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Q-5

December 26, 2001

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

030-20934

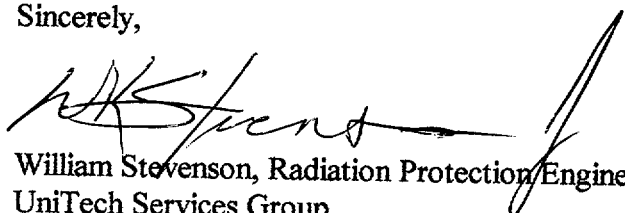
RE: License No. 37-23341-01 Quarterly Report- 3<sup>rd</sup> Quarter 2001

Dear Mr. Kinneman:

In accordance with condition No. 16 of the referenced license, enclosed is the quarterly report for the third quarter of 2001.

If you have any questions or comments, please contact Michael Fuller, Manager, Health Physics & Engineering or me at (413) 543-6911, extensions 25 and 27, respectively.

Sincerely,

  
William Stevenson, Radiation Protection Engineer  
UniTech Services Group

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

1 3 0 8 0 0

NMSS/RGNI MATERIALS-002



2001 - ROYERSFORD WASTEWATER DISCHARGE SUMMARY												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	395000	500000	875000	1175000	645000	310000	275000	320000	940000			
H-3	7.81E-06	7.81E-06	7.81E-06	8.20E-06	8.20E-06	8.20E-06	1.32E-05	1.32E-05	1.32E-05			
mCi H-3	11.676536	14.780425	25.865744	36.468475	20.018865	9.62147	13.73955	15.98784	46.96428			
C-14	3.55E-06	3.55E-06	3.55E-06	4.69E-06	4.69E-06	4.69E-06	5.25E-06	5.25E-06	5.25E-06			
mCi C-14	5.3075163	6.718375	11.757156	20.858189	11.449814	5.5030115	5.4645938	6.3588	18.678975			
K-40	1.98E-07	2.12E-07	ND	ND	2.54E-07	ND	ND	1.22E-07	ND			
Cr-51	ND	3.43E-07	5.89E-07	5.72E-07	8.79E-07	ND	ND	ND	ND			
Mn-54	4.51E-07	5.77E-07	7.92E-07	5.90E-07	7.64E-07	6.36E-07	3.94E-07	9.56E-08	1.17E-07			
Fe-55	9.88E-06	9.88E-06	9.88E-06	1.29E-05	1.29E-05	1.29E-05	3.13E-06	3.13E-06	3.13E-06			
Fe-59	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Co-57	ND	ND	ND	ND	2.37E-08	ND	ND	ND	ND			
Co-58	7.89E-07	8.80E-07	6.02E-07	1.45E-06	4.11E-06	6.01E-07	1.98E-07	5.63E-08	2.09E-07			
Co-60	1.41E-06	1.72E-06	1.40E-06	1.28E-06	1.70E-06	1.13E-06	1.04E-06	4.43E-07	6.11E-07			
Ni-63	3.58E-07	3.58E-07	3.58E-07	9.39E-07	9.39E-07	9.39E-07	9.98E-07	9.98E-07	9.98E-07			
Zn-65	2.40E-07	ND	ND	ND	ND	6.34E-08	ND	6.62E-08	4.97E-08			
Sr-89	*	*	*	*	*	*	*	*	*			
Sr-90	5.39E-09	5.39E-09	5.39E-09	4.82E-09	4.82E-09	4.82E-09	5.38E-09	5.38E-09	5.38E-09			
Zr-95	ND	ND	5.64E-08	1.05E-07	3.43E-07	1.20E-07	ND	ND	ND			
Nb-95	5.06E-08	7.62E-08	7.47E-08	1.63E-07	5.77E-07	2.68E-07	ND	ND	ND			
Tc-99	4.37E-07	4.37E-07	4.37E-07	5.70E-07	5.70E-07	5.70E-07	3.32E-07	3.32E-07	3.32E-07			
Ag-110m	1.26E-07	ND	ND	ND	9.43E-08	ND	3.38E-08	ND	4.80E-08			
Sb-125	1.42E-07	ND	ND	ND	ND	7.37E-08	ND	ND	ND			
I-125	ND	ND	ND	1.14E-06	ND	ND	ND	ND	ND			
I-129	<MDA	<MDA	<MDA	2.45E-08	2.45E-08	2.45E-08	<MDA	<MDA	<MDA			
Cs-134	1.62E-07	3.46E-08	6.71E-08	5.84E-08	1.09E-07	7.02E-08	5.39E-08	ND	6.53E-08			
Cs-137	1.04E-06	4.58E-07	5.00E-07	5.38E-07	1.01E-06	4.79E-07	4.51E-07	2.19E-07	5.95E-07			
Eu-152	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Eu-154	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Pb-212	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Ra-226	ND	ND	ND	ND	ND	ND	ND	ND	1.24E-07			
Th-228	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Th-230	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Th-232	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Th-234	ND	ND	ND	ND	ND	ND	ND	ND	ND			
U-234	ND	ND	ND	ND	ND	ND	ND	4.24E-07	3.94E-07			
U-235	ND	ND	ND	ND	ND	ND	ND	ND	ND			
U-238	ND	ND	ND	ND	ND	ND	ND	2.48E-08	ND			
Pu-238	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Pu-239	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Np-237	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Am-241	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Cm-244	ND	ND	ND	ND	ND	ND	ND	ND	ND			
CONC.	1.53E-05	1.50E-05	1.48E-05	2.03E-05	2.43E-05	1.79E-05	6.64E-06	5.92E-06	6.68E-06	0.00E+00	0.00E+00	0.00E+00
ACTIVITY	22.853447	28.3391277	48.883043	90.463477	59.342947	20.982384	6.9116078	7.1646598	23.763534	0	0	0

