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030-20934

March 3, 2000

Mr. John D. Kinneman
Chief, Nuclear Material Safety Branch 2
Division of Nuclear Material Safety
U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

RE: License No. 37-23341-01 Quarterly Report- 4th Quarter 1999

Dear Mr. Kinneman:

In accordance with condition No. 16 of the referenced license, enclosed is the quarterly report for the fourth quarter 1999.

If you have any questions or comments, please contact me or Michael Fuller, Manager, Health Physics & Engineering at (413) 543-6911.

During data compilation for this year end report it was noted that the total Strontium was not being entered as Sr-90 per the footnote on the spreadsheet. This has been corrected in this report. I apologize if this causes you any inconvenience.

Sincerely,



William Stevenson, Radiation Protection Engineer
UniTech Services Group

cc: M. Fuller, Manager Health Physics and Engineering
Dan Neely, Plant Manager/RSO, UniTech Royersford

NMSS/RGN-002

127896



1999 - ROYERSFORD WASTEWATER DISCHARGE SUMMARY												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	350000	445000	1050000	1295000	1270000	465000	470000	405000	830000	1035000	395000	350000
H-3	2.13E-05	2.13E-05	2.13E-05	5.16E-06	5.16E-06	5.16E-06	1.17E-05	1.17E-05	1.17E-05	6.72E-06	6.72E-06	6.72E-06
mCi H-3	28.21718	35.87612	84.65153	25.29213	24.80386	9.081729	20.813715	17.93522	36.75614	26.32543	10.0469	8.90232
C-14	3.23E-06	3.23E-06	3.23E-06	1.42E-06	1.42E-06	1.42E-06	1.86E-06	1.86E-06	1.86E-06	4.03E-06	4.03E-06	4.03E-06
mCi C-14	4.278943	5.44037	12.83683	6.960237	6.825869	2.499236	3.308847	2.851241	5.843283	15.78742	6.025152	5.3387425
K-40	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Cr-51	NF	NF	1.37E-05	NF	2.69E-07	NF	NF	NF	NF	2.87E-07	NF	NF
Mn-54	2.08E-07	4.82E-07	1.39E-06	2.15E-07	4.95E-07	1.27E-07	8.63E-07	7.13E-07	2.78E-07	3.41E-07	3.23E-07	5.06E-07
Fe-55	1.59E-05	1.59E-05	1.59E-05	6.42E-06	6.42E-06	6.42E-06	9.19E-06	9.19E-06	9.19E-06	8.54E-06	8.54E-06	8.54E-06
Fe-59	NF	NF	NF	NF	1.19E-07	NF	NF	NF	NF	NF	NF	NF
Co-57	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Co-58	NF	5.63E-08	7.79E-07	3.55E-07	5.34E-07	2.68E-07	5.46E-07	4.82E-08	1.07E-06	1.64E-06	6.00E-07	7.35E-07
Co-60	7.64E-07	1.59E-06	2.17E-06	8.65E-07	9.02E-07	4.31E-07	1.65E-06	9.05E-07	1.06E-06	1.16E-06	9.04E-07	1.09E-06
Ni-63	9.72E-07	9.72E-07	9.72E-07	9.56E-07	9.56E-07	9.56E-07	2.02E-09	2.02E-09	2.02E-09	2.62E-09	2.62E-09	2.62E-09
Zn-65	1.50E-07	NF	2.82E-07	2.20E-07	3.13E-07	9.15E-08	3.77E-07	7.37E-08	NF	2.28E-07	NF	1.60E-07
Sr-89	6.60E-09	6.60E-09	6.60E-09	3.29E-09	3.29E-09	3.29E-09	1.56E-08	1.56E-08	1.56E-08	8.60E-09	8.60E-09	8.60E-09
Sr-90	*	*	*	*	*	*	*	*	*	*	*	*
Zr-95	NF	NF	NF	NF	3.88E-08	NF	NF	NF	NF	NF	NF	NF
Nb-95	NF	NF	NF	NF	2.66E-08	NF	3.02E-08	NF	NF	NF	NF	<MDA
Tc-99	1.68E-07	1.68E-07	1.68E-07	5.64E-08	5.64E-08	5.64E-08	1.79E-07	1.79E-07	1.79E-07	1.02E-07	1.02E-07	1.02E-07
Ag-110m	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Sb-125	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
I-129	<MDA	<MDA	<MDA	1.55E-08	1.55E-08	1.55E-08	4.84E-09	4.84E-09	4.84E-09	<MDA	<MDA	<MDA
Cs-134	9.36E-08	NF	1.24E-07	NF	2.66E-08	5.63E-08	1.07E-07	NF	5.16E-07	2.93E-07	8.78E-08	2.17E-07
Cs-137	1.11E-06	1.24E-06	8.38E-07	2.18E-07	2.44E-07	3.76E-07	6.42E-07	2.63E-07	1.29E-06	9.57E-07	4.89E-07	8.06E-07
Eu-152	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Eu-154	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Th-228	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	<MDA
Th-234	3.88E-06	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
U-234	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09	1.26E-09
U-235	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10	5.83E-10
U-238	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Pu-238	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Pu-239	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09	2.29E-09
Np-237	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09
Am-241	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09	2.36E-09
Cm-244	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
CONC.	2.33E-05	2.04E-05	3.64E-05	9.33E-06	1.04E-05	8.81E-06	1.36E-05	1.14E-05	1.36E-05	1.36E-05	1.11E-05	1.22E-05
ACTIVITY	30.81697	34.40253	144.5895	45.74769	50.13136	15.50567	24.223896	17.48153	42.74435	53.1558	16.54515	16.1284246

