03	1.83E+03
m	45	102.66	1.61E+03	1828.03			1.61E+03	1.83E+03
	46	105.81	2.59E+03	325.23			2.59E+03	3.25E+02
M	47	109.26	3.78E+03	388.86	9.22E+01	2.46E+01	3.68E+03	3.90E+02
m	48	111.48	3.63E+03	385.67			3.63E+03	3.86E+02
m	49	112.98	1.24E+04	619.24			1.24E+04	6.19E+02
M	50	121.03	1.13E+03	157.26	6.68E+00	2.29E+01	1.12E+03	1.59E+02
m	51	122.48	2.23E+03	295.16			2.23E+03	2.95E+02
M	52	128.16	7.50E+02	225.22			7.50E+02	2.25E+02
m	53	130.47	1.08E+03	312.17			1.08E+03	3.12E+02
	54	144.02	2.47E+04	367.55	4.83E+01	2.07E+01	2.47E+04	3.68E+02
M	55	154.41	9.84E+03	656.46			9.84E+03	6.56E+02
m	56	156.78	8.43E+02	120.00			8.43E+02	1.20E+02
m	57	158.75	1.14E+03	130.26			1.14E+03	1.30E+02
	58	163.54	7.37E+03	328.13			7.37E+03	3.28E+02
	59	186.25	1.58E+05	535.04	1.65E+02	2.92E+01	1.58E+05	5.36E+02
M	60	195.05	8.77E+02	208.34			8.77E+02	2.08E+02
m	61	196.52	1.15E+03	261.29	5.02E+01	2.63E+01	1.10E+03	2.63E+02
M	62	202.29	1.33E+03	177.61			1.33E+03	1.78E+02
m	63	205.58	5.90E+03	532.45	-8.75E+00	2.28E+01	5.91E+03	5.33E+02
	64	210.90	6.33E+02	253.73	-2.56E+01	2.49E+01	6.59E+02	2.55E+02
M	65	236.30	8.78E+03	206.95			8.78E+03	2.07E+02
[illegible]	66	238.92	1.70E+03	158.38	7.88E+01	2.53E+01	1.62E+03	1.60E+02
m	67	242.30	1.16E+05	806.79			1.16E+05	8.07E+02
M	68	256.59	5.21E+03	249.76			5.21E+03	2.50E+02
m	69	259.17	7.67E+03	324.79	1.45E+01	2.66E+01	7.65E+03	3.26E+02
M	70	269.80	1.04E+04	395.39			1.04E+04	3.95E+02
m	71	271.58	7.71E+03	331.87			7.71E+03	3.32E+02
m	72	275.16	4.24E+03	255.92			4.24E+03	2.56E+02
M	73	281.44	3.74E+02	98.81			3.74E+02	9.88E+01
m	74	284.01	9.97E+02	176.38			9.97E+02	1.76E+02
m	75	286.45	2.16E+03	353.45			2.16E+03	3.53E+02
	76	295.61	2.26E+05	564.38	1.05E+01	4.02E+01	2.26E+05	5.66E+02
M	77	300.43	2.32E+03	306.94			2.32E+03	3.07E+02
m	78	303.02	9.61E+02	154.01			9.61E+02	1.54E+02
m	79	304.88	9.55E+02	153.53			9.55E+02	1.54E+02
	80	314.96	8.17E+02	221.85			8.17E+02	2.22E+02
	81	324.34	2.43E+03	243.77	-2.18E+01	1.99E+01	2.45E+03	2.45E+02
	82	330.31	1.70E+03	258.94	-2.16E+01	3.90E+01	1.72E+03	2.62E+02
	83	338.75	1.57E+03	245.59			1.57E+03	2.46E+02
M	84	349.62	8.01E+02	478.95			8.01E+02	4.79E+02
m	85	352.39	3.40E+05	904.08	8.80E+01	2.36E+01	3.40E+05	9.04E+02
	86	372.55	1.07E+02	235.65			1.07E+02	2.36E+02
M	87	387.29	1.98E+03	201.49			1.98E+03	2.01E+02
m	88	389.44	2.62E+03	256.62			2.62E+03	2.57E+02
M	89	402.42	2.26E+03	308.79			2.26E+03	3.09E+02
m	90	405.75	1.56E+03	230.69			1.56E+03	2.31E+02
	91	427.91	1.02E+03	274.90			1.02E+03	2.75E+02
[illegible]	92	455.50	1.51E+03	259.04			1.51E+03	2.59E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	462.78	1.00E+03	227.37			1.00E+03	2.27E+02
94	470.43	4.74E+02	222.23			4.74E+02	2.22E+02
95	475.41	5.16E+02	255.57			5.16E+02	2.56E+02
96	481.14	1.66E+03	246.26			1.66E+03	2.46E+02
97	487.75	1.87E+03	216.68			1.87E+03	2.17E+02
98	534.42	1.11E+03	209.72			1.11E+03	2.10E+02
99	580.87	9.27E+02	232.25			9.27E+02	2.32E+02
100	610.16	1.70E+05	497.61	4.28E+01	1.95E+01	1.70E+05	4.98E+02
101	616.14	2.29E+02	209.85	-1.45E+00	1.68E+01	2.31E+02	2.11E+02
102	666.34	4.66E+03	259.54			4.66E+03	2.60E+02
103	684.16	9.46E+01	231.75			9.46E+01	2.32E+02
104	698.67	3.58E+03	156.34	4.50E+01	1.05E+01	3.54E+03	1.57E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***********************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
***********************************************************************
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Detector Name: DET01
Sample Title: NOPI-113-GAM3
Peak Analysis Performed on: 1-29-96 8:43:51 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	4.42	0.00E+00	0.00			0.00E+00	0.00E+00
	2	5.40	0.00E+00	0.00	4.00E+01	3.04E+01	-4.00E+01	3.04E+01
	3	6.38	-2.77E+04	1009.23	4.00E+01	3.04E+01	-2.78E+04	1.01E+03
	4	7.03	0.00E+00	0.00	4.00E+01	3.04E+01	-4.00E+01	3.04E+01
	5	8.07	0.00E+00	0.00			0.00E+00	0.00E+00
	6	9.13	0.00E+00	0.00			0.00E+00	0.00E+00
M	7	10.92	4.71E+04	4502.27	1.57E+02	3.08E+01	4.70E+04	4.50E+03
m	8	12.54	3.11E+04	4701.66			3.11E+04	4.70E+03
m	9	13.13	1.25E+05	5557.32			1.25E+05	5.56E+03
[illegible]	10	15.43	8.54E+04	6519.50			8.54E+04	6.52E+03
m	11	16.23	1.45E+05	7958.70			1.45E+05	7.96E+03
m	12	16.84	4.64E+04	5762.56			4.64E+04	5.76E+03
m	13	17.94	1.80E+04	3983.77			1.80E+04	3.98E+03
m	14	19.05	3.79E+04	5065.21	-1.92E-01	1.63E+01	3.79E+04	5.07E+03
m	15	19.69	2.23E+04	4718.79	-1.92E-01	1.63E+01	2.23E+04	4.72E+03
m	16	20.27	1.07E+04	4140.11	-1.92E-01	1.63E+01	1.07E+04	4.14E+03
m	17	20.95	3.49E+03	3179.57			3.49E+03	3.18E+03
M	18	25.75	1.75E+04	363.81			1.75E+04	3.64E+02
m	19	27.48	1.52E+04	332.77	-1.27E+01	1.34E+01	1.52E+04	3.33E+02
	20	32.30	2.02E+03	311.33			2.02E+03	3.11E+02
M	21	35.67	5.43E+02	110.58			5.43E+02	1.11E+02
m	22	36.74	3.04E+03	345.64			3.04E+03	3.46E+02
	23	46.65	1.79E+05	546.60	1.16E+01	3.50E+01	1.79E+05	5.48E+02
	24	50.23	1.88E+04	345.28	-1.20E+01	1.73E+01	1.88E+04	3.46E+02
	25	53.34	4.57E+04	399.85			4.57E+04	4.00E+02
	26	58.69	2.91E+02	287.19			2.91E+02	2.87E+02
M	27	63.41	1.77E+05	777.74	7.25E+01	2.49E+01	1.77E+05	7.78E+02
m	28	65.05	3.40E+02	293.13			3.40E+02	2.93E+02
	29	67.79	2.10E+04	437.54			2.10E+04	4.38E+02
M	30	71.02	1.97E+03	1412.39			1.97E+03	1.41E+03
m	31	73.03	4.57E+03	1468.62			4.57E+03	1.47E+03
m	32	74.94	2.61E+05	4323.01	4.70E+01	1.89E+01	2.61E+05	4.32E+03
m	33	77.23	4.59E+05	4813.04	6.88E+01	2.55E+01	4.59E+05	4.81E+03
m	34	79.45	4.00E+04	2159.33			4.00E+04	2.16E+03
m	35	81.21	3.87E+04	2157.46			3.87E+04	2.16E+03
[illegible]	36	83.98	8.34E+04	4004.81	-3.10E+01	1.96E+01	8.34E+04	4.00E+03
m	37	85.69	2.91E+03	2114.26			2.91E+03	2.11E+03
m	38	87.36	1.49E+05	4893.19			1.49E+05	4.89E+03
m	39	90.00	6.63E+04	3594.71			6.63E+04	3.59E+03
m	40	92.72	2.37E+05	5848.56	2.61E+02	4.01E+01	2.36E+05	5.85E+03

m 41	94.82	3.11E+04	2736.24	2.42E+01	1.36E+01	3.10E+04	2.74E+03
m 42	97.66	5.04E+03	2450.92			5.04E+03	2.45E+03

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	98.54	1.73E+04	2761.16			1.73E+04	2.76E+03
m	44	100.11	1.83E+03	1834.28			1.83E+03	1.83E+03
m	45	102.66	1.61E+03	1828.03			1.61E+03	1.83E+03
	46	105.81	2.59E+03	325.23			2.59E+03	3.25E+02
M	47	109.26	3.78E+03	388.86	9.22E+01	2.46E+01	3.68E+03	3.90E+02
m	48	111.48	3.63E+03	385.67			3.63E+03	3.86E+02
m	49	112.98	1.24E+04	619.24			1.24E+04	6.19E+02
M	50	121.03	1.13E+03	157.26	6.68E+00	2.29E+01	1.12E+03	1.59E+02
m	51	122.48	2.23E+03	295.16			2.23E+03	2.95E+02
M	52	128.16	7.50E+02	225.22			7.50E+02	2.25E+02
m	53	130.47	1.08E+03	312.17			1.08E+03	3.12E+02
	54	144.02	2.47E+04	367.55	4.83E+01	2.07E+01	2.47E+04	3.68E+02
M	55	154.41	9.84E+03	656.46			9.84E+03	6.56E+02
m	56	156.78	8.43E+02	120.00			8.43E+02	1.20E+02
m	57	158.75	1.14E+03	130.26			1.14E+03	1.30E+02
	58	163.54	7.37E+03	328.13			7.37E+03	3.28E+02
	59	186.25	1.58E+05	535.04	1.65E+02	2.92E+01	1.58E+05	5.36E+02
M	60	195.05	8.77E+02	208.34			8.77E+02	2.08E+02
m	61	196.52	1.15E+03	261.29	5.02E+01	2.63E+01	1.10E+03	2.63E+02
M	62	202.29	1.33E+03	177.61			1.33E+03	1.78E+02
m	63	205.58	5.90E+03	532.45	-8.75E+00	2.28E+01	5.91E+03	5.33E+02
	64	210.90	6.33E+02	253.73	-2.56E+01	2.49E+01	6.59E+02	2.55E+02
M	65	236.30	8.78E+03	206.95			8.78E+03	2.07E+02
	66	238.92	1.70E+03	158.38	7.88E+01	2.53E+01	1.62E+03	1.60E+02
m	67	242.30	1.16E+05	806.79			1.16E+05	8.07E+02
M	68	256.59	5.21E+03	249.76			5.21E+03	2.50E+02
m	69	259.17	7.67E+03	324.79	1.45E+01	2.66E+01	7.65E+03	3.26E+02
M	70	269.80	1.04E+04	395.39			1.04E+04	3.95E+02
m	71	271.58	7.71E+03	331.87			7.71E+03	3.32E+02
m	72	275.16	4.24E+03	255.92			4.24E+03	2.56E+02
M	73	281.44	3.74E+02	98.81			3.74E+02	9.88E+01
m	74	284.01	9.97E+02	176.38			9.97E+02	1.76E+02
m	75	286.45	2.16E+03	353.45			2.16E+03	3.53E+02
	76	295.61	2.26E+05	564.38	1.05E+01	4.02E+01	2.26E+05	5.66E+02
M	77	300.43	2.32E+03	306.94			2.32E+03	3.07E+02
m	78	303.02	9.61E+02	154.01			9.61E+02	1.54E+02
m	79	304.88	9.55E+02	153.53			9.55E+02	1.54E+02
	80	314.96	8.17E+02	221.85			8.17E+02	2.22E+02
	81	324.34	2.43E+03	243.77	-2.18E+01	1.99E+01	2.45E+03	2.45E+02
	82	330.31	1.70E+03	258.94	-2.16E+01	3.90E+01	1.72E+03	2.62E+02
	83	338.75	1.57E+03	245.59			1.57E+03	2.46E+02
M	84	349.62	8.01E+02	478.95			8.01E+02	4.79E+02
m	85	352.39	3.40E+05	904.08	8.80E+01	2.36E+01	3.40E+05	9.04E+02
	86	372.55	1.07E+02	235.65			1.07E+02	2.36E+02
M	87	387.29	1.98E+03	201.49			1.98E+03	2.01E+02
m	88	389.44	2.62E+03	256.62			2.62E+03	2.57E+02
M	89	402.42	2.26E+03	308.79			2.26E+03	3.09E+02
m	90	405.75	1.56E+03	230.69			1.56E+03	2.31E+02
	91	427.91	1.02E+03	274.90			1.02E+03	2.75E+02
	92	455.50	1.51E+03	259.04			1.51E+03	2.59E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
93	462.78	1.00E+03	227.37			1.00E+03	2.27E+02
94	470.43	4.74E+02	222.23			4.74E+02	2.22E+02
95	475.41	5.16E+02	255.57			5.16E+02	2.56E+02
96	481.14	1.66E+03	246.26			1.66E+03	2.46E+02
97	487.75	1.87E+03	216.68			1.87E+03	2.17E+02
98	534.42	1.11E+03	209.72			1.11E+03	2.10E+02
99	580.87	9.27E+02	232.25			9.27E+02	2.32E+02
100	610.16	1.70E+05	497.61	4.28E+01	1.95E+01	1.70E+05	4.98E+02
101	616.14	2.29E+02	209.85	-1.45E+00	1.68E+01	2.31E+02	2.11E+02
102	666.34	4.66E+03	259.54			4.66E+03	2.60E+02
103	684.16	9.46E+01	231.75			9.46E+01	2.32E+02
104	698.67	3.58E+03	156.34	4.50E+01	1.05E+01	3.54E+03	1.57E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  1-30-96  9:06:43 AM

Sample Title                     : NOPI-114-GAM3
Spectrum Description             : NOPI-114-GAM3
Sample Identification            : NP114
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-29-96  9:05:19 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80262.1 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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$-0.062 \log x + 1.132$

$-0.009 \log x + 1.015$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-114-GAM3
Peak Locate Performed on: 1-30-96 9:06:00 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	26.02	0.3242	4.43	3.86
2	31.51	0.0515	5.44	9.13
3	37.24	0.0324	6.37	24.46
4	46.93	0.1538	8.05	7.30
5	53.45	0.0988	9.19	5.13
6	63.42	0.0106	10.91	50.72
7	72.00	0.0000	12.55	4.49
8	75.99	0.0200	13.11	51.84
9	88.71	0.0196	15.42	36.24
10	94.35	0.0090	16.22	69.22
11	98.00	<NA>	16.84	<NA>
12	103.81	0.0438	17.93	19.96
13	110.40	0.0161	19.04	35.03
14	114.00	0.0000	19.68	18.68
15	117.23	0.1053	20.25	7.72
16	121.72	0.1076	20.99	6.68
17	148.83	0.0199	25.73	52.76
18	158.82	0.0230	27.47	46.13
19	186.20	0.6303	32.21	4.36
20	206.06	0.2852	35.64	3.35
21	212.25	0.1049	36.71	9.34
22	269.35	0.0045	46.63	215.40
23	289.97	0.0193	50.20	48.22
24	307.97	0.0088	53.33	101.79
25	339.12	0.1980	58.73	4.12
26	366.00	0.0034	63.39	246.36
27	375.32	0.2852	64.99	3.12
28	391.20	0.0151	67.76	57.64
29	409.93	0.1642	70.98	5.60
30	421.14	0.0748	73.03	11.62
31	432.53	0.0043	74.93	257.99
32	445.73	0.0033	77.21	358.27
33	458.46	0.0139	79.44	80.14
34	468.69	0.0131	81.19	90.45
35	484.46	0.0101	83.96	103.34
36	493.73	0.0945	85.68	11.17
37	504.44	0.0136	87.34	107.31
38	519.25	0.0121	89.98	97.23
39	534.91	0.0073	92.70	161.27
40	547.60	0.0225	94.80	46.23
41	563.07	0.1694	97.61	6.69

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	568.79	0.0265	98.52	46.38
43	578.45	0.2420	100.10	4.56
44	592.52	0.6199	102.82	4.06
45	610.50	0.1638	105.79	6.07
46	630.63	0.0872	109.24	12.80
47	643.31	0.0965	111.45	13.03
48	651.80	0.0268	112.96	44.01
49	661.82	0.2988	114.71	4.62
50	698.41	0.1704	121.03	6.48
51	706.67	0.0935	122.46	12.26
52	739.75	0.2249	128.26	5.64
53	752.70	0.1227	130.54	8.98
54	812.10	0.2634	140.76	4.91
55	830.82	0.0213	144.00	59.91
56	890.64	0.0263	154.38	38.89
57	916.35	0.1740	158.84	5.92
58	943.47	0.0324	163.54	29.19
59	1074.28	0.0088	186.22	156.21
60	1125.07	0.2574	195.15	3.13
61	1133.39	0.1692	196.46	5.93
62	1146.08	0.3135	198.69	4.08
63	1166.85	0.3180	202.29	3.84
64	1185.84	0.0501	205.57	25.17
65	1216.71	0.2253	210.93	5.70
66	1362.91	0.0289	236.27	41.15
67	1377.89	0.2237	238.87	5.27
68	1397.46	0.0074	242.27	197.10
69	1445.51	0.3229	250.61	3.09
70	1479.94	0.0466	256.56	25.13
71	1494.86	0.0467	259.14	32.60
72	1556.03	0.0275	269.78	43.23
73	1566.44	0.0441	271.55	35.61
74	1587.03	0.0645	275.09	18.24
75	1637.43	0.2524	283.89	6.20
76	1652.02	0.1308	286.43	13.41
77	1704.82	0.0050	295.58	285.41
78	1732.76	0.0835	300.41	17.90
79	1747.67	0.1793	303.05	8.53
80	1758.36	0.3368	304.84	4.38
81	1815.89	0.2913	314.84	6.38
82	1870.18	0.1231	324.26	14.10
83	1905.18	0.1359	330.33	12.56
84	1953.77	0.2521	338.75	7.27
85	2014.84	0.2526	349.53	4.36
86	2032.32	0.0047	352.36	341.97
87	2233.75	0.1222	387.32	11.41
88	2246.12	0.1242	389.45	13.08
89	2320.24	0.1009	402.32	15.20
90	2339.54	0.3522	405.66	6.01
91	2467.24	0.3729	427.80	4.01

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	2626.30	0.1653	455.39	9.90
93	2667.38	0.4347	462.51	4.83
94	2712.73	0.4496	470.38	4.29
95	2774.40	0.1351	481.07	13.41
96	2812.25	0.1509	487.64	11.66
97	2884.11	0.4077	500.10	3.04
98	2942.64	0.5116	510.25	3.37
99	3081.79	0.1400	534.38	11.05
100	3141.01	1.0588	544.65	3.34
101	3350.54	0.1587	580.99	9.91
102	3416.23	0.3883	592.39	4.00
103	3518.56	0.0068	610.13	221.14
104	3842.47	0.0872	666.31	22.93
105	4028.85	0.1024	698.63	24.38

Errors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-114-GAM3
Peak Analysis Performed on: 1-30-96 9:06:20 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	2	24-	39	31.86	5.44	3.60E+03	1576.09	5.18E+04
m	3	24-	39	37.20	6.37	8.04E+03	1620.31	4.11E+04
	5	44-	55	53.45	9.19	-5.58E+03	435.70	7.81E+04
M	6	60-	78	63.38	10.91	6.25E+04	3861.05	6.62E+04
m	7	60-	78	72.85	12.55	4.01E+04	4064.35	9.06E+04
m	8	60-	78	76.11	13.11	1.62E+05	4787.09	6.95E+04
M	9	84-	125	89.41	15.42	1.19E+05	9158.33	8.75E+04
m	10	84-	125	94.04	16.22	2.01E+05	11214.9	8.54E+04
m	11	84-	125	97.62	16.84	6.24E+04	8024.96	7.75E+04
m	12	84-	125	103.85	17.93	2.36E+04	5438.24	7.13E+04
m	13	84-	125	110.29	19.04	5.05E+04	6984.55	6.65E+04
m	14	84-	125	113.99	19.68	2.93E+04	6618.07	6.31E+04
[redacted]	15	84-	125	117.25	20.25	1.37E+04	5864.27	6.10E+04
[redacted]	16	84-	125	121.52	20.99	4.14E+03	4316.52	5.38E+04
M	17	144-	163	148.86	25.73	2.35E+04	377.85	4.20E+04
m	18	144-	163	158.86	27.47	1.97E+04	328.44	4.48E+04
	19	181-	191	186.20	32.21	3.30E+03	357.11	5.21E+04
M	20	202-	218	206.01	35.64	1.02E+03	169.92	4.11E+04
m	21	202-	218	212.18	36.71	4.18E+03	423.32	4.54E+04
	22	263-	275	269.35	46.63	2.34E+05	623.74	5.91E+04
	23	283-	294	289.97	50.20	2.50E+04	392.78	5.16E+04
	24	301-	313	307.97	53.33	5.98E+04	458.12	5.72E+04
	25	333-	342	339.12	58.73	6.28E+02	330.94	4.79E+04
M	26	359-	378	365.99	63.39	2.32E+05	830.01	4.72E+04
m	27	359-	378	375.25	64.99	6.49E+02	287.02	4.12E+04
	28	384-	398	391.20	67.76	2.63E+04	502.28	7.84E+04
M	29	402-	474	409.79	70.98	2.55E+03	1831.45	5.75E+04
m	30	402-	474	421.59	73.03	6.35E+03	1916.01	5.72E+04
m	31	402-	474	432.52	74.93	3.41E+05	5577.53	6.13E+04
m	32	402-	474	445.68	77.21	6.03E+05	6199.69	5.39E+04
m	33	402-	474	458.54	79.44	5.21E+04	2791.02	5.73E+04
m	34	402-	474	468.64	81.19	5.04E+04	2791.69	5.69E+04
M	35	477-	599	484.60	83.96	1.09E+05	5223.54	6.75E+04
m	36	477-	599	494.50	85.68	4.32E+03	2777.82	7.01E+04
m	37	477-	599	504.10	87.34	1.97E+05	6410.20	6.30E+04
m	38	477-	599	519.33	89.98	8.75E+04	4705.13	5.91E+04
m	39	477-	599	535.01	92.70	3.12E+05	7637.39	5.42E+04
m	40	477-	599	547.13	94.80	4.20E+04	3608.87	5.03E+04
[redacted]	41	477-	599	563.30	97.61	6.67E+03	3117.49	5.19E+04
m	42	477-	599	568.55	98.52	2.45E+04	3609.78	5.14E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	477-	599	577.67	100.10	2.70E+03	2409.32	5.05E+04
m	44	477-	599	593.33	102.82	2.38E+03	2394.09	4.34E+04
	45	602-	618	610.50	105.79	3.29E+03	414.39	5.38E+04
M	46	622-	669	630.40	109.24	5.23E+03	534.49	4.10E+04
m	47	622-	669	643.13	111.45	6.23E+03	547.14	4.06E+04
m	48	622-	669	651.85	112.96	1.81E+04	874.44	4.03E+04
m	49	622-	669	661.91	114.71	2.29E+03	502.27	3.99E+04
M	50	692-	711	698.37	121.03	1.70E+03	205.47	2.94E+04
m	51	692-	711	706.58	122.46	2.60E+03	293.34	2.93E+04
M	52	734-	760	740.06	128.26	1.82E+03	304.79	4.12E+04
m	53	734-	760	753.18	130.54	3.27E+03	440.11	4.43E+04
	54	804-	820	812.10	140.76	1.20E+03	405.66	5.22E+04
	55	823-	838	830.82	144.00	3.20E+04	423.00	4.89E+04
	56	881-	898	890.64	154.38	1.25E+04	444.99	5.70E+04
	57	911-	921	916.35	158.84	1.04E+03	282.51	3.30E+04
	58	935-	950	943.47	163.54	9.30E+03	376.45	4.41E+04
	59	1065-	1083	1074.28	186.22	2.06E+05	612.55	5.00E+04
M	60	1119-	1154	1125.75	195.15	6.09E+02	199.53	3.33E+04
m	61	1119-	1154	1133.28	196.46	1.44E+03	396.44	3.29E+04
m	62	1119-	1154	1146.13	198.69	6.73E+02	211.95	3.21E+04
M	63	1156-	1195	1166.91	202.29	2.65E+03	297.58	3.89E+04
m	64	1156-	1195	1185.84	205.57	9.79E+03	630.98	3.54E+04
	65	1210-	1222	1216.71	210.93	8.66E+02	259.12	2.52E+04
[illegible]	66	1352-	1406	1362.85	236.27	1.17E+04	193.22	2.55E+04
[illegible]	67	1352-	1406	1377.82	238.87	1.05E+03	138.25	2.51E+04
m	68	1352-	1406	1397.45	242.27	1.51E+05	932.84	2.50E+04
	69	1435-	1452	1445.51	250.61	8.29E+01	292.89	2.63E+04
M	70	1469-	1503	1479.81	256.56	6.23E+03	276.13	2.48E+04
m	71	1469-	1503	1494.73	259.14	9.56E+03	369.64	2.39E+04
M	72	1545-	1598	1556.08	269.78	1.33E+04	487.08	2.22E+04
m	73	1545-	1598	1566.27	271.55	1.07E+04	433.08	2.23E+04
m	74	1545-	1598	1586.68	275.09	5.66E+03	335.95	2.24E+04
M	75	1630-	1659	1637.44	283.89	7.31E+02	142.59	2.32E+04
m	76	1630-	1659	1652.06	286.43	2.41E+03	364.82	2.19E+04
	77	1693-	1714	1704.82	295.58	2.96E+05	639.27	2.98E+04
M	78	1724-	1769	1732.70	300.41	3.41E+03	362.07	1.97E+04
m	79	1724-	1769	1747.92	303.05	1.58E+03	188.58	1.93E+04
m	80	1724-	1769	1758.21	304.84	1.15E+03	153.60	1.90E+04
	81	1804-	1825	1815.89	314.84	1.57E+03	314.44	2.59E+04
	82	1861-	1879	1870.18	324.26	2.79E+03	278.72	2.22E+04
	83	1897-	1915	1905.18	330.33	2.32E+03	282.66	2.29E+04
	84	1941-	1961	1953.77	338.75	1.73E+03	321.49	2.80E+04
M	85	2006-	2044	2015.91	349.53	6.30E+02	591.81	2.99E+04
m	86	2006-	2044	2032.22	352.36	4.46E+05	1069.67	2.50E+04
M	87	2223-	2256	2233.83	387.32	3.06E+03	224.98	2.50E+04
m	88	2223-	2256	2246.09	389.45	3.82E+03	271.35	2.61E+04
M	89	2311-	2348	2320.32	402.32	3.48E+03	344.56	2.42E+04
m	90	2311-	2348	2339.53	405.66	2.42E+03	264.82	2.66E+04
	91	2458-	2478	2467.24	427.80	1.32E+03	301.54	2.47E+04
[illegible]	92	2614-	2636	2626.30	455.39	1.64E+03	286.24	2.07E+04

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	2655-	2677	2667.38	462.51	1.52E+03	279.24	1.97E+04
94	2702-	2724	2712.73	470.38	6.04E+02	276.99	1.96E+04
95	2761-	2786	2774.40	481.07	2.69E+03	302.11	2.08E+04
96	2802-	2823	2812.25	487.64	2.82E+03	257.93	1.70E+04
97	2874-	2898	2884.11	500.10	9.08E+00	274.35	1.82E+04
98	2919-	2992	2942.64	510.25	7.71E+02	736.66	5.28E+04
99	3071-	3091	3081.79	534.38	1.29E+03	231.42	1.44E+04
100	3129-	3154	3141.01	544.65	1.26E+02	275.18	1.78E+04
101	3336-	3361	3350.54	580.99	1.47E+03	275.71	1.75E+04
102	3401-	3427	3416.23	592.39	-1.26E+02	289.42	1.91E+04
103	3503-	3533	3518.56	610.13	2.22E+05	569.13	2.09E+04
104	3827-	3854	3842.47	666.31	5.48E+03	274.58	1.55E+04
105	4015-	4044	4028.85	698.63	5.36E+03	178.54	4.47E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-114-GAM3
Peak Analysis Performed on: 1-30-96 9:06:00 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	1	4.43	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.44	3.60E+03	1576.09	4.00E+01	3.04E+01	3.56E+03	1.58E+03
m	3	6.37	8.04E+03	1620.31	4.00E+01	3.04E+01	8.00E+03	1.62E+03
	4	8.05	0.00E+00	0.00			0.00E+00	0.00E+00
	5	9.19	-5.58E+03	435.70			-5.58E+03	4.36E+02
M	6	10.91	6.25E+04	3861.05	1.57E+02	3.08E+01	6.24E+04	3.86E+03
m	7	12.55	4.01E+04	4064.35			4.01E+04	4.06E+03
m	8	13.11	1.62E+05	4787.09			1.62E+05	4.79E+03
M	9	15.42	1.19E+05	9158.33			1.19E+05	9.16E+03
m	10	16.22	2.01E+05	11214.9			2.01E+05	1.12E+04
m	11	16.84	6.24E+04	8024.96			6.24E+04	8.02E+03
m	12	17.93	2.36E+04	5438.24			2.36E+04	5.44E+03
m	13	19.04	5.05E+04	6984.55	-1.92E-01	1.63E+01	5.05E+04	6.98E+03
m	14	19.68	2.93E+04	6618.07	-1.92E-01	1.63E+01	2.93E+04	6.62E+03
m	15	20.25	1.37E+04	5864.27	-1.92E-01	1.63E+01	1.37E+04	5.86E+03
[illegible]	16	20.99	4.14E+03	4316.52			4.14E+03	4.32E+03
M	17	25.73	2.35E+04	377.85			2.35E+04	3.78E+02
m	18	27.47	1.97E+04	328.44	-1.27E+01	1.34E+01	1.98E+04	3.29E+02
	19	32.21	3.30E+03	357.11			3.30E+03	3.57E+02
M	20	35.64	1.02E+03	169.92			1.02E+03	1.70E+02
m	21	36.71	4.18E+03	423.32			4.18E+03	4.23E+02
	22	46.63	2.34E+05	623.74	1.16E+01	3.50E+01	2.34E+05	6.25E+02
	23	50.20	2.50E+04	392.78	-1.20E+01	1.73E+01	2.50E+04	3.93E+02
	24	53.33	5.98E+04	458.12			5.98E+04	4.58E+02
	25	58.73	6.28E+02	330.94			6.28E+02	3.31E+02
M	26	63.39	2.32E+05	830.01	7.25E+01	2.49E+01	2.31E+05	8.30E+02
m	27	64.99	6.49E+02	287.02			6.49E+02	2.87E+02
	28	67.76	2.63E+04	502.28			2.63E+04	5.02E+02
M	29	70.98	2.55E+03	1831.45			2.55E+03	1.83E+03
m	30	73.03	6.35E+03	1916.01			6.35E+03	1.92E+03
m	31	74.93	3.41E+05	5577.53	4.70E+01	1.89E+01	3.41E+05	5.58E+03
m	32	77.21	6.03E+05	6199.69	6.88E+01	2.55E+01	6.03E+05	6.20E+03
m	33	79.44	5.21E+04	2791.02			5.21E+04	2.79E+03
m	34	81.19	5.04E+04	2791.69			5.04E+04	2.79E+03
M	35	83.96	1.09E+05	5223.54	-3.10E+01	1.96E+01	1.09E+05	5.22E+03
m	36	85.68	4.32E+03	2777.82			4.32E+03	2.78E+03
m	37	87.34	1.97E+05	6410.20			1.97E+05	6.41E+03
m	38	89.98	8.75E+04	4705.13			8.75E+04	4.71E+03
m	39	92.70	3.12E+05	7637.39	2.61E+02	4.01E+01	3.11E+05	7.64E+03
m	40	94.80	4.20E+04	3608.87	2.42E+01	1.36E+01	4.19E+04	3.61E+03
m	41	97.61	6.67E+03	3117.49			6.67E+03	3.12E+03
[illegible]	42	98.52	2.45E+04	3609.78			2.45E+04	3.61E+03

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	100.10	2.70E+03	2409.32			2.70E+03	2.41E+03
m	44	102.82	2.38E+03	2394.09			2.38E+03	2.39E+03
	45	105.79	3.29E+03	414.39			3.29E+03	4.14E+02
M	46	109.24	5.23E+03	534.49	9.22E+01	2.46E+01	5.13E+03	5.35E+02
m	47	111.45	6.23E+03	547.14			6.23E+03	5.47E+02
m	48	112.96	1.81E+04	874.44			1.81E+04	8.74E+02
m	49	114.71	2.29E+03	502.27			2.29E+03	5.02E+02
M	50	121.03	1.70E+03	205.47	6.68E+00	2.29E+01	1.70E+03	2.07E+02
m	51	122.46	2.60E+03	293.34			2.60E+03	2.93E+02
M	52	128.26	1.82E+03	304.79			1.82E+03	3.05E+02
m	53	130.54	3.27E+03	440.11			3.27E+03	4.40E+02
	54	140.76	1.20E+03	405.66			1.20E+03	4.06E+02
	55	144.00	3.20E+04	423.00	4.83E+01	2.07E+01	3.20E+04	4.24E+02
	56	154.38	1.25E+04	444.99			1.25E+04	4.45E+02
	57	158.84	1.04E+03	282.51			1.04E+03	2.83E+02
	58	163.54	9.30E+03	376.45			9.30E+03	3.76E+02
	59	186.22	2.06E+05	612.55	1.65E+02	2.92E+01	2.06E+05	6.13E+02
M	60	195.15	6.09E+02	199.53			6.09E+02	2.00E+02
m	61	196.46	1.44E+03	396.44	5.02E+01	2.63E+01	1.39E+03	3.97E+02
m	62	198.69	6.73E+02	211.95			6.73E+02	2.12E+02
M	63	202.29	2.65E+03	297.58			2.65E+03	2.98E+02
m	64	205.57	9.79E+03	630.98	-8.75E+00	2.28E+01	9.80E+03	6.31E+02
	65	210.93	8.66E+02	259.12	-2.56E+01	2.49E+01	8.91E+02	2.60E+02
	66	236.27	1.17E+04	193.22			1.17E+04	1.93E+02
m	67	238.87	1.05E+03	138.25	7.88E+01	2.53E+01	9.71E+02	1.41E+02
m	68	242.27	1.51E+05	932.84			1.51E+05	9.33E+02
	69	250.61	8.29E+01	292.89			8.29E+01	2.93E+02
M	70	256.56	6.23E+03	276.13			6.23E+03	2.76E+02
m	71	259.14	9.56E+03	369.64	1.45E+01	2.66E+01	9.55E+03	3.71E+02
M	72	269.78	1.33E+04	487.08			1.33E+04	4.87E+02
m	73	271.55	1.07E+04	433.08			1.07E+04	4.33E+02
m	74	275.09	5.66E+03	335.95			5.66E+03	3.36E+02
M	75	283.89	7.31E+02	142.59			7.31E+02	1.43E+02
m	76	286.43	2.41E+03	364.82			2.41E+03	3.65E+02
	77	295.58	2.96E+05	639.27	1.05E+01	4.02E+01	2.96E+05	6.41E+02
M	78	300.41	3.41E+03	362.07			3.41E+03	3.62E+02
m	79	303.05	1.58E+03	188.58			1.58E+03	1.89E+02
m	80	304.84	1.15E+03	153.60			1.15E+03	1.54E+02
	81	314.84	1.57E+03	314.44			1.57E+03	3.14E+02
	82	324.26	2.79E+03	278.72	-2.18E+01	1.99E+01	2.81E+03	2.79E+02
	83	330.33	2.32E+03	282.66	-2.16E+01	3.90E+01	2.34E+03	2.85E+02
	84	338.75	1.73E+03	321.49			1.73E+03	3.21E+02
M	85	349.53	6.30E+02	591.81			6.30E+02	5.92E+02
m	86	352.36	4.46E+05	1069.67	8.80E+01	2.36E+01	4.46E+05	1.07E+03
M	87	387.32	3.06E+03	224.98			3.06E+03	2.25E+02
m	88	389.45	3.82E+03	271.35			3.82E+03	2.71E+02
M	89	402.32	3.48E+03	344.56			3.48E+03	3.45E+02
m	90	405.66	2.42E+03	264.82			2.42E+03	2.65E+02
	91	427.80	1.32E+03	301.54			1.32E+03	3.02E+02
	92	455.39	1.64E+03	286.24			1.64E+03	2.86E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	462.51	1.52E+03	279.24			1.52E+03	2.79E+02
94	470.38	6.04E+02	276.99			6.04E+02	2.77E+02
95	481.07	2.69E+03	302.11			2.69E+03	3.02E+02
96	487.64	2.82E+03	257.93			2.82E+03	2.58E+02
97	500.10	9.08E+00	274.35			9.08E+00	2.74E+02
98	510.25	7.71E+02	736.66			7.71E+02	7.37E+02
99	534.38	1.29E+03	231.42			1.29E+03	2.31E+02
100	544.65	1.26E+02	275.18			1.26E+02	2.75E+02
101	580.99	1.47E+03	275.71			1.47E+03	2.76E+02
102	592.39	-1.26E+02	289.42			-1.26E+02	2.89E+02
103	610.13	2.22E+05	569.13	4.28E+01	1.95E+01	2.22E+05	5.69E+02
104	666.31	5.48E+03	274.58			5.48E+03	2.75E+02
105	698.63	5.36E+03	178.54	4.50E+01	1.05E+01	5.32E+03	1.79E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-114-GAM3
Peak Analysis Performed on: 1-30-96 9:06:00 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	1	4.43	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.44	3.60E+03	1576.09	4.00E+01	3.04E+01	3.56E+03	1.58E+03
m	3	6.37	8.04E+03	1620.31	4.00E+01	3.04E+01	8.00E+03	1.62E+03
	4	8.05	0.00E+00	0.00			0.00E+00	0.00E+00
	5	9.19	-5.58E+03	435.70			-5.58E+03	4.36E+02
M	6	10.91	6.25E+04	3861.05	1.57E+02	3.08E+01	6.24E+04	3.86E+03
m	7	12.55	4.01E+04	4064.35			4.01E+04	4.06E+03
m	8	13.11	1.62E+05	4787.09			1.62E+05	4.79E+03
M	9	15.42	1.19E+05	9158.33			1.19E+05	9.16E+03
[illegible]	10	16.22	2.01E+05	11214.9			2.01E+05	1.12E+04
[illegible]	11	16.84	6.24E+04	8024.96			6.24E+04	8.02E+03
m	12	17.93	2.36E+04	5438.24			2.36E+04	5.44E+03
m	13	19.04	5.05E+04	6984.55	-1.92E-01	1.63E+01	5.05E+04	6.98E+03
m	14	19.68	2.93E+04	6618.07	-1.92E-01	1.63E+01	2.93E+04	6.62E+03
m	15	20.25	1.37E+04	5864.27	-1.92E-01	1.63E+01	1.37E+04	5.86E+03
m	16	20.99	4.14E+03	4316.52			4.14E+03	4.32E+03
M	17	25.73	2.35E+04	377.85			2.35E+04	3.78E+02
m	18	27.47	1.97E+04	328.44	-1.27E+01	1.34E+01	1.98E+04	3.29E+02
	19	32.21	3.30E+03	357.11			3.30E+03	3.57E+02
M	20	35.64	1.02E+03	169.92			1.02E+03	1.70E+02
m	21	36.71	4.18E+03	423.32			4.18E+03	4.23E+02
	22	46.63	2.34E+05	623.74	1.16E+01	3.50E+01	2.34E+05	6.25E+02
	23	50.20	2.50E+04	392.78	-1.20E+01	1.73E+01	2.50E+04	3.93E+02
	24	53.33	5.98E+04	458.12			5.98E+04	4.58E+02
	25	58.73	6.28E+02	330.94			6.28E+02	3.31E+02
M	26	63.39	2.32E+05	830.01	7.25E+01	2.49E+01	2.31E+05	8.30E+02
m	27	64.99	6.49E+02	287.02			6.49E+02	2.87E+02
	28	67.76	2.63E+04	502.28			2.63E+04	5.02E+02
M	29	70.98	2.55E+03	1831.45			2.55E+03	1.83E+03
m	30	73.03	6.35E+03	1916.01			6.35E+03	1.92E+03
m	31	74.93	3.41E+05	5577.53	4.70E+01	1.89E+01	3.41E+05	5.58E+03
m	32	77.21	6.03E+05	6199.69	6.88E+01	2.55E+01	6.03E+05	6.20E+03
m	33	79.44	5.21E+04	2791.02			5.21E+04	2.79E+03
m	34	81.19	5.04E+04	2791.69			5.04E+04	2.79E+03
M	35	83.96	1.09E+05	5223.54	-3.10E+01	1.96E+01	1.09E+05	5.22E+03
[illegible]	36	85.68	4.32E+03	2777.82			4.32E+03	2.78E+03
m	37	87.34	1.97E+05	6410.20			1.97E+05	6.41E+03
m	38	89.98	8.75E+04	4705.13			8.75E+04	4.71E+03
m	39	92.70	3.12E+05	7637.39	2.61E+02	4.01E+01	3.11E+05	7.64E+03
m	40	94.80	4.20E+04	3608.87	2.42E+01	1.36E+01	4.19E+04	3.61E+03

m 41	97.61	6.67E+03	3117.49		6.67E+03	3.12E+03
m 42	98.52	2.45E+04	3609.78		2.45E+04	3.61E+03

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	100.10	2.70E+03	2409.32			2.70E+03	2.41E+03
m	44	102.82	2.38E+03	2394.09			2.38E+03	2.39E+03
	45	105.79	3.29E+03	414.39			3.29E+03	4.14E+02
M	46	109.24	5.23E+03	534.49	9.22E+01	2.46E+01	5.13E+03	5.35E+02
m	47	111.45	6.23E+03	547.14			6.23E+03	5.47E+02
m	48	112.96	1.81E+04	874.44			1.81E+04	8.74E+02
m	49	114.71	2.29E+03	502.27			2.29E+03	5.02E+02
M	50	121.03	1.70E+03	205.47	6.68E+00	2.29E+01	1.70E+03	2.07E+02
m	51	122.46	2.60E+03	293.34			2.60E+03	2.93E+02
M	52	128.26	1.82E+03	304.79			1.82E+03	3.05E+02
m	53	130.54	3.27E+03	440.11			3.27E+03	4.40E+02
	54	140.76	1.20E+03	405.66			1.20E+03	4.06E+02
	55	144.00	3.20E+04	423.00	4.83E+01	2.07E+01	3.20E+04	4.24E+02
	56	154.38	1.25E+04	444.99			1.25E+04	4.45E+02
	57	158.84	1.04E+03	282.51			1.04E+03	2.83E+02
	58	163.54	9.30E+03	376.45			9.30E+03	3.76E+02
	59	186.22	2.06E+05	612.55	1.65E+02	2.92E+01	2.06E+05	6.13E+02
M	60	195.15	6.09E+02	199.53			6.09E+02	2.00E+02
m	61	196.46	1.44E+03	396.44	5.02E+01	2.63E+01	1.39E+03	3.97E+02
m	62	198.69	6.73E+02	211.95			6.73E+02	2.12E+02
M	63	202.29	2.65E+03	297.58			2.65E+03	2.98E+02
m	64	205.57	9.79E+03	630.98	-8.75E+00	2.28E+01	9.80E+03	6.31E+02
	65	210.93	8.66E+02	259.12	-2.56E+01	2.49E+01	8.91E+02	2.60E+02
	66	236.27	1.17E+04	193.22			1.17E+04	1.93E+02
m	67	238.87	1.05E+03	138.25	7.88E+01	2.53E+01	9.71E+02	1.41E+02
m	68	242.27	1.51E+05	932.84			1.51E+05	9.33E+02
	69	250.61	8.29E+01	292.89			8.29E+01	2.93E+02
M	70	256.56	6.23E+03	276.13			6.23E+03	2.76E+02
m	71	259.14	9.56E+03	369.64	1.45E+01	2.66E+01	9.55E+03	3.71E+02
M	72	269.78	1.33E+04	487.08			1.33E+04	4.87E+02
m	73	271.55	1.07E+04	433.08			1.07E+04	4.33E+02
m	74	275.09	5.66E+03	335.95			5.66E+03	3.36E+02
M	75	283.89	7.31E+02	142.59			7.31E+02	1.43E+02
m	76	286.43	2.41E+03	364.82			2.41E+03	3.65E+02
	77	295.58	2.96E+05	639.27	1.05E+01	4.02E+01	2.96E+05	6.41E+02
M	78	300.41	3.41E+03	362.07			3.41E+03	3.62E+02
m	79	303.05	1.58E+03	188.58			1.58E+03	1.89E+02
m	80	304.84	1.15E+03	153.60			1.15E+03	1.54E+02
	81	314.84	1.57E+03	314.44			1.57E+03	3.14E+02
	82	324.26	2.79E+03	278.72	-2.18E+01	1.99E+01	2.81E+03	2.79E+02
	83	330.33	2.32E+03	282.66	-2.16E+01	3.90E+01	2.34E+03	2.85E+02
	84	338.75	1.73E+03	321.49			1.73E+03	3.21E+02
M	85	349.53	6.30E+02	591.81			6.30E+02	5.92E+02
m	86	352.36	4.46E+05	1069.67	8.80E+01	2.36E+01	4.46E+05	1.07E+03
M	87	387.32	3.06E+03	224.98			3.06E+03	2.25E+02
m	88	389.45	3.82E+03	271.35			3.82E+03	2.71E+02
M	89	402.32	3.48E+03	344.56			3.48E+03	3.45E+02
m	90	405.66	2.42E+03	264.82			2.42E+03	2.65E+02
	91	427.80	1.32E+03	301.54			1.32E+03	3.02E+02
	92	455.39	1.64E+03	286.24			1.64E+03	2.86E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
93	462.51	1.52E+03	279.24			1.52E+03	2.79E+02
94	470.38	6.04E+02	276.99			6.04E+02	2.77E+02
95	481.07	2.69E+03	302.11			2.69E+03	3.02E+02
96	487.64	2.82E+03	257.93			2.82E+03	2.58E+02
97	500.10	9.08E+00	274.35			9.08E+00	2.74E+02
98	510.25	7.71E+02	736.66			7.71E+02	7.37E+02
99	534.38	1.29E+03	231.42			1.29E+03	2.31E+02
100	544.65	1.26E+02	275.18			1.26E+02	2.75E+02
101	580.99	1.47E+03	275.71			1.47E+03	2.76E+02
102	592.39	-1.26E+02	289.42			-1.26E+02	2.89E+02
103	610.13	2.22E+05	569.13	4.28E+01	1.95E+01	2.22E+05	5.69E+02
104	666.31	5.48E+03	274.58			5.48E+03	2.75E+02
105	698.63	5.36E+03	178.54	4.50E+01	1.05E+01	5.32E+03	1.79E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-05-96  9:55:04 AM

Sample Title                     : NOPI-115-GAM3
Spectrum Description             : NOPI-115-GAM3
Sample Identification            : NP115
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-30-96  9:04:53 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80103.0 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
```

$-0.045\log x + 1.094$

$0.007\log x + 0.979$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-115-GAM3
Peak Locate Performed on: 2-05-96 9:54:07 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.55	0.0832	5.47	6.12
2	37.22	0.0624	6.33	13.06
3	46.76	0.2233	8.02	3.50
4	53.28	0.1788	9.15	4.06
5	63.42	0.0159	10.90	33.99
6	68.00	<NA>	12.55	<NA>
7	76.06	0.0310	13.12	32.75
8	88.67	0.0313	15.43	20.66
9	94.38	0.0151	16.21	39.32
10	98.00	<NA>	16.80	<NA>
11	103.95	0.0780	17.95	15.02
12	110.44	0.0268	19.06	19.35
13	114.00	<NA>	19.73	<NA>
14	148.90	0.0353	25.74	29.75
15	158.88	0.0380	27.47	27.79
16	212.47	0.0728	36.76	6.76
17	269.39	0.0070	46.63	142.58
18	290.05	0.0341	50.22	27.33
19	308.01	0.0137	53.33	65.03
20	366.04	0.0061	63.40	137.55
21	391.26	0.0409	67.77	32.33
22	420.99	0.1570	73.00	5.22
23	432.60	0.0067	74.94	170.66
24	445.80	0.0053	77.22	234.35
25	458.48	0.0219	79.44	49.81
26	468.74	0.0223	81.20	54.67
27	484.50	0.0170	83.97	61.60
28	494.19	0.2158	87.02	5.16
29	504.47	0.0213	87.48	68.77
30	519.31	0.0183	89.99	62.94
31	534.96	0.0131	92.71	91.35
32	547.64	0.0653	94.81	24.57
33	563.53	0.0948	97.71	5.17
34	568.94	0.0349	98.54	23.69
35	610.50	0.3557	105.79	3.36
36	630.73	0.1574	109.28	7.11
37	643.28	0.2356	111.44	4.69
38	651.92	0.0696	112.98	22.79
39	698.21	0.3799	121.07	3.73
40	707.03	0.2523	122.52	5.27
41	739.59	0.2824	128.16	4.43

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	752.92	0.1415	130.51	9.07
43	831.00	0.0371	144.03	34.86
44	890.69	0.0660	154.39	21.82
45	916.50	0.4328	158.86	3.35
46	943.59	0.0634	163.56	15.55
47	1074.69	0.0139	186.30	102.12
48	1132.22	0.3404	196.27	3.63
49	1167.35	0.3402	202.43	3.92
50	1185.84	0.0910	205.58	13.52
51	1215.46	0.5186	210.71	3.02
52	1362.96	0.0527	236.29	22.23
53	1378.66	0.1310	238.98	10.24
54	1397.68	0.0116	242.30	128.63
55	1479.87	0.0831	256.55	15.17
56	1494.98	0.0527	259.18	21.66
57	1556.12	0.0487	269.81	24.14
58	1566.64	0.0637	271.57	19.19
59	1587.28	0.1229	275.10	11.83
60	1612.46	0.4968	279.57	3.10
61	1622.87	0.5603	281.41	3.18
62	1637.63	0.3643	283.90	3.85
63	1652.38	0.1987	286.48	7.11
64	1705.06	0.0097	295.62	183.34
65	1732.85	0.1453	300.42	10.10
66	1747.76	0.3669	303.10	4.17
67	1816.28	0.4130	314.91	3.21
68	1870.77	0.1719	324.36	8.31
69	1905.49	0.1796	330.38	7.32
70	1954.07	0.3941	338.81	5.32
71	2014.65	0.3284	349.52	3.05
72	2032.52	0.0057	352.40	218.28
73	2233.60	0.2179	387.35	5.83
74	2245.64	0.1311	389.38	10.50
75	2320.60	0.1979	402.39	8.08
76	2339.96	0.5514	405.74	3.45
77	2569.65	0.5185	445.56	3.09
78	2626.72	0.1748	455.46	8.02
79	2774.81	0.2364	481.15	8.14
80	2813.26	0.2188	487.81	8.94
81	3082.20	0.2114	534.45	7.99
82	3350.17	0.2403	580.93	7.56
83	3518.91	0.0126	610.19	142.71
84	3842.51	0.1246	666.31	16.56
85	4028.57	0.1945	698.58	14.22

Errors quoted at 1.000 sigma

****
**** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-115-GAM3
Peak Analysis Performed on: 2-05-96 9:54:26 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	32.04	5.47	5.25E+03	528.75	2.17E+04
m	2	29-	39	37.01	6.33	6.40E+03	535.72	1.95E+04
	4	44-	55	53.28	9.15	-1.57E+03	270.86	2.99E+04
M	5	60-	79	63.36	10.90	2.95E+04	2628.61	2.43E+04
m	6	60-	79	72.83	12.55	1.70E+04	2668.85	3.06E+04
m	7	60-	79	76.14	13.12	6.89E+04	3183.09	2.63E+04
M	8	84-	118	89.44	15.43	4.56E+04	3847.44	3.36E+04
m	9	84-	118	93.95	16.21	6.64E+04	4523.89	3.41E+04
m	10	84-	118	97.38	16.80	2.03E+04	3459.53	3.24E+04
m	11	84-	118	103.97	17.95	7.83E+03	2305.47	3.03E+04
m	12	84-	118	110.36	19.06	1.65E+04	2850.09	2.90E+04
m	13	84-	118	114.25	19.73	9.85E+03	2468.47	2.56E+04
[illegible]	14	144-	163	148.92	25.74	7.82E+03	221.28	1.85E+04
[illegible]	15	144-	163	158.87	27.47	7.26E+03	207.72	1.75E+04
	16	208-	216	212.47	36.76	1.33E+03	189.12	1.61E+04
	17	263-	275	269.39	46.63	1.03E+05	404.83	2.32E+04
	18	284-	294	290.05	50.22	8.69E+03	228.65	1.83E+04
	19	302-	314	308.01	53.33	2.39E+04	286.26	2.21E+04
	20	359-	372	366.04	63.40	7.29E+04	390.76	2.90E+04
	21	384-	396	391.26	67.77	9.02E+03	280.91	2.66E+04
M	22	416-	475	421.42	73.00	1.55E+03	809.11	2.32E+04
m	23	416-	475	432.58	74.94	1.40E+05	2426.98	2.46E+04
m	24	416-	475	445.75	77.22	2.47E+05	2680.07	2.11E+04
m	25	416-	475	458.55	79.44	2.06E+04	1190.78	2.20E+04
m	26	416-	475	468.69	81.20	1.78E+04	1152.06	2.17E+04
M	27	477-	575	484.64	83.97	3.78E+04	2320.99	2.39E+04
m	28	477-	575	502.24	87.02	2.72E+04	7418.60	2.28E+04
m	29	477-	575	504.93	87.48	5.79E+04	6661.89	2.41E+04
m	30	477-	575	519.37	89.99	3.43E+04	2157.88	2.15E+04
m	31	477-	575	535.07	92.71	9.77E+04	4671.57	2.17E+04
m	32	477-	575	547.19	94.81	1.28E+04	1294.14	2.07E+04
m	33	477-	575	563.87	97.71	2.37E+03	1075.96	2.02E+04
m	34	477-	575	568.67	98.54	6.11E+03	1216.02	1.88E+04
	35	602-	615	610.50	105.79	8.61E+02	219.09	1.71E+04
M	36	622-	657	630.59	109.28	1.65E+03	185.33	1.48E+04
m	37	622-	657	643.09	111.44	1.34E+03	173.62	1.50E+04
m	38	622-	657	651.97	112.98	4.93E+03	361.28	1.51E+04
M	39	694-	712	698.59	121.07	4.22E+02	98.83	1.39E+04
[illegible]	40	694-	712	706.93	122.52	1.06E+03	204.84	1.36E+04
M	41	731-	757	739.50	128.16	4.09E+02	149.33	9.25E+03
m	42	731-	757	753.02	130.51	6.88E+02	240.11	1.07E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	824-	839	831.00	144.03	1.05E+04	261.56	1.92E+04
	44	884-	896	890.69	154.39	3.98E+03	217.41	1.65E+04
	45	911-	923	916.50	158.86	4.39E+02	203.21	1.55E+04
	46	935-	950	943.59	163.56	2.79E+03	236.03	1.76E+04
	47	1065-	1083	1074.69	186.30	7.77E+04	380.36	1.99E+04
	48	1123-	1140	1132.22	196.27	1.45E+03	243.17	1.77E+04
M	49	1161-	1193	1167.70	202.43	3.86E+02	85.55	1.43E+04
m	50	1161-	1193	1185.87	205.58	2.42E+03	345.50	1.26E+04
	51	1205-	1221	1215.46	210.71	7.06E+02	201.11	1.27E+04
M	52	1352-	1407	1362.97	236.29	3.95E+03	97.84	9.69E+03
m	53	1352-	1407	1378.49	238.98	1.25E+03	77.36	1.02E+04
m	54	1352-	1407	1397.63	242.30	6.20E+04	581.70	9.65E+03
M	55	1469-	1501	1479.79	256.55	1.89E+03	138.56	8.63E+03
m	56	1469-	1501	1494.93	259.18	3.52E+03	223.64	7.92E+03
M	57	1545-	1594	1556.25	269.81	4.53E+03	239.06	8.90E+03
m	58	1545-	1594	1566.41	271.57	3.58E+03	203.90	8.86E+03
m	59	1545-	1594	1586.72	275.10	2.41E+03	163.38	8.79E+03
M	60	1605-	1659	1612.49	279.57	6.14E+01	55.35	7.41E+03
m	61	1605-	1659	1623.11	281.41	1.70E+02	98.69	7.07E+03
m	62	1605-	1659	1637.49	283.90	2.41E+02	133.09	7.91E+03
m	63	1605-	1659	1652.35	286.48	4.75E+02	252.41	7.64E+03
	64	1694-	1715	1705.06	295.62	1.21E+05	406.58	1.18E+04
M	65	1724-	1755	1732.75	300.42	2.45E+02	258.30	6.67E+03
	66	1724-	1755	1748.20	303.10	2.91E+01	33.01	6.81E+03
	67	1805-	1827	1816.28	314.91	6.22E+02	202.64	1.04E+04
	68	1862-	1878	1870.77	324.36	9.03E+02	158.89	7.77E+03
	69	1895-	1913	1905.49	330.38	1.01E+03	176.65	8.93E+03
	70	1942-	1962	1954.07	338.81	7.31E+02	202.48	1.11E+04
M	71	2006-	2043	2015.87	349.52	3.89E+02	224.29	1.16E+04
m	72	2006-	2043	2032.46	352.40	1.82E+05	603.59	9.76E+03
M	73	2222-	2257	2233.98	387.35	9.40E+02	132.38	8.90E+03
m	74	2222-	2257	2245.66	389.38	1.47E+03	193.86	8.55E+03
M	75	2310-	2348	2320.68	402.39	1.16E+03	206.15	1.01E+04
m	76	2310-	2348	2340.02	405.74	8.30E+02	155.93	1.04E+04
	77	2560-	2581	2569.65	445.56	1.19E+02	170.38	7.70E+03
	78	2613-	2638	2626.72	455.46	1.08E+03	193.92	8.59E+03
	79	2761-	2784	2774.81	481.15	1.18E+03	173.60	7.23E+03
	80	2800-	2823	2813.26	487.81	1.18E+03	171.36	7.04E+03
	81	3070-	3092	3082.20	534.45	5.36E+02	151.24	5.76E+03
	82	3339-	3364	3350.17	580.93	5.01E+02	172.32	6.86E+03
	83	3503-	3532	3518.91	610.19	9.02E+04	357.56	7.88E+03
	84	3830-	3854	3842.51	666.31	2.47E+03	152.54	5.04E+03
	85	4016-	4044	4028.57	698.58	1.86E+03	110.62	1.67E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-115-GAM3
Peak Analysis Performed on: 2-05-96 9:54:07 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.47	5.25E+03	528.75	4.00E+01	3.04E+01	5.21E+03	5.30E+02
m	2	6.33	6.40E+03	535.72	4.00E+01	3.04E+01	6.36E+03	5.37E+02
	3	8.02	0.00E+00	0.00			0.00E+00	0.00E+00
	4	9.15	-1.57E+03	270.86			-1.57E+03	2.71E+02
M	5	10.90	2.95E+04	2628.61	1.57E+02	3.08E+01	2.94E+04	2.63E+03
m	6	12.55	1.70E+04	2668.85			1.70E+04	2.67E+03
m	7	13.12	6.89E+04	3183.09			6.89E+04	3.18E+03
M	8	15.43	4.56E+04	3847.44			4.56E+04	3.85E+03
m	9	16.21	6.64E+04	4523.89			6.64E+04	4.52E+03
m	10	16.80	2.03E+04	3459.53			2.03E+04	3.46E+03
m	11	17.95	7.83E+03	2305.47			7.83E+03	2.31E+03
m	12	19.06	1.65E+04	2850.09	-1.92E-01	1.63E+01	1.65E+04	2.85E+03
m	13	19.73	9.85E+03	2468.47	-1.92E-01	1.63E+01	9.85E+03	2.47E+03
M	14	25.74	7.82E+03	221.28			7.82E+03	2.21E+02
m	15	27.47	7.26E+03	207.72	-1.27E+01	1.34E+01	7.27E+03	2.08E+02
	16	36.76	1.33E+03	189.12			1.33E+03	1.89E+02
	17	46.63	1.03E+05	404.83	1.16E+01	3.50E+01	1.03E+05	4.06E+02
	18	50.22	8.69E+03	228.65	-1.20E+01	1.73E+01	8.70E+03	2.29E+02
	19	53.33	2.39E+04	286.26			2.39E+04	2.86E+02
	20	63.40	7.29E+04	390.76	7.25E+01	2.49E+01	7.28E+04	3.92E+02
	21	67.77	9.02E+03	280.91			9.02E+03	2.81E+02
M	22	73.00	1.55E+03	809.11			1.55E+03	8.09E+02
m	23	74.94	1.40E+05	2426.98	4.70E+01	1.89E+01	1.40E+05	2.43E+03
m	24	77.22	2.47E+05	2680.07	6.88E+01	2.55E+01	2.47E+05	2.68E+03
m	25	79.44	2.06E+04	1190.78			2.06E+04	1.19E+03
m	26	81.20	1.78E+04	1152.06			1.78E+04	1.15E+03
M	27	83.97	3.78E+04	2320.99	-3.10E+01	1.96E+01	3.78E+04	2.32E+03
m	28	87.02	2.72E+04	7418.60			2.72E+04	7.42E+03
m	29	87.48	5.79E+04	6661.89			5.79E+04	6.66E+03
m	30	89.99	3.43E+04	2157.88			3.43E+04	2.16E+03
m	31	92.71	9.77E+04	4671.57	2.61E+02	4.01E+01	9.75E+04	4.67E+03
m	32	94.81	1.28E+04	1294.14	2.42E+01	1.36E+01	1.28E+04	1.29E+03
m	33	97.71	2.37E+03	1075.96			2.37E+03	1.08E+03
m	34	98.54	6.11E+03	1216.02			6.11E+03	1.22E+03
	35	105.79	8.61E+02	219.09			8.61E+02	2.19E+02
M	36	109.28	1.65E+03	185.33	9.22E+01	2.46E+01	1.56E+03	1.87E+02
m	37	111.44	1.34E+03	173.62			1.34E+03	1.74E+02
m	38	112.98	4.93E+03	361.28			4.93E+03	3.61E+02
M	39	121.07	4.22E+02	98.83	6.68E+00	2.29E+01	4.16E+02	1.01E+02
m	40	122.52	1.06E+03	204.84			1.06E+03	2.05E+02
M	41	128.16	4.09E+02	149.33			4.09E+02	1.49E+02
	42	130.51	6.88E+02	240.11			6.88E+02	2.40E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	144.03	1.05E+04	261.56	4.83E+01	2.07E+01	1.04E+04	2.62E+02
	44	154.39	3.98E+03	217.41			3.98E+03	2.17E+02
	45	158.86	4.39E+02	203.21			4.39E+02	2.03E+02
	46	163.56	2.79E+03	236.03			2.79E+03	2.36E+02
	47	186.30	7.77E+04	380.36	1.65E+02	2.92E+01	7.75E+04	3.81E+02
	48	196.27	1.45E+03	243.17	5.02E+01	2.63E+01	1.40E+03	2.45E+02
M	49	202.43	3.86E+02	85.55			3.86E+02	8.55E+01
m	50	205.58	2.42E+03	345.50	-8.75E+00	2.28E+01	2.43E+03	3.46E+02
	51	210.71	7.06E+02	201.11	-2.56E+01	2.49E+01	7.32E+02	2.03E+02
M	52	236.29	3.95E+03	97.84			3.95E+03	9.78E+01
m	53	238.98	1.25E+03	77.36	7.88E+01	2.53E+01	1.17E+03	8.14E+01
m	54	242.30	6.20E+04	581.70			6.20E+04	5.82E+02
M	55	256.55	1.89E+03	138.56			1.89E+03	1.39E+02
m	56	259.18	3.52E+03	223.64	1.45E+01	2.66E+01	3.51E+03	2.25E+02
M	57	269.81	4.53E+03	239.06			4.53E+03	2.39E+02
m	58	271.57	3.58E+03	203.90			3.58E+03	2.04E+02
m	59	275.10	2.41E+03	163.38			2.41E+03	1.63E+02
M	60	279.57	6.14E+01	55.35			6.14E+01	5.53E+01
m	61	281.41	1.70E+02	98.69			1.70E+02	9.87E+01
m	62	283.90	2.41E+02	133.09			2.41E+02	1.33E+02
m	63	286.48	4.75E+02	252.41			4.75E+02	2.52E+02
	64	295.62	1.21E+05	406.58	1.05E+01	4.02E+01	1.21E+05	4.09E+02
M	65	300.42	2.45E+02	258.30			2.45E+02	2.58E+02
	66	303.10	2.91E+01	33.01			2.91E+01	3.30E+01
	67	314.91	6.22E+02	202.64			6.22E+02	2.03E+02
	68	324.36	9.03E+02	158.89	-2.18E+01	1.99E+01	9.25E+02	1.60E+02
	69	330.38	1.01E+03	176.65	-2.16E+01	3.90E+01	1.03E+03	1.81E+02
	70	338.81	7.31E+02	202.48			7.31E+02	2.02E+02
M	71	349.52	3.89E+02	224.29			3.89E+02	2.24E+02
m	72	352.40	1.82E+05	603.59	8.80E+01	2.36E+01	1.82E+05	6.04E+02
M	73	387.35	9.40E+02	132.38			9.40E+02	1.32E+02
m	74	389.38	1.47E+03	193.86			1.47E+03	1.94E+02
M	75	402.39	1.16E+03	206.15			1.16E+03	2.06E+02
m	76	405.74	8.30E+02	155.93			8.30E+02	1.56E+02
	77	445.56	1.19E+02	170.38			1.19E+02	1.70E+02
	78	455.46	1.08E+03	193.92			1.08E+03	1.94E+02
	79	481.15	1.18E+03	173.60			1.18E+03	1.74E+02
	80	487.81	1.18E+03	171.36			1.18E+03	1.71E+02
	81	534.45	5.36E+02	151.24			5.36E+02	1.51E+02
	82	580.93	5.01E+02	172.32			5.01E+02	1.72E+02
	83	610.19	9.02E+04	357.56	4.28E+01	1.95E+01	9.02E+04	3.58E+02
	84	666.31	2.47E+03	152.54			2.47E+03	1.53E+02
	85	698.58	1.86E+03	110.62	4.50E+01	1.05E+01	1.81E+03	1.11E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-115-GAM3
Peak Analysis Performed on: 2-05-96 9:54:07 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.47	5.25E+03	528.75	4.00E+01	3.04E+01	5.21E+03	5.30E+02
m	2	6.33	6.40E+03	535.72	4.00E+01	3.04E+01	6.36E+03	5.37E+02
	3	8.02	0.00E+00	0.00			0.00E+00	0.00E+00
	4	9.15	-1.57E+03	270.86			-1.57E+03	2.71E+02
M	5	10.90	2.95E+04	2628.61	1.57E+02	3.08E+01	2.94E+04	2.63E+03
m	6	12.55	1.70E+04	2668.85			1.70E+04	2.67E+03
m	7	13.12	6.89E+04	3183.09			6.89E+04	3.18E+03
M	8	15.43	4.56E+04	3847.44			4.56E+04	3.85E+03
m	9	16.21	6.64E+04	4523.89			6.64E+04	4.52E+03
	10	16.80	2.03E+04	3459.53			2.03E+04	3.46E+03
m	11	17.95	7.83E+03	2305.47			7.83E+03	2.31E+03
m	12	19.06	1.65E+04	2850.09	-1.92E-01	1.63E+01	1.65E+04	2.85E+03
m	13	19.73	9.85E+03	2468.47	-1.92E-01	1.63E+01	9.85E+03	2.47E+03
M	14	25.74	7.82E+03	221.28			7.82E+03	2.21E+02
m	15	27.47	7.26E+03	207.72	-1.27E+01	1.34E+01	7.27E+03	2.08E+02
	16	36.76	1.33E+03	189.12			1.33E+03	1.89E+02
	17	46.63	1.03E+05	404.83	1.16E+01	3.50E+01	1.03E+05	4.06E+02
	18	50.22	8.69E+03	228.65	-1.20E+01	1.73E+01	8.70E+03	2.29E+02
	19	53.33	2.39E+04	286.26			2.39E+04	2.86E+02
	20	63.40	7.29E+04	390.76	7.25E+01	2.49E+01	7.28E+04	3.92E+02
	21	67.77	9.02E+03	280.91			9.02E+03	2.81E+02
M	22	73.00	1.55E+03	809.11			1.55E+03	8.09E+02
m	23	74.94	1.40E+05	2426.98	4.70E+01	1.89E+01	1.40E+05	2.43E+03
m	24	77.22	2.47E+05	2680.07	6.88E+01	2.55E+01	2.47E+05	2.68E+03
m	25	79.44	2.06E+04	1190.78			2.06E+04	1.19E+03
m	26	81.20	1.78E+04	1152.06			1.78E+04	1.15E+03
M	27	83.97	3.78E+04	2320.99	-3.10E+01	1.96E+01	3.78E+04	2.32E+03
m	28	87.02	2.72E+04	7418.60			2.72E+04	7.42E+03
m	29	87.48	5.79E+04	6661.89			5.79E+04	6.66E+03
m	30	89.99	3.43E+04	2157.88			3.43E+04	2.16E+03
m	31	92.71	9.77E+04	4671.57	2.61E+02	4.01E+01	9.75E+04	4.67E+03
m	32	94.81	1.28E+04	1294.14	2.42E+01	1.36E+01	1.28E+04	1.29E+03
m	33	97.71	2.37E+03	1075.96			2.37E+03	1.08E+03
m	34	98.54	6.11E+03	1216.02			6.11E+03	1.22E+03
	35	105.79	8.61E+02	219.09			8.61E+02	2.19E+02
	36	109.28	1.65E+03	185.33	9.22E+01	2.46E+01	1.56E+03	1.87E+02
m	37	111.44	1.34E+03	173.62			1.34E+03	1.74E+02
m	38	112.98	4.93E+03	361.28			4.93E+03	3.61E+02
M	39	121.07	4.22E+02	98.83	6.68E+00	2.29E+01	4.16E+02	1.01E+02
m	40	122.52	1.06E+03	204.84			1.06E+03	2.05E+02

M	41	128.16	4.09E+02	149.33	4.09E+02	1.49E+02
m	42	130.51	6.88E+02	240.11	6.88E+02	2.40E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	144.03	1.05E+04	261.56	4.83E+01	2.07E+01	1.04E+04	2.62E+02
	44	154.39	3.98E+03	217.41			3.98E+03	2.17E+02
	45	158.86	4.39E+02	203.21			4.39E+02	2.03E+02
	46	163.56	2.79E+03	236.03			2.79E+03	2.36E+02
	47	186.30	7.77E+04	380.36	1.65E+02	2.92E+01	7.75E+04	3.81E+02
	48	196.27	1.45E+03	243.17	5.02E+01	2.63E+01	1.40E+03	2.45E+02
M	49	202.43	3.86E+02	85.55			3.86E+02	8.55E+01
m	50	205.58	2.42E+03	345.50	-8.75E+00	2.28E+01	2.43E+03	3.46E+02
	51	210.71	7.06E+02	201.11	-2.56E+01	2.49E+01	7.32E+02	2.03E+02
M	52	236.29	3.95E+03	97.84			3.95E+03	9.78E+01
m	53	238.98	1.25E+03	77.36	7.88E+01	2.53E+01	1.17E+03	8.14E+01
m	54	242.30	6.20E+04	581.70			6.20E+04	5.82E+02
M	55	256.55	1.89E+03	138.56			1.89E+03	1.39E+02
m	56	259.18	3.52E+03	223.64	1.45E+01	2.66E+01	3.51E+03	2.25E+02
M	57	269.81	4.53E+03	239.06			4.53E+03	2.39E+02
m	58	271.57	3.58E+03	203.90			3.58E+03	2.04E+02
m	59	275.10	2.41E+03	163.38			2.41E+03	1.63E+02
M	60	279.57	6.14E+01	55.35			6.14E+01	5.53E+01
m	61	281.41	1.70E+02	98.69			1.70E+02	9.87E+01
m	62	283.90	2.41E+02	133.09			2.41E+02	1.33E+02
m	63	286.48	4.75E+02	252.41			4.75E+02	2.52E+02
	64	295.62	1.21E+05	406.58	1.05E+01	4.02E+01	1.21E+05	4.09E+02
M	65	300.42	2.45E+02	258.30			2.45E+02	2.58E+02
	66	303.10	2.91E+01	33.01			2.91E+01	3.30E+01
	67	314.91	6.22E+02	202.64			6.22E+02	2.03E+02
	68	324.36	9.03E+02	158.89	-2.18E+01	1.99E+01	9.25E+02	1.60E+02
	69	330.38	1.01E+03	176.65	-2.16E+01	3.90E+01	1.03E+03	1.81E+02
	70	338.81	7.31E+02	202.48			7.31E+02	2.02E+02
M	71	349.52	3.89E+02	224.29			3.89E+02	2.24E+02
m	72	352.40	1.82E+05	603.59	8.80E+01	2.36E+01	1.82E+05	6.04E+02
M	73	387.35	9.40E+02	132.38			9.40E+02	1.32E+02
m	74	389.38	1.47E+03	193.86			1.47E+03	1.94E+02
M	75	402.39	1.16E+03	206.15			1.16E+03	2.06E+02
m	76	405.74	8.30E+02	155.93			8.30E+02	1.56E+02
	77	445.56	1.19E+02	170.38			1.19E+02	1.70E+02
	78	455.46	1.08E+03	193.92			1.08E+03	1.94E+02
	79	481.15	1.18E+03	173.60			1.18E+03	1.74E+02
	80	487.81	1.18E+03	171.36			1.18E+03	1.71E+02
	81	534.45	5.36E+02	151.24			5.36E+02	1.51E+02
	82	580.93	5.01E+02	172.32			5.01E+02	1.72E+02
	83	610.19	9.02E+04	357.56	4.28E+01	1.95E+01	9.02E+04	3.58E+02
	84	666.31	2.47E+03	152.54			2.47E+03	1.53E+02
	85	698.58	1.86E+03	110.62	4.50E+01	1.05E+01	1.81E+03	1.11E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-06-96  8:51:57 AM

Sample Title                     : NOPI-116-GAM3
Spectrum Description             : NOPI-116-GAM3
Sample Identification            : NP116
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-05-96  9:36:51 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80081.2 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
```

-0.034 log x + 1.060
0.019 log x + 0.973

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-116-GAM3
Peak Locate Performed on: 2-06-96 8:51:09 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.63	0.0866	5.46	6.97
2	37.32	0.0564	6.35	11.68
3	47.03	0.2816	8.07	4.39
4	63.46	0.0184	10.92	27.02
5	72.00	<NA>	12.55	<NA>
6	76.09	0.0359	13.13	29.52
7	88.74	0.0373	15.43	20.28
8	94.39	0.0152	16.23	37.94
9	98.00	<NA>	16.84	<NA>
10	103.79	0.0651	17.93	12.87
11	110.40	0.0270	19.05	21.01
12	114.00	<NA>	19.69	<NA>
13	117.34	0.2034	20.27	3.11
14	122.06	0.3876	20.97	4.37
15	148.97	0.0330	25.75	31.08
16	158.95	0.0398	27.48	27.36
17	212.24	0.1666	36.72	5.19
18	226.88	0.3641	39.26	3.38
19	269.46	0.0115	46.65	122.17
20	290.10	0.0355	50.23	26.24
21	308.06	0.0160	53.34	55.96
22	366.08	0.0062	63.40	135.08
23	391.28	0.0426	67.77	30.51
24	421.14	0.1074	73.01	7.45
25	432.69	0.0079	74.95	148.97
26	445.87	0.0063	77.23	202.23
27	458.58	0.0247	79.46	44.63
28	468.85	0.0252	81.21	51.72
29	484.57	0.0186	83.98	55.62
30	493.91	0.1903	87.04	5.17
31	504.54	0.0255	87.50	59.35
32	519.38	0.0208	90.01	53.79
33	535.01	0.0134	92.72	88.46
34	547.73	0.0435	94.83	25.30
35	563.46	0.1144	97.67	4.31
36	568.89	0.0555	98.55	23.88
37	577.79	0.2573	100.12	3.39
38	610.74	0.2570	105.83	4.59
39	630.52	0.1608	109.22	6.57
40	642.78	0.4170	111.39	3.04
41	651.93	0.0523	112.97	24.84

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	698.87	0.3339	121.09	4.14
43	707.03	0.2138	122.51	6.82
44	753.30	0.2093	130.56	5.31
45	831.00	0.0384	144.03	34.88
46	890.83	0.0655	154.41	22.33
47	943.59	0.0564	163.56	17.48
48	1074.54	0.0154	186.27	88.35
49	1133.75	0.2871	196.54	3.95
50	1167.46	0.4419	202.35	3.94
51	1186.14	0.0807	205.61	15.63
52	1278.93	0.3684	221.72	3.31
53	1363.04	0.0520	236.30	22.95
54	1378.43	0.1349	238.96	10.14
55	1397.80	0.0139	242.32	110.86
56	1480.20	0.0906	256.62	13.28
57	1495.04	0.0625	259.19	18.56
58	1556.20	0.0494	269.82	23.96
59	1566.74	0.0613	271.60	19.50
60	1587.47	0.1531	275.14	9.46
61	1638.47	0.5110	284.04	3.22
62	1652.39	0.2277	286.47	6.11
63	1705.21	0.0090	295.65	156.31
64	1733.11	0.1563	300.48	9.48
65	1747.27	0.3405	303.00	4.11
66	1759.44	0.3567	305.00	3.78
67	1870.84	0.2171	324.37	8.02
68	1905.49	0.1747	330.38	7.64
69	1953.63	0.3437	338.73	4.59
70	2032.62	0.0068	352.43	186.88
71	2234.11	0.2593	387.37	5.86
72	2246.77	0.2435	389.54	6.36
73	2320.75	0.1637	402.38	10.21
74	2338.83	0.3438	405.64	5.39
75	2570.32	0.3496	445.68	3.73
76	2626.35	0.2043	455.40	6.53
77	2775.23	0.2179	481.22	7.28
78	2813.41	0.2998	487.84	6.16
79	3082.97	0.5386	534.59	4.22
80	3350.97	0.4972	581.07	4.77
81	3519.19	0.0147	610.24	122.07
82	3842.83	0.1243	666.37	14.36
83	4028.51	0.2276	698.57	12.19