ANNUAL TOTALS  
5435000 GALLONS

195.12318 mCi H-3

92.096431 mCi C-14

308.70423 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.

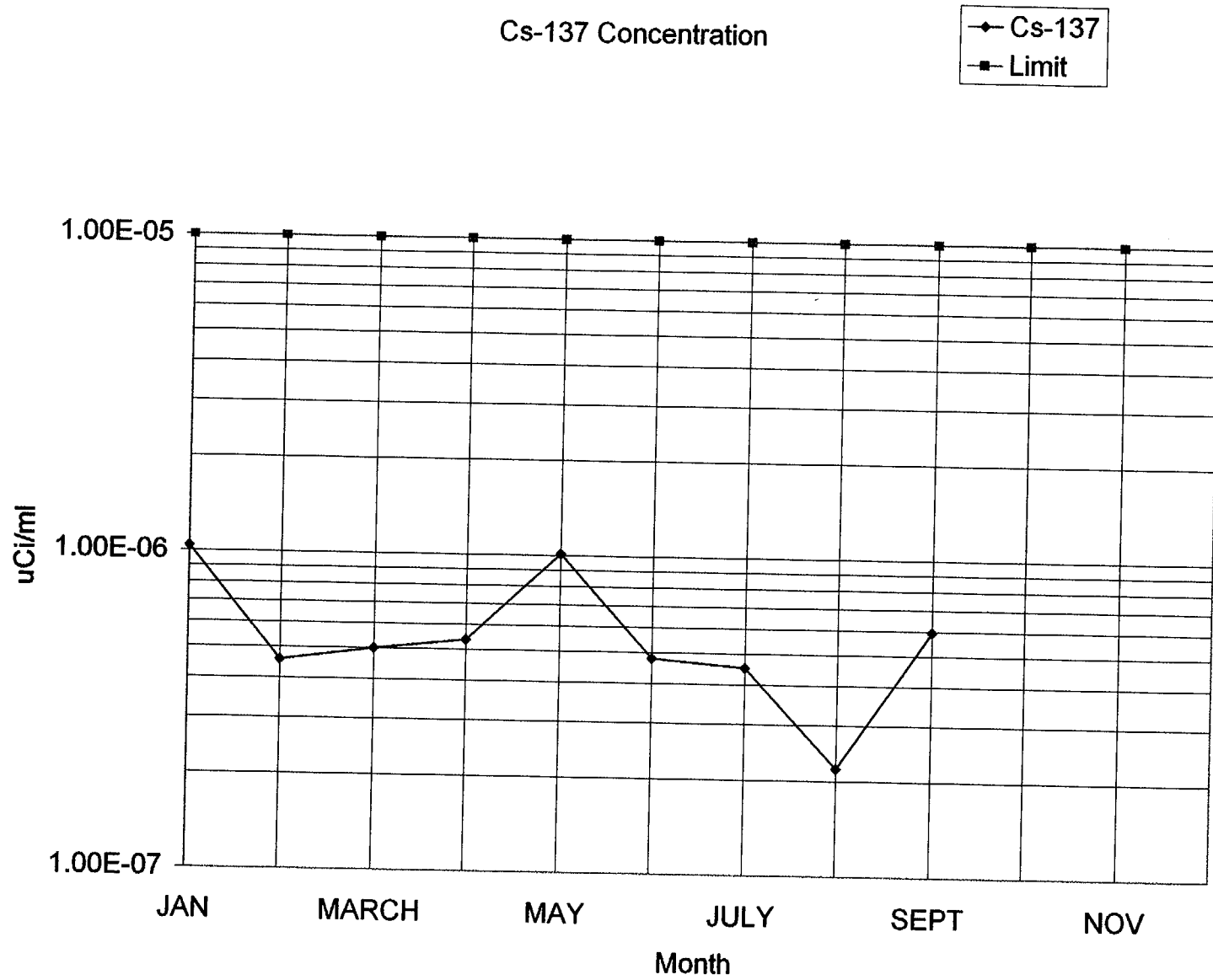
\*Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90