ANNUAL TOTALS
8360000 GALLONS

328.70227 mCi H-3

77.99617 mCi C-14

491.47283 mCi AORN

Notes: CONC. is total concentration for all nuclides except H-3 and C-14.

All concentrations are in uCi/ml. All activities are in mCi.

NF - Not found in gamma spectra search

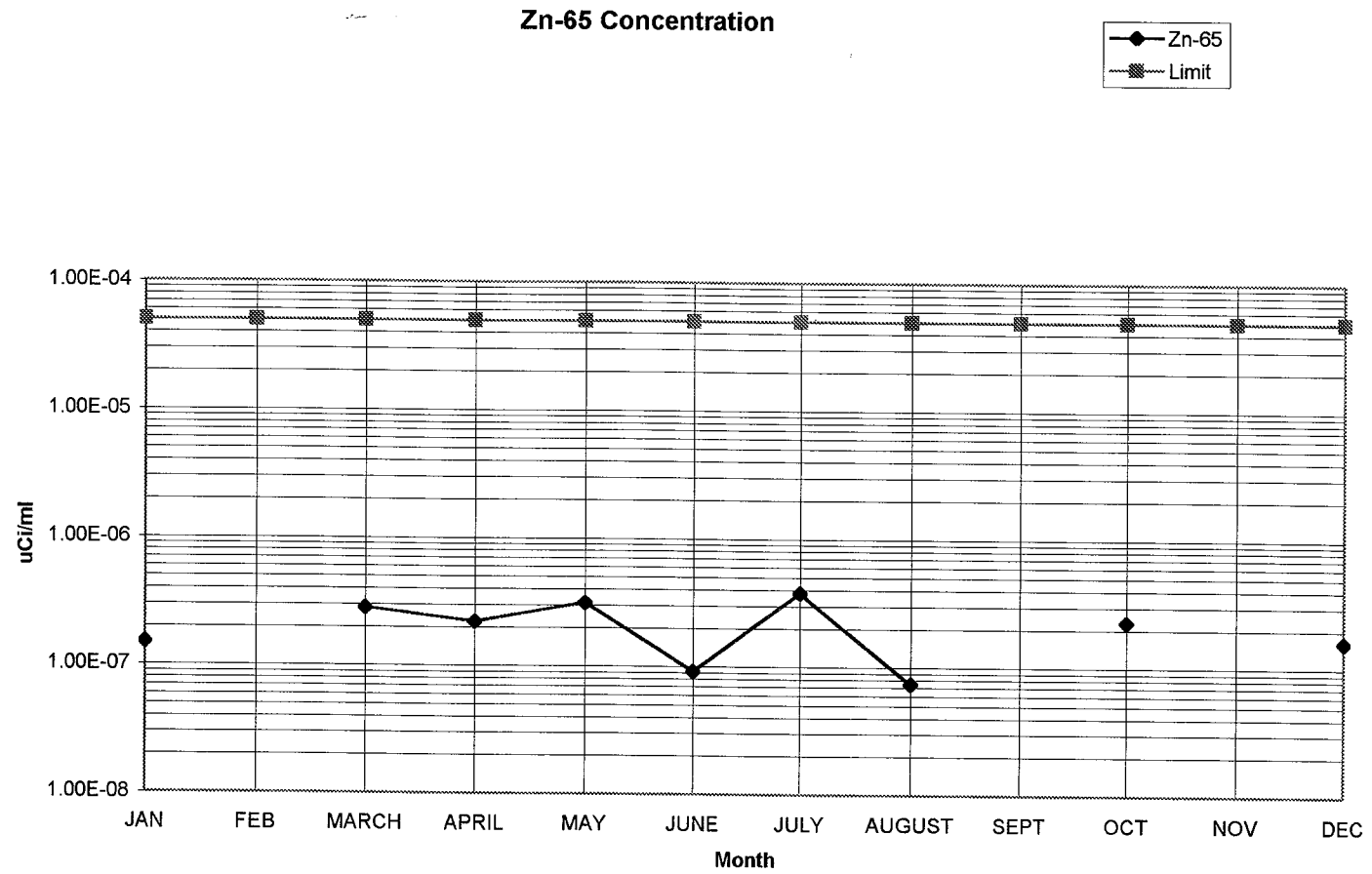
<MDA - Less than minimum detection limit for analytical method.