Errors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-116-GAM3
Peak Analysis Performed on: 2-06-96 8:51:29 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	31.96	5.46	4.49E+03	477.03	1.53E+04
m	2	29-	39	37.10	6.35	5.77E+03	484.96	1.57E+04
	3	45-	49	47.03	8.07	-6.20E+02	123.75	9.64E+03
M	4	60-	79	63.43	10.92	2.21E+04	2126.32	1.96E+04
m	5	60-	79	72.87	12.55	1.43E+04	2229.64	2.48E+04
m	6	60-	79	76.17	13.13	5.57E+04	2622.40	2.14E+04
M	7	84-	125	89.45	15.43	3.74E+04	2866.55	2.70E+04
m	8	84-	125	94.07	16.23	6.19E+04	3473.82	2.64E+04
m	9	84-	125	97.57	16.84	1.94E+04	2511.44	2.20E+04
m	10	84-	125	103.89	17.93	7.67E+03	1730.36	2.22E+04
m	11	84-	125	110.36	19.05	1.61E+04	2202.20	2.07E+04
m	12	84-	125	114.02	19.69	9.42E+03	2030.50	1.97E+04
[redacted]	13	84-	125	117.37	20.27	4.16E+03	1753.43	1.91E+04
[redacted]	14	84-	125	121.39	20.97	1.27E+03	1356.62	1.68E+04
M	15	144-	163	148.97	25.75	7.63E+03	214.09	1.47E+04
m	16	144-	163	158.95	27.48	6.20E+03	181.26	1.39E+04
	17	207-	217	212.24	36.72	1.12E+03	195.51	1.56E+04
	18	224-	229	226.88	39.26	-1.22E+02	125.39	8.95E+03
	19	263-	275	269.46	46.65	8.16E+04	360.94	1.86E+04
	20	284-	295	290.10	50.23	7.63E+03	218.34	1.59E+04
	21	302-	314	308.06	53.34	1.78E+04	252.87	1.75E+04
	22	359-	372	366.08	63.40	6.92E+04	362.64	2.27E+04
	23	384-	397	391.28	67.77	8.11E+03	264.21	2.24E+04
M	24	416-	474	421.45	73.01	1.56E+03	598.41	1.84E+04
m	25	416-	474	432.64	74.95	1.02E+05	1719.43	1.79E+04
m	26	416-	474	445.80	77.23	1.82E+05	1929.65	1.68E+04
m	27	416-	474	458.65	79.46	1.56E+04	856.37	1.75E+04
m	28	416-	474	468.77	81.21	1.53E+04	857.54	1.59E+04
M	29	477-	584	484.72	83.98	3.21E+04	2164.70	1.96E+04
m	30	477-	584	502.36	87.04	2.01E+04	7451.59	1.83E+04
m	31	477-	584	505.01	87.50	4.22E+04	6704.49	1.93E+04
m	32	477-	584	519.48	90.01	2.59E+04	1853.49	1.69E+04
m	33	477-	584	535.13	92.72	9.26E+04	4946.47	1.64E+04
m	34	477-	584	547.28	94.83	1.17E+04	1174.46	1.50E+04
m	35	477-	584	563.67	97.67	2.41E+03	882.61	1.45E+04
m	36	477-	584	568.74	98.55	6.51E+03	1055.55	1.43E+04
m	37	477-	584	577.81	100.12	1.01E+03	706.34	1.31E+04
	38	602-	618	610.74	105.83	7.08E+02	228.52	1.64E+04
[redacted]	39	622-	658	630.24	109.22	1.46E+03	180.68	1.16E+04
m	40	622-	658	642.77	111.39	1.06E+03	167.40	1.19E+04
m	41	622-	658	651.87	112.97	4.78E+03	353.94	1.21E+04
M	42	692-	712	698.71	121.09	4.61E+02	111.17	1.06E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	692-	712	706.88	122.51	9.27E+02	188.31	9.77E+03
	44	747-	761	753.30	130.56	1.07E+03	199.72	1.35E+04
	45	823-	839	831.00	144.03	9.54E+03	244.65	1.61E+04
	46	883-	896	890.83	154.41	3.64E+03	202.42	1.36E+04
	47	937-	949	943.59	163.56	2.62E+03	177.69	1.10E+04
	48	1065-	1083	1074.54	186.27	6.33E+04	339.41	1.54E+04
	49	1127-	1139	1133.75	196.54	6.06E+01	166.27	1.05E+04
M	50	1157-	1195	1167.26	202.35	7.65E+02	140.91	1.04E+04
m	51	1157-	1195	1186.07	205.61	2.85E+03	332.00	9.58E+03
	52	1272-	1284	1278.93	221.72	-2.56E+02	135.42	7.06E+03
M	53	1353-	1406	1363.03	236.30	3.41E+03	106.99	7.85E+03
m	54	1353-	1406	1378.33	238.96	1.17E+03	85.50	7.72E+03
m	55	1353-	1406	1397.73	242.32	4.52E+04	503.25	7.27E+03
M	56	1470-	1502	1480.16	256.62	1.81E+03	129.06	7.28E+03
m	57	1470-	1502	1495.01	259.19	2.83E+03	185.33	7.04E+03
M	58	1547-	1595	1556.31	269.82	3.77E+03	212.98	6.51E+03
m	59	1547-	1595	1566.54	271.60	2.99E+03	181.38	6.54E+03
m	60	1547-	1595	1586.95	275.14	1.67E+03	132.55	6.99E+03
M	61	1631-	1659	1638.30	284.04	1.30E+02	64.82	6.37E+03
m	62	1631-	1659	1652.28	286.47	4.94E+02	201.05	6.90E+03
	63	1694-	1714	1705.21	295.65	8.97E+04	348.09	8.63E+03
M	64	1724-	1770	1733.11	300.48	9.06E+02	216.74	5.78E+03
m	65	1724-	1770	1747.59	303.00	3.45E+02	94.00	5.68E+03
	66	1724-	1770	1759.16	305.00	2.76E+02	81.06	5.61E+03
	67	1859-	1881	1870.84	324.37	1.15E+03	179.51	8.01E+03
	68	1896-	1913	1905.49	330.38	9.13E+02	148.84	6.53E+03
	69	1945-	1961	1953.63	338.73	4.56E+02	149.94	7.03E+03
	70	2020-	2044	2032.62	352.43	1.34E+05	422.14	1.07E+04
M	71	2225-	2257	2234.07	387.37	9.28E+02	122.64	7.28E+03
m	72	2225-	2257	2246.58	389.54	1.22E+03	153.12	8.72E+03
M	73	2311-	2350	2320.66	402.38	9.87E+02	188.81	7.07E+03
m	74	2311-	2350	2339.45	405.64	6.64E+02	133.81	7.03E+03
	75	2561-	2580	2570.32	445.68	8.25E+01	139.75	5.55E+03
	76	2613-	2638	2626.35	455.40	9.26E+02	171.91	6.73E+03
	77	2763-	2788	2775.23	481.22	6.41E+02	168.91	6.55E+03
	78	2800-	2824	2813.41	487.84	8.44E+02	158.68	5.90E+03
	79	3072-	3094	3082.97	534.59	5.49E+02	135.48	4.59E+03
	80	3339-	3361	3350.97	581.07	3.46E+02	137.54	4.78E+03
	81	3504-	3532	3519.19	610.24	6.72E+04	308.18	5.98E+03
	82	3830-	3857	3842.83	666.37	1.67E+03	150.06	4.63E+03
	83	4016-	4044	4028.51	698.57	1.41E+03	97.65	1.30E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-116-GAM3
Peak Analysis Performed on: 2-06-96 8:51:09 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.46	4.49E+03	477.03	4.00E+01	3.04E+01	4.45E+03	4.78E+02
m	2	6.35	5.77E+03	484.96	4.00E+01	3.04E+01	5.73E+03	4.86E+02
	3	8.07	-6.20E+02	123.75			-6.20E+02	1.24E+02
M	4	10.92	2.21E+04	2126.32	1.57E+02	3.08E+01	2.20E+04	2.13E+03
m	5	12.55	1.43E+04	2229.64			1.43E+04	2.23E+03
m	6	13.13	5.57E+04	2622.40			5.57E+04	2.62E+03
M	7	15.43	3.74E+04	2866.55			3.74E+04	2.87E+03
m	8	16.23	6.19E+04	3473.82			6.19E+04	3.47E+03
m	9	16.84	1.94E+04	2511.44			1.94E+04	2.51E+03
m	10	17.93	7.67E+03	1730.36			7.67E+03	1.73E+03
m	11	19.05	1.61E+04	2202.20	-1.92E-01	1.63E+01	1.61E+04	2.20E+03
m	12	19.69	9.42E+03	2030.50	-1.92E-01	1.63E+01	9.42E+03	2.03E+03
m	13	20.27	4.16E+03	1753.43	-1.92E-01	1.63E+01	4.16E+03	1.75E+03
m	14	20.97	1.27E+03	1356.62			1.27E+03	1.36E+03
M	15	25.75	7.63E+03	214.09			7.63E+03	2.14E+02
[illegible]	16	27.48	6.20E+03	181.26	-1.27E+01	1.34E+01	6.22E+03	1.82E+02
[illegible]	17	36.72	1.12E+03	195.51			1.12E+03	1.96E+02
	18	39.26	-1.22E+02	125.39			-1.22E+02	1.25E+02
	19	46.65	8.16E+04	360.94	1.16E+01	3.50E+01	8.16E+04	3.63E+02
	20	50.23	7.63E+03	218.34	-1.20E+01	1.73E+01	7.65E+03	2.19E+02
	21	53.34	1.78E+04	252.87			1.78E+04	2.53E+02
	22	63.40	6.92E+04	362.64	7.25E+01	2.49E+01	6.91E+04	3.64E+02
	23	67.77	8.11E+03	264.21			8.11E+03	2.64E+02
M	24	73.01	1.56E+03	598.41			1.56E+03	5.98E+02
m	25	74.95	1.02E+05	1719.43	4.70E+01	1.89E+01	1.02E+05	1.72E+03
m	26	77.23	1.82E+05	1929.65	6.88E+01	2.55E+01	1.82E+05	1.93E+03
m	27	79.46	1.56E+04	856.37			1.56E+04	8.56E+02
m	28	81.21	1.53E+04	857.54			1.53E+04	8.58E+02
M	29	83.98	3.21E+04	2164.70	-3.10E+01	1.96E+01	3.22E+04	2.16E+03
m	30	87.04	2.01E+04	7451.59			2.01E+04	7.45E+03
m	31	87.50	4.22E+04	6704.49			4.22E+04	6.70E+03
m	32	90.01	2.59E+04	1853.49			2.59E+04	1.85E+03
m	33	92.72	9.26E+04	4946.47	2.61E+02	4.01E+01	9.24E+04	4.95E+03
m	34	94.83	1.17E+04	1174.46	2.42E+01	1.36E+01	1.17E+04	1.17E+03
m	35	97.67	2.41E+03	882.61			2.41E+03	8.83E+02
m	36	98.55	6.51E+03	1055.55			6.51E+03	1.06E+03
m	37	100.12	1.01E+03	706.34			1.01E+03	7.06E+02
	38	105.83	7.08E+02	228.52			7.08E+02	2.29E+02
M	39	109.22	1.46E+03	180.68	9.22E+01	2.46E+01	1.37E+03	1.82E+02
m	40	111.39	1.06E+03	167.40			1.06E+03	1.67E+02
m	41	112.97	4.78E+03	353.94			4.78E+03	3.54E+02
[illegible]	42	121.09	4.61E+02	111.17	6.68E+00	2.29E+01	4.54E+02	1.14E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	122.51	9.27E+02	188.31			9.27E+02	1.88E+02
	44	130.56	1.07E+03	199.72			1.07E+03	2.00E+02
	45	144.03	9.54E+03	244.65	4.83E+01	2.07E+01	9.49E+03	2.46E+02
	46	154.41	3.64E+03	202.42			3.64E+03	2.02E+02
	47	163.56	2.62E+03	177.69			2.62E+03	1.78E+02
	48	186.27	6.33E+04	339.41	1.65E+02	2.92E+01	6.31E+04	3.41E+02
	49	196.54	6.06E+01	166.27	5.02E+01	2.63E+01	1.04E+01	1.68E+02
M	50	202.35	7.65E+02	140.91			7.65E+02	1.41E+02
m	51	205.61	2.85E+03	332.00	-8.75E+00	2.28E+01	2.86E+03	3.33E+02
	52	221.72	-2.56E+02	135.42			-2.56E+02	1.35E+02
M	53	236.30	3.41E+03	106.99			3.41E+03	1.07E+02
m	54	238.96	1.17E+03	85.50	7.88E+01	2.53E+01	1.09E+03	8.92E+01
m	55	242.32	4.52E+04	503.25			4.52E+04	5.03E+02
M	56	256.62	1.81E+03	129.06			1.81E+03	1.29E+02
m	57	259.19	2.83E+03	185.33	1.45E+01	2.66E+01	2.82E+03	1.87E+02
M	58	269.82	3.77E+03	212.98			3.77E+03	2.13E+02
m	59	271.60	2.99E+03	181.38			2.99E+03	1.81E+02
m	60	275.14	1.67E+03	132.55			1.67E+03	1.33E+02
M	61	284.04	1.30E+02	64.82			1.30E+02	6.48E+01
m	62	286.47	4.94E+02	201.05			4.94E+02	2.01E+02
	63	295.65	8.97E+04	348.09	1.05E+01	4.02E+01	8.97E+04	3.50E+02
M	64	300.48	9.06E+02	216.74			9.06E+02	2.17E+02
m	65	303.00	3.45E+02	94.00			3.45E+02	9.40E+01
	66	305.00	2.76E+02	81.06			2.76E+02	8.11E+01
	67	324.37	1.15E+03	179.51	-2.18E+01	1.99E+01	1.17E+03	1.81E+02
	68	330.38	9.13E+02	148.84	-2.16E+01	3.90E+01	9.34E+02	1.54E+02
	69	338.73	4.56E+02	149.94			4.56E+02	1.50E+02
	70	352.43	1.34E+05	422.14	8.80E+01	2.36E+01	1.34E+05	4.23E+02
M	71	387.37	9.28E+02	122.64			9.28E+02	1.23E+02
m	72	389.54	1.22E+03	153.12			1.22E+03	1.53E+02
M	73	402.38	9.87E+02	188.81			9.87E+02	1.89E+02
m	74	405.64	6.64E+02	133.81			6.64E+02	1.34E+02
	75	445.68	8.25E+01	139.75			8.25E+01	1.40E+02
	76	455.40	9.26E+02	171.91			9.26E+02	1.72E+02
	77	481.22	6.41E+02	168.91			6.41E+02	1.69E+02
	78	487.84	8.44E+02	158.68			8.44E+02	1.59E+02
	79	534.59	5.49E+02	135.48			5.49E+02	1.35E+02
	80	581.07	3.46E+02	137.54			3.46E+02	1.38E+02
	81	610.24	6.72E+04	308.18	4.28E+01	1.95E+01	6.72E+04	3.09E+02
	82	666.37	1.67E+03	150.06			1.67E+03	1.50E+02
	83	698.57	1.41E+03	97.65	4.50E+01	1.05E+01	1.36E+03	9.82E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-116-GAM3
Peak Analysis Performed on: 2-06-96 8:51:09 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.46	4.49E+03	477.03	4.00E+01	3.04E+01	4.45E+03	4.78E+02
m	2	6.35	5.77E+03	484.96	4.00E+01	3.04E+01	5.73E+03	4.86E+02
	3	8.07	-6.20E+02	123.75			-6.20E+02	1.24E+02
M	4	10.92	2.21E+04	2126.32	1.57E+02	3.08E+01	2.20E+04	2.13E+03
m	5	12.55	1.43E+04	2229.64			1.43E+04	2.23E+03
m	6	13.13	5.57E+04	2622.40			5.57E+04	2.62E+03
M	7	15.43	3.74E+04	2866.55			3.74E+04	2.87E+03
m	8	16.23	6.19E+04	3473.82			6.19E+04	3.47E+03
m	9	16.84	1.94E+04	2511.44			1.94E+04	2.51E+03
	10	17.93	7.67E+03	1730.36			7.67E+03	1.73E+03
m	11	19.05	1.61E+04	2202.20	-1.92E-01	1.63E+01	1.61E+04	2.20E+03
m	12	19.69	9.42E+03	2030.50	-1.92E-01	1.63E+01	9.42E+03	2.03E+03
m	13	20.27	4.16E+03	1753.43	-1.92E-01	1.63E+01	4.16E+03	1.75E+03
m	14	20.97	1.27E+03	1356.62			1.27E+03	1.36E+03
M	15	25.75	7.63E+03	214.09			7.63E+03	2.14E+02
m	16	27.48	6.20E+03	181.26	-1.27E+01	1.34E+01	6.22E+03	1.82E+02
	17	36.72	1.12E+03	195.51			1.12E+03	1.96E+02
	18	39.26	-1.22E+02	125.39			-1.22E+02	1.25E+02
	19	46.65	8.16E+04	360.94	1.16E+01	3.50E+01	8.16E+04	3.63E+02
	20	50.23	7.63E+03	218.34	-1.20E+01	1.73E+01	7.65E+03	2.19E+02
	21	53.34	1.78E+04	252.87			1.78E+04	2.53E+02
	22	63.40	6.92E+04	362.64	7.25E+01	2.49E+01	6.91E+04	3.64E+02
	23	67.77	8.11E+03	264.21			8.11E+03	2.64E+02
M	24	73.01	1.56E+03	598.41			1.56E+03	5.98E+02
m	25	74.95	1.02E+05	1719.43	4.70E+01	1.89E+01	1.02E+05	1.72E+03
m	26	77.23	1.82E+05	1929.65	6.88E+01	2.55E+01	1.82E+05	1.93E+03
m	27	79.46	1.56E+04	856.37			1.56E+04	8.56E+02
m	28	81.21	1.53E+04	857.54			1.53E+04	8.58E+02
M	29	83.98	3.21E+04	2164.70	-3.10E+01	1.96E+01	3.22E+04	2.16E+03
m	30	87.04	2.01E+04	7451.59			2.01E+04	7.45E+03
m	31	87.50	4.22E+04	6704.49			4.22E+04	6.70E+03
m	32	90.01	2.59E+04	1853.49			2.59E+04	1.85E+03
m	33	92.72	9.26E+04	4946.47	2.61E+02	4.01E+01	9.24E+04	4.95E+03
m	34	94.83	1.17E+04	1174.46	2.42E+01	1.36E+01	1.17E+04	1.17E+03
m	35	97.67	2.41E+03	882.61			2.41E+03	8.83E+02
	36	98.55	6.51E+03	1055.55			6.51E+03	1.06E+03
m	37	100.12	1.01E+03	706.34			1.01E+03	7.06E+02
	38	105.83	7.08E+02	228.52			7.08E+02	2.29E+02
M	39	109.22	1.46E+03	180.68	9.22E+01	2.46E+01	1.37E+03	1.82E+02
m	40	111.39	1.06E+03	167.40			1.06E+03	1.67E+02

m 41	112.97	4.78E+03	353.94			4.78E+03	3.54E+02
M 42	121.09	4.61E+02	111.17	6.68E+00	2.29E+01	4.54E+02	1.14E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	122.51	9.27E+02	188.31			9.27E+02	1.88E+02
	44	130.56	1.07E+03	199.72			1.07E+03	2.00E+02
	45	144.03	9.54E+03	244.65	4.83E+01	2.07E+01	9.49E+03	2.46E+02
	46	154.41	3.64E+03	202.42			3.64E+03	2.02E+02
	47	163.56	2.62E+03	177.69			2.62E+03	1.78E+02
	48	186.27	6.33E+04	339.41	1.65E+02	2.92E+01	6.31E+04	3.41E+02
	49	196.54	6.06E+01	166.27	5.02E+01	2.63E+01	1.04E+01	1.68E+02
M	50	202.35	7.65E+02	140.91			7.65E+02	1.41E+02
m	51	205.61	2.85E+03	332.00	-8.75E+00	2.28E+01	2.86E+03	3.33E+02
	52	221.72	-2.56E+02	135.42			-2.56E+02	1.35E+02
M	53	236.30	3.41E+03	106.99			3.41E+03	1.07E+02
m	54	238.96	1.17E+03	85.50	7.88E+01	2.53E+01	1.09E+03	8.92E+01
m	55	242.32	4.52E+04	503.25			4.52E+04	5.03E+02
M	56	256.62	1.81E+03	129.06			1.81E+03	1.29E+02
m	57	259.19	2.83E+03	185.33	1.45E+01	2.66E+01	2.82E+03	1.87E+02
M	58	269.82	3.77E+03	212.98			3.77E+03	2.13E+02
m	59	271.60	2.99E+03	181.38			2.99E+03	1.81E+02
m	60	275.14	1.67E+03	132.55			1.67E+03	1.33E+02
M	61	284.04	1.30E+02	64.82			1.30E+02	6.48E+01
m	62	286.47	4.94E+02	201.05			4.94E+02	2.01E+02
	63	295.65	8.97E+04	348.09	1.05E+01	4.02E+01	8.97E+04	3.50E+02
M	64	300.48	9.06E+02	216.74			9.06E+02	2.17E+02
m	65	303.00	3.45E+02	94.00			3.45E+02	9.40E+01
	66	305.00	2.76E+02	81.06			2.76E+02	8.11E+01
	67	324.37	1.15E+03	179.51	-2.18E+01	1.99E+01	1.17E+03	1.81E+02
	68	330.38	9.13E+02	148.84	-2.16E+01	3.90E+01	9.34E+02	1.54E+02
	69	338.73	4.56E+02	149.94			4.56E+02	1.50E+02
	70	352.43	1.34E+05	422.14	8.80E+01	2.36E+01	1.34E+05	4.23E+02
M	71	387.37	9.28E+02	122.64			9.28E+02	1.23E+02
m	72	389.54	1.22E+03	153.12			1.22E+03	1.53E+02
M	73	402.38	9.87E+02	188.81			9.87E+02	1.89E+02
m	74	405.64	6.64E+02	133.81			6.64E+02	1.34E+02
	75	445.68	8.25E+01	139.75			8.25E+01	1.40E+02
	76	455.40	9.26E+02	171.91			9.26E+02	1.72E+02
	77	481.22	6.41E+02	168.91			6.41E+02	1.69E+02
	78	487.84	8.44E+02	158.68			8.44E+02	1.59E+02
	79	534.59	5.49E+02	135.48			5.49E+02	1.35E+02
	80	581.07	3.46E+02	137.54			3.46E+02	1.38E+02
	81	610.24	6.72E+04	308.18	4.28E+01	1.95E+01	6.72E+04	3.09E+02
	82	666.37	1.67E+03	150.06			1.67E+03	1.50E+02
	83	698.57	1.41E+03	97.65	4.50E+01	1.05E+01	1.36E+03	9.82E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  2-07-96  9:24:26 AM

Sample Title                     : NOPI-117-GAM3
Spectrum Description             : NOPI-117-GAM3
Sample Identification            : NP117
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-06-96  8:50:12 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80036.8 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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$-0.015\log x + 1.035$

$0.037\log x + 0.922$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-117-GAM3
Peak Locate Performed on: 2-07-96 9:23:43 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.38	0.1016	6.40	5.82
2	63.47	0.0270	10.92	17.95
3	76.06	0.0562	13.11	18.60
4	88.75	0.0608	15.43	12.70
5	94.42	0.0264	16.24	20.31
6	98.00	<NA>	16.83	<NA>
7	103.86	0.1145	17.94	8.54
8	110.43	0.0479	19.09	11.13
9	114.15	0.1594	19.73	6.03
10	148.84	0.0615	25.74	16.57
11	158.78	0.0669	27.47	15.57
12	212.17	0.2212	36.71	5.17
13	269.50	0.0174	46.65	81.01
14	290.09	0.0600	50.22	15.42
15	308.07	0.0234	53.34	38.11
16	366.10	0.0108	63.41	78.25
17	391.34	0.0752	67.78	18.15
18	420.78	0.4450	72.99	3.47
19	432.69	0.0116	74.95	101.23
20	445.92	0.0095	77.24	139.23
21	458.56	0.0372	79.46	29.52
22	468.91	0.0423	81.22	31.16
23	484.59	0.0293	83.98	36.58
24	494.12	0.2446	85.77	3.79
25	504.60	0.0378	87.37	41.74
26	519.43	0.0314	90.01	34.04
27	535.03	0.0230	92.73	51.22
28	547.94	0.1013	94.87	15.19
29	568.86	0.1066	98.57	12.33
30	652.12	0.0829	113.01	14.69
31	707.19	0.5262	122.56	3.25
32	745.59	0.3289	129.17	3.03
33	752.91	0.3158	130.44	4.27
34	831.07	0.0678	144.05	19.74
35	891.18	0.1149	154.47	12.50
36	915.44	0.3678	158.68	3.01
37	944.20	0.1318	163.67	11.01
38	1074.95	0.0252	186.34	60.59
39	1186.03	0.1286	205.61	10.89
40	1363.14	0.0871	236.33	13.62
41	1378.52	0.1023	238.99	14.84

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1397.91	0.0150	242.34	76.87
43	1480.53	0.1777	256.65	9.03
44	1495.16	0.1392	259.22	11.11
45	1556.45	0.1277	269.87	12.18
46	1566.58	0.1238	271.55	10.53
47	1587.94	0.2250	275.21	6.98
48	1652.00	0.2611	286.42	5.87
49	1705.29	0.0130	295.66	106.69
50	1733.53	0.2533	300.55	5.64
51	1748.09	0.4276	303.14	3.34
52	1759.08	0.4521	305.01	3.09
53	1817.33	0.4260	315.09	3.41
54	1871.14	0.2707	324.42	4.98
55	1905.87	0.3363	330.45	4.43
56	1953.86	0.3432	338.77	4.86
57	2032.76	0.0125	352.45	129.82
58	2234.07	0.2182	387.43	5.17
59	2246.79	0.3242	389.49	4.97
60	2321.38	0.3574	402.51	4.51
61	2627.02	0.3556	455.51	4.86
62	2741.07	0.3300	475.29	3.45
63	2774.42	0.3165	481.08	5.24
64	2812.34	0.3011	487.65	6.12
65	3350.72	0.3594	580.94	4.57
66	3367.86	0.5695	584.10	3.64
67	3519.36	0.0217	610.27	84.31
68	3843.16	0.1803	666.43	10.30
69	4027.57	0.6286	698.41	8.10

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-117-GAM3
Peak Analysis Performed on: 2-07-96 9:24:01 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.38	6.40	1.36E+03	99.66	5.12E+03
	2	60-	66	63.47	10.92	9.07E+03	148.97	6.94E+03
	3	73-	79	76.06	13.11	2.39E+04	204.18	9.43E+03
M	4	84-	118	89.48	15.43	1.46E+04	1054.41	1.12E+04
m	5	84-	118	94.12	16.24	2.05E+04	1219.99	1.14E+04
m	6	84-	118	97.51	16.83	6.23E+03	900.40	9.79E+03
m	7	84-	118	103.94	17.94	2.64E+03	648.00	1.02E+04
m	8	84-	118	110.58	19.09	5.58E+03	768.22	9.69E+03
m	9	84-	118	114.25	19.73	3.20E+03	669.57	8.64E+03
M	10	144-	163	148.90	25.74	2.55E+03	145.00	5.60E+03
m	11	144-	163	158.87	27.47	2.32E+03	136.07	5.39E+03
	12	208-	217	212.17	36.71	4.49E+02	120.36	6.20E+03
	13	263-	274	269.50	46.65	3.57E+04	234.15	7.61E+03
	14	284-	294	290.09	50.22	2.76E+03	135.04	6.49E+03
	15	302-	314	308.07	53.34	8.01E+03	167.46	7.61E+03
	16	359-	372	366.10	63.41	2.40E+04	226.57	9.96E+03
	17	384-	398	391.34	67.78	3.17E+03	184.81	1.08E+04
M	18	416-	474	421.36	72.99	7.05E+02	297.42	8.07E+03
m	19	416-	474	432.67	74.95	4.82E+04	891.84	7.79E+03
m	20	416-	474	445.83	77.24	8.49E+04	1013.83	7.19E+03
m	21	416-	474	458.64	79.46	7.07E+03	428.00	7.42E+03
m	22	416-	474	468.82	81.22	5.89E+03	408.43	6.70E+03
M	23	477-	554	484.72	83.98	1.27E+04	755.48	8.71E+03
m	24	477-	554	495.02	85.77	7.73E+02	425.94	8.55E+03
m	25	477-	554	504.29	87.37	2.81E+04	989.68	8.29E+03
m	26	477-	554	519.50	90.01	1.21E+04	726.12	8.44E+03
m	27	477-	554	535.18	92.73	3.24E+04	1050.83	7.52E+03
m	28	477-	554	547.49	94.87	4.20E+03	524.92	7.21E+03
	29	561-	573	568.86	98.57	2.46E+03	135.99	6.08E+03
	30	647-	657	652.12	113.01	1.24E+03	116.10	5.14E+03
	31	702-	712	707.19	122.56	2.45E+02	105.63	4.58E+03
M	32	737-	757	745.29	129.17	1.36E+02	72.70	0.00E+00
m	33	737-	757	752.61	130.44	2.04E+02	109.15	0.00E+00
	34	823-	839	831.07	144.05	3.64E+03	159.93	7.00E+03
	35	885-	898	891.18	154.47	1.40E+03	135.78	6.16E+03
	36	910-	920	915.44	158.68	-2.62E+01	104.77	4.62E+03
	37	939-	952	944.20	163.67	1.09E+03	126.17	5.36E+03
	38	1065-	1083	1074.95	186.34	2.63E+04	222.96	6.94E+03
	39	1176-	1193	1186.03	205.61	8.55E+02	136.89	5.50E+03
M	40	1355-	1407	1363.18	236.33	1.38E+03	70.39	3.52E+03
m	41	1355-	1407	1378.52	238.99	1.61E+03	72.38	3.67E+03
m	42	1355-	1407	1397.85	242.34	2.16E+04	324.11	3.18E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	43	1470-	1505	1480.37	256.65	8.00E+02	88.89	3.33E+03
m	44	1470-	1505	1495.16	259.22	1.30E+03	132.44	3.23E+03
M	45	1546-	1597	1556.58	269.87	1.49E+03	132.98	3.37E+03
m	46	1546-	1597	1566.27	271.55	1.16E+03	107.78	3.20E+03
m	47	1546-	1597	1587.40	275.21	7.60E+02	78.63	3.41E+03
	48	1645-	1659	1652.00	286.42	3.29E+02	94.03	2.95E+03
	49	1694-	1715	1705.29	295.66	4.14E+04	236.64	3.90E+03
M	50	1725-	1768	1733.46	300.55	3.81E+02	122.56	2.62E+03
m	51	1725-	1768	1748.45	303.14	1.85E+02	66.44	2.53E+03
m	52	1725-	1768	1759.20	305.01	1.62E+02	60.61	2.47E+03
	53	1809-	1825	1817.33	315.09	1.86E+02	94.37	2.78E+03
	54	1861-	1882	1871.14	324.42	4.65E+02	117.22	3.54E+03
	55	1897-	1913	1905.87	330.45	1.92E+02	95.57	2.85E+03
	56	1945-	1961	1953.86	338.77	3.49E+02	101.47	3.18E+03
	57	2021-	2044	2032.76	352.45	6.13E+04	281.10	4.45E+03
M	58	2225-	2255	2234.42	387.43	3.44E+02	71.96	3.16E+03
m	59	2225-	2255	2246.34	389.49	5.00E+02	98.70	3.14E+03
	60	2312-	2330	2321.38	402.51	1.35E+02	104.10	3.17E+03
	61	2614-	2637	2627.02	455.51	2.08E+02	108.20	2.87E+03
	62	2731-	2754	2741.07	475.29	3.70E+01	103.48	2.66E+03
	63	2764-	2784	2774.42	481.08	4.12E+02	91.27	2.18E+03
	64	2802-	2822	2812.34	487.65	2.94E+02	92.13	2.26E+03
M	65	3336-	3381	3350.22	580.94	3.25E+02	88.76	2.19E+03
[illegible]	66	3336-	3381	3368.43	584.10	3.07E+02	84.34	2.52E+03
[illegible]	67	3504-	3534	3519.36	610.27	3.07E+04	208.99	2.67E+03
	68	3830-	3857	3843.16	666.43	8.85E+02	98.68	1.96E+03
	69	4015-	4043	4027.57	698.41	6.79E+02	64.60	5.92E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-117-GAM3
Peak Analysis Performed on: 2-07-96 9:23:43 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.40	1.36E+03	99.66	4.00E+01	3.04E+01	1.32E+03	1.04E+02
	2	10.92	9.07E+03	148.97	1.57E+02	3.08E+01	8.91E+03	1.52E+02
	3	13.11	2.39E+04	204.18			2.39E+04	2.04E+02
M	4	15.43	1.46E+04	1054.41			1.46E+04	1.05E+03
m	5	16.24	2.05E+04	1219.99			2.05E+04	1.22E+03
m	6	16.83	6.23E+03	900.40			6.23E+03	9.00E+02
m	7	17.94	2.64E+03	648.00			2.64E+03	6.48E+02
m	8	19.09	5.58E+03	768.22	-1.92E-01	1.63E+01	5.58E+03	7.68E+02
m	9	19.73	3.20E+03	669.57	-1.92E-01	1.63E+01	3.20E+03	6.70E+02
M	10	25.74	2.55E+03	145.00			2.55E+03	1.45E+02
m	11	27.47	2.32E+03	136.07	-1.27E+01	1.34E+01	2.34E+03	1.37E+02
	12	36.71	4.49E+02	120.36			4.49E+02	1.20E+02
	13	46.65	3.57E+04	234.15	1.16E+01	3.50E+01	3.57E+04	2.37E+02
	14	50.22	2.76E+03	135.04	-1.20E+01	1.73E+01	2.77E+03	1.36E+02
	15	53.34	8.01E+03	167.46			8.01E+03	1.67E+02
	16	63.41	2.40E+04	226.57	7.25E+01	2.49E+01	2.39E+04	2.28E+02
	17	67.78	3.17E+03	184.81			3.17E+03	1.85E+02
M	18	72.99	7.05E+02	297.42			7.05E+02	2.97E+02
m	19	74.95	4.82E+04	891.84	4.70E+01	1.89E+01	4.81E+04	8.92E+02
m	20	77.24	8.49E+04	1013.83	6.88E+01	2.55E+01	8.48E+04	1.01E+03
m	21	79.46	7.07E+03	428.00			7.07E+03	4.28E+02
m	22	81.22	5.89E+03	408.43			5.89E+03	4.08E+02
M	23	83.98	1.27E+04	755.48	-3.10E+01	1.96E+01	1.27E+04	7.56E+02
m	24	85.77	7.73E+02	425.94			7.73E+02	4.26E+02
m	25	87.37	2.81E+04	989.68			2.81E+04	9.90E+02
m	26	90.01	1.21E+04	726.12			1.21E+04	7.26E+02
m	27	92.73	3.24E+04	1050.83	2.61E+02	4.01E+01	3.22E+04	1.05E+03
m	28	94.87	4.20E+03	524.92	2.42E+01	1.36E+01	4.18E+03	5.25E+02
	29	98.57	2.46E+03	135.99			2.46E+03	1.36E+02
	30	113.01	1.24E+03	116.10			1.24E+03	1.16E+02
	31	122.56	2.45E+02	105.63			2.45E+02	1.06E+02
M	32	129.17	1.36E+02	72.70			1.36E+02	7.27E+01
m	33	130.44	2.04E+02	109.15			2.04E+02	1.09E+02
	34	144.05	3.64E+03	159.93	4.83E+01	2.07E+01	3.59E+03	1.61E+02
	35	154.47	1.40E+03	135.78			1.40E+03	1.36E+02
	36	158.68	-2.62E+01	104.77			-2.62E+01	1.05E+02
	37	163.67	1.09E+03	126.17			1.09E+03	1.26E+02
	38	186.34	2.63E+04	222.96	1.65E+02	2.92E+01	2.61E+04	2.25E+02
	39	205.61	8.55E+02	136.89	-8.75E+00	2.28E+01	8.64E+02	1.39E+02
M	40	236.33	1.38E+03	70.39			1.38E+03	7.04E+01
m	41	238.99	1.61E+03	72.38	7.88E+01	2.53E+01	1.53E+03	7.67E+01
	42	242.34	2.16E+04	324.11			2.16E+04	3.24E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	43	256.65	8.00E+02	88.89			8.00E+02	8.89E+01
m	44	259.22	1.30E+03	132.44	1.45E+01	2.66E+01	1.29E+03	1.35E+02
M	45	269.87	1.49E+03	132.98			1.49E+03	1.33E+02
m	46	271.55	1.16E+03	107.78			1.16E+03	1.08E+02
m	47	275.21	7.60E+02	78.63			7.60E+02	7.86E+01
	48	286.42	3.29E+02	94.03			3.29E+02	9.40E+01
	49	295.66	4.14E+04	236.64	1.05E+01	4.02E+01	4.14E+04	2.40E+02
M	50	300.55	3.81E+02	122.56			3.81E+02	1.23E+02
m	51	303.14	1.85E+02	66.44			1.85E+02	6.64E+01
m	52	305.01	1.62E+02	60.61			1.62E+02	6.06E+01
	53	315.09	1.86E+02	94.37			1.86E+02	9.44E+01
	54	324.42	4.65E+02	117.22	-2.18E+01	1.99E+01	4.87E+02	1.19E+02
	55	330.45	1.92E+02	95.57	-2.16E+01	3.90E+01	2.13E+02	1.03E+02
	56	338.77	3.49E+02	101.47			3.49E+02	1.01E+02
	57	352.45	6.13E+04	281.10	8.80E+01	2.36E+01	6.12E+04	2.82E+02
M	58	387.43	3.44E+02	71.96			3.44E+02	7.20E+01
m	59	389.49	5.00E+02	98.70			5.00E+02	9.87E+01
	60	402.51	1.35E+02	104.10			1.35E+02	1.04E+02
	61	455.51	2.08E+02	108.20			2.08E+02	1.08E+02
	62	475.29	3.70E+01	103.48			3.70E+01	1.03E+02
	63	481.08	4.12E+02	91.27			4.12E+02	9.13E+01
	64	487.65	2.94E+02	92.13			2.94E+02	9.21E+01
M	65	580.94	3.25E+02	88.76			3.25E+02	8.88E+01
	66	584.10	3.07E+02	84.34	2.12E+01	1.69E+01	2.86E+02	8.60E+01
	67	610.27	3.07E+04	208.99	4.28E+01	1.95E+01	3.06E+04	2.10E+02
	68	666.43	8.85E+02	98.68			8.85E+02	9.87E+01
	69	698.41	6.79E+02	64.60	4.50E+01	1.05E+01	6.34E+02	6.54E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-117-GAM3
Peak Analysis Performed on: 2-07-96 9:23:43 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.40	1.36E+03	99.66	4.00E+01	3.04E+01	1.32E+03	1.04E+02
	2	10.92	9.07E+03	148.97	1.57E+02	3.08E+01	8.91E+03	1.52E+02
	3	13.11	2.39E+04	204.18			2.39E+04	2.04E+02
M	4	15.43	1.46E+04	1054.41			1.46E+04	1.05E+03
m	5	16.24	2.05E+04	1219.99			2.05E+04	1.22E+03
m	6	16.83	6.23E+03	900.40			6.23E+03	9.00E+02
m	7	17.94	2.64E+03	648.00			2.64E+03	6.48E+02
m	8	19.09	5.58E+03	768.22	-1.92E-01	1.63E+01	5.58E+03	7.68E+02
m	9	19.73	3.20E+03	669.57	-1.92E-01	1.63E+01	3.20E+03	6.70E+02
[illegible]	10	25.74	2.55E+03	145.00			2.55E+03	1.45E+02
m	11	27.47	2.32E+03	136.07	-1.27E+01	1.34E+01	2.34E+03	1.37E+02
	12	36.71	4.49E+02	120.36			4.49E+02	1.20E+02
	13	46.65	3.57E+04	234.15	1.16E+01	3.50E+01	3.57E+04	2.37E+02
	14	50.22	2.76E+03	135.04	-1.20E+01	1.73E+01	2.77E+03	1.36E+02
	15	53.34	8.01E+03	167.46			8.01E+03	1.67E+02
	16	63.41	2.40E+04	226.57	7.25E+01	2.49E+01	2.39E+04	2.28E+02
	17	67.78	3.17E+03	184.81			3.17E+03	1.85E+02
M	18	72.99	7.05E+02	297.42			7.05E+02	2.97E+02
m	19	74.95	4.82E+04	891.84	4.70E+01	1.89E+01	4.81E+04	8.92E+02
m	20	77.24	8.49E+04	1013.83	6.88E+01	2.55E+01	8.48E+04	1.01E+03
m	21	79.46	7.07E+03	428.00			7.07E+03	4.28E+02
m	22	81.22	5.89E+03	408.43			5.89E+03	4.08E+02
M	23	83.98	1.27E+04	755.48	-3.10E+01	1.96E+01	1.27E+04	7.56E+02
m	24	85.77	7.73E+02	425.94			7.73E+02	4.26E+02
m	25	87.37	2.81E+04	989.68			2.81E+04	9.90E+02
m	26	90.01	1.21E+04	726.12			1.21E+04	7.26E+02
m	27	92.73	3.24E+04	1050.83	2.61E+02	4.01E+01	3.22E+04	1.05E+03
m	28	94.87	4.20E+03	524.92	2.42E+01	1.36E+01	4.18E+03	5.25E+02
	29	98.57	2.46E+03	135.99			2.46E+03	1.36E+02
	30	113.01	1.24E+03	116.10			1.24E+03	1.16E+02
	31	122.56	2.45E+02	105.63			2.45E+02	1.06E+02
M	32	129.17	1.36E+02	72.70			1.36E+02	7.27E+01
m	33	130.44	2.04E+02	109.15			2.04E+02	1.09E+02
	34	144.05	3.64E+03	159.93	4.83E+01	2.07E+01	3.59E+03	1.61E+02
	35	154.47	1.40E+03	135.78			1.40E+03	1.36E+02
[illegible]	36	158.68	-2.62E+01	104.77			-2.62E+01	1.05E+02
	37	163.67	1.09E+03	126.17			1.09E+03	1.26E+02
	38	186.34	2.63E+04	222.96	1.65E+02	2.92E+01	2.61E+04	2.25E+02
	39	205.61	8.55E+02	136.89	-8.75E+00	2.28E+01	8.64E+02	1.39E+02
M	40	236.33	1.38E+03	70.39			1.38E+03	7.04E+01

m 41	238.99	1.61E+03	72.38	7.88E+01	2.53E+01	1.53E+03	7.67E+01
m 42	242.34	2.16E+04	324.11			2.16E+04	3.24E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	43	256.65	8.00E+02	88.89			8.00E+02	8.89E+01
m	44	259.22	1.30E+03	132.44	1.45E+01	2.66E+01	1.29E+03	1.35E+02
M	45	269.87	1.49E+03	132.98			1.49E+03	1.33E+02
m	46	271.55	1.16E+03	107.78			1.16E+03	1.08E+02
m	47	275.21	7.60E+02	78.63			7.60E+02	7.86E+01
	48	286.42	3.29E+02	94.03			3.29E+02	9.40E+01
	49	295.66	4.14E+04	236.64	1.05E+01	4.02E+01	4.14E+04	2.40E+02
M	50	300.55	3.81E+02	122.56			3.81E+02	1.23E+02
m	51	303.14	1.85E+02	66.44			1.85E+02	6.64E+01
m	52	305.01	1.62E+02	60.61			1.62E+02	6.06E+01
	53	315.09	1.86E+02	94.37			1.86E+02	9.44E+01
	54	324.42	4.65E+02	117.22	-2.18E+01	1.99E+01	4.87E+02	1.19E+02
	55	330.45	1.92E+02	95.57	-2.16E+01	3.90E+01	2.13E+02	1.03E+02
	56	338.77	3.49E+02	101.47			3.49E+02	1.01E+02
	57	352.45	6.13E+04	281.10	8.80E+01	2.36E+01	6.12E+04	2.82E+02
M	58	387.43	3.44E+02	71.96			3.44E+02	7.20E+01
m	59	389.49	5.00E+02	98.70			5.00E+02	9.87E+01
	60	402.51	1.35E+02	104.10			1.35E+02	1.04E+02
	61	455.51	2.08E+02	108.20			2.08E+02	1.08E+02
	62	475.29	3.70E+01	103.48			3.70E+01	1.03E+02
	63	481.08	4.12E+02	91.27			4.12E+02	9.13E+01
	64	487.65	2.94E+02	92.13			2.94E+02	9.21E+01
M	65	580.94	3.25E+02	88.76			3.25E+02	8.88E+01
	66	584.10	3.07E+02	84.34	2.12E+01	1.69E+01	2.86E+02	8.60E+01
	67	610.27	3.07E+04	208.99	4.28E+01	1.95E+01	3.06E+04	2.10E+02
	68	666.43	8.85E+02	98.68			8.85E+02	9.87E+01
	69	698.41	6.79E+02	64.60	4.50E+01	1.05E+01	6.34E+02	6.54E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  2-13-96  8:49:09 AM

Sample Title                     : NOPI-118-GAM3
Spectrum Description             : NOPI-118-GAM3
Sample Identification            : NP118
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-12-96 10:03:18 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80027.6 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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$-0.615 \log x + 1.025$

$0.641 \log x + 0.912$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-118-GAM3
Peak Locate Performed on: 2-13-96 8:48:28 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.21	0.1402	6.37	6.05
2	63.46	0.0340	10.92	14.66
3	76.17	0.0710	13.13	14.02
4	88.81	0.0864	15.46	10.08
5	94.54	0.0306	16.25	16.18
6	98.00	0.0000	16.85	3.21
7	103.77	0.3243	17.94	3.75
8	110.42	0.0626	19.07	8.60
9	114.00	<NA>	19.75	<NA>
10	149.08	0.0807	25.78	12.04
11	159.13	0.1036	27.51	8.86
12	212.58	0.1248	36.78	4.34
13	269.68	0.0145	46.69	66.77
14	290.05	0.0932	50.22	8.71
15	308.22	0.0295	53.37	30.50
16	316.31	0.2099	54.78	3.22
17	366.23	0.0232	63.44	58.82
18	376.12	0.3332	65.20	3.15
19	391.54	0.0994	67.82	11.51
20	432.92	0.0144	74.98	91.50
21	446.04	0.0064	77.27	121.80
22	458.85	0.0458	79.49	28.34
23	469.04	0.0315	81.26	25.00
24	484.82	0.0409	84.00	29.32
25	504.69	0.0449	87.41	35.03
26	519.55	0.0353	90.05	29.61
27	535.26	0.0311	92.78	39.68
28	548.11	0.1247	94.92	11.77
29	569.08	0.1383	98.61	9.67
30	652.32	0.1122	113.05	9.39
31	752.89	0.2486	130.49	3.29
32	831.24	0.0962	144.08	14.62
33	891.27	0.1465	154.49	8.82
34	943.98	0.2288	163.63	5.74
35	1075.57	0.0274	186.45	54.58
36	1186.94	0.2019	205.76	5.55
37	1363.74	0.1667	236.43	9.23
38	1378.96	0.0754	239.07	14.86
39	1398.44	0.0230	242.44	63.71
40	1480.99	0.1827	256.75	6.59
41	1495.77	0.1401	259.34	11.02

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1557.15	0.1272	269.99	9.04
43	1567.59	0.1550	271.73	8.31
44	1587.50	0.2596	275.19	5.67
45	1705.98	0.0189	295.78	94.17
46	1733.69	0.3921	300.59	4.35
47	1870.97	0.3661	324.39	3.39
48	1905.74	0.4468	330.42	3.51
49	1954.81	0.2749	338.93	5.41
50	2033.59	0.0113	352.60	111.07
51	2234.98	0.2994	387.65	4.16
52	2247.04	0.3420	389.46	4.67
53	2321.02	0.4497	402.45	3.62
54	2389.07	0.5744	414.25	3.01
55	2576.53	0.4412	446.76	3.14
56	2628.09	0.5211	455.70	3.47
57	2714.03	0.4785	470.60	3.16
58	2777.44	0.5390	481.60	3.03
59	2814.64	0.5231	488.05	3.13
60	3369.11	0.5362	584.21	3.52
61	3491.90	0.4910	605.56	3.38
62	3520.70	0.0247	610.53	72.52
63	3844.61	0.2306	666.68	8.25
64	4029.34	0.2811	698.72	7.10

Errors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-118-GAM3
Peak Analysis Performed on: 2-13-96 8:48:42 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.21	6.37	7.35E+02	83.56	3.76E+03
	2	60-	66	63.46	10.92	6.05E+03	123.70	4.90E+03
	3	73-	79	76.17	13.13	1.56E+04	166.74	6.46E+03
M	4	84-	118	89.66	15.46	9.21E+03	830.53	7.92E+03
m	5	84-	118	94.20	16.25	1.34E+04	953.72	8.05E+03
m	6	84-	118	97.63	16.85	4.02E+03	699.37	6.92E+03
m	7	84-	118	103.92	17.94	1.46E+03	509.44	7.19E+03
m	8	84-	118	110.47	19.07	3.50E+03	629.14	6.22E+03
m	9	84-	118	114.35	19.75	2.11E+03	549.38	6.06E+03
M	10	145-	163	149.15	25.78	1.39E+03	122.69	4.65E+03
m	11	145-	163	159.10	27.51	1.23E+03	113.38	4.48E+03
	12	207-	218	212.58	36.78	4.01E+02	118.20	5.40E+03
	13	264-	275	269.68	46.69	2.15E+04	187.58	5.49E+03
	14	284-	296	290.05	50.22	1.57E+03	126.90	5.50E+03
M	15	302-	319	308.24	53.37	5.89E+03	184.58	3.88E+03
m	16	302-	319	316.38	54.78	7.84E+01	59.28	3.34E+03
M	17	359-	379	366.31	63.44	1.48E+04	249.68	5.33E+03
m	18	359-	379	376.45	65.20	7.67E+01	80.33	4.21E+03
	19	385-	396	391.54	67.82	1.69E+03	132.31	6.32E+03
M	20	425-	476	432.86	74.98	3.66E+04	554.91	6.23E+03
m	21	425-	476	446.05	77.27	6.48E+04	647.03	5.62E+03
m	22	425-	476	458.84	79.49	5.08E+03	257.33	5.22E+03
m	23	425-	476	469.06	81.26	3.81E+03	237.95	5.12E+03
	24	477-	491	484.82	84.00	7.19E+03	164.11	6.87E+03
M	25	497-	555	504.48	87.41	2.09E+04	608.85	7.18E+03
m	26	497-	555	519.71	90.05	9.18E+03	457.56	6.59E+03
m	27	497-	555	535.47	92.78	2.00E+04	604.50	5.99E+03
m	28	497-	555	547.79	94.92	2.72E+03	315.69	5.57E+03
	29	562-	574	569.08	98.61	1.50E+03	114.91	4.43E+03
	30	648-	657	652.32	113.05	7.70E+02	92.04	3.41E+03
	31	745-	757	752.89	130.49	7.17E+01	104.95	4.16E+03
	32	825-	838	831.24	144.08	2.16E+03	119.43	4.39E+03
	33	886-	898	891.27	154.49	8.72E+02	109.80	4.24E+03
	34	936-	949	943.98	163.63	4.96E+02	108.10	4.06E+03
	35	1066-	1084	1075.57	186.45	1.92E+04	190.93	5.12E+03
	36	1180-	1196	1186.94	205.76	6.90E+02	109.12	3.58E+03
M	37	1356-	1408	1363.76	236.43	7.52E+02	49.67	2.66E+03
m	38	1356-	1408	1378.98	239.07	1.51E+03	59.66	2.59E+03
	39	1356-	1408	1398.42	242.44	1.60E+04	277.04	2.52E+03
M	40	1470-	1503	1480.95	256.75	3.98E+02	62.23	2.26E+03
m	41	1470-	1503	1495.84	259.34	9.66E+02	125.05	2.24E+03
M	42	1546-	1596	1557.28	269.99	9.98E+02	107.01	2.43E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1546-	1596	1567.30	271.73	7.72E+02	87.74	2.47E+03
m	44	1546-	1596	1587.24	275.19	6.41E+02	76.91	2.55E+03
	45	1696-	1715	1705.98	295.78	3.15E+04	203.16	2.78E+03
	46	1725-	1743	1733.69	300.59	1.98E+02	92.75	2.49E+03
	47	1859-	1880	1870.97	324.39	3.58E+02	100.35	2.58E+03
	48	1897-	1913	1905.74	330.42	1.46E+02	81.94	2.10E+03
	49	1945-	1963	1954.81	338.93	2.98E+02	94.49	2.55E+03
	50	2022-	2045	2033.59	352.60	4.70E+04	245.38	3.32E+03
M	51	2223-	2258	2235.69	387.65	4.02E+02	72.67	2.69E+03
m	52	2223-	2258	2246.16	389.46	5.43E+02	92.86	2.71E+03
	53	2312-	2330	2321.02	402.45	2.88E+02	89.56	2.29E+03
	54	2380-	2399	2389.07	414.25	4.31E+01	94.05	2.51E+03
	55	2564-	2587	2576.53	446.76	1.40E+02	91.90	2.07E+03
	56	2618-	2638	2628.09	455.70	1.97E+02	82.67	1.83E+03
	57	2704-	2724	2714.03	470.60	-4.63E+01	81.11	1.82E+03
	58	2767-	2788	2777.44	481.60	2.88E+02	81.31	1.69E+03
	59	2803-	2824	2814.64	488.05	2.92E+02	80.32	1.64E+03
	60	3358-	3380	3369.11	584.21	1.97E+02	79.95	1.60E+03
M	61	3480-	3532	3492.19	605.56	1.05E+02	78.73	1.84E+03
m	62	3480-	3532	3520.85	610.53	2.33E+04	254.39	2.04E+03
	63	3832-	3856	3844.61	666.68	6.54E+02	76.85	1.27E+03
	64	4017-	4045	4029.34	698.72	4.77E+02	55.24	3.79E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-118-GAM3
Peak Analysis Performed on: 2-13-96 8:48:28 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.37	7.35E+02	83.56	4.00E+01	3.04E+01	6.95E+02	8.89E+01
	2	10.92	6.05E+03	123.70	1.57E+02	3.08E+01	5.90E+03	1.27E+02
	3	13.13	1.56E+04	166.74			1.56E+04	1.67E+02
M	4	15.46	9.21E+03	830.53			9.21E+03	8.31E+02
m	5	16.25	1.34E+04	953.72			1.34E+04	9.54E+02
m	6	16.85	4.02E+03	699.37			4.02E+03	6.99E+02
m	7	17.94	1.46E+03	509.44			1.46E+03	5.09E+02
m	8	19.07	3.50E+03	629.14	-1.92E-01	1.63E+01	3.50E+03	6.29E+02
m	9	19.75	2.11E+03	549.38	-1.92E-01	1.63E+01	2.11E+03	5.50E+02
M	10	25.78	1.39E+03	122.69			1.39E+03	1.23E+02
m	11	27.51	1.23E+03	113.38	-1.27E+01	1.34E+01	1.24E+03	1.14E+02
	12	36.78	4.01E+02	118.20			4.01E+02	1.18E+02
	13	46.69	2.15E+04	187.58	1.16E+01	3.50E+01	2.14E+04	1.91E+02
	14	50.22	1.57E+03	126.90	-1.20E+01	1.73E+01	1.58E+03	1.28E+02
M	15	53.37	5.89E+03	184.58			5.89E+03	1.85E+02
[illegible]	16	54.78	7.84E+01	59.28			7.84E+01	5.93E+01
M	17	63.44	1.48E+04	249.68	7.25E+01	2.49E+01	1.48E+04	2.51E+02
m	18	65.20	7.67E+01	80.33			7.67E+01	8.03E+01
	19	67.82	1.69E+03	132.31			1.69E+03	1.32E+02
M	20	74.98	3.66E+04	554.91	4.70E+01	1.89E+01	3.65E+04	5.55E+02
m	21	77.27	6.48E+04	647.03	6.88E+01	2.55E+01	6.48E+04	6.48E+02
m	22	79.49	5.08E+03	257.33			5.08E+03	2.57E+02
m	23	81.26	3.81E+03	237.95			3.81E+03	2.38E+02
	24	84.00	7.19E+03	164.11	-3.10E+01	1.96E+01	7.22E+03	1.65E+02
M	25	87.41	2.09E+04	608.85			2.09E+04	6.09E+02
m	26	90.05	9.18E+03	457.56			9.18E+03	4.58E+02
m	27	92.78	2.00E+04	604.50	2.61E+02	4.01E+01	1.98E+04	6.06E+02
m	28	94.92	2.72E+03	315.69	2.42E+01	1.36E+01	2.70E+03	3.16E+02
	29	98.61	1.50E+03	114.91			1.50E+03	1.15E+02
	30	113.05	7.70E+02	92.04			7.70E+02	9.20E+01
	31	130.49	7.17E+01	104.95			7.17E+01	1.05E+02
	32	144.08	2.16E+03	119.43	4.83E+01	2.07E+01	2.11E+03	1.21E+02
	33	154.49	8.72E+02	109.80			8.72E+02	1.10E+02
	34	163.63	4.96E+02	108.10			4.96E+02	1.08E+02
	35	186.45	1.92E+04	190.93	1.65E+02	2.92E+01	1.90E+04	1.93E+02
	36	205.76	6.90E+02	109.12	-8.75E+00	2.28E+01	6.98E+02	1.11E+02
M	37	236.43	7.52E+02	49.67			7.52E+02	4.97E+01
m	38	239.07	1.51E+03	59.66	7.88E+01	2.53E+01	1.43E+03	6.48E+01
m	39	242.44	1.60E+04	277.04			1.60E+04	2.77E+02
M	40	256.75	3.98E+02	62.23			3.98E+02	6.22E+01
m	41	259.34	9.66E+02	125.05	1.45E+01	2.66E+01	9.52E+02	1.28E+02
[illegible]	42	269.99	9.98E+02	107.01			9.98E+02	1.07E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	271.73	7.72E+02	87.74			7.72E+02	8.77E+01
m	44	275.19	6.41E+02	76.91			6.41E+02	7.69E+01
	45	295.78	3.15E+04	203.16	1.05E+01	4.02E+01	3.15E+04	2.07E+02
	46	300.59	1.98E+02	92.75			1.98E+02	9.27E+01
	47	324.39	3.58E+02	100.35	-2.18E+01	1.99E+01	3.80E+02	1.02E+02
	48	330.42	1.46E+02	81.94	-2.16E+01	3.90E+01	1.68E+02	9.08E+01
	49	338.93	2.98E+02	94.49			2.98E+02	9.45E+01
	50	352.60	4.70E+04	245.38	8.80E+01	2.36E+01	4.69E+04	2.47E+02
M	51	387.65	4.02E+02	72.67			4.02E+02	7.27E+01
m	52	389.46	5.43E+02	92.86			5.43E+02	9.29E+01
	53	402.45	2.88E+02	89.56			2.88E+02	8.96E+01
	54	414.25	4.31E+01	94.05			4.31E+01	9.40E+01
	55	446.76	1.40E+02	91.90			1.40E+02	9.19E+01
	56	455.70	1.97E+02	82.67			1.97E+02	8.27E+01
	57	470.60	-4.63E+01	81.11			-4.63E+01	8.11E+01
	58	481.60	2.88E+02	81.31			2.88E+02	8.13E+01
	59	488.05	2.92E+02	80.32			2.92E+02	8.03E+01
	60	584.21	1.97E+02	79.95	2.12E+01	1.69E+01	1.76E+02	8.17E+01
M	61	605.56	1.05E+02	78.73			1.05E+02	7.87E+01
m	62	610.53	2.33E+04	254.39	4.28E+01	1.95E+01	2.32E+04	2.55E+02
	63	666.68	6.54E+02	76.85			6.54E+02	7.68E+01
	64	698.72	4.77E+02	55.24	4.50E+01	1.05E+01	4.32E+02	5.62E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-118-GAM3
Peak Analysis Performed on: 2-13-96 8:48:28 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.37	7.35E+02	83.56	4.00E+01	3.04E+01	6.95E+02	8.89E+01
	2	10.92	6.05E+03	123.70	1.57E+02	3.08E+01	5.90E+03	1.27E+02
	3	13.13	1.56E+04	166.74			1.56E+04	1.67E+02
M	4	15.46	9.21E+03	830.53			9.21E+03	8.31E+02
m	5	16.25	1.34E+04	953.72			1.34E+04	9.54E+02
m	6	16.85	4.02E+03	699.37			4.02E+03	6.99E+02
m	7	17.94	1.46E+03	509.44			1.46E+03	5.09E+02
m	8	19.07	3.50E+03	629.14	-1.92E-01	1.63E+01	3.50E+03	6.29E+02
m	9	19.75	2.11E+03	549.38	-1.92E-01	1.63E+01	2.11E+03	5.50E+02
[illegible]	10	25.78	1.39E+03	122.69			1.39E+03	1.23E+02
m	11	27.51	1.23E+03	113.38	-1.27E+01	1.34E+01	1.24E+03	1.14E+02
	12	36.78	4.01E+02	118.20			4.01E+02	1.18E+02
	13	46.69	2.15E+04	187.58	1.16E+01	3.50E+01	2.14E+04	1.91E+02
	14	50.22	1.57E+03	126.90	-1.20E+01	1.73E+01	1.58E+03	1.28E+02
M	15	53.37	5.89E+03	184.58			5.89E+03	1.85E+02
m	16	54.78	7.84E+01	59.28			7.84E+01	5.93E+01
M	17	63.44	1.48E+04	249.68	7.25E+01	2.49E+01	1.48E+04	2.51E+02
m	18	65.20	7.67E+01	80.33			7.67E+01	8.03E+01
	19	67.82	1.69E+03	132.31			1.69E+03	1.32E+02
M	20	74.98	3.66E+04	554.91	4.70E+01	1.89E+01	3.65E+04	5.55E+02
m	21	77.27	6.48E+04	647.03	6.88E+01	2.55E+01	6.48E+04	6.48E+02
m	22	79.49	5.08E+03	257.33			5.08E+03	2.57E+02
m	23	81.26	3.81E+03	237.95			3.81E+03	2.38E+02
	24	84.00	7.19E+03	164.11	-3.10E+01	1.96E+01	7.22E+03	1.65E+02
M	25	87.41	2.09E+04	608.85			2.09E+04	6.09E+02
m	26	90.05	9.18E+03	457.56			9.18E+03	4.58E+02
m	27	92.78	2.00E+04	604.50	2.61E+02	4.01E+01	1.98E+04	6.06E+02
m	28	94.92	2.72E+03	315.69	2.42E+01	1.36E+01	2.70E+03	3.16E+02
	29	98.61	1.50E+03	114.91			1.50E+03	1.15E+02
	30	113.05	7.70E+02	92.04			7.70E+02	9.20E+01
	31	130.49	7.17E+01	104.95			7.17E+01	1.05E+02
	32	144.08	2.16E+03	119.43	4.83E+01	2.07E+01	2.11E+03	1.21E+02
	33	154.49	8.72E+02	109.80			8.72E+02	1.10E+02
	34	163.63	4.96E+02	108.10			4.96E+02	1.08E+02
	35	186.45	1.92E+04	190.93	1.65E+02	2.92E+01	1.90E+04	1.93E+02
[illegible]	36	205.76	6.90E+02	109.12	-8.75E+00	2.28E+01	6.98E+02	1.11E+02
M	37	236.43	7.52E+02	49.67			7.52E+02	4.97E+01
m	38	239.07	1.51E+03	59.66	7.88E+01	2.53E+01	1.43E+03	6.48E+01
m	39	242.44	1.60E+04	277.04			1.60E+04	2.77E+02
M	40	256.75	3.98E+02	62.23			3.98E+02	6.22E+01

m 41	259.34	9.66E+02	125.05	1.45E+01	2.66E+01	9.52E+02	1.28E+02
M 42	269.99	9.98E+02	107.01			9.98E+02	1.07E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	271.73	7.72E+02	87.74			7.72E+02	8.77E+01
m	44	275.19	6.41E+02	76.91			6.41E+02	7.69E+01
	45	295.78	3.15E+04	203.16	1.05E+01	4.02E+01	3.15E+04	2.07E+02
	46	300.59	1.98E+02	92.75			1.98E+02	9.27E+01
	47	324.39	3.58E+02	100.35	-2.18E+01	1.99E+01	3.80E+02	1.02E+02
	48	330.42	1.46E+02	81.94	-2.16E+01	3.90E+01	1.68E+02	9.08E+01
	49	338.93	2.98E+02	94.49			2.98E+02	9.45E+01
	50	352.60	4.70E+04	245.38	8.80E+01	2.36E+01	4.69E+04	2.47E+02
M	51	387.65	4.02E+02	72.67			4.02E+02	7.27E+01
m	52	389.46	5.43E+02	92.86			5.43E+02	9.29E+01
	53	402.45	2.88E+02	89.56			2.88E+02	8.96E+01
	54	414.25	4.31E+01	94.05			4.31E+01	9.40E+01
	55	446.76	1.40E+02	91.90			1.40E+02	9.19E+01
	56	455.70	1.97E+02	82.67			1.97E+02	8.27E+01
	57	470.60	-4.63E+01	81.11			-4.63E+01	8.11E+01
	58	481.60	2.88E+02	81.31			2.88E+02	8.13E+01
	59	488.05	2.92E+02	80.32			2.92E+02	8.03E+01
	60	584.21	1.97E+02	79.95	2.12E+01	1.69E+01	1.76E+02	8.17E+01
M	61	605.56	1.05E+02	78.73			1.05E+02	7.87E+01
m	62	610.53	2.33E+04	254.39	4.28E+01	1.95E+01	2.32E+04	2.55E+02
	63	666.68	6.54E+02	76.85			6.54E+02	7.68E+01
	64	698.72	4.77E+02	55.24	4.50E+01	1.05E+01	4.32E+02	5.62E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-14-96  9:00:57 AM

Sample Title                     : NOPI-119-GAM3
Spectrum Description             : NOPI-119-GAM3
Sample Identification            : NP119
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-13-96 12:29:22 PM

Live Time                        :    80000.0 seconds
Real Time                        :    80017.7 seconds


