U-006-307.21

4944

WASTE WATER QUALITY REPORTS, NPDES PERMIT PARAMETERS AND DATA SUMMARIES 1979 TO 1983

NO DATE

NLO/-
250
REPORT
OU4

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Pa

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of January 1979

DATE	MANHOLE.– 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREAT FECAL COLIFORM NO/100ML	SUS SOLI mg/	2243132	ARWE US. IDS /l
1	1.280		300	11		43	0.8				8.6	10	<5	7.5				
2	1.198		1940	330		150	2.7				8.4	6	<5	7.8				<4
3	.509		788	52	24	60	1.1		0.5	<5	7.4					8	11.4	
4	.574	.38	910	95		72	1.8				7.5				0			5
5	.588		1270	130		199	1.6				7.4							5
6	.451		670	41		122	1.0				7.4							<4
7	.437		500	23		61	0.7				7.5							
8	.468		590	17		101	0.6				7.5							
9	.450		370	25		46	0.7				8.6							
10	.350		480	20	10	47	1.0				8.6						9.3	
11	.554	.44	940	81		159	1.2				7.5				0	5		<4
12	.454		960	104		69	1.4				7.3							<4
13	.300		1300	29		212	1.1				7.6		<5					<4
14	.758		1300	15		299	0.8				8.9	13		7.8				
15	.496		1400	90		147	1.3				9.2							<4
16	.307		1050	47		285	1.0				7.7							<4
17	.329		725	14	<5	110	0.9				7.7				0	6	8.5	
18	.670	.48	740	59		133	1.2				8.4	17	<5	8.0				7
19	.547		1640	290		108	2.2				7.5							5
20	.604		1530	61		566	1.0				7.3							8
21	1.160		690	38		253	0.9				7.4	12	<5	7.6				6
22	.845		1390	150		190	1.4				7.4							6
23	.806		1620	280		173	2.1	0.03			8.9							5
24	.827		500	23	<5	74	1.1			<5	7.6	13	<5	7.6				
25	.686	.47	800	110		100	1.3				8.7				0		11.2	14
26	.493		1110	200		99	1.8				8.0							8
27	.467		1650	320		112	2.3				7.5							6
28	.574		1090	150		133	1.4				7.7							6
29	.586		1210	150		148	1.3				7.7							4
30	.611		1090	130		168	1.2				7.9							5
31	.466		580	18	<5	115	0.7				7.4					5	9.5	
AVG.[1]	0.61	0.4	1020	108	10	150	1	0.03	0.5	<5		10	<5		0	6	10	6
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-H&S-351 (REV. 9/15/77)

03901175

-449

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of January 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l		
1	1.52	0.006	<0.01	0.18	1.89	0.8	7.7		10.4	17		
2	2.06	Comp.	Comp.	Comp.	2.72	6.6	8.8		9.3	6		
3	1.24	12/5/78	11/7 -	11/7 -	1.57	1.2	8.4		9.0	25		
4	1.46	1/1/79	11/20	12/4	1.57	1.8	8.6	0	8.6	11		
5	1.98				2.46	0.4	8.8		9.8	35		
6	1.16				1.24	1.2	8.2		9.0	8		
7	.70				1.12	0.4	7.9		9.3	10		
8	.58				.78	0.2	8.0		8.6	94		
9	.42				.61	0.2	8.1		8.8	51		
10	.52				.46	0.5	8.0		8.9	50		
11	1.18				1.40	1.8	8.6	0	9.1	58		
12	1.82				1.50	3.7	8.7		8.2	122		
13	.94				1.10	0.8	8.2		9.5	76		
14	1.96				2.08	0.1	7.9		11.3	78		
15	2.70		<0.01		2.37	2.6	8.5		8.3	71		
16	.98		Comp.		1.40	1.4	8.2	0	9.6	55		
17	.60		11/21 -		.96	0.1	7.9		8.8	83		
18	1.56		12/4		1.52	2.2	8.5		9.0	61		
19	1.95				2.47	8.0	8.6		9.3	5		
20	.98				1.06	1.6	8.2		10.0	14		
21	1.54				1.76	1.4	8.1		10.0	19		
22	2.08				1.57	4.0	8.6		8.4	30		
23	1.76				1.70	7.6	8.6		10.4	24		
24	1.40				1.32	0.9	8.0		9.0	86		
25	1.58				1.98	2.7	8.6	100	8.8	108		
26	1.64				1.34	5.5	8.7		8.7	512		
27	2.28				1.99	8.3	8.7		8.7	193		
28	1.26				1.06	4.0	8.7		9.1	242		
29	1.72				1.28	3.5	8.8		9.1	87		
30	1.12				1.17	3.1	8.8		8.2	112		
31	.54				.52	0.2	8.1		8.4	47		
AVG.[1]	1.39				1.58	2.5		3 [2]	9.2	77		
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (MO. GEO. MEAN)	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

NLO-H&S-351 (REV. 9/15/77)

3390116

1-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Po

WASTE WATER QUALITY REPORT: General Data

For the Month of January 1979

DATE	RIVER	PRECIPITATION		AIR TEMPERATURE		WATER TEMP., MH-175		DISSOLVED SOLIDS, mg/l			
	FLOW CFS	INCHES, AS WATER	CONDITION	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	TIME RECORDED	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEW LIFT STATION
1	21250	1.20	Rain	59	30	48	0500	*	1700		196
2	29050	.01	Snow	30	3	55	2100	7186	2159		140
3	23090			15	0	54	2100	*	1943	251	490
4	15370			22	12	56	1700	2875	2159		665
5	5945	.10	Snow	20	4	56	1700	3234	2159		543
6	4350	.04	Snow	22	8	58	1700	3683	2483		1190
7	4110	.54	Snow	23	18	58	0500	*	1728		735
8	3580			19	-2	57	1700	*	1728		403
9	3250			24	-2	56	2100	*	1943		473
10	2820			17	-11	54	2100	*	1296		508
11	2615			15	3	58	0900	2919	972	252	543
12	2630			28	14	58	1700	3369	1242		560
13	2570	.11	Rain	43	25	56	0900	3234	1350		1150
14	2980	.04	Rain &	42	0	48	0200	3503	*		1650
15	2967		Snow	17	-7	49	2200	3593	*		1000
16	2480			40	8	50	0200	3593	621		595
17	2510	.03	Rain	42	28	53	0500	*	800	616	850
18	3130			30	16	54	1800	3818	1377		333
19	2665	.08	Rain	32	20	54	1800	4042	783		560
20	2335	.20	Rain	40	33	54	0500	4941	756		2625
21	2050	.26	Rain &	37	28	47	2100	4941	2159		2458
22	3900		Snow	31	24	52	0500	4716	*		560
23	3132			43	22	48	1800	4492	1296		735
24	3261	.35	Rain &	38	18	50	0500	*	1150	356	475
25	4335		Snow	26	16	50	2100	4492	837		490
26	3130			27	15	50	0900	4492	*		560
27	2800	.25	Snow	30	20	48	2100	4492	*		648
28	2650	.03	Snow	33	23	48	All Day	4441	*		455
29	2360			24	20	52	0500	4671	2321		490
30	2380			34	16	51	1000	4671	1620		1050
31	2360	.09	Snow	26	12	50	2200	*	1269	281	1085
AVG.[1]	5550	3.33[2]						4154	1514	351	781

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.

0390111

4944

NLO-H&S-391 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

BLL06EC

MWB 2/13

For the Month of JANUARY, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	21250	1.280		*	1700		196	300	10.4	48	0500	102200	
2	29080	1.198		7186	2159		140	1940	9.3	55	2100	107500	
3	23090	.509		*	1943	251	490	788	9.0	54	2100	92900	
4	15370	.574	0	2875	2159		665	910	8.6	56	1700	86300	
5	5946	.588		3234	2159		543	1270	9.8	56	1700	76300	
6	4350	.451		3683	2483		1190	670	9.0	58	1700	68000	
7	4110	.437		*	1728		735	500	9.3	58	0500	51300	
8	3580	.468		*	1728		403	590	8.6	57	1700	36600	
9	3250	.450		*	1943		473	370	8.8	56	2100	63000	
10	2820	.350		*	1296		508	480	8.9	54	2100	67100	
11	2615	.554	0	2919	972	252	543	940	9.1	58	0900	69600	
12	2630	.454		3369	1242		560	960	8.2	58	1700	70400	
13	2570	.300		3234	1350		1150	1300	9.5	56	0900	73100	
14	2980	.758		3503	*		1650	1300	11.3	48	0200	60800	
15	2967	.496		3593	*		1000	1400	8.3	49	2200	54000	
16	2480	.307	0	3593	621		595	1050	9.6	50	0200	77100	
17	2510	.329		*	800	616	850	725	8.8	53	0500	74500	
18	3130	.670		3818	1377		333	740	9.0	54	1800	87800	
19	2665	.547		4042	783		560	1640	9.3	54	1800	85700	
20	2335	.604		4941	756		2625	1530	10.0	54	0500	86000	
21	2050	1.160		4941	2159		2458	690	10.0	47	2100	114000	
22	3900	.845		4716	*		560	1390	8.4	52	0500	86300	
23	3132	.806		4492	1296		735	1620	10.4	48	1800	95500	
24	3261	.827		*	1150	356	475	500	9.0	50	0500	52000	
25	4335	.686	100	4492	837		490	800	8.8	50	2100	121600	
26	3130	.493		4492	*		560	1110	8.7	50	0900	164000	
27	2800	.467		4492	*		648	1650	8.7	48	2100	84900	
28	2650	.574		4441	*		455	1090	9.1	48	All Day	64200	
29	2360	.586		4671	2321		490	1210	9.1	52	0500	57400	
30	2380	.611		4671	1620		1050	1090	8.2	51	1000	92900	
31	2360	.466		*	1269	281	1085	580	8.4	50	2200	101000	

NOTES:

* Not pumped this date

4

NLO-ENG-2456 (1/16/76)

Summary

With two exceptions, wastewater quality met all limits and target values during January. The two exceptions were the chloride and radium-228 concentrations at Manhole-175.

On January 20, the chloride concentration at MH-175 was 566 mg/ℓ. The NPDES daily maximum is 350 mg/ℓ. Oak Ridge was informed but there was no formal violation report since OR previously decided that chloride violations due to road salt carry-off would not be formally handled like other violations. However, the occurrence will be counted as a violation in the quarterly NPDES report.

A radium-228 concentration of 0.18 d/m/mℓ is reported for the four-week period from November 7 to December 4, 1978. The FMPC target value is 0.066 d/m/mℓ.

NATIONAL LEAD COMPANY OF OHIO 0390770
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February 1979

2243131

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT PL FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	5-DA BOD mg/l	[illegible]
1	0.501	.29	1370	200		191	0.7				7.8							6
2	.519		1410	280		117	1.7				8.8							<4
3	.464		1390	240		113	1.5				9.0							<4
4	.442		1870	280		213	1.7				9.1							4
5	.380		1960	400	<5	186	2.0		0.1		9.0							5
6	.430		1800	320		201	2.0				7.4							5
7	.346		510	22		72	1.4			<5	8.6					4	9.73	
8	.436	.30	320	220		201	2.0				7.3				2			4
9	.413		1190	220		133	2.2				7.4							6
10	.433		490	16		118	0.9				8.3							
11	.361		490	21		32	1.2				8.0							
12	.450		590	24		37	0.7				8.2							
13	.516		1090	120		154	1.8				8.4							5
14	.464		775	23	10	117	0.7				7.5					4	9.17	
15	.561	.41	820	110		167	1.7				8.5				8			4
16	.857		868	11		369	0.9				7.4							
17	.613		480	19		124	1.0				7.4							
18	.605		670	12		141	0.5				7.4							
19	.447		430	22		60	0.5				8.1							
20	.520		420	12		109	0.5				7.7							
21	.742		480	17	<5	127	0.6	0.03			7.4	10	<5	7.5		4	8.83	
22	1.010	.29	870	110		104	1.8				7.5	12	<5	8.1	15			<4
23	1.143		700	45		101	1.4				8.6	19	<5	7.9				7
24	1.042		940	95		126	1.7				7.5	14	<5	7.6				10
25	.606		640	14		129	0.9				7.8	23	<5	7.7				
26	.667		1830	240		221	2.2				7.6	11	<5	7.7				6
27	.617		1650	190		261	1.9				8.4							7
28	.903		870	40	17	205	1.0				9.0	9	<5	7.8		3	9.9	
29																		
30																		
31																		
AVG.[1]	0.59	0.3	980	107	10	155	1	0.03	0.1	<5		14	<5		10	4	9	5
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

ILO-H&S-351 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of February 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l		
1	1.10	0.002	<0.01	0.085	1.17	4.3	8.9	80	8.0	38		
2	1.76	Comp.	Comp.	Comp.	1.59	7.2	9.0		8.8	16		
3	1.38	1/2-	12/5-	12/5/78-	1.26	6.0	9.0		11.8	<4		
4	1.36	1/29	12/18	1/1/79	1.05	6.8	9.0		7.5	<4		
5	1.68				1.34	9.2	9.1		8.2	124		
6	1.30				1.43	7.3	9.0		9.3	13		
7	.62				.78	.8	8.3		7.3	5		
8	1.46				1.58	5.7	9.1	6	8.4	6		
9	1.32				1.13	7.2	9.0		8.1	10		
10	.46				.65	.5	8.3		10.2	9		
11	.92				1.19	.6	8.1		10.4	6		
12	.72				.78	1.5	8.1		10.8	8		
13	.84				1.12	6.2	8.9		10.5	9		
14	.48				.48	.3	8.3		10.4	5		
15	.96				.83	5.9	8.9	30	8.4	6		
16	1.42				1.36	.3	7.4		8.0	9		
17	.70				1.17	1.1	8.1		7.9	4		
18	.34				.52	.7	8.3		8.2	197		
19	.50		<0.01		.65	.6	7.6		9.0	<4		
20	.38		Comp.		1.18	.4	8.0		9.8	56		
21	.76		12/19/78-		.76	.4	8.1		9.6	5		
22	1.70		1/1/79		1.54	6.5	9.0	10	9.3	24		
23	2.00				2.43	3.6	8.8		9.2	42		
24	2.42				2.69	6.2	8.9		9.0	30		
25	1.72				2.01	.8	8.1		11.0	8		
26	2.92				2.92	7.5	9.0		11.5	14		
27	2.40				2.46	6.2	8.7		11.8	6		
28	1.68				1.84	1.4	8.3		10.9	15		
29												
30												
31												
AVG.[1]	1.26				1.35	3.76		19 [2]	9.4	24		
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	[illegible]	0.065								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

