



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

September 11, 1979

Davis
file
K-M

NOTE TO: A. B. Davis

FROM: L. R. Greger

SUBJECT: TENTATIVE INSPECTION SCHEDULE DATED AUGUST 23, 1979

Reference: Your Note dated September 5, 1979

An inspection was conducted at Kerr-McGee in August for the specific purpose of reviewing procedures for dismantling one solvent extraction unit. A followup inspection is scheduled for September to review implementation of these procedures and observe the dismantling activities. No further decommissioning activities have been approved by NMSS. When additional decommissioning activities are approved, we will decide upon an inspection program and adjust our schedule as necessary.

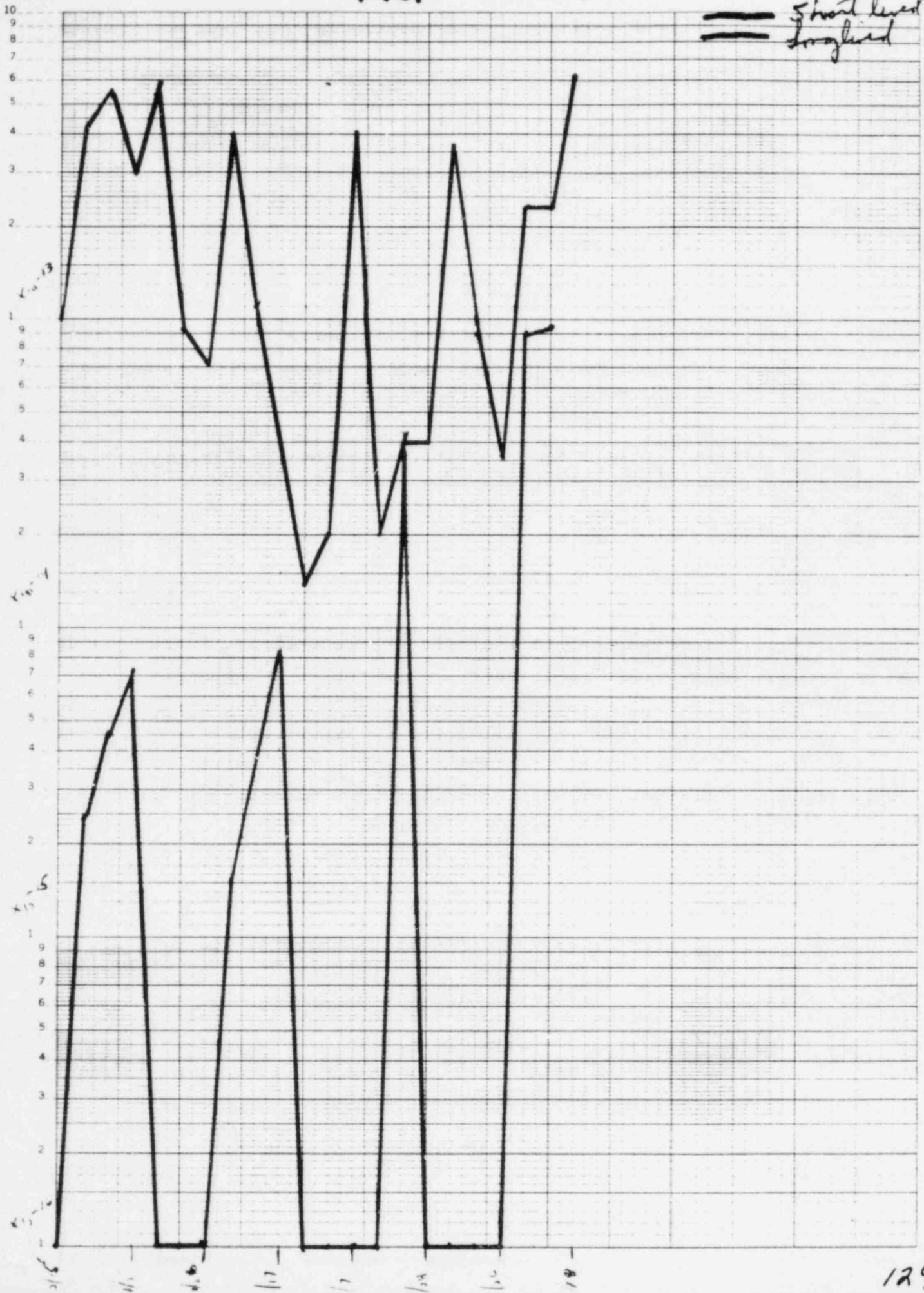
L. R. Greger, Acting Chief
Fuel Facility Projects and
Radiation Support Section

High School

== Short lived
== Long lived

NC/mol BETA

K-E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.