            Energy Calibration Used Done On        :  1-16-96
            Efficiency Calibration Used Done On    : ????????
```

= 0.037 log x + 0.528

0.086 log x + 0.820

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-119-GAM3
Peak Locate Performed on: 2-14-96 9:00:17 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.41	0.1403	6.40	3.94
2	63.46	0.0364	10.92	13.53
3	76.17	0.0868	13.13	13.48
4	88.81	0.0990	15.46	8.79
5	94.42	0.0467	16.29	11.67
6	103.93	0.3390	17.97	5.05
7	110.44	0.0709	19.07	7.33
8	114.00	0.0000	19.82	3.88
9	149.06	0.1137	25.78	9.23
10	159.00	0.1221	27.50	9.25
11	212.69	0.3541	36.80	3.25
12	269.66	0.0162	46.68	60.68
13	290.30	0.1902	50.26	7.50
14	308.19	0.0371	53.36	24.59
15	366.19	0.0199	63.42	43.01
16	391.93	0.0791	67.89	11.11
17	432.92	0.0188	74.98	71.10
18	446.02	0.0084	77.27	93.06
19	458.63	0.0554	79.47	21.17
20	469.01	0.0721	81.26	18.84
21	484.85	0.0547	84.00	22.66
22	504.69	0.0591	87.40	26.84
23	519.59	0.0481	90.06	21.70
24	535.15	0.0414	92.77	28.95
25	547.82	0.2676	94.84	6.57
26	569.59	0.2045	98.70	5.95
27	652.42	0.1438	113.06	7.23
28	707.33	0.3456	122.59	3.24
29	753.23	0.3263	130.55	3.59
30	831.49	0.1275	144.12	10.72
31	891.02	0.2119	154.44	5.32
32	943.57	0.4075	163.56	3.87
33	1075.48	0.0375	186.43	39.27
34	1139.23	0.3865	197.49	3.15
35	1187.02	0.3026	205.78	4.42
36	1363.20	0.2595	236.38	6.32
37	1378.83	0.0763	239.03	15.37
38	1398.33	0.0307	242.43	48.75
39	1480.71	0.3457	256.77	3.51
40	1495.83	0.2098	259.32	7.69
41	1557.13	0.2826	270.00	6.52

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1567.74	0.2138	271.72	6.16
43	1588.54	0.3205	275.33	4.96
44	1705.85	0.0200	295.76	71.39
45	1733.28	0.2129	300.51	5.82
46	1907.86	0.4986	330.79	3.32
47	1954.28	0.2770	338.84	4.70
48	2033.52	0.0148	352.58	84.37
49	2324.09	0.3276	402.98	3.61
50	2601.36	0.5552	451.06	3.02
51	3367.87	0.4640	584.00	4.13
52	3520.55	0.0267	610.48	55.91
53	3844.76	0.2359	666.71	7.15
54	4029.85	0.2394	698.80	5.65

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-119-GAM3
Peak Analysis Performed on: 2-14-96 9:00:30 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.41	6.40	4.92E+02	67.86	2.44E+03
	2	60-	66	63.46	10.92	4.67E+03	104.25	3.27E+03
	3	73-	79	76.17	13.13	1.09E+04	138.18	4.37E+03
M	4	84-	117	89.61	15.46	7.04E+03	479.20	6.26E+03
m	5	84-	117	94.40	16.29	9.11E+03	514.98	5.70E+03
m	6	84-	117	104.14	17.97	1.09E+03	310.02	5.05E+03
m	7	84-	117	110.45	19.07	2.28E+03	357.90	4.79E+03
m	8	84-	117	114.78	19.82	1.19E+03	322.85	3.50E+03
M	9	144-	164	149.13	25.78	8.89E+02	87.96	2.49E+03
m	10	144-	164	159.03	27.50	8.06E+02	80.74	2.68E+03
	11	209-	216	212.69	36.80	7.21E+01	68.66	2.30E+03
	12	263-	275	269.66	46.68	1.74E+04	163.47	3.54E+03
	13	284-	295	290.30	50.26	9.73E+02	93.98	3.13E+03
	14	302-	313	308.19	53.36	3.47E+03	105.34	3.05E+03
	15	359-	371	366.19	63.42	7.90E+03	136.14	4.05E+03
	16	384-	396	391.93	67.89	1.21E+03	107.87	3.97E+03
M	17	425-	474	432.84	74.98	2.11E+04	384.79	3.98E+03
m	18	425-	474	446.02	77.27	3.78E+04	455.93	3.40E+03
m	19	425-	474	458.73	79.47	3.13E+03	179.49	3.02E+03
m	20	425-	474	469.06	81.26	2.29E+03	163.91	2.93E+03
	21	477-	491	484.85	84.00	4.55E+03	125.92	3.93E+03
M	22	497-	554	504.44	87.40	1.28E+04	436.01	4.04E+03
m	23	497-	554	519.78	90.06	5.39E+03	322.29	3.72E+03
m	24	497-	554	535.43	92.77	1.12E+04	421.34	3.42E+03
m	25	497-	554	547.36	94.84	1.66E+03	223.25	3.00E+03
	26	562-	574	569.59	98.70	7.12E+02	89.48	2.75E+03
	27	648-	657	652.42	113.06	3.15E+02	70.84	2.08E+03
	28	702-	713	707.33	122.59	1.12E+02	75.44	2.22E+03
	29	748-	758	753.23	130.55	7.63E+01	72.19	2.15E+03
	30	825-	839	831.49	144.12	1.13E+03	96.98	2.87E+03
	31	885-	896	891.02	154.44	4.74E+02	80.53	2.40E+03
	32	934-	950	943.57	163.56	3.58E+02	98.53	2.98E+03
	33	1066-	1083	1075.48	186.43	1.07E+04	141.82	2.89E+03
	34	1130-	1145	1139.23	197.49	1.23E+02	89.30	2.61E+03
	35	1177-	1197	1187.02	205.78	3.34E+02	103.03	2.83E+03
M	36	1354-	1407	1363.50	236.38	4.34E+02	35.21	1.76E+03
m	37	1354-	1407	1378.78	239.03	1.25E+03	50.27	1.62E+03
m	38	1354-	1407	1398.34	242.43	9.16E+03	213.20	1.62E+03
	39	1473-	1503	1481.03	256.77	1.47E+02	36.11	1.44E+03
m	40	1473-	1503	1495.77	259.32	4.75E+02	95.54	1.38E+03
M	41	1548-	1597	1557.35	270.00	6.43E+02	84.72	1.63E+03
m	42	1548-	1597	1567.23	271.72	4.50E+02	65.61	1.60E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1548-	1597	1588.04	275.33	4.50E+02	64.98	1.54E+03
	44	1694-	1715	1705.85	295.76	1.83E+04	158.12	1.77E+03
	45	1725-	1741	1733.28	300.51	1.38E+02	65.97	1.34E+03
	46	1898-	1915	1907.86	330.79	-2.07E+01	67.96	1.42E+03
	47	1942-	1962	1954.28	338.84	2.93E+02	80.59	1.71E+03
	48	2022-	2043	2033.52	352.58	2.72E+04	185.16	1.88E+03
	49	2312-	2334	2324.09	402.98	1.46E+02	82.76	1.72E+03
	50	2588-	2611	2601.36	451.06	-2.70E+01	72.55	1.32E+03
	51	3355-	3378	3367.87	584.00	6.18E+01	66.03	1.07E+03
	52	3506-	3535	3520.55	610.48	1.36E+04	139.02	1.22E+03
	53	3829-	3856	3844.76	666.71	2.82E+02	67.92	9.60E+02
	54	4017-	4045	4029.85	698.80	2.22E+02	46.56	2.59E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-119-GAM3
Peak Analysis Performed on: 2-14-96 9:00:17 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.40	4.92E+02	67.86	4.00E+01	3.04E+01	4.52E+02	7.44E+01
	2	10.92	4.67E+03	104.25	1.57E+02	3.08E+01	4.52E+03	1.09E+02
	3	13.13	1.09E+04	138.18			1.09E+04	1.38E+02
M	4	15.46	7.04E+03	479.20			7.04E+03	4.79E+02
m	5	16.29	9.11E+03	514.98			9.11E+03	5.15E+02
m	6	17.97	1.09E+03	310.02			1.09E+03	3.10E+02
m	7	19.07	2.28E+03	357.90	-1.92E-01	1.63E+01	2.28E+03	3.58E+02
m	8	19.82	1.19E+03	322.85	-1.92E-01	1.63E+01	1.19E+03	3.23E+02
M	9	25.78	8.89E+02	87.96			8.89E+02	8.80E+01
m	10	27.50	8.06E+02	80.74	-1.27E+01	1.34E+01	8.19E+02	8.18E+01
	11	36.80	7.21E+01	68.66			7.21E+01	6.87E+01
	12	46.68	1.74E+04	163.47	1.16E+01	3.50E+01	1.74E+04	1.67E+02
	13	50.26	9.73E+02	93.98	-1.20E+01	1.73E+01	9.85E+02	9.56E+01
	14	53.36	3.47E+03	105.34			3.47E+03	1.05E+02
	15	63.42	7.90E+03	136.14	7.25E+01	2.49E+01	7.83E+03	1.38E+02
	16	67.89	1.21E+03	107.87			1.21E+03	1.08E+02
M	17	74.98	2.11E+04	384.79	4.70E+01	1.89E+01	2.10E+04	3.85E+02
m	18	77.27	3.78E+04	455.93	6.88E+01	2.55E+01	3.77E+04	4.57E+02
m	19	79.47	3.13E+03	179.49			3.13E+03	1.79E+02
m	20	81.26	2.29E+03	163.91			2.29E+03	1.64E+02
	21	84.00	4.55E+03	125.92	-3.10E+01	1.96E+01	4.58E+03	1.27E+02
M	22	87.40	1.28E+04	436.01			1.28E+04	4.36E+02
m	23	90.06	5.39E+03	322.29			5.39E+03	3.22E+02
m	24	92.77	1.12E+04	421.34	2.61E+02	4.01E+01	1.09E+04	4.23E+02
m	25	94.84	1.66E+03	223.25	2.42E+01	1.36E+01	1.63E+03	2.24E+02
	26	98.70	7.12E+02	89.48			7.12E+02	8.95E+01
	27	113.06	3.15E+02	70.84			3.15E+02	7.08E+01
	28	122.59	1.12E+02	75.44			1.12E+02	7.54E+01
	29	130.55	7.63E+01	72.19			7.63E+01	7.22E+01
	30	144.12	1.13E+03	96.98	4.83E+01	2.07E+01	1.08E+03	9.92E+01
	31	154.44	4.74E+02	80.53			4.74E+02	8.05E+01
	32	163.56	3.58E+02	98.53			3.58E+02	9.85E+01
	33	186.43	1.07E+04	141.82	1.65E+02	2.92E+01	1.05E+04	1.45E+02
	34	197.49	1.23E+02	89.30	5.02E+01	2.63E+01	7.31E+01	9.31E+01
	35	205.78	3.34E+02	103.03	-8.75E+00	2.28E+01	3.43E+02	1.06E+02
M	36	236.38	4.34E+02	35.21			4.34E+02	3.52E+01
m	37	239.03	1.25E+03	50.27	7.88E+01	2.53E+01	1.17E+03	5.63E+01
m	38	242.43	9.16E+03	213.20			9.16E+03	2.13E+02
M	39	256.77	1.47E+02	36.11			1.47E+02	3.61E+01
m	40	259.32	4.75E+02	95.54	1.45E+01	2.66E+01	4.60E+02	9.92E+01
M	41	270.00	6.43E+02	84.72			6.43E+02	8.47E+01
	42	271.72	4.50E+02	65.61			4.50E+02	6.56E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	275.33	4.50E+02	64.98			4.50E+02	6.50E+01
	44	295.76	1.83E+04	158.12	1.05E+01	4.02E+01	1.83E+04	1.63E+02
	45	300.51	1.38E+02	65.97			1.38E+02	6.60E+01
	46	330.79	-2.07E+01	67.96			-2.07E+01	6.80E+01
	47	338.84	2.93E+02	80.59			2.93E+02	8.06E+01
	48	352.58	2.72E+04	185.16	8.80E+01	2.36E+01	2.71E+04	1.87E+02
	49	402.98	1.46E+02	82.76			1.46E+02	8.28E+01
	50	451.06	-2.70E+01	72.55			-2.70E+01	7.25E+01
	51	584.00	6.18E+01	66.03	2.12E+01	1.69E+01	4.06E+01	6.82E+01
	52	610.48	1.36E+04	139.02	4.28E+01	1.95E+01	1.35E+04	1.40E+02
	53	666.71	2.82E+02	67.92			2.82E+02	6.79E+01
	54	698.80	2.22E+02	46.56	4.50E+01	1.05E+01	1.77E+02	4.77E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        A R E A   C O R R E C T I O N   R E P O R T          *****
*****     R E F E R E N C E   P E A K / B K G . S U B T R A C T   *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-119-GAM3
Peak Analysis Performed on: 2-14-96 9:00:17 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.40	4.92E+02	67.86	4.00E+01	3.04E+01	4.52E+02	7.44E+01
	2	10.92	4.67E+03	104.25	1.57E+02	3.08E+01	4.52E+03	1.09E+02
	3	13.13	1.09E+04	138.18			1.09E+04	1.38E+02
M	4	15.46	7.04E+03	479.20			7.04E+03	4.79E+02
m	5	16.29	9.11E+03	514.98			9.11E+03	5.15E+02
m	6	17.97	1.09E+03	310.02			1.09E+03	3.10E+02
m	7	19.07	2.28E+03	357.90	-1.92E-01	1.63E+01	2.28E+03	3.58E+02
m	8	19.82	1.19E+03	322.85	-1.92E-01	1.63E+01	1.19E+03	3.23E+02
M	9	25.78	8.89E+02	87.96			8.89E+02	8.80E+01
	10	27.50	8.06E+02	80.74	-1.27E+01	1.34E+01	8.19E+02	8.18E+01
	11	36.80	7.21E+01	68.66			7.21E+01	6.87E+01
	12	46.68	1.74E+04	163.47	1.16E+01	3.50E+01	1.74E+04	1.67E+02
	13	50.26	9.73E+02	93.98	-1.20E+01	1.73E+01	9.85E+02	9.56E+01
	14	53.36	3.47E+03	105.34			3.47E+03	1.05E+02
	15	63.42	7.90E+03	136.14	7.25E+01	2.49E+01	7.83E+03	1.38E+02
	16	67.89	1.21E+03	107.87			1.21E+03	1.08E+02
M	17	74.98	2.11E+04	384.79	4.70E+01	1.89E+01	2.10E+04	3.85E+02
m	18	77.27	3.78E+04	455.93	6.88E+01	2.55E+01	3.77E+04	4.57E+02
m	19	79.47	3.13E+03	179.49			3.13E+03	1.79E+02
m	20	81.26	2.29E+03	163.91			2.29E+03	1.64E+02
	21	84.00	4.55E+03	125.92	-3.10E+01	1.96E+01	4.58E+03	1.27E+02
M	22	87.40	1.28E+04	436.01			1.28E+04	4.36E+02
m	23	90.06	5.39E+03	322.29			5.39E+03	3.22E+02
m	24	92.77	1.12E+04	421.34	2.61E+02	4.01E+01	1.09E+04	4.23E+02
m	25	94.84	1.66E+03	223.25	2.42E+01	1.36E+01	1.63E+03	2.24E+02
	26	98.70	7.12E+02	89.48			7.12E+02	8.95E+01
	27	113.06	3.15E+02	70.84			3.15E+02	7.08E+01
	28	122.59	1.12E+02	75.44			1.12E+02	7.54E+01
	29	130.55	7.63E+01	72.19			7.63E+01	7.22E+01
	30	144.12	1.13E+03	96.98	4.83E+01	2.07E+01	1.08E+03	9.92E+01
	31	154.44	4.74E+02	80.53			4.74E+02	8.05E+01
	32	163.56	3.58E+02	98.53			3.58E+02	9.85E+01
	33	186.43	1.07E+04	141.82	1.65E+02	2.92E+01	1.05E+04	1.45E+02
	34	197.49	1.23E+02	89.30	5.02E+01	2.63E+01	7.31E+01	9.31E+01
	35	205.78	3.34E+02	103.03	-8.75E+00	2.28E+01	3.43E+02	1.06E+02
	36	236.38	4.34E+02	35.21			4.34E+02	3.52E+01
m	37	239.03	1.25E+03	50.27	7.88E+01	2.53E+01	1.17E+03	5.63E+01
m	38	242.43	9.16E+03	213.20			9.16E+03	2.13E+02
M	39	256.77	1.47E+02	36.11			1.47E+02	3.61E+01
m	40	259.32	4.75E+02	95.54	1.45E+01	2.66E+01	4.60E+02	9.92E+01

M	41	270.00	6.43E+02	84.72	6.43E+02	8.47E+01
m	42	271.72	4.50E+02	65.61	4.50E+02	6.56E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	275.33	4.50E+02	64.98			4.50E+02	6.50E+01
	44	295.76	1.83E+04	158.12	1.05E+01	4.02E+01	1.83E+04	1.63E+02
	45	300.51	1.38E+02	65.97			1.38E+02	6.60E+01
	46	330.79	-2.07E+01	67.96			-2.07E+01	6.80E+01
	47	338.84	2.93E+02	80.59			2.93E+02	8.06E+01
	48	352.58	2.72E+04	185.16	8.80E+01	2.36E+01	2.71E+04	1.87E+02
	49	402.98	1.46E+02	82.76			1.46E+02	8.28E+01
	50	451.06	-2.70E+01	72.55			-2.70E+01	7.25E+01
	51	584.00	6.18E+01	66.03	2.12E+01	1.69E+01	4.06E+01	6.82E+01
	52	610.48	1.36E+04	139.02	4.28E+01	1.95E+01	1.35E+04	1.40E+02
	53	666.71	2.82E+02	67.92			2.82E+02	6.79E+01
	54	698.80	2.22E+02	46.56	4.50E+01	1.05E+01	1.77E+02	4.77E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	2-15-96 8:38:55 AM
Sample Title	:	NOPI-120-GAM3
Spectrum Description	:	NOPI-120-GAM3
Sample Identification	:	NP120
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	2-14-96 8:59:16 AM
Live Time	:	80000.0 seconds
Real Time	:	80024.4 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

$-0.107 \log x + 1.221$

$-0.052 \log x + 1.100$

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-120-GAM3
Peak Locate Performed on: 2-15-96 8:38:07 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.63	0.1911	5.49	3.11
2	37.42	0.1127	6.38	4.80
3	63.52	0.0377	10.93	12.77
4	76.10	0.0699	13.11	13.17
5	88.86	0.0874	15.45	11.22
6	94.49	0.0294	16.24	16.08
7	98.00	<NA>	16.81	<NA>
8	104.00	0.0000	17.97	7.31
9	110.42	0.0530	19.07	10.13
10	114.00	0.0000	19.73	5.46
11	149.04	0.0663	25.76	15.88
12	158.96	0.0721	27.49	13.90
13	212.11	0.3341	36.70	3.71
14	269.65	0.0146	46.68	67.26
15	290.17	0.0646	50.24	15.10
16	308.25	0.0331	53.37	27.51
17	366.18	0.0126	63.42	67.30
18	391.74	0.0724	67.85	17.95
19	432.91	0.0098	74.98	81.29
20	446.01	0.0074	77.27	106.23
21	458.89	0.0536	79.51	23.79
22	468.98	0.0290	81.25	27.07
23	484.75	0.0550	83.98	28.47
24	504.72	0.0521	87.41	31.33
25	519.60	0.0408	90.05	24.82
26	535.25	0.0269	92.77	45.02
27	548.06	0.1216	94.87	12.31
28	569.29	0.1085	98.65	11.50
29	610.76	0.2705	105.84	3.85
30	643.85	0.1990	111.57	4.64
31	652.47	0.1001	113.07	9.89
32	707.20	0.3489	122.56	4.20
33	831.21	0.0712	144.07	18.53
34	878.06	0.2354	152.19	3.61
35	891.32	0.0909	154.49	11.53
36	916.72	0.3575	158.90	3.21
37	943.85	0.1697	163.61	7.74
38	1018.14	0.2676	176.49	3.07
39	1075.00	0.0316	186.35	46.90
40	1186.11	0.2000	205.62	6.87
41	1217.84	0.3156	211.12	3.76

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1363.46	0.1287	236.39	11.61
43	1378.93	0.0794	239.06	14.68
44	1398.32	0.0264	242.42	56.94
45	1480.62	0.2197	256.66	7.13
46	1496.01	0.1768	259.34	9.26
47	1556.90	0.1362	269.97	11.16
48	1567.52	0.1955	271.72	7.82
49	1588.04	0.2292	275.28	5.48
50	1652.83	0.3178	286.56	3.65
51	1705.84	0.0174	295.76	82.29
52	1734.06	0.4193	300.57	4.20
53	1748.85	0.3241	303.07	3.70
54	1871.36	0.3715	324.46	3.53
55	1906.13	0.3896	330.49	3.80
56	1953.75	0.3930	338.75	4.62
57	2033.45	0.0129	352.57	96.21
58	2235.35	0.8273	387.64	3.05
59	2246.24	0.3961	389.48	4.62
60	2321.94	0.2875	402.61	5.24
61	2339.79	0.4106	405.70	3.88
62	2775.86	0.3947	481.33	3.87
63	2912.97	0.5313	505.11	3.46
64	3019.77	0.3972	523.63	3.04
65	3369.27	0.3559	584.24	4.26
66	3520.46	0.0231	610.46	64.81
67	3754.64	0.4308	651.08	3.29
68	3844.96	0.3444	666.74	6.02
69	4028.92	0.2216	698.64	7.70

Errors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-120-GAM3
Peak Analysis Performed on: 2-15-96 8:38:28 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	39	32.13	5.49	1.05E+03	174.74	4.95E+03
m	2	29-	39	37.29	6.38	1.56E+03	184.98	4.27E+03
	3	60-	66	63.52	10.93	5.09E+03	116.35	4.48E+03
	4	73-	79	76.10	13.11	1.48E+04	162.40	6.12E+03
M	5	84-	117	89.58	15.45	9.63E+03	681.42	7.26E+03
m	6	84-	117	94.16	16.24	1.48E+04	797.09	7.56E+03
m	7	84-	117	97.41	16.81	4.65E+03	593.32	6.62E+03
m	8	84-	117	104.10	17.97	1.72E+03	437.04	7.01E+03
m	9	84-	117	110.44	19.07	4.02E+03	540.20	6.18E+03
m	10	84-	117	114.23	19.73	2.11E+03	463.16	5.48E+03
M	11	144-	163	149.02	25.76	1.96E+03	112.46	4.06E+03
m	12	144-	163	158.99	27.49	1.73E+03	102.44	3.80E+03
	13	209-	218	212.11	36.70	2.19E+02	96.98	4.06E+03
	14	263-	275	269.65	46.68	2.18E+04	188.20	5.18E+03
	15	284-	294	290.17	50.24	1.79E+03	109.24	4.26E+03
	16	302-	314	308.25	53.37	5.12E+03	133.53	4.84E+03
	17	359-	373	366.18	63.42	1.87E+04	196.02	6.86E+03
	18	385-	396	391.74	67.85	2.18E+03	125.44	5.42E+03
M	19	425-	474	432.85	74.98	2.74E+04	412.69	5.90E+03
m	20	425-	474	446.01	77.27	4.87E+04	501.39	5.25E+03
m	21	425-	474	458.92	79.51	3.86E+03	190.86	4.82E+03
m	22	425-	474	468.97	81.25	4.01E+03	194.40	4.70E+03
	23	477-	491	484.75	83.98	7.88E+03	161.31	6.31E+03
M	24	497-	555	504.49	87.41	1.62E+04	575.46	6.42E+03
m	25	497-	555	519.71	90.05	7.04E+03	429.16	5.54E+03
m	26	497-	555	535.43	92.77	2.50E+04	652.55	5.28E+03
m	27	497-	555	547.54	94.87	3.16E+03	327.86	4.79E+03
	28	562-	574	569.29	98.65	1.82E+03	110.82	3.96E+03
	29	603-	614	610.76	105.84	2.78E+02	92.94	3.33E+03
M	30	639-	658	643.80	111.57	1.45E+02	64.65	3.45E+03
m	31	639-	658	652.45	113.07	1.00E+03	144.53	3.52E+03
	32	702-	715	707.20	122.56	2.89E+02	102.14	3.67E+03
	33	824-	839	831.21	144.07	2.70E+03	124.25	4.23E+03
	35	873-	898	891.32	154.49	7.30E+02	180.86	7.52E+03
	36	911-	924	916.72	158.90	1.04E+00	100.38	3.65E+03
	37	938-	952	943.85	163.61	7.56E+02	105.26	3.58E+03
	38	1012-	1026	1018.14	176.49	-2.65E+01	100.06	3.48E+03
	39	1066-	1084	1075.00	186.35	1.75E+04	178.90	4.27E+03
	40	1178-	1195	1186.11	205.62	6.15E+02	107.40	3.35E+03
	41	1211-	1225	1217.84	211.12	3.34E+01	88.30	2.69E+03
M	42	1353-	1406	1363.53	236.39	9.84E+02	48.34	2.23E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1353-	1406	1378.94	239.06	1.27E+03	52.76	2.22E+03
m	44	1353-	1406	1398.30	242.42	1.21E+04	249.23	2.19E+03
M	45	1470-	1505	1480.42	256.66	6.90E+02	77.04	2.54E+03
m	46	1470-	1505	1495.85	259.34	9.78E+02	101.43	2.34E+03
M	47	1549-	1598	1557.17	269.97	1.09E+03	108.25	2.16E+03
m	48	1549-	1598	1567.26	271.72	7.77E+02	83.31	2.11E+03
m	49	1549-	1598	1587.79	275.28	5.26E+02	63.94	2.03E+03
	50	1642-	1659	1652.83	286.56	1.72E+02	87.45	2.30E+03
	51	1696-	1715	1705.84	295.76	2.37E+04	179.56	2.43E+03
M	52	1724-	1756	1733.61	300.57	1.46E+02	131.79	1.80E+03
m	53	1724-	1756	1748.03	303.07	1.08E+01	17.20	2.02E+03
	54	1862-	1881	1871.36	324.46	2.13E+02	85.95	2.05E+03
	55	1897-	1914	1906.13	330.49	1.95E+02	82.02	2.00E+03
	56	1945-	1962	1953.75	338.75	1.71E+02	85.41	2.19E+03
	57	2022-	2044	2033.45	352.57	3.56E+04	215.45	2.81E+03
M	58	2226-	2255	2235.67	387.64	1.13E+02	46.76	1.69E+03
m	59	2226-	2255	2246.28	389.48	2.38E+02	86.81	1.61E+03
M	60	2309-	2351	2321.97	402.61	2.96E+02	93.89	1.66E+03
m	61	2309-	2351	2339.79	405.70	2.78E+02	88.94	1.66E+03
	62	2763-	2787	2775.86	481.33	3.98E+02	82.57	1.56E+03
	63	2902-	2925	2912.97	505.11	4.06E+01	75.19	1.40E+03
	64	3006-	3029	3019.77	523.63	-9.76E+00	75.39	1.42E+03
	65	3358-	3382	3369.27	584.24	3.67E+01	82.05	1.62E+03
	66	3505-	3532	3520.46	610.46	1.83E+04	159.84	1.60E+03
	67	3742-	3766	3754.64	651.08	-1.13E+02	71.73	1.27E+03
	68	3832-	3856	3844.96	666.74	4.09E+02	74.99	1.26E+03
	69	4012-	4044	4028.92	698.64	5.46E+02	55.53	4.40E+02

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-120-GAM3
Peak Analysis Performed on: 2-15-96 8:38:07 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.49	1.05E+03	174.74	4.00E+01	3.04E+01	1.01E+03	1.77E+02
m	2	6.38	1.56E+03	184.98	4.00E+01	3.04E+01	1.52E+03	1.87E+02
	3	10.93	5.09E+03	116.35	1.57E+02	3.08E+01	4.93E+03	1.20E+02
	4	13.11	1.48E+04	162.40			1.48E+04	1.62E+02
M	5	15.45	9.63E+03	681.42			9.63E+03	6.81E+02
m	6	16.24	1.48E+04	797.09			1.48E+04	7.97E+02
m	7	16.81	4.65E+03	593.32			4.65E+03	5.93E+02
m	8	17.97	1.72E+03	437.04			1.72E+03	4.37E+02
m	9	19.07	4.02E+03	540.20	-1.92E-01	1.63E+01	4.02E+03	5.40E+02
m	10	19.73	2.11E+03	463.16	-1.92E-01	1.63E+01	2.11E+03	4.63E+02
M	11	25.76	1.96E+03	112.46			1.96E+03	1.12E+02
m	12	27.49	1.73E+03	102.44	-1.27E+01	1.34E+01	1.74E+03	1.03E+02
	13	36.70	2.19E+02	96.98			2.19E+02	9.70E+01
	14	46.68	2.18E+04	188.20	1.16E+01	3.50E+01	2.18E+04	1.91E+02
	15	50.24	1.79E+03	109.24	-1.20E+01	1.73E+01	1.80E+03	1.11E+02
	16	53.37	5.12E+03	133.53			5.12E+03	1.34E+02
	17	63.42	1.87E+04	196.02	7.25E+01	2.49E+01	1.86E+04	1.98E+02
	18	67.85	2.18E+03	125.44			2.18E+03	1.25E+02
M	19	74.98	2.74E+04	412.69	4.70E+01	1.89E+01	2.74E+04	4.13E+02
m	20	77.27	4.87E+04	501.39	6.88E+01	2.55E+01	4.86E+04	5.02E+02
m	21	79.51	3.86E+03	190.86			3.86E+03	1.91E+02
m	22	81.25	4.01E+03	194.40			4.01E+03	1.94E+02
	23	83.98	7.88E+03	161.31	-3.10E+01	1.96E+01	7.91E+03	1.63E+02
M	24	87.41	1.62E+04	575.46			1.62E+04	5.75E+02
m	25	90.05	7.04E+03	429.16			7.04E+03	4.29E+02
m	26	92.77	2.50E+04	652.55	2.61E+02	4.01E+01	2.47E+04	6.54E+02
m	27	94.87	3.16E+03	327.86	2.42E+01	1.36E+01	3.13E+03	3.28E+02
	28	98.65	1.82E+03	110.82			1.82E+03	1.11E+02
	29	105.84	2.78E+02	92.94			2.78E+02	9.29E+01
M	30	111.57	1.45E+02	64.65			1.45E+02	6.46E+01
m	31	113.07	1.00E+03	144.53			1.00E+03	1.45E+02
	32	122.56	2.89E+02	102.14			2.89E+02	1.02E+02
	33	144.07	2.70E+03	124.25	4.83E+01	2.07E+01	2.66E+03	1.26E+02
	34	152.19	0.00E+00	0.00	2.94E+01	2.64E+01	-2.94E+01	2.64E+01
	35	154.49	7.30E+02	180.86			7.30E+02	1.81E+02
	36	158.90	1.04E+00	100.38			1.04E+00	1.00E+02
	37	163.61	7.56E+02	105.26			7.56E+02	1.05E+02
	38	176.49	-2.65E+01	100.06			-2.65E+01	1.00E+02
	39	186.35	1.75E+04	178.90	1.65E+02	2.92E+01	1.74E+04	1.81E+02
	40	205.62	6.15E+02	107.40	-8.75E+00	2.28E+01	6.24E+02	1.10E+02
	41	211.12	3.34E+01	88.30	-2.56E+01	2.49E+01	5.90E+01	9.18E+01
	42	236.39	9.84E+02	48.34			9.84E+02	4.83E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	239.06	1.27E+03	52.76	7.88E+01	2.53E+01	1.19E+03	5.85E+01
m	44	242.42	1.21E+04	249.23			1.21E+04	2.49E+02
M	45	256.66	6.90E+02	77.04			6.90E+02	7.70E+01
m	46	259.34	9.78E+02	101.43	1.45E+01	2.66E+01	9.63E+02	1.05E+02
M	47	269.97	1.09E+03	108.25			1.09E+03	1.08E+02
m	48	271.72	7.77E+02	83.31			7.77E+02	8.33E+01
m	49	275.28	5.26E+02	63.94			5.26E+02	6.39E+01
	50	286.56	1.72E+02	87.45			1.72E+02	8.74E+01
	51	295.76	2.37E+04	179.56	1.05E+01	4.02E+01	2.37E+04	1.84E+02
M	52	300.57	1.46E+02	131.79			1.46E+02	1.32E+02
m	53	303.07	1.08E+01	17.20			1.08E+01	1.72E+01
	54	324.46	2.13E+02	85.95	-2.18E+01	1.99E+01	2.35E+02	8.82E+01
	55	330.49	1.95E+02	82.02	-2.16E+01	3.90E+01	2.17E+02	9.08E+01
	56	338.75	1.71E+02	85.41			1.71E+02	8.54E+01
	57	352.57	3.56E+04	215.45	8.80E+01	2.36E+01	3.55E+04	2.17E+02
M	58	387.64	1.13E+02	46.76			1.13E+02	4.68E+01
m	59	389.48	2.38E+02	86.81			2.38E+02	8.68E+01
M	60	402.61	2.96E+02	93.89			2.96E+02	9.39E+01
m	61	405.70	2.78E+02	88.94			2.78E+02	8.89E+01
	62	481.33	3.98E+02	82.57			3.98E+02	8.26E+01
	63	505.11	4.06E+01	75.19			4.06E+01	7.52E+01
	64	523.63	-9.76E+00	75.39			-9.76E+00	7.54E+01
	65	584.24	3.67E+01	82.05	2.12E+01	1.69E+01	1.55E+01	8.38E+01
	66	610.46	1.83E+04	159.84	4.28E+01	1.95E+01	1.83E+04	1.61E+02
	67	651.08	-1.13E+02	71.73			-1.13E+02	7.17E+01
	68	666.74	4.09E+02	74.99			4.09E+02	7.50E+01
	69	698.64	5.46E+02	55.53	4.50E+01	1.05E+01	5.01E+02	5.65E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-120-GAM3
Peak Analysis Performed on: 2-15-96 8:38:07 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.49	1.05E+03	174.74	4.00E+01	3.04E+01	1.01E+03	1.77E+02
m	2	6.38	1.56E+03	184.98	4.00E+01	3.04E+01	1.52E+03	1.87E+02
	3	10.93	5.09E+03	116.35	1.57E+02	3.08E+01	4.93E+03	1.20E+02
	4	13.11	1.48E+04	162.40			1.48E+04	1.62E+02
M	5	15.45	9.63E+03	681.42			9.63E+03	6.81E+02
m	6	16.24	1.48E+04	797.09			1.48E+04	7.97E+02
m	7	16.81	4.65E+03	593.32			4.65E+03	5.93E+02
m	8	17.97	1.72E+03	437.04			1.72E+03	4.37E+02
m	9	19.07	4.02E+03	540.20	-1.92E-01	1.63E+01	4.02E+03	5.40E+02
	10	19.73	2.11E+03	463.16	-1.92E-01	1.63E+01	2.11E+03	4.63E+02
M	11	25.76	1.96E+03	112.46			1.96E+03	1.12E+02
m	12	27.49	1.73E+03	102.44	-1.27E+01	1.34E+01	1.74E+03	1.03E+02
	13	36.70	2.19E+02	96.98			2.19E+02	9.70E+01
	14	46.68	2.18E+04	188.20	1.16E+01	3.50E+01	2.18E+04	1.91E+02
	15	50.24	1.79E+03	109.24	-1.20E+01	1.73E+01	1.80E+03	1.11E+02
	16	53.37	5.12E+03	133.53			5.12E+03	1.34E+02
	17	63.42	1.87E+04	196.02	7.25E+01	2.49E+01	1.86E+04	1.98E+02
	18	67.85	2.18E+03	125.44			2.18E+03	1.25E+02
M	19	74.98	2.74E+04	412.69	4.70E+01	1.89E+01	2.74E+04	4.13E+02
m	20	77.27	4.87E+04	501.39	6.88E+01	2.55E+01	4.86E+04	5.02E+02
m	21	79.51	3.86E+03	190.86			3.86E+03	1.91E+02
m	22	81.25	4.01E+03	194.40			4.01E+03	1.94E+02
	23	83.98	7.88E+03	161.31	-3.10E+01	1.96E+01	7.91E+03	1.63E+02
M	24	87.41	1.62E+04	575.46			1.62E+04	5.75E+02
m	25	90.05	7.04E+03	429.16			7.04E+03	4.29E+02
m	26	92.77	2.50E+04	652.55	2.61E+02	4.01E+01	2.47E+04	6.54E+02
m	27	94.87	3.16E+03	327.86	2.42E+01	1.36E+01	3.13E+03	3.28E+02
	28	98.65	1.82E+03	110.82			1.82E+03	1.11E+02
	29	105.84	2.78E+02	92.94			2.78E+02	9.29E+01
M	30	111.57	1.45E+02	64.65			1.45E+02	6.46E+01
m	31	113.07	1.00E+03	144.53			1.00E+03	1.45E+02
	32	122.56	2.89E+02	102.14			2.89E+02	1.02E+02
	33	144.07	2.70E+03	124.25	4.83E+01	2.07E+01	2.66E+03	1.26E+02
	34	152.19	0.00E+00	0.00	2.94E+01	2.64E+01	-2.94E+01	2.64E+01
	35	154.49	7.30E+02	180.86			7.30E+02	1.81E+02
	36	158.90	1.04E+00	100.38			1.04E+00	1.00E+02
	37	163.61	7.56E+02	105.26			7.56E+02	1.05E+02
	38	176.49	-2.65E+01	100.06			-2.65E+01	1.00E+02
	39	186.35	1.75E+04	178.90	1.65E+02	2.92E+01	1.74E+04	1.81E+02
	40	205.62	6.15E+02	107.40	-8.75E+00	2.28E+01	6.24E+02	1.10E+02

41	211.12	3.34E+01	88.30	-2.56E+01	2.49E+01	5.90E+01	9.18E+01
M 42	236.39	9.84E+02	48.34			9.84E+02	4.83E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	239.06	1.27E+03	52.76	7.88E+01	2.53E+01	1.19E+03	5.85E+01
m	44	242.42	1.21E+04	249.23			1.21E+04	2.49E+02
M	45	256.66	6.90E+02	77.04			6.90E+02	7.70E+01
m	46	259.34	9.78E+02	101.43	1.45E+01	2.66E+01	9.63E+02	1.05E+02
M	47	269.97	1.09E+03	108.25			1.09E+03	1.08E+02
m	48	271.72	7.77E+02	83.31			7.77E+02	8.33E+01
m	49	275.28	5.26E+02	63.94			5.26E+02	6.39E+01
	50	286.56	1.72E+02	87.45			1.72E+02	8.74E+01
	51	295.76	2.37E+04	179.56	1.05E+01	4.02E+01	2.37E+04	1.84E+02
M	52	300.57	1.46E+02	131.79			1.46E+02	1.32E+02
m	53	303.07	1.08E+01	17.20			1.08E+01	1.72E+01
	54	324.46	2.13E+02	85.95	-2.18E+01	1.99E+01	2.35E+02	8.82E+01
	55	330.49	1.95E+02	82.02	-2.16E+01	3.90E+01	2.17E+02	9.08E+01
	56	338.75	1.71E+02	85.41			1.71E+02	8.54E+01
	57	352.57	3.56E+04	215.45	8.80E+01	2.36E+01	3.55E+04	2.17E+02
M	58	387.64	1.13E+02	46.76			1.13E+02	4.68E+01
m	59	389.48	2.38E+02	86.81			2.38E+02	8.68E+01
M	60	402.61	2.96E+02	93.89			2.96E+02	9.39E+01
m	61	405.70	2.78E+02	88.94			2.78E+02	8.89E+01
	62	481.33	3.98E+02	82.57			3.98E+02	8.26E+01
	63	505.11	4.06E+01	75.19			4.06E+01	7.52E+01
	64	523.63	-9.76E+00	75.39			-9.76E+00	7.54E+01
	65	584.24	3.67E+01	82.05	2.12E+01	1.69E+01	1.55E+01	8.38E+01
	66	610.46	1.83E+04	159.84	4.28E+01	1.95E+01	1.83E+04	1.61E+02
	67	651.08	-1.13E+02	71.73			-1.13E+02	7.17E+01
	68	666.74	4.09E+02	74.99			4.09E+02	7.50E+01
	69	698.64	5.46E+02	55.53	4.50E+01	1.05E+01	5.01E+02	5.65E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	2-16-96 8:59:36 AM
Sample Title	:	NOPI-121-GAM3
Spectrum Description	:	NOPI-121-GAM3
Sample Identification	:	NP121
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	2-15-96 8:37:12 AM
Live Time	:	80000.0 seconds
Real Time	:	80009.7 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

0.031 log x + 0.94
0.680 log x + 0.831

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-121-GAM3
Peak Locate Performed on: 2-16-96 8:59:03 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.57	0.0575	10.94	9.22
2	76.18	0.1171	13.13	7.79
3	89.00	0.0000	15.48	6.15
4	94.46	0.0722	16.26	6.85
5	110.68	0.1724	19.11	3.89
6	148.98	0.1933	25.76	3.93
7	159.33	0.2873	27.54	3.96
8	269.69	0.0226	46.69	42.15
9	290.55	0.1220	50.30	4.15
10	308.24	0.0580	53.37	15.69
11	366.23	0.0543	63.43	24.67
12	391.78	0.2908	67.86	4.66
13	432.94	0.0159	74.99	49.74
14	446.04	0.0123	77.28	62.89
15	458.81	0.0849	79.49	14.15
16	469.02	0.0774	81.27	10.49
17	484.79	0.1064	83.99	11.36
18	504.74	0.0994	87.39	18.16
19	519.64	0.0655	90.07	16.41
20	535.48	0.0541	92.82	16.68
21	548.89	0.2062	94.94	4.45
22	569.06	0.2068	98.61	4.01
23	651.84	0.1979	112.96	4.17
24	831.55	0.3008	144.13	4.48
25	943.86	0.4864	163.61	3.14
26	1075.82	0.0562	186.49	27.46
27	1379.02	0.0550	239.09	21.22
28	1398.55	0.0444	242.44	34.09
29	1495.88	0.2373	259.34	5.26
30	1589.23	0.4455	275.53	3.50
31	1705.99	0.0371	295.78	48.38
32	1895.73	0.3302	328.69	3.50
33	1955.21	0.2771	339.00	5.86
34	2033.69	0.0279	352.61	57.37
35	2235.48	0.3735	387.61	4.08
36	2778.24	0.4024	481.74	3.47
37	2951.95	0.6646	511.87	4.06
38	3352.11	0.2728	581.14	4.13
39	3369.97	0.3611	584.36	5.23
40	3467.89	0.5860	601.34	3.02
41	3520.82	0.0475	610.52	38.15

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	3844.76	0.3111	666.71	5.58
43	4027.74	0.7840	698.44	4.19

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-121-GAM3
Peak Analysis Performed on: 2-16-96 8:59:15 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.57	10.94	2.31E+03	74.38	1.71E+03
	2	73-	79	76.18	13.13	5.14E+03	95.99	2.16E+03
M	3	84-	98	89.75	15.48	2.72E+03	339.12	3.29E+03
m	4	84-	98	94.22	16.26	3.42E+03	342.11	2.67E+03
	5	107-	114	110.68	19.11	4.62E+02	68.22	2.09E+03
M	6	145-	163	149.04	25.76	2.83E+02	65.20	1.45E+03
m	7	145-	163	159.26	27.54	2.16E+02	53.13	1.39E+03
	8	264-	275	269.69	46.69	8.59E+03	112.28	1.61E+03
	9	284-	296	290.55	50.30	2.98E+02	66.73	1.58E+03
	10	302-	313	308.24	53.37	1.56E+03	73.04	1.51E+03
	11	361-	372	366.23	63.43	2.83E+03	86.10	1.83E+03
	12	384-	396	391.78	67.86	3.38E+02	75.67	2.05E+03
[illegible]	13	425-	476	432.89	74.99	1.02E+04	172.52	2.01E+03
m	14	425-	476	446.07	77.28	1.81E+04	231.97	1.68E+03
m	15	425-	476	458.85	79.49	1.39E+03	69.00	1.46E+03
m	16	425-	476	469.09	81.27	7.45E+02	57.95	1.41E+03
	17	478-	491	484.79	83.99	1.47E+03	80.19	1.80E+03
M	18	497-	555	504.42	87.39	6.18E+03	238.89	2.02E+03
m	19	497-	555	519.82	90.07	2.74E+03	174.06	1.96E+03
m	20	497-	555	535.68	92.82	4.10E+03	203.86	1.80E+03
m	21	497-	555	547.94	94.94	5.84E+02	108.55	1.60E+03
	22	562-	573	569.06	98.61	1.80E+02	58.33	1.27E+03
	23	647-	659	651.84	112.96	1.35E+02	60.77	1.35E+03
	24	823-	838	831.55	144.13	4.06E+02	72.22	1.60E+03
	25	934-	948	943.86	163.61	1.08E+02	64.39	1.40E+03
	26	1066-	1084	1075.82	186.49	4.51E+03	99.02	1.57E+03
M	27	1371-	1406	1379.07	239.09	1.76E+03	72.43	8.99E+02
m	28	1371-	1406	1398.43	242.44	4.41E+03	113.57	8.09E+02
	29	1487-	1506	1495.88	259.34	2.05E+02	60.22	9.76E+02
	30	1579-	1597	1589.23	275.53	1.38E+02	55.41	8.65E+02
	31	1694-	1714	1705.99	295.78	8.48E+03	108.83	9.17E+02
	32	1884-	1903	1895.73	328.69	3.63E+00	53.37	8.06E+02
	33	1946-	1963	1955.21	339.00	2.27E+02	51.69	7.52E+02
	34	2021-	2045	2033.69	352.61	1.25E+04	130.40	1.09E+03
	35	2226-	2244	2235.48	387.61	-4.98E+00	51.76	7.81E+02
	36	2765-	2788	2778.24	481.74	1.07E+02	47.36	5.34E+02
	37	2928-	2999	2951.95	511.87	4.71E+02	124.70	1.51E+03
M	38	3341-	3382	3351.38	581.14	5.81E+01	24.71	4.35E+02
[illegible]	39	3341-	3382	3369.97	584.36	3.22E+02	65.37	6.07E+02
	40	3454-	3480	3467.89	601.34	1.89E+01	49.59	5.57E+02
	41	3505-	3532	3520.82	610.52	6.26E+03	93.97	5.68E+02
	42	3829-	3856	3844.76	666.71	1.29E+02	46.86	4.59E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	4015-	4043	4027.74	698.44	1.82E+02	31.03	1.39E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-121-GAM3
Peak Analysis Performed on: 2-16-96 8:59:03 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	10.94	2.31E+03	74.38	1.57E+02	3.08E+01	2.16E+03	8.05E+01
	2	13.13	5.14E+03	95.99			5.14E+03	9.60E+01
M	3	15.48	2.72E+03	339.12			2.72E+03	3.39E+02
m	4	16.26	3.42E+03	342.11			3.42E+03	3.42E+02
	5	19.11	4.62E+02	68.22	-1.92E-01	1.63E+01	4.62E+02	7.02E+01
M	6	25.76	2.83E+02	65.20			2.83E+02	6.52E+01
m	7	27.54	2.16E+02	53.13	-1.27E+01	1.34E+01	2.28E+02	5.48E+01
	8	46.69	8.59E+03	112.28	1.16E+01	3.50E+01	8.58E+03	1.18E+02
	9	50.30	2.98E+02	66.73	-1.20E+01	1.73E+01	3.10E+02	6.89E+01
	10	53.37	1.56E+03	73.04			1.56E+03	7.30E+01
	11	63.43	2.83E+03	86.10	7.25E+01	2.49E+01	2.76E+03	8.96E+01
	12	67.86	3.38E+02	75.67			3.38E+02	7.57E+01
M	13	74.99	1.02E+04	172.52	4.70E+01	1.89E+01	1.02E+04	1.74E+02
m	14	77.28	1.81E+04	231.97	6.88E+01	2.55E+01	1.80E+04	2.33E+02
m	15	79.49	1.39E+03	69.00			1.39E+03	6.90E+01
	16	81.27	7.45E+02	57.95			7.45E+02	5.79E+01
	17	83.99	1.47E+03	80.19	-3.10E+01	1.96E+01	1.50E+03	8.26E+01
M	18	87.39	6.18E+03	238.89			6.18E+03	2.39E+02
m	19	90.07	2.74E+03	174.06			2.74E+03	1.74E+02
m	20	92.82	4.10E+03	203.86	2.61E+02	4.01E+01	3.84E+03	2.08E+02
m	21	94.94	5.84E+02	108.55	2.42E+01	1.36E+01	5.60E+02	1.09E+02
	22	98.61	1.80E+02	58.33			1.80E+02	5.83E+01
	23	112.96	1.35E+02	60.77			1.35E+02	6.08E+01
	24	144.13	4.06E+02	72.22	4.83E+01	2.07E+01	3.58E+02	7.51E+01
	25	163.61	1.08E+02	64.39			1.08E+02	6.44E+01
	26	186.49	4.51E+03	99.02	1.65E+02	2.92E+01	4.35E+03	1.03E+02
M	27	239.09	1.76E+03	72.43	7.88E+01	2.53E+01	1.68E+03	7.67E+01
m	28	242.44	4.41E+03	113.57			4.41E+03	1.14E+02
	29	259.34	2.05E+02	60.22	1.45E+01	2.66E+01	1.91E+02	6.58E+01
	30	275.53	1.38E+02	55.41			1.38E+02	5.54E+01
	31	295.78	8.48E+03	108.83	1.05E+01	4.02E+01	8.47E+03	1.16E+02
	32	328.69	3.63E+00	53.37			3.63E+00	5.34E+01
	33	339.00	2.27E+02	51.69			2.27E+02	5.17E+01
	34	352.61	1.25E+04	130.40	8.80E+01	2.36E+01	1.24E+04	1.33E+02
	35	387.61	-4.98E+00	51.76			-4.98E+00	5.18E+01
	36	481.74	1.07E+02	47.36			1.07E+02	4.74E+01
	37	511.87	4.71E+02	124.70	3.07E+02	7.27E+01	1.65E+02	1.44E+02
M	38	581.14	5.81E+01	24.71			5.81E+01	2.47E+01
m	39	584.36	3.22E+02	65.37	2.12E+01	1.69E+01	3.01E+02	6.75E+01
	40	601.34	1.89E+01	49.59			1.89E+01	4.96E+01
	41	610.52	6.26E+03	93.97	4.28E+01	1.95E+01	6.21E+03	9.60E+01
	42	666.71	1.29E+02	46.86			1.29E+02	4.69E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	698.44	1.82E+02	31.03	4.50E+01	1.05E+01	1.37E+02	3.27E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        A R E A   C O R R E C T I O N   R E P O R T          *****
*****    R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-121-GAM3
Peak Analysis Performed on: 2-16-96 8:59:03 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	10.94	2.31E+03	74.38	1.57E+02	3.08E+01	2.16E+03	8.05E+01
	2	13.13	5.14E+03	95.99			5.14E+03	9.60E+01
M	3	15.48	2.72E+03	339.12			2.72E+03	3.39E+02
m	4	16.26	3.42E+03	342.11			3.42E+03	3.42E+02
	5	19.11	4.62E+02	68.22	-1.92E-01	1.63E+01	4.62E+02	7.02E+01
M	6	25.76	2.83E+02	65.20			2.83E+02	6.52E+01
m	7	27.54	2.16E+02	53.13	-1.27E+01	1.34E+01	2.28E+02	5.48E+01
	8	46.69	8.59E+03	112.28	1.16E+01	3.50E+01	8.58E+03	1.18E+02
	9	50.30	2.98E+02	66.73	-1.20E+01	1.73E+01	3.10E+02	6.89E+01
	10	53.37	1.56E+03	73.04			1.56E+03	7.30E+01
	11	63.43	2.83E+03	86.10	7.25E+01	2.49E+01	2.76E+03	8.96E+01
	12	67.86	3.38E+02	75.67			3.38E+02	7.57E+01
M	13	74.99	1.02E+04	172.52	4.70E+01	1.89E+01	1.02E+04	1.74E+02
m	14	77.28	1.81E+04	231.97	6.88E+01	2.55E+01	1.80E+04	2.33E+02
m	15	79.49	1.39E+03	69.00			1.39E+03	6.90E+01
m	16	81.27	7.45E+02	57.95			7.45E+02	5.79E+01
	17	83.99	1.47E+03	80.19	-3.10E+01	1.96E+01	1.50E+03	8.26E+01
M	18	87.39	6.18E+03	238.89			6.18E+03	2.39E+02
m	19	90.07	2.74E+03	174.06			2.74E+03	1.74E+02
m	20	92.82	4.10E+03	203.86	2.61E+02	4.01E+01	3.84E+03	2.08E+02
m	21	94.94	5.84E+02	108.55	2.42E+01	1.36E+01	5.60E+02	1.09E+02
	22	98.61	1.80E+02	58.33			1.80E+02	5.83E+01
	23	112.96	1.35E+02	60.77			1.35E+02	6.08E+01
	24	144.13	4.06E+02	72.22	4.83E+01	2.07E+01	3.58E+02	7.51E+01
	25	163.61	1.08E+02	64.39			1.08E+02	6.44E+01
	26	186.49	4.51E+03	99.02	1.65E+02	2.92E+01	4.35E+03	1.03E+02
M	27	239.09	1.76E+03	72.43	7.88E+01	2.53E+01	1.68E+03	7.67E+01
m	28	242.44	4.41E+03	113.57			4.41E+03	1.14E+02
	29	259.34	2.05E+02	60.22	1.45E+01	2.66E+01	1.91E+02	6.58E+01
	30	275.53	1.38E+02	55.41			1.38E+02	5.54E+01
	31	295.78	8.48E+03	108.83	1.05E+01	4.02E+01	8.47E+03	1.16E+02
	32	328.69	3.63E+00	53.37			3.63E+00	5.34E+01
	33	339.00	2.27E+02	51.69			2.27E+02	5.17E+01
	34	352.61	1.25E+04	130.40	8.80E+01	2.36E+01	1.24E+04	1.33E+02
	35	387.61	-4.98E+00	51.76			-4.98E+00	5.18E+01
	36	481.74	1.07E+02	47.36			1.07E+02	4.74E+01
	37	511.87	4.71E+02	124.70	3.07E+02	7.27E+01	1.65E+02	1.44E+02
M	38	581.14	5.81E+01	24.71			5.81E+01	2.47E+01
m	39	584.36	3.22E+02	65.37	2.12E+01	1.69E+01	3.01E+02	6.75E+01
	40	601.34	1.89E+01	49.59			1.89E+01	4.96E+01

41	610.52	6.26E+03	93.97	4.28E+01	1.95E+01	6.21E+03	9.60E+01
42	666.71	1.29E+02	46.86			1.29E+02	4.69E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
43	698.44	1.82E+02	31.03	4.50E+01	1.05E+01	1.37E+02	3.27E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-19-96  8:40:56 AM

Sample Title                     : NOPI-122-GAM3
Spectrum Description             : NOPI-122-GAM3
Sample Identification            : NP122
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-16-96  8:58:02 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80008.3 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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-0.079 log x + 1.170

-0.026 log x + 1.051

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-122-GAM3
Peak Locate Performed on: 2-19-96 8:40:20 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.37	0.0650	10.90	9.25
2	76.17	0.1333	13.13	8.90
3	89.00	<NA>	15.43	<NA>
4	94.57	0.0572	16.24	9.28
5	98.00	<NA>	16.85	<NA>
6	104.00	<NA>	17.95	<NA>
7	110.59	0.0944	19.11	5.83
8	114.00	<NA>	19.79	<NA>
9	148.79	0.1565	25.74	6.76
10	158.99	0.2095	27.50	4.07
11	269.70	0.0245	46.69	39.26
12	290.06	0.1825	50.22	4.94
13	308.21	0.0699	53.37	13.08
14	366.16	0.0277	63.42	31.06
15	391.87	0.1612	67.88	8.28
16	432.94	0.0191	74.99	41.47
17	446.01	0.0143	77.27	54.95
18	458.92	0.0719	79.51	11.48
19	468.81	0.1181	81.22	11.17
20	484.89	0.1001	84.01	13.23
21	504.80	0.1224	87.41	15.70
22	519.72	0.0734	90.07	15.84
23	535.34	0.0652	92.80	19.53
24	548.59	0.2636	94.92	4.69
25	569.03	0.1612	98.54	5.40
26	575.91	0.2098	99.73	4.44
27	652.59	0.5312	113.09	3.19
28	747.05	0.1723	129.47	4.59
29	831.02	0.1803	144.04	7.97
30	892.05	0.3824	154.62	4.56
31	1075.18	0.0673	186.38	22.09
32	1209.51	0.2034	209.68	4.86
33	1363.49	0.3617	236.39	4.69
34	1379.08	0.0569	239.08	20.33
35	1398.35	0.0555	242.41	27.61
36	1495.13	0.3275	259.21	4.76
37	1557.09	0.2725	269.96	4.14
38	1652.40	0.3995	286.49	3.55
39	1705.83	0.0369	295.75	38.36
40	1894.04	0.3154	328.40	3.87
41	1955.10	0.2475	338.99	6.69

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	2033.51	0.0267	352.58	46.69
43	2814.16	0.6247	487.97	3.02
44	3369.59	0.3132	584.30	5.91
45	3520.47	0.0608	610.46	29.51
46	3845.74	0.4496	666.88	3.58
47	4030.27	0.3564	698.88	3.96

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-122-GAM3
Peak Analysis Performed on: 2-19-96 8:40:33 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.37	10.90	1.75E+03	67.53	1.49E+03
	2	73-	79	76.17	13.13	4.67E+03	90.13	1.83E+03
M	3	85-	118	89.46	15.43	2.74E+03	247.19	2.13E+03
m	4	85-	118	94.15	16.24	4.04E+03	288.38	2.17E+03
m	5	85-	118	97.64	16.85	1.03E+03	196.64	2.06E+03
m	6	85-	118	104.01	17.95	4.89E+02	149.75	1.96E+03
m	7	85-	118	110.66	19.11	1.07E+03	182.68	1.87E+03
m	8	85-	118	114.62	19.79	5.20E+02	158.78	1.49E+03
M	9	144-	163	148.91	25.74	4.30E+02	64.51	1.18E+03
m	10	144-	163	159.05	27.50	2.65E+02	43.13	1.12E+03
	11	263-	275	269.70	46.69	7.39E+03	105.14	1.40E+03
	12	284-	295	290.06	50.22	3.90E+02	58.25	1.20E+03
	13	302-	313	308.21	53.37	1.09E+03	65.08	1.26E+03
	14	359-	372	366.16	63.42	3.81E+03	90.73	1.61E+03
	15	384-	395	391.87	67.88	5.98E+02	64.44	1.42E+03
M	16	426-	474	432.91	74.99	7.20E+03	140.33	1.64E+03
m	17	426-	474	446.01	77.27	1.27E+04	193.40	1.42E+03
m	18	426-	474	458.95	79.51	8.35E+02	53.53	1.28E+03
m	19	426-	474	468.83	81.22	6.96E+02	51.36	1.25E+03
	20	478-	491	484.89	84.01	1.67E+03	78.57	1.64E+03
M	21	497-	555	504.50	87.41	4.38E+03	189.70	1.80E+03
m	22	497-	555	519.82	90.07	1.90E+03	135.88	1.65E+03
m	23	497-	555	535.58	92.80	5.13E+03	203.19	1.48E+03
m	24	497-	555	547.83	94.92	5.39E+02	91.52	1.35E+03
M	25	562-	579	568.70	98.54	3.89E+02	70.33	1.00E+03
m	26	562-	579	575.57	99.73	1.42E+02	50.91	7.59E+02
	27	647-	659	652.59	113.09	2.22E+02	55.25	1.07E+03
	28	739-	752	747.05	129.47	9.77E+01	56.80	1.12E+03
	29	823-	839	831.02	144.04	4.54E+02	67.13	1.29E+03
	30	884-	897	892.05	154.62	2.56E+02	56.49	1.07E+03
	31	1066-	1084	1075.18	186.38	3.87E+03	88.09	1.15E+03
	32	1201-	1215	1209.51	209.68	5.76E+01	48.58	7.98E+02
M	33	1356-	1407	1363.51	236.39	1.44E+02	27.66	7.41E+02
m	34	1356-	1407	1379.06	239.08	1.63E+03	72.09	7.13E+02
m	35	1356-	1407	1398.27	242.41	2.85E+03	107.34	6.60E+02
	36	1488-	1504	1495.13	259.21	1.40E+02	46.24	6.38E+02
	37	1549-	1566	1557.09	269.96	9.00E+01	53.09	8.33E+02
	38	1642-	1659	1652.40	286.49	4.90E+01	46.86	6.54E+02
	39	1696-	1716	1705.83	295.75	5.43E+03	89.95	7.37E+02
	40	1885-	1903	1894.04	328.40	6.58E+01	44.91	5.76E+02
	41	1947-	1964	1955.10	338.99	2.69E+02	47.28	6.03E+02
	42	2022-	2043	2033.51	352.58	8.18E+03	103.99	7.00E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	2804-	2825	2814.16	487.97	6.66E+01	40.78	4.25E+02
44	3358-	3381	3369.59	584.30	2.25E+02	42.46	3.94E+02
45	3507-	3531	3520.47	610.46	4.02E+03	77.70	4.88E+02
46	3833-	3858	3845.74	666.88	6.03E+01	41.31	3.87E+02
47	4014-	4046	4030.27	698.88	1.35E+02	31.46	1.22E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-122-GAM3
Peak Analysis Performed on: 2-19-96 8:40:20 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	10.90	1.75E+03	67.53	1.57E+02	3.08E+01	1.60E+03	7.42E+01
	2	13.13	4.67E+03	90.13			4.67E+03	9.01E+01
M	3	15.43	2.74E+03	247.19			2.74E+03	2.47E+02
m	4	16.24	4.04E+03	288.38			4.04E+03	2.88E+02
m	5	16.85	1.03E+03	196.64			1.03E+03	1.97E+02
m	6	17.95	4.89E+02	149.75			4.89E+02	1.50E+02
m	7	19.11	1.07E+03	182.68	-1.92E-01	1.63E+01	1.07E+03	1.83E+02
m	8	19.79	5.20E+02	158.78	-1.92E-01	1.63E+01	5.20E+02	1.60E+02
M	9	25.74	4.30E+02	64.51			4.30E+02	6.45E+01
m	10	27.50	2.65E+02	43.13	-1.27E+01	1.34E+01	2.77E+02	4.52E+01
	11	46.69	7.39E+03	105.14	1.16E+01	3.50E+01	7.37E+03	1.11E+02
	12	50.22	3.90E+02	58.25	-1.20E+01	1.73E+01	4.02E+02	6.07E+01
	13	53.37	1.09E+03	65.08			1.09E+03	6.51E+01
	14	63.42	3.81E+03	90.73	7.25E+01	2.49E+01	3.74E+03	9.41E+01
	15	67.88	5.98E+02	64.44			5.98E+02	6.44E+01
	16	74.99	7.20E+03	140.33	4.70E+01	1.89E+01	7.16E+03	1.42E+02
m	17	77.27	1.27E+04	193.40	6.88E+01	2.55E+01	1.27E+04	1.95E+02
m	18	79.51	8.35E+02	53.53			8.35E+02	5.35E+01
m	19	81.22	6.96E+02	51.36			6.96E+02	5.14E+01
	20	84.01	1.67E+03	78.57	-3.10E+01	1.96E+01	1.70E+03	8.10E+01
M	21	87.41	4.38E+03	189.70			4.38E+03	1.90E+02
m	22	90.07	1.90E+03	135.88			1.90E+03	1.36E+02
m	23	92.80	5.13E+03	203.19	2.61E+02	4.01E+01	4.87E+03	2.07E+02
m	24	94.92	5.39E+02	91.52	2.42E+01	1.36E+01	5.14E+02	9.25E+01
M	25	98.54	3.89E+02	70.33			3.89E+02	7.03E+01
m	26	99.73	1.42E+02	50.91			1.42E+02	5.09E+01
	27	113.09	2.22E+02	55.25			2.22E+02	5.52E+01
	28	129.47	9.77E+01	56.80			9.77E+01	5.68E+01
	29	144.04	4.54E+02	67.13	4.83E+01	2.07E+01	4.06E+02	7.02E+01
	30	154.62	2.56E+02	56.49			2.56E+02	5.65E+01
	31	186.38	3.87E+03	88.09	1.65E+02	2.92E+01	3.71E+03	9.28E+01
	32	209.68	5.76E+01	48.58	-2.56E+01	2.49E+01	8.33E+01	5.46E+01
M	33	236.39	1.44E+02	27.66			1.44E+02	2.77E+01
m	34	239.08	1.63E+03	72.09	7.88E+01	2.53E+01	1.55E+03	7.64E+01
m	35	242.41	2.85E+03	107.34			2.85E+03	1.07E+02
	36	259.21	1.40E+02	46.24	1.45E+01	2.66E+01	1.25E+02	5.34E+01
	37	269.96	9.00E+01	53.09			9.00E+01	5.31E+01
	38	286.49	4.90E+01	46.86			4.90E+01	4.69E+01
	39	295.75	5.43E+03	89.95	1.05E+01	4.02E+01	5.42E+03	9.85E+01
	40	328.40	6.58E+01	44.91			6.58E+01	4.49E+01
	41	338.99	2.69E+02	47.28			2.69E+02	4.73E+01
	42	352.58	8.18E+03	103.99	8.80E+01	2.36E+01	8.10E+03	1.07E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	487.97	6.66E+01	40.78			6.66E+01	4.08E+01
44	584.30	2.25E+02	42.46	2.12E+01	1.69E+01	2.04E+02	4.57E+01
45	610.46	4.02E+03	77.70	4.28E+01	1.95E+01	3.98E+03	8.01E+01
46	666.88	6.03E+01	41.31			6.03E+01	4.13E+01
47	698.88	1.35E+02	31.46	4.50E+01	1.05E+01	9.02E+01	3.32E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-122-GAM3
Peak Analysis Performed on: 2-19-96 8:40:20 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	10.90	1.75E+03	67.53	1.57E+02	3.08E+01	1.60E+03	7.42E+01
	2	13.13	4.67E+03	90.13			4.67E+03	9.01E+01
M	3	15.43	2.74E+03	247.19			2.74E+03	2.47E+02
m	4	16.24	4.04E+03	288.38			4.04E+03	2.88E+02
m	5	16.85	1.03E+03	196.64			1.03E+03	1.97E+02
m	6	17.95	4.89E+02	149.75			4.89E+02	1.50E+02
m	7	19.11	1.07E+03	182.68	-1.92E-01	1.63E+01	1.07E+03	1.83E+02
m	8	19.79	5.20E+02	158.78	-1.92E-01	1.63E+01	5.20E+02	1.60E+02
M	9	25.74	4.30E+02	64.51			4.30E+02	6.45E+01
	10	27.50	2.65E+02	43.13	-1.27E+01	1.34E+01	2.77E+02	4.52E+01
	11	46.69	7.39E+03	105.14	1.16E+01	3.50E+01	7.37E+03	1.11E+02
	12	50.22	3.90E+02	58.25	-1.20E+01	1.73E+01	4.02E+02	6.07E+01
	13	53.37	1.09E+03	65.08			1.09E+03	6.51E+01
	14	63.42	3.81E+03	90.73	7.25E+01	2.49E+01	3.74E+03	9.41E+01
	15	67.88	5.98E+02	64.44			5.98E+02	6.44E+01
M	16	74.99	7.20E+03	140.33	4.70E+01	1.89E+01	7.16E+03	1.42E+02
m	17	77.27	1.27E+04	193.40	6.88E+01	2.55E+01	1.27E+04	1.95E+02
m	18	79.51	8.35E+02	53.53			8.35E+02	5.35E+01
m	19	81.22	6.96E+02	51.36			6.96E+02	5.14E+01
	20	84.01	1.67E+03	78.57	-3.10E+01	1.96E+01	1.70E+03	8.10E+01
M	21	87.41	4.38E+03	189.70			4.38E+03	1.90E+02
m	22	90.07	1.90E+03	135.88			1.90E+03	1.36E+02
m	23	92.80	5.13E+03	203.19	2.61E+02	4.01E+01	4.87E+03	2.07E+02
m	24	94.92	5.39E+02	91.52	2.42E+01	1.36E+01	5.14E+02	9.25E+01
M	25	98.54	3.89E+02	70.33			3.89E+02	7.03E+01
m	26	99.73	1.42E+02	50.91			1.42E+02	5.09E+01
	27	113.09	2.22E+02	55.25			2.22E+02	5.52E+01
	28	129.47	9.77E+01	56.80			9.77E+01	5.68E+01
	29	144.04	4.54E+02	67.13	4.83E+01	2.07E+01	4.06E+02	7.02E+01
	30	154.62	2.56E+02	56.49			2.56E+02	5.65E+01
	31	186.38	3.87E+03	88.09	1.65E+02	2.92E+01	3.71E+03	9.28E+01
	32	209.68	5.76E+01	48.58	-2.56E+01	2.49E+01	8.33E+01	5.46E+01
M	33	236.39	1.44E+02	27.66			1.44E+02	2.77E+01
m	34	239.08	1.63E+03	72.09	7.88E+01	2.53E+01	1.55E+03	7.64E+01
m	35	242.41	2.85E+03	107.34			2.85E+03	1.07E+02
	36	259.21	1.40E+02	46.24	1.45E+01	2.66E+01	1.25E+02	5.34E+01
	37	269.96	9.00E+01	53.09			9.00E+01	5.31E+01
	38	286.49	4.90E+01	46.86			4.90E+01	4.69E+01
	39	295.75	5.43E+03	89.95	1.05E+01	4.02E+01	5.42E+03	9.85E+01
	40	328.40	6.58E+01	44.91			6.58E+01	4.49E+01

41	338.99	2.69E+02	47.28			2.69E+02	4.73E+01
42	352.58	8.18E+03	103.99	8.80E+01	2.36E+01	8.10E+03	1.07E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
43	487.97	6.66E+01	40.78			6.66E+01	4.08E+01
44	584.30	2.25E+02	42.46	2.12E+01	1.69E+01	2.04E+02	4.57E+01
45	610.46	4.02E+03	77.70	4.28E+01	1.95E+01	3.98E+03	8.01E+01
46	666.88	6.03E+01	41.31			6.03E+01	4.13E+01
47	698.88	1.35E+02	31.46	4.50E+01	1.05E+01	9.02E+01	3.32E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	2-19-96 8:43:03 AM
Sample Title	:	NOPI-123-GAM3
Spectrum Description	:	NOPI-123-GAM3
Sample Identification	:	NP123
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	2-17-96 12:24:32 PM
Live Time	:	80000.0 seconds
Real Time	:	80005.5 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

0.002 log x + 1.006

0.053 log x + 0.894

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-123-GAM3
Peak Locate Performed on: 2-19-96 8:42:25 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.57	0.1127	10.94	4.74
2	76.22	0.1159	13.13	7.05
3	89.00	0.2994	15.43	4.34
4	94.37	0.1048	16.27	5.76
5	110.58	0.1427	19.09	3.75
6	269.62	0.0445	46.67	22.63
7	308.20	0.1120	53.37	8.49
8	366.24	0.0832	63.43	16.40
9	391.39	0.3046	67.79	3.45
10	432.85	0.0448	74.98	28.43
11	445.96	0.0213	77.25	36.88
12	458.69	0.1866	79.47	6.74
13	469.08	0.2703	81.24	5.92
14	484.90	0.4888	84.01	4.87
15	504.71	0.1444	87.39	11.65
16	519.67	0.0926	90.06	12.00
17	535.00	0.1231	92.79	10.87
18	547.97	0.1788	94.87	4.66
19	574.95	0.2536	99.63	3.47
20	746.09	0.2098	129.31	5.80
21	831.18	0.2889	144.06	4.96
22	890.53	0.8137	154.36	3.00
23	943.21	0.3584	163.49	3.50
24	1074.90	0.1107	186.33	12.54
25	1138.40	0.3762	197.35	3.59
26	1208.80	0.3435	209.56	4.73
27	1378.74	0.0712	239.02	21.39
28	1398.33	0.0751	242.39	16.37
29	1602.38	0.4058	277.81	3.15
30	1705.63	0.0553	295.72	25.00
31	1733.29	0.3885	300.52	3.37
32	1954.76	0.2078	338.92	6.79
33	2033.16	0.0536	352.52	30.22
34	2950.92	0.5506	511.69	3.22
35	3050.05	0.3698	528.88	4.12
36	3368.89	0.2137	584.17	7.71
37	3520.36	0.0746	610.44	20.89

ors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-123-GAM3
Peak Analysis Performed on: 2-19-96 8:42:37 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.57	10.94	7.93E+02	50.02	9.07E+02
	2	73-	79	76.22	13.13	1.83E+03	61.82	1.05E+03
M	3	85-	98	89.47	15.43	1.15E+03	143.87	1.38E+03
m	4	85-	98	94.30	16.27	1.63E+03	148.33	1.22E+03
	5	107-	114	110.58	19.09	3.16E+02	48.70	1.02E+03
	6	263-	275	269.62	46.67	2.64E+03	68.85	7.99E+02
	7	302-	313	308.20	53.37	4.40E+02	46.54	6.90E+02
	8	359-	373	366.24	63.43	1.28E+03	64.72	1.01E+03
	9	384-	396	391.39	67.79	1.98E+02	48.61	8.23E+02
M	10	426-	474	432.85	74.98	3.58E+03	92.22	8.21E+02
m	11	426-	474	445.92	77.25	6.11E+03	128.82	7.12E+02
m	12	426-	474	458.70	79.47	3.85E+02	32.61	6.42E+02
[redacted]	13	426-	474	468.94	81.24	3.44E+02	31.67	6.24E+02
	14	477-	491	484.90	84.01	8.04E+02	56.72	8.39E+02
M	15	497-	552	504.40	87.39	2.07E+03	120.54	9.23E+02
m	16	497-	552	519.77	90.06	1.03E+03	88.92	9.40E+02
m	17	497-	552	535.54	92.79	1.96E+03	117.06	8.48E+02
m	18	497-	552	547.54	94.87	1.85E+02	55.64	6.68E+02
	19	567-	578	574.95	99.63	1.21E+02	41.55	6.35E+02
	20	741-	751	746.09	129.31	9.22E+01	37.51	5.49E+02
	21	823-	836	831.18	144.06	2.32E+02	44.42	6.33E+02
	22	883-	897	890.53	154.36	1.02E+02	44.88	6.65E+02
	23	938-	950	943.21	163.49	7.60E+01	37.86	5.15E+02
	24	1067-	1082	1074.90	186.33	1.48E+03	58.35	6.42E+02
	25	1132-	1147	1138.40	197.35	5.28E+01	45.06	6.58E+02
	26	1202-	1216	1208.80	209.56	1.82E+02	37.11	4.15E+02
M	27	1371-	1408	1378.72	239.02	1.80E+03	75.92	4.37E+02
m	28	1371-	1408	1398.12	242.39	1.23E+03	63.79	3.91E+02
	29	1595-	1610	1602.38	277.81	8.45E+01	32.67	3.27E+02
	30	1696-	1716	1705.63	295.72	2.30E+03	61.49	4.12E+02
	31	1725-	1741	1733.29	300.52	5.02E+01	33.37	3.40E+02
	32	1944-	1962	1954.76	338.92	2.15E+02	39.18	3.90E+02
	33	2021-	2042	2033.16	352.52	3.36E+03	68.95	3.72E+02
	34	2925-	2998	2950.92	511.69	3.82E+02	96.64	8.57E+02
	35	3040-	3064	3050.05	528.88	-2.63E+01	32.50	2.62E+02
	36	3354-	3382	3368.89	584.17	3.42E+02	38.89	2.53E+02
	37	3505-	3535	3520.36	610.44	1.85E+03	55.70	2.57E+02

[redacted] First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-123-GAM3
Peak Analysis Performed on: 2-19-96 8:42:25 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	10.94	7.93E+02	50.02	1.57E+02	3.08E+01	6.36E+02	5.88E+01
	2	13.13	1.83E+03	61.82			1.83E+03	6.18E+01
M	3	15.43	1.15E+03	143.87			1.15E+03	1.44E+02
m	4	16.27	1.63E+03	148.33			1.63E+03	1.48E+02
	5	19.09	3.16E+02	48.70	-1.92E-01	1.63E+01	3.16E+02	5.14E+01
	6	46.67	2.64E+03	68.85	1.16E+01	3.50E+01	2.63E+03	7.72E+01
	7	53.37	4.40E+02	46.54			4.40E+02	4.65E+01
	8	63.43	1.28E+03	64.72	7.25E+01	2.49E+01	1.21E+03	6.94E+01
	9	67.79	1.98E+02	48.61			1.98E+02	4.86E+01
M	10	74.98	3.58E+03	92.22	4.70E+01	1.89E+01	3.54E+03	9.41E+01
m	11	77.25	6.11E+03	128.82	6.88E+01	2.55E+01	6.04E+03	1.31E+02
m	12	79.47	3.85E+02	32.61			3.85E+02	3.26E+01
m	13	81.24	3.44E+02	31.67			3.44E+02	3.17E+01
	14	84.01	8.04E+02	56.72	-3.10E+01	1.96E+01	8.35E+02	6.00E+01
M	15	87.39	2.07E+03	120.54			2.07E+03	1.21E+02
	16	90.06	1.03E+03	88.92			1.03E+03	8.89E+01
m	17	92.79	1.96E+03	117.06	2.61E+02	4.01E+01	1.70E+03	1.24E+02
m	18	94.87	1.85E+02	55.64	2.42E+01	1.36E+01	1.60E+02	5.73E+01
	19	99.63	1.21E+02	41.55			1.21E+02	4.15E+01
	20	129.31	9.22E+01	37.51			9.22E+01	3.75E+01
	21	144.06	2.32E+02	44.42	4.83E+01	2.07E+01	1.84E+02	4.90E+01
	22	154.36	1.02E+02	44.88			1.02E+02	4.49E+01
	23	163.49	7.60E+01	37.86			7.60E+01	3.79E+01
	24	186.33	1.48E+03	58.35	1.65E+02	2.92E+01	1.31E+03	6.53E+01
	25	197.35	5.28E+01	45.06	5.02E+01	2.63E+01	2.63E+00	5.22E+01
	26	209.56	1.82E+02	37.11	-2.56E+01	2.49E+01	2.07E+02	4.47E+01
M	27	239.02	1.80E+03	75.92	7.88E+01	2.53E+01	1.72E+03	8.00E+01
m	28	242.39	1.23E+03	63.79			1.23E+03	6.38E+01
	29	277.81	8.45E+01	32.67			8.45E+01	3.27E+01
	30	295.72	2.30E+03	61.49	1.05E+01	4.02E+01	2.29E+03	7.35E+01
	31	300.52	5.02E+01	33.37			5.02E+01	3.34E+01
	32	338.92	2.15E+02	39.18			2.15E+02	3.92E+01
	33	352.52	3.36E+03	68.95	8.80E+01	2.36E+01	3.27E+03	7.29E+01
	34	511.69	3.82E+02	96.64	3.07E+02	7.27E+01	7.51E+01	1.21E+02
	35	528.88	-2.63E+01	32.50			-2.63E+01	3.25E+01
	36	584.17	3.42E+02	38.89	2.12E+01	1.69E+01	3.21E+02	4.24E+01
	37	610.44	1.85E+03	55.70	4.28E+01	1.95E+01	1.81E+03	5.90E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-123-GAM3
Peak Analysis Performed on: 2-19-96 8:42:25 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	10.94	7.93E+02	50.02	1.57E+02	3.08E+01	6.36E+02	5.88E+01
	2	13.13	1.83E+03	61.82			1.83E+03	6.18E+01
M	3	15.43	1.15E+03	143.87			1.15E+03	1.44E+02
m	4	16.27	1.63E+03	148.33			1.63E+03	1.48E+02
	5	19.09	3.16E+02	48.70	-1.92E-01	1.63E+01	3.16E+02	5.14E+01
	6	46.67	2.64E+03	68.85	1.16E+01	3.50E+01	2.63E+03	7.72E+01
	7	53.37	4.40E+02	46.54			4.40E+02	4.65E+01
	8	63.43	1.28E+03	64.72	7.25E+01	2.49E+01	1.21E+03	6.94E+01
	9	67.79	1.98E+02	48.61			1.98E+02	4.86E+01
	10	74.98	3.58E+03	92.22	4.70E+01	1.89E+01	3.54E+03	9.41E+01
m	11	77.25	6.11E+03	128.82	6.88E+01	2.55E+01	6.04E+03	1.31E+02
m	12	79.47	3.85E+02	32.61			3.85E+02	3.26E+01
m	13	81.24	3.44E+02	31.67			3.44E+02	3.17E+01
	14	84.01	8.04E+02	56.72	-3.10E+01	1.96E+01	8.35E+02	6.00E+01
M	15	87.39	2.07E+03	120.54			2.07E+03	1.21E+02
m	16	90.06	1.03E+03	88.92			1.03E+03	8.89E+01
m	17	92.79	1.96E+03	117.06	2.61E+02	4.01E+01	1.70E+03	1.24E+02
m	18	94.87	1.85E+02	55.64	2.42E+01	1.36E+01	1.60E+02	5.73E+01
	19	99.63	1.21E+02	41.55			1.21E+02	4.15E+01
	20	129.31	9.22E+01	37.51			9.22E+01	3.75E+01
	21	144.06	2.32E+02	44.42	4.83E+01	2.07E+01	1.84E+02	4.90E+01
	22	154.36	1.02E+02	44.88			1.02E+02	4.49E+01
	23	163.49	7.60E+01	37.86			7.60E+01	3.79E+01
	24	186.33	1.48E+03	58.35	1.65E+02	2.92E+01	1.31E+03	6.53E+01
	25	197.35	5.28E+01	45.06	5.02E+01	2.63E+01	2.63E+00	5.22E+01
	26	209.56	1.82E+02	37.11	-2.56E+01	2.49E+01	2.07E+02	4.47E+01
M	27	239.02	1.80E+03	75.92	7.88E+01	2.53E+01	1.72E+03	8.00E+01
m	28	242.39	1.23E+03	63.79			1.23E+03	6.38E+01
	29	277.81	8.45E+01	32.67			8.45E+01	3.27E+01
	30	295.72	2.30E+03	61.49	1.05E+01	4.02E+01	2.29E+03	7.35E+01
	31	300.52	5.02E+01	33.37			5.02E+01	3.34E+01
	32	338.92	2.15E+02	39.18			2.15E+02	3.92E+01
	33	352.52	3.36E+03	68.95	8.80E+01	2.36E+01	3.27E+03	7.29E+01
	34	511.69	3.82E+02	96.64	3.07E+02	7.27E+01	7.51E+01	1.21E+02
	35	528.88	-2.63E+01	32.50			-2.63E+01	3.25E+01
	36	584.17	3.42E+02	38.89	2.12E+01	1.69E+01	3.21E+02	4.24E+01
	37	610.44	1.85E+03	55.70	4.28E+01	1.95E+01	1.81E+03	5.90E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

ors quoted at 1.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***********************************************************************

Report Generated On              :  2-26-96  8:37:38 AM

Sample Title                     : NOPI-466-GAM1
Spectrum Description             : NOPI-466-GAM1
Sample Identification            : NP466_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-23-96  8:33:29 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80005.6 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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0.024 log x + 0.961

0.074 log x + 6.851

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Locate Performed on: 2-26-96 8:36:54 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.19	0.4335	6.36	2.02
2	47.78	0.2905	8.20	2.84
3	63.28	0.1648	10.89	4.41
4	75.89	0.1445	13.08	7.18
5	88.92	0.4012	15.42	3.56
6	94.43	0.0859	16.25	6.21
7	103.31	0.2872	17.97	2.37
8	110.66	0.1599	19.08	3.98
9	148.69	0.1324	25.73	5.17
10	159.16	0.3208	27.52	2.73
11	178.00	0.0000	30.79	2.10
12	193.37	0.2188	33.45	2.71
13	230.50	0.1260	39.89	3.67
14	256.87	0.5361	44.38	2.06
15	269.58	0.0703	46.66	19.00
16	308.40	0.1362	53.40	7.52
17	366.10	0.0514	63.41	16.03
18	390.98	0.2667	67.72	3.23
19	421.64	0.3843	73.10	2.69
20	432.69	0.0459	74.96	24.44
21	445.88	0.0369	77.24	33.83
22	458.63	0.2052	79.48	5.38
23	468.81	0.2379	81.21	5.52
24	484.87	0.1742	84.06	7.61
25	494.85	0.4290	85.05	2.21
26	504.51	0.2361	87.38	9.15
27	519.49	0.1058	90.04	9.01
28	534.92	0.1211	92.79	10.70
29	548.07	1.0942	94.69	2.15
30	568.68	0.4554	98.43	2.34
31	575.93	0.2850	99.73	3.08
32	610.21	0.4043	105.74	2.10
33	651.66	0.3897	112.95	2.95
34	667.06	0.6562	115.61	2.12
35	707.45	0.6231	122.61	2.02
36	746.30	0.4437	129.35	2.82
37	831.14	0.2826	144.06	4.41
38	845.31	1.0971	146.52	2.23
39	874.81	0.4354	151.61	2.08
40	880.86	0.4138	152.66	2.26
41	890.36	0.5304	154.33	2.94

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	944.54	0.6419	163.72	2.37
43	1074.86	0.1114	186.33	12.64
44	1138.51	0.2794	197.36	3.33
45	1184.56	0.4974	205.35	2.17
46	1208.93	0.3591	209.58	3.53
47	1298.47	0.5358	225.11	2.20
48	1378.94	0.0580	239.05	19.66
49	1398.38	0.1081	242.39	12.72
50	1482.04	0.6896	256.94	2.01
51	1495.99	0.4664	259.36	3.11
52	1559.00	0.7812	270.29	2.29
53	1584.39	0.7893	274.68	2.17
54	1602.71	0.5849	277.92	2.28
55	1633.20	0.4548	283.16	2.53
56	1682.78	0.4733	291.76	3.17
57	1705.64	0.0814	295.72	19.26
58	1733.10	0.4813	300.48	3.32
59	1889.16	0.5508	327.55	2.60
60	1925.63	0.7958	333.87	2.07
61	1954.20	0.4305	338.83	4.19
62	2013.61	0.4218	349.02	2.43
63	2033.13	0.0594	352.53	25.20
64	2197.26	0.5879	380.98	2.14
65	2274.90	0.5826	394.45	2.15
66	2327.05	0.4484	403.47	2.67
67	2338.96	0.5982	405.61	2.19
68	2356.28	0.4833	408.48	2.59
69	2367.59	0.6828	410.58	2.27
70	2422.10	0.5341	419.97	2.33
71	2532.64	0.6185	439.15	2.16
72	2673.08	0.8638	463.50	2.06
73	2701.88	0.6931	468.50	2.14
74	2719.09	0.7994	471.48	2.02
75	2836.10	0.6800	491.77	2.18
76	2866.23	0.4939	497.00	2.86
77	2950.74	0.4283	511.66	3.95
78	2994.83	0.4558	519.30	2.54
79	3081.86	0.7867	534.40	2.08
80	3251.00	0.6255	563.73	2.48
81	3326.28	0.7027	576.79	2.36
82	3370.05	0.2706	584.38	6.45
83	3490.60	0.3963	605.29	3.14
84	3520.04	0.1319	610.46	14.23
85	3669.64	0.7321	636.33	2.24
86	3749.32	0.9765	650.15	2.13
87	3810.31	0.6371	660.73	2.15
88	4002.48	0.5380	693.79	2.32
89	4028.72	1.0241	697.83	3.43

Errors quoted at 1.000 sigma

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*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Analysis Performed on: 2-26-96 8:37:12 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.19	6.36	1.38E+02	40.84	9.11E+02
	2	45-	50	47.78	8.20	9.45E+00	39.54	8.75E+02
	3	60-	66	63.28	10.89	7.08E+02	49.78	9.38E+02
	4	72-	78	75.89	13.08	1.79E+03	61.45	1.06E+03
M	5	84-	114	89.40	15.42	1.07E+03	119.50	1.37E+03
m	6	84-	114	94.21	16.25	1.69E+03	143.72	1.44E+03
m	7	84-	114	104.08	17.97	1.04E+02	75.85	1.35E+03
m	8	84-	114	110.51	19.08	4.05E+02	90.28	1.08E+03
M	9	145-	164	148.85	25.73	1.39E+02	40.18	5.34E+02
m	10	145-	164	159.17	27.52	1.45E+02	41.50	4.89E+02
	11	175-	180	178.00	30.79	-1.66E+01	26.45	4.04E+02
	12	190-	195	193.37	33.45	-6.35E+00	26.64	4.06E+02
	13	224-	233	230.50	39.89	5.47E+01	39.39	6.61E+02
M	14	253-	275	256.37	44.38	2.16E+01	15.48	5.87E+02
m	15	253-	275	269.54	46.66	2.28E+03	90.68	5.88E+02
	16	302-	314	308.40	53.40	4.55E+02	47.61	6.89E+02
	17	359-	373	366.10	63.41	1.39E+03	63.85	9.32E+02
	18	383-	395	390.98	67.72	1.46E+02	48.26	8.27E+02
M	19	417-	473	421.96	73.10	1.18E+02	23.62	7.54E+02
m	20	417-	473	432.71	74.96	3.46E+03	88.94	8.07E+02
m	21	417-	473	445.88	77.24	5.96E+03	133.06	7.75E+02
m	22	417-	473	458.76	79.48	3.27E+02	27.60	7.52E+02
m	23	417-	473	468.76	81.21	2.69E+02	26.61	6.84E+02
M	24	479-	552	485.21	84.06	6.86E+02	70.63	9.42E+02
m	25	479-	552	490.88	85.05	5.24E+01	51.00	1.06E+03
m	26	479-	552	504.34	87.38	2.02E+03	114.26	1.03E+03
m	27	479-	552	519.65	90.04	1.06E+03	80.53	1.04E+03
m	28	479-	552	535.52	92.79	1.98E+03	113.17	9.97E+02
m	29	479-	552	546.47	94.69	2.12E+02	48.45	8.07E+02
M	30	561-	579	568.03	98.43	1.27E+02	36.47	7.22E+02
m	31	561-	579	575.52	99.73	1.15E+02	34.13	5.39E+02
	32	602-	617	610.21	105.74	1.62E+02	49.18	7.50E+02
M	33	646-	672	651.76	112.95	6.51E+01	52.14	5.09E+02
m	34	646-	672	667.08	115.61	3.27E+01	27.61	5.21E+02
	35	702-	714	707.45	122.61	-5.06E+01	40.34	6.37E+02
	36	738-	753	746.30	129.35	1.65E+02	49.06	7.43E+02
	37	823-	852	831.14	144.06	1.32E+02	82.61	1.39E+03
M	39	869-	897	874.66	151.61	2.53E+01	19.40	5.09E+02
	40	869-	897	880.73	152.66	1.19E+01	14.55	5.28E+02
m	41	869-	897	890.37	154.33	9.52E+01	58.38	5.63E+02
	42	938-	949	944.54	163.72	7.10E+01	36.16	4.91E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1066-	1083	1074.86	186.33	1.49E+03	61.82	7.16E+02
	44	1129-	1147	1138.51	197.36	1.22E+02	49.01	6.75E+02
	45	1178-	1192	1184.56	205.35	1.52E+01	38.67	5.14E+02
	46	1200-	1214	1208.93	209.58	1.28E+02	38.60	4.72E+02
	47	1290-	1304	1298.47	225.11	-3.27E+01	34.60	4.27E+02
M	48	1370-	1407	1378.90	239.05	1.72E+03	73.31	5.36E+02
m	49	1370-	1407	1398.11	242.39	1.19E+03	60.86	4.32E+02
	51	1474-	1503	1495.99	259.36	1.05E+01	60.79	7.76E+02
	52	1551-	1565	1559.00	270.29	1.05E+02	34.50	3.76E+02
M	53	1577-	1610	1584.32	274.68	5.08E+01	42.07	3.26E+02
m	54	1577-	1610	1603.00	277.92	2.88E+01	24.58	3.43E+02
	55	1625-	1644	1633.20	283.16	9.59E+00	39.22	4.36E+02
	57	1675-	1716	1705.64	295.72	2.19E+03	92.80	9.30E+02
	58	1724-	1744	1733.10	300.48	1.38E+02	38.14	3.63E+02
	59	1880-	1900	1889.16	327.55	3.14E+01	38.80	4.07E+02
	60	1917-	1933	1925.63	333.87	-3.15E+01	33.77	3.75E+02
	61	1946-	1962	1954.20	338.83	1.76E+02	36.50	3.70E+02
M	62	2005-	2043	2012.96	349.02	2.37E+01	16.88	3.66E+02
m	63	2005-	2043	2033.20	352.53	3.51E+03	91.48	3.70E+02
	64	2188-	2206	2197.26	380.98	-3.94E+01	34.05	3.49E+02
	65	2262-	2285	2274.90	394.45	1.73E+01	40.33	4.02E+02
M	66	2318-	2378	2326.95	403.47	1.41E+01	20.93	2.65E+02
m	67	2318-	2378	2339.27	405.61	1.42E+01	21.17	2.72E+02
	68	2318-	2378	2355.84	408.48	2.18E+01	32.45	3.00E+02
m	69	2318-	2378	2367.95	410.58	1.27E+01	18.87	2.91E+02
	70	2413-	2431	2422.10	419.97	5.33E+00	33.02	3.21E+02
	71	2522-	2543	2532.64	439.15	-1.69E+00	32.88	2.89E+02
	72	2663-	2685	2673.08	463.50	3.02E+01	33.34	2.79E+02
	75	2826-	2846	2836.10	491.77	-3.13E+01	30.46	2.63E+02
	76	2856-	2878	2866.23	497.00	-4.73E+01	32.30	2.81E+02
	77	2924-	3017	2950.74	511.66	5.32E+02	112.74	9.24E+02
	79	3067-	3091	3081.86	534.40	1.79E+01	32.57	2.49E+02
	80	3239-	3262	3251.00	563.73	-4.94E+00	32.60	2.67E+02
	81	3313-	3337	3326.28	576.79	4.77E-01	33.02	2.61E+02
	82	3356-	3381	3370.05	584.38	2.93E+02	36.46	2.44E+02
M	83	3477-	3532	3490.63	605.29	4.42E+01	16.73	2.14E+02
m	84	3477-	3532	3520.43	610.46	1.74E+03	77.28	3.22E+02
	85	3655-	3680	3669.64	636.33	-1.14E+01	30.92	2.27E+02
	86	3737-	3764	3749.32	650.15	2.55E+01	30.91	2.07E+02
	87	3798-	3825	3810.31	660.73	1.89E+01	31.27	2.13E+02
M	88	3986-	4044	4000.94	693.79	8.39E+01	20.14	1.39E+02
m	89	3986-	4044	4024.25	697.83	1.70E+02	29.76	1.51E+02

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Analysis Performed on: 2-26-96 8:36:54 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.36	1.38E+02	40.84	4.00E+01	3.04E+01	9.79E+01	5.09E+01
	2	8.20	9.45E+00	39.54			9.45E+00	3.95E+01
	3	10.89	7.08E+02	49.78	1.57E+02	3.08E+01	5.51E+02	5.86E+01
	4	13.08	1.79E+03	61.45			1.79E+03	6.14E+01
M	5	15.42	1.07E+03	119.50			1.07E+03	1.20E+02
m	6	16.25	1.69E+03	143.72			1.69E+03	1.44E+02
m	7	17.97	1.04E+02	75.85			1.04E+02	7.58E+01
m	8	19.08	4.05E+02	90.28	-1.92E-01	1.63E+01	4.05E+02	9.17E+01
M	9	25.73	1.39E+02	40.18			1.39E+02	4.02E+01
m	10	27.52	1.45E+02	41.50	-1.27E+01	1.34E+01	1.57E+02	4.36E+01
	11	30.79	-1.66E+01	26.45			-1.66E+01	2.64E+01
	12	33.45	-6.35E+00	26.64	1.36E+01	1.75E+01	-1.99E+01	3.19E+01
	13	39.89	5.47E+01	39.39			5.47E+01	3.94E+01
M	14	44.38	2.16E+01	15.48	6.50E-01	1.97E+00	2.09E+01	1.56E+01
m	15	46.66	2.28E+03	90.68	1.16E+01	3.50E+01	2.27E+03	9.72E+01
	16	53.40	4.55E+02	47.61			4.55E+02	4.76E+01
	17	63.41	1.39E+03	63.85	7.25E+01	2.49E+01	1.31E+03	6.85E+01
	18	67.72	1.46E+02	48.26			1.46E+02	4.83E+01
M	19	73.10	1.18E+02	23.62			1.18E+02	2.36E+01
m	20	74.96	3.46E+03	88.94	4.70E+01	1.89E+01	3.41E+03	9.09E+01
m	21	77.24	5.96E+03	133.06	6.88E+01	2.55E+01	5.89E+03	1.35E+02
m	22	79.48	3.27E+02	27.60			3.27E+02	2.76E+01
m	23	81.21	2.69E+02	26.61			2.69E+02	2.66E+01
M	24	84.06	6.86E+02	70.63	-3.10E+01	1.96E+01	7.17E+02	7.33E+01
m	25	85.05	5.24E+01	51.00			5.24E+01	5.10E+01
m	26	87.38	2.02E+03	114.26			2.02E+03	1.14E+02
m	27	90.04	1.06E+03	80.53			1.06E+03	8.05E+01
m	28	92.79	1.98E+03	113.17	2.61E+02	4.01E+01	1.72E+03	1.20E+02
m	29	94.69	2.12E+02	48.45	2.42E+01	1.36E+01	1.88E+02	5.03E+01
M	30	98.43	1.27E+02	36.47			1.27E+02	3.65E+01
m	31	99.73	1.15E+02	34.13			1.15E+02	3.41E+01
	32	105.74	1.62E+02	49.18			1.62E+02	4.92E+01
M	33	112.95	6.51E+01	52.14			6.51E+01	5.21E+01
m	34	115.61	3.27E+01	27.61			3.27E+01	2.76E+01
	35	122.61	-5.06E+01	40.34			-5.06E+01	4.03E+01
	36	129.35	1.65E+02	49.06			1.65E+02	4.91E+01
	37	144.06	1.32E+02	82.61	4.83E+01	2.07E+01	8.37E+01	8.52E+01
	38	146.52	0.00E+00	0.00			0.00E+00	0.00E+00
M	39	151.61	2.53E+01	19.40	2.94E+01	2.64E+01	-4.09E+00	3.27E+01
m	40	152.66	1.19E+01	14.55			1.19E+01	1.46E+01
m	41	154.33	9.52E+01	58.38			9.52E+01	5.84E+01
	42	163.72	7.10E+01	36.16			7.10E+01	3.62E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	186.33	1.49E+03	61.82	1.65E+02	2.92E+01	1.33E+03	6.84E+01
	44	197.36	1.22E+02	49.01	5.02E+01	2.63E+01	7.19E+01	5.56E+01
	45	205.35	1.52E+01	38.67	-8.75E+00	2.28E+01	2.40E+01	4.49E+01
	46	209.58	1.28E+02	38.60	-2.56E+01	2.49E+01	1.54E+02	4.60E+01
	47	225.11	-3.27E+01	34.60			-3.27E+01	3.46E+01
M	48	239.05	1.72E+03	73.31	7.88E+01	2.53E+01	1.64E+03	7.75E+01
m	49	242.39	1.19E+03	60.86			1.19E+03	6.09E+01
	50	256.94	0.00E+00	0.00			0.00E+00	0.00E+00
	51	259.36	1.05E+01	60.79	1.45E+01	2.66E+01	-4.07E+00	6.64E+01
	52	270.29	1.05E+02	34.50			1.05E+02	3.45E+01
M	53	274.68	5.08E+01	42.07			5.08E+01	4.21E+01
m	54	277.92	2.88E+01	24.58			2.88E+01	2.46E+01
	55	283.16	9.59E+00	39.22			9.59E+00	3.92E+01
	56	291.76	0.00E+00	0.00			0.00E+00	0.00E+00
	57	295.72	2.19E+03	92.80	1.05E+01	4.02E+01	2.18E+03	1.01E+02
	58	300.48	1.38E+02	38.14			1.38E+02	3.81E+01
	59	327.55	3.14E+01	38.80			3.14E+01	3.88E+01
	60	333.87	-3.15E+01	33.77			-3.15E+01	3.38E+01
	61	338.83	1.76E+02	36.50			1.76E+02	3.65E+01
M	62	349.02	2.37E+01	16.88	4.52E+01	1.95E+01	-2.14E+01	2.58E+01
m	63	352.53	3.51E+03	91.48	8.80E+01	2.36E+01	3.42E+03	9.45E+01
	64	380.98	-3.94E+01	34.05			-3.94E+01	3.41E+01
	65	394.45	1.73E+01	40.33			1.73E+01	4.03E+01
[illegible]	66	403.47	1.41E+01	20.93			1.41E+01	2.09E+01
m	67	405.61	1.42E+01	21.17			1.42E+01	2.12E+01
m	68	408.48	2.18E+01	32.45			2.18E+01	3.24E+01
m	69	410.58	1.27E+01	18.87			1.27E+01	1.89E+01
	70	419.97	5.33E+00	33.02			5.33E+00	3.30E+01
	71	439.15	-1.69E+00	32.88			-1.69E+00	3.29E+01
	72	463.50	3.02E+01	33.34			3.02E+01	3.33E+01
	73	468.50	0.00E+00	0.00	1.48E+01	2.04E+01	-1.48E+01	2.04E+01
	74	471.48	0.00E+00	0.00			0.00E+00	0.00E+00
	75	491.77	-3.13E+01	30.46			-3.13E+01	3.05E+01
	76	497.00	-4.73E+01	32.30			-4.73E+01	3.23E+01
	77	511.66	5.32E+02	112.74	3.07E+02	7.27E+01	2.25E+02	1.34E+02
	78	519.30	0.00E+00	0.00			0.00E+00	0.00E+00
	79	534.40	1.79E+01	32.57			1.79E+01	3.26E+01
	80	563.73	-4.94E+00	32.60			-4.94E+00	3.26E+01
	81	576.79	4.77E-01	33.02			4.77E-01	3.30E+01
	82	584.38	2.93E+02	36.46	2.12E+01	1.69E+01	2.72E+02	4.02E+01
M	83	605.29	4.42E+01	16.73			4.42E+01	1.67E+01
m	84	610.46	1.74E+03	77.28	4.28E+01	1.95E+01	1.69E+03	7.97E+01
	85	636.33	-1.14E+01	30.92			-1.14E+01	3.09E+01
	86	650.15	2.55E+01	30.91			2.55E+01	3.09E+01
	87	660.73	1.89E+01	31.27	-2.10E+01	1.72E+01	4.00E+01	3.57E+01
M	88	693.79	8.39E+01	20.14			8.39E+01	2.01E+01
m	89	697.83	1.70E+02	29.76	4.50E+01	1.05E+01	1.25E+02	3.15E+01

[illegible] First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Analysis Performed on: 2-26-96 8:36:54 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.36	1.38E+02	40.84	4.00E+01	3.04E+01	9.79E+01	5.09E+01
	2	8.20	9.45E+00	39.54			9.45E+00	3.95E+01
	3	10.89	7.08E+02	49.78	1.57E+02	3.08E+01	5.51E+02	5.86E+01
	4	13.08	1.79E+03	61.45			1.79E+03	6.14E+01
M	5	15.42	1.07E+03	119.50			1.07E+03	1.20E+02
m	6	16.25	1.69E+03	143.72			1.69E+03	1.44E+02
m	7	17.97	1.04E+02	75.85			1.04E+02	7.58E+01
m	8	19.08	4.05E+02	90.28	-1.92E-01	1.63E+01	4.05E+02	9.17E+01
M	9	25.73	1.39E+02	40.18			1.39E+02	4.02E+01
	10	27.52	1.45E+02	41.50	-1.27E+01	1.34E+01	1.57E+02	4.36E+01
	11	30.79	-1.66E+01	26.45			-1.66E+01	2.64E+01
	12	33.45	-6.35E+00	26.64	1.36E+01	1.75E+01	-1.99E+01	3.19E+01
	13	39.89	5.47E+01	39.39			5.47E+01	3.94E+01
M	14	44.38	2.16E+01	15.48	6.50E-01	1.97E+00	2.09E+01	1.56E+01
m	15	46.66	2.28E+03	90.68	1.16E+01	3.50E+01	2.27E+03	9.72E+01
	16	53.40	4.55E+02	47.61			4.55E+02	4.76E+01
	17	63.41	1.39E+03	63.85	7.25E+01	2.49E+01	1.31E+03	6.85E+01
	18	67.72	1.46E+02	48.26			1.46E+02	4.83E+01
M	19	73.10	1.18E+02	23.62			1.18E+02	2.36E+01
m	20	74.96	3.46E+03	88.94	4.70E+01	1.89E+01	3.41E+03	9.09E+01
m	21	77.24	5.96E+03	133.06	6.88E+01	2.55E+01	5.89E+03	1.35E+02
m	22	79.48	3.27E+02	27.60			3.27E+02	2.76E+01
m	23	81.21	2.69E+02	26.61			2.69E+02	2.66E+01
M	24	84.06	6.86E+02	70.63	-3.10E+01	1.96E+01	7.17E+02	7.33E+01
m	25	85.05	5.24E+01	51.00			5.24E+01	5.10E+01
m	26	87.38	2.02E+03	114.26			2.02E+03	1.14E+02
m	27	90.04	1.06E+03	80.53			1.06E+03	8.05E+01
m	28	92.79	1.98E+03	113.17	2.61E+02	4.01E+01	1.72E+03	1.20E+02
m	29	94.69	2.12E+02	48.45	2.42E+01	1.36E+01	1.88E+02	5.03E+01
M	30	98.43	1.27E+02	36.47			1.27E+02	3.65E+01
m	31	99.73	1.15E+02	34.13			1.15E+02	3.41E+01
	32	105.74	1.62E+02	49.18			1.62E+02	4.92E+01
M	33	112.95	6.51E+01	52.14			6.51E+01	5.21E+01
m	34	115.61	3.27E+01	27.61			3.27E+01	2.76E+01
	35	122.61	-5.06E+01	40.34			-5.06E+01	4.03E+01
	36	129.35	1.65E+02	49.06			1.65E+02	4.91E+01
	37	144.06	1.32E+02	82.61	4.83E+01	2.07E+01	8.37E+01	8.52E+01
	38	146.52	0.00E+00	0.00			0.00E+00	0.00E+00
M	39	151.61	2.53E+01	19.40	2.94E+01	2.64E+01	-4.09E+00	3.27E+01
m	40	152.66	1.19E+01	14.55			1.19E+01	1.46E+01

m 41	154.33	9.52E+01	58.38		9.52E+01	5.84E+01
42	163.72	7.10E+01	36.16		7.10E+01	3.62E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	186.33	1.49E+03	61.82	1.65E+02	2.92E+01	1.33E+03	6.84E+01
	44	197.36	1.22E+02	49.01	5.02E+01	2.63E+01	7.19E+01	5.56E+01
	45	205.35	1.52E+01	38.67	-8.75E+00	2.28E+01	2.40E+01	4.49E+01
	46	209.58	1.28E+02	38.60	-2.56E+01	2.49E+01	1.54E+02	4.60E+01
	47	225.11	-3.27E+01	34.60			-3.27E+01	3.46E+01
M	48	239.05	1.72E+03	73.31	7.88E+01	2.53E+01	1.64E+03	7.75E+01
m	49	242.39	1.19E+03	60.86			1.19E+03	6.09E+01
	50	256.94	0.00E+00	0.00			0.00E+00	0.00E+00
	51	259.36	1.05E+01	60.79	1.45E+01	2.66E+01	-4.07E+00	6.64E+01
	52	270.29	1.05E+02	34.50			1.05E+02	3.45E+01
M	53	274.68	5.08E+01	42.07			5.08E+01	4.21E+01
m	54	277.92	2.88E+01	24.58			2.88E+01	2.46E+01
	55	283.16	9.59E+00	39.22			9.59E+00	3.92E+01
	56	291.76	0.00E+00	0.00			0.00E+00	0.00E+00
	57	295.72	2.19E+03	92.80	1.05E+01	4.02E+01	2.18E+03	1.01E+02
	58	300.48	1.38E+02	38.14			1.38E+02	3.81E+01
	59	327.55	3.14E+01	38.80			3.14E+01	3.88E+01
	60	333.87	-3.15E+01	33.77			-3.15E+01	3.38E+01
	61	338.83	1.76E+02	36.50			1.76E+02	3.65E+01
M	62	349.02	2.37E+01	16.88	4.52E+01	1.95E+01	-2.14E+01	2.58E+01
m	63	352.53	3.51E+03	91.48	8.80E+01	2.36E+01	3.42E+03	9.45E+01
	64	380.98	-3.94E+01	34.05			-3.94E+01	3.41E+01
	65	394.45	1.73E+01	40.33			1.73E+01	4.03E+01
	66	403.47	1.41E+01	20.93			1.41E+01	2.09E+01
m	67	405.61	1.42E+01	21.17			1.42E+01	2.12E+01
m	68	408.48	2.18E+01	32.45			2.18E+01	3.24E+01
m	69	410.58	1.27E+01	18.87			1.27E+01	1.89E+01
	70	419.97	5.33E+00	33.02			5.33E+00	3.30E+01
	71	439.15	-1.69E+00	32.88			-1.69E+00	3.29E+01
	72	463.50	3.02E+01	33.34			3.02E+01	3.33E+01
	73	468.50	0.00E+00	0.00	1.48E+01	2.04E+01	-1.48E+01	2.04E+01
	74	471.48	0.00E+00	0.00			0.00E+00	0.00E+00
	75	491.77	-3.13E+01	30.46			-3.13E+01	3.05E+01
	76	497.00	-4.73E+01	32.30			-4.73E+01	3.23E+01
	77	511.66	5.32E+02	112.74	3.07E+02	7.27E+01	2.25E+02	1.34E+02
	78	519.30	0.00E+00	0.00			0.00E+00	0.00E+00
	79	534.40	1.79E+01	32.57			1.79E+01	3.26E+01
	80	563.73	-4.94E+00	32.60			-4.94E+00	3.26E+01
	81	576.79	4.77E-01	33.02			4.77E-01	3.30E+01
	82	584.38	2.93E+02	36.46	2.12E+01	1.69E+01	2.72E+02	4.02E+01
M	83	605.29	4.42E+01	16.73			4.42E+01	1.67E+01
m	84	610.46	1.74E+03	77.28	4.28E+01	1.95E+01	1.69E+03	7.97E+01
	85	636.33	-1.14E+01	30.92			-1.14E+01	3.09E+01
	86	650.15	2.55E+01	30.91			2.55E+01	3.09E+01
	87	660.73	1.89E+01	31.27	-2.10E+01	1.72E+01	4.00E+01	3.57E+01
M	88	693.79	8.39E+01	20.14			8.39E+01	2.01E+01
m	89	697.83	1.70E+02	29.76	4.50E+01	1.05E+01	1.25E+02	3.15E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
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Report Generated On	:	2-23-96 8:35:15 AM
Sample Title	:	NOPI-467-GAM1
Spectrum Description	:	NOPI-467-GAM1
Sample Identification	:	NP467_2
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	2.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	2-22-96 8:39:50 AM
Live Time	:	80000.0 seconds
Real Time	:	80005.1 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

0.012 log x + 6.990

0.062 log x + 0.878

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Locate Performed on: 2-23-96 8:34:29 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.09	0.5283	5.31	2.03
2	37.00	<NA>	6.33	<NA>
3	63.56	0.1566	10.94	3.30
4	75.99	0.4338	13.09	3.97
5	89.00	0.3384	15.43	3.15
6	94.34	0.0981	16.26	6.52
7	110.13	0.3193	19.01	3.12
8	148.63	0.3257	25.73	3.39
9	159.15	0.6869	27.51	2.21
10	212.86	0.4474	36.83	2.83
11	230.60	0.5432	39.91	2.42
12	269.51	0.0826	46.66	17.57
13	290.49	0.4837	50.29	2.53
14	308.23	0.1500	53.37	6.54
15	334.91	0.7808	58.00	2.11
16	366.19	0.0862	63.42	15.17
17	391.58	0.4532	67.83	2.67
18	432.88	0.0532	74.98	24.72
19	446.01	0.0252	77.27	30.55
20	458.63	0.2080	79.46	5.94
21	468.79	0.3204	81.17	3.76
22	485.99	0.3722	84.20	3.91
23	504.77	0.1907	87.42	9.51
24	519.66	0.1044	90.06	10.38
25	535.13	0.1659	92.83	9.88
26	663.94	1.0443	115.06	2.08
27	746.43	0.2792	129.37	3.72
28	773.09	0.3426	133.99	2.44
29	831.08	0.5885	144.05	2.46
30	844.13	0.3521	146.31	2.45
31	890.34	0.5119	154.31	3.06
32	907.21	0.5698	157.21	2.22
33	943.60	0.4098	163.56	2.58
34	1051.78	0.3894	182.32	2.37
35	1075.09	0.0985	186.37	11.96
36	1107.14	0.3541	191.92	2.33
37	1139.01	0.7476	197.45	2.16
38	1197.11	0.6010	207.53	2.06
39	1209.19	0.4328	209.62	3.42
40	1363.49	0.4542	236.36	2.17
41	1379.06	0.0546	239.08	21.35

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1398.67	0.0913	242.42	14.08
43	1431.02	0.6349	248.09	2.40
44	1496.56	0.2674	259.46	3.55
45	1602.50	0.1659	277.83	5.62
46	1664.26	0.4889	288.54	2.44
47	1706.17	0.0707	295.81	19.93
48	1734.06	0.6140	300.65	3.01
49	1763.57	0.5363	305.77	2.61
50	1806.12	0.5625	313.15	2.29
51	1894.91	0.6878	328.54	3.10
52	1955.20	0.2694	339.00	6.55
53	2033.60	0.0536	352.60	23.58
54	2213.81	0.5730	383.85	2.55
55	2237.46	0.3806	387.95	2.61
56	2527.52	0.5832	438.26	2.30
57	2602.57	0.5610	451.27	2.50
58	2676.54	0.5827	464.16	2.64
59	2702.88	0.5847	468.67	2.25
60	2724.36	0.6277	472.33	2.00
61	2778.69	0.3966	481.82	3.18
62	2860.29	0.6271	495.97	2.01
63	2950.81	1.4927	511.67	2.62
64	3018.81	0.5881	523.46	2.60
65	3089.07	0.7321	535.65	2.05
66	3123.99	0.6700	541.70	2.38
67	3369.97	0.3040	584.36	6.43
68	3395.38	0.5350	588.77	2.58
69	3521.08	0.1282	610.57	13.02
70	3598.85	0.6034	624.06	2.65
71	3662.56	0.6622	635.11	2.14
72	4029.43	0.4851	698.73	3.25

Errors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Analysis Performed on: 2-23-96 8:34:47 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	2	29-	39	37.00	6.33	1.20E+01	70.49	2.06E+03
	3	60-	66	63.56	10.94	4.92E+02	45.86	8.51E+02
	4	72-	78	75.99	13.09	1.35E+03	55.42	9.16E+02
M	5	84-	98	89.48	15.43	9.20E+02	101.37	1.15E+03
m	6	84-	98	94.27	16.26	1.51E+03	109.77	1.01E+03
	7	107-	114	110.13	19.01	2.23E+02	44.46	8.75E+02
M	8	145-	164	148.87	25.73	9.12E+01	43.91	4.76E+02
m	9	145-	164	159.09	27.51	5.60E+01	28.12	4.47E+02
	10	210-	217	212.86	36.83	2.02E+01	30.47	4.50E+02
	11	225-	236	230.60	39.91	1.55E+02	41.73	6.34E+02
	12	263-	275	269.51	46.66	1.68E+03	58.08	6.44E+02
	13	284-	294	290.49	50.29	7.18E+01	37.73	5.63E+02
	14	302-	312	308.23	53.37	2.68E+02	40.57	5.80E+02
	15	328-	337	334.91	58.00	2.66E+01	33.17	4.73E+02
	16	360-	372	366.19	63.42	1.14E+03	56.30	7.69E+02
	17	387-	396	391.58	67.83	7.90E+01	37.98	5.99E+02
M	18	426-	475	432.82	74.98	2.65E+03	82.52	7.48E+02
m	19	426-	475	446.03	77.27	4.67E+03	117.95	6.07E+02
m	20	426-	475	458.67	79.46	3.33E+02	30.75	5.62E+02
m	21	426-	475	468.52	81.17	2.06E+02	26.60	5.36E+02
	22	478-	492	485.99	84.20	4.92E+02	53.00	8.02E+02
M	23	497-	542	504.57	87.42	1.36E+03	96.55	9.84E+02
m	24	497-	542	519.79	90.06	6.45E+02	71.85	9.78E+02
m	25	497-	542	535.73	92.83	1.69E+03	107.17	9.11E+02
	26	657-	669	663.94	115.06	1.94E+01	40.33	6.11E+02
	27	741-	754	746.43	129.37	1.37E+02	40.49	5.42E+02
	28	768-	778	773.09	133.99	-2.38E+01	32.60	4.57E+02
	29	826-	849	831.08	144.05	-2.76E+01	65.05	1.06E+03
M	31	882-	912	890.23	154.31	7.47E+01	56.42	4.58E+02
m	32	882-	912	907.00	157.21	2.87E+01	23.48	4.27E+02
	33	938-	948	943.60	163.56	-3.38E+00	32.11	4.32E+02
	34	1044-	1059	1051.78	182.32	-1.66E+01	40.01	5.38E+02
	35	1067-	1082	1075.09	186.37	1.04E+03	50.39	4.98E+02
	36	1101-	1113	1107.14	191.92	-1.26E+00	34.22	4.44E+02
	37	1133-	1146	1139.01	197.45	7.74E+01	37.11	4.72E+02
	39	1191-	1216	1209.19	209.62	-5.30E+00	59.36	8.27E+02
M	40	1353-	1405	1363.37	236.36	3.92E+01	22.89	4.08E+02
m	41	1353-	1405	1379.05	239.08	1.67E+03	88.35	3.92E+02
	42	1353-	1405	1398.32	242.42	7.75E+02	54.27	3.70E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1422-	1438	1431.02	248.09	-1.10E-01	34.98	3.89E+02
	44	1488-	1505	1496.56	259.46	5.09E+01	36.71	3.97E+02
	45	1595-	1613	1602.50	277.83	6.30E+01	36.41	3.73E+02
	46	1656-	1671	1664.26	288.54	-4.10E+01	31.54	3.44E+02
	47	1696-	1715	1706.17	295.81	1.51E+03	52.47	3.55E+02
	48	1726-	1742	1734.06	300.65	7.87E+01	33.76	3.39E+02
	49	1755-	1772	1763.57	305.77	-3.84E+01	33.21	3.50E+02
	50	1795-	1816	1806.12	313.15	-1.29E+01	38.45	3.95E+02
	51	1886-	1902	1894.91	328.54	5.28E+01	31.13	2.93E+02
	52	1946-	1967	1955.20	339.00	3.07E+02	41.15	3.68E+02
	53	2023-	2042	2033.60	352.60	2.16E+03	58.56	3.61E+02
	55	2204-	2247	2237.46	387.95	-5.80E+01	69.83	7.59E+02
	56	2518-	2538	2527.52	438.26	-2.62E+01	32.73	3.02E+02
	57	2589-	2612	2602.57	451.27	7.85E+00	34.81	3.00E+02
M	58	2665-	2737	2676.88	464.16	3.00E+01	77.85	2.29E+02
m	60	2665-	2737	2723.99	472.33	6.27E+00	17.07	2.01E+02
	61	2768-	2788	2778.69	481.82	-1.17E+01	28.36	2.25E+02
	62	2849-	2871	2860.29	495.97	3.14E+01	30.08	2.25E+02
	63	2926-	3001	2950.81	511.67	5.32E+02	86.23	6.48E+02
	64	3006-	3028	3018.81	523.46	-2.51E+01	29.43	2.28E+02
	65	3078-	3099	3089.07	535.65	-3.21E+00	28.71	2.20E+02
	66	3111-	3134	3123.99	541.70	4.89E+01	29.21	2.00E+02
	67	3355-	3406	3369.97	584.36	2.65E+02	62.45	4.72E+02
	69	3506-	3536	3521.08	610.57	1.19E+03	46.30	1.96E+02
	70	3587-	3613	3598.85	624.06	4.33E+01	27.87	1.68E+02
	71	3651-	3673	3662.56	635.11	8.88E-01	27.47	1.94E+02
	72	4016-	4045	4029.43	698.73	5.70E+01	24.41	7.30E+01

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Analysis Performed on: 2-23-96 8:34:29 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	5.31	0.00E+00	0.00			0.00E+00	0.00E+00
	2	6.33	1.20E+01	70.49	4.00E+01	3.04E+01	-2.80E+01	7.68E+01
	3	10.94	4.92E+02	45.86	1.57E+02	3.08E+01	3.35E+02	5.53E+01
	4	13.09	1.35E+03	55.42			1.35E+03	5.54E+01
M	5	15.43	9.20E+02	101.37			9.20E+02	1.01E+02
m	6	16.26	1.51E+03	109.77			1.51E+03	1.10E+02
	7	19.01	2.23E+02	44.46	-1.92E-01	1.63E+01	2.23E+02	4.74E+01
M	8	25.73	9.12E+01	43.91			9.12E+01	4.39E+01
m	9	27.51	5.60E+01	28.12	-1.27E+01	1.34E+01	6.86E+01	3.11E+01
	10	36.83	2.02E+01	30.47			2.02E+01	3.05E+01
	11	39.91	1.55E+02	41.73			1.55E+02	4.17E+01
	12	46.66	1.68E+03	58.08	1.16E+01	3.50E+01	1.67E+03	6.78E+01
	13	50.29	7.18E+01	37.73	-1.20E+01	1.73E+01	8.38E+01	4.15E+01
	14	53.37	2.68E+02	40.57			2.68E+02	4.06E+01
	15	58.00	2.66E+01	33.17			2.66E+01	3.32E+01
	16	63.42	1.14E+03	56.30	7.25E+01	2.49E+01	1.07E+03	6.16E+01
	17	67.83	7.90E+01	37.98			7.90E+01	3.80E+01
M	18	74.98	2.65E+03	82.52	4.70E+01	1.89E+01	2.60E+03	8.46E+01
m	19	77.27	4.67E+03	117.95	6.88E+01	2.55E+01	4.60E+03	1.21E+02
m	20	79.46	3.33E+02	30.75			3.33E+02	3.07E+01
m	21	81.17	2.06E+02	26.60			2.06E+02	2.66E+01
	22	84.20	4.92E+02	53.00	-3.10E+01	1.96E+01	5.23E+02	5.65E+01
M	23	87.42	1.36E+03	96.55			1.36E+03	9.66E+01
m	24	90.06	6.45E+02	71.85			6.45E+02	7.18E+01
m	25	92.83	1.69E+03	107.17	2.61E+02	4.01E+01	1.43E+03	1.14E+02
	26	115.06	1.94E+01	40.33			1.94E+01	4.03E+01
	27	129.37	1.37E+02	40.49			1.37E+02	4.05E+01
	28	133.99	-2.38E+01	32.60			-2.38E+01	3.26E+01
	29	144.05	-2.76E+01	65.05	4.83E+01	2.07E+01	-7.59E+01	6.83E+01
	30	146.31	0.00E+00	0.00			0.00E+00	0.00E+00
M	31	154.31	7.47E+01	56.42			7.47E+01	5.64E+01
m	32	157.21	2.87E+01	23.48			2.87E+01	2.35E+01
	33	163.56	-3.38E+00	32.11			-3.38E+00	3.21E+01
	34	182.32	-1.66E+01	40.01			-1.66E+01	4.00E+01
	35	186.37	1.04E+03	50.39	1.65E+02	2.92E+01	8.79E+02	5.83E+01
	36	191.92	-1.26E+00	34.22			-1.26E+00	3.42E+01
	37	197.45	7.74E+01	37.11	5.02E+01	2.63E+01	2.72E+01	4.55E+01
	38	207.53	0.00E+00	0.00			0.00E+00	0.00E+00
	39	209.62	-5.30E+00	59.36	-2.56E+01	2.49E+01	2.03E+01	6.44E+01
M	40	236.36	3.92E+01	22.89			3.92E+01	2.29E+01
m	41	239.08	1.67E+03	88.35	7.88E+01	2.53E+01	1.59E+03	9.19E+01
	42	242.42	7.75E+02	54.27			7.75E+02	5.43E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	248.09	-1.10E-01	34.98			-1.10E-01	3.50E+01
	44	259.46	5.09E+01	36.71	1.45E+01	2.66E+01	3.64E+01	4.54E+01
	45	277.83	6.30E+01	36.41			6.30E+01	3.64E+01
	46	288.54	-4.10E+01	31.54			-4.10E+01	3.15E+01
	47	295.81	1.51E+03	52.47	1.05E+01	4.02E+01	1.50E+03	6.61E+01
	48	300.65	7.87E+01	33.76			7.87E+01	3.38E+01
	49	305.77	-3.84E+01	33.21			-3.84E+01	3.32E+01
	50	313.15	-1.29E+01	38.45			-1.29E+01	3.85E+01
	51	328.54	5.28E+01	31.13			5.28E+01	3.11E+01
	52	339.00	3.07E+02	41.15			3.07E+02	4.12E+01
	53	352.60	2.16E+03	58.56	8.80E+01	2.36E+01	2.07E+03	6.31E+01
	54	383.85	0.00E+00	0.00			0.00E+00	0.00E+00
	55	387.95	-5.80E+01	69.83			-5.80E+01	6.98E+01
	56	438.26	-2.62E+01	32.73			-2.62E+01	3.27E+01
	57	451.27	7.85E+00	34.81			7.85E+00	3.48E+01
M	58	464.16	3.00E+01	77.85			3.00E+01	7.79E+01
m	59	468.67	0.00E+00	0.00	1.48E+01	2.04E+01	-1.48E+01	2.04E+01
m	60	472.33	6.27E+00	17.07			6.27E+00	1.71E+01
	61	481.82	-1.17E+01	28.36			-1.17E+01	2.84E+01
	62	495.97	3.14E+01	30.08			3.14E+01	3.01E+01
	63	511.67	5.32E+02	86.23	3.07E+02	7.27E+01	2.25E+02	1.13E+02
	64	523.46	-2.51E+01	29.43			-2.51E+01	2.94E+01
	65	535.65	-3.21E+00	28.71			-3.21E+00	2.87E+01
	66	541.70	4.89E+01	29.21	3.93E+01	1.96E+01	9.57E+00	3.52E+01
	67	584.36	2.65E+02	62.45	2.12E+01	1.69E+01	2.44E+02	6.47E+01
	68	588.77	0.00E+00	0.00			0.00E+00	0.00E+00
	69	610.57	1.19E+03	46.30	4.28E+01	1.95E+01	1.15E+03	5.02E+01
	70	624.06	4.33E+01	27.87			4.33E+01	2.79E+01
	71	635.11	8.88E-01	27.47	0.00E+00	0.00E+00	8.88E-01	2.75E+01
	72	698.73	5.70E+01	24.41	4.50E+01	1.05E+01	1.20E+01	2.66E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Analysis Performed on: 2-23-96 8:34:29 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	5.31	0.00E+00	0.00			0.00E+00	0.00E+00
	2	6.33	1.20E+01	70.49	4.00E+01	3.04E+01	-2.80E+01	7.68E+01
	3	10.94	4.92E+02	45.86	1.57E+02	3.08E+01	3.35E+02	5.53E+01
	4	13.09	1.35E+03	55.42			1.35E+03	5.54E+01
M	5	15.43	9.20E+02	101.37			9.20E+02	1.01E+02
m	6	16.26	1.51E+03	109.77			1.51E+03	1.10E+02
	7	19.01	2.23E+02	44.46	-1.92E-01	1.63E+01	2.23E+02	4.74E+01
M	8	25.73	9.12E+01	43.91			9.12E+01	4.39E+01
m	9	27.51	5.60E+01	28.12	-1.27E+01	1.34E+01	6.86E+01	3.11E+01
	10	36.83	2.02E+01	30.47			2.02E+01	3.05E+01
	11	39.91	1.55E+02	41.73			1.55E+02	4.17E+01
	12	46.66	1.68E+03	58.08	1.16E+01	3.50E+01	1.67E+03	6.78E+01
	13	50.29	7.18E+01	37.73	-1.20E+01	1.73E+01	8.38E+01	4.15E+01
	14	53.37	2.68E+02	40.57			2.68E+02	4.06E+01
	15	58.00	2.66E+01	33.17			2.66E+01	3.32E+01
	16	63.42	1.14E+03	56.30	7.25E+01	2.49E+01	1.07E+03	6.16E+01
	17	67.83	7.90E+01	37.98			7.90E+01	3.80E+01
M	18	74.98	2.65E+03	82.52	4.70E+01	1.89E+01	2.60E+03	8.46E+01
m	19	77.27	4.67E+03	117.95	6.88E+01	2.55E+01	4.60E+03	1.21E+02
m	20	79.46	3.33E+02	30.75			3.33E+02	3.07E+01
m	21	81.17	2.06E+02	26.60			2.06E+02	2.66E+01
	22	84.20	4.92E+02	53.00	-3.10E+01	1.96E+01	5.23E+02	5.65E+01
M	23	87.42	1.36E+03	96.55			1.36E+03	9.66E+01
m	24	90.06	6.45E+02	71.85			6.45E+02	7.18E+01
m	25	92.83	1.69E+03	107.17	2.61E+02	4.01E+01	1.43E+03	1.14E+02
	26	115.06	1.94E+01	40.33			1.94E+01	4.03E+01
	27	129.37	1.37E+02	40.49			1.37E+02	4.05E+01
	28	133.99	-2.38E+01	32.60			-2.38E+01	3.26E+01
	29	144.05	-2.76E+01	65.05	4.83E+01	2.07E+01	-7.59E+01	6.83E+01
	30	146.31	0.00E+00	0.00			0.00E+00	0.00E+00
M	31	154.31	7.47E+01	56.42			7.47E+01	5.64E+01
m	32	157.21	2.87E+01	23.48			2.87E+01	2.35E+01
	33	163.56	-3.38E+00	32.11			-3.38E+00	3.21E+01
	34	182.32	-1.66E+01	40.01			-1.66E+01	4.00E+01
	35	186.37	1.04E+03	50.39	1.65E+02	2.92E+01	8.79E+02	5.83E+01
	36	191.92	-1.26E+00	34.22			-1.26E+00	3.42E+01
	37	197.45	7.74E+01	37.11	5.02E+01	2.63E+01	2.72E+01	4.55E+01
	38	207.53	0.00E+00	0.00			0.00E+00	0.00E+00
	39	209.62	-5.30E+00	59.36	-2.56E+01	2.49E+01	2.03E+01	6.44E+01
M	40	236.36	3.92E+01	22.89			3.92E+01	2.29E+01

m 41	239.08	1.67E+03	88.35	7.88E+01	2.53E+01	1.59E+03	9.19E+01
m 42	242.42	7.75E+02	54.27			7.75E+02	5.43E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	248.09	-1.10E-01	34.98			-1.10E-01	3.50E+01
	44	259.46	5.09E+01	36.71	1.45E+01	2.66E+01	3.64E+01	4.54E+01
	45	277.83	6.30E+01	36.41			6.30E+01	3.64E+01
	46	288.54	-4.10E+01	31.54			-4.10E+01	3.15E+01
	47	295.81	1.51E+03	52.47	1.05E+01	4.02E+01	1.50E+03	6.61E+01
	48	300.65	7.87E+01	33.76			7.87E+01	3.38E+01
	49	305.77	-3.84E+01	33.21			-3.84E+01	3.32E+01
	50	313.15	-1.29E+01	38.45			-1.29E+01	3.85E+01
	51	328.54	5.28E+01	31.13			5.28E+01	3.11E+01
	52	339.00	3.07E+02	41.15			3.07E+02	4.12E+01
	53	352.60	2.16E+03	58.56	8.80E+01	2.36E+01	2.07E+03	6.31E+01
	54	383.85	0.00E+00	0.00			0.00E+00	0.00E+00
	55	387.95	-5.80E+01	69.83			-5.80E+01	6.98E+01
	56	438.26	-2.62E+01	32.73			-2.62E+01	3.27E+01
	57	451.27	7.85E+00	34.81			7.85E+00	3.48E+01
M	58	464.16	3.00E+01	77.85			3.00E+01	7.79E+01
m	59	468.67	0.00E+00	0.00	1.48E+01	2.04E+01	-1.48E+01	2.04E+01
m	60	472.33	6.27E+00	17.07			6.27E+00	1.71E+01
	61	481.82	-1.17E+01	28.36			-1.17E+01	2.84E+01
	62	495.97	3.14E+01	30.08			3.14E+01	3.01E+01
	63	511.67	5.32E+02	86.23	3.07E+02	7.27E+01	2.25E+02	1.13E+02
	64	523.46	-2.51E+01	29.43			-2.51E+01	2.94E+01
	65	535.65	-3.21E+00	28.71			-3.21E+00	2.87E+01
	66	541.70	4.89E+01	29.21	3.93E+01	1.96E+01	9.57E+00	3.52E+01
	67	584.36	2.65E+02	62.45	2.12E+01	1.69E+01	2.44E+02	6.47E+01
	68	588.77	0.00E+00	0.00			0.00E+00	0.00E+00
	69	610.57	1.19E+03	46.30	4.28E+01	1.95E+01	1.15E+03	5.02E+01
	70	624.06	4.33E+01	27.87			4.33E+01	2.79E+01
	71	635.11	8.88E-01	27.47	0.00E+00	0.00E+00	8.88E-01	2.75E+01
	72	698.73	5.70E+01	24.41	4.50E+01	1.05E+01	1.20E+01	2.66E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***********************************************************************

Report Generated On              :  2-22-96  8:58:04 AM

Sample Title                     : NOPI-468-GAM1
Spectrum Description             : NOPI-468-GAM1
Sample Identification            : NP468_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-21-96 11:01:01 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80005.5 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Locate Performed on: 2-22-96 8:56:22 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.78	0.1886	10.98	4.31
2	76.35	0.1266	13.16	4.97
3	88.60	0.1864	15.43	3.02
4	94.53	0.0977	16.28	4.99
5	110.49	0.1959	19.08	2.41
6	149.35	0.2474	25.79	2.54
7	159.18	0.4659	27.51	2.19
8	216.00	0.0000	37.38	2.57
9	231.00	0.2766	39.98	4.06
10	269.80	0.0474	46.71	19.49
11	290.36	0.2144	50.27	2.82
12	308.41	0.2135	53.41	6.64
13	317.89	0.3875	55.07	2.87
14	366.43	0.0990	63.46	12.65
15	377.86	0.5377	65.43	2.33
16	391.42	0.3916	67.81	2.96
17	418.39	0.5301	72.72	2.27
18	433.01	0.0320	75.02	24.44
19	446.14	0.0391	77.30	32.86
20	459.12	0.1468	79.53	5.55
21	468.79	0.3034	81.19	3.78
22	485.41	0.4883	84.10	5.03
23	504.92	0.2135	87.44	9.92
24	520.09	0.1649	90.12	8.63
25	535.26	0.1381	92.84	8.94
26	547.60	0.4484	94.77	3.17
27	568.13	0.3385	98.50	2.41
28	575.52	0.5154	99.67	2.19
29	651.68	0.4613	112.93	2.78
30	696.57	0.3746	120.72	2.65
31	707.11	0.3261	122.55	2.60
32	719.46	0.4347	124.69	2.40
33	746.25	0.2509	129.34	4.67
34	793.10	0.6003	137.46	2.28
35	815.08	0.3008	141.25	2.76
36	821.57	0.6297	142.38	2.17
37	830.58	0.2934	144.01	3.32
38	839.96	0.4365	145.56	2.23
39	846.87	0.6053	146.75	2.28
40	889.93	0.4844	154.25	2.09
41	993.10	0.3673	172.15	2.27

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1020.78	0.3675	176.95	2.35
43	1075.11	0.1363	186.37	10.78
44	1127.53	0.4463	195.46	2.38
45	1139.13	1.2010	197.47	2.54
46	1186.79	0.5570	205.74	2.00
47	1209.21	0.2468	209.63	5.35
48	1379.27	0.0745	239.12	20.64
49	1398.93	0.0919	242.47	13.05
50	1422.77	0.6249	246.66	2.20
51	1518.19	0.5323	263.21	2.43
52	1542.76	0.5054	267.47	2.23
53	1560.26	0.5985	270.51	2.85
54	1569.53	0.5800	272.12	2.22
55	1640.47	0.4703	284.42	2.19
56	1706.32	0.0652	295.84	20.98
57	1734.56	0.2575	300.74	3.66
58	1828.19	0.4513	316.93	2.46
59	1842.75	0.6413	319.65	2.30
60	1873.22	0.5408	324.70	2.30
61	1896.48	0.4416	328.78	3.04
62	1954.95	0.2441	338.96	6.65
63	1971.66	0.5251	341.86	2.01
64	2016.45	0.6586	349.51	2.09
65	2033.96	0.0653	352.65	24.30
66	2323.70	0.6111	402.91	2.14
67	2538.38	0.6141	440.14	2.26
68	2674.93	0.5397	463.82	2.80
69	2770.42	0.5746	480.38	2.24
70	2837.28	0.4319	492.00	2.81
71	2847.90	0.5584	493.91	2.20
72	2913.29	0.5332	505.16	2.02
73	2952.42	0.5683	511.95	4.30
74	3225.88	0.6039	559.38	2.53
75	3250.71	0.6271	563.64	2.77
76	3276.22	0.5719	568.10	2.26
77	3309.85	0.5130	573.94	2.44
78	3370.07	0.1612	584.38	8.89
79	3430.99	0.6834	594.95	2.12
80	3471.00	0.6318	601.88	2.54
81	3521.11	0.1045	610.57	17.62
82	3570.77	0.6500	619.19	2.12
83	3613.35	0.6946	626.57	2.02
84	3630.68	0.8574	629.58	2.07
85	3643.16	0.6380	631.74	2.41
86	3778.26	0.6231	655.17	2.32
87	3790.50	0.6362	657.29	2.43
88	3845.19	0.6691	666.78	2.55
89	3903.06	0.6422	676.82	2.47
90	3968.62	0.5140	688.18	2.51
91	4029.59	0.2673	698.76	4.64

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance

Errors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Analysis Performed on: 2-22-96 8:56:43 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.78	10.98	4.86E+02	46.09	8.69E+02
	2	73-	79	76.35	13.16	1.30E+03	55.24	9.26E+02
M	3	84-	98	89.45	15.43	8.84E+02	109.43	1.28E+03
m	4	84-	98	94.37	16.28	1.28E+03	115.26	1.14E+03
	5	107-	114	110.49	19.08	3.14E+02	45.16	8.60E+02
M	6	144-	163	149.22	25.79	9.54E+01	34.91	5.20E+02
m	7	144-	163	159.11	27.51	9.81E+01	35.83	5.33E+02
	8	213-	218	216.00	37.38	-1.75E+01	24.07	3.36E+02
	9	225-	236	231.00	39.98	1.33E+02	42.61	6.69E+02
	10	263-	275	269.80	46.71	1.79E+03	58.46	6.18E+02
	11	284-	293	290.36	50.27	5.83E+01	34.49	4.96E+02
M	12	304-	320	308.46	53.41	2.76E+02	53.23	5.20E+02
[redacted]	13	304-	320	318.02	55.07	1.10E+01	8.60	3.29E+02
[redacted]	14	359-	397	366.42	63.46	8.35E+02	107.57	5.71E+02
m	15	359-	397	377.76	65.43	1.46E+01	14.54	5.80E+02
m	16	359-	397	391.49	67.81	1.05E+02	20.82	5.87E+02
M	17	415-	473	419.79	72.72	6.51E+01	25.67	6.47E+02
m	18	415-	473	433.05	75.02	2.85E+03	91.02	6.19E+02
m	19	415-	473	446.20	77.30	4.78E+03	127.95	5.65E+02
m	20	415-	473	459.05	79.53	3.08E+02	31.43	5.29E+02
m	21	415-	473	468.65	81.19	1.91E+02	27.72	5.21E+02
	22	479-	492	485.41	84.10	4.78E+02	48.82	6.91E+02
M	23	497-	551	504.66	87.44	1.61E+03	104.62	8.75E+02
m	24	497-	551	520.15	90.12	8.11E+02	75.67	8.57E+02
m	25	497-	551	535.83	92.84	1.49E+03	100.71	8.39E+02
m	26	497-	551	546.92	94.77	1.13E+02	47.77	6.33E+02
M	27	561-	579	568.44	98.50	6.78E+01	28.88	5.11E+02
m	28	561-	579	575.20	99.67	7.39E+01	30.93	4.05E+02
	29	647-	658	651.68	112.93	3.81E+01	36.52	5.17E+02
	33	741-	753	746.25	129.34	1.28E+02	39.20	5.34E+02
	34	788-	799	793.10	137.46	3.24E+01	33.48	4.35E+02
M	35	810-	851	814.97	141.25	2.96E+01	20.16	4.31E+02
m	36	810-	851	821.44	142.38	1.59E+01	15.93	3.89E+02
m	37	810-	851	830.83	144.01	9.29E+01	47.72	4.22E+02
m	38	810-	851	839.78	145.56	3.81E+01	23.20	4.16E+02
m	39	810-	851	846.66	146.75	3.58E+01	22.39	3.75E+02
	40	884-	898	889.93	154.25	1.50E+02	41.02	5.32E+02
	41	987-	999	993.10	172.15	8.33E+00	35.06	4.63E+02
[redacted]	42	1014-	1026	1020.78	176.95	-4.88E+01	34.24	4.65E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1067-	1084	1075.11	186.37	1.03E+03	54.96	6.13E+02
	45	1121-	1147	1139.13	197.47	1.20E+02	62.49	8.64E+02
	46	1178-	1192	1186.79	205.74	2.34E+01	37.61	4.83E+02
	47	1203-	1215	1209.21	209.63	1.19E+02	31.90	3.40E+02
M	48	1370-	1406	1379.28	239.12	1.68E+03	71.32	4.01E+02
m	49	1370-	1406	1398.62	242.47	8.64E+02	51.05	3.91E+02
	50	1413-	1429	1422.77	246.66	-1.41E+01	35.46	3.99E+02
	51	1511-	1528	1518.19	263.21	-1.96E+01	34.82	3.78E+02
	53	1535-	1576	1560.26	270.51	8.46E+01	75.46	8.97E+02
	55	1631-	1647	1640.47	284.42	4.81E+01	32.45	3.20E+02
	56	1697-	1714	1706.32	295.84	1.60E+03	52.74	3.62E+02
	57	1724-	1743	1734.56	300.74	1.14E+02	35.83	3.33E+02
M	58	1817-	1850	1827.94	316.93	-2.97E+01	37.18	1.56E+02
m	59	1817-	1850	1843.62	319.65	-1.66E+01	20.83	1.47E+02
M	60	1865-	1906	1872.73	324.70	2.90E+01	21.54	1.80E+02
m	61	1865-	1906	1896.29	328.78	8.41E+01	51.51	2.18E+02
	62	1944-	1981	1954.95	338.96	2.66E+02	62.88	6.29E+02
M	64	2007-	2044	2015.82	349.51	4.98E+01	14.35	2.74E+02
m	65	2007-	2044	2033.89	352.65	2.46E+03	76.44	2.79E+02
	66	2311-	2333	2323.70	402.91	4.82E+01	34.95	2.97E+02
	67	2529-	2550	2538.38	440.14	-1.34E+01	32.16	2.78E+02
	68	2662-	2685	2674.93	463.82	3.89E+01	34.70	2.91E+02
	69	2760-	2781	2770.42	480.38	7.20E+00	30.42	2.45E+02
M	70	2824-	2860	2837.41	492.00	1.85E+01	31.66	1.89E+01
m	71	2824-	2860	2848.40	493.91	8.06E+00	13.87	2.04E+01
	73	2899-	2977	2952.42	511.95	4.10E+02	95.36	7.84E+02
M	74	3214-	3288	3225.91	559.38	-1.92E+01	35.98	6.42E+01
m	75	3214-	3288	3250.51	563.64	-2.72E+01	50.65	7.61E+01
	77	3298-	3323	3309.85	573.94	1.86E-01	31.33	2.31E+02
	78	3356-	3384	3370.07	584.38	2.46E+02	36.60	2.36E+02
	79	3417-	3441	3430.99	594.95	1.45E+01	29.46	2.06E+02
	80	3456-	3481	3471.00	601.88	1.63E+01	32.64	2.47E+02
	81	3509-	3536	3521.11	610.57	1.28E+03	47.29	2.12E+02
	82	3556-	3581	3570.77	619.19	7.71E+00	29.91	2.07E+02
	85	3602-	3655	3643.16	631.74	-3.20E+01	55.67	4.04E+02
	86	3763-	3804	3778.26	655.17	-1.40E+01	44.60	3.20E+02
	88	3831-	3857	3845.19	666.78	5.91E+01	28.18	1.68E+02
	89	3888-	3915	3903.06	676.82	1.37E+01	29.99	1.96E+02
	90	3953-	3981	3968.62	688.18	-8.11E+00	29.65	1.91E+02
	91	4017-	4045	4029.59	698.76	4.83E+01	22.93	6.87E+01

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Analysis Performed on: 2-22-96 8:56:22 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	10.98	4.86E+02	46.09	1.57E+02	3.08E+01	3.29E+02	5.55E+01
	2	13.16	1.30E+03	55.24			1.30E+03	5.52E+01
M	3	15.43	8.84E+02	109.43			8.84E+02	1.09E+02
m	4	16.28	1.28E+03	115.26			1.28E+03	1.15E+02
	5	19.08	3.14E+02	45.16	-1.92E-01	1.63E+01	3.14E+02	4.80E+01
M	6	25.79	9.54E+01	34.91			9.54E+01	3.49E+01
m	7	27.51	9.81E+01	35.83	-1.27E+01	1.34E+01	1.11E+02	3.82E+01
	8	37.38	-1.75E+01	24.07			-1.75E+01	2.41E+01
	9	39.98	1.33E+02	42.61			1.33E+02	4.26E+01
	10	46.71	1.79E+03	58.46	1.16E+01	3.50E+01	1.78E+03	6.81E+01
	11	50.27	5.83E+01	34.49	-1.20E+01	1.73E+01	7.03E+01	3.86E+01
M	12	53.41	2.76E+02	53.23			2.76E+02	5.32E+01
m	13	55.07	1.10E+01	8.60			1.10E+01	8.60E+00
M	14	63.46	8.35E+02	107.57	7.25E+01	2.49E+01	7.62E+02	1.10E+02
m	15	65.43	1.46E+01	14.54			1.46E+01	1.45E+01
	16	67.81	1.05E+02	20.82			1.05E+02	2.08E+01
M	17	72.72	6.51E+01	25.67			6.51E+01	2.57E+01
m	18	75.02	2.85E+03	91.02	4.70E+01	1.89E+01	2.81E+03	9.30E+01
m	19	77.30	4.78E+03	127.95	6.88E+01	2.55E+01	4.71E+03	1.30E+02
m	20	79.53	3.08E+02	31.43			3.08E+02	3.14E+01
m	21	81.19	1.91E+02	27.72			1.91E+02	2.77E+01
	22	84.10	4.78E+02	48.82	-3.10E+01	1.96E+01	5.09E+02	5.26E+01
M	23	87.44	1.61E+03	104.62			1.61E+03	1.05E+02
m	24	90.12	8.11E+02	75.67			8.11E+02	7.57E+01
m	25	92.84	1.49E+03	100.71	2.61E+02	4.01E+01	1.23E+03	1.08E+02
m	26	94.77	1.13E+02	47.77	2.42E+01	1.36E+01	8.93E+01	4.97E+01
M	27	98.50	6.78E+01	28.88			6.78E+01	2.89E+01
m	28	99.67	7.39E+01	30.93			7.39E+01	3.09E+01
	29	112.93	3.81E+01	36.52			3.81E+01	3.65E+01
	30	120.72	0.00E+00	0.00	6.68E+00	2.29E+01	-6.68E+00	2.29E+01
	31	122.55	0.00E+00	0.00			0.00E+00	0.00E+00
	32	124.69	0.00E+00	0.00	-2.34E+01	2.17E+01	2.34E+01	2.17E+01
	33	129.34	1.28E+02	39.20			1.28E+02	3.92E+01
	34	137.46	3.24E+01	33.48			3.24E+01	3.35E+01
M	35	141.25	2.96E+01	20.16			2.96E+01	2.02E+01
m	36	142.38	1.59E+01	15.93			1.59E+01	1.59E+01
m	37	144.01	9.29E+01	47.72	4.83E+01	2.07E+01	4.46E+01	5.20E+01
m	38	145.56	3.81E+01	23.20			3.81E+01	2.32E+01
m	39	146.75	3.58E+01	22.39			3.58E+01	2.24E+01
	40	154.25	1.50E+02	41.02			1.50E+02	4.10E+01
	41	172.15	8.33E+00	35.06			8.33E+00	3.51E+01
	42	176.95	-4.88E+01	34.24			-4.88E+01	3.42E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	186.37	1.03E+03	54.96	1.65E+02	2.92E+01	8.61E+02	6.23E+01
	44	195.46	0.00E+00	0.00			0.00E+00	0.00E+00
	45	197.47	1.20E+02	62.49	5.02E+01	2.63E+01	6.95E+01	6.78E+01
	46	205.74	2.34E+01	37.61	-8.75E+00	2.28E+01	3.21E+01	4.40E+01
	47	209.63	1.19E+02	31.90	-2.56E+01	2.49E+01	1.45E+02	4.05E+01
M	48	239.12	1.68E+03	71.32	7.88E+01	2.53E+01	1.60E+03	7.57E+01
m	49	242.47	8.64E+02	51.05			8.64E+02	5.10E+01
	50	246.66	-1.41E+01	35.46			-1.41E+01	3.55E+01
	51	263.21	-1.96E+01	34.82			-1.96E+01	3.48E+01
	52	267.47	0.00E+00	0.00			0.00E+00	0.00E+00
	53	270.51	8.46E+01	75.46			8.46E+01	7.55E+01
	54	272.12	0.00E+00	0.00			0.00E+00	0.00E+00
	55	284.42	4.81E+01	32.45			4.81E+01	3.25E+01
	56	295.84	1.60E+03	52.74	1.05E+01	4.02E+01	1.59E+03	6.63E+01
	57	300.74	1.14E+02	35.83			1.14E+02	3.58E+01
M	58	316.93	-2.97E+01	37.18			-2.97E+01	3.72E+01
m	59	319.65	-1.66E+01	20.83			-1.66E+01	2.08E+01
M	60	324.70	2.90E+01	21.54	-2.18E+01	1.99E+01	5.08E+01	2.93E+01
m	61	328.78	8.41E+01	51.51	-2.16E+01	3.90E+01	1.06E+02	6.46E+01
	62	338.96	2.66E+02	62.88			2.66E+02	6.29E+01
	63	341.86	0.00E+00	0.00			0.00E+00	0.00E+00
M	64	349.51	4.98E+01	14.35			4.98E+01	1.43E+01
m	65	352.65	2.46E+03	76.44	8.80E+01	2.36E+01	2.37E+03	8.00E+01
	66	402.91	4.82E+01	34.95			4.82E+01	3.49E+01
	67	440.14	-1.34E+01	32.16			-1.34E+01	3.22E+01
	68	463.82	3.89E+01	34.70			3.89E+01	3.47E+01
	69	480.38	7.20E+00	30.42			7.20E+00	3.04E+01
M	70	492.00	1.85E+01	31.66			1.85E+01	3.17E+01
m	71	493.91	8.06E+00	13.87			8.06E+00	1.39E+01
	72	505.16	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	73	511.95	4.10E+02	95.36	3.07E+02	7.27E+01	1.04E+02	1.20E+02
M	74	559.38	-1.92E+01	35.98			-1.92E+01	3.60E+01
m	75	563.64	-2.72E+01	50.65			-2.72E+01	5.07E+01
m	76	568.10	0.00E+00	0.00			0.00E+00	0.00E+00
	77	573.94	1.86E-01	31.33			1.86E-01	3.13E+01
	78	584.38	2.46E+02	36.60	2.12E+01	1.69E+01	2.25E+02	4.03E+01
	79	594.95	1.45E+01	29.46			1.45E+01	2.95E+01
	80	601.88	1.63E+01	32.64			1.63E+01	3.26E+01
	81	610.57	1.28E+03	47.29	4.28E+01	1.95E+01	1.23E+03	5.12E+01
	82	619.19	7.71E+00	29.91			7.71E+00	2.99E+01
	83	626.57	0.00E+00	0.00			0.00E+00	0.00E+00
	84	629.58	0.00E+00	0.00			0.00E+00	0.00E+00
	85	631.74	-3.20E+01	55.67	0.00E+00	0.00E+00	-3.20E+01	5.57E+01
	86	655.17	-1.40E+01	44.60			-1.40E+01	4.46E+01
	87	657.29	0.00E+00	0.00			0.00E+00	0.00E+00
	88	666.78	5.91E+01	28.18			5.91E+01	2.82E+01
	89	676.82	1.37E+01	29.99			1.37E+01	3.00E+01
	90	688.18	-8.11E+00	29.65			-8.11E+00	2.96E+01
	91	698.76	4.83E+01	22.93	4.50E+01	1.05E+01	3.33E+00	2.52E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Analysis Performed on: 2-22-96 8:56:22 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	10.98	4.86E+02	46.09	1.57E+02	3.08E+01	3.29E+02	5.55E+01
	2	13.16	1.30E+03	55.24			1.30E+03	5.52E+01
M	3	15.43	8.84E+02	109.43			8.84E+02	1.09E+02
m	4	16.28	1.28E+03	115.26			1.28E+03	1.15E+02
	5	19.08	3.14E+02	45.16	-1.92E-01	1.63E+01	3.14E+02	4.80E+01
M	6	25.79	9.54E+01	34.91			9.54E+01	3.49E+01
m	7	27.51	9.81E+01	35.83	-1.27E+01	1.34E+01	1.11E+02	3.82E+01
	8	37.38	-1.75E+01	24.07			-1.75E+01	2.41E+01
	9	39.98	1.33E+02	42.61			1.33E+02	4.26E+01
	10	46.71	1.79E+03	58.46	1.16E+01	3.50E+01	1.78E+03	6.81E+01
	11	50.27	5.83E+01	34.49	-1.20E+01	1.73E+01	7.03E+01	3.86E+01
M	12	53.41	2.76E+02	53.23			2.76E+02	5.32E+01
m	13	55.07	1.10E+01	8.60			1.10E+01	8.60E+00
M	14	63.46	8.35E+02	107.57	7.25E+01	2.49E+01	7.62E+02	1.10E+02
m	15	65.43	1.46E+01	14.54			1.46E+01	1.45E+01
m	16	67.81	1.05E+02	20.82			1.05E+02	2.08E+01
M	17	72.72	6.51E+01	25.67			6.51E+01	2.57E+01
m	18	75.02	2.85E+03	91.02	4.70E+01	1.89E+01	2.81E+03	9.30E+01
m	19	77.30	4.78E+03	127.95	6.88E+01	2.55E+01	4.71E+03	1.30E+02
m	20	79.53	3.08E+02	31.43			3.08E+02	3.14E+01
m	21	81.19	1.91E+02	27.72			1.91E+02	2.77E+01
	22	84.10	4.78E+02	48.82	-3.10E+01	1.96E+01	5.09E+02	5.26E+01
M	23	87.44	1.61E+03	104.62			1.61E+03	1.05E+02
m	24	90.12	8.11E+02	75.67			8.11E+02	7.57E+01
m	25	92.84	1.49E+03	100.71	2.61E+02	4.01E+01	1.23E+03	1.08E+02
m	26	94.77	1.13E+02	47.77	2.42E+01	1.36E+01	8.93E+01	4.97E+01
M	27	98.50	6.78E+01	28.88			6.78E+01	2.89E+01
m	28	99.67	7.39E+01	30.93			7.39E+01	3.09E+01
	29	112.93	3.81E+01	36.52			3.81E+01	3.65E+01
	30	120.72	0.00E+00	0.00	6.68E+00	2.29E+01	-6.68E+00	2.29E+01
	31	122.55	0.00E+00	0.00			0.00E+00	0.00E+00
	32	124.69	0.00E+00	0.00	-2.34E+01	2.17E+01	2.34E+01	2.17E+01
	33	129.34	1.28E+02	39.20			1.28E+02	3.92E+01
	34	137.46	3.24E+01	33.48			3.24E+01	3.35E+01
M	35	141.25	2.96E+01	20.16			2.96E+01	2.02E+01
	36	142.38	1.59E+01	15.93			1.59E+01	1.59E+01
m	37	144.01	9.29E+01	47.72	4.83E+01	2.07E+01	4.46E+01	5.20E+01
m	38	145.56	3.81E+01	23.20			3.81E+01	2.32E+01
m	39	146.75	3.58E+01	22.39			3.58E+01	2.24E+01
	40	154.25	1.50E+02	41.02			1.50E+02	4.10E+01

41	172.15	8.33E+00	35.06	8.33E+00	3.51E+01
42	176.95	-4.88E+01	34.24	-4.88E+01	3.42E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	186.37	1.03E+03	54.96	1.65E+02	2.92E+01	8.61E+02	6.23E+01
	44	195.46	0.00E+00	0.00			0.00E+00	0.00E+00
	45	197.47	1.20E+02	62.49	5.02E+01	2.63E+01	6.95E+01	6.78E+01
	46	205.74	2.34E+01	37.61	-8.75E+00	2.28E+01	3.21E+01	4.40E+01
	47	209.63	1.19E+02	31.90	-2.56E+01	2.49E+01	1.45E+02	4.05E+01
M	48	239.12	1.68E+03	71.32	7.88E+01	2.53E+01	1.60E+03	7.57E+01
m	49	242.47	8.64E+02	51.05			8.64E+02	5.10E+01
	50	246.66	-1.41E+01	35.46			-1.41E+01	3.55E+01
	51	263.21	-1.96E+01	34.82			-1.96E+01	3.48E+01
	52	267.47	0.00E+00	0.00			0.00E+00	0.00E+00
	53	270.51	8.46E+01	75.46			8.46E+01	7.55E+01
	54	272.12	0.00E+00	0.00			0.00E+00	0.00E+00
	55	284.42	4.81E+01	32.45			4.81E+01	3.25E+01
	56	295.84	1.60E+03	52.74	1.05E+01	4.02E+01	1.59E+03	6.63E+01
	57	300.74	1.14E+02	35.83			1.14E+02	3.58E+01
M	58	316.93	-2.97E+01	37.18			-2.97E+01	3.72E+01
m	59	319.65	-1.66E+01	20.83			-1.66E+01	2.08E+01
M	60	324.70	2.90E+01	21.54	-2.18E+01	1.99E+01	5.08E+01	2.93E+01
m	61	328.78	8.41E+01	51.51	-2.16E+01	3.90E+01	1.06E+02	6.46E+01
	62	338.96	2.66E+02	62.88			2.66E+02	6.29E+01
	63	341.86	0.00E+00	0.00			0.00E+00	0.00E+00
M	64	349.51	4.98E+01	14.35			4.98E+01	1.43E+01
m	65	352.65	2.46E+03	76.44	8.80E+01	2.36E+01	2.37E+03	8.00E+01
	66	402.91	4.82E+01	34.95			4.82E+01	3.49E+01
	67	440.14	-1.34E+01	32.16			-1.34E+01	3.22E+01
	68	463.82	3.89E+01	34.70			3.89E+01	3.47E+01
	69	480.38	7.20E+00	30.42			7.20E+00	3.04E+01
M	70	492.00	1.85E+01	31.66			1.85E+01	3.17E+01
m	71	493.91	8.06E+00	13.87			8.06E+00	1.39E+01
	72	505.16	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	73	511.95	4.10E+02	95.36	3.07E+02	7.27E+01	1.04E+02	1.20E+02
M	74	559.38	-1.92E+01	35.98			-1.92E+01	3.60E+01
m	75	563.64	-2.72E+01	50.65			-2.72E+01	5.07E+01
m	76	568.10	0.00E+00	0.00			0.00E+00	0.00E+00
	77	573.94	1.86E-01	31.33			1.86E-01	3.13E+01
	78	584.38	2.46E+02	36.60	2.12E+01	1.69E+01	2.25E+02	4.03E+01
	79	594.95	1.45E+01	29.46			1.45E+01	2.95E+01
	80	601.88	1.63E+01	32.64			1.63E+01	3.26E+01
	81	610.57	1.28E+03	47.29	4.28E+01	1.95E+01	1.23E+03	5.12E+01
	82	619.19	7.71E+00	29.91			7.71E+00	2.99E+01
	83	626.57	0.00E+00	0.00			0.00E+00	0.00E+00
	84	629.58	0.00E+00	0.00			0.00E+00	0.00E+00
	85	631.74	-3.20E+01	55.67	0.00E+00	0.00E+00	-3.20E+01	5.57E+01
	86	655.17	-1.40E+01	44.60			-1.40E+01	4.46E+01
	87	657.29	0.00E+00	0.00			0.00E+00	0.00E+00
	88	666.78	5.91E+01	28.18			5.91E+01	2.82E+01
	89	676.82	1.37E+01	29.99			1.37E+01	3.00E+01
	90	688.18	-8.11E+00	29.65			-8.11E+00	2.96E+01
	91	698.76	4.83E+01	22.93	4.50E+01	1.05E+01	3.33E+00	2.52E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***********************************************************************

Report Generated On              :  2-22-96  9:23:22 AM

Sample Title                     : NOPI-469-GAM1
Spectrum Description             : NOPI-469-GAM1
Sample Identification            : NP469_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-20-96  8:39:25 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80006.4 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Locate Performed on: 2-22-96 9:22:26 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	26.00	<NA>	4.42	<NA>
2	34.00	<NA>	5.84	<NA>
3	37.85	0.4365	6.45	2.20
4	63.72	0.1297	10.97	5.52
5	76.01	0.1628	13.10	4.84
6	88.93	0.1647	15.44	6.81
7	94.59	0.0693	16.31	7.91
8	104.00	0.0000	17.95	5.05
9	110.46	0.1228	19.11	4.02
10	149.31	0.2737	25.78	4.06
11	159.33	0.3464	27.51	3.21
12	179.00	0.0000	30.96	2.08
13	231.25	0.2940	40.02	3.29
14	269.78	0.0333	46.70	27.52
15	290.41	0.3070	50.28	3.59
16	308.20	0.0950	53.37	9.38
17	366.41	0.0597	63.46	20.35
18	391.73	0.2749	67.85	4.71
19	433.00	0.0232	75.01	34.05
20	446.13	0.0299	77.30	43.04
21	459.12	0.1478	79.53	8.30
22	468.93	0.1017	81.24	7.97
23	485.19	0.1980	84.06	6.97
24	504.94	0.1154	87.43	13.28
25	519.72	0.0902	90.08	12.54
26	535.43	0.0932	92.84	15.22
27	548.20	0.2849	94.77	3.14
28	569.20	0.2702	98.63	3.14
29	652.44	0.2803	113.08	3.64
30	666.94	0.3860	115.56	2.40
31	679.04	0.4142	117.72	2.23
32	687.59	0.2433	119.16	2.28
33	746.09	0.2308	129.31	3.58
34	775.80	0.4452	134.46	2.13
35	831.71	0.2571	144.16	5.32
36	891.22	0.2902	154.49	4.69
37	900.98	0.3830	156.00	2.26
38	944.39	0.5472	163.70	2.96
39	983.66	0.5856	170.51	2.02
40	997.43	0.5253	172.90	2.21
41	1017.83	0.3781	176.43	2.64

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1041.17	0.3646	180.48	2.37
43	1055.41	0.4937	182.95	2.59
44	1075.46	0.0877	186.43	16.18
45	1091.66	0.4664	189.24	2.58
46	1098.27	0.5047	190.39	2.58
47	1138.78	0.4032	197.43	2.82
48	1147.01	0.3042	198.82	2.67
49	1186.04	0.4543	205.61	3.16
50	1209.22	0.3277	209.63	3.48
51	1237.06	0.3842	214.46	2.01
52	1363.97	0.4761	236.41	3.05
53	1379.22	0.0724	239.12	21.32
54	1398.84	0.0590	242.47	20.49
55	1496.30	0.6461	259.42	2.34
56	1560.20	1.1987	270.50	2.12
57	1588.96	0.4165	275.49	3.41
58	1622.97	0.3570	281.38	2.18
59	1706.18	0.0487	295.81	28.98
60	1734.25	0.5352	300.68	2.93
61	1748.07	0.5838	303.11	2.62
62	1783.22	0.6209	309.17	2.10
63	1828.05	0.5992	316.95	2.44
64	1845.84	0.7026	320.04	2.17
65	1955.54	0.2924	339.03	5.39
66	1968.20	0.5143	341.26	2.23
67	1986.86	0.7881	344.39	2.23
68	2033.94	0.0442	352.66	36.67
69	2110.97	0.6559	366.02	2.28
70	2208.32	0.5939	382.90	2.38
71	2236.72	0.3355	387.83	3.64
72	2247.95	0.5145	389.95	2.30
73	2364.11	0.5131	409.92	2.52
74	2450.18	0.5403	424.85	2.37
75	2586.59	0.7018	448.50	2.13
76	2633.98	0.5320	456.72	2.41
77	2662.59	0.5073	461.60	2.69
78	2673.66	0.7051	463.87	2.05
79	2736.99	0.6506	474.59	2.01
80	2777.07	0.8916	481.54	2.33
81	2952.27	0.4810	511.92	3.56
82	2987.26	0.6065	517.99	2.13
83	3031.94	0.5862	525.74	2.51
84	3103.76	0.4876	538.19	2.58
85	3294.77	0.5128	571.32	2.96
86	3370.62	0.2170	584.47	7.29
87	3468.37	0.6367	601.43	2.06
88	3486.22	0.5440	604.52	2.28
89	3521.44	0.0637	610.63	23.45
90	3583.69	0.7801	621.43	2.02
91	3644.07	0.7223	631.90	2.10

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	3671.87	0.4281	636.72	2.75
93	3745.81	0.3917	649.54	3.65
94	3788.23	0.7206	656.90	2.24
95	3823.87	0.7806	663.08	2.28
96	3868.06	0.4514	670.75	2.71
97	3940.08	0.5709	683.24	2.09
98	4028.91	0.7152	698.64	3.49

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Analysis Performed on: 2-22-96 9:22:47 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	2	24-	39	34.18	5.84	-2.13E+01	35.39	1.28E+03
m	3	24-	39	37.70	6.45	-6.48E+01	83.45	9.76E+02
	4	60-	66	63.72	10.97	1.06E+03	56.67	1.14E+03
	5	73-	79	76.01	13.10	2.52E+03	71.24	1.36E+03
M	6	84-	114	89.49	15.44	1.64E+03	134.23	1.71E+03
m	7	84-	114	94.51	16.31	2.52E+03	161.03	1.70E+03
m	8	84-	114	104.01	17.95	1.52E+02	89.10	1.84E+03
m	9	84-	114	110.70	19.11	5.05E+02	100.74	1.50E+03
M	10	144-	163	149.15	25.78	1.79E+02	55.16	7.84E+02
m	11	144-	163	159.13	27.51	1.18E+02	39.31	8.11E+02
	12	176-	181	179.00	30.96	-1.07E+01	29.99	5.12E+02
	13	226-	237	231.25	40.02	1.74E+02	51.03	9.69E+02
	14	263-	275	269.78	46.70	3.63E+03	79.15	1.00E+03
	15	284-	294	290.41	50.28	2.21E+02	46.23	8.01E+02
	16	303-	313	308.20	53.37	5.97E+02	51.70	8.73E+02
	17	359-	371	366.41	63.46	2.19E+03	69.82	1.02E+03
	18	384-	398	391.73	67.85	3.08E+02	62.13	1.23E+03
M	19	426-	475	433.01	75.01	4.71E+03	109.71	1.08E+03
m	20	426-	475	446.20	77.30	8.23E+03	153.84	9.56E+02
m	21	426-	475	459.05	79.53	5.52E+02	40.66	8.71E+02
m	22	426-	475	468.93	81.24	4.64E+02	38.91	8.50E+02
	23	478-	492	485.19	84.06	1.07E+03	68.16	1.24E+03
M	24	497-	555	504.61	87.43	2.78E+03	133.20	1.32E+03
m	25	497-	555	519.91	90.08	1.28E+03	93.44	1.22E+03
m	26	497-	555	535.79	92.84	3.03E+03	139.18	1.11E+03
m	27	497-	555	546.94	94.77	3.37E+02	61.41	1.10E+03
	28	562-	573	569.20	98.63	1.78E+02	46.90	7.97E+02
M	29	647-	691	652.50	113.08	6.13E+01	103.10	6.31E+02
m	30	647-	691	666.81	115.56	1.14E+01	20.43	6.14E+02
m	31	647-	691	679.30	117.72	8.23E+00	15.67	6.00E+02
	33	740-	751	746.09	129.31	9.33E+01	44.16	7.40E+02
	34	769-	783	775.80	134.46	-4.06E+01	48.55	8.33E+02
	35	823-	837	831.71	144.16	2.12E+02	52.25	8.74E+02
M	36	886-	905	891.30	154.49	1.50E+02	58.60	6.61E+02
m	37	886-	905	899.98	156.00	2.04E+01	17.94	6.70E+02
	38	936-	950	944.39	163.70	1.33E+02	47.63	7.41E+02
	41	1009-	1024	1017.83	176.43	4.71E+00	47.35	7.43E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1035-	1061	1055.41	182.95	-7.89E+01	77.74	1.40E+03
	44	1067-	1104	1075.46	186.43	2.06E+03	117.60	1.91E+03
M	47	1131-	1153	1138.91	197.43	5.88E+01	38.14	6.07E+02
m	48	1131-	1153	1146.91	198.82	4.20E+01	27.38	5.88E+02
	49	1180-	1195	1186.04	205.61	1.23E+02	44.87	6.27E+02
	50	1201-	1219	1209.22	209.63	1.81E+02	49.22	6.64E+02
	51	1231-	1247	1237.06	214.46	1.03E+01	45.58	6.61E+02
M	52	1353-	1408	1363.66	236.41	8.24E+01	30.40	5.56E+02
m	53	1353-	1408	1379.28	239.12	1.90E+03	89.27	5.05E+02
m	54	1353-	1408	1398.59	242.47	1.84E+03	87.63	4.25E+02
	55	1489-	1504	1496.30	259.42	1.30E+02	38.20	4.41E+02
	56	1552-	1571	1560.20	270.50	1.78E+02	48.80	6.28E+02
	57	1581-	1595	1588.96	275.49	1.24E+01	35.20	4.24E+02
	58	1611-	1632	1622.97	281.38	3.08E+01	46.95	5.78E+02
	59	1695-	1717	1706.18	295.81	3.29E+03	73.47	5.43E+02
M	60	1725-	1756	1734.22	300.68	8.46E+01	46.08	4.08E+02
m	61	1725-	1756	1748.25	303.11	3.72E+01	22.26	4.03E+02
	62	1775-	1792	1783.22	309.17	-1.78E+01	36.60	4.17E+02
	64	1820-	1853	1845.84	320.04	-7.99E+01	66.18	8.49E+02
M	65	1947-	1994	1955.36	339.03	1.68E+02	85.90	4.66E+02
m	67	1947-	1994	1986.27	344.39	2.08E+01	15.61	4.82E+02
	68	2023-	2043	2033.94	352.66	4.81E+03	82.56	5.51E+02
	69	2101-	2118	2110.97	366.02	2.33E+01	33.94	3.47E+02
	70	2198-	2217	2208.32	382.90	2.27E+01	38.24	4.10E+02
M	71	2227-	2259	2236.77	387.83	4.68E+01	37.82	1.46E+02
m	72	2227-	2259	2248.99	389.95	4.00E+01	34.07	1.35E+02
	73	2352-	2373	2364.11	409.92	-1.50E+01	42.26	4.80E+02
	74	2439-	2459	2450.18	424.85	-5.07E+01	40.31	4.54E+02
	75	2576-	2598	2586.59	448.50	2.32E+01	37.10	3.49E+02
	76	2623-	2644	2633.98	456.72	3.48E+00	37.02	3.64E+02
M	77	2652-	2684	2662.08	461.60	3.05E+01	25.52	7.05E+01
m	78	2652-	2684	2675.22	463.87	3.06E+01	25.58	7.32E+01
	79	2725-	2749	2736.99	474.59	7.00E+01	37.72	3.28E+02
	80	2767-	2789	2777.07	481.54	4.61E+01	36.41	3.30E+02
	81	2926-	3013	2952.27	511.92	4.67E+02	118.72	1.13E+03
	83	3018-	3041	3031.94	525.74	2.12E+01	35.59	3.10E+02
	84	3091-	3113	3103.76	538.19	-9.92E+00	34.97	3.17E+02
	85	3281-	3305	3294.77	571.32	-3.75E+01	36.68	3.35E+02
	86	3359-	3384	3370.62	584.47	2.77E+02	39.03	2.93E+02
	88	3457-	3497	3486.22	604.52	-1.09E+01	59.64	5.82E+02
	89	3508-	3532	3521.44	610.63	2.60E+03	61.40	2.82E+02
	90	3572-	3594	3583.69	621.43	-3.58E+01	32.10	2.75E+02
	92	3633-	3682	3671.87	636.72	-1.04E+02	65.89	6.13E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	3730-	3757	3745.81	649.54	-1.56E+01	36.21	2.92E+02
94	3776-	3802	3788.23	656.90	-2.89E+01	33.78	2.64E+02
95	3811-	3835	3823.87	663.08	-7.57E+01	33.54	2.90E+02
96	3855-	3881	3868.06	670.75	6.44E+00	33.74	2.58E+02
97	3925-	3954	3940.08	683.24	-4.31E+00	37.22	2.92E+02
98	4016-	4044	4028.91	698.64	6.73E+01	26.95	9.77E+01

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Analysis Performed on: 2-22-96 9:22:26 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	1	4.42	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.84	-2.13E+01	35.39	4.00E+01	3.04E+01	-6.13E+01	4.67E+01
m	3	6.45	-6.48E+01	83.45	4.00E+01	3.04E+01	-1.05E+02	8.88E+01
	4	10.97	1.06E+03	56.67	1.57E+02	3.08E+01	9.01E+02	6.45E+01
	5	13.10	2.52E+03	71.24			2.52E+03	7.12E+01
M	6	15.44	1.64E+03	134.23			1.64E+03	1.34E+02
m	7	16.31	2.52E+03	161.03			2.52E+03	1.61E+02
m	8	17.95	1.52E+02	89.10			1.52E+02	8.91E+01
m	9	19.11	5.05E+02	100.74	-1.92E-01	1.63E+01	5.05E+02	1.02E+02
M	10	25.78	1.79E+02	55.16			1.79E+02	5.52E+01
m	11	27.51	1.18E+02	39.31	-1.27E+01	1.34E+01	1.31E+02	4.15E+01
	12	30.96	-1.07E+01	29.99			-1.07E+01	3.00E+01
	13	40.02	1.74E+02	51.03			1.74E+02	5.10E+01
	14	46.70	3.63E+03	79.15	1.16E+01	3.50E+01	3.62E+03	8.65E+01
	15	50.28	2.21E+02	46.23	-1.20E+01	1.73E+01	2.33E+02	4.93E+01
	16	53.37	5.97E+02	51.70			5.97E+02	5.17E+01
	17	63.46	2.19E+03	69.82	7.25E+01	2.49E+01	2.12E+03	7.41E+01
	18	67.85	3.08E+02	62.13			3.08E+02	6.21E+01
M	19	75.01	4.71E+03	109.71	4.70E+01	1.89E+01	4.66E+03	1.11E+02
m	20	77.30	8.23E+03	153.84	6.88E+01	2.55E+01	8.16E+03	1.56E+02
m	21	79.53	5.52E+02	40.66			5.52E+02	4.07E+01
m	22	81.24	4.64E+02	38.91			4.64E+02	3.89E+01
	23	84.06	1.07E+03	68.16	-3.10E+01	1.96E+01	1.10E+03	7.09E+01
M	24	87.43	2.78E+03	133.20			2.78E+03	1.33E+02
m	25	90.08	1.28E+03	93.44			1.28E+03	9.34E+01
m	26	92.84	3.03E+03	139.18	2.61E+02	4.01E+01	2.77E+03	1.45E+02
m	27	94.77	3.37E+02	61.41	2.42E+01	1.36E+01	3.13E+02	6.29E+01
	28	98.63	1.78E+02	46.90			1.78E+02	4.69E+01
M	29	113.08	6.13E+01	103.10			6.13E+01	1.03E+02
m	30	115.56	1.14E+01	20.43			1.14E+01	2.04E+01
m	31	117.72	8.23E+00	15.67			8.23E+00	1.57E+01
m	32	119.16	0.00E+00	0.00	6.68E+00	2.29E+01	-6.68E+00	2.29E+01
	33	129.31	9.33E+01	44.16			9.33E+01	4.42E+01
	34	134.46	-4.06E+01	48.55			-4.06E+01	4.86E+01
	35	144.16	2.12E+02	52.25	4.83E+01	2.07E+01	1.63E+02	5.62E+01
M	36	154.49	1.50E+02	58.60			1.50E+02	5.86E+01
m	37	156.00	2.04E+01	17.94			2.04E+01	1.79E+01
	38	163.70	1.33E+02	47.63			1.33E+02	4.76E+01
	39	170.51	0.00E+00	0.00			0.00E+00	0.00E+00
	40	172.90	0.00E+00	0.00			0.00E+00	0.00E+00
	41	176.43	4.71E+00	47.35			4.71E+00	4.73E+01
	42	180.48	0.00E+00	0.00	2.17E+01	2.56E+01	-2.17E+01	2.56E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	182.95	-7.89E+01	77.74			-7.89E+01	7.77E+01
	44	186.43	2.06E+03	117.60	1.65E+02	2.92E+01	1.89E+03	1.21E+02
	45	189.24	0.00E+00	0.00			0.00E+00	0.00E+00
	46	190.39	0.00E+00	0.00			0.00E+00	0.00E+00
M	47	197.43	5.88E+01	38.14	5.02E+01	2.63E+01	8.61E+00	4.63E+01
m	48	198.82	4.20E+01	27.38			4.20E+01	2.74E+01
	49	205.61	1.23E+02	44.87	-8.75E+00	2.28E+01	1.32E+02	5.03E+01
	50	209.63	1.81E+02	49.22	-2.56E+01	2.49E+01	2.07E+02	5.52E+01
	51	214.46	1.03E+01	45.58			1.03E+01	4.56E+01
M	52	236.41	8.24E+01	30.40			8.24E+01	3.04E+01
m	53	239.12	1.90E+03	89.27	7.88E+01	2.53E+01	1.82E+03	9.28E+01
m	54	242.47	1.84E+03	87.63			1.84E+03	8.76E+01
	55	259.42	1.30E+02	38.20	1.45E+01	2.66E+01	1.16E+02	4.66E+01
	56	270.50	1.78E+02	48.80			1.78E+02	4.88E+01
	57	275.49	1.24E+01	35.20			1.24E+01	3.52E+01
	58	281.38	3.08E+01	46.95			3.08E+01	4.69E+01
	59	295.81	3.29E+03	73.47	1.05E+01	4.02E+01	3.28E+03	8.37E+01
M	60	300.68	8.46E+01	46.08			8.46E+01	4.61E+01
m	61	303.11	3.72E+01	22.26			3.72E+01	2.23E+01
	62	309.17	-1.78E+01	36.60			-1.78E+01	3.66E+01
	63	316.95	0.00E+00	0.00			0.00E+00	0.00E+00
	64	320.04	-7.99E+01	66.18			-7.99E+01	6.62E+01
M	65	339.03	1.68E+02	85.90			1.68E+02	8.59E+01
	66	341.26	0.00E+00	0.00			0.00E+00	0.00E+00
m	67	344.39	2.08E+01	15.61			2.08E+01	1.56E+01
	68	352.66	4.81E+03	82.56	8.80E+01	2.36E+01	4.72E+03	8.59E+01
	69	366.02	2.33E+01	33.94	3.80E+01	2.35E+01	-1.47E+01	4.13E+01
	70	382.90	2.27E+01	38.24			2.27E+01	3.82E+01
M	71	387.83	4.68E+01	37.82			4.68E+01	3.78E+01
m	72	389.95	4.00E+01	34.07			4.00E+01	3.41E+01
	73	409.92	-1.50E+01	42.26			-1.50E+01	4.23E+01
	74	424.85	-5.07E+01	40.31			-5.07E+01	4.03E+01
	75	448.50	2.32E+01	37.10	1.17E+01	2.09E+01	1.14E+01	4.26E+01
	76	456.72	3.48E+00	37.02	-1.25E+01	1.74E+01	1.60E+01	4.09E+01
M	77	461.60	3.05E+01	25.52			3.05E+01	2.55E+01
m	78	463.87	3.06E+01	25.58			3.06E+01	2.56E+01
	79	474.59	7.00E+01	37.72			7.00E+01	3.77E+01
	80	481.54	4.61E+01	36.41			4.61E+01	3.64E+01
	81	511.92	4.67E+02	118.72	3.07E+02	7.27E+01	1.60E+02	1.39E+02
	82	517.99	0.00E+00	0.00			0.00E+00	0.00E+00
	83	525.74	2.12E+01	35.59			2.12E+01	3.56E+01
	84	538.19	-9.92E+00	34.97			-9.92E+00	3.50E+01
	85	571.32	-3.75E+01	36.68			-3.75E+01	3.67E+01
	86	584.47	2.77E+02	39.03	2.12E+01	1.69E+01	2.56E+02	4.25E+01
	87	601.43	0.00E+00	0.00			0.00E+00	0.00E+00
	88	604.52	-1.09E+01	59.64			-1.09E+01	5.96E+01
	89	610.63	2.60E+03	61.40	4.28E+01	1.95E+01	2.56E+03	6.44E+01
	90	621.43	-3.58E+01	32.10			-3.58E+01	3.21E+01
	91	631.90	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	92	636.72	-1.04E+02	65.89			-1.04E+02	6.59E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	649.54	-1.56E+01	36.21			-1.56E+01	3.62E+01
94	656.90	-2.89E+01	33.78			-2.89E+01	3.38E+01
95	663.08	-7.57E+01	33.54			-7.57E+01	3.35E+01
96	670.75	6.44E+00	33.74			6.44E+00	3.37E+01
97	683.24	-4.31E+00	37.22			-4.31E+00	3.72E+01
98	698.64	6.73E+01	26.95	4.50E+01	1.05E+01	2.23E+01	2.89E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Analysis Performed on: 2-22-96 9:22:26 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	1	4.42	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.84	-2.13E+01	35.39	4.00E+01	3.04E+01	-6.13E+01	4.67E+01
m	3	6.45	-6.48E+01	83.45	4.00E+01	3.04E+01	-1.05E+02	8.88E+01
	4	10.97	1.06E+03	56.67	1.57E+02	3.08E+01	9.01E+02	6.45E+01
	5	13.10	2.52E+03	71.24			2.52E+03	7.12E+01
M	6	15.44	1.64E+03	134.23			1.64E+03	1.34E+02
m	7	16.31	2.52E+03	161.03			2.52E+03	1.61E+02
m	8	17.95	1.52E+02	89.10			1.52E+02	8.91E+01
m	9	19.11	5.05E+02	100.74	-1.92E-01	1.63E+01	5.05E+02	1.02E+02
	10	25.78	1.79E+02	55.16			1.79E+02	5.52E+01
m	11	27.51	1.18E+02	39.31	-1.27E+01	1.34E+01	1.31E+02	4.15E+01
	12	30.96	-1.07E+01	29.99			-1.07E+01	3.00E+01
	13	40.02	1.74E+02	51.03			1.74E+02	5.10E+01
	14	46.70	3.63E+03	79.15	1.16E+01	3.50E+01	3.62E+03	8.65E+01
	15	50.28	2.21E+02	46.23	-1.20E+01	1.73E+01	2.33E+02	4.93E+01
	16	53.37	5.97E+02	51.70			5.97E+02	5.17E+01
	17	63.46	2.19E+03	69.82	7.25E+01	2.49E+01	2.12E+03	7.41E+01
	18	67.85	3.08E+02	62.13			3.08E+02	6.21E+01
M	19	75.01	4.71E+03	109.71	4.70E+01	1.89E+01	4.66E+03	1.11E+02
m	20	77.30	8.23E+03	153.84	6.88E+01	2.55E+01	8.16E+03	1.56E+02
m	21	79.53	5.52E+02	40.66			5.52E+02	4.07E+01
m	22	81.24	4.64E+02	38.91			4.64E+02	3.89E+01
	23	84.06	1.07E+03	68.16	-3.10E+01	1.96E+01	1.10E+03	7.09E+01
M	24	87.43	2.78E+03	133.20			2.78E+03	1.33E+02
m	25	90.08	1.28E+03	93.44			1.28E+03	9.34E+01
m	26	92.84	3.03E+03	139.18	2.61E+02	4.01E+01	2.77E+03	1.45E+02
m	27	94.77	3.37E+02	61.41	2.42E+01	1.36E+01	3.13E+02	6.29E+01
	28	98.63	1.78E+02	46.90			1.78E+02	4.69E+01
M	29	113.08	6.13E+01	103.10			6.13E+01	1.03E+02
m	30	115.56	1.14E+01	20.43			1.14E+01	2.04E+01
m	31	117.72	8.23E+00	15.67			8.23E+00	1.57E+01
m	32	119.16	0.00E+00	0.00	6.68E+00	2.29E+01	-6.68E+00	2.29E+01
	33	129.31	9.33E+01	44.16			9.33E+01	4.42E+01
	34	134.46	-4.06E+01	48.55			-4.06E+01	4.86E+01
	35	144.16	2.12E+02	52.25	4.83E+01	2.07E+01	1.63E+02	5.62E+01
	36	154.49	1.50E+02	58.60			1.50E+02	5.86E+01
m	37	156.00	2.04E+01	17.94			2.04E+01	1.79E+01
	38	163.70	1.33E+02	47.63			1.33E+02	4.76E+01
	39	170.51	0.00E+00	0.00			0.00E+00	0.00E+00
	40	172.90	0.00E+00	0.00			0.00E+00	0.00E+00

41	176.43	4.71E+00	47.35			4.71E+00	4.73E+01
42	180.48	0.00E+00	0.00	2.17E+01	2.56E+01	-2.17E+01	2.56E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	182.95	-7.89E+01	77.74			-7.89E+01	7.77E+01
	44	186.43	2.06E+03	117.60	1.65E+02	2.92E+01	1.89E+03	1.21E+02
	45	189.24	0.00E+00	0.00			0.00E+00	0.00E+00
	46	190.39	0.00E+00	0.00			0.00E+00	0.00E+00
M	47	197.43	5.88E+01	38.14	5.02E+01	2.63E+01	8.61E+00	4.63E+01
m	48	198.82	4.20E+01	27.38			4.20E+01	2.74E+01
	49	205.61	1.23E+02	44.87	-8.75E+00	2.28E+01	1.32E+02	5.03E+01
	50	209.63	1.81E+02	49.22	-2.56E+01	2.49E+01	2.07E+02	5.52E+01
	51	214.46	1.03E+01	45.58			1.03E+01	4.56E+01
M	52	236.41	8.24E+01	30.40			8.24E+01	3.04E+01
m	53	239.12	1.90E+03	89.27	7.88E+01	2.53E+01	1.82E+03	9.28E+01
m	54	242.47	1.84E+03	87.63			1.84E+03	8.76E+01
	55	259.42	1.30E+02	38.20	1.45E+01	2.66E+01	1.16E+02	4.66E+01
	56	270.50	1.78E+02	48.80			1.78E+02	4.88E+01
	57	275.49	1.24E+01	35.20			1.24E+01	3.52E+01
	58	281.38	3.08E+01	46.95			3.08E+01	4.69E+01
	59	295.81	3.29E+03	73.47	1.05E+01	4.02E+01	3.28E+03	8.37E+01
M	60	300.68	8.46E+01	46.08			8.46E+01	4.61E+01
m	61	303.11	3.72E+01	22.26			3.72E+01	2.23E+01
	62	309.17	-1.78E+01	36.60			-1.78E+01	3.66E+01
	63	316.95	0.00E+00	0.00			0.00E+00	0.00E+00
	64	320.04	-7.99E+01	66.18			-7.99E+01	6.62E+01
M	65	339.03	1.68E+02	85.90			1.68E+02	8.59E+01
	66	341.26	0.00E+00	0.00			0.00E+00	0.00E+00
m	67	344.39	2.08E+01	15.61			2.08E+01	1.56E+01
	68	352.66	4.81E+03	82.56	8.80E+01	2.36E+01	4.72E+03	8.59E+01
	69	366.02	2.33E+01	33.94	3.80E+01	2.35E+01	-1.47E+01	4.13E+01
	70	382.90	2.27E+01	38.24			2.27E+01	3.82E+01
M	71	387.83	4.68E+01	37.82			4.68E+01	3.78E+01
m	72	389.95	4.00E+01	34.07			4.00E+01	3.41E+01
	73	409.92	-1.50E+01	42.26			-1.50E+01	4.23E+01
	74	424.85	-5.07E+01	40.31			-5.07E+01	4.03E+01
	75	448.50	2.32E+01	37.10	1.17E+01	2.09E+01	1.14E+01	4.26E+01
	76	456.72	3.48E+00	37.02	-1.25E+01	1.74E+01	1.60E+01	4.09E+01
M	77	461.60	3.05E+01	25.52			3.05E+01	2.55E+01
m	78	463.87	3.06E+01	25.58			3.06E+01	2.56E+01
	79	474.59	7.00E+01	37.72			7.00E+01	3.77E+01
	80	481.54	4.61E+01	36.41			4.61E+01	3.64E+01
	81	511.92	4.67E+02	118.72	3.07E+02	7.27E+01	1.60E+02	1.39E+02
	82	517.99	0.00E+00	0.00			0.00E+00	0.00E+00
	83	525.74	2.12E+01	35.59			2.12E+01	3.56E+01
	84	538.19	-9.92E+00	34.97			-9.92E+00	3.50E+01
	85	571.32	-3.75E+01	36.68			-3.75E+01	3.67E+01
	86	584.47	2.77E+02	39.03	2.12E+01	1.69E+01	2.56E+02	4.25E+01
	87	601.43	0.00E+00	0.00			0.00E+00	0.00E+00
	88	604.52	-1.09E+01	59.64			-1.09E+01	5.96E+01
	89	610.63	2.60E+03	61.40	4.28E+01	1.95E+01	2.56E+03	6.44E+01
	90	621.43	-3.58E+01	32.10			-3.58E+01	3.21E+01
	91	631.90	0.00E+00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	92	636.72	-1.04E+02	65.89			-1.04E+02	6.59E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
93	649.54	-1.56E+01	36.21			-1.56E+01	3.62E+01
94	656.90	-2.89E+01	33.78			-2.89E+01	3.38E+01
95	663.08	-7.57E+01	33.54			-7.57E+01	3.35E+01
96	670.75	6.44E+00	33.74			6.44E+00	3.37E+01
97	683.24	-4.31E+00	37.22			-4.31E+00	3.72E+01
98	698.64	6.73E+01	26.95	4.50E+01	1.05E+01	2.23E+01	2.89E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
************************************************************************

Report Generated On              :  2-20-96  8:41:21 AM

Sample Title                     : NOPI-470-GAM1
Spectrum Description             : NOPI-470-GAM1
Sample Identification            : NP470_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-19-96  8:38:57 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80007.1 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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0.008 log x + 0.987

0.058 log x + 0.876

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Locate Performed on: 2-20-96 8:40:40 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.43	0.0872	10.92	6.10
2	76.18	0.2777	13.13	6.48
3	88.88	0.1649	15.43	6.14
4	94.43	0.0617	16.29	8.52
5	110.58	0.1435	19.09	3.75
6	149.04	0.2078	25.78	5.49
7	159.29	0.2054	27.52	4.93
8	230.84	0.3219	39.95	3.48
9	269.71	0.0311	46.69	30.15
10	290.37	0.3015	50.27	4.50
11	308.36	0.0876	53.39	11.30
12	366.22	0.0519	63.43	26.13
13	391.54	0.2117	67.82	6.02
14	432.95	0.0222	75.00	35.43
15	446.08	0.0285	77.28	46.40
16	459.04	0.0762	79.52	10.67
17	469.16	0.0795	81.28	10.39
18	484.75	0.1038	83.98	11.41
19	504.77	0.1189	87.42	14.30
20	519.87	0.1283	90.09	12.32
21	535.30	0.0735	92.80	17.29
22	547.52	0.2139	94.83	4.61
23	611.07	0.2870	105.89	3.13
24	652.20	0.2095	113.03	5.75
25	745.96	0.3993	129.29	3.20
26	831.45	0.1301	144.11	7.43
27	890.85	0.2672	154.41	4.71
28	943.81	0.4072	163.60	3.66
29	1075.18	0.0792	186.38	18.28
30	1209.21	0.2863	209.63	3.96
31	1364.37	0.4080	236.54	3.73
32	1379.11	0.0526	239.10	22.43
33	1398.60	0.0694	242.45	20.78
34	1587.93	0.4290	275.31	3.31
35	1706.08	0.0445	295.80	33.20
36	1734.48	0.4315	300.72	3.45
37	1783.20	0.4446	309.17	3.02
38	1895.59	0.3828	328.66	3.50
39	1954.77	0.2257	338.93	6.35
40	2033.63	0.0413	352.60	38.72
41	2951.71	0.3523	511.82	4.60

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	3252.17	0.3455	563.93	3.52
43	3370.00	0.2857	584.37	6.59
44	3520.95	0.0692	610.55	25.36
45	3845.08	0.4310	666.76	3.46
46	4029.93	0.3721	698.82	3.89

Errors quoted at 1.000 sigma

****
[redacted]** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Analysis Performed on: 2-20-96 8:40:55 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	60-	66	63.43	10.92	1.26E+03	59.05	1.18E+03
	2	73-	79	76.18	13.13	3.34E+03	79.01	1.54E+03
M	3	84-	98	89.49	15.43	2.11E+03	284.15	2.45E+03
m	4	84-	98	94.39	16.29	3.39E+03	289.98	2.08E+03
	5	107-	114	110.58	19.09	4.47E+02	64.13	1.82E+03
M	6	144-	163	149.13	25.78	2.94E+02	48.96	8.92E+02
m	7	144-	163	159.16	27.52	2.77E+02	46.29	8.55E+02
	8	225-	236	230.84	39.95	1.81E+02	54.78	1.12E+03
	9	263-	275	269.71	46.69	4.57E+03	87.54	1.18E+03
	10	284-	294	290.37	50.27	3.97E+02	48.46	8.19E+02
	11	302-	314	308.36	53.39	8.43E+02	59.63	1.03E+03
	12	361-	372	366.22	63.43	2.89E+03	77.37	1.23E+03
	[redacted]13	384-	395	391.54	67.82	3.21E+02	59.04	1.26E+03
M	14	426-	476	432.94	75.00	5.35E+03	106.58	1.31E+03
m	15	426-	476	446.11	77.28	9.38E+03	157.10	1.12E+03
m	16	426-	476	458.99	79.52	6.79E+02	37.13	1.00E+03
m	17	426-	476	469.18	81.28	6.58E+02	36.88	9.68E+02
	18	477-	491	484.75	83.98	1.37E+03	72.77	1.36E+03
M	19	497-	554	504.56	87.42	3.14E+03	142.35	1.40E+03
m	20	497-	554	519.97	90.09	1.53E+03	104.01	1.40E+03
m	21	497-	554	535.61	92.80	4.25E+03	163.93	1.23E+03
m	22	497-	554	547.30	94.83	5.66E+02	75.34	1.09E+03
	23	603-	615	611.07	105.89	9.13E+01	50.08	9.20E+02
	24	648-	658	652.20	113.03	1.83E+02	45.97	8.06E+02
	25	740-	751	745.96	129.29	9.47E+01	46.17	8.10E+02
	26	826-	836	831.45	144.11	3.62E+02	46.14	7.43E+02
	27	883-	898	890.85	154.41	2.60E+02	56.02	9.59E+02
	28	938-	948	943.81	163.60	3.42E+01	41.18	6.98E+02
	29	1066-	1082	1075.18	186.38	2.73E+03	75.38	9.43E+02
	30	1203-	1215	1209.21	209.63	7.66E+01	39.85	5.74E+02
M	31	1357-	1408	1364.38	236.54	1.20E+02	32.39	6.73E+02
m	32	1357-	1408	1379.16	239.10	1.78E+03	84.61	5.79E+02
m	33	1357-	1408	1398.46	242.45	2.08E+03	92.89	5.18E+02
	34	1576-	1595	1587.93	275.31	8.34E+01	48.98	6.61E+02
	35	1695-	1714	1706.08	295.80	3.82E+03	77.02	6.05E+02
	36	1726-	1742	1734.48	300.72	4.25E+01	40.38	5.06E+02
	37	1775-	1791	1783.20	309.17	-1.49E+01	37.29	4.48E+02
	38	1884-	1903	1895.59	328.66	-3.66E+00	45.70	5.93E+02
	[redacted]39	1946-	1963	1954.77	338.93	2.11E+02	43.17	5.07E+02
	40	2023-	2042	2033.63	352.60	5.82E+03	88.70	5.84E+02
	41	2928-	3002	2951.71	511.82	5.34E+02	108.51	1.09E+03
	42	3238-	3264	3252.17	563.93	4.76E+01	39.63	3.47E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	3358-	3383	3370.00	584.37	2.96E+02	41.54	3.35E+02
44	3505-	3535	3520.95	610.55	3.04E+03	68.84	3.49E+02
45	3833-	3857	3845.08	666.76	3.23E+01	37.61	3.35E+02
46	4014-	4045	4029.93	698.82	1.24E+02	28.89	1.09E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Analysis Performed on: 2-20-96 8:40:40 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	10.92	1.26E+03	59.05	1.57E+02	3.08E+01	1.10E+03	6.66E+01
	2	13.13	3.34E+03	79.01			3.34E+03	7.90E+01
M	3	15.43	2.11E+03	284.15			2.11E+03	2.84E+02
m	4	16.29	3.39E+03	289.98			3.39E+03	2.90E+02
	5	19.09	4.47E+02	64.13	-1.92E-01	1.63E+01	4.47E+02	6.62E+01
M	6	25.78	2.94E+02	48.96			2.94E+02	4.90E+01
m	7	27.52	2.77E+02	46.29	-1.27E+01	1.34E+01	2.90E+02	4.82E+01
	8	39.95	1.81E+02	54.78			1.81E+02	5.48E+01
	9	46.69	4.57E+03	87.54	1.16E+01	3.50E+01	4.56E+03	9.43E+01
	10	50.27	3.97E+02	48.46	-1.20E+01	1.73E+01	4.09E+02	5.14E+01
	11	53.39	8.43E+02	59.63			8.43E+02	5.96E+01
	12	63.43	2.89E+03	77.37	7.25E+01	2.49E+01	2.82E+03	8.13E+01
	13	67.82	3.21E+02	59.04			3.21E+02	5.90E+01
M	14	75.00	5.35E+03	106.58	4.70E+01	1.89E+01	5.31E+03	1.08E+02
m	15	77.28	9.38E+03	157.10	6.88E+01	2.55E+01	9.31E+03	1.59E+02
	16	79.52	6.79E+02	37.13			6.79E+02	3.71E+01
m	17	81.28	6.58E+02	36.88			6.58E+02	3.69E+01
	18	83.98	1.37E+03	72.77	-3.10E+01	1.96E+01	1.40E+03	7.54E+01
M	19	87.42	3.14E+03	142.35			3.14E+03	1.42E+02
m	20	90.09	1.53E+03	104.01			1.53E+03	1.04E+02
m	21	92.80	4.25E+03	163.93	2.61E+02	4.01E+01	3.99E+03	1.69E+02
m	22	94.83	5.66E+02	75.34	2.42E+01	1.36E+01	5.42E+02	7.66E+01
	23	105.89	9.13E+01	50.08			9.13E+01	5.01E+01
	24	113.03	1.83E+02	45.97			1.83E+02	4.60E+01
	25	129.29	9.47E+01	46.17			9.47E+01	4.62E+01
	26	144.11	3.62E+02	46.14	4.83E+01	2.07E+01	3.13E+02	5.06E+01
	27	154.41	2.60E+02	56.02			2.60E+02	5.60E+01
	28	163.60	3.42E+01	41.18			3.42E+01	4.12E+01
	29	186.38	2.73E+03	75.38	1.65E+02	2.92E+01	2.57E+03	8.09E+01
	30	209.63	7.66E+01	39.85	-2.56E+01	2.49E+01	1.02E+02	4.70E+01
M	31	236.54	1.20E+02	32.39			1.20E+02	3.24E+01
m	32	239.10	1.78E+03	84.61	7.88E+01	2.53E+01	1.70E+03	8.83E+01
m	33	242.45	2.08E+03	92.89			2.08E+03	9.29E+01
	34	275.31	8.34E+01	48.98			8.34E+01	4.90E+01
	35	295.80	3.82E+03	77.02	1.05E+01	4.02E+01	3.81E+03	8.69E+01
	36	300.72	4.25E+01	40.38			4.25E+01	4.04E+01
	37	309.17	-1.49E+01	37.29			-1.49E+01	3.73E+01
	38	328.66	-3.66E+00	45.70			-3.66E+00	4.57E+01
	39	338.93	2.11E+02	43.17			2.11E+02	4.32E+01
	40	352.60	5.82E+03	88.70	8.80E+01	2.36E+01	5.73E+03	9.18E+01
	41	511.82	5.34E+02	108.51	3.07E+02	7.27E+01	2.28E+02	1.31E+02
	42	563.93	4.76E+01	39.63			4.76E+01	3.96E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	584.37	2.96E+02	41.54	2.12E+01	1.69E+01	2.75E+02	4.48E+01
44	610.55	3.04E+03	68.84	4.28E+01	1.95E+01	2.99E+03	7.16E+01
45	666.76	3.23E+01	37.61			3.23E+01	3.76E+01
46	698.82	1.24E+02	28.89	4.50E+01	1.05E+01	7.86E+01	3.07E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Analysis Performed on: 2-20-96 8:40:40 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	10.92	1.26E+03	59.05	1.57E+02	3.08E+01	1.10E+03	6.66E+01
	2	13.13	3.34E+03	79.01			3.34E+03	7.90E+01
M	3	15.43	2.11E+03	284.15			2.11E+03	2.84E+02
m	4	16.29	3.39E+03	289.98			3.39E+03	2.90E+02
	5	19.09	4.47E+02	64.13	-1.92E-01	1.63E+01	4.47E+02	6.62E+01
M	6	25.78	2.94E+02	48.96			2.94E+02	4.90E+01
m	7	27.52	2.77E+02	46.29	-1.27E+01	1.34E+01	2.90E+02	4.82E+01
	8	39.95	1.81E+02	54.78			1.81E+02	5.48E+01
	9	46.69	4.57E+03	87.54	1.16E+01	3.50E+01	4.56E+03	9.43E+01
	10	50.27	3.97E+02	48.46	-1.20E+01	1.73E+01	4.09E+02	5.14E+01
	11	53.39	8.43E+02	59.63			8.43E+02	5.96E+01
	12	63.43	2.89E+03	77.37	7.25E+01	2.49E+01	2.82E+03	8.13E+01
	13	67.82	3.21E+02	59.04			3.21E+02	5.90E+01
M	14	75.00	5.35E+03	106.58	4.70E+01	1.89E+01	5.31E+03	1.08E+02
m	15	77.28	9.38E+03	157.10	6.88E+01	2.55E+01	9.31E+03	1.59E+02
m	16	79.52	6.79E+02	37.13			6.79E+02	3.71E+01
m	17	81.28	6.58E+02	36.88			6.58E+02	3.69E+01
	18	83.98	1.37E+03	72.77	-3.10E+01	1.96E+01	1.40E+03	7.54E+01
M	19	87.42	3.14E+03	142.35			3.14E+03	1.42E+02
m	20	90.09	1.53E+03	104.01			1.53E+03	1.04E+02
m	21	92.80	4.25E+03	163.93	2.61E+02	4.01E+01	3.99E+03	1.69E+02
m	22	94.83	5.66E+02	75.34	2.42E+01	1.36E+01	5.42E+02	7.66E+01
	23	105.89	9.13E+01	50.08			9.13E+01	5.01E+01
	24	113.03	1.83E+02	45.97			1.83E+02	4.60E+01
	25	129.29	9.47E+01	46.17			9.47E+01	4.62E+01
	26	144.11	3.62E+02	46.14	4.83E+01	2.07E+01	3.13E+02	5.06E+01
	27	154.41	2.60E+02	56.02			2.60E+02	5.60E+01
	28	163.60	3.42E+01	41.18			3.42E+01	4.12E+01
	29	186.38	2.73E+03	75.38	1.65E+02	2.92E+01	2.57E+03	8.09E+01
	30	209.63	7.66E+01	39.85	-2.56E+01	2.49E+01	1.02E+02	4.70E+01
M	31	236.54	1.20E+02	32.39			1.20E+02	3.24E+01
m	32	239.10	1.78E+03	84.61	7.88E+01	2.53E+01	1.70E+03	8.83E+01
m	33	242.45	2.08E+03	92.89			2.08E+03	9.29E+01
	34	275.31	8.34E+01	48.98			8.34E+01	4.90E+01
	35	295.80	3.82E+03	77.02	1.05E+01	4.02E+01	3.81E+03	8.69E+01
	36	300.72	4.25E+01	40.38			4.25E+01	4.04E+01
	37	309.17	-1.49E+01	37.29			-1.49E+01	3.73E+01
	38	328.66	-3.66E+00	45.70			-3.66E+00	4.57E+01
	39	338.93	2.11E+02	43.17			2.11E+02	4.32E+01
	40	352.60	5.82E+03	88.70	8.80E+01	2.36E+01	5.73E+03	9.18E+01

41	511.82	5.34E+02	108.51	3.07E+02	7.27E+01	2.28E+02	1.31E+02
42	563.93	4.76E+01	39.63			4.76E+01	3.96E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
43	584.37	2.96E+02	41.54	2.12E+01	1.69E+01	2.75E+02	4.48E+01
44	610.55	3.04E+03	68.84	4.28E+01	1.95E+01	2.99E+03	7.16E+01
45	666.76	3.23E+01	37.61			3.23E+01	3.76E+01
46	698.82	1.24E+02	28.89	4.50E+01	1.05E+01	7.86E+01	3.07E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-12-96 10:05:24 AM

Sample Title                     : NOPI-471-GAM1
Spectrum Description             : NOPI-471-GAM1
Sample Identification            : NP471_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-11-96 11:44:07 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80255.5 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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-0.641 log x + 1.091

0.011 log x + 0.976

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Locate Performed on: 2-12-96 10:04:35 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	26.12	0.2834	4.44	3.60
2	31.63	0.0587	5.49	10.16
3	37.37	0.0302	6.38	19.99
4	46.98	0.3099	8.06	5.69
5	53.19	0.1225	9.14	7.21
6	63.50	0.0108	10.92	42.82
7	72.00	<NA>	12.55	<NA>
8	76.11	0.0208	13.13	49.88
9	88.79	0.0227	15.44	36.60
10	94.45	0.0084	16.24	60.75
11	98.00	<NA>	16.84	<NA>
12	103.91	0.0526	17.95	20.63
13	110.49	0.0153	19.06	30.34
14	114.00	0.0665	19.70	19.50
15	117.50	0.0908	20.27	5.05
16	122.20	0.1413	20.98	6.09
17	149.04	0.0193	25.76	53.33
18	159.02	0.0219	27.49	47.65
19	186.25	0.3959	32.22	3.40
20	212.46	0.1183	36.76	8.79
21	269.64	0.0046	46.68	213.29
22	290.21	0.0205	50.25	47.28
23	308.17	0.0093	53.36	97.80
24	339.28	0.4041	58.76	3.07
25	366.19	0.0037	63.43	234.12
26	375.71	0.2407	65.10	4.31
27	391.55	0.0233	67.82	53.07
28	409.68	0.3124	70.98	4.16
29	421.51	0.1111	73.07	11.30
30	432.88	0.0048	74.98	273.55
31	446.01	0.0022	77.26	363.74
32	458.78	0.0148	79.49	83.50
33	469.00	0.0088	81.25	90.44
34	484.78	0.0111	84.02	103.85
35	494.25	0.0912	85.73	11.27
36	504.68	0.0151	87.40	105.93
37	519.57	0.0115	90.04	91.04
38	535.23	0.0077	92.77	158.92
39	547.90	0.0336	94.86	45.42
40	563.48	0.0711	97.69	6.67
41	569.05	0.0175	98.58	45.36

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	579.20	0.2759	100.16	4.55
43	590.54	0.1451	102.33	3.44
44	595.14	0.4188	103.13	3.13
45	611.25	0.1671	105.92	6.95
46	631.24	0.0925	109.36	12.31
47	643.50	0.1060	111.48	11.04
48	652.27	0.0269	113.02	41.58
49	661.97	0.1250	114.71	6.43
50	698.48	0.1850	121.10	5.55
51	707.35	0.0920	122.58	12.05
52	740.09	0.2291	128.28	6.11
53	753.20	0.1210	130.59	10.76
54	812.35	0.4244	140.80	3.84
55	831.31	0.0220	144.09	62.72
56	891.30	0.0384	154.49	37.80
57	917.09	0.2376	158.96	5.78
58	944.07	0.0439	163.64	31.45
59	1074.91	0.0092	186.33	157.17
60	1126.87	0.3559	195.43	3.52
61	1134.29	0.1750	196.58	6.08
62	1168.05	0.2374	202.43	6.04
63	1186.48	0.0649	205.68	25.09
64	1217.60	0.3255	211.08	5.44
65	1363.60	0.0383	236.40	39.72
66	1378.88	0.2314	238.99	6.86
67	1398.26	0.0077	242.42	198.10
68	1480.76	0.0603	256.69	26.70
69	1495.73	0.0468	259.29	31.36
70	1556.89	0.0272	269.94	43.79
71	1567.24	0.0466	271.70	34.67
72	1587.98	0.0886	275.24	17.80
73	1638.85	0.2526	284.14	6.17
74	1653.13	0.0954	286.61	15.18
75	1705.79	0.0050	295.75	281.86
76	1733.54	0.0848	300.56	16.04
77	1748.33	0.1709	303.20	8.03
78	1759.96	0.2910	305.15	5.80
79	1817.19	0.3669	315.07	4.80
80	1871.38	0.0957	324.47	14.28
81	1905.99	0.1217	330.47	12.84
82	1954.50	0.1541	338.88	8.84
83	2015.56	0.2274	349.73	3.94
84	2033.46	0.0037	352.56	332.71
85	2235.11	0.1597	387.59	10.62
86	2247.29	0.0943	389.62	14.49
87	2321.65	0.1295	402.56	13.37
88	2340.44	0.4422	405.86	6.54
89	2467.79	0.4971	427.90	3.82
90	2569.89	0.3072	445.61	3.67
91	2628.59	0.1269	455.79	10.12

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	2668.99	0.6022	462.79	3.47
93	2713.82	0.5761	470.57	4.14
94	2776.13	0.1755	481.37	11.73
95	2814.42	0.1634	488.01	10.23
96	2868.94	0.3399	497.47	3.56
97	3083.83	0.1929	534.74	8.88
98	3245.10	0.5065	562.71	3.47
99	3351.84	0.2126	581.22	8.88
100	3429.15	0.4397	594.63	3.47
101	3520.48	0.0068	610.47	218.80
102	3617.89	0.3662	627.36	3.33
103	3844.65	0.0728	666.69	24.96
104	3947.58	0.4870	684.43	3.65
105	3978.29	0.3695	689.88	4.76
106	4028.84	0.2189	698.63	22.84

Errors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Analysis Performed on: 2-12-96 10:04:59 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	2	24-	39	32.17	5.49	2.72E+03	1331.56	5.78E+04
m	3	24-	39	37.28	6.38	6.43E+03	1385.71	4.02E+04
	5	44-	55	53.19	9.14	-5.00E+03	428.20	7.53E+04
M	6	60-	79	63.48	10.92	6.43E+04	6707.76	6.06E+04
m	7	60-	79	72.84	12.55	4.18E+04	7124.64	7.78E+04
m	8	60-	79	76.23	13.13	1.69E+05	8346.13	6.75E+04
M	9	84-	126	89.53	15.44	1.12E+05	10181.4	8.59E+04
m	10	84-	126	94.13	16.24	1.93E+05	12579.6	8.40E+04
m	11	84-	126	97.62	16.84	6.26E+04	9063.37	6.98E+04
m	12	84-	126	103.96	17.95	2.27E+04	6080.59	7.01E+04
m	13	84-	126	110.41	19.06	4.94E+04	7870.82	5.91E+04
m	14	84-	126	114.06	19.70	2.83E+04	7187.14	6.21E+04
[illegible]	15	84-	126	117.40	20.27	1.39E+04	6241.21	6.01E+04
m	16	84-	126	121.47	20.98	4.04E+03	4861.57	5.26E+04
M	17	144-	163	149.03	25.76	2.28E+04	372.24	4.58E+04
m	18	144-	163	159.01	27.49	1.94E+04	326.98	4.36E+04
	19	181-	190	186.25	32.22	2.29E+03	327.34	4.64E+04
	20	207-	218	212.46	36.76	3.23E+03	372.32	5.39E+04
	21	263-	275	269.64	46.68	2.29E+05	616.62	5.75E+04
	22	284-	295	290.21	50.25	2.46E+04	389.60	5.06E+04
	23	302-	313	308.17	53.36	5.80E+04	431.45	5.12E+04
	24	333-	342	339.28	58.76	3.95E+02	325.78	4.66E+04
M	25	359-	378	366.26	63.43	2.23E+05	832.57	5.11E+04
m	26	359-	378	375.84	65.10	6.00E+02	325.16	4.01E+04
	27	384-	396	391.55	67.82	2.53E+04	446.60	6.63E+04
M	28	402-	475	409.75	70.98	2.34E+03	1704.91	5.61E+04
m	29	402-	475	421.81	73.07	6.20E+03	1789.89	5.58E+04
m	30	402-	475	432.82	74.98	3.31E+05	5198.55	5.48E+04
m	31	402-	475	445.99	77.26	5.87E+05	5787.91	5.25E+04
m	32	402-	475	458.83	79.49	5.04E+04	2599.23	5.10E+04
m	33	402-	475	468.96	81.25	4.81E+04	2586.12	5.06E+04
M	34	477-	602	484.96	84.02	1.03E+05	1764.35	6.71E+04
m	35	477-	602	494.83	85.73	3.54E+03	963.91	6.54E+04
m	36	477-	602	504.45	87.40	1.89E+05	2171.27	6.70E+04
m	37	477-	602	519.68	90.04	8.34E+04	1599.17	5.92E+04
m	38	477-	602	535.39	92.77	2.99E+05	2618.39	5.83E+04
m	39	477-	602	547.48	94.86	3.91E+04	1235.65	5.44E+04
m	40	477-	602	563.78	97.69	6.02E+03	935.91	4.96E+04
[illegible]	41	477-	602	568.91	98.58	2.18E+04	1099.34	4.91E+04
m	42	477-	602	578.04	100.16	1.36E+03	833.45	4.84E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	45	603-	617	611.25	105.92	2.96E+03	368.05	4.60E+04
M	46	623-	665	631.08	109.36	4.25E+03	398.60	4.07E+04
m	47	623-	665	643.29	111.48	4.63E+03	402.92	3.75E+04
m	48	623-	665	652.17	113.02	1.52E+04	741.45	4.06E+04
m	49	623-	665	661.89	114.71	1.12E+03	372.71	3.12E+04
M	50	693-	714	698.73	121.10	1.36E+03	195.00	3.45E+04
m	51	693-	714	707.27	122.58	2.84E+03	350.83	3.41E+04
M	52	735-	761	740.15	128.28	1.71E+03	320.32	3.43E+04
m	53	735-	761	753.48	130.59	3.25E+03	457.21	3.44E+04
	54	804-	819	812.35	140.80	1.18E+03	380.00	4.76E+04
	55	823-	839	831.31	144.09	3.02E+04	436.60	5.13E+04
	56	882-	900	891.30	154.49	1.23E+04	457.51	5.83E+04
	57	912-	926	917.09	158.96	1.48E+03	354.29	4.30E+04
	58	937-	953	944.07	163.64	9.02E+03	390.85	4.59E+04
	59	1065-	1083	1074.91	186.33	1.99E+05	604.15	4.91E+04
M	60	1120-	1140	1127.34	195.43	7.89E+02	183.69	2.95E+04
m	61	1120-	1140	1134.00	196.58	1.26E+03	277.92	3.19E+04
M	62	1159-	1196	1167.72	202.43	1.78E+03	215.63	3.22E+04
m	63	1159-	1196	1186.46	205.68	7.52E+03	588.79	2.92E+04
	64	1207-	1223	1217.60	211.08	1.16E+03	318.36	3.20E+04
M	65	1353-	1408	1363.58	236.40	1.12E+04	203.03	2.63E+04
m	66	1353-	1408	1378.55	238.99	1.52E+03	149.25	2.58E+04
m	67	1353-	1408	1398.27	242.42	1.47E+05	925.44	2.26E+04
	68	1470-	1505	1480.59	256.69	6.42E+03	312.18	2.24E+04
m	69	1470-	1505	1495.59	259.29	9.39E+03	389.84	2.19E+04
M	70	1546-	1596	1556.96	269.94	1.24E+04	462.54	2.20E+04
m	71	1546-	1596	1567.15	271.70	9.78E+03	406.34	2.18E+04
m	72	1546-	1596	1587.53	275.24	5.37E+03	320.83	2.04E+04
M	73	1631-	1660	1638.88	284.14	5.64E+02	132.07	2.13E+04
m	74	1631-	1660	1653.08	286.61	2.41E+03	380.46	2.13E+04
	75	1694-	1715	1705.79	295.75	2.89E+05	631.21	2.90E+04
M	76	1725-	1768	1733.55	300.56	3.03E+03	341.75	1.93E+04
m	77	1725-	1768	1748.74	303.20	1.38E+03	177.29	1.89E+04
m	78	1725-	1768	1760.02	305.15	1.09E+03	152.61	1.98E+04
	79	1806-	1828	1817.19	315.07	1.53E+03	321.90	2.63E+04
	80	1863-	1879	1871.38	324.47	2.68E+03	252.79	1.96E+04
	81	1896-	1915	1905.99	330.47	2.53E+03	291.77	2.36E+04
	82	1944-	1962	1954.50	338.88	1.55E+03	290.97	2.46E+04
M	83	2007-	2043	2017.05	349.73	6.72E+02	583.71	2.76E+04
m	84	2007-	2043	2033.37	352.56	4.33E+05	1047.39	2.47E+04
M	85	2225-	2259	2235.38	387.59	2.46E+03	216.94	2.23E+04
m	86	2225-	2259	2247.07	389.62	3.19E+03	274.14	2.24E+04
M	87	2311-	2352	2321.66	402.56	3.66E+03	350.62	2.64E+04
m	88	2311-	2352	2340.70	405.86	2.73E+03	279.09	3.03E+04
	89	2458-	2480	2467.79	427.90	1.22E+03	321.19	2.63E+04
	90	2557-	2580	2569.89	445.61	6.50E+02	293.48	2.14E+04
	91	2615-	2641	2628.59	455.79	2.31E+03	319.25	2.27E+04
	92	2655-	2679	2668.99	462.79	1.15E+03	296.35	2.10E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	93	2703-	2726	2713.82	470.57	1.11E+03	280.44	1.94E+04
	94	2763-	2786	2776.13	481.37	2.86E+03	276.32	1.84E+04
	95	2802-	2827	2814.42	488.01	2.82E+03	290.31	1.91E+04
	96	2856-	2878	2868.94	497.47	-4.70E+02	256.24	1.70E+04
	97	3073-	3093	3083.83	534.74	1.07E+03	227.98	1.40E+04
	98	3233-	3256	3245.10	562.71	-9.46E+01	250.94	1.57E+04
	99	3337-	3362	3351.84	581.22	1.55E+03	271.34	1.69E+04
	100	3414-	3441	3429.15	594.63	9.20E+02	293.79	1.89E+04
	101	3505-	3535	3520.48	610.47	2.16E+05	560.14	2.02E+04
	102	3602-	3631	3617.89	627.36	2.76E+02	281.50	1.66E+04
	103	3831-	3859	3844.65	666.69	5.67E+03	277.69	1.54E+04
M	104	3935-	3990	3946.97	684.43	5.14E+02	188.86	1.35E+04
m	105	3935-	3990	3978.38	689.88	9.90E+02	330.34	2.11E+04
	106	4016-	4044	4028.84	698.63	4.64E+03	177.02	4.24E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Analysis Performed on: 2-12-96 10:04:35 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	1	4.44	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.49	2.72E+03	1331.56	4.00E+01	3.04E+01	2.68E+03	1.33E+03
m	3	6.38	6.43E+03	1385.71	4.00E+01	3.04E+01	6.39E+03	1.39E+03
	4	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
	5	9.14	-5.00E+03	428.20			-5.00E+03	4.28E+02
M	6	10.92	6.43E+04	6707.76	1.57E+02	3.08E+01	6.42E+04	6.71E+03
m	7	12.55	4.18E+04	7124.64			4.18E+04	7.12E+03
m	8	13.13	1.69E+05	8346.13			1.69E+05	8.35E+03
M	9	15.44	1.12E+05	10181.4			1.12E+05	1.02E+04
m	10	16.24	1.93E+05	12579.6			1.93E+05	1.26E+04
m	11	16.84	6.26E+04	9063.37			6.26E+04	9.06E+03
m	12	17.95	2.27E+04	6080.59			2.27E+04	6.08E+03
m	13	19.06	4.94E+04	7870.82	-1.92E-01	1.63E+01	4.94E+04	7.87E+03
m	14	19.70	2.83E+04	7187.14	-1.92E-01	1.63E+01	2.83E+04	7.19E+03
m	15	20.27	1.39E+04	6241.21	-1.92E-01	1.63E+01	1.39E+04	6.24E+03
[illegible]	16	20.98	4.04E+03	4861.57			4.04E+03	4.86E+03
M	17	25.76	2.28E+04	372.24			2.28E+04	3.72E+02
m	18	27.49	1.94E+04	326.98	-1.27E+01	1.34E+01	1.94E+04	3.27E+02
	19	32.22	2.29E+03	327.34			2.29E+03	3.27E+02
	20	36.76	3.23E+03	372.32			3.23E+03	3.72E+02
	21	46.68	2.29E+05	616.62	1.16E+01	3.50E+01	2.29E+05	6.18E+02
	22	50.25	2.46E+04	389.60	-1.20E+01	1.73E+01	2.46E+04	3.90E+02
	23	53.36	5.80E+04	431.45			5.80E+04	4.31E+02
	24	58.76	3.95E+02	325.78			3.95E+02	3.26E+02
M	25	63.43	2.23E+05	832.57	7.25E+01	2.49E+01	2.23E+05	8.33E+02
m	26	65.10	6.00E+02	325.16			6.00E+02	3.25E+02
	27	67.82	2.53E+04	446.60			2.53E+04	4.47E+02
M	28	70.98	2.34E+03	1704.91			2.34E+03	1.70E+03
m	29	73.07	6.20E+03	1789.89			6.20E+03	1.79E+03
m	30	74.98	3.31E+05	5198.55	4.70E+01	1.89E+01	3.31E+05	5.20E+03
m	31	77.26	5.87E+05	5787.91	6.88E+01	2.55E+01	5.87E+05	5.79E+03
m	32	79.49	5.04E+04	2599.23			5.04E+04	2.60E+03
m	33	81.25	4.81E+04	2586.12			4.81E+04	2.59E+03
M	34	84.02	1.03E+05	1764.35	-3.10E+01	1.96E+01	1.03E+05	1.76E+03
m	35	85.73	3.54E+03	963.91			3.54E+03	9.64E+02
m	36	87.40	1.89E+05	2171.27			1.89E+05	2.17E+03
m	37	90.04	8.34E+04	1599.17			8.34E+04	1.60E+03
m	38	92.77	2.99E+05	2618.39	2.61E+02	4.01E+01	2.99E+05	2.62E+03
m	39	94.86	3.91E+04	1235.65	2.42E+01	1.36E+01	3.90E+04	1.24E+03
m	40	97.69	6.02E+03	935.91			6.02E+03	9.36E+02
m	41	98.58	2.18E+04	1099.34			2.18E+04	1.10E+03
[illegible]	42	100.16	1.36E+03	833.45			1.36E+03	8.33E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	102.33	0.00E+00	0.00			0.00E+00	0.00E+00
m	44	103.13	0.00E+00	0.00			0.00E+00	0.00E+00
	45	105.92	2.96E+03	368.05			2.96E+03	3.68E+02
M	46	109.36	4.25E+03	398.60	9.22E+01	2.46E+01	4.16E+03	3.99E+02
m	47	111.48	4.63E+03	402.92			4.63E+03	4.03E+02
m	48	113.02	1.52E+04	741.45			1.52E+04	7.41E+02
m	49	114.71	1.12E+03	372.71			1.12E+03	3.73E+02
M	50	121.10	1.36E+03	195.00	6.68E+00	2.29E+01	1.35E+03	1.96E+02
m	51	122.58	2.84E+03	350.83			2.84E+03	3.51E+02
M	52	128.28	1.71E+03	320.32			1.71E+03	3.20E+02
m	53	130.59	3.25E+03	457.21			3.25E+03	4.57E+02
	54	140.80	1.18E+03	380.00			1.18E+03	3.80E+02
	55	144.09	3.02E+04	436.60	4.83E+01	2.07E+01	3.01E+04	4.37E+02
	56	154.49	1.23E+04	457.51			1.23E+04	4.58E+02
	57	158.96	1.48E+03	354.29			1.48E+03	3.54E+02
	58	163.64	9.02E+03	390.85			9.02E+03	3.91E+02
	59	186.33	1.99E+05	604.15	1.65E+02	2.92E+01	1.99E+05	6.05E+02
M	60	195.43	7.89E+02	183.69			7.89E+02	1.84E+02
m	61	196.58	1.26E+03	277.92	5.02E+01	2.63E+01	1.21E+03	2.79E+02
M	62	202.43	1.78E+03	215.63			1.78E+03	2.16E+02
m	63	205.68	7.52E+03	588.79	-8.75E+00	2.28E+01	7.53E+03	5.89E+02
	64	211.08	1.16E+03	318.36	-2.56E+01	2.49E+01	1.18E+03	3.19E+02
M	65	236.40	1.12E+04	203.03			1.12E+04	2.03E+02
[illegible]	66	238.99	1.52E+03	149.25	7.88E+01	2.53E+01	1.44E+03	1.51E+02
m	67	242.42	1.47E+05	925.44			1.47E+05	9.25E+02
M	68	256.69	6.42E+03	312.18			6.42E+03	3.12E+02
m	69	259.29	9.39E+03	389.84	1.45E+01	2.66E+01	9.37E+03	3.91E+02
M	70	269.94	1.24E+04	462.54			1.24E+04	4.63E+02
m	71	271.70	9.78E+03	406.34			9.78E+03	4.06E+02
m	72	275.24	5.37E+03	320.83			5.37E+03	3.21E+02
M	73	284.14	5.64E+02	132.07			5.64E+02	1.32E+02
m	74	286.61	2.41E+03	380.46			2.41E+03	3.80E+02
	75	295.75	2.89E+05	631.21	1.05E+01	4.02E+01	2.89E+05	6.32E+02
M	76	300.56	3.03E+03	341.75			3.03E+03	3.42E+02
m	77	303.20	1.38E+03	177.29			1.38E+03	1.77E+02
m	78	305.15	1.09E+03	152.61			1.09E+03	1.53E+02
	79	315.07	1.53E+03	321.90			1.53E+03	3.22E+02
	80	324.47	2.68E+03	252.79	-2.18E+01	1.99E+01	2.70E+03	2.54E+02
	81	330.47	2.53E+03	291.77	-2.16E+01	3.90E+01	2.55E+03	2.94E+02
	82	338.88	1.55E+03	290.97			1.55E+03	2.91E+02
M	83	349.73	6.72E+02	583.71			6.72E+02	5.84E+02
m	84	352.56	4.33E+05	1047.39	8.80E+01	2.36E+01	4.33E+05	1.05E+03
M	85	387.59	2.46E+03	216.94			2.46E+03	2.17E+02
m	86	389.62	3.19E+03	274.14			3.19E+03	2.74E+02
M	87	402.56	3.66E+03	350.62			3.66E+03	3.51E+02
m	88	405.86	2.73E+03	279.09			2.73E+03	2.79E+02
	89	427.90	1.22E+03	321.19			1.22E+03	3.21E+02
	90	445.61	6.50E+02	293.48			6.50E+02	2.93E+02
	91	455.79	2.31E+03	319.25			2.31E+03	3.19E+02
[illegible]	92	462.79	1.15E+03	296.35			1.15E+03	2.96E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	470.57	1.11E+03	280.44			1.11E+03	2.80E+02
94	481.37	2.86E+03	276.32			2.86E+03	2.76E+02
95	488.01	2.82E+03	290.31			2.82E+03	2.90E+02
96	497.47	-4.70E+02	256.24			-4.70E+02	2.56E+02
97	534.74	1.07E+03	227.98			1.07E+03	2.28E+02
98	562.71	-9.46E+01	250.94			-9.46E+01	2.51E+02
99	581.22	1.55E+03	271.34			1.55E+03	2.71E+02
100	594.63	9.20E+02	293.79			9.20E+02	2.94E+02
101	610.47	2.16E+05	560.14	4.28E+01	1.95E+01	2.16E+05	5.60E+02
102	627.36	2.76E+02	281.50			2.76E+02	2.81E+02
103	666.69	5.67E+03	277.69			5.67E+03	2.78E+02
M 104	684.43	5.14E+02	188.86			5.14E+02	1.89E+02
m 105	689.88	9.90E+02	330.34	-5.15E+01	1.92E+01	1.04E+03	3.31E+02
106	698.63	4.64E+03	177.02	4.50E+01	1.05E+01	4.60E+03	1.77E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        A R E A   C O R R E C T I O N   R E P O R T        *****
*****     R E F E R E N C E   P E A K / B K G . S U B T R A C T   *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Analysis Performed on: 2-12-96 10:04:35 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	1	4.44	0.00E+00	0.00			0.00E+00	0.00E+00
M	2	5.49	2.72E+03	1331.56	4.00E+01	3.04E+01	2.68E+03	1.33E+03
m	3	6.38	6.43E+03	1385.71	4.00E+01	3.04E+01	6.39E+03	1.39E+03
	4	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
	5	9.14	-5.00E+03	428.20			-5.00E+03	4.28E+02
M	6	10.92	6.43E+04	6707.76	1.57E+02	3.08E+01	6.42E+04	6.71E+03
m	7	12.55	4.18E+04	7124.64			4.18E+04	7.12E+03
m	8	13.13	1.69E+05	8346.13			1.69E+05	8.35E+03
M	9	15.44	1.12E+05	10181.4			1.12E+05	1.02E+04
	10	16.24	1.93E+05	12579.6			1.93E+05	1.26E+04
m	11	16.84	6.26E+04	9063.37			6.26E+04	9.06E+03
m	12	17.95	2.27E+04	6080.59			2.27E+04	6.08E+03
m	13	19.06	4.94E+04	7870.82	-1.92E-01	1.63E+01	4.94E+04	7.87E+03
m	14	19.70	2.83E+04	7187.14	-1.92E-01	1.63E+01	2.83E+04	7.19E+03
m	15	20.27	1.39E+04	6241.21	-1.92E-01	1.63E+01	1.39E+04	6.24E+03
m	16	20.98	4.04E+03	4861.57			4.04E+03	4.86E+03
M	17	25.76	2.28E+04	372.24			2.28E+04	3.72E+02
m	18	27.49	1.94E+04	326.98	-1.27E+01	1.34E+01	1.94E+04	3.27E+02
	19	32.22	2.29E+03	327.34			2.29E+03	3.27E+02
	20	36.76	3.23E+03	372.32			3.23E+03	3.72E+02
	21	46.68	2.29E+05	616.62	1.16E+01	3.50E+01	2.29E+05	6.18E+02
	22	50.25	2.46E+04	389.60	-1.20E+01	1.73E+01	2.46E+04	3.90E+02
	23	53.36	5.80E+04	431.45			5.80E+04	4.31E+02
	24	58.76	3.95E+02	325.78			3.95E+02	3.26E+02
M	25	63.43	2.23E+05	832.57	7.25E+01	2.49E+01	2.23E+05	8.33E+02
m	26	65.10	6.00E+02	325.16			6.00E+02	3.25E+02
	27	67.82	2.53E+04	446.60			2.53E+04	4.47E+02
M	28	70.98	2.34E+03	1704.91			2.34E+03	1.70E+03
m	29	73.07	6.20E+03	1789.89			6.20E+03	1.79E+03
m	30	74.98	3.31E+05	5198.55	4.70E+01	1.89E+01	3.31E+05	5.20E+03
m	31	77.26	5.87E+05	5787.91	6.88E+01	2.55E+01	5.87E+05	5.79E+03
m	32	79.49	5.04E+04	2599.23			5.04E+04	2.60E+03
m	33	81.25	4.81E+04	2586.12			4.81E+04	2.59E+03
M	34	84.02	1.03E+05	1764.35	-3.10E+01	1.96E+01	1.03E+05	1.76E+03
m	35	85.73	3.54E+03	963.91			3.54E+03	9.64E+02
	36	87.40	1.89E+05	2171.27			1.89E+05	2.17E+03
m	37	90.04	8.34E+04	1599.17			8.34E+04	1.60E+03
m	38	92.77	2.99E+05	2618.39	2.61E+02	4.01E+01	2.99E+05	2.62E+03
m	39	94.86	3.91E+04	1235.65	2.42E+01	1.36E+01	3.90E+04	1.24E+03
m	40	97.69	6.02E+03	935.91			6.02E+03	9.36E+02

m	41	98.58	2.18E+04	1099.34	2.18E+04	1.10E+03
r	42	100.16	1.36E+03	833.45	1.36E+03	8.33E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	102.33	0.00E+00	0.00			0.00E+00	0.00E+00
m	44	103.13	0.00E+00	0.00			0.00E+00	0.00E+00
	45	105.92	2.96E+03	368.05			2.96E+03	3.68E+02
M	46	109.36	4.25E+03	398.60	9.22E+01	2.46E+01	4.16E+03	3.99E+02
m	47	111.48	4.63E+03	402.92			4.63E+03	4.03E+02
m	48	113.02	1.52E+04	741.45			1.52E+04	7.41E+02
m	49	114.71	1.12E+03	372.71			1.12E+03	3.73E+02
M	50	121.10	1.36E+03	195.00	6.68E+00	2.29E+01	1.35E+03	1.96E+02
m	51	122.58	2.84E+03	350.83			2.84E+03	3.51E+02
M	52	128.28	1.71E+03	320.32			1.71E+03	3.20E+02
m	53	130.59	3.25E+03	457.21			3.25E+03	4.57E+02
	54	140.80	1.18E+03	380.00			1.18E+03	3.80E+02
	55	144.09	3.02E+04	436.60	4.83E+01	2.07E+01	3.01E+04	4.37E+02
	56	154.49	1.23E+04	457.51			1.23E+04	4.58E+02
	57	158.96	1.48E+03	354.29			1.48E+03	3.54E+02
	58	163.64	9.02E+03	390.85			9.02E+03	3.91E+02
	59	186.33	1.99E+05	604.15	1.65E+02	2.92E+01	1.99E+05	6.05E+02
M	60	195.43	7.89E+02	183.69			7.89E+02	1.84E+02
m	61	196.58	1.26E+03	277.92	5.02E+01	2.63E+01	1.21E+03	2.79E+02
M	62	202.43	1.78E+03	215.63			1.78E+03	2.16E+02
m	63	205.68	7.52E+03	588.79	-8.75E+00	2.28E+01	7.53E+03	5.89E+02
	64	211.08	1.16E+03	318.36	-2.56E+01	2.49E+01	1.18E+03	3.19E+02
M	65	236.40	1.12E+04	203.03			1.12E+04	2.03E+02
	66	238.99	1.52E+03	149.25	7.88E+01	2.53E+01	1.44E+03	1.51E+02
m	67	242.42	1.47E+05	925.44			1.47E+05	9.25E+02
M	68	256.69	6.42E+03	312.18			6.42E+03	3.12E+02
m	69	259.29	9.39E+03	389.84	1.45E+01	2.66E+01	9.37E+03	3.91E+02
M	70	269.94	1.24E+04	462.54			1.24E+04	4.63E+02
m	71	271.70	9.78E+03	406.34			9.78E+03	4.06E+02
m	72	275.24	5.37E+03	320.83			5.37E+03	3.21E+02
M	73	284.14	5.64E+02	132.07			5.64E+02	1.32E+02
m	74	286.61	2.41E+03	380.46			2.41E+03	3.80E+02
	75	295.75	2.89E+05	631.21	1.05E+01	4.02E+01	2.89E+05	6.32E+02
M	76	300.56	3.03E+03	341.75			3.03E+03	3.42E+02
m	77	303.20	1.38E+03	177.29			1.38E+03	1.77E+02
m	78	305.15	1.09E+03	152.61			1.09E+03	1.53E+02
	79	315.07	1.53E+03	321.90			1.53E+03	3.22E+02
	80	324.47	2.68E+03	252.79	-2.18E+01	1.99E+01	2.70E+03	2.54E+02
	81	330.47	2.53E+03	291.77	-2.16E+01	3.90E+01	2.55E+03	2.94E+02
	82	338.88	1.55E+03	290.97			1.55E+03	2.91E+02
M	83	349.73	6.72E+02	583.71			6.72E+02	5.84E+02
m	84	352.56	4.33E+05	1047.39	8.80E+01	2.36E+01	4.33E+05	1.05E+03
M	85	387.59	2.46E+03	216.94			2.46E+03	2.17E+02
m	86	389.62	3.19E+03	274.14			3.19E+03	2.74E+02
M	87	402.56	3.66E+03	350.62			3.66E+03	3.51E+02
m	88	405.86	2.73E+03	279.09			2.73E+03	2.79E+02
	89	427.90	1.22E+03	321.19			1.22E+03	3.21E+02
	90	445.61	6.50E+02	293.48			6.50E+02	2.93E+02
	91	455.79	2.31E+03	319.25			2.31E+03	3.19E+02
	92	462.79	1.15E+03	296.35			1.15E+03	2.96E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
93	470.57	1.11E+03	280.44			1.11E+03	2.80E+02
94	481.37	2.86E+03	276.32			2.86E+03	2.76E+02
95	488.01	2.82E+03	290.31			2.82E+03	2.90E+02
96	497.47	-4.70E+02	256.24			-4.70E+02	2.56E+02
97	534.74	1.07E+03	227.98			1.07E+03	2.28E+02
98	562.71	-9.46E+01	250.94			-9.46E+01	2.51E+02
99	581.22	1.55E+03	271.34			1.55E+03	2.71E+02
100	594.63	9.20E+02	293.79			9.20E+02	2.94E+02
101	610.47	2.16E+05	560.14	4.28E+01	1.95E+01	2.16E+05	5.60E+02
102	627.36	2.76E+02	281.50			2.76E+02	2.81E+02
103	666.69	5.67E+03	277.69			5.67E+03	2.78E+02
M 104	684.43	5.14E+02	188.86			5.14E+02	1.89E+02
m 105	689.88	9.90E+02	330.34	-5.15E+01	1.92E+01	1.04E+03	3.31E+02
106	698.63	4.64E+03	177.02	4.50E+01	1.05E+01	4.60E+03	1.77E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-12-96  8:47:38 AM

Sample Title                     : NOPI-472-GAM1
Spectrum Description             : NOPI-472-GAM1
Sample Identification            : NP472_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-10-96 11:42:32 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80018.8 seconds


          Energy Calibration Used Done On        :  1-16-96
          Efficiency Calibration Used Done On    : ????????
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-0.225 log x + 1.454

-0.116 log x + 1.327

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Locate Performed on: 2-12-96 8:47:02 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.12	0.1892	6.35	5.42
2	53.18	0.2681	9.14	3.37
3	63.42	0.0544	10.91	9.84
4	76.12	0.0963	13.12	10.69
5	88.78	0.0956	15.41	8.61
6	94.42	0.0405	16.25	13.43
7	103.95	0.2117	17.94	5.61
8	110.41	0.0733	19.07	7.44
9	114.00	<NA>	19.78	<NA>
10	148.80	0.0984	25.73	10.18
11	158.94	0.1224	27.48	9.14
12	269.54	0.0262	46.66	53.98
13	290.13	0.0940	50.23	10.10
14	308.05	0.0353	53.34	25.59
15	366.13	0.0154	63.41	55.31
16	391.46	0.0781	67.80	15.31
17	432.74	0.0173	74.96	69.94
18	445.96	0.0083	77.25	94.79
19	458.66	0.0576	79.47	18.97
20	468.97	0.0360	81.24	22.08
21	484.62	0.0452	83.96	23.19
22	504.43	0.0540	87.36	25.74
23	519.44	0.0440	90.02	24.35
24	535.18	0.0338	92.76	36.28
25	547.71	0.1153	94.81	9.01
26	568.61	0.1443	98.53	7.37
27	593.98	0.3370	102.93	3.37
28	643.55	0.2940	111.50	3.50
29	652.00	0.1289	113.01	10.54
30	831.10	0.0852	144.05	16.69
31	890.83	0.1694	154.41	7.39
32	944.20	0.1889	163.67	6.51
33	1075.08	0.0265	186.36	42.35
34	1186.15	0.1731	205.63	6.71
35	1363.46	0.1829	236.39	7.57
36	1378.92	0.0644	239.04	18.59
37	1398.12	0.0227	242.39	50.94
38	1466.32	0.3775	254.19	3.03
39	1480.39	0.1878	256.66	7.43
40	1495.42	0.1702	259.25	8.54
41	1557.04	0.1942	269.95	8.11

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1566.93	0.1597	271.62	7.75
43	1588.02	0.3570	275.23	5.25
44	1652.90	0.4988	286.57	3.38
45	1705.64	0.0189	295.72	72.14
46	1733.05	0.4091	300.47	4.11
47	1870.97	0.4171	324.39	4.37
48	1906.09	0.2629	330.48	4.74
49	1954.59	0.2614	338.90	5.17
50	2033.22	0.0183	352.53	87.71
51	2235.23	0.3566	387.57	4.28
52	2246.58	0.4199	389.54	3.44
53	2340.79	0.3453	405.87	3.66
54	2626.75	0.4478	455.47	3.33
55	2775.73	0.3887	481.30	3.54
56	2815.01	0.4863	488.12	3.44
57	3083.61	0.6325	534.70	3.02
58	3368.80	0.3757	584.16	4.57
59	3495.26	0.4870	606.03	3.02
60	3520.12	0.0321	610.42	55.63
61	3844.17	0.3264	666.60	5.53
62	4029.05	0.5113	698.67	6.43

ors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Analysis Performed on: 2-12-96 8:47:16 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.12	6.35	5.44E+02	69.60	2.59E+03
	2	50-	56	53.18	9.14	9.63E+01	75.81	2.98E+03
	3	60-	66	63.42	10.91	2.73E+03	94.54	3.28E+03
	4	73-	79	76.12	13.12	8.06E+03	126.04	4.14E+03
M	5	84-	118	89.34	15.41	6.22E+03	281.61	5.89E+03
m	6	84-	118	94.21	16.25	9.98E+03	331.67	5.08E+03
m	7	84-	118	103.96	17.94	1.36E+03	191.89	4.65E+03
m	8	84-	118	110.47	19.07	2.87E+03	225.78	4.86E+03
m	9	84-	118	114.52	19.78	1.33E+03	195.21	3.97E+03
M	10	144-	163	148.87	25.73	1.17E+03	93.48	3.00E+03
m	11	144-	163	158.92	27.48	9.23E+02	76.33	2.85E+03
	12	263-	275	269.54	46.66	1.59E+04	160.75	3.78E+03
	13	284-	294	290.13	50.23	1.12E+03	92.85	3.15E+03
	14	302-	313	308.05	53.34	3.77E+03	111.57	3.47E+03
	15	359-	372	366.13	63.41	1.18E+04	158.73	4.88E+03
	16	386-	396	391.46	67.80	1.90E+03	104.49	3.78E+03
M	17	425-	474	432.70	74.96	2.18E+04	351.31	4.26E+03
m	18	425-	474	445.90	77.25	3.91E+04	429.22	3.80E+03
m	19	425-	474	458.70	79.47	3.04E+03	159.36	3.50E+03
m	20	425-	474	468.92	81.24	2.75E+03	156.19	3.42E+03
	21	477-	491	484.62	83.96	5.58E+03	136.59	4.55E+03
M	22	497-	554	504.21	87.36	1.26E+04	457.49	4.68E+03
m	23	497-	554	519.57	90.02	5.56E+03	342.86	4.37E+03
m	24	497-	554	535.36	92.76	1.60E+04	495.57	4.02E+03
m	25	497-	554	547.17	94.81	2.06E+03	250.62	3.52E+03
	26	561-	573	568.61	98.53	1.02E+03	94.97	3.03E+03
	27	587-	597	593.98	102.93	5.53E+01	74.22	2.29E+03
M	28	639-	659	643.41	111.50	8.94E+01	43.60	2.34E+03
m	29	639-	659	652.12	113.01	7.03E+02	125.74	2.43E+03
	30	823-	838	831.10	144.05	1.81E+03	107.03	3.21E+03
	31	881-	898	890.83	154.41	7.97E+02	114.91	3.82E+03
	32	938-	949	944.20	163.67	4.34E+02	79.63	2.36E+03
	33	1066-	1083	1075.08	186.36	1.28E+04	150.50	3.04E+03
	34	1177-	1192	1186.15	205.63	3.20E+02	86.64	2.39E+03
M	35	1356-	1407	1363.56	236.39	6.18E+02	49.25	1.80E+03
m	36	1356-	1407	1378.79	239.04	1.63E+03	68.12	1.67E+03
m	37	1356-	1407	1398.12	242.39	9.80E+03	209.64	1.62E+03
M	38	1457-	1505	1466.17	254.19	1.25E+02	36.92	1.40E+03
	39	1457-	1505	1480.40	256.66	4.09E+02	69.83	1.47E+03
m	40	1457-	1505	1495.34	259.25	6.94E+02	109.81	1.36E+03
M	41	1548-	1595	1557.06	269.95	6.17E+02	86.31	1.53E+03
m	42	1548-	1595	1566.67	271.62	4.78E+02	69.82	1.46E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1548-	1595	1587.50	275.23	3.18E+02	51.99	1.50E+03
	44	1644-	1661	1652.90	286.57	1.16E+02	78.07	1.83E+03
	45	1694-	1714	1705.64	295.72	1.89E+04	161.13	1.93E+03
	46	1725-	1743	1733.05	300.47	1.55E+02	76.04	1.66E+03
	47	1862-	1878	1870.97	324.39	6.26E+01	67.59	1.44E+03
	48	1898-	1918	1906.09	330.48	2.54E+01	81.61	1.83E+03
	49	1943-	1963	1954.59	338.90	2.29E+02	84.35	1.90E+03
	50	2021-	2043	2033.22	352.53	2.80E+04	189.81	2.06E+03
	52	2226-	2255	2246.58	389.54	4.69E+01	110.17	2.54E+03
	53	2329-	2352	2340.79	405.87	1.84E+01	89.08	1.98E+03
	54	2613-	2636	2626.75	455.47	8.12E+01	76.21	1.42E+03
	55	2762-	2785	2775.73	481.30	8.30E+01	72.73	1.30E+03
	56	2805-	2825	2815.01	488.12	4.93E+01	64.59	1.13E+03
	57	3073-	3093	3083.61	534.70	1.60E+02	57.54	8.68E+02
	58	3357-	3382	3368.80	584.16	1.05E+02	75.64	1.32E+03
M	59	3482-	3532	3494.89	606.03	4.81E+01	53.89	1.21E+03
m	60	3482-	3532	3520.23	610.42	1.39E+04	192.40	1.33E+03
	61	3832-	3856	3844.17	666.60	2.69E+02	64.30	9.35E+02
	62	4017-	4045	4029.05	698.67	3.04E+02	44.49	2.59E+02

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Analysis Performed on: 2-12-96 8:47:02 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.35	5.44E+02	69.60	4.00E+01	3.04E+01	5.04E+02	7.60E+01
	2	9.14	9.63E+01	75.81			9.63E+01	7.58E+01
	3	10.91	2.73E+03	94.54	1.57E+02	3.08E+01	2.57E+03	9.94E+01
	4	13.12	8.06E+03	126.04			8.06E+03	1.26E+02
M	5	15.41	6.22E+03	281.61			6.22E+03	2.82E+02
m	6	16.25	9.98E+03	331.67			9.98E+03	3.32E+02
m	7	17.94	1.36E+03	191.89			1.36E+03	1.92E+02
m	8	19.07	2.87E+03	225.78	-1.92E-01	1.63E+01	2.87E+03	2.26E+02
m	9	19.78	1.33E+03	195.21	-1.92E-01	1.63E+01	1.33E+03	1.96E+02
M	10	25.73	1.17E+03	93.48			1.17E+03	9.35E+01
m	11	27.48	9.23E+02	76.33	-1.27E+01	1.34E+01	9.36E+02	7.75E+01
	12	46.66	1.59E+04	160.75	1.16E+01	3.50E+01	1.59E+04	1.65E+02
	13	50.23	1.12E+03	92.85	-1.20E+01	1.73E+01	1.13E+03	9.44E+01
	14	53.34	3.77E+03	111.57			3.77E+03	1.12E+02
	15	63.41	1.18E+04	158.73	7.25E+01	2.49E+01	1.17E+04	1.61E+02
	16	67.80	1.90E+03	104.49			1.90E+03	1.04E+02
M	17	74.96	2.18E+04	351.31	4.70E+01	1.89E+01	2.18E+04	3.52E+02
m	18	77.25	3.91E+04	429.22	6.88E+01	2.55E+01	3.90E+04	4.30E+02
m	19	79.47	3.04E+03	159.36			3.04E+03	1.59E+02
m	20	81.24	2.75E+03	156.19			2.75E+03	1.56E+02
	21	83.96	5.58E+03	136.59	-3.10E+01	1.96E+01	5.61E+03	1.38E+02
M	22	87.36	1.26E+04	457.49			1.26E+04	4.57E+02
m	23	90.02	5.56E+03	342.86			5.56E+03	3.43E+02
m	24	92.76	1.60E+04	495.57	2.61E+02	4.01E+01	1.58E+04	4.97E+02
m	25	94.81	2.06E+03	250.62	2.42E+01	1.36E+01	2.04E+03	2.51E+02
	26	98.53	1.02E+03	94.97			1.02E+03	9.50E+01
	27	102.93	5.53E+01	74.22			5.53E+01	7.42E+01
M	28	111.50	8.94E+01	43.60			8.94E+01	4.36E+01
m	29	113.01	7.03E+02	125.74			7.03E+02	1.26E+02
	30	144.05	1.81E+03	107.03	4.83E+01	2.07E+01	1.76E+03	1.09E+02
	31	154.41	7.97E+02	114.91			7.97E+02	1.15E+02
	32	163.67	4.34E+02	79.63			4.34E+02	7.96E+01
	33	186.36	1.28E+04	150.50	1.65E+02	2.92E+01	1.26E+04	1.53E+02
	34	205.63	3.20E+02	86.64	-8.75E+00	2.28E+01	3.29E+02	8.96E+01
M	35	236.39	6.18E+02	49.25			6.18E+02	4.93E+01
m	36	239.04	1.63E+03	68.12	7.88E+01	2.53E+01	1.55E+03	7.27E+01
m	37	242.39	9.80E+03	209.64			9.80E+03	2.10E+02
M	38	254.19	1.25E+02	36.92			1.25E+02	3.69E+01
m	39	256.66	4.09E+02	69.83			4.09E+02	6.98E+01
m	40	259.25	6.94E+02	109.81	1.45E+01	2.66E+01	6.80E+02	1.13E+02
M	41	269.95	6.17E+02	86.31			6.17E+02	8.63E+01
	42	271.62	4.78E+02	69.82			4.78E+02	6.98E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	275.23	3.18E+02	51.99			3.18E+02	5.20E+01
	44	286.57	1.16E+02	78.07			1.16E+02	7.81E+01
	45	295.72	1.89E+04	161.13	1.05E+01	4.02E+01	1.89E+04	1.66E+02
	46	300.47	1.55E+02	76.04			1.55E+02	7.60E+01
	47	324.39	6.26E+01	67.59	-2.18E+01	1.99E+01	8.44E+01	7.05E+01
	48	330.48	2.54E+01	81.61	-2.16E+01	3.90E+01	4.69E+01	9.05E+01
	49	338.90	2.29E+02	84.35			2.29E+02	8.43E+01
	50	352.53	2.80E+04	189.81	8.80E+01	2.36E+01	2.79E+04	1.91E+02
	51	387.57	0.00E+00	0.00			0.00E+00	0.00E+00
	52	389.54	4.69E+01	110.17			4.69E+01	1.10E+02
	53	405.87	1.84E+01	89.08			1.84E+01	8.91E+01
	54	455.47	8.12E+01	76.21			8.12E+01	7.62E+01
	55	481.30	8.30E+01	72.73			8.30E+01	7.27E+01
	56	488.12	4.93E+01	64.59			4.93E+01	6.46E+01
	57	534.70	1.60E+02	57.54			1.60E+02	5.75E+01
	58	584.16	1.05E+02	75.64	2.12E+01	1.69E+01	8.42E+01	7.75E+01
M	59	606.03	4.81E+01	53.89			4.81E+01	5.39E+01
m	60	610.42	1.39E+04	192.40	4.28E+01	1.95E+01	1.38E+04	1.93E+02
	61	666.60	2.69E+02	64.30			2.69E+02	6.43E+01
	62	698.67	3.04E+02	44.49	4.50E+01	1.05E+01	2.59E+02	4.57E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Analysis Performed on: 2-12-96 8:47:02 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.35	5.44E+02	69.60	4.00E+01	3.04E+01	5.04E+02	7.60E+01
	2	9.14	9.63E+01	75.81			9.63E+01	7.58E+01
	3	10.91	2.73E+03	94.54	1.57E+02	3.08E+01	2.57E+03	9.94E+01
	4	13.12	8.06E+03	126.04			8.06E+03	1.26E+02
M	5	15.41	6.22E+03	281.61			6.22E+03	2.82E+02
m	6	16.25	9.98E+03	331.67			9.98E+03	3.32E+02
m	7	17.94	1.36E+03	191.89			1.36E+03	1.92E+02
m	8	19.07	2.87E+03	225.78	-1.92E-01	1.63E+01	2.87E+03	2.26E+02
m	9	19.78	1.33E+03	195.21	-1.92E-01	1.63E+01	1.33E+03	1.96E+02
	10	25.73	1.17E+03	93.48			1.17E+03	9.35E+01
m	11	27.48	9.23E+02	76.33	-1.27E+01	1.34E+01	9.36E+02	7.75E+01
	12	46.66	1.59E+04	160.75	1.16E+01	3.50E+01	1.59E+04	1.65E+02
	13	50.23	1.12E+03	92.85	-1.20E+01	1.73E+01	1.13E+03	9.44E+01
	14	53.34	3.77E+03	111.57			3.77E+03	1.12E+02
	15	63.41	1.18E+04	158.73	7.25E+01	2.49E+01	1.17E+04	1.61E+02
	16	67.80	1.90E+03	104.49			1.90E+03	1.04E+02
M	17	74.96	2.18E+04	351.31	4.70E+01	1.89E+01	2.18E+04	3.52E+02
m	18	77.25	3.91E+04	429.22	6.88E+01	2.55E+01	3.90E+04	4.30E+02
m	19	79.47	3.04E+03	159.36			3.04E+03	1.59E+02
m	20	81.24	2.75E+03	156.19			2.75E+03	1.56E+02
	21	83.96	5.58E+03	136.59	-3.10E+01	1.96E+01	5.61E+03	1.38E+02
M	22	87.36	1.26E+04	457.49			1.26E+04	4.57E+02
m	23	90.02	5.56E+03	342.86			5.56E+03	3.43E+02
m	24	92.76	1.60E+04	495.57	2.61E+02	4.01E+01	1.58E+04	4.97E+02
m	25	94.81	2.06E+03	250.62	2.42E+01	1.36E+01	2.04E+03	2.51E+02
	26	98.53	1.02E+03	94.97			1.02E+03	9.50E+01
	27	102.93	5.53E+01	74.22			5.53E+01	7.42E+01
M	28	111.50	8.94E+01	43.60			8.94E+01	4.36E+01
m	29	113.01	7.03E+02	125.74			7.03E+02	1.26E+02
	30	144.05	1.81E+03	107.03	4.83E+01	2.07E+01	1.76E+03	1.09E+02
	31	154.41	7.97E+02	114.91			7.97E+02	1.15E+02
	32	163.67	4.34E+02	79.63			4.34E+02	7.96E+01
	33	186.36	1.28E+04	150.50	1.65E+02	2.92E+01	1.26E+04	1.53E+02
	34	205.63	3.20E+02	86.64	-8.75E+00	2.28E+01	3.29E+02	8.96E+01
M	35	236.39	6.18E+02	49.25			6.18E+02	4.93E+01
	36	239.04	1.63E+03	68.12	7.88E+01	2.53E+01	1.55E+03	7.27E+01
m	37	242.39	9.80E+03	209.64			9.80E+03	2.10E+02
M	38	254.19	1.25E+02	36.92			1.25E+02	3.69E+01
m	39	256.66	4.09E+02	69.83			4.09E+02	6.98E+01
m	40	259.25	6.94E+02	109.81	1.45E+01	2.66E+01	6.80E+02	1.13E+02

M 41	269.95	6.17E+02	86.31	6.17E+02	8.63E+01
M 42	271.62	4.78E+02	69.82	4.78E+02	6.98E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	275.23	3.18E+02	51.99			3.18E+02	5.20E+01
	44	286.57	1.16E+02	78.07			1.16E+02	7.81E+01
	45	295.72	1.89E+04	161.13	1.05E+01	4.02E+01	1.89E+04	1.66E+02
	46	300.47	1.55E+02	76.04			1.55E+02	7.60E+01
	47	324.39	6.26E+01	67.59	-2.18E+01	1.99E+01	8.44E+01	7.05E+01
	48	330.48	2.54E+01	81.61	-2.16E+01	3.90E+01	4.69E+01	9.05E+01
	49	338.90	2.29E+02	84.35			2.29E+02	8.43E+01
	50	352.53	2.80E+04	189.81	8.80E+01	2.36E+01	2.79E+04	1.91E+02
	51	387.57	0.00E+00	0.00			0.00E+00	0.00E+00
	52	389.54	4.69E+01	110.17			4.69E+01	1.10E+02
	53	405.87	1.84E+01	89.08			1.84E+01	8.91E+01
	54	455.47	8.12E+01	76.21			8.12E+01	7.62E+01
	55	481.30	8.30E+01	72.73			8.30E+01	7.27E+01
	56	488.12	4.93E+01	64.59			4.93E+01	6.46E+01
	57	534.70	1.60E+02	57.54			1.60E+02	5.75E+01
	58	584.16	1.05E+02	75.64	2.12E+01	1.69E+01	8.42E+01	7.75E+01
M	59	606.03	4.81E+01	53.89			4.81E+01	5.39E+01
m	60	610.42	1.39E+04	192.40	4.28E+01	1.95E+01	1.38E+04	1.93E+02
	61	666.60	2.69E+02	64.30			2.69E+02	6.43E+01
	62	698.67	3.04E+02	44.49	4.50E+01	1.05E+01	2.59E+02	4.57E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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**********************************************************************
*****  G A M M A   S P E C T R U M   A N A L Y S I S          *****
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Report Generated On	:	2-12-96 8:45:31 AM
Sample Title	:	NOPI-473-GAM1
Spectrum Description	:	NOPI-473-GAM1
Sample Identification	:	NP473_2
Sample Type	:	
Sample Geometry	:	
Peak Locate Threshold	:	3.00
Peak Locate Range (in channels)	:	1 - 4096
Peak Area Range (in channels)	:	1 - 4096
Identification Energy Tolerance	:	1.000 keV
Sample Size	:	0.000E+00 Unit
Sample Taken On	:	
Acquisition Started	:	2-09-96 8:40:57 AM
Live Time	:	80000.0 seconds
Real Time	:	80151.3 seconds

Energy Calibration Used Done On	:	1-16-96
Efficiency Calibration Used Done On	:	????????

$-0.105\log x + 1.217$

$-0.650\log x + 1.097$

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****
***** P E A K L O C A T E R E P O R T *****
****

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Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Locate Performed on: 2-12-96 8:44:40 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.61	0.0562	5.41	10.28
2	37.35	0.0425	6.38	14.76
3	41.00	0.0000	6.81	3.59
4	46.98	0.2404	8.06	5.17
5	53.42	0.1703	9.25	3.14
6	63.43	0.0164	10.92	32.25
7	72.00	<NA>	12.52	<NA>
8	76.08	0.0307	13.12	35.50
9	88.77	0.0256	15.41	31.58
10	94.38	0.0123	16.23	47.33
11	98.00	<NA>	16.85	<NA>
12	103.83	0.0491	17.94	18.69
13	110.38	0.0222	19.05	26.17
14	114.00	<NA>	19.69	<NA>
15	121.88	0.2335	20.27	4.31
16	148.96	0.0260	25.75	40.61
17	158.89	0.0262	27.47	39.61
18	212.46	0.1460	36.76	7.23
19	269.51	0.0093	46.66	151.14
20	290.10	0.0209	50.23	43.68
21	308.09	0.0118	53.35	75.43
22	339.18	0.2280	58.74	3.68
23	366.12	0.0045	63.41	185.46
24	391.47	0.0247	67.81	49.17
25	409.59	0.2849	70.94	4.61
26	421.20	0.1356	73.03	9.58
27	432.74	0.0059	74.96	203.59
28	445.95	0.0028	77.24	276.45
29	458.69	0.0190	79.48	60.05
30	468.90	0.0166	81.22	79.26
31	484.62	0.0119	83.98	91.26
32	494.05	0.0838	85.67	11.68
33	504.57	0.0189	87.38	80.87
34	519.44	0.0152	90.02	71.42
35	535.10	0.0097	92.74	122.68
36	547.85	0.0293	94.85	40.22
37	563.50	0.0653	97.69	7.09
38	569.02	0.0238	98.58	33.34
39	579.27	0.4309	100.11	3.65
40	610.26	0.1928	105.75	6.79
41	630.97	0.1526	109.33	8.34

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Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	643.29	0.1387	111.44	8.69
43	652.12	0.0361	113.01	34.06
44	662.41	0.2671	114.81	4.16
45	698.59	0.2126	121.08	5.34
46	706.95	0.0966	122.52	13.42
47	739.77	0.2197	128.17	5.55
48	752.75	0.1604	130.48	7.14
49	811.90	0.2467	140.72	3.26
50	831.25	0.0270	144.08	48.36
51	876.69	0.3158	151.98	3.02
52	891.01	0.0387	154.44	36.75
53	916.74	0.3356	158.90	4.36
54	943.85	0.0569	163.61	24.05
55	1074.72	0.0113	186.30	123.45
56	1133.86	0.2921	196.56	4.20
57	1167.65	0.3057	202.39	3.97
58	1186.17	0.0625	205.62	20.52
59	1216.81	0.2912	210.94	6.13
60	1363.38	0.0428	236.36	35.61
61	1378.47	0.1924	238.98	7.87
62	1398.02	0.0075	242.37	154.64
63	1459.12	0.4304	253.03	3.86
64	1470.74	0.3321	255.09	3.79
65	1480.55	0.0625	256.67	23.73
66	1495.42	0.0647	259.23	21.13
67	1556.56	0.0402	269.87	37.38
68	1567.05	0.0368	271.66	32.79
69	1587.51	0.1104	275.17	13.26
70	1622.70	0.2818	281.41	4.64
71	1638.79	0.2381	284.13	6.37
72	1652.88	0.1087	286.56	13.63
73	1705.49	0.0064	295.70	209.55
74	1733.01	0.1165	300.47	15.68
75	1748.36	0.1744	303.17	8.99
76	1758.99	0.2030	304.95	5.99
77	1815.55	0.4341	314.78	3.24
78	1870.77	0.1302	324.36	13.85
79	1905.90	0.1370	330.45	13.05
80	1954.17	0.1480	338.82	9.31
81	2015.17	0.3132	349.63	3.53
82	2033.05	0.0061	352.49	259.93
83	2234.74	0.1624	387.50	8.96
84	2246.86	0.1353	389.55	11.93
85	2321.28	0.1595	402.48	11.63
86	2339.38	0.3078	405.74	6.37
87	2570.51	0.4843	445.71	3.56
88	2627.66	0.2660	455.62	6.63
89	2668.60	0.2422	462.73	5.55
90	2713.84	0.4227	470.57	3.28
91	2775.73	0.1633	481.30	9.25

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Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	2813.37	0.1895	487.83	8.92
93	2942.43	0.4804	510.22	3.57
94	3082.65	0.2166	534.53	8.38
95	3351.35	0.2491	581.13	6.51
96	3519.82	0.0106	610.35	169.96
97	3844.01	0.0945	666.57	17.52
98	4028.83	0.1764	698.63	17.40

Errors quoted at 1.000 sigma

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PEAK ANALYSIS REPORT

Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Analysis Performed on: 2-12-96 8:45:05 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	29-	55	31.71	5.41	6.56E+03	843.18	2.71E+04
m	2	29-	55	37.25	6.38	8.45E+03	923.80	3.09E+04
m	3	29-	55	39.76	6.81	1.82E+03	715.39	3.11E+04
m	5	29-	55	53.85	9.25	7.24E+02	753.62	2.13E+04
M	6	60-	79	63.43	10.92	2.99E+04	2905.74	3.45E+04
m	7	60-	79	72.69	12.52	2.33E+04	3043.32	4.36E+04
m	8	60-	79	76.16	13.12	8.05E+04	3596.29	3.75E+04
M	9	84-	125	89.32	15.41	6.79E+04	4843.29	4.70E+04
m	10	84-	125	94.07	16.23	9.88E+04	5616.73	4.65E+04
m	11	84-	125	97.63	16.85	3.11E+04	4063.80	4.27E+04
m	12	84-	125	103.92	17.94	1.62E+04	3015.32	3.96E+04
m	13	84-	125	110.33	19.05	2.72E+04	3642.16	3.70E+04
[illegible]	14	84-	125	114.03	19.69	1.58E+04	3411.48	3.53E+04
m	15	84-	125	117.35	20.27	7.09E+03	2984.71	3.43E+04
M	16	144-	163	148.94	25.75	1.29E+04	268.34	2.70E+04
m	17	144-	163	158.90	27.47	1.32E+04	273.79	2.56E+04
	18	206-	217	212.46	36.76	2.15E+03	285.62	3.16E+04
	19	263-	275	269.51	46.66	1.26E+05	467.10	3.51E+04
	20	284-	294	290.10	50.23	1.80E+04	289.29	2.76E+04
	21	302-	314	308.09	53.35	3.38E+04	347.62	3.31E+04
	22	333-	342	339.18	58.74	6.97E+02	251.30	2.75E+04
	23	359-	372	366.12	63.41	1.34E+05	502.41	4.31E+04
	24	384-	398	391.47	67.81	2.06E+04	388.65	4.53E+04
M	25	402-	474	409.55	70.94	1.96E+03	1040.69	3.34E+04
m	26	402-	474	421.57	73.03	4.23E+03	1089.08	3.62E+04
m	27	402-	474	432.70	74.96	1.93E+05	3123.31	3.27E+04
m	28	402-	474	445.86	77.24	3.43E+05	3526.32	3.15E+04
m	29	402-	474	458.78	79.48	3.05E+04	1572.67	3.08E+04
m	30	402-	474	468.82	81.22	3.56E+04	1669.05	3.06E+04
M	31	477-	585	484.74	83.98	7.37E+04	3527.97	4.01E+04
m	32	477-	585	494.47	85.67	2.81E+03	1796.85	3.89E+04
m	33	477-	585	504.31	87.38	1.10E+05	4014.44	3.72E+04
m	34	477-	585	519.54	90.02	4.89E+04	2957.51	3.69E+04
m	35	477-	585	535.24	92.74	1.81E+05	4840.13	3.15E+04
m	36	477-	585	547.38	94.85	2.77E+04	2382.33	3.08E+04
m	37	477-	585	563.79	97.69	5.44E+03	2018.27	2.78E+04
m	38	477-	585	568.90	98.58	1.38E+04	2292.05	2.74E+04
m	39	477-	585	577.76	100.11	2.16E+03	1553.44	2.88E+04
[illegible]	40	603-	617	610.26	105.75	1.45E+03	284.63	2.76E+04
M	41	622-	[illegible]	630.89	109.33	3.11E+03	322.97	2.37E+04
m	42	622-	[illegible]	643.08	111.44	3.39E+03	327.07	2.35E+04

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	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	622-	670	652.09	113.01	1.08E+04	599.50	2.32E+04
m	44	622-	670	662.50	114.81	1.32E+03	293.44	2.48E+04
M	45	690-	714	698.62	121.08	1.30E+03	152.93	2.01E+04
m	46	690-	714	706.95	122.52	2.97E+03	304.59	2.00E+04
M	47	734-	757	739.50	128.17	2.66E+02	168.62	1.74E+04
m	48	734-	757	752.86	130.48	4.36E+02	264.21	1.64E+04
	49	803-	816	811.90	140.72	7.48E+02	263.29	2.49E+04
	50	823-	838	831.25	144.08	2.05E+04	324.90	2.83E+04
M	51	871-	896	876.81	151.98	1.22E+02	112.95	2.22E+04
m	52	871-	896	890.99	154.44	8.72E+03	467.96	2.18E+04
	53	911-	922	916.74	158.90	1.01E+03	230.73	2.08E+04
	54	937-	949	943.85	163.61	5.21E+03	246.19	2.11E+04
	55	1065-	1083	1074.72	186.30	1.22E+05	469.08	2.89E+04
	56	1124-	1142	1133.86	196.56	1.83E+03	307.17	2.73E+04
M	57	1157-	1193	1167.47	202.39	1.37E+03	193.10	1.85E+04
m	58	1157-	1193	1186.13	205.62	4.98E+03	439.08	1.84E+04
	59	1209-	1222	1216.81	210.94	9.03E+02	207.79	1.53E+04
M	60	1353-	1406	1363.37	236.36	8.16E+03	176.68	1.49E+04
m	61	1353-	1406	1378.47	238.98	1.06E+03	124.57	1.56E+04
m	62	1353-	1406	1397.99	242.37	8.54E+04	695.62	1.37E+04
M	63	1452-	1502	1459.47	253.03	2.91E+02	124.97	1.36E+04
m	64	1452-	1502	1471.39	255.09	5.46E+02	125.89	1.35E+04
m	65	1452-	1502	1480.49	256.67	4.39E+03	296.08	1.34E+04
[illegible]	66	1452-	1502	1495.22	259.23	4.61E+03	307.91	1.24E+04
M	67	1547-	1597	1556.61	269.87	9.60E+03	355.36	1.23E+04
m	68	1547-	1597	1566.89	271.66	7.45E+03	307.34	1.29E+04
m	69	1547-	1597	1587.12	275.17	3.35E+03	220.99	1.29E+04
M	70	1615-	1659	1623.12	281.41	3.54E+02	102.94	1.22E+04
m	71	1615-	1659	1638.82	284.13	6.30E+02	139.98	1.23E+04
m	72	1615-	1659	1652.84	286.56	1.72E+03	329.10	1.16E+04
	73	1694-	1716	1705.49	295.70	1.67E+05	484.73	1.74E+04
M	74	1725-	1768	1733.04	300.47	2.57E+03	258.49	1.17E+04
m	75	1725-	1768	1748.60	303.17	1.19E+03	132.76	1.10E+04
m	76	1725-	1768	1758.88	304.95	9.23E+02	111.77	1.17E+04
	77	1804-	1824	1815.55	314.78	8.95E+02	229.37	1.42E+04
	78	1862-	1881	1870.77	324.36	2.19E+03	220.70	1.33E+04
	79	1893-	1913	1905.90	330.45	2.24E+03	230.41	1.40E+04
	80	1942-	1962	1954.17	338.82	1.53E+03	244.58	1.61E+04
M	81	2007-	2045	2016.50	349.63	6.70E+02	421.85	1.58E+04
m	82	2007-	2045	2032.95	352.49	2.54E+05	789.56	1.48E+04
M	83	2225-	2255	2234.87	387.50	1.35E+03	143.99	1.32E+04
m	84	2225-	2255	2246.69	389.55	2.05E+03	204.95	1.26E+04
M	85	2309-	2351	2321.21	402.48	2.84E+03	268.66	1.65E+04
m	86	2309-	2351	2340.01	405.74	2.00E+03	198.73	1.88E+04
	87	2561-	2579	2570.51	445.71	2.64E+02	185.47	1.01E+04
	88	2617-	2637	2627.66	455.62	6.48E+02	199.97	1.08E+04
	89	2655-	2681	2668.60	462.73	1.26E+03	239.58	1.28E+04
	90	2701-	2724	2713.84	470.57	3.57E+02	216.36	1.16E+04
	91	2762-	2786	2775.73	481.30	1.81E+03	220.23	1.13E+04
[illegible]	92	2803-	2824	2813.37	487.83	1.77E+03	193.91	9.55E+03

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Peak No.	ROI Start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	2919-	2990	2942.43	510.22	6.63E+02	541.22	2.92E+04
94	3072-	3096	3082.65	534.53	6.56E+02	201.94	9.71E+03
95	3339-	3364	3351.35	581.13	8.52E+02	209.31	1.01E+04
96	3504-	3534	3519.82	610.35	1.26E+05	429.19	1.20E+04
97	3832-	3859	3844.01	666.57	3.02E+03	207.11	8.83E+03
98	4013-	4044	4028.83	698.63	3.25E+03	142.55	2.85E+03

One or more peaks were dropped due to multiplet de-convolution.
M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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B A C K G R O U N D S U B T R A C T R E P O R T

Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Analysis Performed on: 2-12-96 8:44:40 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	5.41	6.56E+03	843.18	4.00E+01	3.04E+01	6.52E+03	8.44E+02
m	2	6.38	8.45E+03	923.80	4.00E+01	3.04E+01	8.41E+03	9.24E+02
m	3	6.81	1.82E+03	715.39	4.00E+01	3.04E+01	1.78E+03	7.16E+02
m	4	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
m	5	9.25	7.24E+02	753.62			7.24E+02	7.54E+02
M	6	10.92	2.99E+04	2905.74	1.57E+02	3.08E+01	2.97E+04	2.91E+03
m	7	12.52	2.33E+04	3043.32			2.33E+04	3.04E+03
m	8	13.12	8.05E+04	3596.29			8.05E+04	3.60E+03
M	9	15.41	6.79E+04	4843.29			6.79E+04	4.84E+03
m	10	16.23	9.88E+04	5616.73			9.88E+04	5.62E+03
m	11	16.85	3.11E+04	4063.80			3.11E+04	4.06E+03
m	12	17.94	1.62E+04	3015.32			1.62E+04	3.02E+03
m	13	19.05	2.72E+04	3642.16	-1.92E-01	1.63E+01	2.72E+04	3.64E+03
m	14	19.69	1.58E+04	3411.48	-1.92E-01	1.63E+01	1.58E+04	3.41E+03
m	15	20.27	7.09E+03	2984.71	-1.92E-01	1.63E+01	7.09E+03	2.98E+03
	16	25.75	1.29E+04	268.34			1.29E+04	2.68E+02
m	17	27.47	1.32E+04	273.79	-1.27E+01	1.34E+01	1.32E+04	2.74E+02
	18	36.76	2.15E+03	285.62			2.15E+03	2.86E+02
	19	46.66	1.26E+05	467.10	1.16E+01	3.50E+01	1.26E+05	4.68E+02
	20	50.23	1.80E+04	289.29	-1.20E+01	1.73E+01	1.80E+04	2.90E+02
	21	53.35	3.38E+04	347.62			3.38E+04	3.48E+02
	22	58.74	6.97E+02	251.30			6.97E+02	2.51E+02
	23	63.41	1.34E+05	502.41	7.25E+01	2.49E+01	1.34E+05	5.03E+02
	24	67.81	2.06E+04	388.65			2.06E+04	3.89E+02
M	25	70.94	1.96E+03	1040.69			1.96E+03	1.04E+03
m	26	73.03	4.23E+03	1089.08			4.23E+03	1.09E+03
m	27	74.96	1.93E+05	3123.31	4.70E+01	1.89E+01	1.93E+05	3.12E+03
m	28	77.24	3.43E+05	3526.32	6.88E+01	2.55E+01	3.43E+05	3.53E+03
m	29	79.48	3.05E+04	1572.67			3.05E+04	1.57E+03
m	30	81.22	3.56E+04	1669.05			3.56E+04	1.67E+03
M	31	83.98	7.37E+04	3527.97	-3.10E+01	1.96E+01	7.37E+04	3.53E+03
m	32	85.67	2.81E+03	1796.85			2.81E+03	1.80E+03
m	33	87.38	1.10E+05	4014.44			1.10E+05	4.01E+03
m	34	90.02	4.89E+04	2957.51			4.89E+04	2.96E+03
m	35	92.74	1.81E+05	4840.13	2.61E+02	4.01E+01	1.81E+05	4.84E+03
m	36	94.85	2.77E+04	2382.33	2.42E+01	1.36E+01	2.77E+04	2.38E+03
m	37	97.69	5.44E+03	2018.27			5.44E+03	2.02E+03
m	38	98.58	1.38E+04	2292.05			1.38E+04	2.29E+03
m	39	100.11	2.16E+03	1553.44			2.16E+03	1.55E+03
	40	105.75	1.45E+03	284.63			1.45E+03	2.85E+02
M	41	109.33	3.11E+03	322.97	9.22E+01	2.46E+01	3.01E+03	3.24E+02
	42	111.44	3.39E+03	327.07			3.39E+03	3.27E+02

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	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m	43	113.01	1.08E+04	599.50			1.08E+04	6.00E+02
m	44	114.81	1.32E+03	293.44			1.32E+03	2.93E+02
M	45	121.08	1.30E+03	152.93	6.68E+00	2.29E+01	1.29E+03	1.55E+02
m	46	122.52	2.97E+03	304.59			2.97E+03	3.05E+02
M	47	128.17	2.66E+02	168.62			2.66E+02	1.69E+02
m	48	130.48	4.36E+02	264.21			4.36E+02	2.64E+02
	49	140.72	7.48E+02	263.29			7.48E+02	2.63E+02
	50	144.08	2.05E+04	324.90	4.83E+01	2.07E+01	2.05E+04	3.26E+02
M	51	151.98	1.22E+02	112.95	2.94E+01	2.64E+01	9.26E+01	1.16E+02
m	52	154.44	8.72E+03	467.96			8.72E+03	4.68E+02
	53	158.90	1.01E+03	230.73			1.01E+03	2.31E+02
	54	163.61	5.21E+03	246.19			5.21E+03	2.46E+02
	55	186.30	1.22E+05	469.08	1.65E+02	2.92E+01	1.22E+05	4.70E+02
	56	196.56	1.83E+03	307.17	5.02E+01	2.63E+01	1.78E+03	3.08E+02
M	57	202.39	1.37E+03	193.10			1.37E+03	1.93E+02
m	58	205.62	4.98E+03	439.08	-8.75E+00	2.28E+01	4.99E+03	4.40E+02
	59	210.94	9.03E+02	207.79	-2.56E+01	2.49E+01	9.28E+02	2.09E+02
M	60	236.36	8.16E+03	176.68			8.16E+03	1.77E+02
m	61	238.98	1.06E+03	124.57	7.88E+01	2.53E+01	9.79E+02	1.27E+02
m	62	242.37	8.54E+04	695.62			8.54E+04	6.96E+02
M	63	253.03	2.91E+02	124.97			2.91E+02	1.25E+02
m	64	255.09	5.46E+02	125.89			5.46E+02	1.26E+02
m	65	256.67	4.39E+03	296.08			4.39E+03	2.96E+02
	66	259.23	4.61E+03	307.91	1.45E+01	2.66E+01	4.59E+03	3.09E+02
M	67	269.87	9.60E+03	355.36			9.60E+03	3.55E+02
m	68	271.66	7.45E+03	307.34			7.45E+03	3.07E+02
m	69	275.17	3.35E+03	220.99			3.35E+03	2.21E+02
M	70	281.41	3.54E+02	102.94			3.54E+02	1.03E+02
m	71	284.13	6.30E+02	139.98			6.30E+02	1.40E+02
m	72	286.56	1.72E+03	329.10			1.72E+03	3.29E+02
	73	295.70	1.67E+05	484.73	1.05E+01	4.02E+01	1.67E+05	4.86E+02
M	74	300.47	2.57E+03	258.49			2.57E+03	2.58E+02
m	75	303.17	1.19E+03	132.76			1.19E+03	1.33E+02
m	76	304.95	9.23E+02	111.77			9.23E+02	1.12E+02
	77	314.78	8.95E+02	229.37			8.95E+02	2.29E+02
	78	324.36	2.19E+03	220.70	-2.18E+01	1.99E+01	2.22E+03	2.22E+02
	79	330.45	2.24E+03	230.41	-2.16E+01	3.90E+01	2.27E+03	2.34E+02
	80	338.82	1.53E+03	244.58			1.53E+03	2.45E+02
M	81	349.63	6.70E+02	421.85			6.70E+02	4.22E+02
m	82	352.49	2.54E+05	789.56	8.80E+01	2.36E+01	2.54E+05	7.90E+02
M	83	387.50	1.35E+03	143.99			1.35E+03	1.44E+02
m	84	389.55	2.05E+03	204.95			2.05E+03	2.05E+02
M	85	402.48	2.84E+03	268.66			2.84E+03	2.69E+02
m	86	405.74	2.00E+03	198.73			2.00E+03	1.99E+02
	87	445.71	2.64E+02	185.47			2.64E+02	1.85E+02
	88	455.62	6.48E+02	199.97			6.48E+02	2.00E+02
	89	462.73	1.26E+03	239.58			1.26E+03	2.40E+02
	90	470.57	3.57E+02	216.36			3.57E+02	2.16E+02
	91	481.30	1.81E+03	220.23			1.81E+03	2.20E+02
	92	487.83	1.77E+03	193.91			1.77E+03	1.94E+02

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Peak No.	Energy (keV)	Area	Area Uncert.	Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	510.22	6.63E+02	541.22			6.63E+02	5.41E+02
94	534.53	6.56E+02	201.94			6.56E+02	2.02E+02
95	581.13	8.52E+02	209.31			8.52E+02	2.09E+02
96	610.35	1.26E+05	429.19	4.28E+01	1.95E+01	1.26E+05	4.30E+02
97	666.57	3.02E+03	207.11			3.02E+03	2.07E+02
98	698.63	3.25E+03	142.55	4.50E+01	1.05E+01	3.20E+03	1.43E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
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Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Analysis Performed on: 2-12-96 8:44:40 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	5.41	6.56E+03	843.18	4.00E+01	3.04E+01	6.52E+03	8.44E+02
m	2	6.38	8.45E+03	923.80	4.00E+01	3.04E+01	8.41E+03	9.24E+02
m	3	6.81	1.82E+03	715.39	4.00E+01	3.04E+01	1.78E+03	7.16E+02
m	4	8.06	0.00E+00	0.00			0.00E+00	0.00E+00
m	5	9.25	7.24E+02	753.62			7.24E+02	7.54E+02
M	6	10.92	2.99E+04	2905.74	1.57E+02	3.08E+01	2.97E+04	2.91E+03
m	7	12.52	2.33E+04	3043.32			2.33E+04	3.04E+03
m	8	13.12	8.05E+04	3596.29			8.05E+04	3.60E+03
M	9	15.41	6.79E+04	4843.29			6.79E+04	4.84E+03
m	10	16.23	9.88E+04	5616.73			9.88E+04	5.62E+03
m	11	16.85	3.11E+04	4063.80			3.11E+04	4.06E+03
m	12	17.94	1.62E+04	3015.32			1.62E+04	3.02E+03
m	13	19.05	2.72E+04	3642.16	-1.92E-01	1.63E+01	2.72E+04	3.64E+03
m	14	19.69	1.58E+04	3411.48	-1.92E-01	1.63E+01	1.58E+04	3.41E+03
m	15	20.27	7.09E+03	2984.71	-1.92E-01	1.63E+01	7.09E+03	2.98E+03
M	16	25.75	1.29E+04	268.34			1.29E+04	2.68E+02
m	17	27.47	1.32E+04	273.79	-1.27E+01	1.34E+01	1.32E+04	2.74E+02
	18	36.76	2.15E+03	285.62			2.15E+03	2.86E+02
	19	46.66	1.26E+05	467.10	1.16E+01	3.50E+01	1.26E+05	4.68E+02
	20	50.23	1.80E+04	289.29	-1.20E+01	1.73E+01	1.80E+04	2.90E+02
	21	53.35	3.38E+04	347.62			3.38E+04	3.48E+02
	22	58.74	6.97E+02	251.30			6.97E+02	2.51E+02
	23	63.41	1.34E+05	502.41	7.25E+01	2.49E+01	1.34E+05	5.03E+02
	24	67.81	2.06E+04	388.65			2.06E+04	3.89E+02
M	25	70.94	1.96E+03	1040.69			1.96E+03	1.04E+03
m	26	73.03	4.23E+03	1089.08			4.23E+03	1.09E+03
m	27	74.96	1.93E+05	3123.31	4.70E+01	1.89E+01	1.93E+05	3.12E+03
m	28	77.24	3.43E+05	3526.32	6.88E+01	2.55E+01	3.43E+05	3.53E+03
m	29	79.48	3.05E+04	1572.67			3.05E+04	1.57E+03
m	30	81.22	3.56E+04	1669.05			3.56E+04	1.67E+03
M	31	83.98	7.37E+04	3527.97	-3.10E+01	1.96E+01	7.37E+04	3.53E+03
m	32	85.67	2.81E+03	1796.85			2.81E+03	1.80E+03
m	33	87.38	1.10E+05	4014.44			1.10E+05	4.01E+03
m	34	90.02	4.89E+04	2957.51			4.89E+04	2.96E+03
m	35	92.74	1.81E+05	4840.13	2.61E+02	4.01E+01	1.81E+05	4.84E+03
m	36	94.85	2.77E+04	2382.33	2.42E+01	1.36E+01	2.77E+04	2.38E+03
m	37	97.69	5.44E+03	2018.27			5.44E+03	2.02E+03
m	38	98.58	1.38E+04	2292.05			1.38E+04	2.29E+03
m	39	100.11	2.16E+03	1553.44			2.16E+03	1.55E+03
	40	105.75	1.45E+03	284.63			1.45E+03	2.85E+02

M 41	109.33	3.11E+03	322.97	9.22E+01	2.46E+01	3.01E+03	3.24E+02
m 42	111.44	3.39E+03	327.07			3.39E+03	3.27E+02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	43	113.01	1.08E+04	599.50			1.08E+04	6.00E+02
m	44	114.81	1.32E+03	293.44			1.32E+03	2.93E+02
M	45	121.08	1.30E+03	152.93	6.68E+00	2.29E+01	1.29E+03	1.55E+02
m	46	122.52	2.97E+03	304.59			2.97E+03	3.05E+02
M	47	128.17	2.66E+02	168.62			2.66E+02	1.69E+02
m	48	130.48	4.36E+02	264.21			4.36E+02	2.64E+02
	49	140.72	7.48E+02	263.29			7.48E+02	2.63E+02
	50	144.08	2.05E+04	324.90	4.83E+01	2.07E+01	2.05E+04	3.26E+02
M	51	151.98	1.22E+02	112.95	2.94E+01	2.64E+01	9.26E+01	1.16E+02
m	52	154.44	8.72E+03	467.96			8.72E+03	4.68E+02
	53	158.90	1.01E+03	230.73			1.01E+03	2.31E+02
	54	163.61	5.21E+03	246.19			5.21E+03	2.46E+02
	55	186.30	1.22E+05	469.08	1.65E+02	2.92E+01	1.22E+05	4.70E+02
	56	196.56	1.83E+03	307.17	5.02E+01	2.63E+01	1.78E+03	3.08E+02
M	57	202.39	1.37E+03	193.10			1.37E+03	1.93E+02
m	58	205.62	4.98E+03	439.08	-8.75E+00	2.28E+01	4.99E+03	4.40E+02
	59	210.94	9.03E+02	207.79	-2.56E+01	2.49E+01	9.28E+02	2.09E+02
M	60	236.36	8.16E+03	176.68			8.16E+03	1.77E+02
m	61	238.98	1.06E+03	124.57	7.88E+01	2.53E+01	9.79E+02	1.27E+02
m	62	242.37	8.54E+04	695.62			8.54E+04	6.96E+02
M	63	253.03	2.91E+02	124.97			2.91E+02	1.25E+02
m	64	255.09	5.46E+02	125.89			5.46E+02	1.26E+02
m	65	256.67	4.39E+03	296.08			4.39E+03	2.96E+02
m	66	259.23	4.61E+03	307.91	1.45E+01	2.66E+01	4.59E+03	3.09E+02
M	67	269.87	9.60E+03	355.36			9.60E+03	3.55E+02
m	68	271.66	7.45E+03	307.34			7.45E+03	3.07E+02
m	69	275.17	3.35E+03	220.99			3.35E+03	2.21E+02
M	70	281.41	3.54E+02	102.94			3.54E+02	1.03E+02
m	71	284.13	6.30E+02	139.98			6.30E+02	1.40E+02
m	72	286.56	1.72E+03	329.10			1.72E+03	3.29E+02
	73	295.70	1.67E+05	484.73	1.05E+01	4.02E+01	1.67E+05	4.86E+02
M	74	300.47	2.57E+03	258.49			2.57E+03	2.58E+02
m	75	303.17	1.19E+03	132.76			1.19E+03	1.33E+02
m	76	304.95	9.23E+02	111.77			9.23E+02	1.12E+02
	77	314.78	8.95E+02	229.37			8.95E+02	2.29E+02
	78	324.36	2.19E+03	220.70	-2.18E+01	1.99E+01	2.22E+03	2.22E+02
	79	330.45	2.24E+03	230.41	-2.16E+01	3.90E+01	2.27E+03	2.34E+02
	80	338.82	1.53E+03	244.58			1.53E+03	2.45E+02
M	81	349.63	6.70E+02	421.85			6.70E+02	4.22E+02
m	82	352.49	2.54E+05	789.56	8.80E+01	2.36E+01	2.54E+05	7.90E+02
M	83	387.50	1.35E+03	143.99			1.35E+03	1.44E+02
m	84	389.55	2.05E+03	204.95			2.05E+03	2.05E+02
M	85	402.48	2.84E+03	268.66			2.84E+03	2.69E+02
m	86	405.74	2.00E+03	198.73			2.00E+03	1.99E+02
	87	445.71	2.64E+02	185.47			2.64E+02	1.85E+02
	88	455.62	6.48E+02	199.97			6.48E+02	2.00E+02
	89	462.73	1.26E+03	239.58			1.26E+03	2.40E+02
	90	470.57	3.57E+02	216.36			3.57E+02	2.16E+02
	91	481.30	1.81E+03	220.23			1.81E+03	2.20E+02
	92	487.83	1.77E+03	193.91			1.77E+03	1.94E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
93	510.22	6.63E+02	541.22			6.63E+02	5.41E+02
94	534.53	6.56E+02	201.94			6.56E+02	2.02E+02
95	581.13	8.52E+02	209.31			8.52E+02	2.09E+02
96	610.35	1.26E+05	429.19	4.28E+01	1.95E+01	1.26E+05	4.30E+02
97	666.57	3.02E+03	207.11			3.02E+03	2.07E+02
98	698.63	3.25E+03	142.55	4.50E+01	1.05E+01	3.20E+03	1.43E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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***********************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***********************************************************************

Report Generated On              :  2-09-96  8:42:37 AM

Sample Title                     : NOPI-474-GAM1
Spectrum Description             : NOPI-474-GAM1
Sample Identification            : NP474_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-08-96  9:24:06 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80017.2 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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0.6261 log x + 0.887
0.1041 log x # 0.779

****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Locate Performed on: 2-09-96 8:42:02 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.35	0.1245	6.39	5.06
2	63.43	0.0392	10.92	13.37
3	76.17	0.0765	13.12	13.51
4	88.76	0.0903	15.44	8.79
5	94.39	0.0403	16.28	14.28
6	104.00	<NA>	17.94	<NA>
7	110.49	0.0638	19.08	7.28
8	114.07	0.2798	19.80	4.07
9	148.96	0.0930	25.75	11.45
10	159.01	0.1095	27.49	9.35
11	269.54	0.0242	46.66	59.09
12	290.19	0.1121	50.24	8.98
13	308.08	0.0384	53.34	23.10
14	366.11	0.0163	63.41	51.83
15	391.43	0.1102	67.80	10.04
16	410.37	0.3820	71.09	3.25
17	432.79	0.0188	74.96	66.37
18	445.93	0.0153	77.24	86.49
19	458.64	0.0613	79.47	19.72
20	468.92	0.0425	81.23	18.61
21	484.69	0.0490	84.00	23.02
22	493.83	0.3701	85.55	3.19
23	504.60	0.0602	87.38	26.32
24	519.47	0.0474	90.02	22.70
25	535.12	0.0352	92.75	33.53
26	548.04	0.1721	94.87	9.08
27	569.06	0.0949	98.61	8.44
28	651.79	0.1865	112.95	8.39
29	831.32	0.1128	144.09	11.98
30	890.95	0.1966	154.44	7.29
31	899.18	0.3214	155.87	3.05
32	943.79	0.2179	163.60	6.37
33	1074.97	0.0408	186.35	36.93
34	1185.71	0.4025	205.55	4.29
35	1363.64	0.1929	236.38	8.35
36	1378.63	0.1158	239.01	12.74
37	1398.06	0.0248	242.37	46.66
38	1480.23	0.3061	256.66	4.97
39	1495.13	0.2230	259.25	7.03
40	1556.36	0.2202	269.91	6.69
41	1567.13	0.2300	271.57	4.79

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1587.05	0.3191	275.16	5.33
43	1652.18	0.3388	286.45	4.03
44	1705.50	0.0202	295.70	66.10
45	1733.84	0.6247	300.61	3.04
46	1929.87	0.3117	334.69	4.03
47	1953.94	0.3903	338.76	4.17
48	2033.06	0.0198	352.51	80.47
49	2233.80	0.3805	387.30	3.95
50	2246.43	0.4250	389.50	3.37
51	2321.90	0.5128	402.60	3.08
52	2628.41	0.6857	455.76	3.29
53	2774.90	0.3138	481.16	5.21
54	2812.89	0.3162	487.75	5.01
55	3051.44	0.4097	529.12	3.43
56	3369.98	0.4773	584.36	3.71
57	3519.62	0.0351	610.32	52.19
58	3844.98	0.2870	666.74	6.72
59	4029.13	0.2578	698.68	6.76

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Analysis Performed on: 2-09-96 8:42:16 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.35	6.39	6.36E+02	70.91	2.62E+03
	2	60-	66	63.43	10.92	4.42E+03	103.29	3.30E+03
	3	73-	79	76.17	13.12	1.24E+04	144.82	4.57E+03
M	4	84-	118	89.55	15.44	8.00E+03	773.64	6.43E+03
m	5	84-	118	94.37	16.28	1.19E+04	859.99	5.87E+03
m	6	84-	118	103.94	17.94	1.17E+03	471.63	5.24E+03
m	7	84-	118	110.50	19.08	2.97E+03	568.53	4.95E+03
m	8	84-	118	114.64	19.80	1.51E+03	505.48	4.01E+03
M	9	143-	163	148.98	25.75	1.09E+03	92.12	2.86E+03
m	10	143-	163	159.00	27.49	8.93E+02	77.16	2.73E+03
	11	263-	275	269.54	46.66	1.82E+04	166.17	3.57E+03
	12	284-	295	290.19	50.24	1.00E+03	92.49	3.01E+03
	13	302-	313	308.08	53.34	3.33E+03	104.37	3.02E+03
	14	359-	373	366.11	63.41	1.04E+04	152.75	4.49E+03
	15	384-	396	391.43	67.80	1.29E+03	107.74	3.93E+03
	16	407-	414	410.37	71.09	2.86E+01	70.96	2.49E+03
M	17	425-	475	432.74	74.96	1.88E+04	326.96	3.73E+03
m	18	425-	475	445.88	77.24	3.35E+04	399.15	3.28E+03
m	19	425-	475	458.71	79.47	2.78E+03	150.74	2.99E+03
m	20	425-	475	468.89	81.23	2.35E+03	143.88	2.92E+03
M	21	477-	555	484.83	84.00	5.23E+03	348.62	3.90E+03
m	22	477-	555	493.78	85.55	2.19E+02	198.08	3.78E+03
m	23	477-	555	504.31	87.38	1.12E+04	455.37	3.80E+03
m	24	477-	555	519.58	90.02	4.98E+03	332.81	3.49E+03
m	25	477-	555	535.28	92.75	1.45E+04	505.94	3.13E+03
m	26	477-	555	547.54	94.87	2.04E+03	242.51	2.87E+03
	27	562-	574	569.06	98.61	1.06E+03	88.55	2.56E+03
	28	647-	658	651.79	112.95	4.80E+02	81.99	2.48E+03
	29	823-	838	831.32	144.09	1.31E+03	100.67	2.94E+03
M	30	885-	904	890.98	154.44	3.42E+02	108.67	2.17E+03
m	31	885-	904	899.23	155.87	3.43E+01	16.79	2.11E+03
	32	936-	951	943.79	163.60	5.03E+02	90.56	2.56E+03
	33	1065-	1082	1074.97	186.35	1.05E+04	139.22	2.74E+03
	34	1179-	1195	1185.71	205.55	2.44E+02	84.16	2.18E+03
M	35	1353-	1408	1363.47	236.38	4.81E+02	37.56	1.65E+03
m	36	1353-	1408	1378.62	239.01	9.98E+02	47.89	1.64E+03
m	37	1353-	1408	1398.03	242.37	8.18E+03	211.72	1.51E+03
M	38	1473-	1505	1480.41	256.66	2.95E+02	54.40	1.54E+03
	39	1473-	1505	1495.32	259.25	5.29E+02	85.26	1.45E+03
M	40	1549-	1594	1556.82	269.91	5.50E+02	76.78	1.39E+03
m	41	1549-	1594	1566.36	271.57	4.28E+02	62.27	1.54E+03
m	42	1549-	1594	1587.11	275.16	2.96E+02	47.31	1.36E+03

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1642-	1659	1652.18	286.45	9.67E+01	73.83	1.64E+03
	44	1694-	1715	1705.50	295.70	1.62E+04	151.75	1.81E+03
	45	1724-	1741	1733.84	300.61	1.54E+02	68.32	1.39E+03
M	46	1921-	1962	1930.35	334.69	1.00E+02	45.37	1.31E+03
m	47	1921-	1962	1953.83	338.76	2.57E+02	103.44	1.35E+03
	48	2021-	2044	2033.06	352.51	2.40E+04	178.75	1.98E+03
M	49	2222-	2255	2233.72	387.30	1.75E+02	65.44	1.11E+03
m	50	2222-	2255	2246.38	389.50	1.51E+02	57.63	1.16E+03
	51	2312-	2332	2321.90	402.60	1.71E+02	74.64	1.49E+03
	52	2618-	2638	2628.41	455.76	-9.00E+01	65.81	1.21E+03
	53	2764-	2787	2774.90	481.16	2.22E+02	66.94	1.06E+03
	54	2802-	2822	2812.89	487.75	1.02E+02	59.81	9.58E+02
	55	3040-	3061	3051.44	529.12	-3.31E+01	56.29	8.49E+02
	56	3358-	3380	3369.98	584.36	1.73E+02	62.25	9.54E+02
	57	3505-	3533	3519.62	610.32	1.19E+04	130.52	1.11E+03
	58	3829-	3858	3844.98	666.74	3.56E+02	69.69	9.44E+02
	59	4015-	4045	4029.13	698.68	3.29E+02	46.75	2.94E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Analysis Performed on: 2-09-96 8:42:02 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.39	6.36E+02	70.91	4.00E+01	3.04E+01	5.96E+02	7.72E+01
	2	10.92	4.42E+03	103.29	1.57E+02	3.08E+01	4.27E+03	1.08E+02
	3	13.12	1.24E+04	144.82			1.24E+04	1.45E+02
M	4	15.44	8.00E+03	773.64			8.00E+03	7.74E+02
m	5	16.28	1.19E+04	859.99			1.19E+04	8.60E+02
m	6	17.94	1.17E+03	471.63			1.17E+03	4.72E+02
m	7	19.08	2.97E+03	568.53	-1.92E-01	1.63E+01	2.97E+03	5.69E+02
m	8	19.80	1.51E+03	505.48	-1.92E-01	1.63E+01	1.51E+03	5.06E+02
M	9	25.75	1.09E+03	92.12			1.09E+03	9.21E+01
m	10	27.49	8.93E+02	77.16	-1.27E+01	1.34E+01	9.05E+02	7.83E+01
	11	46.66	1.82E+04	166.17	1.16E+01	3.50E+01	1.82E+04	1.70E+02
	12	50.24	1.00E+03	92.49	-1.20E+01	1.73E+01	1.01E+03	9.41E+01
	13	53.34	3.33E+03	104.37			3.33E+03	1.04E+02
	14	63.41	1.04E+04	152.75	7.25E+01	2.49E+01	1.03E+04	1.55E+02
	15	67.80	1.29E+03	107.74			1.29E+03	1.08E+02
	16	71.09	2.86E+01	70.96			2.86E+01	7.10E+01
M	17	74.96	1.88E+04	326.96	4.70E+01	1.89E+01	1.88E+04	3.28E+02
m	18	77.24	3.35E+04	399.15	6.88E+01	2.55E+01	3.34E+04	4.00E+02
m	19	79.47	2.78E+03	150.74			2.78E+03	1.51E+02
m	20	81.23	2.35E+03	143.88			2.35E+03	1.44E+02
M	21	84.00	5.23E+03	348.62	-3.10E+01	1.96E+01	5.26E+03	3.49E+02
m	22	85.55	2.19E+02	198.08			2.19E+02	1.98E+02
m	23	87.38	1.12E+04	455.37			1.12E+04	4.55E+02
m	24	90.02	4.98E+03	332.81			4.98E+03	3.33E+02
m	25	92.75	1.45E+04	505.94	2.61E+02	4.01E+01	1.42E+04	5.08E+02
m	26	94.87	2.04E+03	242.51	2.42E+01	1.36E+01	2.02E+03	2.43E+02
	27	98.61	1.06E+03	88.55			1.06E+03	8.85E+01
	28	112.95	4.80E+02	81.99			4.80E+02	8.20E+01
	29	144.09	1.31E+03	100.67	4.83E+01	2.07E+01	1.27E+03	1.03E+02
M	30	154.44	3.42E+02	108.67			3.42E+02	1.09E+02
m	31	155.87	3.43E+01	16.79			3.43E+01	1.68E+01
	32	163.60	5.03E+02	90.56			5.03E+02	9.06E+01
	33	186.35	1.05E+04	139.22	1.65E+02	2.92E+01	1.03E+04	1.42E+02
	34	205.55	2.44E+02	84.16	-8.75E+00	2.28E+01	2.53E+02	8.72E+01
M	35	236.38	4.81E+02	37.56			4.81E+02	3.76E+01
m	36	239.01	9.98E+02	47.89	7.88E+01	2.53E+01	9.20E+02	5.42E+01
m	37	242.37	8.18E+03	211.72			8.18E+03	2.12E+02
M	38	256.66	2.95E+02	54.40			2.95E+02	5.44E+01
m	39	259.25	5.29E+02	85.26	1.45E+01	2.66E+01	5.15E+02	8.93E+01
M	40	269.91	5.50E+02	76.78			5.50E+02	7.68E+01
m	41	271.57	4.28E+02	62.27			4.28E+02	6.23E+01
	42	275.16	2.96E+02	47.31			2.96E+02	4.73E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	286.45	9.67E+01	73.83			9.67E+01	7.38E+01
	44	295.70	1.62E+04	151.75	1.05E+01	4.02E+01	1.62E+04	1.57E+02
	45	300.61	1.54E+02	68.32			1.54E+02	6.83E+01
M	46	334.69	1.00E+02	45.37			1.00E+02	4.54E+01
m	47	338.76	2.57E+02	103.44			2.57E+02	1.03E+02
	48	352.51	2.40E+04	178.75	8.80E+01	2.36E+01	2.40E+04	1.80E+02
M	49	387.30	1.75E+02	65.44			1.75E+02	6.54E+01
m	50	389.50	1.51E+02	57.63			1.51E+02	5.76E+01
	51	402.60	1.71E+02	74.64			1.71E+02	7.46E+01
	52	455.76	-9.00E+01	65.81			-9.00E+01	6.58E+01
	53	481.16	2.22E+02	66.94			2.22E+02	6.69E+01
	54	487.75	1.02E+02	59.81			1.02E+02	5.98E+01
	55	529.12	-3.31E+01	56.29			-3.31E+01	5.63E+01
	56	584.36	1.73E+02	62.25	2.12E+01	1.69E+01	1.52E+02	6.45E+01
	57	610.32	1.19E+04	130.52	4.28E+01	1.95E+01	1.18E+04	1.32E+02
	58	666.74	3.56E+02	69.69			3.56E+02	6.97E+01
	59	698.68	3.29E+02	46.75	4.50E+01	1.05E+01	2.84E+02	4.79E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Analysis Performed on: 2-09-96 8:42:02 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.39	6.36E+02	70.91	4.00E+01	3.04E+01	5.96E+02	7.72E+01
	2	10.92	4.42E+03	103.29	1.57E+02	3.08E+01	4.27E+03	1.08E+02
	3	13.12	1.24E+04	144.82			1.24E+04	1.45E+02
M	4	15.44	8.00E+03	773.64			8.00E+03	7.74E+02
m	5	16.28	1.19E+04	859.99			1.19E+04	8.60E+02
m	6	17.94	1.17E+03	471.63			1.17E+03	4.72E+02
m	7	19.08	2.97E+03	568.53	-1.92E-01	1.63E+01	2.97E+03	5.69E+02
m	8	19.80	1.51E+03	505.48	-1.92E-01	1.63E+01	1.51E+03	5.06E+02
M	9	25.75	1.09E+03	92.12			1.09E+03	9.21E+01
[illegible]	10	27.49	8.93E+02	77.16	-1.27E+01	1.34E+01	9.05E+02	7.83E+01
[illegible]	11	46.66	1.82E+04	166.17	1.16E+01	3.50E+01	1.82E+04	1.70E+02
	12	50.24	1.00E+03	92.49	-1.20E+01	1.73E+01	1.01E+03	9.41E+01
	13	53.34	3.33E+03	104.37			3.33E+03	1.04E+02
	14	63.41	1.04E+04	152.75	7.25E+01	2.49E+01	1.03E+04	1.55E+02
	15	67.80	1.29E+03	107.74			1.29E+03	1.08E+02
	16	71.09	2.86E+01	70.96			2.86E+01	7.10E+01
M	17	74.96	1.88E+04	326.96	4.70E+01	1.89E+01	1.88E+04	3.28E+02
m	18	77.24	3.35E+04	399.15	6.88E+01	2.55E+01	3.34E+04	4.00E+02
m	19	79.47	2.78E+03	150.74			2.78E+03	1.51E+02
m	20	81.23	2.35E+03	143.88			2.35E+03	1.44E+02
M	21	84.00	5.23E+03	348.62	-3.10E+01	1.96E+01	5.26E+03	3.49E+02
m	22	85.55	2.19E+02	198.08			2.19E+02	1.98E+02
m	23	87.38	1.12E+04	455.37			1.12E+04	4.55E+02
m	24	90.02	4.98E+03	332.81			4.98E+03	3.33E+02
m	25	92.75	1.45E+04	505.94	2.61E+02	4.01E+01	1.42E+04	5.08E+02
m	26	94.87	2.04E+03	242.51	2.42E+01	1.36E+01	2.02E+03	2.43E+02
	27	98.61	1.06E+03	88.55			1.06E+03	8.85E+01
	28	112.95	4.80E+02	81.99			4.80E+02	8.20E+01
	29	144.09	1.31E+03	100.67	4.83E+01	2.07E+01	1.27E+03	1.03E+02
M	30	154.44	3.42E+02	108.67			3.42E+02	1.09E+02
m	31	155.87	3.43E+01	16.79			3.43E+01	1.68E+01
	32	163.60	5.03E+02	90.56			5.03E+02	9.06E+01
	33	186.35	1.05E+04	139.22	1.65E+02	2.92E+01	1.03E+04	1.42E+02
	34	205.55	2.44E+02	84.16	-8.75E+00	2.28E+01	2.53E+02	8.72E+01
M	35	236.38	4.81E+02	37.56			4.81E+02	3.76E+01
[illegible]	36	239.01	9.98E+02	47.89	7.88E+01	2.53E+01	9.20E+02	5.42E+01
m	37	242.37	8.18E+03	211.72			8.18E+03	2.12E+02
M	38	256.66	2.95E+02	54.40			2.95E+02	5.44E+01
m	39	259.25	5.29E+02	85.26	1.45E+01	2.66E+01	5.15E+02	8.93E+01
M	40	269.91	5.50E+02	76.78			5.50E+02	7.68E+01

m 41	271.57	4.28E+02	62.27		4.28E+02	6.23E+01
m 42	275.16	2.96E+02	47.31		2.96E+02	4.73E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	286.45	9.67E+01	73.83			9.67E+01	7.38E+01
	44	295.70	1.62E+04	151.75	1.05E+01	4.02E+01	1.62E+04	1.57E+02
	45	300.61	1.54E+02	68.32			1.54E+02	6.83E+01
M	46	334.69	1.00E+02	45.37			1.00E+02	4.54E+01
m	47	338.76	2.57E+02	103.44			2.57E+02	1.03E+02
	48	352.51	2.40E+04	178.75	8.80E+01	2.36E+01	2.40E+04	1.80E+02
M	49	387.30	1.75E+02	65.44			1.75E+02	6.54E+01
m	50	389.50	1.51E+02	57.63			1.51E+02	5.76E+01
	51	402.60	1.71E+02	74.64			1.71E+02	7.46E+01
	52	455.76	-9.00E+01	65.81			-9.00E+01	6.58E+01
	53	481.16	2.22E+02	66.94			2.22E+02	6.69E+01
	54	487.75	1.02E+02	59.81			1.02E+02	5.98E+01
	55	529.12	-3.31E+01	56.29			-3.31E+01	5.63E+01
	56	584.36	1.73E+02	62.25	2.12E+01	1.69E+01	1.52E+02	6.45E+01
	57	610.32	1.19E+04	130.52	4.28E+01	1.95E+01	1.18E+04	1.32E+02
	58	666.74	3.56E+02	69.69			3.56E+02	6.97E+01
	59	698.68	3.29E+02	46.75	4.50E+01	1.05E+01	2.84E+02	4.79E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  2-08-96  9:25:49 AM

Sample Title                     : NOPI-475-GAM1
Spectrum Description             : NOPI-475-GAM1
Sample Identification            : NP475_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-07-96  9:22:14 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80012.9 seconds


          Energy Calibration Used Done On        :  1-16-96
          Efficiency Calibration Used Done On    : ????????
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0.053 log t + 0.897

0.101 log t + 0.789

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Locate Performed on: 2-08-96 9:25:12 AM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 3.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.46	0.1595	6.41	3.15
2	63.49	0.0421	10.93	11.18
3	76.12	0.0893	13.12	11.35
4	88.65	0.0854	15.43	7.37
5	94.38	0.0419	16.24	14.09
6	98.00	<NA>	16.82	<NA>
7	103.85	0.2167	17.93	4.40
8	110.36	0.0765	19.08	8.06
9	114.42	0.1581	19.79	3.45
10	148.99	0.0914	25.76	9.79
11	159.07	0.1180	27.47	8.48
12	269.52	0.0282	46.66	50.58
13	290.22	0.1276	50.25	7.31
14	308.10	0.0465	53.35	19.73
15	366.10	0.0189	63.41	44.96
16	391.62	0.1164	67.83	11.48
17	432.78	0.0231	74.96	53.59
18	445.92	0.0184	77.24	71.43
19	458.66	0.0725	79.48	15.79
20	468.97	0.0457	81.24	17.24
21	484.65	0.0570	83.97	19.40
22	504.59	0.0722	87.38	21.99
23	519.52	0.0588	90.03	17.82
24	535.06	0.0406	92.75	29.59
25	547.89	0.1397	94.89	9.02
26	569.00	0.2107	98.60	6.39
27	651.90	0.1311	112.97	9.81
28	831.06	0.1053	144.04	12.86
29	891.24	0.1403	154.48	7.89
30	943.39	0.2295	163.53	5.92
31	1037.08	0.2820	179.77	3.24
32	1074.87	0.0469	186.33	30.55
33	1186.42	0.3578	205.67	4.37
34	1244.97	0.1961	215.83	4.06
35	1363.44	0.2047	236.39	8.22
36	1378.73	0.1066	239.00	14.80
37	1397.97	0.0298	242.36	38.84
38	1495.82	0.2415	259.33	5.78
39	1556.54	0.2089	269.87	7.22
40	1567.34	0.2523	271.66	5.81
41	1587.97	0.4536	275.25	3.28

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1651.96	0.3844	286.41	3.42
43	1705.44	0.0244	295.69	55.61
44	1733.88	0.4450	300.62	3.91
45	1895.80	0.4573	328.86	3.27
46	1904.98	0.3390	330.24	3.49
47	2032.93	0.0244	352.48	65.74
48	2319.66	0.4239	402.21	3.54
49	2812.02	0.5640	487.60	3.14
50	3368.10	0.3840	584.04	4.62
51	3519.67	0.0430	610.32	42.09
52	3843.81	0.7465	666.54	4.31
53	4029.05	0.3878	698.67	5.47

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Analysis Performed on: 2-08-96 9:25:24 AM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	1	35-	39	37.46	6.41	4.06E+02	62.92	2.12E+03
	2	60-	66	63.49	10.93	3.43E+03	90.92	2.57E+03
	3	73-	79	76.12	13.12	9.34E+03	126.18	3.49E+03
M	4	84-	118	89.46	15.43	5.67E+03	400.69	4.04E+03
m	5	84-	118	94.12	16.24	8.13E+03	472.04	4.00E+03
m	6	84-	118	97.45	16.82	2.40E+03	341.53	3.37E+03
m	7	84-	118	103.89	17.93	9.97E+02	233.06	3.44E+03
m	8	84-	118	110.48	19.08	2.21E+03	285.07	3.25E+03
m	9	84-	118	114.57	19.79	1.20E+03	251.34	2.54E+03
M	10	144-	163	149.03	25.76	9.78E+02	88.28	2.06E+03
m	11	144-	163	158.90	27.47	6.60E+02	66.88	1.90E+03
	12	263-	274	269.52	46.66	1.35E+04	139.74	2.40E+03
	13	284-	296	290.22	50.25	9.06E+02	82.91	2.26E+03
	14	302-	314	308.10	53.35	2.35E+03	90.41	2.21E+03
	15	359-	373	366.10	63.41	7.90E+03	130.19	3.14E+03
	16	384-	396	391.62	67.83	9.66E+02	91.31	2.81E+03
M	17	425-	474	432.72	74.96	1.26E+04	230.99	2.83E+03
m	18	425-	474	445.87	77.24	2.28E+04	296.38	2.39E+03
m	19	425-	474	458.78	79.48	1.92E+03	104.21	2.11E+03
m	20	425-	474	468.93	81.24	1.74E+03	101.63	2.03E+03
	21	477-	491	484.65	83.97	3.55E+03	109.11	2.90E+03
M	22	497-	554	504.31	87.38	7.47E+03	264.41	3.10E+03
m	23	497-	554	519.60	90.03	3.24E+03	191.80	2.87E+03
m	24	497-	554	535.27	92.75	1.09E+04	305.37	2.58E+03
m	25	497-	554	547.64	94.89	1.33E+03	143.07	2.22E+03
	26	562-	573	569.00	98.60	8.03E+02	72.17	1.75E+03
	27	647-	657	651.90	112.97	4.14E+02	66.25	1.67E+03
	28	823-	837	831.06	144.04	1.11E+03	81.82	1.94E+03
	29	886-	897	891.24	154.48	4.07E+02	67.06	1.63E+03
	30	937-	952	943.39	163.53	3.96E+02	78.26	1.90E+03
	31	1028-	1045	1037.08	179.77	-4.06E+00	82.27	2.07E+03
	32	1065-	1083	1074.87	186.33	7.65E+03	121.30	2.09E+03
	33	1180-	1193	1186.42	205.67	2.76E+02	61.99	1.29E+03
	34	1238-	1250	1244.97	215.83	-5.90E+01	53.12	1.09E+03
M	35	1356-	1407	1363.55	236.39	3.92E+02	35.53	1.26E+03
m	36	1356-	1407	1378.59	239.00	1.00E+03	49.51	1.22E+03
m	37	1356-	1407	1397.94	242.36	5.63E+03	164.92	1.06E+03
	38	1487-	1503	1495.82	259.33	2.24E+02	62.62	1.18E+03
	39	1546-	1595	1556.61	269.87	4.81E+02	76.20	1.05E+03
m	40	1546-	1595	1566.89	271.66	3.73E+02	61.83	1.05E+03
m	41	1546-	1595	1587.57	275.25	1.84E+02	38.83	9.80E+02
	42	1644-	1658	1651.96	286.41	4.65E+01	53.25	9.68E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1695-	1715	1705.44	295.69	1.11E+04	124.97	1.25E+03
	44	1722-	1741	1733.88	300.62	1.44E+02	62.68	1.08E+03
M	45	1886-	1912	1896.73	328.86	1.52E+01	31.07	1.06E+03
m	46	1886-	1912	1904.67	330.24	2.41E+01	49.22	1.01E+03
	47	2020-	2044	2032.93	352.48	1.61E+04	148.38	1.44E+03
	48	2307-	2329	2319.66	402.21	7.76E+01	67.76	1.16E+03
	49	2801-	2825	2812.02	487.60	6.45E+01	59.86	8.53E+02
	50	3357-	3380	3368.10	584.04	9.45E+01	55.18	7.37E+02
	51	3504-	3534	3519.67	610.32	8.18E+03	112.91	9.37E+02
	52	3831-	3855	3843.81	666.54	2.12E+02	49.55	5.44E+02
	53	4017-	4045	4029.05	698.67	1.49E+02	38.12	1.89E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Analysis Performed on: 2-08-96 9:25:12 AM

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	6.41	4.06E+02	62.92	4.00E+01	3.04E+01	3.66E+02	6.99E+01
	2	10.93	3.43E+03	90.92	1.57E+02	3.08E+01	3.28E+03	9.60E+01
	3	13.12	9.34E+03	126.18			9.34E+03	1.26E+02
M	4	15.43	5.67E+03	400.69			5.67E+03	4.01E+02
m	5	16.24	8.13E+03	472.04			8.13E+03	4.72E+02
m	6	16.82	2.40E+03	341.53			2.40E+03	3.42E+02
m	7	17.93	9.97E+02	233.06			9.97E+02	2.33E+02
m	8	19.08	2.21E+03	285.07	-1.92E-01	1.63E+01	2.21E+03	2.86E+02
m	9	19.79	1.20E+03	251.34	-1.92E-01	1.63E+01	1.20E+03	2.52E+02
M	10	25.76	9.78E+02	88.28			9.78E+02	8.83E+01
m	11	27.47	6.60E+02	66.88	-1.27E+01	1.34E+01	6.73E+02	6.82E+01
	12	46.66	1.35E+04	139.74	1.16E+01	3.50E+01	1.35E+04	1.44E+02
	13	50.25	9.06E+02	82.91	-1.20E+01	1.73E+01	9.18E+02	8.47E+01
	14	53.35	2.35E+03	90.41			2.35E+03	9.04E+01
	15	63.41	7.90E+03	130.19	7.25E+01	2.49E+01	7.83E+03	1.33E+02
	16	67.83	9.66E+02	91.31			9.66E+02	9.13E+01
M	17	74.96	1.26E+04	230.99	4.70E+01	1.89E+01	1.25E+04	2.32E+02
m	18	77.24	2.28E+04	296.38	6.88E+01	2.55E+01	2.27E+04	2.97E+02
m	19	79.48	1.92E+03	104.21			1.92E+03	1.04E+02
m	20	81.24	1.74E+03	101.63			1.74E+03	1.02E+02
	21	83.97	3.55E+03	109.11	-3.10E+01	1.96E+01	3.58E+03	1.11E+02
M	22	87.38	7.47E+03	264.41			7.47E+03	2.64E+02
m	23	90.03	3.24E+03	191.80			3.24E+03	1.92E+02
m	24	92.75	1.09E+04	305.37	2.61E+02	4.01E+01	1.07E+04	3.08E+02
m	25	94.89	1.33E+03	143.07	2.42E+01	1.36E+01	1.31E+03	1.44E+02
	26	98.60	8.03E+02	72.17			8.03E+02	7.22E+01
	27	112.97	4.14E+02	66.25			4.14E+02	6.63E+01
	28	144.04	1.11E+03	81.82	4.83E+01	2.07E+01	1.06E+03	8.44E+01
	29	154.48	4.07E+02	67.06			4.07E+02	6.71E+01
	30	163.53	3.96E+02	78.26			3.96E+02	7.83E+01
	31	179.77	-4.06E+00	82.27			-4.06E+00	8.23E+01
	32	186.33	7.65E+03	121.30	1.65E+02	2.92E+01	7.49E+03	1.25E+02
	33	205.67	2.76E+02	61.99	-8.75E+00	2.28E+01	2.85E+02	6.60E+01
	34	215.83	-5.90E+01	53.12			-5.90E+01	5.31E+01
M	35	236.39	3.92E+02	35.53			3.92E+02	3.55E+01
m	36	239.00	1.00E+03	49.51	7.88E+01	2.53E+01	9.23E+02	5.56E+01
m	37	242.36	5.63E+03	164.92			5.63E+03	1.65E+02
	38	259.33	2.24E+02	62.62	1.45E+01	2.66E+01	2.10E+02	6.80E+01
M	39	269.87	4.81E+02	76.20			4.81E+02	7.62E+01
m	40	271.66	3.73E+02	61.83			3.73E+02	6.18E+01
m	41	275.25	1.84E+02	38.83			1.84E+02	3.88E+01
	42	286.41	4.65E+01	53.25			4.65E+01	5.32E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	43	295.69	1.11E+04	124.97	1.05E+01	4.02E+01	1.11E+04	1.31E+02
	44	300.62	1.44E+02	62.68			1.44E+02	6.27E+01
M	45	328.86	1.52E+01	31.07	-2.16E+01	3.90E+01	3.68E+01	4.99E+01
m	46	330.24	2.41E+01	49.22	-2.16E+01	3.90E+01	4.57E+01	6.28E+01
	47	352.48	1.61E+04	148.38	8.80E+01	2.36E+01	1.60E+04	1.50E+02
	48	402.21	7.76E+01	67.76			7.76E+01	6.78E+01
	49	487.60	6.45E+01	59.86			6.45E+01	5.99E+01
	50	584.04	9.45E+01	55.18	2.12E+01	1.69E+01	7.34E+01	5.77E+01
	51	610.32	8.18E+03	112.91	4.28E+01	1.95E+01	8.14E+03	1.15E+02
	52	666.54	2.12E+02	49.55			2.12E+02	4.96E+01
	53	698.67	1.49E+02	38.12	4.50E+01	1.05E+01	1.04E+02	3.95E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****          A R E A   C O R R E C T I O N   R E P O R T          *****
*****      R E F E R E N C E   P E A K / B K G . S U B T R A C T    *****
*************************************************************************
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Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Analysis Performed on: 2-08-96 9:25:12 AM

Ref. Peak Energy: 0.00; Reference Date:
Peak Ratio: 0.00; Uncertainty: 0.00
Background File : E:\GENIEPC\CAMFILES\BG012196.CNF

Corrected area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	6.41	4.06E+02	62.92	4.00E+01	3.04E+01	3.66E+02	6.99E+01
	2	10.93	3.43E+03	90.92	1.57E+02	3.08E+01	3.28E+03	9.60E+01
	3	13.12	9.34E+03	126.18			9.34E+03	1.26E+02
M	4	15.43	5.67E+03	400.69			5.67E+03	4.01E+02
m	5	16.24	8.13E+03	472.04			8.13E+03	4.72E+02
m	6	16.82	2.40E+03	341.53			2.40E+03	3.42E+02
m	7	17.93	9.97E+02	233.06			9.97E+02	2.33E+02
m	8	19.08	2.21E+03	285.07	-1.92E-01	1.63E+01	2.21E+03	2.86E+02
m	9	19.79	1.20E+03	251.34	-1.92E-01	1.63E+01	1.20E+03	2.52E+02
	10	25.76	9.78E+02	88.28			9.78E+02	8.83E+01
m	11	27.47	6.60E+02	66.88	-1.27E+01	1.34E+01	6.73E+02	6.82E+01
	12	46.66	1.35E+04	139.74	1.16E+01	3.50E+01	1.35E+04	1.44E+02
	13	50.25	9.06E+02	82.91	-1.20E+01	1.73E+01	9.18E+02	8.47E+01
	14	53.35	2.35E+03	90.41			2.35E+03	9.04E+01
	15	63.41	7.90E+03	130.19	7.25E+01	2.49E+01	7.83E+03	1.33E+02
	16	67.83	9.66E+02	91.31			9.66E+02	9.13E+01
M	17	74.96	1.26E+04	230.99	4.70E+01	1.89E+01	1.25E+04	2.32E+02
m	18	77.24	2.28E+04	296.38	6.88E+01	2.55E+01	2.27E+04	2.97E+02
m	19	79.48	1.92E+03	104.21			1.92E+03	1.04E+02
m	20	81.24	1.74E+03	101.63			1.74E+03	1.02E+02
	21	83.97	3.55E+03	109.11	-3.10E+01	1.96E+01	3.58E+03	1.11E+02
M	22	87.38	7.47E+03	264.41			7.47E+03	2.64E+02
m	23	90.03	3.24E+03	191.80			3.24E+03	1.92E+02
m	24	92.75	1.09E+04	305.37	2.61E+02	4.01E+01	1.07E+04	3.08E+02
m	25	94.89	1.33E+03	143.07	2.42E+01	1.36E+01	1.31E+03	1.44E+02
	26	98.60	8.03E+02	72.17			8.03E+02	7.22E+01
	27	112.97	4.14E+02	66.25			4.14E+02	6.63E+01
	28	144.04	1.11E+03	81.82	4.83E+01	2.07E+01	1.06E+03	8.44E+01
	29	154.48	4.07E+02	67.06			4.07E+02	6.71E+01
	30	163.53	3.96E+02	78.26			3.96E+02	7.83E+01
	31	179.77	-4.06E+00	82.27			-4.06E+00	8.23E+01
	32	186.33	7.65E+03	121.30	1.65E+02	2.92E+01	7.49E+03	1.25E+02
	33	205.67	2.76E+02	61.99	-8.75E+00	2.28E+01	2.85E+02	6.60E+01
	34	215.83	-5.90E+01	53.12			-5.90E+01	5.31E+01
M	35	236.39	3.92E+02	35.53			3.92E+02	3.55E+01
	36	239.00	1.00E+03	49.51	7.88E+01	2.53E+01	9.23E+02	5.56E+01
m	37	242.36	5.63E+03	164.92			5.63E+03	1.65E+02
	38	259.33	2.24E+02	62.62	1.45E+01	2.66E+01	2.10E+02	6.80E+01
M	39	269.87	4.81E+02	76.20			4.81E+02	7.62E+01
m	40	271.66	3.73E+02	61.83			3.73E+02	6.18E+01

m	41	275.25	1.84E+02	38.83	1.84E+02	3.88E+01
	42	286.41	4.65E+01	53.25	4.65E+01	5.32E+01

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	43	295.69	1.11E+04	124.97	1.05E+01	4.02E+01	1.11E+04	1.31E+02
	44	300.62	1.44E+02	62.68			1.44E+02	6.27E+01
M	45	328.86	1.52E+01	31.07	-2.16E+01	3.90E+01	3.68E+01	4.99E+01
m	46	330.24	2.41E+01	49.22	-2.16E+01	3.90E+01	4.57E+01	6.28E+01
	47	352.48	1.61E+04	148.38	8.80E+01	2.36E+01	1.60E+04	1.50E+02
	48	402.21	7.76E+01	67.76			7.76E+01	6.78E+01
	49	487.60	6.45E+01	59.86			6.45E+01	5.99E+01
	50	584.04	9.45E+01	55.18	2.12E+01	1.69E+01	7.34E+01	5.77E+01
	51	610.32	8.18E+03	112.91	4.28E+01	1.95E+01	8.14E+03	1.15E+02
	52	666.54	2.12E+02	49.55			2.12E+02	4.96E+01
	53	698.67	1.49E+02	38.12	4.50E+01	1.05E+01	1.04E+02	3.95E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:41:43 PM

Sample Title                     : DP1B standard
Spectrum Description             : DP1B standard
Sample Identification            : DP1B
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  1-23-96  8:56:07 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80027.6 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
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Detector Name: DET01
Sample Title: DP1B standard
Peak Locate Performed on: 4-11-96 1:41:01 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.33	0.4660	5.35	3.31
2	37.00	0.3703	6.37	7.29
3	63.40	0.2107	10.89	13.41
4	76.01	0.2053	13.07	14.86
5	94.38	0.1855	16.32	18.09
6	114.01	0.3759	19.33	7.01
7	148.80	0.2014	25.74	14.66
8	158.59	0.2103	27.43	12.22
9	212.11	0.3267	36.65	4.58
10	269.32	0.0861	46.63	66.53
11	289.91	0.1922	50.08	13.61
12	307.96	0.1124	53.31	37.69
13	365.98	0.0797	63.38	71.33
14	391.22	0.1628	67.77	17.90
15	409.59	0.3414	71.28	3.26
16	432.48	0.0698	74.91	78.68
17	445.67	0.0608	77.20	106.78
18	458.35	0.1275	79.43	24.35
19	468.61	0.1222	81.19	26.51
20	484.46	0.1091	83.95	29.55
21	504.36	0.0941	87.33	35.95
22	519.14	0.1164	90.04	28.95
23	534.88	0.0777	92.69	46.49
24	547.53	0.1589	94.92	13.78
25	568.64	0.1777	98.29	12.47
26	611.48	0.4601	105.72	2.01
27	643.04	0.3923	111.18	2.87
28	651.69	0.1814	112.99	11.49
29	707.06	0.3127	122.61	4.49
30	739.79	0.3827	128.07	2.63
31	752.37	0.3813	130.78	3.05
32	830.60	0.1294	144.03	18.86
33	890.50	0.1740	154.33	10.71
34	915.91	0.3690	159.15	2.96
35	943.53	0.1908	163.50	9.09
36	1074.29	0.0725	186.19	48.11
37	1094.85	0.3776	189.69	3.03
38	1186.01	0.2052	205.51	6.12
39	1362.85	0.1527	236.11	11.47
40	1378.15	0.2017	238.87	6.34
41	1397.41	0.0668	242.26	60.46

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1479.60	0.1944	256.37	8.04
43	1494.53	0.1643	259.13	10.13
44	1555.86	0.1491	269.65	13.11
45	1566.24	0.1624	271.58	11.64
46	1586.70	0.2095	274.84	7.03
47	1651.69	0.2511	286.41	3.34
48	1704.72	0.0524	295.56	91.40
49	1732.34	0.2093	300.53	5.96
50	1904.53	0.2253	330.36	5.65
51	1927.85	0.2974	334.08	2.92
52	2032.16	0.0467	352.32	105.17
53	2189.76	0.3952	379.22	2.06
54	2233.36	0.2710	386.66	3.38
55	2245.02	0.2839	389.19	3.33
56	2319.81	0.2699	402.56	2.61
57	2337.71	0.3264	405.21	2.15
58	2812.91	0.2278	487.80	3.68
59	3117.31	0.3017	540.59	2.26
60	3350.78	0.2445	580.63	2.32
61	3518.28	0.0506	610.08	68.61
62	3842.43	0.1471	666.28	7.30
63	3955.52	0.2796	685.76	2.59
64	4028.18	0.1578	698.63	7.25

Errors quoted at 1.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                 *****
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Detector Name: DET01
Sample Title: DP1B standard
Peak Analysis Performed on: 4-11-96 1:41:14 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	28-	34	31.35	5.35	4.39E+02	125.90	5.48E+03
2	34-	39	37.22	6.37	5.07E+02	116.02	5.13E+03
3	60-	66	63.27	10.89	4.30E+03	133.21	4.84E+03
4	72-	79	75.86	13.07	1.49E+04	194.26	7.61E+03
5	92-	97	94.60	16.32	8.99E+03	205.06	1.30E+04
6	107-	117	111.94	19.33	4.90E+03	195.35	8.83E+03
7	144-	152	148.91	25.74	2.25E+03	130.94	4.58E+03
8	154-	162	158.67	27.43	1.74E+03	130.16	4.66E+03
9	207-	216	211.84	36.65	4.59E+02	129.39	4.63E+03
10	264-	274	269.35	46.63	2.27E+04	205.53	5.21E+03
11	284-	294	289.25	50.08	2.44E+03	142.07	4.70E+03
12	302-	313	307.87	53.31	5.83E+03	164.40	5.29E+03
13	360-	371	365.95	63.38	2.11E+04	215.11	6.28E+03
14	385-	396	391.26	67.77	2.67E+03	165.74	6.20E+03
15	409-	415	411.49	71.28	3.70E+02	102.35	3.62E+03
16	426-	438	432.41	74.91	3.14E+04	258.39	8.30E+03
17	439-	451	445.64	77.20	5.60E+04	297.08	7.58E+03
18	452-	464	458.49	79.43	2.53E+03	197.41	8.57E+03
19	464-	474	468.62	81.19	3.86E+03	159.54	5.72E+03
20	478-	490	484.58	83.95	9.24E+03	185.32	5.91E+03
21	500-	510	504.02	87.33	1.71E+04	206.13	6.56E+03
22	512-	525	519.66	90.04	6.89E+03	199.70	7.31E+03
23	528-	541	534.93	92.69	2.65E+04	239.06	6.80E+03
24	541-	553	547.83	94.92	5.57E+02	187.74	8.04E+03
25	559-	575	567.23	98.29	2.11E+03	181.91	5.88E+03
26	604-	618	610.08	105.72	4.16E+02	152.11	4.76E+03
27	636-	646	641.56	111.18	2.65E+02	121.98	3.88E+03
28	646-	658	652.02	112.99	9.29E+02	145.80	4.77E+03
29	704-	714	707.46	122.61	2.55E+02	112.33	3.27E+03
30	735-	746	738.96	128.07	1.79E+02	121.70	3.63E+03
31	750-	759	754.60	130.78	2.54E+02	105.55	3.09E+03
32	823-	838	831.00	144.03	3.01E+03	165.78	4.89E+03
33	886-	895	890.39	154.33	9.78E+02	111.83	3.26E+03
34	912-	923	918.14	159.15	2.19E+02	120.46	3.56E+03
35	935-	951	943.26	163.50	6.95E+02	163.61	4.95E+03
36	1065-	1082	1074.09	186.19	1.97E+04	216.08	4.92E+03
37	1090-	1098	1094.28	189.69	1.48E+02	85.52	2.18E+03
38	1177-	1194	1185.47	205.51	8.63E+02	148.57	3.85E+03
39	1353-	1371	1361.94	236.11	1.14E+03	141.40	3.26E+03
40	1371-	1384	1377.81	238.87	5.22E+02	105.16	2.33E+03
41	1388-	1406	1397.35	242.26	1.45E+04	178.49	3.01E+03
42	1470-	1486	1478.77	256.37	4.43E+02	119.27	2.62E+03

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	1486-	1504	1494.66	259.13	9.26E+02	128.69	2.71E+03
44	1546-	1562	1555.32	269.65	6.58E+02	126.59	2.92E+03
45	1562-	1575	1566.44	271.58	6.23E+02	102.62	2.18E+03
46	1576-	1596	1585.25	274.84	6.02E+02	134.86	2.80E+03
47	1646-	1658	1651.93	286.41	2.88E+02	91.28	1.88E+03
48	1694-	1714	1704.70	295.56	2.85E+04	217.46	3.00E+03
49	1726-	1742	1733.37	300.53	3.63E+02	106.39	2.08E+03
50	1894-	1915	1905.36	330.36	3.31E+02	130.86	2.58E+03
51	1917-	1934	1926.85	334.08	1.79E+02	111.12	2.21E+03
52	2021-	2042	2031.99	352.32	4.29E+04	247.85	2.86E+03
53	2183-	2195	2187.09	379.22	9.37E+01	77.71	1.38E+03
54	2222-	2239	2230.01	386.66	2.30E+02	110.33	2.15E+03
55	2239-	2250	2244.57	389.19	1.48E+02	78.75	1.51E+03
56	2312-	2331	2321.69	402.56	2.22E+02	119.94	2.36E+03
57	2331-	2342	2336.99	405.21	1.23E+02	78.83	1.51E+03
58	2800-	2825	2813.20	487.80	5.95E+02	114.59	1.67E+03
59	3111-	3124	3117.58	540.59	9.10E+01	61.00	8.05E+02
60	3337-	3359	3348.45	580.63	2.43E+02	100.16	1.45E+03
61	3504-	3532	3518.24	610.08	2.13E+04	189.53	1.78E+03
62	3828-	3856	3842.29	666.28	6.90E+02	111.65	1.43E+03
63	3947-	3962	3954.62	685.76	1.09E+02	61.54	7.33E+02
64	4023-	4035	4028.86	698.63	3.04E+02	38.18	2.38E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: DP1B standard
Peak Analysis Performed on: 4-11-96 1:41:01 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	5.35	4.39E+02	125.90	4.00E+01	3.04E+01	3.99E+02	1.30E+02
2	6.37	5.07E+02	116.02	4.00E+01	3.04E+01	4.67E+02	1.20E+02
3	10.89	4.30E+03	133.21	1.57E+02	3.08E+01	4.14E+03	1.37E+02
4	13.07	1.49E+04	194.26			1.49E+04	1.94E+02
5	16.32	8.99E+03	205.06			8.99E+03	2.05E+02
6	19.33	4.90E+03	195.35	-1.92E-01	1.63E+01	4.90E+03	1.96E+02
7	25.74	2.25E+03	130.94			2.25E+03	1.31E+02
8	27.43	1.74E+03	130.16	-1.27E+01	1.34E+01	1.75E+03	1.31E+02
9	36.65	4.59E+02	129.39			4.59E+02	1.29E+02
10	46.63	2.27E+04	205.53	1.16E+01	3.50E+01	2.27E+04	2.08E+02
11	50.08	2.44E+03	142.07	-1.20E+01	1.73E+01	2.45E+03	1.43E+02
12	53.31	5.83E+03	164.40			5.83E+03	1.64E+02
13	63.38	2.11E+04	215.11	7.25E+01	2.49E+01	2.11E+04	2.17E+02
14	67.77	2.67E+03	165.74			2.67E+03	1.66E+02
15	71.28	3.70E+02	102.35			3.70E+02	1.02E+02
16	74.91	3.14E+04	258.39	4.70E+01	1.89E+01	3.14E+04	2.59E+02
17	77.20	5.60E+04	297.08	6.88E+01	2.55E+01	5.59E+04	2.98E+02
18	79.43	2.53E+03	197.41			2.53E+03	1.97E+02
19	81.19	3.86E+03	159.54			3.86E+03	1.60E+02
20	83.95	9.24E+03	185.32	-3.10E+01	1.96E+01	9.27E+03	1.86E+02
21	87.33	1.71E+04	206.13			1.71E+04	2.06E+02
22	90.04	6.89E+03	199.70			6.89E+03	2.00E+02
23	92.69	2.65E+04	239.06	2.61E+02	4.01E+01	2.62E+04	2.42E+02
24	94.92	5.57E+02	187.74	2.42E+01	1.36E+01	5.33E+02	1.88E+02
25	98.29	2.11E+03	181.91			2.11E+03	1.82E+02
26	105.72	4.16E+02	152.11			4.16E+02	1.52E+02
27	111.18	2.65E+02	121.98			2.65E+02	1.22E+02
28	112.99	9.29E+02	145.80			9.29E+02	1.46E+02
29	122.61	2.55E+02	112.33			2.55E+02	1.12E+02
30	128.07	1.79E+02	121.70			1.79E+02	1.22E+02
31	130.78	2.54E+02	105.55			2.54E+02	1.06E+02
32	144.03	3.01E+03	165.78	4.83E+01	2.07E+01	2.96E+03	1.67E+02
33	154.33	9.78E+02	111.83			9.78E+02	1.12E+02
34	159.15	2.19E+02	120.46			2.19E+02	1.20E+02
35	163.50	6.95E+02	163.61			6.95E+02	1.64E+02
36	186.19	1.97E+04	216.08	1.65E+02	2.92E+01	1.95E+04	2.18E+02
37	189.69	1.48E+02	85.52			1.48E+02	8.55E+01
38	205.51	8.63E+02	148.57	-8.75E+00	2.28E+01	8.72E+02	1.50E+02
39	236.11	1.14E+03	141.40			1.14E+03	1.41E+02
40	238.87	5.22E+02	105.16	7.88E+01	2.53E+01	4.43E+02	1.08E+02
41	242.26	1.45E+04	178.49			1.45E+04	1.78E+02
42	256.37	4.43E+02	119.27			4.43E+02	1.19E+02

2.50E+3 ±4.06%

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	259.13	9.26E+02	128.69	1.45E+01	2.66E+01	9.12E+02	1.31E+02
44	269.65	6.58E+02	126.59			6.58E+02	1.27E+02
45	271.58	6.23E+02	102.62			6.23E+02	1.03E+02
46	274.84	6.02E+02	134.86			6.02E+02	1.35E+02
47	286.41	2.88E+02	91.28			2.88E+02	9.13E+01
48	295.56	2.85E+04	217.46	1.05E+01	4.02E+01	2.85E+04	2.21E+02
49	300.53	3.63E+02	106.39			3.63E+02	1.06E+02
50	330.36	3.31E+02	130.86	-2.16E+01	3.90E+01	3.53E+02	1.37E+02
51	334.08	1.79E+02	111.12			1.79E+02	1.11E+02
52	352.32	4.29E+04	247.85	8.80E+01	2.36E+01	4.28E+04	2.49E+02
53	379.22	9.37E+01	77.71			9.37E+01	7.77E+01
54	386.66	2.30E+02	110.33			2.30E+02	1.10E+02
55	389.19	1.48E+02	78.75			1.48E+02	7.88E+01
56	402.56	2.22E+02	119.94			2.22E+02	1.20E+02
57	405.21	1.23E+02	78.83			1.23E+02	7.88E+01
58	487.80	5.95E+02	114.59			5.95E+02	1.15E+02
59	540.59	9.10E+01	61.00			9.10E+01	6.10E+01
60	580.63	2.43E+02	100.16			2.43E+02	1.00E+02
61	610.08	2.13E+04	189.53	4.28E+01	1.95E+01	2.13E+04	1.91E+02
62	666.28	6.90E+02	111.65			6.90E+02	1.12E+02
63	685.76	1.09E+02	61.54			1.09E+02	6.15E+01
64	698.63	3.04E+02	38.18	4.50E+01	1.05E+01	2.59E+02	3.96E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:16:44 PM

Sample Title                     : NOPI-466-GAM1
Spectrum Description             : NOPI-466-GAM1
Sample Identification            : NP466_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-23-96  8:33:29 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80005.6 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Locate Performed on: 4-11-96 1:15:20 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.28	0.4063	10.87	4.38
2	75.89	0.3534	13.06	7.14
3	94.43	0.3051	16.38	6.17
4	110.54	0.3082	19.06	5.70
5	159.16	0.4286	27.52	2.50
6	269.58	0.1592	46.66	18.30
7	308.32	0.2357	53.38	8.57
8	366.10	0.1690	63.40	15.61
9	390.98	0.3865	67.68	3.17
10	432.70	0.1263	74.96	23.92
11	445.89	0.1111	77.25	33.15
12	458.63	0.2680	79.47	5.28
13	468.82	0.2846	81.22	5.44
14	484.88	0.2415	84.06	7.49
15	504.53	0.1703	87.38	10.16
16	519.45	0.1908	90.06	8.82
17	534.92	0.1737	92.82	10.47
18	568.68	0.4830	98.09	2.34
19	575.94	0.3954	99.93	3.06
20	610.18	0.4516	105.78	2.20
21	651.67	0.3673	113.03	2.92
22	746.31	0.3271	129.18	2.79
23	831.14	0.2633	143.99	4.34
24	845.30	0.4094	146.65	2.21
25	890.36	0.3143	154.27	2.91
26	944.54	0.3838	163.44	2.36
27	1074.86	0.1425	186.32	12.47
28	1208.93	0.2879	209.42	3.65
29	1378.94	0.1193	239.05	19.52
30	1398.41	0.1405	242.35	12.62
31	1559.00	0.2796	270.36	2.27
32	1584.39	0.3367	274.64	2.16
33	1705.65	0.1060	295.75	19.87
34	1733.10	0.2652	300.43	3.30
35	1954.19	0.2258	339.11	4.17
36	2033.13	0.0932	352.53	25.07
37	2274.90	0.3763	394.31	2.15
38	2327.05	0.3306	403.52	2.67
39	2866.23	0.2999	496.83	2.86
40	3250.99	0.3325	564.11	2.48
41	3326.28	0.3186	576.94	2.36

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	3370.04	0.1779	584.26	6.43
43	3490.60	0.2700	605.30	3.14
44	3520.02	0.1048	610.41	14.18
45	3749.31	0.3067	650.06	2.13

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Analysis Performed on: 4-11-96 1:15:45 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	60-	66	63.18	10.87	6.98E+02	57.65	9.48E+02
2	72-	79	75.78	13.06	1.85E+03	73.91	1.20E+03
3	92-	98	94.94	16.38	1.13E+03	74.92	1.56E+03
4	107-	114	110.40	19.06	2.42E+02	59.09	1.07E+03
5	154-	163	159.19	27.52	1.43E+02	52.33	7.39E+02
6	264-	274	269.52	46.66	2.32E+03	68.88	6.47E+02
7	303-	313	308.28	53.38	5.13E+02	50.16	5.34E+02
8	360-	371	366.08	63.40	1.35E+03	66.73	7.76E+02
9	385-	396	390.72	67.68	6.97E+01	58.35	8.30E+02
10	427-	438	432.70	74.96	3.41E+03	82.71	8.54E+02
11	439-	451	445.90	77.25	5.76E+03	101.12	1.04E+03
12	455-	464	458.74	79.47	2.57E+02	52.19	6.93E+02
13	464-	474	468.80	81.22	1.55E+02	55.60	7.78E+02
14	478-	490	485.18	84.06	6.63E+02	65.19	8.44E+02
15	500-	510	504.34	87.38	1.89E+03	69.52	7.68E+02
16	513-	525	519.79	90.06	1.00E+03	65.93	7.87E+02
17	528-	541	535.71	92.82	1.93E+03	75.68	8.46E+02
18	562-	572	566.09	98.09	1.30E+02	47.41	5.52E+02
19	572-	582	576.67	99.93	8.47E+01	47.13	5.66E+02
20	603-	616	610.41	105.78	2.18E+02	54.47	6.11E+02
21	644-	658	652.21	113.03	1.20E+02	59.62	7.23E+02
22	739-	753	745.37	129.18	1.61E+02	59.43	7.04E+02
23	823-	838	830.76	143.99	2.10E+02	60.17	6.78E+02
24	842-	852	846.11	146.65	6.69E+01	42.22	4.50E+02
25	884-	895	890.03	154.27	1.12E+02	47.89	5.44E+02
26	936-	948	942.88	163.44	6.01E+01	48.73	5.43E+02
27	1066-	1083	1074.83	186.32	1.48E+03	74.06	7.28E+02
28	1200-	1217	1208.00	209.42	1.73E+02	55.69	5.29E+02
29	1369-	1388	1378.84	239.05	1.55E+03	77.81	7.50E+02
30	1389-	1407	1397.88	242.35	1.18E+03	65.38	5.41E+02
31	1552-	1568	1559.41	270.36	1.65E+02	47.04	3.85E+02
32	1579-	1590	1584.08	274.64	4.09E+01	35.10	2.96E+02
33	1695-	1715	1705.82	295.75	2.27E+03	69.10	4.00E+02
34	1722-	1739	1732.81	300.43	6.44E+01	46.05	3.74E+02
35	1949-	1964	1955.84	339.11	1.93E+02	43.39	3.37E+02
36	2024-	2043	2033.21	352.53	3.50E+03	73.84	3.29E+02
37	2270-	2279	2274.10	394.31	4.50E+01	22.47	1.29E+02
38	2323-	2332	2327.24	403.52	3.75E+01	22.36	1.31E+02
39	2860-	2872	2865.23	496.83	6.34E+01	20.30	7.96E+01
40	3245-	3261	3253.18	564.11	3.61E+01	29.70	1.61E+02
41	3320-	3334	3327.16	576.94	3.46E+01	25.97	1.34E+02
42	3356-	3383	3369.39	584.26	2.68E+02	50.71	2.87E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	3482-	3496	3490.69	605.30	3.44E+01	24.76	1.21E+02
44	3506-	3533	3520.17	610.41	1.66E+03	65.06	3.22E+02
45	3739-	3757	3748.77	650.06	4.51E+01	27.07	1.19E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-466-GAM1
Peak Analysis Performed on: 4-11-96 1:15:20 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	10.87	6.98E+02	57.65	1.57E+02	3.08E+01	5.41E+02	6.54E+01	
2	13.06	1.85E+03	73.91			1.85E+03	7.39E+01	
3	16.38	1.13E+03	74.92			1.13E+03	7.49E+01	
4	19.06	2.42E+02	59.09	-1.92E-01	1.63E+01	2.42E+02	6.13E+01	
5	27.52	1.43E+02	52.33	-1.27E+01	1.34E+01	1.56E+02	5.40E+01	
6	46.66	2.32E+03	68.88	1.16E+01	3.50E+01	2.31E+03	7.72E+01	
7	53.38	5.13E+02	50.16			5.13E+02	5.02E+01	
8	63.40	1.35E+03	66.73	7.25E+01	2.49E+01	1.28E+03	7.12E+01	
9	67.68	6.97E+01	58.35			6.97E+01	5.84E+01	6.50E+01 ± 34.7%
10	74.96	3.41E+03	82.71	4.70E+01	1.89E+01	3.37E+03	8.48E+01	
11	77.25	5.76E+03	101.12	6.88E+01	2.55E+01	5.69E+03	1.04E+02	
12	79.47	2.57E+02	52.19			2.57E+02	5.22E+01	
13	81.22	1.55E+02	55.60			1.55E+02	5.56E+01	
14	84.06	6.63E+02	65.19	-3.10E+01	1.96E+01	6.94E+02	6.81E+01	
15	87.38	1.89E+03	69.52			1.89E+03	6.95E+01	
16	90.06	1.00E+03	65.93			1.00E+03	6.59E+01	
17	92.82	1.93E+03	75.68	2.61E+02	4.01E+01	1.67E+03	8.56E+01	
18	98.09	1.30E+02	47.41			1.30E+02	4.74E+01	
19	99.93	8.47E+01	47.13			8.47E+01	4.71E+01	
20	105.78	2.18E+02	54.47			2.18E+02	5.45E+01	
21	113.03	1.20E+02	59.62			1.20E+02	5.96E+01	
22	129.18	1.61E+02	59.43			1.61E+02	5.94E+01	
23	143.99	2.10E+02	60.17	4.83E+01	2.07E+01	1.61E+02	6.36E+01	
24	146.65	6.69E+01	42.22			6.69E+01	4.22E+01	
25	154.27	1.12E+02	47.89			1.12E+02	4.79E+01	
26	163.44	6.01E+01	48.73			6.01E+01	4.87E+01	
27	186.32	1.48E+03	74.06	1.65E+02	2.92E+01	1.32E+03	7.96E+01	
28	209.42	1.73E+02	55.69	-2.56E+01	2.49E+01	1.99E+02	6.10E+01	
29	239.05	1.55E+03	77.81	7.88E+01	2.53E+01	1.47E+03	8.18E+01	
30	242.35	1.18E+03	65.38			1.18E+03	6.54E+01	
31	270.36	1.65E+02	47.04			1.65E+02	4.70E+01	
32	274.64	4.09E+01	35.10			4.09E+01	3.51E+01	
33	295.75	2.27E+03	69.10	1.05E+01	4.02E+01	2.26E+03	7.99E+01	
34	300.43	6.44E+01	46.05			6.44E+01	4.60E+01	
35	339.11	1.93E+02	43.39			1.93E+02	4.34E+01	
36	352.53	3.50E+03	73.84	8.80E+01	2.36E+01	3.41E+03	7.75E+01	
37	394.31	4.50E+01	22.47			4.50E+01	2.25E+01	
38	403.52	3.75E+01	22.36			3.75E+01	2.24E+01	
39	496.83	6.34E+01	20.30			6.34E+01	2.03E+01	
40	564.11	3.61E+01	29.70			3.61E+01	2.97E+01	
41	576.94	3.46E+01	25.97			3.46E+01	2.60E+01	
42	584.26	2.68E+02	50.71	2.12E+01	1.69E+01	2.47E+02	5.34E+01	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	605.30	3.44E+01	24.76			3.44E+01	2.48E+01
44	610.41	1.66E+03	65.06	4.28E+01	1.95E+01	1.61E+03	6.79E+01
45	650.06	4.51E+01	27.07			4.51E+01	2.71E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:19:42 PM

Sample Title                     : NOPI-467-GAM1
Spectrum Description             : NOPI-467-GAM1
Sample Identification            : NP467_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-22-96  8:39:50 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80005.1 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
```