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

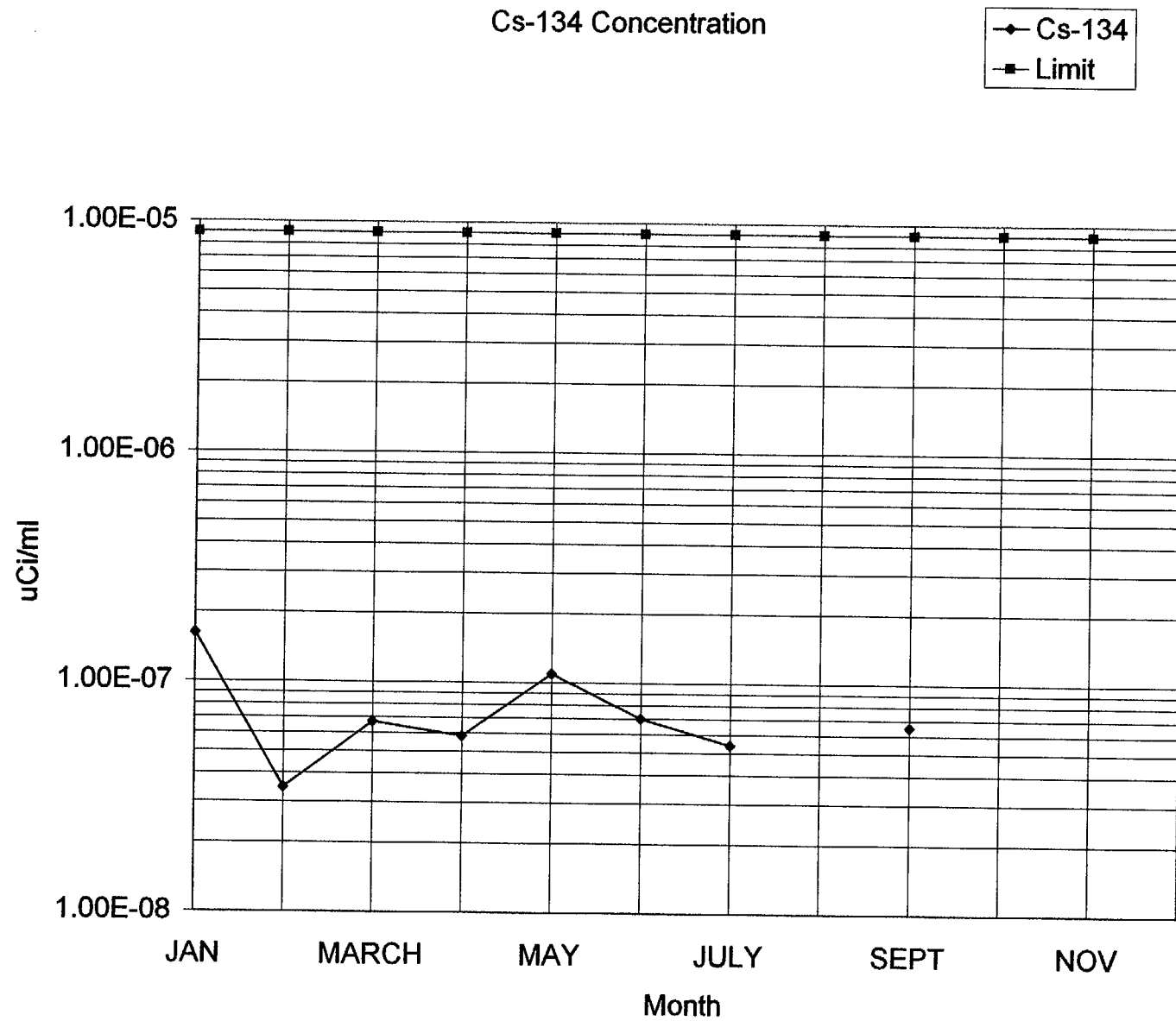
ND - No Data

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	0.00078	0.00078	0.00078	0.00082	0.00082	0.00082	0.00132	0.00132	0.00132			
C-14	3.0E-04	0.01183	0.01183	0.01183	0.01563	0.01563	0.01563	0.01750	0.01750	0.01750			
K-40	4.0E-05	0.00494	0.00530			0.00636			0.00305				
Cr-51	5.0E-03		0.00007	0.00012	0.00011	0.00018							
Mn-54	3.0E-04	0.00150	0.00192	0.00264	0.00197	0.00255	0.00212	0.00131	0.00032	0.00039			
Fe-55	1.0E-03	0.00988	0.00988	0.00988	0.01290	0.01290	0.01290	0.00313	0.00313	0.00313			
Fe-59	1.0E-04												
Co-57	6.0E-04					0.00004							
Co-58	2.0E-04	0.00394	0.00440	0.00301	0.00725	0.02055	0.00301	0.00099	0.00028	0.00105			
Co-60	3.0E-05	0.04703	0.05717	0.04660	0.04277	0.05677	0.03777	0.03480	0.01475	0.02037			
Ni-63	1.0E-03	0.00036	0.00036	0.00036	0.00094	0.00094	0.00094	0.00100	0.00100	0.00100			
Zn-65	5.0E-05	0.00479					0.00127		0.00132	0.00099			
Sr-89	8.0E-05												
Sr-90	5.0E-06	0.00108	0.00108	0.00108	0.00096	0.00096	0.00096	0.00108	0.00108	0.00108			