LO-H&S-351 (REV. 9/15/77)

039011

1-449

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of February 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	1935			22	-2	54	0500	5390	1188		1470
2	1820	.01	Snow	26	23	54	0500	5390	1080		700
3	1800	.06	Snow	32	30	48	0100	7186	1161		770
4	1820			30	3	48	0900	8085	*		1330
5	1600			16	-4	48	0100	7186	*		770
6	1400			34	26	51	2100	7186	1916		823
7	1435	.14	Snow	32	12	54	0100	*	3779	405	473
8	1500	.13	Snow	20	14	55	1300	6288	783		1085
9	1480			16	0	52	0100	5839	891		700
10	1380			20	12	52	0900	*	1404		840
11	1325			28	24	54	2100	*	1343		910
12	1385	.13	Rain &	31	12	54	1700	*	2969		840
13	1325		Snow	20	14	54	2100	6839	1728		630
14	1350			32	32	54	1700	*	1889	955	385
15	1315	.18	Rain	36	30	55	1300	5390	1296		875
16	1425			30	10	55	1300	*	864		1330
17	1230			12	8	53	1800	*	1620		735
18	1210	.18	Snow	26	14	51	1800	*	345		420
19	1210			26	2	54	1300	*	864		455
20	1210			43	35	58	1700	*	2051		560
21	1350	.35	Rain	44	37	52	0100	*	620	327	368
22	4900	.42	Rain	44	42	39	All Day	6737	1728		490
23	16000	.42	Rain	64	57	48	1700	5390	1242		473
24	36200			57	33	47	All Day	5390	1458		840
25	35760	1.10	Rain &	36	26	50	0500	*	1512		875
26	31870	.05	Snow	30	21	42	0800	5839	6478		648
27	17690			44	28	40	0800	5569	2699		1050
28	13000			46	42	54	0500	*	1782	1341	840
29											
30											
31											
AVG.[1]	6640	3.17[2]						6247	1732	757	774

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

03901772

NLO-H&S-351 (REV. 9/15/77)

SUMMARY

There were no wastewater quality problems during February, 1979. All NPDES permit levels were met. *

Radium-228 is reported for the period 12/5/78 to 1/1/79. The concentration, 0.085 d/m/mℓ, is the lowest reported since September of last year.

* No! See chloride result for February 16.
MWB 4/20/79

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

ALLOBED

For the Month of FEBRUARY, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	1935	.501	80	5390	1188		1470	1370	8.0	54	0500	82800	
2	1820	.519		5390	1080		700	1410	8.8	54	0500	83700	
3	1800	.464		7186	1161		770	1390	11.8	48	0100	67900	
4	1820	.442		8085	*		1330	1870	7.8	48	0900	51900	
5	1600	.380		7186	*		770	1960	8.2	48	0100	48800	
6	1400	.430		7186	1916		823	1800	9.3	51	2100	63900	
7	1435	.346		*	3779	405	473	510	7.3	54	0100	65500	
8	1500	.436	6	6288	783		1085	320	8.4	55	1300	68500	
9	1480	.413		5839	891		700	1190	8.1	52	0100	66800	
10	1380	.433		*	1404		840	490	10.2	52	0900	91900	
11	1325	.361		*	1943		910	490	10.4	54	2100	84500	
12	1385	.450		*	2969		840	590	10.8	54	1700	41700	
13	1325	.516		6839	1728		630	1090	10.6	54	2100	67200	
14	1350	.464		*	1889	955	385	775	10.4	54	1700	64600	
15	1315	.561	30	5390	1296		875	820	8.4	55	1300	69020	
16	1425	.857		*	864		1330	868	8.0	55	1300	79880	
17	1230	.613		*	1620		735	480	7.9	53	1800	83500	
18	1210	.605		*	945		420	670	8.2	51	1800	64900	
19	1210	.447		*	864		455	430	9.0	54	1300	61700	
20	1210	.520		*	2051		560	420	9.8	58	1700	57100	
21	1350	.742		*	620	327	368	480	9.6	52	0100	85000	
22	4900	1.010	10	6737	1728		490	870	9.3	39	All Day	124900	
23	16000	1.143		5390	1242		473	700	9.2	48	1700	145400	
24	36200	1.042		5390	1458		840	940	9.0	47	All Day	129200	
25	35760	.606		*	1512		875	640	11.0	50	0500	79400	
26	31870	.667		5839	6478		648	1830	11.5	42	0800	141700	
27	17690	.617		5569	2699		1050	1650	11.8	40	0800	76100	
28	13000	.903		*	1782	1341	840	870	10.9	54	0500	160000	
29													
30													
31													

NOTES: * Not pumped this day.

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

0390765

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March 1979

2243130

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	B. mg/l	mg/l
1	0.820	.42	840	62		139	1.2				8.9	18	<5	7.9	0			<4
2	.780		2140	250		188	2.2				9.0							5
3	.602		1940	230		233	2.2				9.0							6
4	.854		1750	210		169	1.9				7.3	17	<5	7.7				5
5	.553		810	21		148	0.8				7.5							
6	.596		2090	310		239	2.1				7.6							14
7	.567		2250	350	95	214	2.5		0.2	<5	7.2						8.4	21
8	.668	.31	3570	480		218	2.9				8.9				0.	7		5
9	.400		1140	232		154	2.3				7.1							10
10	.574		2280	280		267	2.7				7.9							4
11	.455		2290	313		198	3.4				7.8							<4
12	.569		1450	185		177	3.5				8.2							<4
13	.412		1020	73		110	1.6				7.2							5
14	.373		540	20	<5	71	0.9				7.5					7	7.1	
15	.341	.34	560	25		62	0.8				7.4				0			
16	.407		540	21		66	0.7				7.6							
17	.401		1240	100		160	1.4				7.5							<4
18	.344		660	23		122	0.6				7.4							
19	.372		610	21		120	0.6				7.8							
20	.401		1190	470		192	1.6				7.4					8		<4
21	.421		540	19	<5	108	0.7	0.03			7.8				0		6.2	
22	.409	.32	1190	110		145	1.6				8.1							<4
23	.409		800	10		75	1.1				7.4							9
24	.854		810	77		113	1.8				9.2	22	<5	7.6				<4
25	.454		950	67		168	1.3				9.0							<4
26	.401		950	80		118	2.0				7.7							4
27	.496		980	55		139	1.5				8.3							7
28	.456		830	58	19	86	1.6				7.4					5	8.8	5
29	.453	.42	1130	77		96	2.0				7.5				0			<4
30	.387		1070	100		103	2.9				8.8							4
31	.400		1830	190		134	4.6				7.5							12
AVG.[1]	.50	0.4	1400	160	33	150	2	0.03	0.2	<5		20	<5		0	7	8	7
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

4644

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of March 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l
1	2.26	0.006	0.002	0.025	2.52	1.9	8.4	23	9.0	15
2	2.80	Comp.	Comp.	Comp.	3.39	5.6	8.8		8.4	11
3	2.22	1/30-	1/2-	1/2-	2.38	4.8	8.6		10.6	<4
4	3.12	2/26	1/15	1/29	3.92	5.2	8.4		9.4	65
5	1.64				2.06	.5	8.0		8.7	72
6	2.70				2.34	6.5	8.6		8.9	11
7	3.06				3.04	6.7	8.8		10.2	9
8	3.16				3.76	9.7	8.7	0	10.8	13
9	3.08				2.38	6.2	8.7		10.0	13
10	4.62				4.18	7.5	8.6		9.9	14
11	7.78				7.12	9.3	8.8		9.9	11
12	11.70				9.43	6.6	8.6		10.4	16
13	4.58				3.79	2.4	8.3		10.2	6
14	1.28				1.75	.7	8.0		7.6	14
15	.78				1.28	.4	8.0	0	9.0	4
16	.60		0.002		.65	2.1	8.0		8.5	5
17	3.40		Comp.		2.86	2.8	8.6		10.1	7
18	.64		1/16-		.78	.3	8.1		9.2	4
19	.78		1/29		.98	.2	8.1		8.1	6
20	3.64				3.11	2.6	8.7		8.2	26
21	1.22				1.30	.4	8.1		8.4	6
22	3.54				2.72	2.7	8.8	200	6.8	30
23	1.72				1.55	1.0	8.0		7.6	7
24	4.08				3.72	3.8	8.8		8.7	40
25	3.16				2.88	2.7	8.6		9.0	4
26	2.92				2.99	2.7	8.6		8.5	13
27	2.16				1.94	2.2	8.6		7.9	<4
28	2.26				1.89	2.2	8.5		8.3	9
29	3.14				2.82	3.1	8.5	42	8.8	<4
30	3.64				3.14	4.4	8.8		8.9	4
31	6.56				5.40	8.1	8.7		8.5	11
AVG.[1]	3.17				2.97	3.7		13 [2]	9.0	15
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (MO. GEO. MEAN)	≥5.0 AVG. 4.0 MIN.	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066						

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

-9L0b3-

-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of March 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	10850	.08	Rain	47	37			6737	1782		665
2	17080			52	34	53	0500	6288	1728		770
3	19500	.20	Rain	64	34	50	0500	7186	1728		910
4	28650	.01	Rain	67	40	50	0500	*	2969		630
5	33180			41	34	51	0900	*	972		735
6	29000			50	30	54	2100	6288	2375		840
7	24600			50	24	50	0800	6962	1080		910
8	19770			56	37	58	1300	5839	1026	670	840
9	13500	.02	Rain	46	30	56	1700	6288	1620		700
10	10000			40	19	55	0100	6288	2051		770
11	7100			32	14	49	0800	3818	2483		700
12	7100			47	20	51	2100	3144	864		700
13	5580			62	26	56	0900	3503	972		630
14	4960	.01	Rain & Snow	57	27	53	2100	*	*	390	560
15	4760			36	19	54	1300	*	*		560
16	4550			52	18	58	1300	*	810		700
17	4225			66	21	56	0500	4492	2429		630
18	3950			74	47	58	0500	*	864		700
19	3735	.04	Rain	74	43	60	1700	*	1188		630
20	3600			67	55	60	1300	4492	2159		630
21	3550			70	52	58	0500	*	1134	410	483
22	3250	.01	Rain	75	45	60	1700	3683	1134		553
23	3150	.52	Rain	64	50	55	0500	4042	729		560
24	2980			51	33	56	0100	4492	1161		490
25	3150			33	28	53	0900	4492	1080		735
26	3440			41	28	56	0900	4042	1512		560
27	3100			44	28	58	2000	4132	1835		595
28	2775			68	28	56	2200	4042	918	673	473
29	2665	.04	Rain	70	60	56	2100	4267	863		[illegible]
30	2740			72	52	56	2100	3593	783		455
31	3500	.17	Rain	64	48	59	2100	4042	1080		[illegible]
AVG.[1]	9355	1.1[2]						4876	1425	536	649

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.

NLO-H&S-351 (REV. 9/15/77)

0390167

0390644

There were no [illegible]
radium-228 resul[illegible]
period January [illegible] 20 [illegible] ent.
0.025 d/m/mℓ, [illegible] observed [illegible]

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

69L06E0

For the Month of MARCH, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	10850	.820	23	6737	1782		665	840	9.0			109800	
2	17080	.780		6288	1728		770	2140	8.4	53	0500	138700	
3	19500	.602		7186	1728		910	1940	10.6	50	0500	88300	
4	28650	.854		*	2969		630	1750	9.4	50	0500	46400	
5	33180	.553		*	972		735	810	8.7	51	0900	37500	
6	29000	.596		6288	2375		840	2090	8.9	54	2100	77500	
7	24600	.567		6962	1080		910	2250	10.2	50	0800	68800	
8	19770	.668	0	5839	1026	670	840	3570	10.8	58	1300	68900	
9	13500	.400		6288	1620		700	1140	10.0	56	1700	46800	
10	10000	.574		6288	2051		770	2280	9.9	55	0100	61200	
11	7100	.455		3818	2483		700	2290	9.9	49	0800	42500	
12	7100	.569		3144	864		700	1450	10.4	52	2100	41700	
13	5580	.412		3503	972		630	1020	10.2	56	0900	62800	
14	4960	.373		*	*	390	560	540	7.6	53	2100	62700	
15	4760	.341	0	*	*		560	560	9.0	54	1300	71200	
16	4550	.407		*	810		700	540	8.5	58	1300	66300	
17	4225	.402		4492	2429		630	1240	10.1	56	0500	62300	
18	3950	.344		*	864		700	660	9.2	58	0500	44600	
19	3735	.372		*	1188		630	610	8.1	60	1700	52800	
20	3600	.401		4492	2159		630	1190	8.2	60	1300	49800	
21	3550	.421		*	1134	410	483	540	8.4	58	0500	53700	
22	3250	.409	200	3683	1134		553	1190	6.8	60	1700	72200	
23	3150	.409		4042	729		560	800	7.6	55	0500	56100	
24	2980	.854		4492	1161		490	810	8.7	56	0100	72900	
25	3150	.454		4492	1080		735	950	9.0	53	0900	51400	
26	3440	.401		4042	1512		560	950	8.5	56	0900	47500	
27	3100	.496		4132	1835		595	980	7.9	58	2000	66900	
28	2775	.456		4042	918	673	473	830	8.3	56	2200	67800	
29	2665	.453	42	4267	863		490	1130	8.8	56	2100	60400	
30	2740	.387		3593	783		455	1070	8.9	56	2100	64300	
31	3500	.400		4042	1080		525	1830	8.5	59	2100	57100	

NOTES: * Not pumped this date.