****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Locate Performed on: 4-11-96 1:18:38 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.56	0.4127	10.83	3.28
2	75.99	0.3703	13.07	3.94
3	94.34	0.3198	16.33	6.49
4	110.35	0.4006	19.16	4.06
5	230.61	0.4406	39.99	2.37
6	269.50	0.1723	46.65	17.06
7	308.20	0.2572	53.36	7.35
8	366.18	0.1717	63.43	14.76
9	391.57	0.4006	67.84	2.61
10	432.88	0.1333	74.97	24.32
11	446.01	0.1183	77.27	29.99
12	458.63	0.2698	79.50	5.86
13	468.79	0.3298	81.28	3.68
14	485.99	0.2592	84.11	3.84
15	504.71	0.1881	87.43	10.36
16	519.66	0.1905	90.07	10.19
17	535.13	0.1748	92.85	9.66
18	746.44	0.3115	129.32	3.68
19	890.33	0.3381	154.20	3.03
20	907.23	0.4267	157.31	2.23
21	1075.09	0.1556	186.33	11.85
22	1209.19	0.2715	209.55	3.58
23	1379.06	0.1157	239.06	21.22
24	1398.70	0.1464	242.28	14.00
25	1602.49	0.2368	277.79	5.66
26	1706.17	0.1110	295.77	20.44
27	1734.06	0.2685	300.72	3.00
28	1806.13	0.3661	313.22	2.30
29	1894.90	0.2970	328.59	3.10
30	1955.21	0.1982	339.02	6.53
31	2033.60	0.0995	352.58	23.47
32	2527.51	0.3669	438.70	2.31
33	2676.54	0.2635	464.18	2.63
34	3369.97	0.1741	584.64	6.41
35	3521.07	0.1129	610.54	12.98
36	3598.86	0.2956	623.67	2.65