Zr-95	2.0E-04			0.00028	0.00053	0.00172	0.00060						
Nb-95	3.0E-04	0.00017	0.00025	0.00025	0.00054	0.00192	0.00089						
Tc-99	6.0E-04	0.00073	0.00073	0.00073	0.00095	0.00095	0.00095	0.00055	0.00055	0.00055			
Ag-110m	6.0E-05	0.00210				0.00157		0.00056		0.00080			
Sb-125	3.0E-04	0.00047					0.00025						
I-125	2.0E-05				0.05720								
I-129	2.0E-06				0.01225	0.01225	0.01225						
Cs-134	9.0E-06	0.01799	0.00384	0.00746	0.00648	0.01214	0.00780	0.00599		0.00725			
Cs-137	1.0E-05	0.10370	0.04577	0.05004	0.05379	0.10130	0.04787	0.04514	0.02190	0.05952			
Eu-152	1.0E-04												
Eu-154	7.0E-05												
Pb-212	2.0E-06												
Ra-226	6.0E-07									0.06190			
Th-228	2.0E-06												
Th-230	1.0E-06												
Th-232	5.0E-05												
Th-234	5.0E-05												
U-234	3.0E-06								0.00847	0.00788			
U-235	3.0E-06												
U-238	3.0E-06								0.00826				
Pu-238	2.0E-07												
Pu-239	2.0E-07												
Np-237	2.0E-07												
Am-241	2.0E-07												
Cm-244	3.0E-07												
TOTAL	1.00	0.21130	0.14338	0.13505	0.21510	0.24954	0.14603	0.11337	0.08293	0.18473	0.00000	0.00000	0.00000