West Chicago High School

Sampling Period	an Concentration after		24 hour decay		% of no
	Stron alpha 10^{-13} uCi/ml	% of no	Stron Beta 10^{-13} uCi/ml	% of no	
10/9-15/79	5.3	27	1.0	0.1	
10/15-22/79	2.0	10	4.2	0.4	
10/22-29/79	5.4	27	5.4	0.1	
10/29-11/5/79	3.1	16	3.0	0.3	
11/5-13/79	3.1	16	5.9	1	
11/13-19/79	0.76	4	0.9	0.09	
11/19-26/79	0.45	2	0.73	0.07	
11/26-12/4/79	2.6	13	4.0	0.4	
12/4-10/79	4.2	21	1.11	0.1	
12/10-17/79	1.2	6	1.1	0.1	
12/17-26/79	1.2	6	BKLD	—	
12/26-1/2/80	0.25	1	4.1	0.4	

High School

Sampling Period	air concentration	after 24 hour decay		% of
	Gross alpha 10-13 uCi/ml	% of	Gross Beta	
1/2-7/80	BKGD *	7 day decay	BKGD *	
1/7-14/80	0.15	1.0	0.4	0.04
1/14-21/80	filter burned up			
1/21-28/80	0.5	3	3.7	0.3
1/28-2/4/80	0.5	3	0.97	0.09
2/4-11/80	0.09	0.4	0.37	0.04
2/11-19/80	0.58	3	2.3	0.2
2/19-26/80	initial count not performed			
2/26-3/4/80	1.25	6	6.26	1

West Chicago Jr High School

Sampling Period	Air Concentrations		after 24 hour decay		% of mpc
	Gross alpha 10 ⁻¹³ uCi/ml	% of mpc	Gross Beta 10 ⁻¹³ uCi/ml	% of mpc	
10/9 - 15/79	2.6	13	7.5	1	
10/15 - 22/79	0.7	4	2.6	0.2	
10/22 - 29/79	6.7	34	7.1	1	
10/29 - 11/5/79	2.5	13	2.4	0.2	
11/5 - 13/79	2.1	11	5.2	1	
11/13 - 19/79	0.6	3	0.9	0.09	
11/19 - 26/79	0.4	2	0.9	0.09	
11/26 - 12/4/79	2.9	15	4.9	0.5	
12/4 - 10/79	2.1	11	4.6	0.5	
12/10 - 17/79	1.7	9	2.2	0.2	
12/17 - 26/79	1.2	6	BKGD		
12/26 - 1/2/80	1.5	9	1.3	0.1	

J n High

Sampling Period	Brown alpha 10^{-13} u/sal	% of mpc	Brown Beta 10^{-13} u/sal	% of mpc
1/2 - 9/80	BKGD	* 7 day decay	BKGD *	
1/7 - 14/80	0.2	1	0.05	0.005
1/14 - 21/80	2.7	14	5.4	1
1/21 - 28/80	1.0	5	3.6	0.3
1/28 - 2/4/80	1.5	8	1.0	0.1
2/4 - 11/80	0.14	1	1.0	0.1
2/11 - 18/80	0.4	2	0.3	0.03
2/19 - 26/80	no initial count performed			
2/26 - 3/4/80	0.37	2	2.1	0.2

mPC's used

alpha - Th (nat)

Beta - unknown Beta

2×10^{-12} $\mu\text{Ci/ml}$

1×10^{-10} $\mu\text{Ci/ml}$

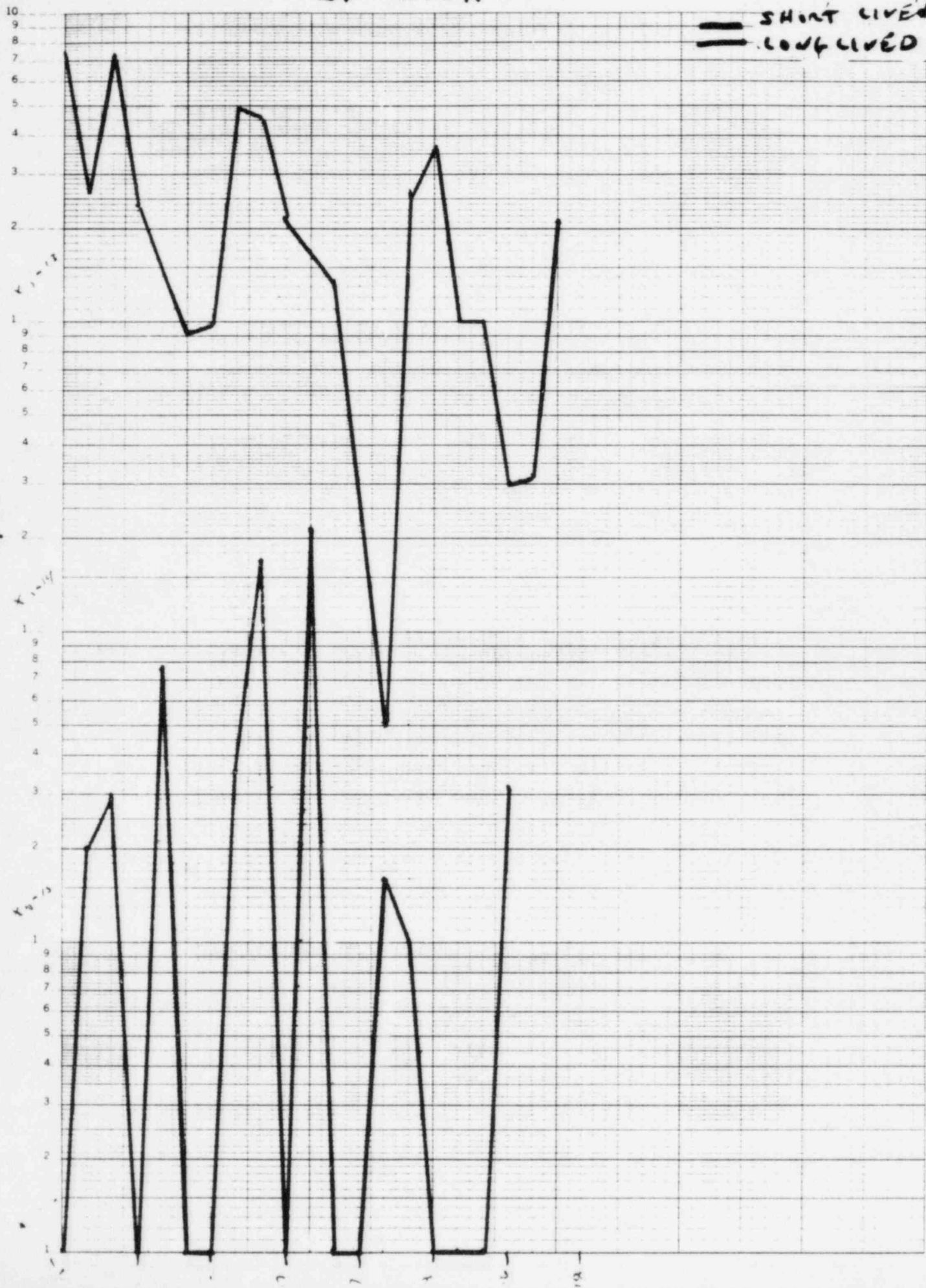
all recounts made 7 days later or ~~9~~ longer
were < 0.2 mPC

Jr HIGH

== SHORT LIVED
== LONG LIVED

u6/mol 46 6010 BeTa

K-E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.