F[illegible]rs quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Analysis Performed on: 4-11-96 1:18:58 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	60-	66	62.96	10.83	5.12E+02	53.18	8.31E+02
2	72-	79	75.83	13.07	1.42E+03	66.96	1.02E+03
3	92-	97	94.65	16.33	9.13E+02	64.49	1.26E+03
4	107-	114	110.98	19.16	2.27E+02	53.53	8.71E+02
5	225-	235	231.06	39.99	1.11E+02	49.51	6.24E+02
6	264-	274	269.47	46.65	1.60E+03	62.41	6.13E+02
7	303-	313	308.18	53.36	2.18E+02	50.86	6.25E+02
8	360-	371	366.23	63.43	1.18E+03	62.27	6.75E+02
9	385-	397	391.65	67.84	1.17E+02	57.28	7.42E+02
10	427-	438	432.78	74.97	2.62E+03	76.21	7.96E+02
11	440-	451	446.04	77.27	4.50E+03	87.58	7.93E+02
12	452-	464	458.89	79.50	9.50E+01	63.02	9.11E+02
13	464-	474	469.17	81.28	1.85E+02	47.69	5.55E+02
14	479-	492	485.49	84.11	5.62E+02	61.18	6.98E+02
15	498-	510	504.63	87.43	1.37E+03	69.36	8.09E+02
16	513-	525	519.84	90.07	6.58E+02	61.32	7.30E+02
17	528-	541	535.88	92.85	1.76E+03	73.77	8.21E+02
18	741-	753	746.17	129.32	1.83E+02	46.60	4.62E+02
19	882-	898	889.60	154.20	1.07E+02	58.39	6.24E+02
20	904-	911	907.55	157.31	4.63E+01	30.39	2.90E+02
21	1066-	1083	1074.88	186.33	1.02E+03	64.81	5.77E+02
22	1201-	1214	1208.77	209.55	1.08E+02	42.26	3.73E+02
23	1369-	1388	1378.94	239.06	1.49E+03	72.90	6.36E+02
24	1389-	1405	1397.49	242.28	8.25E+02	55.66	4.33E+02
25	1596-	1606	1602.26	277.79	7.46E+01	29.00	2.03E+02
26	1696-	1714	1705.94	295.77	1.54E+03	57.83	3.14E+02
27	1729-	1740	1734.44	300.72	8.55E+01	32.10	2.35E+02
28	1802-	1811	1806.53	313.22	5.35E+01	22.95	1.34E+02
29	1886-	1903	1895.18	328.59	4.92E+01	41.79	3.07E+02
30	1944-	1965	1955.30	339.02	2.29E+02	55.29	4.35E+02
31	2022-	2044	2033.51	352.58	2.14E+03	70.82	4.26E+02
32	2523-	2537	2530.07	438.70	3.29E+01	29.49	1.76E+02
33	2668-	2688	2676.97	464.18	9.71E+01	39.26	2.28E+02
34	3358-	3383	3371.58	584.64	2.91E+02	42.76	2.05E+02
35	3507-	3534	3520.94	610.54	1.14E+03	54.12	2.24E+02
36	3590-	3605	3596.63	623.67	5.28E+01	22.54	8.92E+01