-4944

NLO-ENG-2456 (1/16/76)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April 1979

2243129

	MANHOLE – 175											STORM SEWER OUTFALL			SEWAGE TREATMENT PI			
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	5-DAY BOD mg/l	
1	0.514		980	68		89	1.8				7.5							12
2	1.077		720	46		81	1.6		0.18		7.6	16	<5	7.9			9.03	<4
3	.670		600	12		80	0.9				7.6							
4	.600		450	7	<5	73	0.8			<5	8.1	27	<5	7.8		11		
5	.871	.31	940	75		108	2.0				8.0	20	<5	7.6	1			9
6	.706		1150	82		133	2.4				7.6							6
7	.583		1400	115		130	2.5				7.5							8
8	.690		1940	180		120	4.4				7.8	<4	<5	3.4				<4
9	1.026		1760	150		166	4.2				8.8	8	<5	7.8	4			<4
10	.683		400	15		75	0.8				7.5							7
11	.615		620	12	<5	75	0.7				8.7					4	4.39	
12	1.100	.20	1020	75		102	2.6				8.0	26	<5	7.9				
13	.684		1230	100		95	3.3				8.5		<5					5
14	1.106		540	25		65	1.4				8.1	13		7.6				<4
15	.500		640	15		134	0.9				7.7							
16	.552		1300	98		122	3.1				7.8							4
17	.499		880	31		101	1.2				7.7							
18	.433		560	20	<5	64	0.7	<0.01			7.9						9.03	7
19	.463		1820	190		121	3.1				7.6				0	5		5
20	.512	.42	2140	175		120	3.2				8.0							<4
21	.421		1750	105		122	2.4				8.1							6
22	.620		2210	165		152	3.0				7.9	42	<5	7.5				5
23	.494		2300	180		133	3.1				7.3							6
24	.371		620	19		127	0.7				7.4							
25	.394		570	18	<5	64	0.8				8.2						6.22	
26	.560	.48	2260	170		126	3.3				7.6				0	5		
27	.558		1230	130		151	3.0				8.6							<4
28	.532		1226	110		157	2.1				7.7	25		7.8				6
29	.330		620	22		79	0.7				7.6							
30	.312		580	20		66	0.6				8.5							
31																		
AVG.[1]	0.62		1140	82	<5	108	2	<0.01	0.2	<5		18	<5		1	6	7	6
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of April 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l		
1	2.54	0.01	0.001	<0.001	2.81	2.7	8.5		8.6	<4		
2	2.42	Comp.	Comp.	Comp.	2.70	7.3	8.6		9.7	8		
3	1.78	2/27-	1/30-	1/30-	2.71	0.3	8.0		9.6	40		
4	1.10	3/26	2/12	2/26	1.92	0.4	8.1		10.6	88		
5	2.80				3.69	2.9	8.7	0	9.5	29		
6	2.54				2.70	3.2	8.6		9.2	63		
7	2.78				2.57	3.8	8.4		8.2	19		
8	3.90				3.50	6.1	8.6		9.5	137		
9	3.52				3.89	5.6	8.6	53	8.7	13		
10	1.28				1.48	0.4	8.0		8.3	8		
11	1.00				.85	0.2	8.0		10.1	20		
12	2.82				2.53	2.6	8.4		10.2	28		
13	2.82				2.84	3.8	8.2		9.2	11		
14	1.74				2.87	1.0	7.9		10.4	13		
15	1.42		0.002		1.64	0.4	8.1		9.1	<4		
16	2.56		Comp.		2.80	3.1	8.3		10.2	5		
17	1.38		2/13-		1.42	0.6	7.9		10.2	<4		
18	1.10		2/26		1.51	0.4	7.9		8.0	4		
19	3.70				2.94	4.4	8.2	19	8.3	5		
20	3.20				2.85	4.4	8.3		9.0	6		
21	1.88				2.85	2.5	8.1		9.2	<4		
22	3.64				5.19	4.1	8.2		9.1	15		
23	3.40				5.09	5.0	8.2		8.0	6		
24	.98				1.11	0.4	7.9		7.7	<4		
25	1.26				1.49	0.2	7.9		8.2	7		
26	3.24				2.76	4.4	8.4	10	8.0	10		
27	2.22				2.10	3.7	8.2		8.1	5		
28	1.78				2.30	4.2	7.8		8.3	13		
29	1.28				1.83	1.0	8.0		7.8	<4		
30	1.04				1.13	0.5	8.0		8.5	<4		
31												
AVG.[1]	2.24				2.54	2.7		10[2]	9.0	19		
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

LO-H&S-351 (REV. 9/15/77)

039016

-4044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of April 1979

DATE	RIVER	PRECIPITATION		AIR TEMPERATURE		WATER TEMP., MH-175		DISSOLVED SOLIDS, mg/l			
	FLOW CFS	INCHES, AS WATER	CONDITION	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	TIME RECORDED	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION
1	4250	.47	Rain	48	44	55	0500	4492	2591		525
2	7140	.54	Rain	66	43	54	0500	4492	1620		263
3	7000			48	36	54	2100	*	2375		420
4	5800	.77	Rain	46	39	53	0500	*	1404	808	385
5	8660			56	39	54	1700	4042	1188		350
6	8820			44	25	54	2100	3593	1188		490
7	7200			40	21	58	2100	4312	1080		490
8	6000	.35	Rain	60	36	50	1300	4492	1512		350
9	6160	.13	Rain & Snow	54	36	54	2100	4492	1943		315
10	6000			52	29	56	2100	4092	1134		420
11	5535	.32	Rain	64	39	54	0500	*	1053		280
12	12120	.74	Rain	75	59	56	0500	4042	1404	288	490
13	15000	.02	Rain	66	43	58	1300	*	1350		350
14	31300			66	40	58	0800	4042	2699		630
15	26000			54	40	53	1300	*	3239		595
16	19380			60	34	56	0900	3593	2159		560
17	14250			60	31	58	0100	3593	2051		665
18	9365			64	32	56	2000	*	1269	1144	613
19	7140			67	32	58	0100	5749	1296		560
20	5700			72	40	59	1000	5839	1188		683
21	5100	.28	Rain	82	52	62	0500	6108	2645		665
22	4600			59	52	63	2100	5929	2807		368
23	4050	.02	Rain	70	54	59	1300	5929	1134		578
24	3650			74	58	61	1300	*	3239		578
25	3440	.04	Rain	69	60	64	1300	*	1296	441	560
26	3275	.03	Rain	66	46	64	1300	5390	1943		490
27	3275	.11	Rain	64	38	61	0100	4492	1943		508
28	3125			48	38	54	All Day	4671	1512		333
29	3035			61	30	54	All Day	*	*		490
30	2950			62	46	58	1700	*	756		578
31											
AVG.[1]	8311	4.22[2]						4669	1759	670	486

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

039016 2

4944

Summary

May 23, 1979

Waste water quality was good during April. No NPDES violations occurred. Nitrate nitrogen and ammonia nitrogen concentrations were low.

Radium-228 at MH-175 is reported for the period 1/30/79 to 2/26/79. The concentration shown (<0.001 d/m/mℓ) is the lowest reported during the last five years.

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION - WATER PLANT
WASTE WATER QUALITY REPORT

49L06E0

MWB 5/9

For the Month of APRIL, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	4250	.514		4492	2591		525	980	8.6	55	0500	52200	
2	7140	1.077		4492	1620		263	720	9.7	54	0500	75000	
3	7000	.670		*	2375		420	600	9.6	54	2100	71000	
4	5800	.600		*	1404	808	385	450	10.6	53	0500	84100	
5	8660	.871	0	4042	1188		350	940	9.5	54	1700	110300	
6	8820	.706		3593	1188		490	1150	9.2	54	2100	86000	
7	7200	.583		4312	1080		490	1400	8.2	58	2100	93600	
8	6000	.690		4492	1512		350	1940	9.5	50	1300	57700	
9	6160	1.026	53	4492	1943		315	1760	8.7	54	2100	63600	
10	6000	.683		4092	1134		420	400	8.3	56	2100	76400	
11	5535	.615		*	1053		280	620	10.1	54	0500	92900	
12	12120	1.100		4042	1404	288	490	1020	10.2	56	0500	164800	
13	15000	.684		*	1350		350	1230	9.2	58	1300	91500	
14	31330	1.106		4042	2699		630	540	10.4	58	0800	106500	
15	26000	.500		*	3239		595	640	9.1	53	1300	48600	
16	19380	.552		3593	2159		560	1300	10.2	56	0900	35500	
17	14250	.499		3593	2051	1144	665	880	10.2	58	0100	53600	
18	9365	.433		*	1269	1144	613	560	8.0	56	2000	48200	
19	7140	.463	19	5749	1296		560	1820	8.3	58	0100	52800	
20	5700	.512		5839	1188		683	2140	9.0	59	1000	57200	
21	5100	.421		6108	2645		665	1750	9.2	62	0500	46100	
22	4600	.620		5929	2807		368	2210	9.1	63	2100	38500	
23	4050	.494		5929	1134		578	2300	8.0	59	1300	46800	
24	3650	.371		*	3239		578	620	7.7	61	1300	87700	
25	3440	.394		*	1296	441	560	570	8.2	64	1300	50000	
26	3275	.560	10	5390	1943		490	2260	8.0	64	1300	51700	
27	3275	.558		4492	1943		508	1230	8.1	61	0100	64200	
28	3125	.532		4671	1512		333	1226	8.3	54	All Day	82000	
29	3035	.330		*	*		490	620	7.8	54	All Day	19100	
30	2950	.312		*	756		578	580	8.5	58	1700	19100	
31													

NOTES: * Not pumped this date.

20

4 4 0 9 4

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May 1979

2243128

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT F FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	B mg/l	mg/l
1	.461		2080	220		191	4.1				7.8							<4
2	.352		550	18	<5	62	0.7		0.07	<5	7.1						25.2	
3	.534	.41	2720	230		154	4.5				7.8	13	<5	8.1	0	5		4
4	.891		480	11		53	1.1				7.9	12	<5	8.2				
5	.864		540	20		49	1.2				7.8	8	<5	7.5				
6	.599		1733	140		116	2.6				7.7							6
7	.551		1720	140		112	2.3				7.5							7
8	.483		850	19		120	0.7				7.5							
9	.533		760	17	<5	159	1.3	<0.01			7.4					5		
10	.433	.47	1810	180		114	3.4				7.4				200		10.4	36
11	.515		1060	110		142	2.6				7.4							17
12	.494		1890	190		123	3.8				7.3							7
13	.493		2170	220		130	5.0				7.6	13	<5	7.9				16
14	.454		1620	130		183	3.2				7.6							7
15	.358		1630	150		118	3.2				7.5							8
16	.347		470	20	<5	61	0.9				9.3					5	7.1	
17	.311	.49	1430	160		100	3.8				8.3				0			13
18	.371		1430	150		89	3.6				7.8							5
19	.250		500	20		110	1.0				7.8							
20	.272		630	23		53	0.8				7.7							
21	.273		570	22		65	0.7				8.2							
22	.304		530	19		51	0.8				8.1							
23	.297		560	18		49	0.7				7.4						4.9	
24	.357	.42	1740	150		75	3.0				7.4				55	5		5
25	.463		1550	140		128	3.1				7.6							<4
26	.614		1140	80		150	2.2				7.9	20	<5	7.8				<4
27	.601		960	90		71	2.4				7.5	87	<5	7.8				<4
28	.365		520	16		66	1.1				7.8	8	<5	7.8				
29	.303		540	19		58	0.8				7.6							
30	.272	.44	1160	18	<5	74	2.9				8.1							
31	.448		1050	99		59	2.6				8.6							
AVG.[1]	0.45	0.4	1200	94	<5	102	2	<0.01	<0.01	<5		20	<5		3	1	3.7	5
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	39	5	11	8
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		400	40	40	40
LIMITS 4	2		1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200	20	20	20
															200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-H&S-391 (REV 9/18/77)

3 0 1 5 3

49444

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of May 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l		
1	1.74	0.005	0.004	<0.01	2.76	7.1	9.0		7.9	5		
2	.84	Comp.	Comp.	Comp.	1.00	.2	7.5		7.9	6		
3	2.04	3/27-	2/27-	2/27-	3.22	6.4	9.0	40	8.2	7		
4	1.62	5/7	3/12	3/26	2.05	.4	7.8		8.4	9		
5	1.84				1.98	2.0	7.7		9.6	5		
6	2.32				2.13	4.7	8.5		8.9	<4		
7	1.58				1.93	3.5	8.5		9.3	<4		
8	1.20				1.53	.3	7.9		9.3	4		
9	.84				.99	.2	7.7		8.6	5		
10	1.12				1.25	11.2	8.8	200	8.5	55		
11	2.82				5.13	8.0	8.8		8.4	10		
12	.84				2.22	11.1	8.8		8.1	27		
13	.92				1.78	14.3	8.7		8.5	38		
14	.78				1.41	8.6	8.4		8.5	11		
15	.68				.71	9.0	8.1		7.9	37		
16	.84		0.001		.95	.2	8.1		7.7	11		
17	.62		Comp.		.99	9.3	8.8	10	8.3	42		
18	.54		3/13-		.86	7.2	7.9		7.8	8		
19	.86		3/26		1.32	.2	7.7		8.4	10		
20	.68				1.74	.3	8.0		9.2	6		
21	.70				.70	.2	8.0		9.0	<4		
22	.56				1.26	.5	7.9		8.4	30		
23	.68				.90	.2	7.9		8.2	9		
24	.54				.74	8.8	8.0	20	8.1	11		
25	.70				1.58	8.4	8.1		8.9	11		
26	1.52				1.89	6.3	7.5		7.5	8		
27	1.48				2.14	5.8	7.5		9.8	22		
28	1.46				1.89	.7	7.9		8.7	28		
29	1.12				1.36	.4	8.0		8.8	7		
30	1.06				1.35	6.4	8.4		8.5	31		
31	1.24				1.10	5.8	8.1	200	8.4	22		
AVG.[1]	1.15				1.64	4.8		50 [2]	8.5	15		
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

NLO-H&S-391 (REV. 9/19/77)