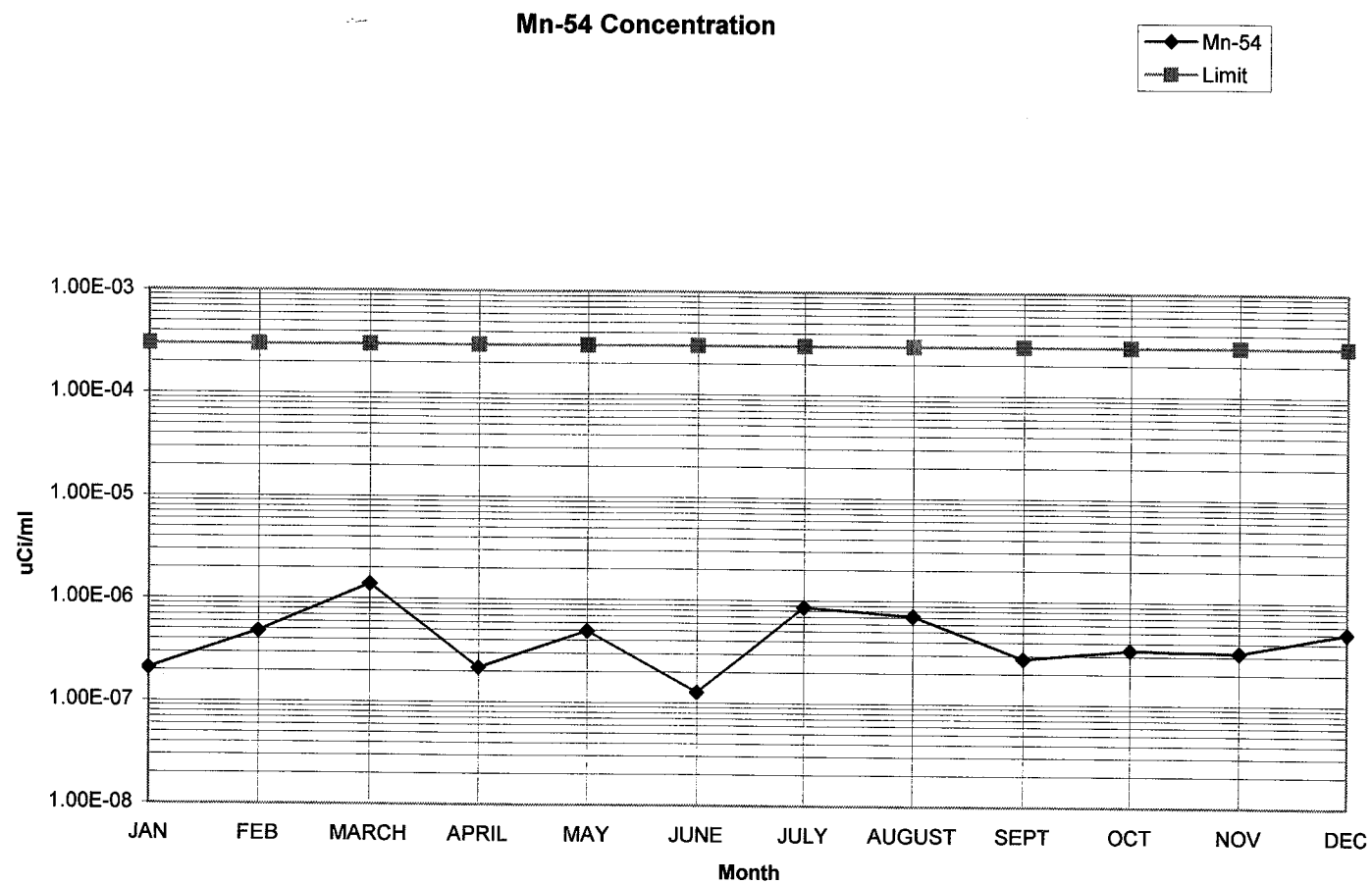
*Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90