M First peak in a multiplet region
m Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-467-GAM1
Peak Analysis Performed on: 4-11-96 1:18:38 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	10.83	5.12E+02	53.18	1.57E+02	3.08E+01	3.55E+02	6.15E+01
2	13.07	1.42E+03	66.96			1.42E+03	6.70E+01
3	16.33	9.13E+02	64.49			9.13E+02	6.45E+01
4	19.16	2.27E+02	53.53	-1.92E-01	1.63E+01	2.27E+02	5.60E+01
5	39.99	1.11E+02	49.51			1.11E+02	4.95E+01
6	46.65	1.60E+03	62.41	1.16E+01	3.50E+01	1.58E+03	7.15E+01
7	53.36	2.18E+02	50.86			2.18E+02	5.09E+01
8	63.43	1.18E+03	62.27	7.25E+01	2.49E+01	1.11E+03	6.71E+01
9	67.84	1.17E+02	57.28			1.17E+02	5.73E+01
10	74.97	2.62E+03	76.21	4.70E+01	1.89E+01	2.57E+03	7.85E+01
11	77.27	4.50E+03	87.58	6.88E+01	2.55E+01	4.43E+03	9.12E+01
12	79.50	9.50E+01	63.02			9.50E+01	6.30E+01
13	81.28	1.85E+02	47.69			1.85E+02	4.77E+01
14	84.11	5.62E+02	61.18	-3.10E+01	1.96E+01	5.93E+02	6.42E+01
15	87.43	1.37E+03	69.36			1.37E+03	6.94E+01
16	90.07	6.58E+02	61.32			6.58E+02	6.13E+01
17	92.85	1.76E+03	73.77	2.61E+02	4.01E+01	1.49E+03	8.40E+01
18	129.32	1.83E+02	46.60			1.83E+02	4.66E+01
19	154.20	1.07E+02	58.39			1.07E+02	5.84E+01
20	157.31	4.63E+01	30.39			4.63E+01	3.04E+01
21	186.33	1.02E+03	64.81	1.65E+02	2.92E+01	8.59E+02	7.11E+01
22	209.55	1.08E+02	42.26	-2.56E+01	2.49E+01	1.34E+02	4.91E+01
23	239.06	1.49E+03	72.90	7.88E+01	2.53E+01	1.41E+03	7.72E+01
24	242.28	8.25E+02	55.66			8.25E+02	5.57E+01
25	277.79	7.46E+01	29.00			7.46E+01	2.90E+01
26	295.77	1.54E+03	57.83	1.05E+01	4.02E+01	1.53E+03	7.04E+01
27	300.72	8.55E+01	32.10			8.55E+01	3.21E+01
28	313.22	5.35E+01	22.95			5.35E+01	2.30E+01
29	328.59	4.92E+01	41.79			4.92E+01	4.18E+01
30	339.02	2.29E+02	55.29			2.29E+02	5.53E+01
31	352.58	2.14E+03	70.82	8.80E+01	2.36E+01	2.05E+03	7.46E+01
32	438.70	3.29E+01	29.49			3.29E+01	2.95E+01
33	464.18	9.71E+01	39.26			9.71E+01	3.93E+01
34	584.64	2.91E+02	42.76	2.12E+01	1.69E+01	2.70E+02	4.60E+01
35	610.54	1.14E+03	54.12	4.28E+01	1.95E+01	1.10E+03	5.75E+01
36	623.67	5.28E+01	22.54			5.28E+01	2.25E+01