22

83-0154

1-48-44

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of May 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	2820	.98	Rain	65	34	57	All Day	5390	1835		1120
2	2630	.54	Rain	79	39	60	1300	*	729	341	613
3	2800			70	54	58	1300	4944	1188		455
4	4000			54	43	58	0500	*	2429		298
5	3600			62	32	56	1300	*	1808		368
6	3200			73	37	62	0500	5390	1296		630
7	2935			81	46	63	2100	5390	1458		683
8	2635			84	56	65	1700	*	864		665
9	2500			86	57	66	1300	7186	1728	987	543
10	2400			86	63	64	1700	7186	*		665
11	2320			86	64	62	2100	7186	1728		560
12	2240	.22	Rain	72	52	62	1300	7186	1188		630
13	2000			67	46	64	1400	7186	2590		455
14	2180			75	43	64	1400	7186	*		613
15	2178			72	56	60	1700	7186	945		613
16	2100			70	38	64	1300	*	702	430	525
17	2000			74	42	64	1700	6827	918		560
18	1910			81	43	62	1700	7186	733		595
19	1800			84	46	65	1300	*	4319		578
20	1700			81	55	66	1300	*	756		665
21	1635			72	50	64	1300	*	1350		630
22	1575			71	42	60	1700	*	675		508
23	1540			73	57	66	1300	*	567	468	525
24	1575			62	49	64	1300	7186	728		525
25	1721	.33	Rain	49	44	59	0900	7186	3239		455
26	2250	.12	Rain	70	44	60	1700	7546	2267		490
27	3600	.31	Rain	68	50	58	1300	7546	2051		315
28	4800			75	45	62	1700	*	1512		420
29	5370			80	42	62	1700	9342	1080		595
30	4150			82	48	61	0900	*	*	352	595
31	3310	.44	Rain	74	54	65	1300	*	*		473
AVG.[1]	2628	2.94[2]						6902	1512	516	560

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

NLO-H&S-351 (REV. 9/15/77)

0390155

23

49444

Copper Concentrations, mg/ℓ

Date	Pit 5	Clearwell	Manhole-175
4/23/79	0.08	0.46	0.13
4/24	0.18		0.03
4/25	0.11	0.42	0.03
4/26	1.18		0.08
4/27		0.47	0.10
4/28		0.04	0.058
4/29			0.10
4/30			0.06
April avg.		0.348	0.07
April max.			0.13
"Limit" avg.(1)			0.07
"Limit" max.(1)			0.35

(1) Average and maximum values reported in the application for a Corps of Engineers discharge permit.

Summary, May 1979

Wastewater quality was acceptable during the month. No NPDES violations occurred.

Concentrations of radium-226 and radium-228 were below the target limit of 0.066 d/m/mℓ during the periods for which results are reported. An increase, however, is anticipated. At the completion of the Pilot Plant thorium campaign, the special barium sulfate treatment for radium removal was halted. Cleanout for the ADU campaign sent thorium-bearing waste to the general sump and this waste contained radium-228. A rise in radium-228 concentration has occurred at the Clearwell. Therefore, Manhole-175 samples now being analyzed are expected to also show an increase. After the thorium clean-out effect passes, radium concentrations should return to a level under the target limit. Despite the increase which is expected to persist for several months, the annual average radium-228 concentration at Manhole-175 is expected to be less than the target value of 0.066 d/m/ℓ.

Copper concentrations in Pit 5, the Clearwell, and Manhole-175 are shown in an attachment. Analyses were started in April, about the time that the Pilot Plant extraction campaign began. So far, the Pilot Plant processing of copper-containing Zirnlo solutions has not significantly changed the concentration of copper in the site effluent. The average copper concentrations for April and May were not greater than the self-imposed limit of 0.07 mg/ℓ, which is the average reported in 1972 in the application submitted for a Corps of Engineers discharge permit. Prior to the Pilot Plant work, NLO decided that EPA would not have to be notified of a wastewater change if the copper concentration did not exceed the levels reported in the Corps application which was used by the U. S. EPA to set NPDES permit limits.

Copper Concentrations, mg/ℓ

Date	Pit 5	Clearwell	Manhole-175
5/1/79		0.38	0.10
5/2	0.02		0.02
5/3		0.38	0.15
5/4	0.02	0.08	0.02
5/5			0.03
5/6		0.03	0.19
5/7	0.025	0.03	0.20
5/8	0.023		0.025
5/9	0.023		0.023
5/10		0.08	0.020
5/11		0.056	0.083
5/12		0.028	0.028
5/13		0.028	0.042
5/14		0.028	0.014
5/15		0.028	0.028
5/16			0.028
5/17		0.028	0.028
5/18			0.028
5/19			0.028
5/20			0.028
5/21	0.25	0.028	0.028
5/22			0.003
5/23			0.004
5/24		0.026	0.026
5/25		0.045	0.032
5/26		0.025	0.025
5/27	0.058	0.017	0.012
5/28			0.005
5/29		0.033	0.005
5/30			0.005
5/31			0.010
May avg.		0.075	0.04
May max.			0.20
"Limit" avg.(1)			0.07
"Limit" max.(1)			0.35

(1) Average and maximum values reported in the application for a Corps of Engineers discharge permit.

1390158

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

For the Month of MAY, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2820	.461		5390	1835		1120	2080	7.9	57	All Day	36500	
2	2630	.352		*	729	341	613	550	7.9	60	1300	59200	
3	2800	.534	40	4944	1188		455	2720	8.2	58	1300	82400	
4	4000	.891		*	2429		298	480	8.4	58	0500	118000	
5	3600	.864		*	1808		368	540	9.6	56	1300	93400	
6	3200	.599		5390	1296		630	1733	8.9	62	0500	40400	
7	2935	.551		5390	1458		683	1720	9.3	63	2100	33200	
8	2635	.483		*	864		665	850	9.3	65	1700	59000	
9	2500	.533		7186	1728	987	543	760	8.6	66	1300	75500	
10	2400	.433	200	7186	*		665	1810	8.5	64	1700	33800	
11	2320	.515		7186	1728		660	1060	8.4	62	2100	44500	
12	2240	.494		7186	1188		630	1890	8.1	62	1300	74600	
13	2000	.493		7186	2690		455	2170	8.5	64	1400	52700	
14	2180	.454		7186	*		613	1620	8.5	64	1400	42600	
15	2178	.358		7186	945		613	1630	7.9	60	1700	66200	
16	2100	.347		*	702	430	525	470	7.7	64	1300	50700	
17	2000	.311	10	6827	918		560	1490	8.3	64	1700	53100	
18	1910	.371		7186	783		595	1430	7.8	62	1700	49500	
19	1800	.250		*	4319		578	500	8.4	65	1300	42700	
20	1700	.272		*	756		665	630	9.2	66	1300	30800	
21	1635	.273		*	1350		630	570	9.0	64	1300	24600	
22	1575	.304		*	675		508	530	8.4	60	1700	46200	
23	1540	.297		*	567	468	525	560	8.2	66	1300	48300	
24	1575	.357	20	7186	728		525	1740	8.1	64	1300	57500	
25	1721	.463		7186	3239		455	1550	8.9	59	0900	49800	
26	2250	.614		7546	2267		490	1140	7.5	60	1700	48600	
27	3600	.601		7546	2051		315	960	9.8	58	1300	33700	
28	4800	.365		*	1512		420	520	8.7	62	1700	25000	
29	5370	.303		9342	1080		595	540	8.8	62	1700	23200	
30	4150	.272		*	*	352	595	1160	8.5	61	0900	45400	
31	3310	.448	200	*	*		473	1050	8.4	65	1300	47100	

NOTES:

* Not pumped this date

27

-4644

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of June 1979

2243127

DATE	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT FECAL COLIFORM NO/100ml	SUS. SOLIDS mg/l	mg/l	mg/l
	MANHOLE – 175																	
1	0.646		1100	120		60	3.0				7.5	8	<5	7.9				<4
2	.332		1600	170		83	3.8				7.7							<4
3	.328		1830	170		214	3.6				7.6							<4
4	.317		2000	220		98	4.2				7.8							<4
5	.308		780	18		181	0.7				7.6							
6	.315		740	19	<5	119	0.8		0.1	5	7.4					6	4.47	
7	.259	.38	1720	190		127	4.2				7.9				0			35
8	.620		1150	100		81	3.0				7.8	17	<5	8.1				7
9	.369		1670	150		137	4.0				7.5							21
10	.353		2000	190		156	4.7				7.8							5
11	.357		1670	160		121	3.9				7.8							25
12	.363		2530	380		129	7.0				7.8							20
13	.346		625	25	<5	125	1.7				8.6					3	3.8	
14	.323	.37	1687	180		103	4.0				8.3				0			8
15	.385		1510	140		119	3.6				9.5							4
16	.357		1380	140		79	3.6				9.5							10
17	.292		1610	160		67	4.2				8.7							6
18	.392		2130	270		76	6.1				9.6							11
19	.617		1470	160		100	4.0				9.1	18	<5	8.2				8
20	.634		1200	130	<1	59	3.5				8.8	4	<5	8.0		3	3.96	12
21	.810	.45	890	66		50	2.1	0.03			7.6	16	<5	7.1	16			8
22	.821		910	83		56	2.6				8.4	12	<5	7.2				8
23	.462		830	35		154	1.5				7.7							
24	.377		570	18		54	1.0				7.9							
25	.357		460	16		49	1.0				7.7	6	<5	8.4				
26	.543		1350	140		63	3.8				9.4							32
27	.547		1280	140	3	55	3.9				8.9					2	3.05	9
28	.540	.42	1180	130		81	3.6				8.6				0			5
29	.544		1280	100		144	2.8				8.4							6
30	.839		820	68		75	2.2				8.2	79	<5	7.6				8
31																		
AVG.[1]	.46	0.4	1270	120	3	93	3	0.03	0.1	5		25	5		7	4	4	11
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-065-391 (REV. 9/29/77)

0390148

-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of June 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwe Cu mg/ℓ
1	1.18	0.004	0.002	0.014	4.70	6.2	8.9		7.9	16	0.012	0.025
2	.84	Comp.	Comp.	Comp.	2.80	12.2	8.2		8.2	13	0.023	0.018
3	.88	5/8-	3/27-	3/27-	1.30	11.1	8.3		8.3	12	0.01	0.007
4	.74	6/4	4/9	4/23	2.38	14.6	8.5		8.3	19	0.01	
5	.60				.94	.5	7.9		9.0	8	0.008	0.059
6	.70				2.02	.5	7.8		8.0	5	0.009	0.014
7	.84				2.01	12.8	8.5	14	7.9	9	0.009	
8	1.10				1.31	8.2	8.0		8.0	18	0.008	
9	.94				2.01	11.0	7.5		8.3	20	0.008	0.108
10	.72				1.03	14.0	9.2		8.1	20	0.006	0.071
11	.74				2.04	9.8	8.1		8.2	<4	0.008	0.015
12	.50				.62	20.5	8.5		7.3	10	0.035	0.081
13	.50				1.43	1.3	7.8		7.8	<4	0.094	
14	.78				.90	13.9	8.1	0	8.0	<4	0.006	0.079
15	.68		0.002		.76	10.8	7.8		8.7	4	0.011	0.025
16	.54		Comp.		.65	10.1	8.8		8.2	4	0.006	0.035
17	.82		4/10-		1.07	11.9	8.6		8.3	4	0.010	0.069
18	.62		4/23		.85	19.2	9.6		8.1	8	0.015	0.017
19	1.10				1.00	12.7	9.0		7.0	30		
20	1.04				1.26	9.8	8.6		6.2	42		
21	.60				1.29	4.3	8.0	200	8.4	37		
22	1.20				2.11	4.8	7.5		6.6	15		
23	1.36				2.21	1.9	7.8		7.5	9	0.001	
24	1.26				2.05	.7	7.9		8.6	4	0.001	
25	1.42				1.62	.3	7.9		8.4	4	0.001	0.003
26	.74				1.07	10.9	8.8		7.2	30	0.001	0.007
27	.60				1.52	9.5	8.5		5.5	20	0.001	0.010
28	.58				.96	9.8	8.3	5	7.6	18	0.001	0.010
29	.62				.82	8.3	8.2		6.1	8	0.003	0.012
30	1.00				1.44	5.2	7.5		6.6	18	0.010	0.004
31												
AVG.[1]	.84				1.54	8.9		11 [2]	7.7	14	0.01	0.03
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

390149
269
-49-

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: General Data

For the Month of June 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	3065			78	62	66	1300	8983	702		455
2	2800			78	51	66	1300	8085	*		560
3	2450			79	60	67	1300	8085	2591		840
4	2180			86	50	64	0900	8085	675		665
5	1910			83	53	63	1700	*	3000		1330
6	1820			87	64	71	2100	*	650	842	595
7	3164	.76	Rain	78	64	70	1300	10780	1100		613
8	4920			84	66	68	0100	9342	1100		385
9	4785			88	69	72	1300	9342	864		630
10	4450			89	61	70	1300	10780	702		630
11	4320			78	50	64	2100	9342	756		630
12	3425			81	48	68	0100	8983	675		700
13	2635			75	56	66	0900	*	1404	359	438
14	2335			86	60	67	1400	9342	3239		735
15	2040			85	57	68	1700	9163	*		455
16	1865			84	58	67	0100	10420	2484		490
17	1700			88	60	68	2100	10420	837		560
18	1565			82	62	65	1700	4492	972		543
19	2660	.67	Rain	78	62	65	1700	10780	2239		420
20	2150	1.42	Rain	89	64	68	2100	10780	1296	326	438
21	3300	.47	Rain	86	66	70	1700	10780	648		333
22	2665			87	60	68	1300	5390	1943		455
23	2320			80	62	67	1400	*	1296		910
24	1875	.16	Rain	70	53	65	1300	*	729		560
25	1575			73	44	64	1700	*	702		385
26	1460			79	46	64	1700	5390	1404		560
27	1375			82	53	64	1700	5390	729	333	543
28	1315			85	58	67	2100	5390	1620		665
29	1275	.67	Rain	77	61	65	1300	6288	2483		490
30	1460	.32	Rain	76	58	64	0100	6288	729		475
31											
AVG.[1]	2495	4.47 [2]						8422	1342	465	583