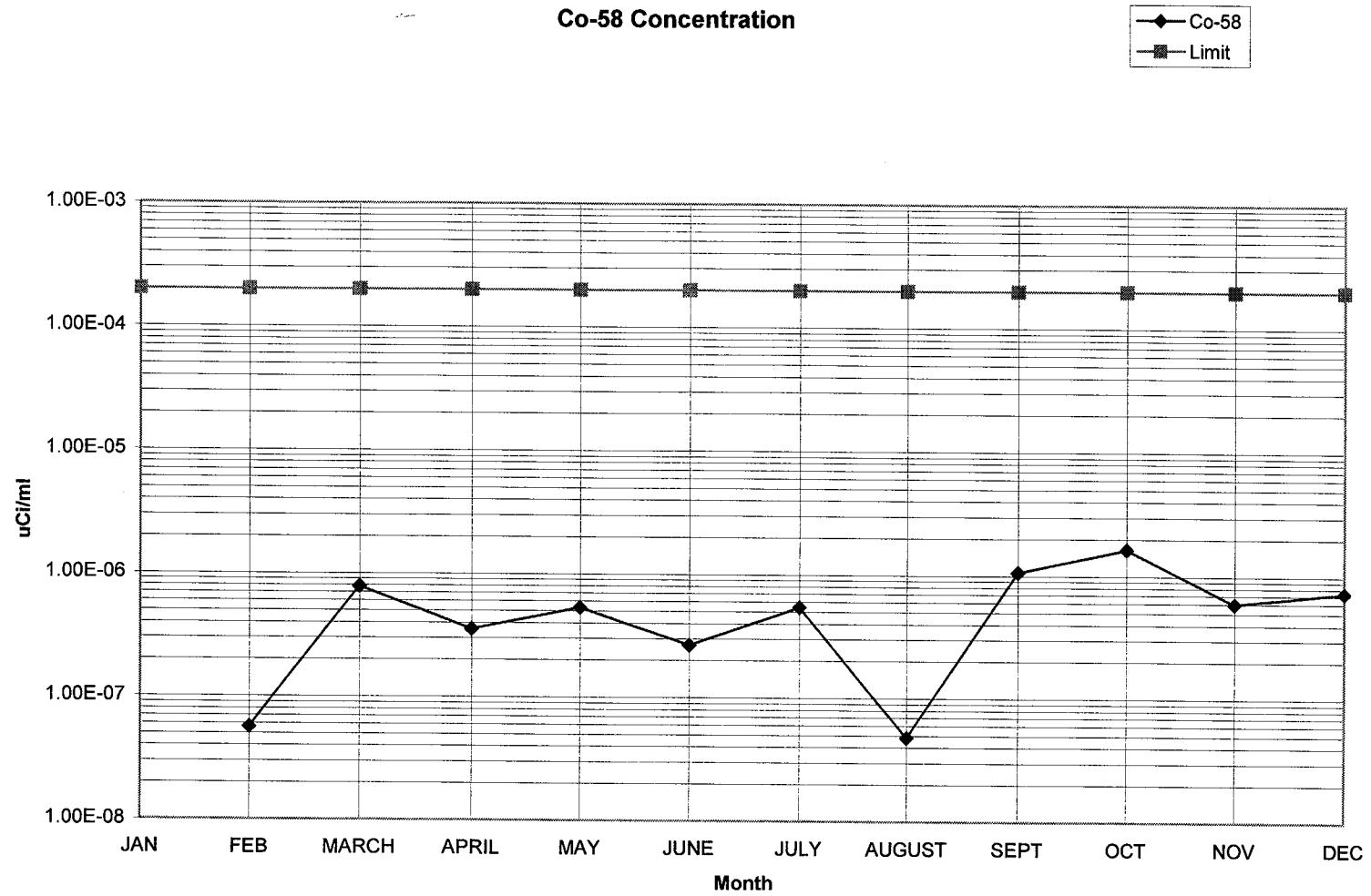
AORN - All other radionuclides (except for H-3 and C-14)