8.00 E+01 ± 32.+2%

M = First peak in a multiplet region
m = Other peak in a multiplet region
F Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:21:47 PM

Sample Title                     : NOPI-468-GAM1
Spectrum Description             : NOPI-468-GAM1
Sample Identification            : NP468_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-21-96 11:01:01 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80005.5 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Locate Performed on: 4-11-96 1:21:04 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	63.78	0.4256	10.91	4.30
2	76.35	0.3642	13.07	4.94
3	94.53	0.3268	16.39	4.96
4	110.47	0.3568	19.21	4.18
5	149.33	0.5224	25.74	2.46
6	159.18	0.5121	27.43	2.03
7	230.99	0.3936	40.05	3.99
8	269.80	0.1614	46.72	18.87
9	308.42	0.2451	53.43	7.44
10	366.42	0.1875	63.44	12.33
11	391.41	0.3727	67.86	2.88
12	418.40	0.5114	72.80	2.27
13	433.01	0.1334	75.01	24.00
14	446.14	0.1146	77.30	32.33
15	459.12	0.2840	79.51	5.46
16	468.79	0.3218	81.24	3.69
17	485.41	0.2784	84.16	4.96
18	504.91	0.1808	87.45	10.75
19	520.09	0.2026	90.20	8.48
20	535.25	0.1838	92.86	8.71
21	651.68	0.3980	113.06	2.76
22	746.24	0.2917	129.48	4.63
23	793.09	0.3845	137.65	2.25
24	889.93	0.3450	154.45	2.06
25	1075.11	0.1573	186.35	10.66
26	1127.53	0.3926	195.48	2.38
27	1209.21	0.2386	209.73	5.52
28	1379.27	0.1171	239.10	20.51
29	1398.96	0.1487	242.36	12.98
30	1569.52	0.4455	270.53	2.24
31	1706.32	0.1074	295.81	21.52
32	1734.56	0.2978	300.29	3.66
33	1954.94	0.1889	339.01	6.62
34	2016.42	0.3880	349.26	2.08
35	2033.96	0.0977	352.63	24.19
36	2674.93	0.3108	463.26	2.80
37	3250.71	0.2727	563.68	2.76
38	3370.08	0.1533	584.32	8.87
39	3471.00	0.3035	601.96	2.54
40	3521.10	0.1019	610.64	17.57
41	3845.19	0.2810	666.97	2.55

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Analysis Performed on: 4-11-96 1:21:23 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	60-	66	63.40	10.91	4.99E+02	53.52	8.56E+02
2	72-	79	75.87	13.07	1.35E+03	67.74	1.08E+03
3	92-	98	94.98	16.39	8.12E+02	67.26	1.30E+03
4	106-	114	111.23	19.21	2.50E+02	59.75	1.02E+03
5	145-	153	148.94	25.74	7.26E+01	45.47	6.08E+02
6	155-	163	158.67	27.43	1.04E+02	43.12	5.34E+02
7	226-	235	231.43	40.05	1.25E+02	45.97	5.66E+02
8	264-	274	269.86	46.72	1.74E+03	62.01	5.59E+02
9	303-	313	308.56	53.43	3.41E+02	48.56	5.38E+02
10	360-	371	366.27	63.44	9.02E+02	59.92	6.72E+02
11	385-	397	391.75	67.86	8.97E+01	56.95	7.41E+02
12	416-	424	420.26	72.80	9.64E+01	42.67	5.27E+02
13	427-	438	433.02	75.01	2.78E+03	75.77	7.41E+02
14	440-	452	446.22	77.30	4.67E+03	88.34	7.39E+02
15	453-	465	458.96	79.51	1.34E+02	60.92	8.39E+02
16	465-	474	468.90	81.24	1.49E+02	44.15	5.08E+02
17	479-	491	485.74	84.16	4.77E+02	56.47	6.37E+02
18	498-	511	504.71	87.45	1.62E+03	70.68	7.49E+02
19	513-	526	520.56	90.20	7.65E+02	62.84	7.05E+02
20	528-	541	535.94	92.86	1.44E+03	69.01	7.44E+02
21	649-	658	652.43	113.06	6.47E+01	39.22	4.13E+02
22	742-	753	747.10	129.48	6.35E+01	47.53	5.48E+02
23	788-	800	794.21	137.65	6.58E+01	43.95	4.38E+02
24	886-	897	891.08	154.45	1.17E+02	43.86	4.49E+02
25	1066-	1083	1074.98	186.35	1.00E+03	67.06	6.35E+02
26	1124-	1131	1127.65	195.48	4.28E+01	26.53	2.18E+02
27	1204-	1217	1209.82	209.73	1.02E+02	42.76	3.82E+02
28	1370-	1388	1379.17	239.10	1.58E+03	67.07	5.05E+02
29	1389-	1408	1397.93	242.36	9.67E+02	60.98	4.55E+02
30	1550-	1573	1560.36	270.53	8.10E+01	63.11	5.53E+02
31	1698-	1714	1706.17	295.81	1.65E+03	56.74	2.98E+02
32	1724-	1740	1731.99	300.29	8.38E+01	40.88	2.99E+02
33	1944-	1965	1955.25	339.01	3.48E+02	45.42	2.64E+02
34	2010-	2021	2014.34	349.26	3.29E+01	28.68	1.92E+02
35	2023-	2044	2033.77	352.63	2.44E+03	66.69	3.08E+02
36	2665-	2681	2671.68	463.26	7.18E+01	32.66	1.82E+02
37	3245-	3257	3250.73	563.68	2.48E+01	22.45	1.11E+02
38	3358-	3378	3369.73	584.32	2.34E+02	36.83	1.79E+02
39	3465-	3479	3471.42	601.96	5.15E+01	24.27	1.13E+02
40	3510-	3534	3521.48	610.64	1.30E+03	50.45	1.73E+02
41	3840-	3859	3846.29	666.97	6.71E+01	26.94	1.06E+02

M = First peak in a multiplet region

m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-468-GAM1
Peak Analysis Performed on: 4-11-96 1:21:04 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	10.91	4.99E+02	53.52	1.57E+02	3.08E+01	3.42E+02	6.18E+01	
2	13.07	1.35E+03	67.74			1.35E+03	6.77E+01	
3	16.39	8.12E+02	67.26			8.12E+02	6.73E+01	
4	19.21	2.50E+02	59.75	-1.92E-01	1.63E+01	2.50E+02	6.19E+01	
5	25.74	7.26E+01	45.47			7.26E+01	4.55E+01	
6	27.43	1.04E+02	43.12	-1.27E+01	1.34E+01	1.17E+02	4.52E+01	
7	40.05	1.25E+02	45.97			1.25E+02	4.60E+01	
8	46.72	1.74E+03	62.01	1.16E+01	3.50E+01	1.73E+03	7.12E+01	
9	53.43	3.41E+02	48.56			3.41E+02	4.86E+01	
10	63.44	9.02E+02	59.92	7.25E+01	2.49E+01	8.29E+02	6.49E+01	
11	67.86	8.97E+01	56.95			8.97E+01	5.69E+01	1.07E+02 ± 25.5%
12	72.80	9.64E+01	42.67			9.64E+01	4.27E+01	
13	75.01	2.78E+03	75.77	4.70E+01	1.89E+01	2.73E+03	7.81E+01	
14	77.30	4.67E+03	88.34	6.88E+01	2.55E+01	4.60E+03	9.20E+01	
15	79.51	1.34E+02	60.92			1.34E+02	6.09E+01	
16	81.24	1.49E+02	44.15			1.49E+02	4.42E+01	
17	84.16	4.77E+02	56.47	-3.10E+01	1.96E+01	5.08E+02	5.98E+01	
18	87.45	1.62E+03	70.68			1.62E+03	7.07E+01	
19	90.20	7.65E+02	62.84			7.65E+02	6.28E+01	
20	92.86	1.44E+03	69.01	2.61E+02	4.01E+01	1.18E+03	7.98E+01	
21	113.06	6.47E+01	39.22			6.47E+01	3.92E+01	
22	129.48	6.35E+01	47.53			6.35E+01	4.75E+01	
23	137.65	6.58E+01	43.95			6.58E+01	4.39E+01	
24	154.45	1.17E+02	43.86			1.17E+02	4.39E+01	
25	186.35	1.00E+03	67.06	1.65E+02	2.92E+01	8.38E+02	7.32E+01	
26	195.48	4.28E+01	26.53			4.28E+01	2.65E+01	
27	209.73	1.02E+02	42.76	-2.56E+01	2.49E+01	1.28E+02	4.95E+01	
28	239.10	1.58E+03	67.07	7.88E+01	2.53E+01	1.51E+03	7.17E+01	
29	242.36	9.67E+02	60.98			9.67E+02	6.10E+01	
30	270.53	8.10E+01	63.11			8.10E+01	6.31E+01	
31	295.81	1.65E+03	56.74	1.05E+01	4.02E+01	1.64E+03	6.95E+01	
32	300.29	8.38E+01	40.88			8.38E+01	4.09E+01	
33	339.01	3.48E+02	45.42			3.48E+02	4.54E+01	
34	349.26	3.29E+01	28.68			3.29E+01	2.87E+01	
35	352.63	2.44E+03	66.69	8.80E+01	2.36E+01	2.36E+03	7.07E+01	
36	463.26	7.18E+01	32.66			7.18E+01	3.27E+01	
37	563.68	2.48E+01	22.45			2.48E+01	2.24E+01	
38	584.32	2.34E+02	36.83	2.12E+01	1.69E+01	2.13E+02	4.05E+01	
39	601.96	5.15E+01	24.27			5.15E+01	2.43E+01	
40	610.64	1.30E+03	50.45	4.28E+01	1.95E+01	1.25E+03	5.41E+01	
41	666.97	6.71E+01	26.94			6.71E+01	2.69E+01	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:23:57 PM

Sample Title                     : NOPI-469-GAM1
Spectrum Description             : NOPI-469-GAM1
Sample Identification            : NP469_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-20-96  8:39:25 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80006.4 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Locate Performed on: 4-11-96 1:23:01 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.86	0.6248	6.56	2.19
2	63.72	0.3615	10.88	5.49
3	76.01	0.2989	13.08	4.80
4	94.59	0.2734	16.40	7.86
5	110.48	0.2807	19.12	6.60
6	114.71	0.5910	19.99	2.03
7	149.33	0.3874	25.77	3.81
8	159.35	0.4361	27.43	3.03
9	231.27	0.3984	40.07	3.19
10	269.78	0.1352	46.70	26.60
11	290.42	0.3928	50.07	3.49
12	308.25	0.2024	53.41	10.93
13	366.41	0.1456	63.45	19.84
14	391.74	0.3099	67.82	4.58
15	433.00	0.1136	75.01	33.47
16	446.13	0.1001	77.30	42.27
17	459.12	0.2221	79.53	8.13
18	468.92	0.2372	81.23	7.84
19	485.19	0.2218	84.07	6.82
20	504.92	0.1556	87.39	14.59
21	519.68	0.1742	90.10	12.34
22	535.42	0.1468	92.83	14.91
23	548.21	0.3907	94.98	3.12
24	569.21	0.3805	98.35	3.11
25	652.44	0.3130	112.97	3.60
26	679.05	0.4759	117.82	2.23
27	746.09	0.3547	129.35	3.56
28	831.71	0.2493	144.07	5.26
29	891.22	0.2658	154.52	4.63
30	944.39	0.3191	163.71	2.92
31	983.66	0.4480	170.04	2.01
32	1075.46	0.1278	186.37	16.03
33	1147.01	0.4070	198.82	2.68
34	1186.05	0.3339	205.78	3.15
35	1363.97	0.3413	236.55	3.05
36	1379.22	0.1152	239.09	21.18
37	1398.87	0.1189	242.48	20.37
38	1560.20	0.3876	270.89	2.13
39	1706.19	0.0922	295.81	29.68
40	1734.25	0.2789	300.78	2.91
41	1748.07	0.3235	303.09	2.61

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1783.22	0.3875	308.95	2.09
43	1828.05	0.3822	317.40	2.44
44	1955.54	0.2042	338.94	5.36
45	2033.94	0.0804	352.63	36.50
46	2236.72	0.2833	387.83	3.64
47	2247.95	0.3541	389.79	2.30
48	2673.66	0.3596	463.46	2.05
49	2715.22	0.3011	470.71	2.01
50	2777.07	0.3213	481.26	2.33
51	3031.94	0.2923	525.88	2.50
52	3294.77	0.3054	571.25	2.96
53	3370.62	0.1607	584.38	7.27
54	3521.42	0.0869	610.61	23.38
55	3745.81	0.2662	648.79	3.65
56	3823.87	0.3366	663.14	2.28
57	4028.92	0.2334	698.48	3.49

Errors quoted at 1.000 sigma

****
** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Analysis Performed on: 4-11-96 1:23:30 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	36-	40	38.29	6.56	1.57E+02	49.35	9.89E+02
2	60-	66	63.22	10.88	1.07E+03	64.91	1.13E+03
3	72-	79	75.90	13.08	2.58E+03	85.82	1.59E+03
4	92-	98	95.06	16.40	1.57E+03	89.28	2.24E+03
5	107-	114	110.74	19.12	3.57E+02	68.67	1.44E+03
6	114-	118	115.77	19.99	1.54E+02	43.23	7.20E+02
7	145-	153	149.07	25.77	2.01E+02	55.59	8.81E+02
8	155-	163	158.65	27.43	1.33E+02	54.85	8.67E+02
9	226-	235	231.56	40.07	1.34E+02	55.45	8.38E+02
10	264-	274	269.77	46.70	3.67E+03	82.14	8.18E+02
11	285-	295	289.18	50.07	2.19E+02	57.16	7.98E+02
12	303-	313	308.45	53.41	6.20E+02	61.73	8.50E+02
13	360-	371	366.34	63.45	2.17E+03	77.40	9.57E+02
14	386-	397	391.54	67.82	3.07E+02	65.48	9.89E+02
15	427-	438	432.98	75.01	4.62E+03	97.40	1.22E+03
16	440-	452	446.21	77.30	8.22E+03	115.48	1.21E+03
17	453-	465	459.05	79.53	2.31E+02	77.48	1.35E+03
18	465-	474	468.84	81.23	4.93E+02	56.36	7.52E+02
19	479-	491	485.22	84.07	1.16E+03	73.60	9.97E+02
20	498-	511	504.41	87.39	2.70E+03	91.17	1.23E+03
21	513-	525	520.02	90.10	1.17E+03	75.67	1.07E+03
22	529-	541	535.78	92.83	2.80E+03	85.76	1.08E+03
23	544-	554	548.13	94.98	1.66E+02	59.69	8.96E+02
24	562-	575	567.60	98.35	2.43E+02	65.46	8.88E+02
25	645-	659	651.87	112.97	1.34E+02	68.47	9.55E+02
26	676-	685	679.85	117.82	5.51E+01	44.03	5.31E+02
27	738-	751	746.35	129.35	9.48E+01	62.80	8.54E+02
28	824-	839	831.22	144.07	2.86E+02	68.69	8.80E+02
29	886-	898	891.44	154.52	1.66E+02	57.55	7.32E+02
30	939-	950	944.45	163.71	1.28E+02	49.84	5.86E+02
31	975-	989	980.95	170.04	7.99E+01	56.42	6.51E+02
32	1067-	1083	1075.09	186.37	2.18E+03	80.65	8.25E+02
m 33	1130-	1152	1146.92	198.82	8.69E+01	28.24	5.23E+02
34	1181-	1194	1187.01	205.78	1.19E+02	51.14	5.53E+02
35	1360-	1370	1364.48	236.55	5.31E+01	39.25	3.94E+02
36	1370-	1388	1379.10	239.09	1.66E+03	77.37	7.46E+02
37	1389-	1408	1398.64	242.48	1.86E+03	72.27	5.66E+02
38	1554-	1569	1562.45	270.89	1.79E+02	51.80	5.01E+02
39	1696-	1716	1706.18	295.81	3.28E+03	79.95	4.98E+02
40	1728-	1741	1734.81	300.78	1.70E+02	38.29	2.88E+02
41	1743-	1753	1748.11	303.09	4.35E+01	31.89	2.59E+02
42	1777-	1788	1781.92	308.95	6.01E+01	31.22	2.26E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1823-	1838	1830.67	317.40	5.35E+01	41.16	3.28E+02
	44	1944-	1964	1954.82	338.94	2.61E+02	57.83	4.93E+02
	45	2023-	2044	2033.80	352.63	4.79E+03	92.93	5.93E+02
M	46	2232-	2252	2236.77	387.83	5.96E+01	22.13	2.23E+02
m	47	2232-	2252	2248.05	389.79	5.23E+01	20.23	2.15E+02
	48	2657-	2685	2672.85	463.46	6.39E+01	58.93	4.13E+02
	49	2710-	2720	2714.64	470.71	2.96E+01	25.25	1.60E+02
	50	2770-	2782	2775.45	481.26	6.40E+01	28.55	1.74E+02
	51	3025-	3040	3032.77	525.88	6.43E+01	29.97	1.67E+02
	52	3289-	3300	3294.38	571.25	3.44E+01	22.60	1.19E+02
	53	3359-	3379	3370.04	584.38	2.80E+02	41.91	2.36E+02
	54	3507-	3535	3521.33	610.61	2.67E+03	69.28	2.59E+02
	55	3731-	3751	3741.44	648.79	4.80E+01	33.52	1.72E+02
	56	3818-	3829	3824.18	663.14	2.21E+01	19.23	8.69E+01
	57	4022-	4035	4027.99	698.48	7.62E+01	15.78	3.78E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-469-GAM1
Peak Analysis Performed on: 4-11-96 1:23:01 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	6.56	1.57E+02	49.35	4.00E+01	3.04E+01	1.16E+02	5.80E+01	
2	10.88	1.07E+03	64.91	1.57E+02	3.08E+01	9.10E+02	7.19E+01	
3	13.08	2.58E+03	85.82			2.58E+03	8.58E+01	
4	16.40	1.57E+03	89.28			1.57E+03	8.93E+01	
5	19.12	3.57E+02	68.67	-1.92E-01	1.63E+01	3.57E+02	7.06E+01	
6	19.99	1.54E+02	43.23	-1.92E-01	1.63E+01	1.54E+02	4.62E+01	
7	25.77	2.01E+02	55.59			2.01E+02	5.56E+01	
8	27.43	1.33E+02	54.85	-1.27E+01	1.34E+01	1.46E+02	5.65E+01	
9	40.07	1.34E+02	55.45			1.34E+02	5.55E+01	
10	46.70	3.67E+03	82.14	1.16E+01	3.50E+01	3.66E+03	8.93E+01	
11	50.07	2.19E+02	57.16	-1.20E+01	1.73E+01	2.31E+02	5.97E+01	
12	53.41	6.20E+02	61.73			6.20E+02	6.17E+01	
13	63.45	2.17E+03	77.40	7.25E+01	2.49E+01	2.09E+03	8.13E+01	
14	67.82	3.07E+02	65.48			3.07E+02	6.55E+01	2.77E+02 ± 12.77% ~~277+~~
15	75.01	4.62E+03	97.40	4.70E+01	1.89E+01	4.57E+03	9.92E+01	
16	77.30	8.22E+03	115.48	6.88E+01	2.55E+01	8.15E+03	1.18E+02	
17	79.53	2.31E+02	77.48			2.31E+02	7.75E+01	
18	81.23	4.93E+02	56.36			4.93E+02	5.64E+01	
19	84.07	1.16E+03	73.60	-3.10E+01	1.96E+01	1.19E+03	7.62E+01	
20	87.39	2.70E+03	91.17			2.70E+03	9.12E+01	
21	90.10	1.17E+03	75.67			1.17E+03	7.57E+01	
22	92.83	2.80E+03	85.76	2.61E+02	4.01E+01	2.54E+03	9.47E+01	
23	94.98	1.66E+02	59.69	2.42E+01	1.36E+01	1.41E+02	6.12E+01	
24	98.35	2.43E+02	65.46			2.43E+02	6.55E+01	
25	112.97	1.34E+02	68.47			1.34E+02	6.85E+01	
26	117.82	5.51E+01	44.03			5.51E+01	4.40E+01	
27	129.35	9.48E+01	62.80			9.48E+01	6.28E+01	
28	144.07	2.86E+02	68.69	4.83E+01	2.07E+01	2.38E+02	7.17E+01	
29	154.52	1.66E+02	57.55			1.66E+02	5.75E+01	
30	163.71	1.28E+02	49.84			1.28E+02	4.98E+01	
31	170.04	7.99E+01	56.42			7.99E+01	5.64E+01	
32	186.37	2.18E+03	80.65	1.65E+02	2.92E+01	2.01E+03	8.58E+01	
m 33	198.82	8.69E+01	28.24			8.69E+01	2.82E+01	
34	205.78	1.19E+02	51.14	-8.75E+00	2.28E+01	1.28E+02	5.60E+01	
35	236.55	5.31E+01	39.25			5.31E+01	3.93E+01	
36	239.09	1.66E+03	77.37	7.88E+01	2.53E+01	1.58E+03	8.14E+01	
37	242.48	1.86E+03	72.27			1.86E+03	7.23E+01	
38	270.89	1.79E+02	51.80			1.79E+02	5.18E+01	
39	295.81	3.28E+03	79.95	1.05E+01	4.02E+01	3.27E+03	8.95E+01	
40	300.78	1.70E+02	38.29			1.70E+02	3.83E+01	
41	303.09	4.35E+01	31.89			4.35E+01	3.19E+01	
42	308.95	6.01E+01	31.22			6.01E+01	3.12E+01	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	317.40	5.35E+01	41.16			5.35E+01	4.12E+01
44	338.94	2.61E+02	57.83			2.61E+02	5.78E+01
45	352.63	4.79E+03	92.93	8.80E+01	2.36E+01	4.70E+03	9.59E+01
M 46	387.83	5.96E+01	22.13			5.96E+01	2.21E+01
m 47	389.79	5.23E+01	20.23			5.23E+01	2.02E+01
48	463.46	6.39E+01	58.93			6.39E+01	5.89E+01
49	470.71	2.96E+01	25.25			2.96E+01	2.52E+01
50	481.26	6.40E+01	28.55			6.40E+01	2.85E+01
51	525.88	6.43E+01	29.97			6.43E+01	3.00E+01
52	571.25	3.44E+01	22.60			3.44E+01	2.26E+01
53	584.38	2.80E+02	41.91	2.12E+01	1.69E+01	2.59E+02	4.52E+01
54	610.61	2.67E+03	69.28	4.28E+01	1.95E+01	2.63E+03	7.20E+01
55	648.79	4.80E+01	33.52			4.80E+01	3.35E+01
56	663.14	2.21E+01	19.23			2.21E+01	1.92E+01
57	698.48	7.62E+01	15.78	4.50E+01	1.05E+01	3.12E+01	1.89E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:25:52 PM

Sample Title                     : NOPI-470-GAM1
Spectrum Description             : NOPI-470-GAM1
Sample Identification            : NP470_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-19-96  8:38:57 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80007.1 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Locate Performed on: 4-11-96 1:25:13 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	32.00	0.6030	5.35	2.75
2	37.56	0.4555	6.47	2.68
3	63.43	0.3075	10.86	6.06
4	76.18	0.3046	13.21	6.44
5	94.43	0.2587	16.39	8.48
6	110.56	0.2997	19.21	6.21
7	149.04	0.3497	25.82	5.24
8	159.31	0.3358	27.49	4.59
9	212.79	0.4646	36.82	2.94
10	230.82	0.4217	40.06	3.42
11	269.70	0.1289	46.69	29.14
12	290.37	0.3272	50.15	4.38
13	308.33	0.1914	53.37	13.01
14	339.03	0.5473	58.94	2.21
15	366.22	0.1338	63.46	25.53
16	391.54	0.2739	67.83	5.90
17	432.95	0.1109	74.99	34.81
18	446.08	0.0968	77.28	45.56
19	459.04	0.2056	79.51	10.51
20	469.17	0.2079	81.30	10.22
21	484.75	0.1890	84.05	11.20
22	504.72	0.1494	87.40	15.60
23	519.86	0.1785	90.13	12.13
24	535.30	0.1338	92.80	16.91
25	547.52	0.2737	94.93	4.54
26	568.99	0.3747	98.36	2.62
27	611.08	0.3831	105.57	3.17
28	652.20	0.2659	113.00	5.69
29	668.84	0.4898	116.40	2.13
30	745.96	0.3141	129.26	3.16
31	831.45	0.2127	144.12	7.35
32	890.86	0.2976	154.49	4.70
33	1075.18	0.1204	186.34	18.07
34	1209.23	0.3037	209.77	4.00
35	1364.38	0.2746	236.45	3.70
36	1379.11	0.1134	239.07	22.29
37	1398.63	0.1126	242.41	20.63
38	1496.57	0.2871	259.31	2.81
39	1543.66	0.3623	267.60	2.65
40	1587.94	0.3237	274.87	3.30
41	1706.09	0.0876	295.77	33.98

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1734.48	0.2826	300.66	3.44
43	1895.59	0.2996	328.65	3.50
44	1954.77	0.2030	339.05	6.33
45	2033.63	0.0770	352.60	38.53
46	2090.63	0.3825	362.37	2.03
47	2853.22	0.3568	494.58	2.01
48	3370.00	0.1688	584.54	6.57
49	3520.94	0.0829	610.52	25.28
50	3564.08	0.3492	617.32	2.28
51	3845.08	0.2505	666.69	3.45
52	4029.94	0.2576	697.96	3.89

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Analysis Performed on: 4-11-96 1:25:31 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	29-	34	31.32	5.35	1.98E+02	63.11	1.48E+03
2	34-	40	37.78	6.47	1.82E+02	70.34	1.71E+03
3	60-	66	63.13	10.86	1.28E+03	67.19	1.16E+03
4	75-	79	76.64	13.21	2.39E+03	77.42	1.52E+03
5	92-	98	95.02	16.39	2.22E+03	100.13	2.73E+03
6	107-	114	111.26	19.21	5.04E+02	76.30	1.77E+03
7	144-	153	149.37	25.82	3.35E+02	64.44	1.09E+03
8	155-	163	158.98	27.49	3.02E+02	57.97	9.33E+02
9	211-	217	212.80	36.82	1.17E+02	43.13	6.15E+02
10	226-	235	231.48	40.06	1.50E+02	59.22	9.58E+02
11	264-	274	269.69	46.69	4.46E+03	92.63	1.10E+03
12	285-	295	289.64	50.15	3.88E+02	59.50	8.31E+02
13	303-	313	308.24	53.37	8.60E+02	63.55	8.45E+02
14	333-	344	340.33	58.94	8.26E+01	65.24	1.04E+03
15	361-	371	366.38	63.46	3.01E+03	82.59	1.02E+03
16	385-	397	391.58	67.83	3.16E+02	78.80	1.39E+03
17	427-	438	432.90	74.99	5.38E+03	104.02	1.36E+03
18	440-	451	446.09	77.28	9.35E+03	120.81	1.31E+03
19	453-	465	458.98	79.51	2.99E+02	84.17	1.59E+03
20	465-	475	469.28	81.30	6.78E+02	65.51	9.52E+02
21	478-	490	485.11	84.05	1.40E+03	79.48	1.16E+03
22	498-	510	504.47	87.40	2.91E+03	92.81	1.34E+03
23	513-	526	520.21	90.13	1.35E+03	85.75	1.34E+03
24	528-	541	535.58	92.80	3.87E+03	99.71	1.35E+03
25	543-	553	547.89	94.93	1.71E+02	68.88	1.21E+03
26	562-	575	567.64	98.36	3.58E+02	68.75	9.57E+02
27	604-	617	609.22	105.57	1.04E+02	67.76	9.82E+02
28	647-	659	652.05	113.00	1.35E+02	66.25	9.90E+02
29	666-	675	671.66	116.40	9.26E+01	48.22	6.32E+02
30	741-	751	745.80	129.26	1.30E+02	52.88	7.04E+02
31	827-	838	831.47	144.12	3.31E+02	60.99	8.32E+02
32	883-	898	891.27	154.49	3.47E+02	68.65	8.72E+02
33	1066-	1083	1074.93	186.34	2.67E+03	92.17	1.06E+03
34	1205-	1217	1210.07	209.77	8.68E+01	50.30	5.70E+02
35	1358-	1369	1363.87	236.45	1.26E+02	45.23	4.76E+02
36	1371-	1388	1378.96	239.07	1.64E+03	77.71	7.88E+02
37	1389-	1407	1398.25	242.41	2.05E+03	78.66	7.21E+02
38	1487-	1502	1495.70	259.31	1.11E+02	52.64	5.31E+02
39	1539-	1548	1543.51	267.60	3.97E+01	31.73	2.73E+02
40	1578-	1594	1585.39	274.87	1.61E+02	52.85	4.96E+02
41	1696-	1716	1705.94	295.77	3.78E+03	89.98	6.86E+02
42	1724-	1739	1734.14	300.66	9.13E+01	47.67	4.36E+02

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	1890-	1901	1895.51	328.65	8.15E+01	35.95	3.02E+02
44	1947-	1962	1955.47	339.05	2.17E+02	49.39	4.45E+02
45	2022-	2044	2033.61	352.60	5.76E+03	102.85	7.13E+02
46	2085-	2095	2089.97	362.37	4.40E+01	30.35	2.33E+02
47	2845-	2860	2852.28	494.58	4.63E+01	32.69	2.04E+02
48	3361-	3383	3370.98	584.54	3.17E+02	46.57	2.74E+02
49	3507-	3534	3520.82	610.52	2.95E+03	77.62	3.84E+02
50	3550-	3571	3560.01	617.32	4.41E+01	39.50	2.32E+02
51	3836-	3859	3844.68	666.69	4.43E+01	47.10	3.07E+02
52	4015-	4035	4025.00	697.96	1.36E+02	25.60	8.59E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-470-GAM1
Peak Analysis Performed on: 4-11-96 1:25:13 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	5.35	1.98E+02	63.11	4.00E+01	3.04E+01	1.58E+02	7.01E+01	
2	6.47	1.82E+02	70.34	4.00E+01	3.04E+01	1.42E+02	7.66E+01	
3	10.86	1.28E+03	67.19	1.57E+02	3.08E+01	1.12E+03	7.39E+01	
4	13.21	2.39E+03	77.42			2.39E+03	7.74E+01	
5	16.39	2.22E+03	100.13			2.22E+03	1.00E+02	
6	19.21	5.04E+02	76.30	-1.92E-01	1.63E+01	5.04E+02	7.80E+01	
7	25.82	3.35E+02	64.44			3.35E+02	6.44E+01	
8	27.49	3.02E+02	57.97	-1.27E+01	1.34E+01	3.15E+02	5.95E+01	
9	36.82	1.17E+02	43.13			1.17E+02	4.31E+01	
10	40.06	1.50E+02	59.22			1.50E+02	5.92E+01	
11	46.69	4.46E+03	92.63	1.16E+01	3.50E+01	4.45E+03	9.90E+01	
12	50.15	3.88E+02	59.50	-1.20E+01	1.73E+01	4.00E+02	6.20E+01	
13	53.37	8.60E+02	63.55			8.60E+02	6.35E+01	
14	58.94	8.26E+01	65.24			8.26E+01	6.52E+01	
15	63.46	3.01E+03	82.59	7.25E+01	2.49E+01	2.94E+03	8.63E+01	
16	67.83	3.16E+02	78.80			3.16E+02	7.88E+01	3.34E+02 ±11.16%
17	74.99	5.38E+03	104.02	4.70E+01	1.89E+01	5.33E+03	1.06E+02	
18	77.28	9.35E+03	120.81	6.88E+01	2.55E+01	9.28E+03	1.23E+02	
19	79.51	2.99E+02	84.17			2.99E+02	8.42E+01	
20	81.30	6.78E+02	65.51			6.78E+02	6.55E+01	
21	84.05	1.40E+03	79.48	-3.10E+01	1.96E+01	1.43E+03	8.19E+01	
22	87.40	2.91E+03	92.81			2.91E+03	9.28E+01	
23	90.13	1.35E+03	85.75			1.35E+03	8.58E+01	
24	92.80	3.87E+03	99.71	2.61E+02	4.01E+01	3.61E+03	1.07E+02	
25	94.93	1.71E+02	68.88	2.42E+01	1.36E+01	1.47E+02	7.02E+01	
26	98.36	3.58E+02	68.75			3.58E+02	6.88E+01	
27	105.57	1.04E+02	67.76			1.04E+02	6.78E+01	
28	113.00	1.35E+02	66.25			1.35E+02	6.62E+01	
29	116.40	9.26E+01	48.22			9.26E+01	4.82E+01	
30	129.26	1.30E+02	52.88			1.30E+02	5.29E+01	
31	144.12	3.31E+02	60.99	4.83E+01	2.07E+01	2.83E+02	6.44E+01	
32	154.49	3.47E+02	68.65			3.47E+02	6.87E+01	
33	186.34	2.67E+03	92.17	1.65E+02	2.92E+01	2.50E+03	9.67E+01	
34	209.77	8.68E+01	50.30	-2.56E+01	2.49E+01	1.12E+02	5.61E+01	
35	236.45	1.26E+02	45.23			1.26E+02	4.52E+01	
36	239.07	1.64E+03	77.71	7.88E+01	2.53E+01	1.56E+03	8.17E+01	
37	242.41	2.05E+03	78.66			2.05E+03	7.87E+01	
38	259.31	1.11E+02	52.64	1.45E+01	2.66E+01	9.60E+01	5.90E+01	
39	267.60	3.97E+01	31.73			3.97E+01	3.17E+01	
40	274.87	1.61E+02	52.85			1.61E+02	5.29E+01	
41	295.77	3.78E+03	89.98	1.05E+01	4.02E+01	3.77E+03	9.86E+01	
42	300.66	9.13E+01	47.67			9.13E+01	4.77E+01	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	328.65	8.15E+01	35.95			8.15E+01	3.60E+01
44	339.05	2.17E+02	49.39			2.17E+02	4.94E+01
45	352.60	5.76E+03	102.85	8.80E+01	2.36E+01	5.68E+03	1.06E+02
46	362.37	4.40E+01	30.35			4.40E+01	3.04E+01
47	494.58	4.63E+01	32.69			4.63E+01	3.27E+01
48	584.54	3.17E+02	46.57	2.12E+01	1.69E+01	2.96E+02	4.95E+01
49	610.52	2.95E+03	77.62	4.28E+01	1.95E+01	2.91E+03	8.00E+01
50	617.32	4.41E+01	39.50			4.41E+01	3.95E+01
51	666.69	4.43E+01	47.10			4.43E+01	4.71E+01
52	697.96	1.36E+02	25.60	4.50E+01	1.05E+01	9.10E+01	2.77E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*****************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*****************************************************************************

Report Generated On              :  4-11-96  1:32:45 PM

Sample Title                     : NOPI-471-GAM1
Spectrum Description             : NOPI-471-GAM1
Sample Identification            : NP471_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-11-96 11:44:07 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80255.5 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Locate Performed on: 4-11-96 1:31:53 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.63	0.2495	5.39	10.10
2	37.37	0.1786	6.44	19.86
3	53.18	0.3371	9.21	7.19
4	63.50	0.1090	10.91	42.50
5	76.10	0.1064	13.20	49.50
6	98.00	0.2666	16.43	14.07
7	117.60	0.2955	19.45	6.88
8	149.04	0.1068	25.76	50.21
9	159.02	0.1136	27.49	44.93
10	174.32	0.5192	30.19	2.16
11	186.24	0.3188	32.15	3.12
12	212.40	0.2107	36.76	10.50
13	269.63	0.0490	46.67	206.06
14	290.21	0.1061	50.13	45.97
15	308.15	0.0645	53.36	112.06
16	366.19	0.0447	63.43	228.49
17	391.55	0.0912	67.80	51.85
18	409.69	0.3062	70.81	4.34
19	432.89	0.0400	74.97	268.65
20	446.01	0.0346	77.26	357.08
21	458.79	0.0712	79.52	81.99
22	469.00	0.0698	81.27	88.80
23	484.78	0.0618	84.02	101.68
24	504.63	0.0537	87.38	116.65
25	519.52	0.0627	90.10	89.49
26	535.23	0.0434	92.76	155.02
27	547.90	0.0915	94.94	44.64
28	569.05	0.0983	98.38	44.76
29	579.20	0.3056	100.43	4.50
30	595.13	0.3729	102.99	3.09
31	611.27	0.2276	105.74	7.31
32	631.24	0.1774	109.31	12.16
33	643.51	0.1921	111.18	10.95
34	652.27	0.0961	113.03	41.06
35	667.97	0.4839	115.13	2.35
36	698.50	0.2522	121.08	5.48
37	707.36	0.1719	122.62	12.58
38	740.09	0.2375	128.27	6.03
39	759.12	0.4861	130.86	2.62
40	812.33	0.3053	140.80	3.98
41	831.31	0.0730	144.13	62.08

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	860.04	0.4196	149.29	2.62
43	891.30	0.0963	154.50	37.44
44	906.29	0.3222	157.05	2.70
45	917.06	0.2352	159.06	6.03
46	944.07	0.1039	163.64	31.19
47	1038.93	0.4531	179.65	2.31
48	1074.91	0.0408	186.32	155.29
49	1126.88	0.3412	195.44	3.51
50	1134.29	0.2440	196.60	6.05
51	1168.05	0.2413	202.29	6.02
52	1186.48	0.1098	205.68	24.95
53	1217.56	0.2399	210.72	5.60
54	1363.60	0.0843	236.38	39.46
55	1378.88	0.2049	238.97	6.81
56	1398.29	0.0372	242.41	196.73
57	1480.76	0.1052	256.83	26.57
58	1495.73	0.0927	259.31	31.16
59	1556.89	0.0814	269.85	43.57
60	1567.23	0.0924	271.74	34.51
61	1587.98	0.1258	275.13	17.71
62	1623.28	0.3102	281.73	2.94
63	1638.85	0.2143	284.11	6.13
64	1653.13	0.1319	286.52	15.04
65	1705.79	0.0296	295.74	288.75
66	1733.54	0.1253	300.55	15.97
67	1748.33	0.1774	303.19	7.98
68	1759.95	0.2266	305.24	5.79
69	1817.16	0.2278	315.34	4.91
70	1871.38	0.1329	324.39	14.21
71	1906.01	0.1446	330.57	13.05
72	1933.26	0.3335	334.56	2.77
73	1954.50	0.1689	338.70	8.81
74	2015.55	0.2782	349.52	4.01
75	2033.46	0.0263	352.55	331.07
76	2235.12	0.1526	387.55	10.58
77	2247.28	0.1315	389.78	14.44
78	2321.65	0.1241	402.57	13.30
79	2340.44	0.1711	405.94	6.51
80	2467.79	0.2225	427.89	3.81
81	2569.89	0.2733	445.78	3.66
82	2628.59	0.1529	455.60	10.09
83	2668.99	0.2248	462.82	3.46
84	2713.83	0.2152	470.74	4.19
85	2742.19	0.2819	475.64	2.52
86	2776.13	0.1323	481.39	11.69
87	2814.43	0.1372	487.99	10.43
88	3083.83	0.1509	534.64	8.86
89	3139.90	0.2677	544.90	2.36
90	3309.21	0.2836	574.14	2.43
91	3351.84	0.1454	581.05	8.86

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	3520.46	0.0284	610.45	218.11
93	3844.65	0.0848	666.69	24.90
94	3947.58	0.2407	684.44	3.64
95	4028.85	0.0928	698.38	22.84