Jr HIGH

Jr HIGH

== SHORT LINED
LONG LINED

10
9
8
7
6
5
4
3
2
1
0

$\times 10^{-13}$

$\times 10^{-11}$

1
9
8
7
6
5
4
3
2
1
0

$\times 10^{-10}$

$\times 10^{-16}$



46 6010

10/10/10

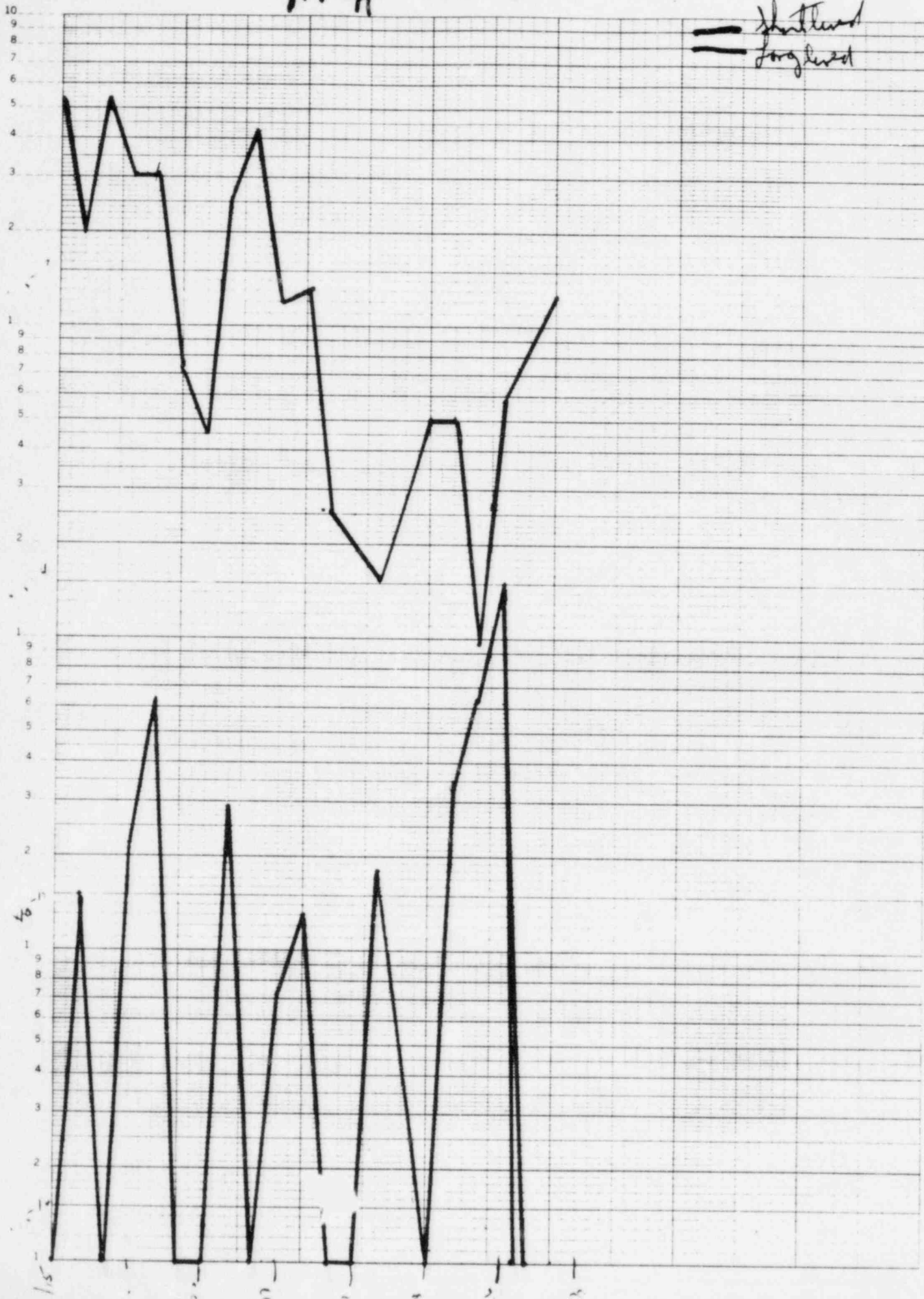
K-E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

High School

Shutland
Longwood

ncial Acctg

K-E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.



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WEST CHICAGO AIR SAMPLES - RUNNING DATA

a) ODD NUMBERED SAMPLES

- JR HIGH SCHOOL

b) EVEN NUMBERED SAMPLES

- HIGH SCHOOL

c) DATA (BKGD - YIELD - COUNTS) IN LAB ANALYSIS BOOK

d) TH (NAT); $CG = 2 \times 10^{-12} \mu\text{Ci/ml}$

e) UNKNOWN BETA; $CG = 1 \times 10^{-10} \mu\text{Ci/ml}$

SAMPLE No.	SAMPLE PERIOD	DATE COUNTED	TYPE	RESULTS ($\mu\text{Ci/ml}$)
1	10/9 - 15/79	10/16	α	2.65×10^{-13}
			β	7.51×10^{-13}
2	10/9 - 15/79	10/16	α	5.29×10^{-13}
			β	1.08×10^{-13}
1		10/23	α	BKGD
			β	BKGD
2		10/23	α	BKGD
			β	BKGD
3	10/15 - 22/79	10/23	α	7.05×10^{-14}
			β	2.64×10^{-13}
4	10/15 - 22/79	10/23	α	2.07×10^{-13}
			β	4.26×10^{-13}
3		10/30	α	BKGD
			β	2.04×10^{-15}
4		10/30	α	1.53×10^{-15}
			β	2.40×10^{-15}
5	10/22 - 24/79	10/30	α	6.76×10^{-13}
			β	7.11×10^{-13}
6	10/22 - 24/79	10/30	α	5.42×10^{-13}
			β	5.46×10^{-13}

α avg $2.4 \times 10^{-13} \mu\text{Ci/ml}$
 0.02 pCi/m^3

β avg ~~0.02~~ $3 \times 10^{-13} \mu\text{Ci/ml}$
 0.03 pCi/m^3

5		"/6	α	BKGD
			β	2.87×10^{-14}
6		"/6	α	BKGD
			β	4.51×10^{-15}
7	"/29 - "/5/79	"/6	α	2.49×10^{-13}
			β	2.37×10^{-13}
8	"/29 - "/5/79	"/6	α	3.13×10^{-13}
			β	3.05×10^{-13}
7		"/14	α	BKGD
			β	BKGD
8		"/14	α	2.23×10^{-15}
			β	7.28×10^{-15}
9	⊕ "/5-13/79	"/14	α	2.12×10^{-13}
			β	5.18×10^{-13}
10	⊕ "/5-13/79	"/14	α	3.12×10^{-13}
			β	5.94×10^{-13}
9		"/22	α	3.24×10^{-15}
			β	7.77×10^{-15}
10		"/22	α	6.23×10^{-15}
			β	BKGD
11	"/13-19/79	"/22	α	6.24×10^{-14}
			β	9.82×10^{-14}
12	"/13-19/79	"/22	α	7.58×10^{-14}
			β	9.13×10^{-14}
11		"/27	α	BKGD
			β	BKGD
12		"/27	α	BKGD
			β	BKGD
13	"/19-26/79	"/27	α	3.96×10^{-14}
			β	9.88×10^{-14}
14	"/19-26/79	"/27	α	4.57×10^{-14}
			β	7.24×10^{-14}

⊕ SAMPLES RUN FOR 8 DAYS DUE TO FEDERAL HOLIDAY "/12

13		12/5	α	BKGD
			β	BKGD
14		12/5	α	BKGD
			β	8.34×10^{-15}
15	④ 11/26-12/4/79	12/5	α	2.93×10^{-13}
			β	4.89×10^{-13}
16	④ 11/26-12/4/79	12/5	α	2.57×10^{-13}
			β	4.08×10^{-13}
15		12/11	α	BKGD
			β	3.67×10^{-15}
16		12/11	α	2.78×10^{-15}
			β	1.53×10^{-15}
17	12/4-10/79	12/11	α	2.17×10^{-13}
			β	4.65×10^{-13}
18	12/4-10/79	12/11	α	4.23×10^{-13}
			β	1.11×10^{-13}
17		12/18	α	BKGD
			β	1.73×10^{-14}
18		12/18	α	BKGD
			β	8.45×10^{-15}
19	12/10-17/79	12/18	α	1.75×10^{-13}
			β	2.2×10^{-13}
20	12/10-17/79	12/18	α	1.23×10^{-13}
			β	1.16×10^{-13}
19		12/27	α	7.3×10^{-16}
			β	BKGD
20		12/27	α	7.3×10^{-16}
			β	1.43×10^{-14}
21	④ 12/17-24/79	12/27	α	1.22×10^{-13}
			β	BKGD
22	④ 12/17-24/79	12/27	α	1.27×10^{-13}
			β	BKGD

④ SAMPLES RUN FOR 8 DAYS ④ SAMPLES RUN FOR 4 DAYS

21		$1/3$	α	2.87×10^{-15}
			β	2.16×10^{-14}
22		$1/3$	α	1.28×10^{-15}
			β	4.41×10^{-14}
23	$12/26 - 1/2/80$	$1/3$	α	1.52×10^{-13}
			β	1.29×10^{-13}
24	$1/26 - 1/2/80$	$1/3$	α	2.55×10^{-14}
			β	4.17×10^{-13}
23		$1/14$	α	BKGD
			β	BKGD
24		$1/14$	α	BKGD
			β	6.1×10^{-15}
25	$1/2 - 7/80$	$1/14$	α	BKGD
			β	BKGD
26	$1/2 - 7/80$	$1/14$	α	BKGD
			β	BKGD
25		$1/17$	α	BKGD
			β	BKGD
26		$1/17$	α	BKGD
			β	BKGD
27	$1/7 - 14/80$	$1/17$	α	1.96×10^{-14}
			β	4.97×10^{-15}
28	$1/7 - 14/80$	$1/17$	α	1.54×10^{-14}
			β	4.05×10^{-14}
27		$1/22$	α	2.69×10^{-15}
			β	1.59×10^{-14}
28		$1/22$	α	1.81×10^{-15}
			β	4.17×10^{-14}
29	$1/14 - 21/80$	$1/22$	α	2.77×10^{-13}
			β	5.4×10^{-13}
30	AIR SAMPLER MOTOR BURNED OUT DURING SAMPLING PERIOD			

29		$1/29$	α	1.69×10^{-15}
			β	1.08×10^{-15}
30		$1/29$	α	—
			β	—
31	$1/21 - 28/80$	$1/29$	α	1.0×10^{-13}
			β	3.59×10^{-13}
32	$1/21 - 28/80$	$1/29$	α	4.89×10^{-14}
			β	3.69×10^{-13}
31	No recount performed			
32	" " "			
33	$1/28 - 2/4/80$	$2/5$	α	1.55×10^{-13}
			β	1.03×10^{-13}
34	$1/28 - 2/4/80$	$2/5$	α	5.0×10^{-14}
			β	9.71×10^{-14}
33		$2/20$	α	2.71×10^{-16}
			β	BK48
34		$2/20$	α	3.34×10^{-15}
			β	BK62
35	$2/4 - 11/80$	$2/13$	α	1.39×10^{-14}
			β	1.08×10^{-13}
36	$2/4 - 11/80$	$2/13$	α	9.57×10^{-15}
			β	3.68×10^{-14}
35		$2/20$	α	6.81×10^{-15}
			β	BK68
36		$2/20$	α	6.40×10^{-15}
			β	BK62
37	$2/11 - 14/80$	$2/20$	α	4.07×10^{-14}
			β	3.04×10^{-14}
38	$2/11 - 14/80$	$2/20$	α	5.87×10^{-14}
			β	2.33×10^{-13}

37		2/26	α	8.08×10^{-14}
			β	2.24×10^{-13}
38		2/26	α	1.50×10^{-14}
			β	9.05×10^{-14}
39	2/19-26/80	no initial count performed		
40	2/19-26/80	"	"	"
39		3/5	α	BKGD
			β	3.13×10^{-14}
40		3/5	α	2.4×10^{-15}
			β	9.68×10^{-14}
41	2/26-3/4/80	3/5	α	3.69×10^{-14}
			β	2.14×10^{-13}
42	2/26-3/4/80	3/5	α	1.25×10^{-13}
			β	6.26×10^{-13}
41				
42				
43				
44				
43				
44				
45				
46				