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

0390150

30

4944

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

For the Month of JUNE, 1979

	FLOWS		FECAL COLIFORMS AT MH 175	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)	MH 175 (NO./100ml)	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	3065	.646		8983	702		455	1100	7.9	66	1300	84200	
2	2800	.332		8085	*		560	1600	8.2	66	1300	61500	
3	2450	.328		8085	2591		840	1830	8.3	67	1300	30900	
4	2180	.317		8085	675		665	2000	8.3	64	0900	36900	
5	1910	.308		*	3000		1330	780	9.0	63	1700	62800	
6	1820	.315		*	650	842	595	740	8.0	71	2100	66400	
7	3164	.259	14	10780	1100		613	1720	7.9	70	1300	72200	
8	4920	.620		9342	1100		385	1150	8.0	68	0100	81700	
9	4785	.369		9342	864		630	1670	8.3	72	1300	78000	
10	4450	.353		10780	702		630	2000	8.1	70	1300	49500	
11	4320	.357		9342	756		630	1670	8.2	64	2100	35300	
12	3425	.363		8983	675		700	2530	7.3	68	0100	59000	
13	2635	.346		*	1404	359	438	625	7.8	66	0900	51800	
14	2335	.323	0	9342	3239		735	1687	8.0	67	1400	48600	
15	2040	.385		9163	*		455	1510	8.7	68	1700	65500	
16	1865	.357		10420	2484		490	1380	8.2	67	0100	54200	
17	1700	.292		10420	837		560	1610	8.3	68	2100	31600	
18	1565	.392		4492	972		543	2130	8.1	65	1700	27400	
19	2660	.617		10780	2239		420	1470	7.0	65	1700	61000	
20	2150	.634		10780	1296	326	438	1200	6.2	68	2100	57200	
21	3300	.810	200	10780	648		333	890	8.4	70	1700	113200	
22	2665	.821		5390	1943		455	910	6.6	68	1300	93500	
23	2320	.462		*	1296		910	830	7.5	67	1400	61900	
24	1875	.377		*	729		560	570	8.6	65	1300	41800	
25	1575	.357		*	702		385	460	8.4	64	1700	32400	
26	1460	.543		5390	1404		560	1350	7.2	64	1700	46600	
27	1375	.547		5390	729	333	543	1280	5.5	64	1700	43300	
28	1315	.540	5	5390	1620		665	1180	7.6	67	2100	56500	
29	1275	.544		6288	2483		490	1280	6.1	65	1300	63600	
30	1460	.839		6288	729		475	820	6.6	64	0100	88100	
31													

NOTES:

* Not pumped this date.

3

49 44

Summary, June 1979

Wastewater quality was acceptable during June. No NPDES violations occurred.

Concentrations of radium-226 and radium-228 were below the NLO target value during the periods for which results are reported.

Daily copper results for most of June are given in the report (p. 2) for Manhole-175 and the pit Clearwell. A summary of 1979 copper results is given below. This summary shows that the concentration of copper has decreased in the plant effluent since mid-April.

Copper Concentrations, mg/ℓ

Period	Sampling Location MH-175	Sampling Location Clearwell
1/2 - 1/15/79	0.062	0.200
1/16 - 1/29/79	0.080	0.283
1/30 - 2/12/79	0.155	0.782
2/13 - 2/26/79	0.074	0.564
2/27 - 3/12/79	0.106	0.283
3/13 - 3/26/79	0.041	0.233
3/27 - 4/09/79	0.200	1.236
4/10 - 4/23/79	0.133	0.818
4/23 - 4/30/79	0.07	0.35
5/1 - 5/30/79	0.04	0.075
6/1 - 6/30/79	0.01	0.03

1390752

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: NPDES Permit Parameters 44L06E1

For the Month of July, 1979

2243126

DATE	MANHOLE – 175											STORM SEWER OUTFALL			SEWAGE TREATMEN			
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	mg/l	mg/l
1	0.678		840	66		69	2.0				7.9	55	<5	7.9				12
2	.552		990	72		94	1.9				8.0							8
3	.553		1170	110		69	2.6				8.7							10
4	.464		600	35	4	47	1.7		0.1	<5	7.5	20	<5	7.7		3	1.56	
5	.588	.44	450	14		38	1.1				7.5	10	<5	7.8	1			
6	.550		1800	210		69	4.3				9.2							5
7	.536		2170	270		122	5.2				9.0							<4
8	.495		2840	300		87	5.6				9.0							4
9	.603		2030	260		71	4.9				8.8	22	<5	8.0				<4
10	.573		2250	260		134	5.0				9.1							<4
11	.579		2850	360	14	133	5.2				9.3						1.53	<4
12	.443	.42	1230	110		87	2.1	0.02			7.6				2	1		<4
13	.788		480	11		46	0.8				7.6	11	<5	8.2				
14	.851		1890	140		100	3.0				9.0	12	<5	8.1				<4
15	.608		2530	150		79	2.1				9.0							<4
16	.585		1830	120		84	2.1				9.2							8
17	.533		2710	80		55	3.9				9.2							4
18	.478		1810	280	<5	62	2.5				9.0					1	0.87	<4
19	.544	.41	2770	210		124	2.6				9.2				0			<4
20	.496		3630	160		101	2.4				9.0							<4
21	.451		1880	83		92	2.8				7.5							5
22	.432		540	16		52	1.0				7.5							
23	.426		430	18		48	1.2				7.5							
24	.567		590	11		97	0.5				7.5	<4	<5	7.5				
25	.821		2300	250	<5	145	4.4				8.7	<4	<5	7.7		2	0.86	6
26	.760	.43	1300	260		108	4.7				8.2	<4	<5	7.4	0			5
27	.760		2210	240		95	5.0				8.3	<4	<5	7.5				9
28	.525		670	33		45	1.5				7.6							
29	.981		530	7		27	1.1				7.6	20	<5	7.6				
30	.543		550	12		54	.8				7.6							
31	.648		2390	280		126	5.7				8.6							
AVG.[1]	.59	0.4	1600	140	7	83	3	0.02	0.1	<5		15	<5		<1	2	1	7 6
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

83

4944

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLI-H&S-351 (REV. 9/18/77)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of July 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clear Cu mg/
1	1.00	0.008	0.004	0.079	1.34	5.2	7.8		7.2	8	0.005	0.002
2	.72	Comp.	Comp.	Comp.	.74	5.5	7.9		4.5	7	.002	.004
3	.60	6/5 -	4/24 -	4/24 -	.81	7.6	8.1		6.8	8	.003	.007
4	.68	7/2	5/7	5/21	1.40	16.3	7.4	200	7.6	<4		
5	1.04				1.44	.2	7.7		8.0	12	.005	.015
6	.66				.55	14.1	8.7		5.3	6	.005	.107
7	.46				.60	18.6	8.2		4.4	4	.013	.084
8	.52				.80	37.1	8.4		5.8	4	.015	.090
9	.78		0.003		.95	17.4	8.2		5.9	4	.015	.049
10	.52		Comp.		.70	18.2	8.3		5.8	5	.020	.159
11	.58		5/8 -		.93	26.4	8.8		5.0	7	.037	.250
12	.48		5/21		.47	8.2	7.8	100	7.0	5	<.005	.426
13	.52				.99	7.8	8.0		6.7	27	<.005	
14	1.54				3.35	11.8	8.8		5.8	<4	.014	.217
15	1.48		0.005	0.075	2.41	15.1	8.5		5.5	<4	.040	.083
16	.92		Comp.	Comp.	3.43	25.3	8.6		5.6	4	.043	.183
17	.86		5/22 -	5/22 -	2.43	24.3	8.2		5.8	<4	.039	.183
18	.82		6/4	6/18	2.78	20.4	8.3		6.3	<4	.025	.283
19	1.36				3.50	14.9	8.3	120	5.6	7	.056	.317
20	1.04				2.45	22.3	7.9		4.2	7	.085	.126
21	.52				2.51	8.4	8.2		7.0	<4	.039	.085
22	.32				1.61	5.6	7.2		7.7	<4	.003	
23	.28				1.36	5.2	7.1		6.7	<4	.005	
24	.42				.72	.2	7.6		7.0	5	.006	
25	.54		0.003		.89	14.1	7.0		5.7	7	.027	.038
26	.82		Comp.		1.25	14.6	7.2	140	6.5	5	.026	.043
27	1.04		6/5 -		1.32	14.1	7.4		6.5	4	.024	.031
28	.68		6/18		.88	1.4	7.8		7.9	<4	.005	
29	1.18				1.35	.9	7.8		8.2	7	.008	
30	.96				1.01	.3	8.0		7.4	5	.006	.019
31	1.18				1.02	15.5	8.2		6.0	4	.020	
AVG.[1]	0.79				1.48	12.8		135[2]	6.3	6	.02	0.12
LIMITS OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	Avg.	0.07 (4)	
ERDAM-0524	59	9	0.066	0.066						Max.	0.35	

NOTES: [1]Arithmetic averages except for Fecal Coliforms.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

(4) NLO Concentration Guides.

NLO-H&S-351 (REV. 9/15/77)

34

44

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of July 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEW. LIFT STATION
1	1700			79	56	62	0100	6288	2159		350
2	1820			82	56	68	2100	6288	1256		543
3	1625			85	52	70	2100	6827	864		560
4	1550	.55	Rain	75	56	66	All Day	*	1026		368
5	1600			74	48	68	1700	*	810	396	333
6	1360			76	48	68	1700	8983	594		560
7	1200			78	52	65	1300	8803	2597		630
8	1100	.23	Rain	79	57	68	2100	8803	864		595
9	1140			74	66	68	1300	8803	1080		333
10	1400			84	68	69	2100	8983	2483		613
11	1600			83	64	68	0900	8983	1242	919	630
12	1684	.91	Rain	78	68	66	2100	8983	*		665
13	2451	.41	Rain	76	69	70	2100	*	864		273
14	2200			85	63	69	1300	8624	1026		683
15	3000			86	68	68	All Day	7078	1188		350
16	4900			90	66	72	2100	7186	1566		840
17	2560			82	66	72	1300	7007	1026		700
18	1860			80	54	70	2100	8624	810	414	683
19	1525			80	52	71	0100	7546	864		613
20	1300			82	55	71	0500	8983	729		665
21	1230			84	60	62	1700	8983	729		700
22	1200			89	64	60	1300	*	648		980
23	1180			86	64	60	1300	*	2159		735
24	1610	.64	Rain	85	68	76	1700	*	1620	300	613
25	3500	.21	Rain	80	70	60	0900	8624	1512		333
26	4565	.23	Rain	82	72	X	X	8983	1349		350
27	4350			84	60	X	X	6288	1296		315
28	5300	.87	Rain	84	68	X	X	*	864		595
29	21550			80	67	X	X	*	1242		280
30	19560			88	68	72	1700	*	1458		623
31	12530			90	74	74	1700	5749	1080		683
AVG.[1]	3682	4.05 [2]						7974	1205	507	555

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
X Instrument failure.
* Not pumped this date.

NLO-H&S-351 (REV. 9/15/77)

-4944

Summary, July 1979

All NPDES limits were met during July.

Concentrations of radium-228 were above the NLO target level for the two periods for which results are reported (4/24/79 - 6/18/79). The increase in Ra-228 is probably due to the thorium cleanout in the Pilot Plant and is not expected to persist. Soon after the cleanout there was an increase in the Clearwell Ra-228 level and then a return to a low level. That increase is now being seen in the Manhole-175 results given in this report. This increased level may persist through several sampling periods but the annual average Ra-228 concentration is expected to be less than the NLO target concentration of 0.066 d/m/mℓ.

The average copper concentration at MH-175 was 0.02 mg/ℓ, well within the NLO target average concentration of 0.07 mg/ℓ.

0390747

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters bELOBEO

For the Month of August 1979

2243125

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	S- mg/l	mg/l
1	0.649		2610	280	<5	154	7.2		0.1	<5	8.5							
2	.867	.18	800	52		85	2.3				7.5	32	<5	8.0	11	1	2.9	5
3	.476		610	14		66	1.1				7.7							
4	.620		2190	220		108	7.1				8.4							
5	.537		2030	220		108	8.0				8.2							7
6	.368		740	23	<5	115	1.4				7.6							5
7	.538		560	10		41	0.8				7.6							
8	.540		500	10		36	0.6				7.5							
9	.596	.11	390	11		46	0.8				7.4				1	1	3.1	
10	.699		1470	160		108	5.8				8.5							
11	.897		1240	130		96	5.2				7.9	22	<5	7.2				<4
12	.833		700	71		79	3.3				7.9	7	<5	7.6				<4
13	.508		1050	94		100	3.7				7.7							9
14	.504		580	10		104	1.1				7.7							7
15	.527		560	10	<5	74	1.1				7.7							
16	.489	.11	530	11		53	0.7	0.02			7.6				10	3	0.3	
17	.593		2100	290		120	7.1				8.8							
18	.523		1800	210		99	6.6				8.2							4
19	.748		570	26		50	1.3				7.6	11	10	7.3				<4
20	.793		430	8		31	1.2				7.6	23	<5	7.9				
21	.825	.14	1090	100	7	47	3.7	<0.01		<5	8.2	5	<5	7.7				
22	.778	.13	1460	130	8	79	4.3	0.03		<5	8.3	<4	<5	8.1				7
23	.676	.10	1230	130	10	70	4.5	0.02		<5	7.8					12	5.8	13
24	.651		1810	190		134	6.0				8.1				1			
25	.611		1530	140		155	4.4				8.0							8
26	.543		1840	150		93	4.6				7.8							7
27	1.077		710	41		34	1.8				8.0							5
28	.587	.12	560	17	<5	44	1.3			<5	9.6	<4	<5	7.9				<4
29	.589		610	10		95	1.3				7.8							
30	.610	.11	550	12		81	1.0				7.6					9	5.1	
31	.581		1530	160		101	3.9				8.8				26			
AVG.[1]	0.6	0.1	1100	96	7	82	3	0.02	0.1	<5		13	6		11	6	4	7
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4	3		1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of August 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwel Cu mg/ℓ
1	1.02	0.006	0.003	0.014	1.24	17.8	8.2		7.5	4	0.018	0.016
2	1.14	Comp.	Comp.	Comp.	1.15	3.2	7.7	200	8.5	9	.011	.012
3	1.32	7/3-	6/19-	6/19-	1.48	.2	7.7		8.5	8	.007	
4	.98	7/30	7/2	7/16	1.52	12.8	7.6		5.1	<4	.01	
5	1.20				1.63	12.1	7.7		5.9	<4	.01	.011
6	.68				.92	.6	7.9		7.9	<4	.006	.011
7	.20				.72	.2	8.0		7.4	<4	.006	
8	.30				.70	.1	7.9		7.3	<4	.006	.094
9	.44				.55	.2	7.9	310	7.9	5	.008	
10	.92				.96	10.0	8.3		6.5	<4	.019	.014
11	.90				.93	4.2	7.4		7.6	<4	.021	
12	1.58				1.57	8.1	7.5		4.7	5	.023	.083
13	1.34				1.29	5.1	7.7		7.3	5	.026	.083
14	.56				.81	.3	8.0		7.6	4	.001	
15	.58		0.001		.87	.2	7.9	60	6.1	5	.003	
16	.86		Comp.		.93	.1	7.9		8.0	<4	.001	
17	1.44		7/3-		1.52	12.1	7.4		8.0	<4	.026	.072
18	1.48		7/16		.87	10.8	7.5		6.2	<4		.064
19	1.50				1.38	1.1	7.8		7.8	5	.017	
20	1.44				1.34	.3	7.9		7.8	5	.013	.093
21	1.48				1.53	4.8	7.9		5.8	5	.033	.090
22	1.72				1.40	7.0	7.8		7.6	<4	.013	.058
23	1.72				1.08	7.2	8.0	200	4.5	<4	.016	.06
24	1.72				1.71	10.5	8.0		5.9	4	.084	.047
25	1.60				1.32	7.4	7.5		4.8	<4	.014	.063
26	1.82				1.44	8.1	7.6		7.8	<4	.020	.069
27	1.14				1.13	2.6	7.5		7.1	5	.013	.046
28	.96				1.22	.6	7.8		8.1	5	.028	
29	.78				.70	.1	7.7		8.2	<4	.007	
30	1.42				2.14	.3	7.7	200	8.1	<4	.005	.038
31	1.48				2.11	8.4	8.6		5.9	4	.029	.045
AVG.[1]	1.15				1.23	5.1		172 [2]	7.0	5	.02	.05
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	≤200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	Avg. 0.07 (4)		
LIMITS[3] ERDAM-0524	59	9	0.066	0.066						Max. 0.35		

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.
(4) ILO Concentration Guides.

3301 14D
3803
449444

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

14L06EC

Page

WASTE WATER QUALITY REPORT: General Data

For the Month of August 1979

DATE	RIVER	PRECIPITATION		AIR TEMPERATURE		WATER TEMP., MH-175		DISSOLVED SOLIDS, mg/l			
	FLOW CFS	INCHES, AS WATER	CONDITION	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	TIME RECORDED	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION
1	8370	2.05	Rain	85	70	74	All Day	5929	1242	626	665
2	13650			80	64	69	0100	*	1728		385
3	9120			84	61			3593**	2267		560
4	8450			86	64	73	0500	3593	1620		630
5	6850			89	66	72	1700	4132	3239		700
6	5850			87	70	74	1700	4312**	1701		665
7	10750			90	70	69	0500	*	1296		490
8	7070	.02	Rain	93	70	69	2100	*	1404	250	473
9	4800			90	72	72	1700	*	1053		525
10	3245	.20	Rain	88	70	75	1700	4901	1566		420
11	4100	.93	Rain	72	60	74	1700	4901	1242		301
12	4800			75	54	71	0900	5030	1566		350
13	4500			78	52	66	All Day	5030	2807		560
14	3390			78	58	69	2200	*	1835		700
15	2680			68	45	65	1900	*	1728	394	490
16	2235			73	46	74	1300	*	1512		525
17	1962			77	48	70	2100	5929	1512		718
18	1765	.48	Rain	80	65	65	1700	6288	1620		613
19	1885	.46	Rain	86	68	70	2100	*	1296		315
20	9200	.65	Rain	82	66	70	1300	5929**	1836		368
21	16980			82	66	70	1300	5389	1404		543
22	15650	.15	Rain	82	67	69	0900	4132	1512	399	490
23	11940			80	69	70	1300	3683	1943		490
24	19240			80	64	70	All Day	3773	3131		560
25	16050			76	59	70	All Day	5210	2483		543
26	12090	1.15	Rain	68	64	70	0900	5210	1512		665
27	10890			81	66	70	All Day	3593	1997		238
28	8610			81	66	70	All Day	*	1242		578
29	9780			82	69	68	All Day	*	1943	462	630
30	13290			86	66	70	All Day	*	1404		543
31	8820			85	61	72	0900	4492	1782		613
AVG.[1]	8223	6.09 [2]						4752	1756	426	527

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.
**Grab Sample.

39

4944

Summary for August, 1979

Wastewater quality was good during August, 1979. No NPDES violations occurred.

The concentration of radium-228 at Manhole-175 has decreased to the level found prior to the cleanout of Pilot Plant thorium equipment. So far this year, the average concentration of radium-226 and radium-228 combined is 0.06 d/m/mℓ.

During August, the average copper concentration at MH-175 was 0.02 mg/ℓ, which is 28% of the NLO guide of 0.07 mg/ℓ.

Rainfall during the month amounted to 6.09 inches. This is the most precipitation we've had since December of 1977 when the snowfall amounted to 6.09 inches measured as water.

Precipitation run-off is the probable cause of the rise in fecal coliforms at MH-175. Bird droppings washed into the storm sewer add significantly to the fecal coliform count in the plant effluent.

0390742

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

EhLObEO

For the Month of AUGUST, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^9)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	8370	.649		5929	1242	626	665	2610	7.5	74	All Day	20000	
2	13650	.867	200	*	1728		385	800	8.5	69	0100	60000	
3	9120	.476		3593**	2267		560	610	8.5			40000	
4	8450	.620		3593	1620		630	2190	5.1	73	0500	40000	
5	6850	.537		4132	3239		700	2030	5.9	72	1700	25000	
6	5850	.368		4312**	1701		665	740	7.9	74	1700	17000	
7	10750	.538		*	1296		490	560	7.4	69	0500	72000	
8	7070	.540		*	1404	250	473	500	7.3	69	2100	90000	
9	4800	.596	310	*	1053		525	390	7.9	72	1700	58500	
10	3245	.699		4901	1566		420	1470	6.5	75	1700	125900	
11	4100	.897		4901	1242		301	1240	7.6	74	1700	126700	
12	4800	.833		5030	1566		350	700	4.7	71	0900	100600	
13	4500	.508		5030	2807		560	1050	7.3	66	All Day	44100	
14	3390	.504		*	1835		700	580	7.6	69	2200	50000	
15	2680	.527	60	*	1728	394	490	560	6.1	65	1900	79800	
16	2235	.489		*	1512		525	530	8.0	74	1300	83100	
17	1962	.593		5929	1512		718	2100	8.0	70	2100	80000	
18	1765	.523		6288	1620		613	1800	6.2	65	1700	74900	
19	1885	.748		*	1296		315	570	7.8	70	2100	74400	
20	9200	.793		5929**	1835		368	430	7.8	70	1300	72300	
21	16980	.825		5389	1404		543	1090	5.8	70	1300	67000	
22	15650	.778		4132	1512	399	490	1460	7.6	69	0900	81000	
23	11940	.676	200	3683	1943		490	1230	4.5	70	1300	89200	
24	19240	.651		3773	3131		560	1810	5.9	70	All Day	113400	
25	16050	.611		5210	2483		543	1530	4.8	70	All Day	96700	
26	12090	.543		5210	1512		665	1840	7.8	70	0900	50800	
27	10890	1.077		3593	1997		238	710	7.1	70	All Day	136100	
28	8610	.587		*	1242		578	560	8.1	70	All Day	101300	
29	9780	.589		*	1943	462	630	610	8.2	68	All Day	105100	
30	13290	.610	200	*	1404		543	550	8.1	70	All Day	101800	
31	8820	.581		4492	1782		613	1530	5.9	72	0900	111500	

NOTES:

* Not pumped this day.

** Grab Sample.

41

1044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1979

2243124

	MANHOLE ~ 175											STORM SEWER OUTFALL			SEWAGE TREATMENT PL			
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	5-DAY BOD mg/l	
1	0.507		1570	170		115	4.5				7.3							8
2	.723		1620	160		72	4.1				8.0		<5					13
3	.655		1550	170		72	4.1				8.3		<5					10
4	.575		910	72		53	2.0				8.2					2	4.03	7
5	.528		530	12	<5	28	0.8		0.13	<5	7.6				41			
6	.586	.10	940	12		38	0.9				7.7							
7	.525		560	11		35	0.6				8.4							
8	.531		1890	210		81	4.1				8.5							8
9	.570		1810	240		89	4.7				8.3							6
10	.515		2350	280		141	5.4				8.4							4
11	.445		890	67		124	1.8				7.6							
12	.492		510	11	<5	66	0.7	<0.01			7.7					1	1.1	
13	.513	.09	460	11		46	0.6				7.6				0			
14	1.125		265	6		27	0.7				7.4	13	<5	7.9				
15	.832		420	9		38	1.0				8.3	<4	<5	7.8				
16	.199		1530	150		97	3.2				7.9							18
17	.344		1510	100		137	2.4				8.1							6
18	.630		1510	130		124	2.9				8.1							7
19	.605		1230	100	<5	63	2.5				7.9	7	<5	7.9		1	4.25	26
20	.551	.11	1000	99		72	1.0				7.9				22			22
21	.609		530	15		65	0.9				8.0							
22	1.036		410	6		58	0.9				7.9	5	<5	7.5				
23	.890		1070	95		70	2.2				8.1	<4	<5	7.9				22
24	.560		760	42		58	1.2				8.1							14
25	.590		1470	120		125	2.2				8.0							11
26	.504		780	53	18	52	1.2				7.7				3	2	3.72	7
27	.539	.16	1880	180		129	2.5				8.0							6
28	.730		1670	170		117	2.6				8.3	21	<5	8.0				10
29	.706		1300	110		69	2.6				8.2		<5					5
30	.576		1440	140		79	2.4				7.9							10
31																		
AVG.[1]	0.61	0.1	1100	93	8	74	2	<0.01	0.1	<5		9	<5		17	1	3	12
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NL-HS-151 (REV. 9/14/77)

-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

9EL06ED

WASTE WATER QUALITY REPORT: General Data

For the Month of September 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	6145	.68	Rain	86	62	72	2000	4492	1835		665
2	5650	.16	Rain	82	68	74	1300	4492	2105		333
3	5020			87	66	72	0900	4850	1674		420
4	4100			87	66	72	1300	4492	1350		665
5	3650			87	71	72	1700	*	1242		630
6	3600			86	65	70	1700	*	918	324	525
7	3360			79	58	70	All Day	*	891		508
8	2950			66	50	72	All Day	6288	756		595
9	2580			73	44	72	All Day	6288	756		578
10	2260			81	50	73	0900	6288	864		565
11	2450			84	55	70	0900	*	1188		560
12	2100			86	61	70	1300	*	*	355	490
13	1975			80	66	72	2100	*	945		455
14	35000	2.34	Rain	73	60	70	All Day	*	1188		147
15	13420	1.68	Rain	70	47	69	1300	2695	2483		595
16	8800			73	47	70	0900	*	2699		578
17	5350			77	48	70	1300	2695	2159		543
18	4200			80	57	70	1300	2695	3779		613
19	3820	.11	Rain	70	48	70	0900	2695	1728	350	420
20	3360			75	44	70	1700	2695	1943		490
21	3130			66	61	70	0800	*	1296		420
22	3610	.46	Rain	65	51	67	1700	*	1350		228
23	3475	1.21	Rain	70	46	67	1700	4941	1188		350
24	3030			75	43	70	2000	3593	1728		543
25	2820			79	50	68	All Day	3593	2159		543
26	2757			82	51	68	1700	3414	*	364	525
27	2571	.02	Rain	74	52	69	2100	3503	1053		945
28	2800	.71	Rain	73	53	68	2100	3144	1188		315
29	3665			78	57	68	1700	2246	1404		385
30	3050			80	57	69	2100	3054	1404		560
31											
AVG.[1]	5023	7.37 [2]						3908	1545	348	506

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.