Errors quoted at 1.000 sigma

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***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Analysis Performed on: 4-11-96 1:32:12 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	28-	34	31.59	5.39	3.27E+03	384.31	5.13E+04
2	34-	40	37.65	6.44	1.19E+04	398.10	5.27E+04
3	50-	56	53.59	9.21	2.01E+03	342.60	4.14E+04
4	60-	66	63.43	10.91	5.84E+04	439.65	4.86E+04
5	75-	79	76.58	13.20	1.34E+05	554.74	7.30E+04
6	92-	101	95.22	16.43	1.43E+05	905.08	1.81E+05
7	107-	121	112.61	19.45	6.26E+04	779.32	1.14E+05
8	144-	153	149.00	25.76	2.31E+04	447.69	5.05E+04
9	154-	163	159.01	27.49	2.01E+04	434.32	4.80E+04
10	170-	178	174.54	30.19	7.81E+02	371.43	4.19E+04
11	181-	190	185.87	32.15	2.81E+03	405.36	4.58E+04
12	210-	216	212.42	36.76	4.10E+03	300.57	3.09E+04
13	264-	274	269.59	46.67	2.28E+05	642.90	4.93E+04
14	285-	295	289.53	50.13	2.42E+04	449.36	4.68E+04
15	302-	313	308.16	53.36	5.80E+04	512.98	5.13E+04
16	360-	371	366.25	63.43	2.24E+05	684.91	6.13E+04
17	385-	397	391.40	67.80	2.54E+04	555.43	6.64E+04
18	403-	415	408.80	70.81	1.83E+03	539.34	6.76E+04
19	427-	438	432.77	74.97	3.17E+05	783.33	7.40E+04
20	440-	451	445.99	77.26	5.70E+05	922.14	7.01E+04
21	452-	464	459.00	79.52	2.49E+04	632.65	8.80E+04
22	464-	475	469.11	81.27	3.92E+04	539.14	6.27E+04
23	478-	490	484.93	84.02	9.98E+04	587.11	5.76E+04
24	500-	510	504.35	87.38	1.75E+05	646.60	6.28E+04
25	513-	525	520.00	90.10	7.00E+04	594.46	6.66E+04
26	528-	541	535.35	92.76	2.74E+05	760.17	6.76E+04
27	543-	554	547.91	94.94	2.75E+04	498.99	5.51E+04
28	559-	575	567.75	98.38	2.51E+04	567.76	5.66E+04
29	575-	585	579.56	100.43	1.03E+03	364.94	3.50E+04
30	585-	601	594.35	102.99	1.65E+03	524.51	5.20E+04
31	604-	617	610.19	105.74	3.58E+03	441.22	4.23E+04
32	624-	637	630.76	109.31	1.25E+03	464.43	4.74E+04
33	637-	647	641.59	111.18	3.29E+03	378.39	3.69E+04
34	647-	659	652.24	113.03	1.02E+04	448.15	4.45E+04
35	659-	672	664.34	115.13	2.35E+03	436.53	4.16E+04
36	693-	702	698.63	121.08	7.42E+02	322.26	2.93E+04
37	702-	714	707.52	122.62	1.83E+03	405.03	3.80E+04
38	735-	745	740.11	128.27	1.33E+03	345.90	3.14E+04
39	745-	766	755.04	130.86	3.72E+03	642.72	6.29E+04
40	804-	819	812.34	140.80	1.72E+03	487.62	4.71E+04
41	823-	838	831.54	144.13	3.08E+04	519.23	4.77E+04
42	855-	867	861.32	149.29	5.22E+02	413.38	3.99E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	883-	899	891.38	154.50	1.27E+04	533.98	5.18E+04
	44	902-	912	906.04	157.05	8.70E+02	351.90	3.26E+04
	45	912-	924	917.66	159.06	1.51E+03	401.24	3.74E+04
	46	936-	951	944.07	163.64	8.38E+03	477.85	4.39E+04
	47	1030-	1042	1036.38	179.65	4.88E+02	379.89	3.37E+04
	48	1066-	1083	1074.80	186.32	1.99E+05	674.75	4.66E+04
M	49	1123-	1142	1127.41	195.44	8.19E+02	177.11	2.70E+04
m	50	1123-	1142	1134.07	196.60	1.42E+03	226.99	3.17E+04
	51	1159-	1176	1166.91	202.29	2.24E+03	479.01	4.12E+04
	52	1177-	1195	1186.43	205.68	7.92E+03	482.69	3.91E+04
	53	1208-	1222	1215.55	210.72	1.55E+03	366.70	2.79E+04
	54	1354-	1372	1363.46	236.38	1.08E+04	440.16	3.18E+04
	55	1372-	1385	1378.43	238.97	1.77E+03	320.52	2.24E+04
	56	1389-	1407	1398.23	242.41	1.46E+05	559.32	2.89E+04
	57	1480-	1486	1481.40	256.83	2.31E+03	188.14	1.16E+04
	58	1486-	1505	1495.68	259.31	7.64E+03	425.77	2.89E+04
	59	1547-	1562	1556.49	269.85	9.13E+03	354.99	2.34E+04
	60	1562-	1576	1567.37	271.74	4.64E+03	346.64	2.42E+04
	61	1578-	1597	1586.89	275.13	5.37E+03	405.94	2.65E+04
	62	1619-	1633	1624.98	281.73	6.16E+02	312.31	2.03E+04
	63	1633-	1643	1638.68	284.11	7.74E+02	241.31	1.52E+04
	64	1645-	1659	1652.59	286.52	3.42E+03	318.73	2.06E+04
	65	1695-	1715	1705.77	295.74	2.89E+05	681.55	2.81E+04
	66	1727-	1743	1733.46	300.55	2.95E+03	332.62	2.04E+04
	67	1743-	1755	1748.73	303.19	1.68E+03	257.57	1.51E+04
	68	1755-	1770	1760.54	305.24	6.80E+02	311.10	1.91E+04
	69	1811-	1827	1818.78	315.34	1.51E+03	320.85	1.93E+04
	70	1860-	1878	1870.96	324.39	2.86E+03	357.47	2.17E+04
	71	1901-	1916	1906.60	330.57	2.11E+03	313.92	1.92E+04
	72	1922-	1939	1929.60	334.56	6.73E+02	355.48	2.28E+04
	73	1943-	1962	1953.47	338.70	1.87E+03	394.29	2.56E+04
	74	2011-	2020	2015.83	349.52	5.94E+02	226.79	1.44E+04
	75	2022-	2044	2033.33	352.55	4.33E+05	797.48	3.01E+04
	76	2223-	2240	2235.14	387.55	1.36E+03	342.87	2.11E+04
	77	2240-	2258	2247.97	389.78	2.04E+03	363.06	2.25E+04
	78	2314-	2330	2321.74	402.57	3.00E+03	327.00	1.97E+04
	79	2330-	2351	2341.18	405.94	2.99E+03	412.93	2.57E+04
	80	2460-	2479	2467.74	427.89	1.41E+03	370.89	2.26E+04
	81	2565-	2581	2570.90	445.78	3.00E+02	284.23	1.53E+04
	82	2616-	2640	2627.50	455.60	2.13E+03	395.24	2.12E+04
	83	2661-	2679	2669.14	462.82	9.67E+02	305.03	1.60E+04
	84	2704-	2726	2714.80	470.74	1.08E+03	355.70	1.86E+04
	85	2736-	2754	2743.04	475.64	5.17E+02	296.40	1.52E+04
	86	2763-	2788	2776.22	481.39	3.31E+03	386.27	1.94E+04
	87	2801-	2826	2814.26	487.99	2.85E+03	382.66	1.91E+04
	88	3074-	3092	3083.28	534.64	1.20E+03	271.78	1.26E+04
	89	3132-	3152	3142.42	544.90	6.99E+02	294.98	1.38E+04
	90	3302-	3322	3311.00	574.14	3.97E+02	291.36	1.35E+04
	91	3338-	3361	3350.88	581.05	1.99E+03	329.72	1.52E+04
	92	3506-	3534	3520.37	610.45	2.15E+05	610.83	1.92E+04

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	3830-	3858	3844.67	666.69	5.79E+03	363.20	1.53E+04
94	3935-	3955	3947.01	684.44	7.88E+02	257.88	1.05E+04
95	4018-	4035	4027.40	698.38	4.11E+03	158.58	3.71E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-471-GAM1
Peak Analysis Performed on: 4-11-96 1:31:53 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	5.39	3.27E+03	384.31	4.00E+01	3.04E+01	3.23E+03	3.86E+02	
2	6.44	1.19E+04	398.10	4.00E+01	3.04E+01	1.18E+04	3.99E+02	
3	9.21	2.01E+03	342.60			2.01E+03	3.43E+02	
4	10.91	5.84E+04	439.65	1.57E+02	3.08E+01	5.83E+04	4.41E+02	
5	13.20	1.34E+05	554.74			1.34E+05	5.55E+02	
6	16.43	1.43E+05	905.08			1.43E+05	9.05E+02	
7	19.45	6.26E+04	779.32	-1.92E-01	1.63E+01	6.26E+04	7.79E+02	
8	25.76	2.31E+04	447.69			2.31E+04	4.48E+02	
9	27.49	2.01E+04	434.32	-1.27E+01	1.34E+01	2.01E+04	4.35E+02	
10	30.19	7.81E+02	371.43			7.81E+02	3.71E+02	
11	32.15	2.81E+03	405.36			2.81E+03	4.05E+02	
12	36.76	4.10E+03	300.57			4.10E+03	3.01E+02	
13	46.67	2.28E+05	642.90	1.16E+01	3.50E+01	2.28E+05	6.44E+02	
14	50.13	2.42E+04	449.36	-1.20E+01	1.73E+01	2.42E+04	4.50E+02	
15	53.36	5.80E+04	512.98			5.80E+04	5.13E+02	
16	63.43	2.24E+05	684.91	7.25E+01	2.49E+01	2.24E+05	6.85E+02	
17	67.80	2.54E+04	555.43			2.54E+04	5.55E+02	2.51E+04 ± 1.21%
18	70.81	1.83E+03	539.34			1.83E+03	5.39E+02	
19	74.97	3.17E+05	783.33	4.70E+01	1.89E+01	3.17E+05	7.84E+02	
20	77.26	5.70E+05	922.14	6.88E+01	2.55E+01	5.70E+05	9.22E+02	
21	79.52	2.49E+04	632.65			2.49E+04	6.33E+02	
22	81.27	3.92E+04	539.14			3.92E+04	5.39E+02	
23	84.02	9.98E+04	587.11	-3.10E+01	1.96E+01	9.98E+04	5.87E+02	
24	87.38	1.75E+05	646.60			1.75E+05	6.47E+02	
25	90.10	7.00E+04	594.46			7.00E+04	5.94E+02	
26	92.76	2.74E+05	760.17	2.61E+02	4.01E+01	2.74E+05	7.61E+02	
27	94.94	2.75E+04	498.99	2.42E+01	1.36E+01	2.75E+04	4.99E+02	
28	98.38	2.51E+04	567.76			2.51E+04	5.68E+02	
29	100.43	1.03E+03	364.94			1.03E+03	3.65E+02	
30	102.99	1.65E+03	524.51			1.65E+03	5.25E+02	
31	105.74	3.58E+03	441.22			3.58E+03	4.41E+02	
32	109.31	1.25E+03	464.43	9.22E+01	2.46E+01	1.16E+03	4.65E+02	
33	111.18	3.29E+03	378.39			3.29E+03	3.78E+02	
34	113.03	1.02E+04	448.15			1.02E+04	4.48E+02	
35	115.13	2.35E+03	436.53			2.35E+03	4.37E+02	
36	121.08	7.42E+02	322.26	6.68E+00	2.29E+01	7.36E+02	3.23E+02	
37	122.62	1.83E+03	405.03			1.83E+03	4.05E+02	
38	128.27	1.33E+03	345.90			1.33E+03	3.46E+02	
39	130.86	3.72E+03	642.72			3.72E+03	6.43E+02	
40	140.80	1.72E+03	487.62			1.72E+03	4.88E+02	
41	144.13	3.08E+04	519.23	4.83E+01	2.07E+01	3.08E+04	5.20E+02	
42	149.29	5.22E+02	413.38			5.22E+02	4.13E+02	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	154.50	1.27E+04	533.98			1.27E+04	5.34E+02
44	157.05	8.70E+02	351.90			8.70E+02	3.52E+02
45	159.06	1.51E+03	401.24			1.51E+03	4.01E+02
46	163.64	8.38E+03	477.85			8.38E+03	4.78E+02
47	179.65	4.88E+02	379.89			4.88E+02	3.80E+02
48	186.32	1.99E+05	674.75	1.65E+02	2.92E+01	1.99E+05	6.75E+02
M 49	195.44	8.19E+02	177.11			8.19E+02	1.77E+02
m 50	196.60	1.42E+03	226.99	5.02E+01	2.63E+01	1.37E+03	2.29E+02
51	202.29	2.24E+03	479.01			2.24E+03	4.79E+02
52	205.68	7.92E+03	482.69	-8.75E+00	2.28E+01	7.93E+03	4.83E+02
53	210.72	1.55E+03	366.70	-2.56E+01	2.49E+01	1.58E+03	3.68E+02
54	236.38	1.08E+04	440.16			1.08E+04	4.40E+02
55	238.97	1.77E+03	320.52	7.88E+01	2.53E+01	1.70E+03	3.22E+02
56	242.41	1.46E+05	559.32			1.46E+05	5.59E+02
57	256.83	2.31E+03	188.14			2.31E+03	1.88E+02
58	259.31	7.64E+03	425.77	1.45E+01	2.66E+01	7.63E+03	4.27E+02
59	269.85	9.13E+03	354.99			9.13E+03	3.55E+02
60	271.74	4.64E+03	346.64			4.64E+03	3.47E+02
61	275.13	5.37E+03	405.94			5.37E+03	4.06E+02
62	281.73	6.16E+02	312.31			6.16E+02	3.12E+02
63	284.11	7.74E+02	241.31			7.74E+02	2.41E+02
64	286.52	3.42E+03	318.73			3.42E+03	3.19E+02
65	295.74	2.89E+05	681.55	1.05E+01	4.02E+01	2.89E+05	6.83E+02
66	300.55	2.95E+03	332.62			2.95E+03	3.33E+02
67	303.19	1.68E+03	257.57			1.68E+03	2.58E+02
68	305.24	6.80E+02	311.10			6.80E+02	3.11E+02
69	315.34	1.51E+03	320.85			1.51E+03	3.21E+02
70	324.39	2.86E+03	357.47	-2.18E+01	1.99E+01	2.88E+03	3.58E+02
71	330.57	2.11E+03	313.92	-2.16E+01	3.90E+01	2.13E+03	3.16E+02
72	334.56	6.73E+02	355.48			6.73E+02	3.55E+02
73	338.70	1.87E+03	394.29			1.87E+03	3.94E+02
74	349.52	5.94E+02	226.79			5.94E+02	2.27E+02
75	352.55	4.33E+05	797.48	8.80E+01	2.36E+01	4.33E+05	7.98E+02
76	387.55	1.36E+03	342.87			1.36E+03	3.43E+02
77	389.78	2.04E+03	363.06			2.04E+03	3.63E+02
78	402.57	3.00E+03	327.00			3.00E+03	3.27E+02
79	405.94	2.99E+03	412.93			2.99E+03	4.13E+02
80	427.89	1.41E+03	370.89			1.41E+03	3.71E+02
81	445.78	3.00E+02	284.23			3.00E+02	2.84E+02
82	455.60	2.13E+03	395.24			2.13E+03	3.95E+02
83	462.82	9.67E+02	305.03			9.67E+02	3.05E+02
84	470.74	1.08E+03	355.70			1.08E+03	3.56E+02
85	475.64	5.17E+02	296.40			5.17E+02	2.96E+02
86	481.39	3.31E+03	386.27			3.31E+03	3.86E+02
87	487.99	2.85E+03	382.66			2.85E+03	3.83E+02
88	534.64	1.20E+03	271.78			1.20E+03	2.72E+02
89	544.90	6.99E+02	294.98			6.99E+02	2.95E+02
90	574.14	3.97E+02	291.36			3.97E+02	2.91E+02
91	581.05	1.99E+03	329.72			1.99E+03	3.30E+02
92	610.45	2.15E+05	610.83	4.28E+01	1.95E+01	2.15E+05	6.11E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	666.69	5.79E+03	363.20			5.79E+03	3.63E+02
94	684.44	7.88E+02	257.88			7.88E+02	2.58E+02
95	698.38	4.11E+03	158.58	4.50E+01	1.05E+01	4.07E+03	1.59E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:34:45 PM

Sample Title                     : NOPI-472-GAM1
Spectrum Description             : NOPI-472-GAM1
Sample Identification            : NP472_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-10-96 11:42:32 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80018.8 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Locate Performed on: 4-11-96 1:34:04 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.11	0.4052	6.36	5.39
2	53.17	0.4958	9.09	3.36
3	63.42	0.2427	10.88	9.77
4	76.12	0.2287	13.07	10.60
5	94.42	0.2091	16.33	13.34
6	114.14	0.4592	19.32	4.10
7	148.79	0.2375	25.70	9.53
8	158.95	0.2690	27.48	8.70
9	212.53	0.4251	36.83	2.94
10	231.30	0.5554	39.66	2.27
11	269.54	0.0973	46.65	52.13
12	290.13	0.2290	50.11	9.81
13	308.05	0.1269	53.34	29.18
14	366.14	0.0923	63.42	54.05
15	391.46	0.1668	67.77	14.94
16	420.54	0.4021	72.81	2.15
17	432.75	0.0773	74.95	68.67
18	445.96	0.0677	77.24	93.06
19	458.66	0.1418	79.50	18.56
20	468.97	0.1413	81.25	21.69
21	484.62	0.1261	83.99	22.68
22	504.39	0.1046	87.34	28.32
23	519.39	0.1225	90.09	23.94
24	535.19	0.0914	92.75	35.42
25	547.72	0.1995	94.92	8.85
26	568.61	0.2244	98.35	7.23
27	593.99	0.4289	102.69	3.40
28	610.82	0.4460	105.69	2.29
29	651.99	0.2026	113.15	10.44
30	745.89	0.3813	128.98	2.41
31	831.10	0.1449	144.11	16.54
32	890.83	0.2038	154.39	7.29
33	944.20	0.2147	163.78	6.44
34	1075.08	0.0808	186.31	41.88
35	1186.14	0.2393	205.74	6.69
36	1226.29	0.4178	212.71	2.03
37	1363.46	0.1842	236.33	7.51
38	1378.92	0.1256	239.02	18.49
39	1398.14	0.0742	242.37	50.58
40	1466.32	0.3581	253.71	3.03
41	1480.39	0.2105	256.58	7.41

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1495.42	0.1776	259.31	8.48
43	1557.05	0.1851	269.84	8.06
44	1566.92	0.1975	271.68	7.72
45	1588.02	0.2287	275.14	5.22
46	1652.91	0.3015	286.53	3.35
47	1705.63	0.0579	295.72	73.91
48	1733.05	0.2447	300.19	4.08
49	1760.20	0.3805	305.29	2.20
50	1870.97	0.2471	324.47	4.35
51	1906.12	0.2503	330.03	4.78
52	1954.59	0.2197	338.79	5.14
53	2033.22	0.0516	352.51	87.29
54	2235.23	0.2550	387.57	4.27
55	2246.58	0.2782	390.03	3.43
56	2322.06	0.2765	402.61	2.92
57	2626.75	0.2858	454.95	3.33
58	2775.73	0.2666	480.95	3.53
59	2815.00	0.2349	488.08	3.51
60	2956.89	0.3022	512.88	2.76
61	3083.61	0.2318	534.60	3.01
62	3368.80	0.2106	584.52	4.56
63	3520.10	0.0563	610.38	55.45
64	3844.17	0.1660	666.63	5.51
65	4029.05	0.1776	698.84	6.43

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Analysis Performed on: 4-11-96 1:34:22 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	34-	39	37.16	6.36	4.28E+02	93.47	3.29E+03
2	50-	56	52.90	9.09	1.57E+02	91.27	2.92E+03
3	60-	66	63.23	10.88	2.80E+03	108.23	3.20E+03
4	72-	79	75.83	13.07	8.59E+03	149.57	4.59E+03
5	92-	97	94.63	16.33	5.13E+03	153.06	7.15E+03
6	107-	117	111.90	19.32	2.72E+03	154.85	5.65E+03
7	144-	152	148.71	25.70	1.21E+03	104.03	2.95E+03
8	154-	163	158.94	27.48	8.32E+02	111.13	3.27E+03
9	207-	217	212.86	36.83	1.37E+02	113.19	3.37E+03
10	222-	236	229.20	39.66	3.19E+02	146.17	4.41E+03
11	264-	274	269.50	46.65	1.59E+04	167.59	3.26E+03
12	285-	295	289.40	50.11	1.17E+03	114.15	3.12E+03
13	302-	313	308.05	53.34	3.73E+03	133.30	3.51E+03
14	360-	371	366.17	63.42	1.20E+04	167.77	4.05E+03
15	385-	397	391.26	67.77	1.75E+03	145.65	4.56E+03
16	416-	424	420.34	72.81	1.76E+02	104.90	3.30E+03
17	426-	438	432.63	74.95	2.16E+04	210.00	5.30E+03
18	440-	451	445.89	77.24	3.89E+04	238.24	4.46E+03
19	452-	464	458.87	79.50	1.58E+03	159.95	5.64E+03
20	464-	474	469.01	81.25	2.33E+03	127.06	3.67E+03
21	478-	490	484.77	83.99	5.76E+03	147.91	3.79E+03
22	499-	510	504.09	87.34	1.18E+04	172.32	4.37E+03
23	513-	525	519.94	90.09	4.92E+03	150.85	4.19E+03
24	528-	541	535.27	92.75	1.47E+04	185.41	4.39E+03
25	544-	554	547.80	94.92	1.26E+03	117.73	3.32E+03
26	562-	575	567.57	98.35	1.03E+03	126.29	3.28E+03
27	590-	596	592.64	102.69	1.43E+02	63.54	1.39E+03
28	604-	617	609.88	105.69	1.35E+02	119.37	3.12E+03
29	647-	658	652.92	113.15	9.11E+02	104.66	2.51E+03
30	738-	749	744.19	128.98	1.37E+02	100.96	2.50E+03
31	823-	838	831.46	144.11	1.85E+03	133.07	3.17E+03
32	883-	898	890.72	154.39	7.61E+02	134.24	3.44E+03
33	939-	952	944.83	163.78	6.26E+02	110.72	2.57E+03
34	1066-	1083	1074.77	186.31	1.27E+04	172.59	3.10E+03
35	1183-	1194	1186.81	205.74	2.88E+02	85.66	1.74E+03
36	1222-	1232	1226.96	212.71	1.19E+02	71.45	1.32E+03
37	1354-	1369	1363.21	236.33	5.65E+02	99.31	1.86E+03
38	1369-	1388	1378.71	239.02	1.27E+03	130.14	2.61E+03
39	1388-	1407	1398.01	242.37	9.96E+03	147.99	1.99E+03
40	1454-	1470	1463.42	253.71	9.86E+01	93.23	1.64E+03
41	1470-	1485	1479.96	256.58	1.93E+02	91.89	1.65E+03
42	1490-	1504	1495.70	259.31	5.01E+02	87.27	1.49E+03

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	1547-	1562	1556.41	269.84	4.65E+02	92.45	1.62E+03
44	1562-	1572	1566.99	271.68	2.65E+02	69.34	1.21E+03
45	1578-	1594	1586.99	275.14	3.36E+02	92.96	1.58E+03
46	1644-	1660	1652.62	286.53	2.48E+02	93.30	1.61E+03
47	1695-	1715	1705.63	295.72	1.88E+04	177.08	2.01E+03
48	1724-	1740	1731.38	300.19	2.28E+02	87.82	1.41E+03
49	1756-	1766	1760.82	305.29	1.39E+02	56.84	8.20E+02
50	1866-	1877	1871.42	324.47	1.98E+02	62.73	9.30E+02
51	1892-	1911	1903.46	330.03	1.81E+02	99.80	1.63E+03
52	1943-	1960	1953.96	338.79	1.41E+02	97.60	1.71E+03
53	2022-	2044	2033.08	352.51	2.79E+04	205.12	2.09E+03
54	2229-	2242	2235.22	387.57	1.20E+02	71.69	1.11E+03
55	2242-	2262	2249.42	390.03	1.09E+02	102.56	1.66E+03
56	2315-	2329	2321.97	402.61	1.53E+02	75.59	1.17E+03
57	2610-	2633	2623.75	454.95	9.78E+01	99.65	1.40E+03
58	2765-	2783	2773.69	480.95	1.58E+02	75.67	9.65E+02
59	2806-	2822	2814.78	488.08	9.89E+01	68.56	8.75E+02
60	2951-	2962	2957.81	512.88	1.22E+02	54.10	6.98E+02
61	3073-	3094	3083.03	534.60	9.59E+01	79.86	9.62E+02
62	3362-	3382	3370.89	584.52	2.63E+02	77.93	9.29E+02
63	3506-	3533	3520.01	610.38	1.38E+04	155.01	1.27E+03
64	3834-	3855	3844.35	666.63	2.47E+02	76.07	8.49E+02
65	4024-	4035	4030.04	698.84	1.55E+02	31.03	1.65E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-472-GAM1
Peak Analysis Performed on: 4-11-96 1:34:04 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	6.36	4.28E+02	93.47	4.00E+01	3.04E+01	3.88E+02	9.83E+01
2	9.09	1.57E+02	91.27			1.57E+02	9.13E+01
3	10.88	2.80E+03	108.23	1.57E+02	3.08E+01	2.64E+03	1.13E+02
4	13.07	8.59E+03	149.57			8.59E+03	1.50E+02
5	16.33	5.13E+03	153.06			5.13E+03	1.53E+02
6	19.32	2.72E+03	154.85	-1.92E-01	1.63E+01	2.72E+03	1.56E+02
7	25.70	1.21E+03	104.03			1.21E+03	1.04E+02
8	27.48	8.32E+02	111.13	-1.27E+01	1.34E+01	8.45E+02	1.12E+02
9	36.83	1.37E+02	113.19			1.37E+02	1.13E+02
10	39.66	3.19E+02	146.17			3.19E+02	1.46E+02
11	46.65	1.59E+04	167.59	1.16E+01	3.50E+01	1.59E+04	1.71E+02
12	50.11	1.17E+03	114.15	-1.20E+01	1.73E+01	1.18E+03	1.15E+02
13	53.34	3.73E+03	133.30			3.73E+03	1.33E+02
14	63.42	1.20E+04	167.77	7.25E+01	2.49E+01	1.19E+04	1.70E+02
15	67.77	1.75E+03	145.65			1.75E+03	1.46E+02
16	72.81	1.76E+02	104.90			1.76E+02	1.05E+02
17	74.95	2.16E+04	210.00	4.70E+01	1.89E+01	2.15E+04	2.11E+02
18	77.24	3.89E+04	238.24	6.88E+01	2.55E+01	3.89E+04	2.40E+02
19	79.50	1.58E+03	159.95			1.58E+03	1.60E+02
20	81.25	2.33E+03	127.06			2.33E+03	1.27E+02
21	83.99	5.76E+03	147.91	-3.10E+01	1.96E+01	5.79E+03	1.49E+02
22	87.34	1.18E+04	172.32			1.18E+04	1.72E+02
23	90.09	4.92E+03	150.85			4.92E+03	1.51E+02
24	92.75	1.47E+04	185.41	2.61E+02	4.01E+01	1.44E+04	1.90E+02
25	94.92	1.26E+03	117.73	2.42E+01	1.36E+01	1.23E+03	1.19E+02
26	98.35	1.03E+03	126.29			1.03E+03	1.26E+02
27	102.69	1.43E+02	63.54			1.43E+02	6.35E+01
28	105.69	1.35E+02	119.37			1.35E+02	1.19E+02
29	113.15	9.11E+02	104.66			9.11E+02	1.05E+02
30	128.98	1.37E+02	100.96			1.37E+02	1.01E+02
31	144.11	1.85E+03	133.07	4.83E+01	2.07E+01	1.80E+03	1.35E+02
32	154.39	7.61E+02	134.24			7.61E+02	1.34E+02
33	163.78	6.26E+02	110.72			6.26E+02	1.11E+02
34	186.31	1.27E+04	172.59	1.65E+02	2.92E+01	1.25E+04	1.75E+02
35	205.74	2.88E+02	85.66	-8.75E+00	2.28E+01	2.96E+02	8.86E+01
36	212.71	1.19E+02	71.45			1.19E+02	7.14E+01
37	236.33	5.65E+02	99.31			5.65E+02	9.93E+01
38	239.02	1.27E+03	130.14	7.88E+01	2.53E+01	1.19E+03	1.33E+02
39	242.37	9.96E+03	147.99			9.96E+03	1.48E+02
40	253.71	9.86E+01	93.23			9.86E+01	9.32E+01
41	256.58	1.93E+02	91.89			1.93E+02	9.19E+01
42	259.31	5.01E+02	87.27	1.45E+01	2.66E+01	4.87E+02	9.12E+01

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	269.84	4.65E+02	92.45			4.65E+02	9.25E+01
44	271.68	2.65E+02	69.34			2.65E+02	6.93E+01
45	275.14	3.36E+02	92.96			3.36E+02	9.30E+01
46	286.53	2.48E+02	93.30			2.48E+02	9.33E+01
47	295.72	1.88E+04	177.08	1.05E+01	4.02E+01	1.88E+04	1.82E+02
48	300.19	2.28E+02	87.82			2.28E+02	8.78E+01
49	305.29	1.39E+02	56.84			1.39E+02	5.68E+01
50	324.47	1.98E+02	62.73	-2.18E+01	1.99E+01	2.20E+02	6.58E+01
51	330.03	1.81E+02	99.80	-2.16E+01	3.90E+01	2.03E+02	1.07E+02
52	338.79	1.41E+02	97.60			1.41E+02	9.76E+01
53	352.51	2.79E+04	205.12	8.80E+01	2.36E+01	2.79E+04	2.06E+02
54	387.57	1.20E+02	71.69			1.20E+02	7.17E+01
55	390.03	1.09E+02	102.56			1.09E+02	1.03E+02
56	402.61	1.53E+02	75.59			1.53E+02	7.56E+01
57	454.95	9.78E+01	99.65			9.78E+01	9.96E+01
58	480.95	1.58E+02	75.67			1.58E+02	7.57E+01
59	488.08	9.89E+01	68.56			9.89E+01	6.86E+01
60	512.88	1.22E+02	54.10			1.22E+02	5.41E+01
61	534.60	9.59E+01	79.86			9.59E+01	7.99E+01
62	584.52	2.63E+02	77.93	2.12E+01	1.69E+01	2.42E+02	7.97E+01
63	610.38	1.38E+04	155.01	4.28E+01	1.95E+01	1.38E+04	1.56E+02
64	666.63	2.47E+02	76.07			2.47E+02	7.61E+01
65	698.84	1.55E+02	31.03	4.50E+01	1.05E+01	1.10E+02	3.28E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:36:34 PM

Sample Title                     : NOPI-473-GAM1
Spectrum Description             : NOPI-473-GAM1
Sample Identification            : NP473_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-09-96  8:40:57 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80151.3 seconds


            Energy Calibration Used Done On       :  1-16-96
            Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Locate Performed on: 4-11-96 1:35:48 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	31.61	0.2450	5.37	10.24
2	37.35	0.2111	6.44	14.67
3	53.42	0.4295	9.25	3.12
4	63.43	0.1335	10.90	32.04
5	76.08	0.1296	13.19	35.24
6	94.38	0.1144	16.33	47.05
7	110.42	0.1198	19.17	40.67
8	117.61	0.4438	19.94	3.08
9	121.84	0.4491	21.10	4.15
10	148.96	0.1239	25.74	38.32
11	158.88	0.1238	27.47	37.26
12	212.41	0.2346	36.75	8.84
13	232.59	0.5153	40.16	2.23
14	269.51	0.0581	46.65	145.91
15	290.11	0.1082	50.13	42.31
16	308.08	0.0733	53.35	86.37
17	339.18	0.3528	58.67	3.59
18	366.12	0.0502	63.41	181.05
19	375.84	0.4032	65.12	2.39
20	391.47	0.0938	67.78	48.02
21	409.56	0.2930	70.91	4.92
22	432.75	0.0452	74.95	199.86
23	445.95	0.0397	77.24	271.38
24	458.69	0.0812	79.50	58.82
25	468.91	0.0742	81.24	77.83
26	484.62	0.0647	83.98	89.38
27	504.52	0.0611	87.36	88.61
28	519.40	0.0721	90.08	70.26
29	535.10	0.0491	92.73	119.63
30	547.86	0.0991	95.03	39.59
31	569.02	0.1148	98.33	32.90
32	579.28	0.3249	100.35	3.63
33	593.48	0.3124	102.94	2.29
34	610.28	0.2450	105.66	7.02
35	630.98	0.2217	109.19	8.25
36	643.30	0.2179	111.21	8.59
37	652.11	0.1093	113.04	33.68
38	698.60	0.2704	121.01	5.28
39	706.94	0.1702	122.59	14.01
40	759.70	0.4194	130.84	2.02
41	811.90	0.3556	140.76	3.34

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	831.25	0.0810	144.11	47.80
43	891.01	0.0978	154.43	36.39
44	916.74	0.2412	159.05	4.63
45	943.85	0.1181	163.58	23.85
46	1074.72	0.0457	186.28	122.02
47	1133.87	0.3103	196.19	4.20
48	1159.23	0.4510	201.14	2.06
49	1167.65	0.2697	202.44	3.94
50	1186.17	0.1235	205.61	20.38
51	1216.76	0.2239	210.98	6.28
52	1363.38	0.0891	236.33	35.39
53	1378.47	0.1890	239.08	7.83
54	1398.04	0.0426	242.36	153.58
55	1445.48	0.3529	250.78	2.73
56	1459.12	0.2790	252.99	3.84
57	1470.75	0.3337	254.90	3.80
58	1480.55	0.1076	256.70	23.58
59	1495.43	0.1095	259.19	20.99
60	1556.57	0.0863	269.83	37.20
61	1567.05	0.0948	271.74	32.63
62	1587.51	0.1431	275.08	13.19
63	1638.80	0.2091	284.02	6.31
64	1652.88	0.1407	286.57	13.50
65	1664.35	0.3383	288.61	3.01
66	1705.49	0.0336	295.69	214.87
67	1733.01	0.1307	300.52	15.60
68	1748.36	0.1793	303.13	8.96
69	1758.99	0.2227	305.15	5.97
70	1806.19	0.3342	313.25	2.73
71	1815.59	0.3142	314.79	3.22
72	1870.76	0.1376	324.48	13.79
73	1905.90	0.1391	330.29	13.31
74	1929.01	0.2208	334.47	2.99
75	1954.16	0.1639	338.72	9.26
76	2015.17	0.2733	349.56	3.62
77	2033.05	0.0299	352.48	258.69
78	2234.75	0.1723	387.36	8.94
79	2246.86	0.1405	389.61	11.89
80	2321.27	0.1375	402.35	11.58
81	2339.38	0.1730	405.88	6.34
82	2467.55	0.2349	428.05	2.66
83	2570.52	0.2619	445.54	3.55
84	2627.66	0.1779	455.67	6.60
85	2668.60	0.2112	462.47	5.54
86	2775.73	0.1537	481.29	9.22
87	2813.37	0.1477	487.83	9.10
88	2850.52	0.2951	494.83	2.78
89	3082.65	0.1605	534.64	8.36
90	3141.26	0.2546	544.53	2.81
91	3163.11	0.2849	548.43	2.13

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
92	3305.15	0.3180	573.73	2.46
93	3351.35	0.1721	581.11	6.50
94	3519.79	0.0324	610.33	169.43
95	3844.01	0.0970	666.63	17.46
96	3976.26	0.2781	689.64	2.81
97	4028.84	0.1059	698.52	17.37

Errors quoted at 1.000 sigma

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Analysis Performed on: 4-11-96 1:36:07 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	28-	34	31.47	5.37	3.12E+03	290.74	2.90E+04
2	34-	40	37.62	6.44	5.10E+03	300.64	3.06E+04
3	50-	56	53.84	9.25	8.80E+02	260.31	2.40E+04
4	60-	66	63.33	10.90	2.75E+04	322.45	2.75E+04
5	75-	79	76.56	13.19	6.24E+04	393.66	3.85E+04
6	92-	97	94.64	16.33	5.20E+04	512.29	8.24E+04
7	107-	114	111.03	19.17	1.58E+04	404.91	4.91E+04
8	114-	121	115.49	19.94	3.85E+03	355.82	3.84E+04
9	121-	125	122.14	21.10	5.25E+02	194.54	1.62E+04
10	144-	153	148.93	25.74	1.27E+04	343.78	3.00E+04
11	154-	163	158.89	27.47	1.29E+04	338.84	2.90E+04
12	210-	216	212.41	36.75	2.19E+03	230.49	1.82E+04
13	227-	237	232.04	40.16	8.85E+02	337.54	3.00E+04
14	264-	274	269.50	46.65	1.26E+05	486.60	2.95E+04
15	285-	295	289.53	50.13	1.76E+04	351.86	2.80E+04
16	302-	313	308.08	53.35	3.32E+04	396.97	3.11E+04
17	333-	344	338.78	58.67	1.07E+03	366.13	3.30E+04
18	360-	371	366.13	63.41	1.35E+05	528.01	3.60E+04
19	373-	381	375.96	65.12	5.49E+02	296.83	2.67E+04
20	385-	397	391.31	67.78	2.10E+04	431.95	3.88E+04
21	403-	415	409.35	70.91	1.34E+03	418.63	4.07E+04
22	426-	438	432.65	74.95	1.84E+05	621.78	4.76E+04
23	440-	451	445.86	77.24	3.32E+05	707.03	4.19E+04
24	452-	464	458.90	79.50	1.58E+04	489.72	5.27E+04
25	464-	474	468.92	81.24	2.99E+04	401.77	3.50E+04
26	478-	490	484.73	83.98	6.96E+04	469.56	3.55E+04
27	500-	510	504.19	87.36	9.86E+04	502.80	3.97E+04
28	513-	525	519.88	90.08	3.85E+04	463.51	4.15E+04
29	528-	541	535.19	92.73	1.62E+05	594.68	4.26E+04
30	541-	554	548.41	95.03	5.42E+03	506.73	5.44E+04
31	559-	575	567.45	98.33	1.49E+04	444.65	3.48E+04
32	575-	585	579.10	100.35	1.24E+03	280.96	2.06E+04
33	586-	600	594.05	102.94	2.10E+03	359.04	2.66E+04
34	603-	616	609.74	105.66	2.10E+03	340.01	2.51E+04
35	624-	637	630.08	109.19	1.85E+03	355.94	2.76E+04
36	637-	647	641.75	111.21	1.58E+03	293.54	2.24E+04
37	647-	658	652.27	113.04	7.67E+03	320.14	2.36E+04
38	691-	702	698.21	121.01	7.43E+02	290.20	2.08E+04
39	702-	713	707.35	122.59	2.01E+03	292.88	2.09E+04
40	746-	766	754.95	130.84	2.30E+03	475.99	3.58E+04
41	804-	819	812.14	140.76	1.09E+03	377.35	2.82E+04
42	823-	838	831.45	144.11	2.05E+04	402.79	2.83E+04

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	883-	898	890.96	154.43	9.09E+03	392.56	2.90E+04
	44	910-	924	917.59	159.05	1.31E+03	351.96	2.57E+04
	45	937-	951	943.71	163.58	5.67E+03	345.65	2.39E+04
	46	1066-	1083	1074.60	186.28	1.22E+05	525.43	2.81E+04
	47	1121-	1142	1131.75	196.19	1.25E+03	458.89	3.22E+04
M	48	1155-	1176	1160.30	201.14	5.12E+02	161.89	1.90E+04
m	49	1155-	1176	1167.77	202.44	1.31E+03	231.36	2.52E+04
	50	1177-	1194	1186.03	205.61	3.71E+03	359.54	2.28E+04
	51	1208-	1225	1217.00	210.98	1.47E+03	326.96	1.91E+04
	52	1354-	1372	1363.21	236.33	8.70E+03	339.56	1.85E+04
	53	1372-	1385	1379.04	239.08	1.33E+03	246.35	1.32E+04
	54	1388-	1407	1397.93	242.36	8.59E+04	439.85	1.79E+04
	55	1442-	1454	1446.48	250.78	2.71E+02	215.52	1.08E+04
	56	1454-	1465	1459.27	252.99	3.48E+02	201.16	9.96E+03
	57	1465-	1474	1470.24	254.90	2.43E+02	175.64	8.69E+03
	58	1474-	1486	1480.65	256.70	4.06E+03	228.36	1.13E+04
	59	1488-	1504	1494.98	259.19	5.29E+03	279.07	1.37E+04
	60	1546-	1561	1556.36	269.83	7.04E+03	280.20	1.43E+04
	61	1561-	1574	1567.36	271.74	2.26E+03	270.52	1.57E+04
	62	1577-	1597	1586.60	275.08	3.47E+03	326.69	1.65E+04
	63	1632-	1644	1638.15	284.02	7.84E+02	213.27	1.05E+04
	64	1644-	1660	1652.86	286.57	1.72E+03	276.37	1.42E+04
	65	1660-	1668	1664.65	288.61	3.25E+02	155.72	7.31E+03
	66	1695-	1715	1705.44	295.69	1.68E+05	515.30	1.57E+04
	67	1730-	1743	1733.29	300.52	1.84E+03	221.16	1.03E+04
	68	1743-	1753	1748.36	303.13	7.61E+02	174.50	7.87E+03
	69	1753-	1769	1760.03	305.15	4.40E+02	254.62	1.22E+04
M	70	1804-	1825	1806.70	313.25	2.97E+02	100.40	6.81E+03
m	71	1804-	1825	1815.60	314.79	4.59E+02	130.10	1.02E+04
	72	1865-	1881	1871.48	324.48	2.25E+03	248.00	1.12E+04
	73	1895-	1912	1904.94	330.29	2.18E+03	262.10	1.21E+04
	74	1921-	1939	1929.08	334.47	7.24E+02	285.40	1.40E+04
	75	1943-	1960	1953.56	338.72	1.58E+03	277.88	1.37E+04
	76	2010-	2020	2016.08	349.56	6.80E+02	186.55	9.06E+03
	77	2022-	2043	2032.90	352.48	2.53E+05	601.56	1.67E+04
	78	2225-	2240	2234.04	387.36	8.53E+02	236.78	1.10E+04
	79	2240-	2255	2247.04	389.61	1.83E+03	237.14	1.09E+04
	80	2309-	2332	2320.45	402.35	2.35E+03	340.96	1.62E+04
	81	2332-	2350	2340.85	405.88	2.25E+03	274.04	1.26E+04
	82	2461-	2479	2468.65	428.05	1.07E+03	271.36	1.26E+04
	83	2562-	2580	2569.52	445.54	6.15E+02	238.65	9.76E+03
	84	2620-	2639	2627.94	455.67	9.39E+02	247.58	1.00E+04
	85	2656-	2680	2667.11	462.47	1.39E+03	294.74	1.18E+04
	86	2763-	2788	2775.62	481.29	1.70E+03	301.47	1.19E+04
	87	2800-	2825	2813.36	487.83	1.86E+03	293.53	1.12E+04
	88	2842-	2863	2853.72	494.83	3.95E+02	245.22	9.18E+03
	89	3072-	3095	3083.26	534.64	8.12E+02	255.04	9.17E+03
	90	3130-	3150	3140.29	544.53	9.21E+02	219.91	7.58E+03
	91	3150-	3172	3162.76	548.43	5.08E+02	237.99	8.31E+03
	92	3298-	3318	3308.64	573.73	3.00E+02	222.66	7.87E+03

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	3337-	3360	3351.19	581.11	6.91E+02	257.88	9.40E+03
94	3506-	3533	3519.73	610.33	1.26E+05	458.59	1.06E+04
95	3829-	3858	3844.35	666.63	3.34E+03	284.98	9.16E+03
96	3970-	3982	3976.99	689.64	2.02E+02	132.50	4.07E+03
97	4021-	4035	4028.19	698.52	2.05E+03	101.65	1.63E+03

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-473-GAM1
Peak Analysis Performed on: 4-11-96 1:35:48 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	5.37	3.12E+03	290.74	4.00E+01	3.04E+01	3.08E+03	2.92E+02	
2	6.44	5.10E+03	300.64	4.00E+01	3.04E+01	5.06E+03	3.02E+02	
3	9.25	8.80E+02	260.31			8.80E+02	2.60E+02	
4	10.90	2.75E+04	322.45	1.57E+02	3.08E+01	2.73E+04	3.24E+02	
5	13.19	6.24E+04	393.66			6.24E+04	3.94E+02	
6	16.33	5.20E+04	512.29			5.20E+04	5.12E+02	
7	19.17	1.58E+04	404.91	-1.92E-01	1.63E+01	1.58E+04	4.05E+02	
8	19.94	3.85E+03	355.82	-1.92E-01	1.63E+01	3.85E+03	3.56E+02	
9	21.10	5.25E+02	194.54			5.25E+02	1.95E+02	
10	25.74	1.27E+04	343.78			1.27E+04	3.44E+02	
11	27.47	1.29E+04	338.84	-1.27E+01	1.34E+01	1.29E+04	3.39E+02	
12	36.75	2.19E+03	230.49			2.19E+03	2.30E+02	
13	40.16	8.85E+02	337.54			8.85E+02	3.38E+02	
14	46.65	1.26E+05	486.60	1.16E+01	3.50E+01	1.26E+05	4.88E+02	
15	50.13	1.76E+04	351.86	-1.20E+01	1.73E+01	1.76E+04	3.52E+02	
16	53.35	3.32E+04	396.97			3.32E+04	3.97E+02	
17	58.67	1.07E+03	366.13			1.07E+03	3.66E+02	
18	63.41	1.35E+05	528.01	7.25E+01	2.49E+01	1.35E+05	5.29E+02	
19	65.12	5.49E+02	296.83			5.49E+02	2.97E+02	
20	67.78	2.10E+04	431.95			2.10E+04	4.32E+02	2.07E+04±1.23%
21	70.91	1.34E+03	418.63			1.34E+03	4.19E+02	
22	74.95	1.84E+05	621.78	4.70E+01	1.89E+01	1.84E+05	6.22E+02	
23	77.24	3.32E+05	707.03	6.88E+01	2.55E+01	3.32E+05	7.07E+02	
24	79.50	1.58E+04	489.72			1.58E+04	4.90E+02	
25	81.24	2.99E+04	401.77			2.99E+04	4.02E+02	
26	83.98	6.96E+04	469.56	-3.10E+01	1.96E+01	6.96E+04	4.70E+02	
27	87.36	9.86E+04	502.80			9.86E+04	5.03E+02	
28	90.08	3.85E+04	463.51			3.85E+04	4.64E+02	
29	92.73	1.62E+05	594.68	2.61E+02	4.01E+01	1.62E+05	5.96E+02	
30	95.03	5.42E+03	506.73	2.42E+01	1.36E+01	5.39E+03	5.07E+02	
31	98.33	1.49E+04	444.65			1.49E+04	4.45E+02	
32	100.35	1.24E+03	280.96			1.24E+03	2.81E+02	
33	102.94	2.10E+03	359.04			2.10E+03	3.59E+02	
34	105.66	2.10E+03	340.01			2.10E+03	3.40E+02	
35	109.19	1.85E+03	355.94	9.22E+01	2.46E+01	1.76E+03	3.57E+02	
36	111.21	1.58E+03	293.54			1.58E+03	2.94E+02	
37	113.04	7.67E+03	320.14			7.67E+03	3.20E+02	
38	121.01	7.43E+02	290.20	6.68E+00	2.29E+01	7.36E+02	2.91E+02	
39	122.59	2.01E+03	292.88			2.01E+03	2.93E+02	
40	130.84	2.30E+03	475.99			2.30E+03	4.76E+02	
41	140.76	1.09E+03	377.35			1.09E+03	3.77E+02	
42	144.11	2.05E+04	402.79	4.83E+01	2.07E+01	2.05E+04	4.03E+02	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	154.43	9.09E+03	392.56			9.09E+03	3.93E+02
44	159.05	1.31E+03	351.96			1.31E+03	3.52E+02
45	163.58	5.67E+03	345.65			5.67E+03	3.46E+02
46	186.28	1.22E+05	525.43	1.65E+02	2.92E+01	1.21E+05	5.26E+02
47	196.19	1.25E+03	458.89			1.25E+03	4.59E+02
M 48	201.14	5.12E+02	161.89			5.12E+02	1.62E+02
m 49	202.44	1.31E+03	231.36			1.31E+03	2.31E+02
50	205.61	3.71E+03	359.54	-8.75E+00	2.28E+01	3.72E+03	3.60E+02
51	210.98	1.47E+03	326.96	-2.56E+01	2.49E+01	1.50E+03	3.28E+02
52	236.33	8.70E+03	339.56			8.70E+03	3.40E+02
53	239.08	1.33E+03	246.35	7.88E+01	2.53E+01	1.25E+03	2.48E+02
54	242.36	8.59E+04	439.85			8.59E+04	4.40E+02
55	250.78	2.71E+02	215.52			2.71E+02	2.16E+02
56	252.99	3.48E+02	201.16			3.48E+02	2.01E+02
57	254.90	2.43E+02	175.64			2.43E+02	1.76E+02
58	256.70	4.06E+03	228.36			4.06E+03	2.28E+02
59	259.19	5.29E+03	279.07	1.45E+01	2.66E+01	5.27E+03	2.80E+02
60	269.83	7.04E+03	280.20			7.04E+03	2.80E+02
61	271.74	2.26E+03	270.52			2.26E+03	2.71E+02
62	275.08	3.47E+03	326.69			3.47E+03	3.27E+02
63	284.02	7.84E+02	213.27			7.84E+02	2.13E+02
64	286.57	1.72E+03	276.37			1.72E+03	2.76E+02
65	288.61	3.25E+02	155.72			3.25E+02	1.56E+02
66	295.69	1.68E+05	515.30	1.05E+01	4.02E+01	1.68E+05	5.17E+02
67	300.52	1.84E+03	221.16			1.84E+03	2.21E+02
68	303.13	7.61E+02	174.50			7.61E+02	1.74E+02
69	305.15	4.40E+02	254.62			4.40E+02	2.55E+02
M 70	313.25	2.97E+02	100.40			2.97E+02	1.00E+02
m 71	314.79	4.59E+02	130.10			4.59E+02	1.30E+02
72	324.48	2.25E+03	248.00	-2.18E+01	1.99E+01	2.27E+03	2.49E+02
73	330.29	2.18E+03	262.10	-2.16E+01	3.90E+01	2.20E+03	2.65E+02
74	334.47	7.24E+02	285.40			7.24E+02	2.85E+02
75	338.72	1.58E+03	277.88			1.58E+03	2.78E+02
76	349.56	6.80E+02	186.55			6.80E+02	1.87E+02
77	352.48	2.53E+05	601.56	8.80E+01	2.36E+01	2.53E+05	6.02E+02
78	387.36	8.53E+02	236.78			8.53E+02	2.37E+02
79	389.61	1.83E+03	237.14			1.83E+03	2.37E+02
80	402.35	2.35E+03	340.96			2.35E+03	3.41E+02
81	405.88	2.25E+03	274.04			2.25E+03	2.74E+02
82	428.05	1.07E+03	271.36			1.07E+03	2.71E+02
83	445.54	6.15E+02	238.65			6.15E+02	2.39E+02
84	455.67	9.39E+02	247.58			9.39E+02	2.48E+02
85	462.47	1.39E+03	294.74			1.39E+03	2.95E+02
86	481.29	1.70E+03	301.47			1.70E+03	3.01E+02
87	487.83	1.86E+03	293.53			1.86E+03	2.94E+02
88	494.83	3.95E+02	245.22			3.95E+02	2.45E+02
89	534.64	8.12E+02	255.04			8.12E+02	2.55E+02
90	544.53	9.21E+02	219.91			9.21E+02	2.20E+02
91	548.43	5.08E+02	237.99			5.08E+02	2.38E+02
92	573.73	3.00E+02	222.66			3.00E+02	2.23E+02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
93	581.11	6.91E+02	257.88			6.91E+02	2.58E+02
94	610.33	1.26E+05	458.59	4.28E+01	1.95E+01	1.26E+05	4.59E+02
95	666.63	3.34E+03	284.98			3.34E+03	2.85E+02
96	689.64	2.02E+02	132.50	-5.15E+01	1.92E+01	2.53E+02	1.34E+02
97	698.52	2.05E+03	101.65	4.50E+01	1.05E+01	2.00E+03	1.02E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On                 :  4-11-96  1:38:20 PM

Sample Title                        : NOPI-474-GAM1
Spectrum Description                : NOPI-474-GAM1
Sample Identification               : NP474_2
Sample Type                         :
Sample Geometry                     :

Peak Locate Threshold               :  2.00
Peak Locate Range (in channels)     :     1 -  4096
Peak Area Range (in channels)       :     1 -  4096
Identification Energy Tolerance     :    1.000 keV

Sample Size                         :   0.000E+00 Unit

Sample Taken On                     :
Acquisition Started                 :  2-08-96  9:24:06 AM

Live Time                           :    80000.0 seconds
Real Time                           :    80017.2 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Locate Performed on: 4-11-96 1:37:41 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.34	0.3607	6.44	5.04
2	53.66	0.5040	9.23	2.61
3	63.43	0.2065	10.90	13.28
4	76.17	0.2029	13.08	13.40
5	94.39	0.2075	16.34	14.20
6	110.47	0.2060	19.14	12.57
7	114.25	0.3943	19.97	4.85
8	148.95	0.2339	25.72	10.80
9	159.01	0.2543	27.46	8.81
10	212.11	0.3707	36.75	3.52
11	269.54	0.0935	46.66	57.10
12	290.20	0.2487	50.15	8.77
13	308.07	0.1322	53.34	26.55
14	366.11	0.0952	63.41	50.69
15	391.42	0.1977	67.83	9.74
16	432.79	0.0802	74.96	65.20
17	445.94	0.0710	77.24	84.89
18	458.64	0.1465	79.51	19.40
19	468.91	0.1533	81.27	18.26
20	484.69	0.1306	83.99	22.54
21	504.55	0.1086	87.35	28.63
22	519.43	0.1272	90.07	22.32
23	535.12	0.0934	92.74	32.66
24	548.05	0.2071	94.98	8.92
25	569.06	0.2288	98.37	8.34
26	651.79	0.2136	112.98	8.28
27	706.24	0.3988	122.44	2.27
28	726.98	0.4570	126.16	2.07
29	831.33	0.1648	144.04	11.85
30	890.95	0.2202	154.39	7.22
31	917.65	0.3802	159.32	2.05
32	943.79	0.2305	163.63	6.32
33	961.99	0.4164	166.27	2.44
34	1074.98	0.0856	186.31	36.53
35	1185.72	0.2725	205.61	4.27
36	1313.49	0.3900	227.73	2.38
37	1363.65	0.1888	236.19	8.30
38	1378.63	0.1464	238.97	12.65
39	1398.08	0.0776	242.36	46.35
40	1495.13	0.2011	259.20	6.99
41	1556.36	0.2016	269.77	6.65

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1567.13	0.2368	271.65	4.76
43	1587.04	0.2389	275.26	5.31
44	1705.49	0.0600	295.69	67.73
45	1733.84	0.2721	300.42	3.03
46	1833.49	0.3645	317.81	2.49
47	1953.94	0.2390	338.77	4.15
48	2033.06	0.0538	352.51	80.08
49	2156.41	0.3881	374.08	2.18
50	2233.80	0.2630	387.04	3.94
51	2321.89	0.2736	402.69	3.07
52	2774.90	0.2139	481.14	5.20
53	2812.90	0.2121	487.83	5.07
54	3033.19	0.3317	525.83	2.32
55	3331.49	0.3328	577.75	2.06
56	3349.61	0.2734	580.75	2.68
57	3369.98	0.2360	584.48	3.70
58	3519.59	0.0585	610.30	52.03
59	3674.02	0.3549	636.62	2.23
60	3707.28	0.2943	643.21	2.46
61	3844.98	0.1691	666.43	6.71
62	4029.14	0.1719	698.64	6.88

Errors quoted at 1.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T                *****
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Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Analysis Performed on: 4-11-96 1:37:59 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	34-	40	37.62	6.44	6.51E+02	105.31	3.74E+03
2	50-	56	53.70	9.23	2.11E+02	89.86	2.83E+03
3	60-	66	63.34	10.90	4.58E+03	115.34	3.15E+03
4	72-	79	75.89	13.08	1.30E+04	167.84	5.07E+03
5	92-	97	94.69	16.34	5.63E+03	168.66	8.85E+03
6	107-	114	110.84	19.14	1.88E+03	129.69	4.93E+03
7	114-	118	115.67	19.97	7.01E+02	82.47	2.52E+03
8	144-	153	148.82	25.72	1.14E+03	110.52	3.15E+03
9	154-	163	158.85	27.46	9.53E+02	106.80	2.97E+03
10	207-	216	212.39	36.75	3.76E+02	98.68	2.67E+03
11	264-	274	269.52	46.66	1.83E+04	171.27	2.94E+03
12	285-	295	289.64	50.15	1.11E+03	105.78	2.66E+03
13	302-	313	308.03	53.34	3.29E+03	124.80	3.07E+03
14	360-	371	366.10	63.41	1.04E+04	156.78	3.53E+03
15	390-	397	391.60	67.83	9.59E+02	95.60	2.60E+03
16	426-	438	432.72	74.96	1.85E+04	196.37	4.73E+03
17	440-	451	445.89	77.24	3.29E+04	221.91	4.09E+03
18	452-	464	458.93	79.51	1.48E+03	150.88	5.00E+03
19	464-	474	469.10	81.27	1.86E+03	120.97	3.40E+03
20	478-	490	484.79	83.99	4.90E+03	139.39	3.42E+03
21	498-	510	504.14	87.35	1.04E+04	165.39	3.96E+03
22	513-	525	519.84	90.07	3.94E+03	142.94	3.88E+03
23	528-	541	535.24	92.74	1.28E+04	175.16	3.98E+03
24	543-	554	548.16	94.98	1.15E+03	119.23	3.25E+03
25	562-	575	567.67	98.37	9.03E+02	119.36	2.93E+03
26	646-	658	651.95	112.98	5.61E+02	108.04	2.61E+03
27	703-	710	706.50	122.44	9.18E+01	65.29	1.38E+03
28	724-	732	727.96	126.16	1.03E+02	71.42	1.53E+03
29	823-	838	831.02	144.04	1.48E+03	123.96	2.77E+03
30	883-	896	890.71	154.39	4.89E+02	112.05	2.68E+03
31	912-	925	919.16	159.32	1.50E+02	106.28	2.47E+03
32	935-	951	943.97	163.63	5.76E+02	120.25	2.64E+03
33	954-	966	959.23	166.27	1.71E+02	93.40	2.00E+03
34	1066-	1083	1074.75	186.31	1.03E+04	161.98	2.90E+03
35	1180-	1194	1186.03	205.61	3.17E+02	95.99	1.86E+03
36	1310-	1317	1313.62	227.73	7.86E+01	49.68	7.89E+02
37	1354-	1369	1362.39	236.19	4.51E+02	93.94	1.67E+03
38	1369-	1387	1378.42	238.97	9.81E+02	110.22	1.94E+03
39	1388-	1407	1397.93	242.36	8.45E+03	138.76	1.80E+03
40	1489-	1504	1495.04	259.20	5.32E+02	84.19	1.29E+03
41	1550-	1562	1556.03	269.77	2.40E+02	78.52	1.37E+03
42	1562-	1573	1566.83	271.65	2.53E+02	69.69	1.14E+03

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
43	1582-	1596	1587.68	275.26	1.61E+02	80.04	1.31E+03
44	1695-	1715	1705.45	295.69	1.62E+04	164.18	1.71E+03
45	1723-	1741	1732.73	300.42	3.53E+02	87.93	1.28E+03
46	1829-	1838	1833.01	317.81	8.28E+01	47.96	6.28E+02
47	1943-	1964	1953.89	338.77	1.71E+02	106.77	1.72E+03
48	2027-	2043	2033.09	352.51	2.34E+04	180.10	1.82E+03
49	2152-	2161	2157.49	374.08	9.60E+01	44.50	5.37E+02
50	2225-	2238	2232.22	387.04	2.00E+02	66.85	9.44E+02
51	2314-	2333	2322.42	402.69	1.25E+02	94.14	1.45E+03
52	2764-	2787	2774.78	481.14	1.87E+02	88.84	1.10E+03
53	2807-	2820	2813.38	487.83	1.87E+02	53.00	5.79E+02
54	3024-	3040	3032.48	525.83	7.19E+01	57.38	6.13E+02
55	3326-	3338	3331.84	577.75	7.72E+01	43.00	4.16E+02
56	3338-	3355	3349.12	580.75	1.11E+02	62.59	6.92E+02
57	3360-	3379	3370.66	584.48	1.73E+02	71.21	8.18E+02
58	3505-	3533	3519.54	610.30	1.19E+04	144.69	1.09E+03
59	3663-	3680	3671.28	636.62	5.46E+01	55.48	5.48E+02
60	3701-	3719	3709.29	643.21	7.68E+01	58.49	5.81E+02
61	3830-	3854	3843.20	666.43	2.94E+02	79.81	8.38E+02
62	4023-	4035	4028.89	698.64	2.19E+02	28.75	1.34E+02

M = First peak in a multiplet region
m = Other peak in a multiplet region
L = Fitted singlet

Errors quoted at 1.000 sigma

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-474-GAM1
Peak Analysis Performed on: 4-11-96 1:37:41 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	6.44	6.51E+02	105.31	4.00E+01	3.04E+01	6.11E+02	1.10E+02	
2	9.23	2.11E+02	89.86			2.11E+02	8.99E+01	
3	10.90	4.58E+03	115.34	1.57E+02	3.08E+01	4.42E+03	1.19E+02	
4	13.08	1.30E+04	167.84			1.30E+04	1.68E+02	
5	16.34	5.63E+03	168.66			5.63E+03	1.69E+02	
6	19.14	1.88E+03	129.69	-1.92E-01	1.63E+01	1.88E+03	1.31E+02	
7	19.97	7.01E+02	82.47	-1.92E-01	1.63E+01	7.02E+02	8.41E+01	
8	25.72	1.14E+03	110.52			1.14E+03	1.11E+02	
9	27.46	9.53E+02	106.80	-1.27E+01	1.34E+01	9.65E+02	1.08E+02	
10	36.75	3.76E+02	98.68			3.76E+02	9.87E+01	
11	46.66	1.83E+04	171.27	1.16E+01	3.50E+01	1.83E+04	1.75E+02	
12	50.15	1.11E+03	105.78	-1.20E+01	1.73E+01	1.12E+03	1.07E+02	
13	53.34	3.29E+03	124.80			3.29E+03	1.25E+02	
14	63.41	1.04E+04	156.78	7.25E+01	2.49E+01	1.04E+04	1.59E+02	
15	67.83	9.59E+02	95.60			9.59E+02	9.56E+01	1.19E+03 ± 5.78%
16	74.96	1.85E+04	196.37	4.70E+01	1.89E+01	1.84E+04	1.97E+02	
17	77.24	3.29E+04	221.91	6.88E+01	2.55E+01	3.28E+04	2.23E+02	
18	79.51	1.48E+03	150.88			1.48E+03	1.51E+02	
19	81.27	1.86E+03	120.97			1.86E+03	1.21E+02	
20	83.99	4.90E+03	139.39	-3.10E+01	1.96E+01	4.93E+03	1.41E+02	
21	87.35	1.04E+04	165.39			1.04E+04	1.65E+02	
22	90.07	3.94E+03	142.94			3.94E+03	1.43E+02	
23	92.74	1.28E+04	175.16	2.61E+02	4.01E+01	1.25E+04	1.80E+02	
24	94.98	1.15E+03	119.23	2.42E+01	1.36E+01	1.13E+03	1.20E+02	
25	98.37	9.03E+02	119.36			9.03E+02	1.19E+02	
26	112.98	5.61E+02	108.04			5.61E+02	1.08E+02	
27	122.44	9.18E+01	65.29			9.18E+01	6.53E+01	
28	126.16	1.03E+02	71.42			1.03E+02	7.14E+01	
29	144.04	1.48E+03	123.96	4.83E+01	2.07E+01	1.43E+03	1.26E+02	
30	154.39	4.89E+02	112.05			4.89E+02	1.12E+02	
31	159.32	1.50E+02	106.28			1.50E+02	1.06E+02	
32	163.63	5.76E+02	120.25			5.76E+02	1.20E+02	
33	166.27	1.71E+02	93.40	-1.96E+01	2.16E+01	1.91E+02	9.59E+01	
34	186.31	1.03E+04	161.98	1.65E+02	2.92E+01	1.01E+04	1.65E+02	
35	205.61	3.17E+02	95.99	-8.75E+00	2.28E+01	3.25E+02	9.87E+01	
36	227.73	7.86E+01	49.68			7.86E+01	4.97E+01	
37	236.19	4.51E+02	93.94			4.51E+02	9.39E+01	
38	238.97	9.81E+02	110.22	7.88E+01	2.53E+01	9.02E+02	1.13E+02	
39	242.36	8.45E+03	138.76			8.45E+03	1.39E+02	
40	259.20	5.32E+02	84.19	1.45E+01	2.66E+01	5.18E+02	8.83E+01	
41	269.77	2.40E+02	78.52			2.40E+02	7.85E+01	
42	271.65	2.53E+02	69.69			2.53E+02	6.97E+01	

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	275.26	1.61E+02	80.04			1.61E+02	8.00E+01
44	295.69	1.62E+04	164.18	1.05E+01	4.02E+01	1.62E+04	1.69E+02
45	300.42	3.53E+02	87.93			3.53E+02	8.79E+01
46	317.81	8.28E+01	47.96			8.28E+01	4.80E+01
47	338.77	1.71E+02	106.77			1.71E+02	1.07E+02
48	352.51	2.34E+04	180.10	8.80E+01	2.36E+01	2.33E+04	1.82E+02
49	374.08	9.60E+01	44.50			9.60E+01	4.45E+01
50	387.04	2.00E+02	66.85			2.00E+02	6.69E+01
51	402.69	1.25E+02	94.14			1.25E+02	9.41E+01
52	481.14	1.87E+02	88.84			1.87E+02	8.88E+01
53	487.83	1.87E+02	53.00			1.87E+02	5.30E+01
54	525.83	7.19E+01	57.38			7.19E+01	5.74E+01
55	577.75	7.72E+01	43.00			7.72E+01	4.30E+01
56	580.75	1.11E+02	62.59			1.11E+02	6.26E+01
57	584.48	1.73E+02	71.21	2.12E+01	1.69E+01	1.52E+02	7.32E+01
58	610.30	1.19E+04	144.69	4.28E+01	1.95E+01	1.19E+04	1.46E+02
59	636.62	5.46E+01	55.48			5.46E+01	5.55E+01
60	643.21	7.68E+01	58.49			7.68E+01	5.85E+01
61	666.43	2.94E+02	79.81			2.94E+02	7.98E+01
62	698.64	2.19E+02	28.75	4.50E+01	1.05E+01	1.74E+02	3.06E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************

Report Generated On              :  4-11-96  1:40:00 PM

Sample Title                     : NOPI-475-GAM1
Spectrum Description             : NOPI-475-GAM1
Sample Identification            : NP475_2
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  2.00
Peak Locate Range (in channels)  :     1 -  4096
Peak Area Range (in channels)    :     1 -  4096
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :   0.000E+00 Unit

Sample Taken On                  :
Acquisition Started              :  2-07-96  9:22:14 AM

Live Time                        :    80000.0 seconds
Real Time                        :    80012.9 seconds


          Energy Calibration Used Done On       :  1-16-96
          Efficiency Calibration Used Done On   : ????????
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****
***** P E A K L O C A T E R E P O R T *****
****

Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Locate Performed on: 4-11-96 1:39:22 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 4096
Peak Search Sensitivity: 2.00

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
1	37.46	0.4169	6.43	3.13
2	63.49	0.2147	10.91	11.09
3	76.12	0.2203	13.07	11.26
4	94.38	0.2111	16.33	14.01
5	110.40	0.2177	19.15	12.58
6	114.45	0.3483	19.96	4.55
7	148.99	0.2316	25.75	9.05
8	159.08	0.2624	27.47	7.92
9	212.18	0.3988	36.83	2.76
10	232.51	0.4387	39.93	2.63
11	269.51	0.1011	46.65	48.82
12	290.22	0.2636	50.13	7.06
13	308.09	0.1453	53.34	22.40
14	366.10	0.1024	63.41	43.96
15	391.62	0.2032	67.82	11.23
16	432.79	0.0891	74.96	52.62
17	445.93	0.0779	77.24	70.09
18	458.66	0.1592	79.54	15.49
19	468.97	0.1593	81.28	16.93
20	484.65	0.1413	84.01	19.00
21	504.53	0.1192	87.36	23.88
22	519.48	0.1419	90.06	17.53
23	535.06	0.1005	92.74	28.87
24	547.90	0.2153	94.98	8.90
25	569.01	0.2594	98.34	6.28
26	651.91	0.2076	112.96	9.72
27	831.06	0.1611	144.01	12.72
28	891.23	0.2182	154.51	7.84
29	943.39	0.2336	163.66	5.87
30	993.24	0.4203	172.94	2.37
31	1074.87	0.0925	186.28	30.19
32	1186.42	0.2578	205.60	4.35
33	1363.43	0.1949	236.36	8.19
34	1378.73	0.1400	239.06	14.71
35	1397.98	0.0852	242.36	38.58
36	1464.78	0.3385	253.79	2.89
37	1479.79	0.2788	256.37	2.79
38	1495.82	0.2099	259.21	5.74
39	1556.54	0.1967	269.75	7.19
40	1567.34	0.2157	271.70	5.77
41	1579.43	0.4132	273.95	2.33

Peak No.	Centroid Channel	Centroid Uncertainty	Energy (keV)	Peak Significance
42	1587.97	0.2845	275.28	3.25
43	1651.96	0.3074	286.49	3.39
44	1705.44	0.0659	295.67	56.93
45	1733.88	0.2551	300.55	3.89
46	1904.99	0.2846	330.27	3.53
47	1986.84	0.3996	344.78	2.02
48	2032.93	0.0597	352.48	65.44
49	2248.31	0.2861	389.66	2.56
50	2667.90	0.3457	462.87	2.04
51	2698.90	0.3714	468.05	2.09
52	2714.19	0.3321	470.37	2.03
53	2774.54	0.2914	481.20	2.59
54	3331.98	0.3035	577.92	2.27
55	3368.10	0.1956	583.96	4.60
56	3519.64	0.0649	610.30	41.96
57	3790.23	0.2982	657.82	2.31
58	3843.81	0.2081	666.74	4.31
59	4029.06	0.1891	698.71	5.47

Errors quoted at 1.000 sigma

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T              *****
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Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Analysis Performed on: 4-11-96 1:39:38 PM
Peak Analysis From Channel: 1
Peak Analysis To Channel: 4096

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
1	34-	40	37.57	6.43	3.53E+02	94.16	3.05E+03
2	60-	66	63.42	10.91	3.50E+03	101.99	2.50E+03
3	72-	79	75.83	13.07	9.75E+03	147.10	3.96E+03
4	92-	97	94.65	16.33	4.57E+03	148.89	6.85E+03
5	107-	114	110.90	19.15	1.29E+03	113.71	3.85E+03
6	114-	118	115.57	19.96	6.01E+02	71.98	1.88E+03
7	145-	153	148.95	25.75	1.14E+03	86.05	1.91E+03
8	154-	163	158.90	27.47	7.36E+02	89.31	2.06E+03
9	207-	216	212.84	36.83	1.76E+02	84.12	1.97E+03
10	227-	237	230.72	39.93	1.83E+02	92.76	2.21E+03
11	264-	274	269.49	46.65	1.34E+04	147.94	2.26E+03
12	285-	295	289.55	50.13	8.10E+02	91.34	1.99E+03
13	302-	313	308.05	53.34	2.24E+03	103.59	2.12E+03
14	360-	371	366.14	63.41	7.81E+03	134.65	2.58E+03
15	385-	397	391.52	67.82	9.81E+02	113.51	2.80E+03
16	426-	438	432.69	74.96	1.24E+04	163.98	3.40E+03
17	440-	451	445.88	77.24	2.25E+04	185.99	3.04E+03
18	452-	464	459.12	79.54	1.10E+03	125.25	3.41E+03
19	464-	474	469.16	81.28	1.46E+03	99.99	2.28E+03
20	478-	490	484.89	84.01	3.48E+03	120.29	2.59E+03
21	498-	510	504.24	87.36	7.39E+03	137.94	2.73E+03
22	513-	525	519.77	90.06	2.97E+03	118.16	2.59E+03
23	528-	541	535.26	92.74	1.03E+04	149.04	2.66E+03
24	543-	554	548.12	94.98	8.93E+02	99.98	2.27E+03
25	562-	575	567.51	98.34	8.23E+02	100.58	2.04E+03
26	647-	658	651.81	112.96	4.62E+02	86.85	1.76E+03
27	823-	838	830.89	144.01	9.33E+02	110.02	2.22E+03
28	888-	898	891.39	154.51	2.73E+02	79.72	1.59E+03
29	935-	951	944.19	163.66	5.04E+02	103.38	1.94E+03
30	990-	1008	997.65	172.94	1.60E+02	107.97	1.99E+03
31	1066-	1083	1074.62	186.28	7.74E+03	135.09	1.91E+03
32	1181-	1193	1185.99	205.60	3.25E+02	72.02	1.13E+03
33	1356-	1372	1363.38	236.36	2.71E+02	88.14	1.42E+03
34	1372-	1387	1378.93	239.06	1.06E+03	82.12	1.13E+03
35	1388-	1407	1397.96	242.36	5.73E+03	117.86	1.36E+03
36	1457-	1469	1463.85	253.79	1.64E+02	56.89	7.22E+02
37	1470-	1485	1478.73	256.37	1.39E+02	74.91	1.09E+03
38	1486-	1501	1495.10	259.21	3.61E+02	73.43	1.01E+03
39	1546-	1561	1555.89	269.75	3.72E+02	74.41	1.03E+03
40	1563-	1573	1567.15	271.70	3.36E+02	53.21	6.58E+02
M 41	1576-	1597	1580.11	273.95	7.72E+01	30.33	6.67E+02
m 42	1576-	1597	1587.75	275.28	1.77E+02	45.07	8.98E+02

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1646-	1658	1652.40	286.49	1.00E+02	58.71	7.86E+02
	44	1695-	1715	1705.37	295.67	1.11E+04	137.21	1.23E+03
	45	1723-	1740	1733.48	300.55	2.38E+02	71.60	8.89E+02
m	46	1891-	1911	1904.86	330.27	1.02E+02	35.67	6.18E+02
	47	1982-	1994	1988.50	344.78	8.55E+01	58.03	7.71E+02
	48	2026-	2043	2032.89	352.48	1.59E+04	148.36	1.14E+03
	49	2240-	2254	2247.29	389.66	1.32E+02	59.63	7.18E+02
	50	2663-	2674	2669.44	462.87	6.78E+01	41.37	4.10E+02
	51	2694-	2703	2699.27	468.05	8.79E+01	32.80	2.81E+02
	52	2706-	2722	2712.67	470.37	1.70E+02	52.55	4.85E+02
	53	2768-	2783	2775.15	481.20	1.34E+02	52.15	5.15E+02
	54	3325-	3339	3332.80	577.92	8.51E+01	41.35	3.42E+02
	55	3359-	3375	3367.67	583.96	1.86E+02	50.56	4.51E+02
	56	3505-	3533	3519.54	610.30	8.16E+03	124.73	8.98E+02
	57	3783-	3804	3793.53	657.82	1.60E+02	50.12	3.62E+02
	58	3834-	3858	3844.95	666.74	2.74E+02	61.33	4.80E+02
	59	4024-	4035	4029.32	698.71	1.22E+02	22.50	8.43E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

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***** B A C K G R O U N D S U B T R A C T R E P O R T *****
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Detector Name: DET01
Sample Title: NOPI-475-GAM1
Peak Analysis Performed on: 4-11-96 1:39:22 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	6.43	3.53E+02	94.16	4.00E+01	3.04E+01	3.13E+02	9.90E+01
2	10.91	3.50E+03	101.99	1.57E+02	3.08E+01	3.34E+03	1.07E+02
3	13.07	9.75E+03	147.10			9.75E+03	1.47E+02
4	16.33	4.57E+03	148.89			4.57E+03	1.49E+02
5	19.15	1.29E+03	113.71	-1.92E-01	1.63E+01	1.29E+03	1.15E+02
6	19.96	6.01E+02	71.98	-1.92E-01	1.63E+01	6.01E+02	7.38E+01
7	25.75	1.14E+03	86.05			1.14E+03	8.61E+01
8	27.47	7.36E+02	89.31	-1.27E+01	1.34E+01	7.49E+02	9.03E+01
9	36.83	1.76E+02	84.12			1.76E+02	8.41E+01
10	39.93	1.83E+02	92.76			1.83E+02	9.28E+01
11	46.65	1.34E+04	147.94	1.16E+01	3.50E+01	1.34E+04	1.52E+02
12	50.13	8.10E+02	91.34	-1.20E+01	1.73E+01	8.22E+02	9.30E+01
13	53.34	2.24E+03	103.59			2.24E+03	1.04E+02
14	63.41	7.81E+03	134.65	7.25E+01	2.49E+01	7.74E+03	1.37E+02
15	67.82	9.81E+02	113.51			9.81E+02	1.14E+02
16	74.96	1.24E+04	163.98	4.70E+01	1.89E+01	1.24E+04	1.65E+02
17	77.24	2.25E+04	185.99	6.88E+01	2.55E+01	2.24E+04	1.88E+02
18	79.54	1.10E+03	125.25			1.10E+03	1.25E+02
19	81.28	1.46E+03	99.99			1.46E+03	1.00E+02
20	84.01	3.48E+03	120.29	-3.10E+01	1.96E+01	3.51E+03	1.22E+02
21	87.36	7.39E+03	137.94			7.39E+03	1.38E+02
22	90.06	2.97E+03	118.16			2.97E+03	1.18E+02
23	92.74	1.03E+04	149.04	2.61E+02	4.01E+01	9.99E+03	1.54E+02
24	94.98	8.93E+02	99.98	2.42E+01	1.36E+01	8.68E+02	1.01E+02
25	98.34	8.23E+02	100.58			8.23E+02	1.01E+02
26	112.96	4.62E+02	86.85			4.62E+02	8.69E+01
27	144.01	9.33E+02	110.02	4.83E+01	2.07E+01	8.84E+02	1.12E+02
28	154.51	2.73E+02	79.72			2.73E+02	7.97E+01
29	163.66	5.04E+02	103.38			5.04E+02	1.03E+02
30	172.94	1.60E+02	107.97			1.60E+02	1.08E+02
31	186.28	7.74E+03	135.09	1.65E+02	2.92E+01	7.57E+03	1.38E+02
32	205.60	3.25E+02	72.02	-8.75E+00	2.28E+01	3.33E+02	7.55E+01
33	236.36	2.71E+02	88.14			2.71E+02	8.81E+01
34	239.06	1.06E+03	82.12	7.88E+01	2.53E+01	9.81E+02	8.59E+01
35	242.36	5.73E+03	117.86			5.73E+03	1.18E+02
36	253.79	1.64E+02	56.89			1.64E+02	5.69E+01
37	256.37	1.39E+02	74.91			1.39E+02	7.49E+01
38	259.21	3.61E+02	73.43	1.45E+01	2.66E+01	3.46E+02	7.81E+01
39	269.75	3.72E+02	74.41			3.72E+02	7.44E+01
40	271.70	3.36E+02	53.21			3.36E+02	5.32E+01
41	273.95	7.72E+01	30.33			7.72E+01	3.03E+01
42	275.28	1.77E+02	45.07			1.77E+02	4.51E+01

1.08E+03 ± 5.73%

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
43	286.49	1.00E+02	58.71			1.00E+02	5.87E+01
44	295.67	1.11E+04	137.21	1.05E+01	4.02E+01	1.11E+04	1.43E+02
45	300.55	2.38E+02	71.60			2.38E+02	7.16E+01
m 46	330.27	1.02E+02	35.67	-2.16E+01	3.90E+01	1.23E+02	5.29E+01
47	344.78	8.55E+01	58.03			8.55E+01	5.80E+01
48	352.48	1.59E+04	148.36	8.80E+01	2.36E+01	1.58E+04	1.50E+02
49	389.66	1.32E+02	59.63			1.32E+02	5.96E+01
50	462.87	6.78E+01	41.37			6.78E+01	4.14E+01
51	468.05	8.79E+01	32.80	1.48E+01	2.04E+01	7.31E+01	3.86E+01
52	470.37	1.70E+02	52.55			1.70E+02	5.26E+01
53	481.20	1.34E+02	52.15			1.34E+02	5.21E+01
54	577.92	8.51E+01	41.35			8.51E+01	4.14E+01
55	583.96	1.86E+02	50.56	2.12E+01	1.69E+01	1.65E+02	5.33E+01
56	610.30	8.16E+03	124.73	4.28E+01	1.95E+01	8.12E+03	1.26E+02
57	657.82	1.60E+02	50.12			1.60E+02	5.01E+01
58	666.74	2.74E+02	61.33			2.74E+02	6.13E+01
59	698.71	1.22E+02	22.50	4.50E+01	1.05E+01	7.67E+01	2.48E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma