OH. 43-3

OUTPLANT-1961

NLO

NATIONAL LEAD COMPANY OF OHIO

HEALTH AND SAFETY DIVISION – ANALYTICAL DEPT.

ANALYTICAL DATA SHEET

INDUSTRIAL HYGIENE AND RADIATION DEPT.					ANALYTICAL CHEMISTRY SECTION	
I. H. NO.	SAMPLE NOS.:	DATE COLLECTED:	BY:	ROUTE TO:	DATE RECEIVED:	BY:
720	8	8/5-8/6/61	DF	DF	8-10-61	
LOCATION:		TYPE OF SAMPLE:			DATE REPORTED:	BY:
Ajax-Magnethermic Corp.		urine			8-11-61	

ANALYZED FOR

	F		Alpha
x	U		Beta
	NO_3		Ra
	Oil		pH
	Be		Th
	Cl		TSS

REMARKS:

8/5/61 (Saturday and 8/6/61(Sunday)urine specimen of the four employees in the vicinity of the vacuum cleaner-bag reuption *denotes those employees closest to the plume of black oxide.

METHOD OF ANALYSIS:

BY:

COUNTING DATA:

BKGD GEO

SAMPLE NO.	HOUR	SAMPLE DESCRIPTION	R	T	Q		mg/l		
1-A	11:15	2nd urine (1st urine at 0730)					0.008		
1-B	11:30	2nd urine (1st urine at 0720)					0.018		
2-A*	10:10	2nd urine (1st urine at 0605)					0.017		
2-B*	12:15	2nd urine (1st urinat 1030)					0.016		
3-A	9:15	2nd urine (1st urine at 0700)					0.011		
3-B	11:10	2nd urine (1st urine at 0925)					0.013		
4-A*	9:00	2nd urine (1st urine at 0730)					0.019		
4-B*	10:10	2nd urine (1st urine at 0600)					0.026		

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INDUSTRIAL HYGIENE AND RADIATION DEPT.					ANALYTICAL CHEMISTRY SECTION	
I.H. NO. 707	SAMPLE NOS.: 4	DATE COLLECTED: 8-4-61	BY: DF	ROUTE TO: DF	DATE RECEIVED: 8-7-61	BY:
LOCATION: AJAX - Magnethermic Corp.		TYPE OF SAMPLE: AIRBLAST			DATE REPORTED: 8-11-61	BY:
REMARKS: No handling of radioactive materials.					METHOD OF ANALYSIS: MAC #2 1:20 8-9-61	BY:
					COUNTING DATA: BKGD .13 c/m	GEO 43%

ANALYZED FOR			
	F	X	Alpha
	U		Beta
	NO_3		Ra
	Oil		pH
	Be		Th
	Cl		TSS

SAMPLE NO.	HOUR	SAMPLE DESCRIPTION	R	T	Q	c	t	c/m	dpm/m^3
4285	0752	GA - at site of incident	.30	15		14	30	0.34	<1
4284	0808	GA - Same as 4285	.30	15		8	30	.14	<1
4283	0833	GA - 15' away	.30	15		6	30	.07	<1
4282	0853	GA - Same as 4283	.30	15		9	30	.17	<1

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INDUSTRIAL HYGIENE AND RADIATION DEPT.					ANALYTICAL CHEMISTRY SECTION	
H. NO. 465	SAMPLE NOS.: 15	DATE COLLECTED: 5/23/61	BY: DF	ROUTE TO: DF	DATE RECEIVED: 5-26-61	BY:
LOCATION: Ajax-Mangethermic		TYPE OF SAMPLE: air dust	ANALYZED FOR		DATE REPORTED: 6-1-61	BY:
REMARKS: Industion heat treating of 1.6" x 18" uranium hollow billets with a 4" x 4" circular copper coil (preparatory for future tests-project M-10-5-7- with GFM Forming Maching - at Ithaca, NY)			F, U, NO_3, Oil, Be, Cl	Alpha (x), Beta (x), Ra, pH, Th, TSS	METHOD OF ANALYSIS: MAC#1 12:25 5-26-61	BY:
					COUNTING DATA: BKGD .27 c/m	GEO 40%

SAMPLE NO.	HOUR	SAMPLE DESCRIPTION	R	T	Q	c	t	c/m	DPM/m³
750	0757	BKGD-before any testing above vertical scanner.-GA	.30	15	4.5	6	30.00	ND	ND
749		(hollow 1.6" x 18" billet in pos). Same as 750	.30	15	4.5	9	30.00	.03	.02
748	0802	Bkgd-drill press - GA	.30	15	4.5	12	30.00	.13	.10
747		Same as 748	.30	15	4.5	4	30.00	ND	ND
746		BZ-drilling thermo holes (5)	MAC#1 .30	10:10 2.5	5-29-61 B .75	.27 c/m 89	GEO 40 13.00	6.58	31
745		same as 746	.30	1.5	.45	18	30.00	.33	3
744		BZ-appl. of heat	.30	2	.60	28	30.00	.66	4
743		Process 6" from top of coil	.30	3	.90	111	30.00	3.43	14
742		Process 3" from top of coil	.30	3	.90	344	30.00	11.20	44
741		Process 5" above coil	.30	3	.90	20	30.00	.40	2
740		GA-12" away	.30	15	4.5	26	30.00	.60	.50
739		GA-quenching operation	.30	2	.60	3330	10.00	332.73	1981
738		Process same as 741	.30	5	1.5	148	7.00	20.87	50
737		BZ-during heat application	.30	3	.90	51	30.00	1.43	6
736		BZ-same as 739	.30	1	.30	659	6.00	109.56	1304