4044

43

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

4E10b6E

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of September 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 mg/ℓ	Clearwell mg/ℓ
1	1.46	0.01	0.003	0.038	1.45	8.5	7.8		6.9	6	0.008	0.02
2	1.36	Comp.	Comp.	Comp.	1.24	8.4	7.3		6.8	12	.009	.024
3	1.78	7/31-	7/17-	7/17-	1.45	8.0	7.9		6.8	9	.013	.022
4	.78	8/27	7/30	8/13	1.21	3.2	7.8		6.6	6	.001	.025
5	.56				.70	.1	7.9		6.9	<4	.001	.022
6	.50				.60	.5	7.7	200	6.3	<4	.002	.022
7	.42				1.27	.3	7.7		7.0	<4	.002	.025
8	1.20				1.39	12.9	7.6		6.1	9	.015	.021
9	.94				1.19	13.8	7.7		6.2	4	.015	.014
10	1.12				1.08	15.5	7.8		5.4	<4	.018	.031
11	.90				1.08	3.2	7.7		6.5	<4	.008	
12	.78				.92	.4	7.9		6.7	<4	.005	
13	.64				.92	.2	8.0	40	6.0	<4	.005	
14	.56				.65	.4	7.8		7.5	11	.015	
15	1.68		0.004		1.90	.3	7.7		5.9	<4	.015	.03
16	1.54		Comp.		2.21	8.4	7.6		8.3	5	.020	
17	1.32		7/31-		1.62	5.1	7.7		6.0	<4	.018	.039
18	1.48		8/13		1.52	7.4	7.8		7.2	5	.021	.039
19	1.62				1.62	6.5	7.6	200	6.5	9	.032	.045
20	1.38				1.07	6.6	7.6		6.9	6	.022	.031
21	1.32				1.62	.6	7.8		8.0	4	.012	
22	1.50				1.77	.6	7.8		8.5	5	.031	
23	1.70				1.93	4.4	7.6		7.5	5	.036	.081
24	1.28				1.52	1.6	7.6		7.0	<4	.017	.026
25	1.48				1.52	5.0	7.7		8.6	7	.026	.024
26	.98				1.06	2.4	7.5		7.5	4	.022	.022
27	1.86				2.25	7.7	7.7	230	5.5	7	.032	.021
28	1.08				1.92	7.6	7.7		7.5	12	.047	.014
29	1.94				3.04	5.4	7.2		7.0	<4	.011	.017
30	1.48				1.51	5.9	7.5		6.0	<4	.010	.019
31												
AVG.[1]	1.22				1.44	5.0		138 [2]	6.9	6	0.02	0.03
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.		Avg. 0.07	(4)
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

4 4

944

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

8EL06EC

For the Month of SEPTEMBER, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10³)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	6145	.507		4492	1835		665	1570	6.9	72	2000	90500	
2	5650	.723		4492	2105		333	1620	6.8	74	1300	86200	
3	5020	.655		4850	1674		420	1550	6.8	72	0900	65700	
4	4100	.575		4492	1350		665	910	6.6	72	1300	62300	
5	3650	.528		*	1242	324	630	530	6.9	72	1700	99000	
6	3600	.586	200	*	918		525	440	6.3	70	1700	136800	
7	3360	.525		*	891		508	560	7.0	70	All Day	110100	
8	2950	.531		6288	756		595	1890	6.1	72	All Day	87100	
9	2580	.570		6288	756		578	1810	6.2	72	All Day	65500	
10	2260	.515		6288	864		565	2350	5.4	73	0900	75200	
11	2450	.445		*	1188		560	890	6.5	70	0900	85300	
12	2100	.492		*	*	355	490	510	6.7	70	1300	91800	
13	1975	.513	40	*	945		455	460	6.0	72	2100	94700	
14	35000	1.125		*	1188		147	265	7.5	70	All Day	23500	
15	13420	.832		2695	2483		595	420	5.9	69	1300	13800	
16	8800	.199		*	2699		578	1530	8.3	70	0900	98000	
17	5350	.344		2695	2159		543	1510	6.0	70	1300	66000	
18	4200	.630		2695	3779		613	1510	7.2	70	1300	90500	
19	3820	.605	200	2695	1728	350	420	1230	6.5	70	0900	95500	
20	3360	.551		2695	1943		490	1000	6.9	70	1700	99200	
21	3130	.609		*	1296		420	530	8.0	70	0800	100300	
22	3610	1.036		*	1350		228	410	8.5	67	1700	138500	
23	3475	.890		4941	1188		350	1070	7.5	67	1700	105600	
24	3030	.560		3593	1728		543	760	7.0	70	2000	51000	
25	2820	.590		3593	2159		543	1470	8.6	68	All Day	67000	
26	2757	.504		3414	*	364	525	780	7.5	68	1700	79000	
27	2571	.539	230	3503	1053		945	1880	5.5	69	2100	74000	
28	2800	.730		3144	1188		315	1670	7.5	68	2100	83000	
29	3665	.706		2246	1404		385	1300	7.0	68	1700	88000	
30	3050	.576		3054	1404		560	1440	6.0	69	2100	76900	
31													

NOTES:

* Not pumped this date.

45

-4044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of October 1979

2243123

DATE	MANHOLE – 175											STORM SEWER OUTFALL			SEWAGE TREATMENT F			
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	B-I	
1	0.512		1290	130		69	2.1				8.0							
2	.687		690	48		47	1.3				7.6	16	<5	8.0				5
3	.603		530	9	<5	64	1.0		0.2	<5	7.5					1	2.6	5
4	.762	.20	1190	110		76	1.9				8.1	7	<5	7.8	3			
5	.607		1180	110		84	2.1	0.02			8.0							6
6	.553		1030	100		71	2.4				8.1							8
7	.477		1120	120		76	2.4				8.0							4
8	.510		1260	130		83	2.7				7.8							<4
9	.522		480	10		52	1.1				8.1							4
10	.583		350	8	<5	34	.8				7.7							5
11	.524	.16	1020	95		67	2.0				8.1					3	4.2	
12	.592		1280	140		81	2.4				8.2				0			<4
13	.594		1300	110		126	2.4				8.4							4
14	.515		1250	120		100	2.5				8.2							8
15	.508		1490	120		158	2.5				8.0							10
16	.437		690	42		71	1.3				7.7							9
17	.459		480	8	<5	64	0.7				7.8					1	1.5	<4
18	.544	.14	1020	95		68	2.1				8.1				0			
19	.409		1240	120		86	2.6				8.3							<4
20	.564		1250	120		78	2.2				8.3							8
21	.492		1460	130		130	2.4				8.2							<4
22	.472		1440	140		85	2.3				8.3							<4
23	.534		500	29		45	1.0				7.8	10		8.2				<4
24	.484		500	9		71	0.6				7.8					2	1.1	
25	.529	.33	1140	100		125	1.6				8.2							<4
26	.456		1120	120		77	2.1				8.2				0			<4
27	.512		1290	130		67	2.2				8.3							<4
28	.491		390	18		52	0.8				7.5							<4
29	.449		460	9		70	0.6				7.6							
30	.410		460	9		58	0.6				7.5							
31	.469		500	8	<5	104	0.6				7.3							
AVG.[1]	.52	.2	960	80	<5	78	2	0.02	0.01	<5		12	<5		1	1	4.2	
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	2	3	5
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	40	40	40
LIMITS 4	49		1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Geo. Mean)	20	20	20

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-HES-151 (REV. 9/15/77)

3390130

49

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of October 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwel Cu mg/ℓ
1	1.02	0.01	0.002	0.035	1.35	5.4	7.7		6.1	<4	0.011	0.017
2	.90	Comp.	Comp.	Comp.	1.11	1.9	7.8		8.4	5	.014	.018
3	.58	8/28-	8/14-	8/14-	.81	.5	7.9		8.9	<4	.010	
4	1.16	10/8	8/27	9/10	1.22	3.4	7.8	180	8.5	10	.032	.164
5	1.22				1.59	4.2	7.8		7.9	<4	.040	.153
6	1.06				1.28	4.7	7.6		8.2	<4	.020	.086
7	1.18				1.27	5.8	7.8		8.0	<4	.018	.095
8	1.08				1.55	6.0	7.8		7.6	<4	.025	.118
9	1.48				2.08	.4	7.8		8.3	<4	.008	.069
10	1.17				1.96	.4	7.9		7.8	<4	.009	.050
11	1.04				1.07	4.4	7.8	140	5.2	<4	.015	.075
12	1.04				1.24	5.5	7.8		6.1	<4	.015	.073
13	1.46				1.85	5.0	7.3		5.4	<4	.015	.044
14	.76				.97	5.7	7.6		6.0	<4	.013	.063
15	.86		0.003		1.41	5.9	7.6		6.0	5	.019	.050
16	1.42		Comp.		1.38	1.6	7.7		5.7	<4	.010	.103
17	.94		8/28-		1.32	.4	7.8		6.4	<4	.016	.334
18	1.72		9/10		1.92	4.3	7.5	200	6.2	<4	.013	.201
19	1.72				1.35	5.1	8.0		5.5	<4	.037	.204
20	.96				1.16	5.4	7.4		4.7	<4	.036	.131
21	.92				1.03	5.3	7.5		4.0	5	.041	.150
22	.64				.96	5.9	7.6		4.5	50	.034	.062
23	1.00				1.09	1.4	7.8		6.5	11	.011	
24	.78				1.11	.2	8.0		6.3	5	.006	
25	.82				.93	3.9	8.2	10	6.6	<4	.026	.141
26	.78				2.03	4.6	8.1		5.6	8	.033	.126
27	1.06				.79	4.2	7.9		5.6	<4	.028	.074
28	.54				.54	.7	8.0		5.5	4	.009	
29	.40				.36	.4	8.1		6.2	5	.007	
30	.36				.54	.1	8.1		6.4	4	.005	
31	.48				.72	.2	7.0		7.2	<4	.006	
AVG.[1]	.99				1.23	3.3		84 [2]	6.5	5	.02	.11
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

NLO-H&S-[illegible] (R. 7/18/77)

039013

-4944

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: General Data

For the Month of October 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	2755			78	58	68	1300	3324	1134		560
2	4200	.57	Rain	78	57	68	0900	3324	1458		298
3	3610			68	57	68	2100	*	1080	685	490
4	3165	.27	Rain	66	46	68	1700	3503	1026		333
5	3820			56	39	67	1400	2964	1404		420
6	3440			66	45	72	0800	3503	1134		490
7	3000			62	42	69	2100	3593	1134		560
8	2635	.05	Rain	61	41	68	0900	3593	1620		490
9	2700	.13	Rain	58	45	68	1300	3593	1943		403
10	2775			53	38	66	All Day	*	1242	366	263
11	2700	.01	Rain	55	45	67	1300	4492	1512		420
12	2920	.11	Rain	64	44	66	1300	4581	1080		403
13	2755			65	34	64	1300	4492	2159		350
14	2480			58	29	60	0100	4042	1188		455
15	2140			60	34	58	1700	3593	1728		980
16	2095	.02	Rain	66	49	58	All Day	3144	1026		420
17	2100			76	49	62	1700	3414	2807	312	385
18	2070			77	53	65	2100	3773	810		490
19	2335			77	49	63	1300	3683	1620		403
20	2320			81	65	60	1700	3773	837		455
21	2150			83	65	60	All Day	3773	3023		455
22	2015	.27	Rain	82	61	68	1300	3773	999		420
23	1990			46	43	61	2100	3773	1512		385
24	2000			44	35	60	2100	*	2483	396	368
25	1962			56	29	60	1900	3414	1026		770
26	1897			49	27	58	0900	3144	1296		350
27	1820	.02	Rain	71	30	58	2100	3683	1026		385
28	1750	.03	Rain	64	40	57	All Day	*	594		385
29	1660			69	35	62	1300	*	*		368
30	1660			73	43	58	1700	*	1080		368
31	1565			75	56	61	2100	*	864	373	981
AVG.[1]	2467	1.48 [2]						3664	1395	426	46[illegible]

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.

1390132

4944

4 CO

Waste Water Quality Report Summary

October, 1979

Waste water quality was good during October 1979. All NPDES limits were met. Radium and copper at Manhole-175 remain well under the target values.

0390733

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

MWB 11/15

hELObEC

For the Month of OCTOBER, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2755	.512		3324	1134		560	1290	6.1	68	1300	49800	
2	4200	.687		3324	1458		298	690	8.4	68	0900	94300	
3	3610	.603		*	1080	685	490	530	8.9	68	2100	89500	
4	3165	.762	180	3503	1026		333	1190	8.5	68	1700	80800	
5	3820	.607		2964	1404		420	1180	7.9	67	1400	84200	
6	3440	.553		3503	1134		490	1030	8.2	72	0800	67200	
7	3000	.477		3593	1134		560	1120	8.0	69	2100	46500	
8	2635	.510		3593	1620		490	1260	7.6	68	0900	50900	
9	2700	.522		3593	1943		403	480	8.3	68	1300	71000	
10	2775	.583		*	1242	366	263	350	7.8	66	All Day	65500	
11	2700	.523	140	4492	1512		420	1020	5.2	67	1300	70100	
12	2920	.591		4581	1080		403	1280	6.1	66	1300	77100	
13	2755	.594		4492	2159		350	1300	5.4	64	1300	74900	
14	2480	.515		4042	1188		455	1250	6.0	60	0100	50500	
15	2140	.508		3593	1728		980	1490	6.0	58	1700	36300	
16	2095	.437		3144	1026		420	690	5.7	58	All Day	57700	
17	2100	.459		3414	2807	312	385	480	6.4	62	1700	61400	
18	2070	.544	200	3773	810		490	1020	6.2	65	2100	65300	
19	2335	.409		3683	1620		403	1240	5.5	63	1300	62000	
20	2320	.564		3773	837		455	1250	4.7	60	1700	79600	
21	2150	.492		3773	3023		455	1460	4.0	60	All Day	73700	
22	2015	.472		3773	999		420	1440	4.5	68	1300	37000	
23	1990	.534		3773	1512		385	500	6.5	61	2100	63500	
24	2000	.484		*	2483	396	368	550	6.3	60	2100	82100	
25	1962	.529	10	3414	1026		770	1140	6.6	60	1900	79700	
26	1897	.456		3144	1296		350	1120	5.6	58	0900	75300	
27	1820	.512		3683	1026		385	1290	5.6	58	2100	67500	
28	1750	.491		*	594		385	390	5.5	57	All Day	54300	
29	1660	.449		*	*		368	460	6.2	62	1300	79000	
30	1660	.410		*	1080		368	460	6.4	58	1700	45300	
31	1565	.469		*	864	373	980	500	7.2	61	2100	70800	

NOTES:

* Not pumped this date

-4944-

NLO-ENG-2456 (1/16/76)

NATIONAL LEAD COMPANY OF OHIO 2257184

(10)

WASTE WATER QUALITY General Data For the Month of OCTOBER, 1979

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS	VOL × TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS	VOL (×1000) gals × SUSPENDED SOLIDS	PRECIPITATION
1	97,000	3324	7	3331	323,107						
2	32,000	3324	7	3331	106,592						
3	0	0	0	0	0						
4	97,000	3503	7	3510	340,470	314,000	2770	3691	6491	869,780	
5	97,000	2964	7	2971	288,187						
6	97,000	3503	7	3510	340,470						
7	97,000	3593	7	3510	340,470						
8	97,000	3593	7	3510	340,470						
9	16,000	3593	7	3510	56,160						
10	0	0	0	0	0						
11	97,000	4492	7	4497	436,209	253,200	2070	3691	5761	524,124	
12	97,000	4581	7	4588	445,036						
13	97,000	4492	7	4499	436,403						
14	97,000	4042	7	4049	392,753						
15	97,000	3593	7	3600	349,200						
16	12,100	3144	7	3151	38,1[illegible]						
17	97,000	3414	7	3421	331,837						
18	97,000	3773	7	3780	366,660						
19	74,000	3683	7	3690	273,060	145,500	2160	3691	5851	314,280	
20	97,000	3773	7	3780	366,660						
21	97,000	3773	7	3780	366,660						
22	97,000	3773	7	3780	366,660						
23	4,000	3773	7	3780	15,120						
24	0	0	0	0	0						
25	97,000	3414	7	3421	331,837						
26	85,000	3144	7	3151	267,835	206,600	350	3691	4041	72,310	
27	97,000	3683	7	3690	357,930						
28	0	0	0	0	0						
29	0	0	0	0	0						
30	0	0	0	0	0						
31	0	0	0	0	0						
Avg.[1]	1969.1	[2]			7,277,901	326,300	13,150	3691	16,841	4,290,845	
						TOTAL 1245.6				6,071,339	

NOTES: [1] Arithmetic averages

(NOTE: IN THIS INSTANCE DISSOLVED SOLIDS IS A CONSTANT)

$\frac{7,277,901}{1969.1} = 3696$ mg/l (ppm) wtd. avg.