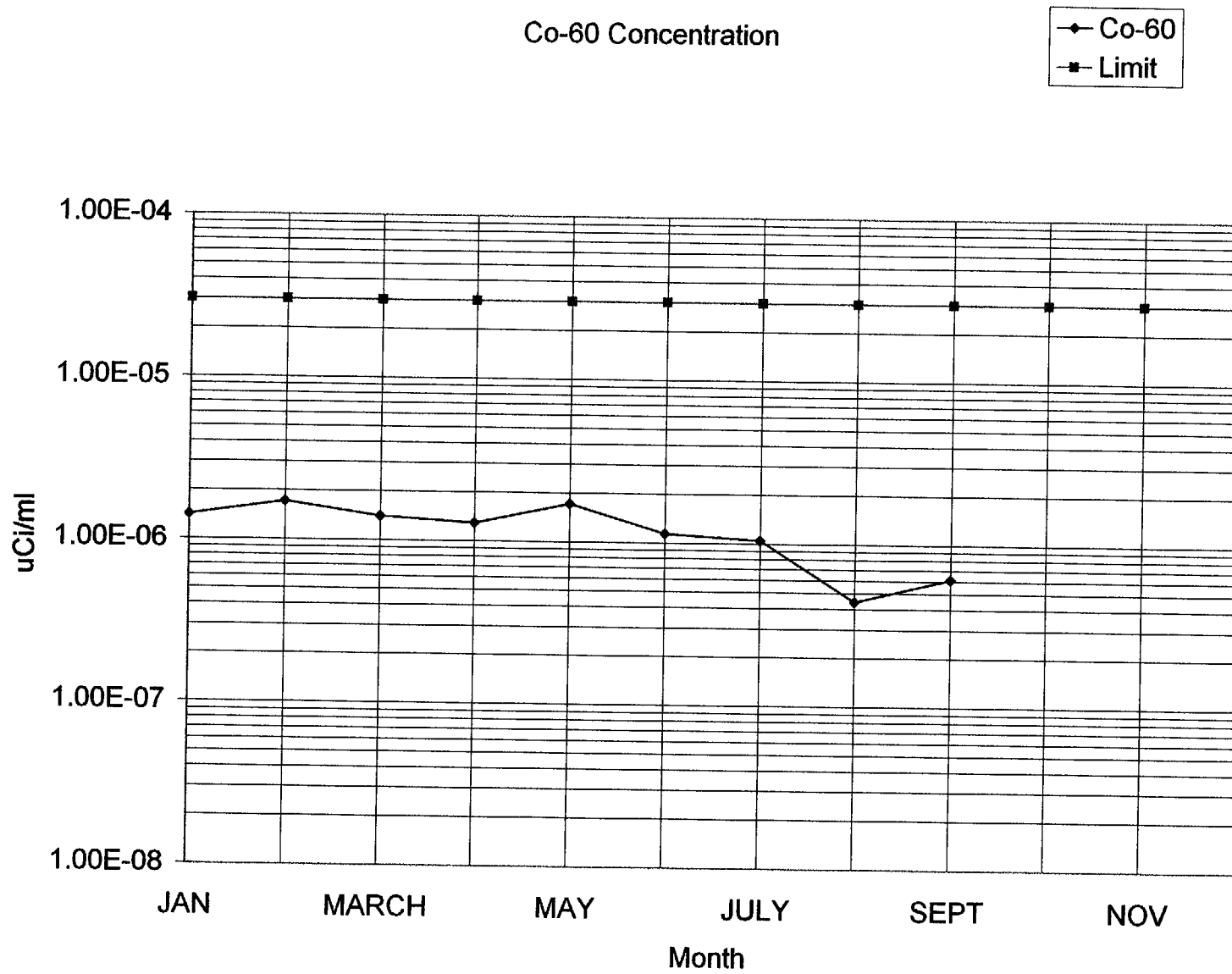
## Cs-137 Concentration



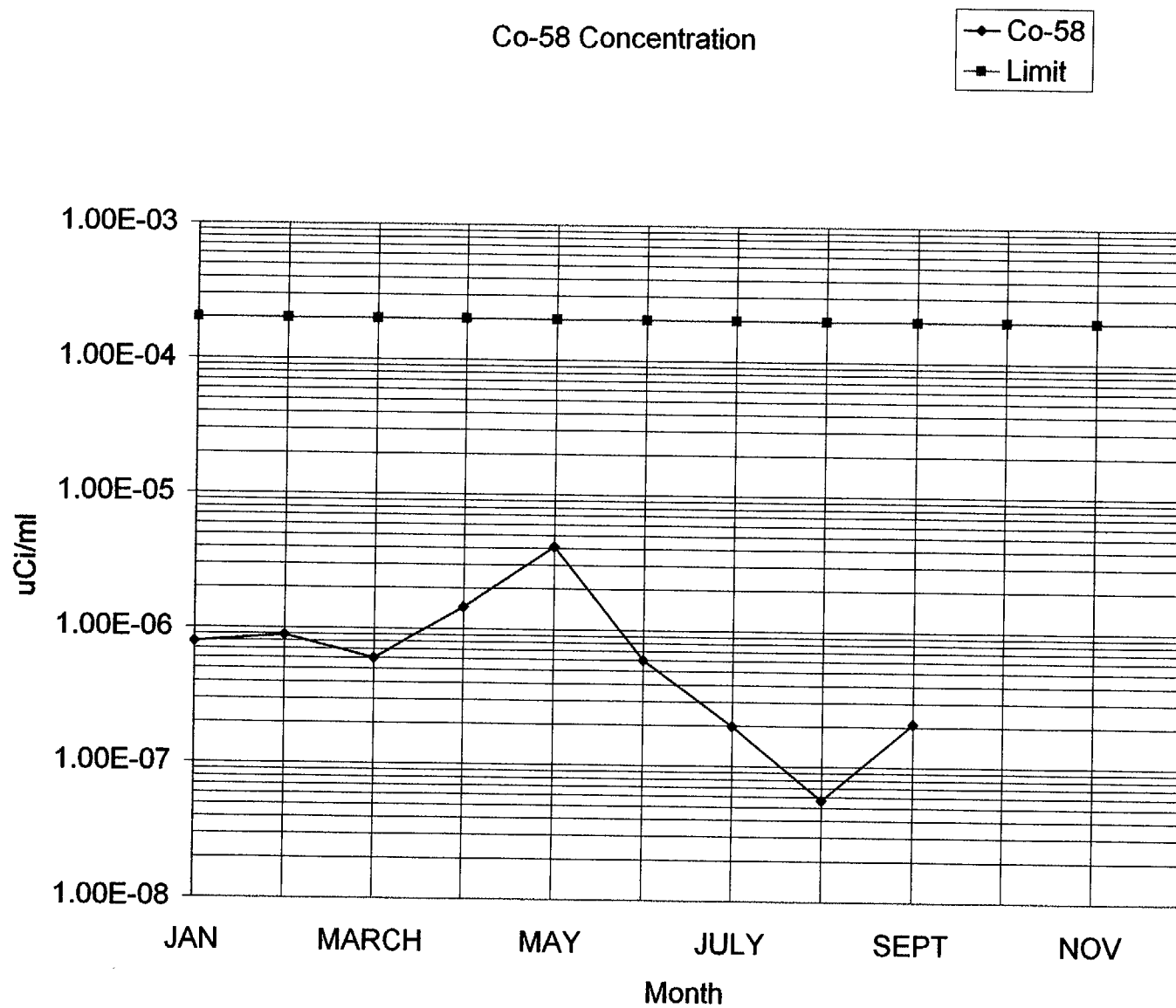
## Cs-134 Concentration



## Co-60 Concentration

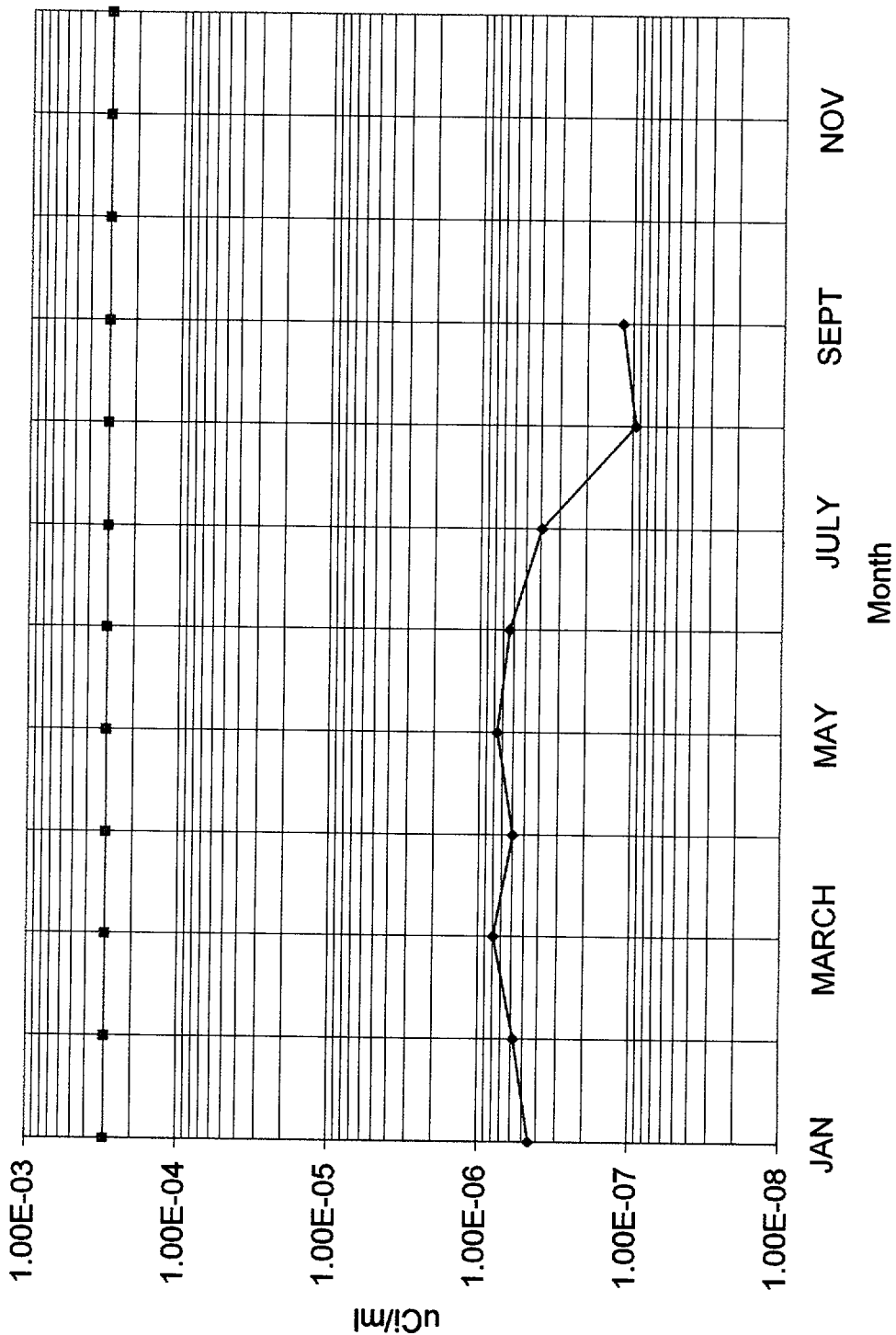


## Co-58 Concentration

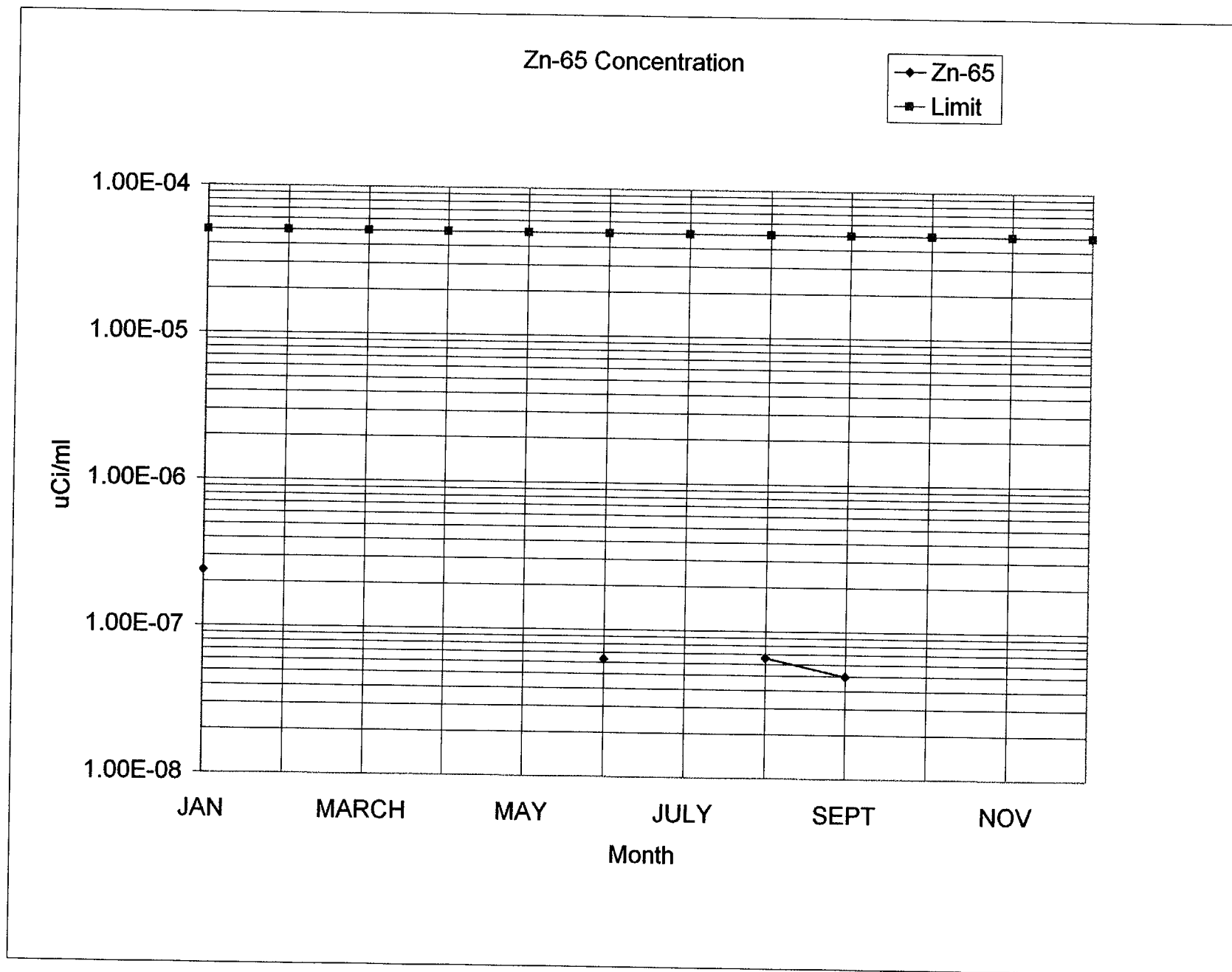


# Mn-54 Concentration

◆ Mn-54  
 ■ Limit







130800

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