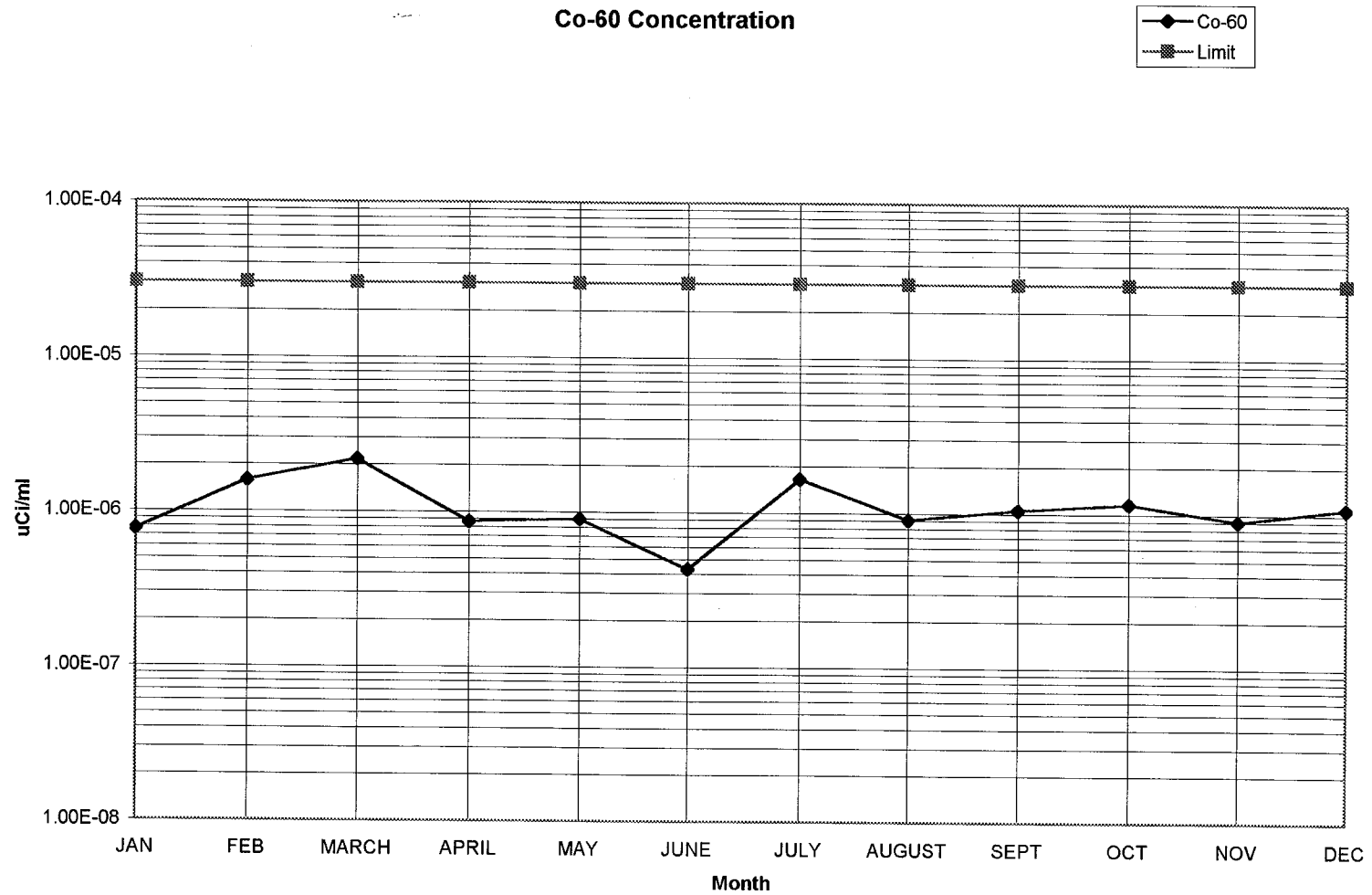
ND - No Data

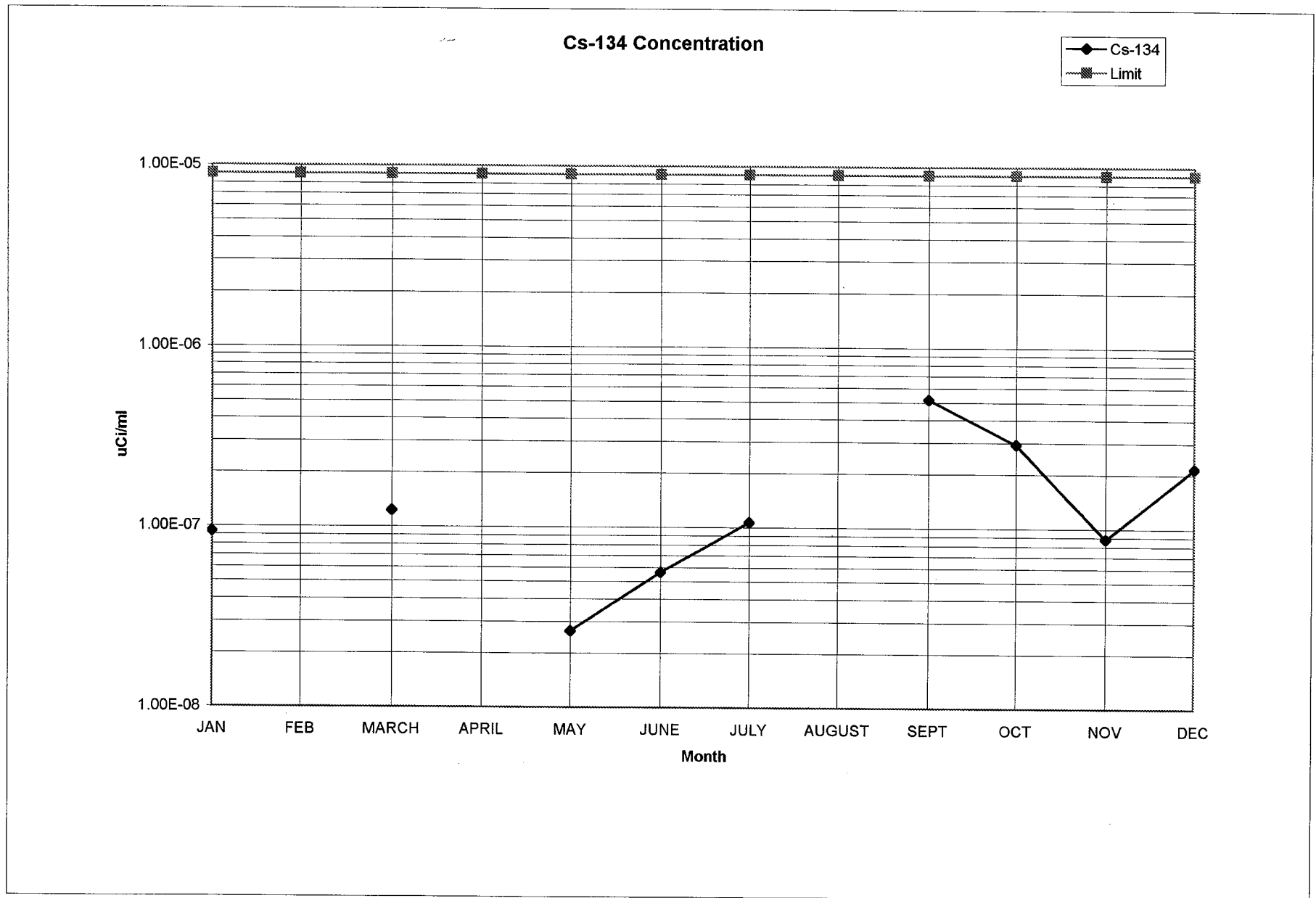
079 - ROYERSFORD RATIOS OF DISCHARGES TO LIMITS													
	LIMIT	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
H-3	1.0E-02	0.00213	0.00213	0.00213	0.00052	0.00052	0.00052	0.00117	0.00117	0.00117	0.00067	0.00067	0.00067
C-14	3.0E-04	0.01077	0.01077	0.01077	0.00473	0.00473	0.00473	0.00620	0.00620	0.00620	0.01343	0.01343	0.01343
K-40	4.0E-05												
Cr-51	5.0E-03			0.00275		0.00005					0.00006		
Mn-54	3.0E-04	0.00069	0.00161	0.00464	0.00072	0.00165	0.00042	0.00288	0.00238	0.00093	0.00114	0.00108	0.00169
Fe-55	1.0E-03	0.01590	0.01590	0.01590	0.00642	0.00642	0.00642	0.00919	0.00919	0.00919	0.00854	0.00854	0.00854
Fe-59	1.0E-04					0.00119							
Co-57	6.0E-04												
Co-58	2.0E-04		0.00028	0.00390	0.00177	0.00267	0.00134	0.00273	0.00024	0.00533	0.00820	0.00300	0.00367
Co-60	3.0E-05	0.02546	0.05297	0.07233	0.02882	0.03007	0.01437	0.05500	0.03017	0.03517	0.03867	0.03012	0.03627
Ni-63	1.0E-03	0.00097	0.00097	0.00097	0.00096	0.00096	0.00096	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Zn-65	5.0E-05	0.00301		0.00565	0.00440	0.00627	0.00183	0.00753	0.00147		0.00456		0.00320
Sr-89	8.0E-05												
Sr-90	5.0E-06	0.00132	0.00132	0.00132	0.00066	0.00066	0.00066	0.00312	0.00312	0.00312	0.00172	0.00172	0.00172
Zr-95	2.0E-04					0.00019							
Nb-95	3.0E-04					0.00009		0.00010					0.00011
Tc-99	6.0E-04	0.00028	0.00028	0.00028	0.00009	0.00009	0.00009	0.00030	0.00030	0.00030	0.00017	0.00017	0.00017
Ag-110m	6.0E-05												
Sb-125	3.0E-04												
I-129	2.0E-06				0.00775	0.00775	0.00775	0.00242	0.00242	0.00242			
Cs-134	9.0E-06	0.01040		0.01373		0.00296	0.00626	0.01190		0.05733	0.03256	0.00976	0.02411
Cs-137	1.0E-05	0.11140	0.12420	0.08379	0.02180	0.02437	0.03755	0.06422	0.02630	0.12900	0.09570	0.04891	0.08057
Eu-152	1.0E-04												
Eu-154	7.0E-05												
Th-228	2.0E-06												
Th-234	5.0E-05	0.07754											
U-234	3.0E-06	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042	0.00042
U-235	3.0E-06	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019	0.00019
U-238	3.0E-06												
Pu-238	2.0E-07												
Pu-239	2.0E-07	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145	0.01145
Np-237	2.0E-07	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590	0.01590
Am-241	2.0E-07	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180	0.01180
Cu-244	3.0E-07												
TOTAL	1.00	0.29963	0.25019	0.25792	0.11840	0.13040	0.12266	0.20653	0.12272	0.28992	0.24518	0.15717	0.21392

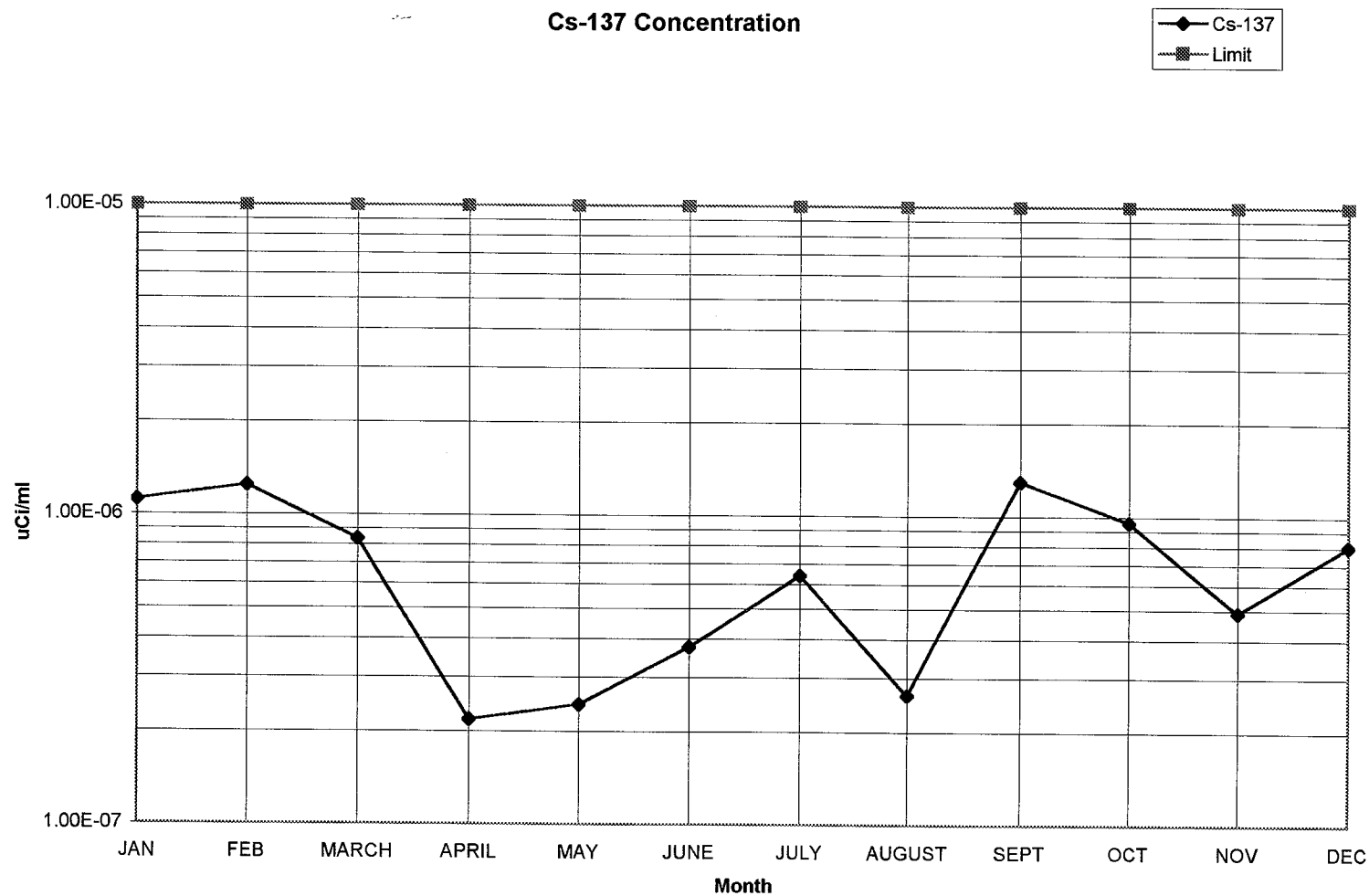












(FOR LFMS USE)
INFORMATION FROM LTS

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: Program Code: 03218
: Status Code: 0
: Fee Category: 6A
: Exp. Date: 20050831
: Fee Comments: CALIBRATION IS FOR THEM
: Decom Fin Assur Read: Y

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A. REGION

Applicant/Licensee: UNITECH SERVICES GROUP, INC.
Received Date: 20000316
Docket No: 3020934
Control No.: 127896
License No.: 37-23341-01
Action Type: Notifications

Amount: _____
Check No.: _____

Signed K. J. Brown
Date 3-16-00

1. Fee Category and Amount: _____

Amendment _____
Renewal _____
License _____

Signed _____
Date _____

This is to acknowledge the receipt of your letter/application dated

3-3-00, and to inform you that the initial processing which includes an administrative review has been performed.

☒ *NOTIF.* 37-23341-01
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 1 2 7 8 9 6.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

Sincerely,
Licensing Assistance Team Leader