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ANALYTICAL DATA SHEET

INDUSTRIAL HYGIENE AND RADIATION DEPT.					ANALYTICAL CHEMISTRY SECTION	
I.H. NO. 464	SAMPLE NOS.: 9	DATE COLLECTED: 5/24/61	BY: DF	ROUTE TO: DF	DATE RECEIVED: 5-26-61	BY:
LOCATION: Ajaz magnethermic		TYPE OF SAMPLE: air dust			DATE REPORTED: 6-1-61	BY:
REMARKS: Induction heat testing of NLO coil (3 pt.) 4 uranium slugs (solid 1 7/16" x 8 3/8") heat unit positioned on ~~back~~ box-coil 2 ft. from floor.					METHOD OF ANALYSIS: MAC#2 12:25 5-26-61	BY:
					COUNTING DATA: BKGD .26 c/m	GEO 41%

ANALYZED FOR			
	F	x	Alpha
	U	x	Beta
	NO_3		Ra
	Oil		pH
	Be		Th
	Cl		TSS

SAMPLE NO.	HOUR	SAMPLE DESCRIPTION	R	T	Q	c.	t	c/m	DPM/m³
735	0850	BKGD from horizontal apparatus 3 ft. away	.30	15	4.5	9	30.00	.04	.03
734	0850	BKGD from horizontal apparatus 5 ft. away	.30	15	4.5	8	30.00	.01	.007
733		Process 3" above end of coil of fumes.	.30	3	.9	28	30.00	.67	3
		10:50 5-29-61 BKGD .20 c/m GEO 40% applied.							
~~Box~~ 730		GA-5" diag.above coil;one heat	.30	13	3.9	11.	30.00	.17	.2
731	GA-3" away-after heat appl.(residual)		.30	15	4.5	55	30.00	1.63	1.3
732		BZ-quenching of 4 slugs	.30	2.5	7.5	2486	30.00	82.67	39
729		BZ-2" away from coil	.30	2	.60	27	30.00	.70	4
728		GA-3" away, same as 731	.30	15	4.5	78	16.00	4.68	4
727		(1.6" x 18") BZ-quenching hot billet	.30	1.5	.45	34563	30.00	1151.90	9142

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OFFSITE 1960

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HEALTH AND SAFETY DIVISION – ANALYTICAL DEPT.

ANALYTICAL DATA SHEET

INDUSTRIAL HYGIENE AND RADIATION DEPT.					ANALYTICAL CHEMISTRY SECTION	
I.H. NO. 83	SAMPLE NOS.: 18	DATE COLLECTED: 2/29/60	BY: JM	ROUTE TO: JM	DATE RECEIVED: 3-9-60	BY: RP
LOCATION: AJAX-MAGNETHERMIC		TYPE OF SAMPLE: air dust			DATE REPORTED: 3-11-60	BY:

ANALYZED FOR			
	F	X	Alpha
	U		Beta
	NO_3		Ra
	Oil		pH
	Be		Th

REMARKS: Samples were taken at slug heat treating operation in Youngstown, Ohio. The operation will be carried out at NLO; however, the air dust level will be much lower because the amount of oxide on these slugs was very great and no ventilation was provided during this sampling period. Very little movement in area to cause air currents (windows closed). Total of 24 slugs heated.

METHOD OF ANALYSIS: ASC # 3

10:00 3-10-60 BY:

COUNTING DATA: BKGD .17 c/m GEO 40%

SAMPLE NO.	HOUR	SAMPLE DESCRIPTION	R	T	Q	Count	Time	c/m	d/m/m3
4728	1135	Entrance of coil (utilizing vacuum cleaner)	.02	3	.06	6	16.50	.19	11
4729	1135	Exit of coil (utilizing vacuum cleaner)	.02	3	.06	4	25.00	nd	nd
4730	1135	Control (utilizing vacuum cleaner)	.02	3	.06	2	15.00	nd	nd
4731	1150	Entrance of coil (utilizing vacuum cleaner)	.02	3	.06	11	15.00	.56	33
4732	1150	Exit of coil (utilizing vacuum cleaner)	.02	3	.06	6	18.00	.16	10
4733	1150	Entrance of coil (utilizing vacuum cleaner)	.02	3	.06	3	16.50	.01	1
4734	1150	Exit of coil (utilizing vacuum cleaner)	.02	3	.06	7	19.00	.20	12
4735	1150	Entrance side of vacuum exhaust from coil exit.	.02	3	.06	4	16.50	.07	4
						.17 c/m		41%	
4736	1150	Exit side of vacuum exhaust from coil exit.	.02	3	.06	12	15.00	.63	37
4737	1215	Exit side of coil without use of vacuum.	.02	3	.06	32	4.34	7.20	418
4738	1215	Entrance side of coil without use of vacuum.	.02	3	.06	32	.94	33.87	1967
4739	1230	Quench operation on 20 slugs (steam and transport)	.02	3	.06	32	.80	39.83	2313
4740	1230	Control	.02	3	.06	3	15.00	.03	2
4741	1530	Control (?)	.02	3	.06	2	17.00	nd	nd
4742	1530	Slug cooling (output end) 12 slugs on tray	.02	2	.04	32	1.61	19.71	1717
4743	1530	Cooling of 12 slugs on tray	.02	2	.04	29	17.50	1.49	129
4744	1545		.02	2	.04	32	12.43	2.40	209
4745	1545		.02	2	.04	19	23.00	.66	57

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