12/26/2001, and to inform you that the initial processing which includes an administrative review has been performed.

☒ *NOTIFICATION 37-2334-01 (328 QTR 2001 REPORT)*  
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 130800.  
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

	:	(FOR LFMS USE)
	:	INFORMATION FROM LTS
BETWEEN:	:	-----
	:	
License Fee Management Branch, ARM	:	Program Code: 03218
and	:	Status Code: 0
Regional Licensing Sections	:	Fee Category: 6A
	:	Exp. Date: 20050831
	:	Fee Comments: CALIBRATION IS FOR THEM
	:	Decom Fin Assur Reqd: Y
	:	::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED  
 Applicant/Licensee: UNITECH SERVICES GROUP, INC.  
 Received Date: 20011227  
 Docket No: 3020934  
 Control No.: 130800  
 License No.: 37-23341-01  
 Action Type: Notifications

2. FEE ATTACHED  
 Amount:             
 Check No.:           

3. COMMENTS

Signed M. A. Perkins  
 Date 12/31/2001

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /\_\_ /)

1. Fee Category and Amount: \_\_\_\_\_

2. Correct Fee Paid. Application may be processed for:  
 Amendment \_\_\_\_\_  
 Renewal \_\_\_\_\_  
 License \_\_\_\_\_

3. OTHER \_\_\_\_\_  
 \_\_\_\_\_

Signed \_\_\_\_\_  
 Date \_\_\_\_\_