$\frac{6,071,339}{1245.6} = 4874$ mg/l (wtd avg) ppm

51

-49044

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

EL08040

2257185

For the Month of OCTOBER, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10³)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2755	.512		3324	1134		560	1290	6.1	68	1300	49800	
2	4200	.687		3324	1458		298	690	8.4	68	0900	94300	
3	3610	.603		*	1080	685	490	530	8.9	68	2100	89500	
4	3165	.762	180	3503	1026		333	1190	8.5	68	1700	80800	
5	3820	.607		2964	1404		420	1180	7.9	67	1400	84200	
6	3440	.553		3503	1134		490	1030	8.2	72	0800	67200	
7	3000	.477		3593	1134		560	1120	8.0	69	2100	46500	
8	2635	.510		3593	1620		490	1260	7.6	68	0900	50900	
9	2700	.522		3593	1943		403	480	8.3	68	1300	71000	
10	2775	.583		*	1242	366	203	350	7.8	66	All Day	65500	
11	2700	.523	140	4492	1512		420	1020	5.2	67	1300	76100	
12	2920	.591		4581	1080		403	1280	6.1	66	1300	77100	
13	2755	.594		4492	2159		350	1300	5.4	64	1300	74900	
14	2480	.515		4042	1188		455	1250	6.0	60	0100	50500	
15	2140	.508		3593	1728		980	1490	6.0	58	1700	36300	
16	2095	.437		3144	1026		420	690	5.7	58	All Day	57700	
17	2100	.459		3414	2807	312	385	480	6.4	62	1700	61400	
18	2070	.544	200	3773	810		490	1020	6.2	65	2100	65300	
19	2335	.409		3683	1620		403	1240	5.5	63	1300	62000	
20	2320	.564		3773	837		455	1250	4.7	60	1700	79600	
21	2150	.492		3773	3023		455	1460	4.0	60	All Day	73700	
22	2015	.472		3773	999		420	1440	4.5	68	1300	37000	
23	1990	.534		3773	1512		385	500	6.5	61	2100	63500	
24	2000	.484		*	2483	396	368	550	6.3	60	2100	82100	
25	1962	.529	10	3414	1026		770	1140	6.6	60	1900	79700	
26	1897	.456		3144	1296		350	1120	5.6	58	0900	75300	
27	1820	.512		3683	1026		385	1290	5.6	58	2100	67500	
28	1750	.491		*	594		385	390	5.5	57	All Day	54300	
29	1660	.449		*	*		368	460	6.2	62	1300	79000	
30	1660	.410		*	1080		368	460	6.4	58	1700	45300	
31	1565	.469		*	864	373	980	500	7.2	61	2100	70800	

NOTES:

* Not pumped this date

1944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

Pag

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1979

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREA FECAL COLIFORM NO/100ML	S SO m	2243122	RWt JS. IDS g/l
1	0.521	.15	400	8		36	0.7				7.8				1			
2	.809		740	67		40	1.8				8.2	<4	<5	7.9				<4
3	.546		1200	120		113	2.6				8.5							<4
4	.475		1130	110		123	2.2				7.5							<4
5	.457		400	9		62	0.8				7.5						7.6	
6	.453		310	8		35	0.8				7.5							
7	.500		440	9	<5	58	0.7		0.1	<5	7.7					2		
8	.510	.14	1000	96		114	2.1				8.0				6			6
9	.537		820	58		79	1.7				7.7							21
10	1.082		360	15		27	1.2			<5	7.3	<4	<5	8.0				76
11	.462		375	9		37	0.9				7.9							
12	.416		450	8		41	0.7				7.4						8.7	
13	.563		860	96		65	2.0				8.3							8
14	.516		610	14	<5	127	1.0	<0.01			7.6					2		
15	.472	.17	430	8		46	0.7				7.8				0			
16	.499		1360	150		75	2.5				8.2							7
17	.413		1260	160		73	4.0				8.7							13
18	.484		1410	170		72	4.8				8.7							13
19	.459		1060	100		50	4.0				7.7						6.7	18
20	.439		460	13		39	1.5				7.7							
21	.449	.30	450	7	<5	74	2.4				7.5				0	3		
22	.525		620	7		142	1.5				7.5	10		7.1				
23	.832		500	5		84	1.4				7.7	6		7.4				
24	1.058		360	4		30	1.4				7.7	<4		7.7				
25	.556		490	6		40	1.0				8.0						9.4	
26	1.157		420	3		23	1.0				7.6	4	<5	8.0				
27	.691		1000	68		62	3.1				8.0							<4
28	.659		880	79	16	68	4.3				8.1	6	<5	8.1		2		6
29	.485	.38	840	69		112	4.8				8.8				0			19
30	.387		1000	78		159	4.1				8.5							21
31																		
AVG.[1]	0.58	0.2	690	47	9	65	2	<0.01	0.1	<5		5	<5		1	2	8	15
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4	3.5		1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-HES-343 (REV. 9/18/77)

0390125

044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of November 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwell Cu mg/ℓ
1	0.58	0.006	0.001	0.037	1.13	.2	8.0	100	7.1	5	0.005	
2	1.28	Comp.	Comp.	Comp.	1.73	2.3	7.8		6.6	9	.022	0.338
3	1.26	10/9-	9/11-	9/11-	1.38	4.8	7.6		5.6	<4	.041	.292
4	1.20	11/5/79	9/24	10/8	1.42	4.5	7.8		6.8	<4	.040	.333
5	.66				.52	.4	8.0		6.8	<4	.006	
6	.40				.52	.3	8.0		6.7	<4	.004	
7	.30				.55	.2	8.0		8.0	<4	.003	
8	.62				.62	3.3	7.9	230	7.9	<4	.023	.172
9	.76				.89	1.6	7.9		7.9	4	.018	.116
10	1.06				1.52	.6	7.4		8.8	6	.009	.067
11	.78				1.34	.2	7.9		9.2	<4	.002	
12	.72				1.06	.3	7.9		7.3	<4	.004	
13	1.04				.95	3.2	7.8		8.1	<4	.073	.018
14	.70				.43	.3	8.0		6.3	<4	.006	
15	.52		0.003		.85	.2	8.0	140	6.8	<4	.002	.066
16	.70		Comp.		.77	4.9	7.9		6.4	<4	.013	.059
17	.72		9/25-		.79	4.3	7.7		7.8	<4	.010	.018
18	.98		10/8		1.12	4.5	8.1		7.7	<4	.018	.042
19	.78				.66	2.8	7.8		7.3	4	.014	.032
20	.38				.86	.5	7.9		7.4	5	.003	
21	.36				.55	.4	8.2	100	7.6	9	.001	
22	.54				.58	.2	7.8		8.2	5	.007	
23	1.48				1.46	.3	7.9		10.0	<4	.005	
24	1.60				1.57	.5	7.8		6.9	<4	.007	
25	1.02				.96	.3	8.0		9.8	<4	.003	
26	.82				.56	.3	8.1		8.3	9	.003	
27	.82				1.12	1.6	8.6		8.3	8	.010	.040
28	.84				1.04	1.9	8.5		8.8	17	.012	.042
29	1.00				1.26	1.6	8.6	20	8.1	9	.010	.045
30	.64				.92	1.7	8.7		8.7	6	.013	.045
31												
AVG.[1]	.82				.97	1.6		92 [2]	7.7	5	.01	.11
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

390126

-1044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of November 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	1500	.63	Rain	68	37	60	1700	*	566		350
2	2800			53	33	65	1300	3593	1512		280
3	2850			55	28	50	1700	3593	3132		543
4	2680			56	26	50	All Day	3593	1296		438
5	2335			62	29	63	1300	*	1134		385
6	2135			55	34	65	0500	*	810		403
7	1949			46	34	60	2100	*	729	325	385
8	1835			47	34	60	All Day	2875	2591		403
9	1860	1.33	Rain	57	44	55	2100	2695	972		508
10	7880			48	36	56	0100	3144	1242		228
11	6200			40	27	56	0800	*	1296		420
12	4545			45	26	52	0100	*	1080		420
13	3750			46	28	48	0800	2695	918		403
14	3410			46	28	57	0900	*	867	358	508
15	2950			49	32	54	1300	*	2159		455
16	2680			52	32	64	1300	4492	783		350
17	2480			66	26	66	0100	4492	783		473
18	2320			67	31	58	1700	4402	729		438
19	2200	.01	Rain	66	31	58	2100	3234	837		385
20	2150			60	40	64	1700	*	972		385
21	2070			71	43	64	0500	*	918	949	350
22	2080	.35	Rain	64	55	62	1800	*	2267		385
23	2510	1.08	Rain	60	42	60	1300	*	3455		210
24	17520			48	35	57	1800	*	1889		196
25	15000	1.15	Rain	61	33	57	0500	*	1512		455
26	35240	.05	Rain	61	41	58	1700	*	1619		189
27	25500	.08	Rain &Snow	65	33	66	0900	4312	2159		455
28	18700	.01	Snow	48	29	58	1300	3593	1889	451	280
29	11400			29	24	58	0900	3593	3239		438
30	11500			33	27	57	0900	3593	2483		630
31											
AVG.[1]	6734	4.72 [2]						3593	1528	521	392

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

0390121

4944

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

3390128

For the Month of NOVEMBER, 1979

	FLOWS		FECAL COLIFORMS AT MH 175	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10 3)	(NO./100ml)	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175	(mg/l)	DAILY MAXIMUM	TIME OF DAY		
1	1500	.521	100	*	566		350	400	7.1	60	1700	75300	
2	2800	.809		3593	1512		280	740	6.6	65	1300	88400	
3	2850	.546		3593	3132		543	1200	5.6	50	1700	86600	
4	2680	.475		3593	1296		438	1130	6.8	50	All Day	47100	
5	2335	.457		*	1134		385	400	6.8	63	1300	44500	
6	2135	.453		*	810		403	310	6.7	65	0500	73400	
7	1949	.500		*	729	325	385	440	8.0	60	2100	74100	
8	1835	.510	230	2875	2591		403	1000	7.9	60	All Day	76400	
9	1860	.537		2695	972		508	820	7.9	55	2100	81600	
10	7880	1.082		3144	1242		228	360	8.8	56	0100	140100	
11	6200	.462		*	1296		420	375	9.2	56	0800	54700	
12	4545	.416		*	1080		420	450	7.3	52	0100	44700	
13	3750	.563		2695	918		403	860	8.1	48	0800	84300	
14	3410	.516		*	867	358	508	610	6.3	57	0900	77300	
15	2950	.472	140	*	2159		455	430	6.8	54	1300	69900	
16	2680	.499		4492	783		350	1360	6.4	64	1300	74000	
17	2480	.413		4492	783		473	1260	7.8	66	0100	66000	
18	2320	.484		4402	729		438	1410	7.7	58	1700	69900	
19	2200	.459		3234	837		385	1060	7.3	58	2100	37100	
20	2150	.439		*	972		385	460	7.4	64	1700	66700	
21	2070	.449	100	*	918	949	350	450	7.6	64	0500	72200	
22	2080	.525		*	2267		385	620	8.2	62	1800	67700	
23	2510	.832		*	3455		210	500	10.0	60	1300	53200	
24	17520	1.058		*	1889		196	360	6.9	57	1800	114100	
25	15000	.556		*	1512		455	490	9.8	57	0500	65200	
26	35240	1.157		*	1619		189	420	8.3	58	1700	138300	
27	25500	.691		4312	2159		455	1000	8.3	66	0900	91400	
28	18700	.659		3593	1889	451	280	880	8.8	58	1300	85300	
29	11400	.485	20	3593	3239		438	840	8.1	58	0900	82500	
30	11500	.387		3593	2483		630	1000	8.7	57	0900	86000	
31													

NOTES:

* Not pumped this date.

-4944

56

Waste Water Quality Report Summary

November, 1979

One water quality problem occurred in November. Precipitation runoff carried soil into the Clearwell and caused a suspended solids concentration of 76 mg/ℓ in the sample dated 11/10/79. The NPDES permit limit is 40 mg/ℓ.

The average concentration of radium-228 at Manhole-175 has been constant for the past three months. Averages reported (in d/m/mℓ) are: 0.038 (Sept.), 0.035 (Oct.), and 0.037 (Nov.).

2236227

NATIONAL LEAD COMPANY OF OHIO

For the Month of NOVEMBER 1979

WASTE WATER QUALITY — General Data

DATE (Day of Month)	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l	CLEARWELL (VVB-FVA) VOLUME (in 1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	PRECIPITATION VOLUME (in 1000 gal units) TIMES TOTAL SOLIDS
1										
2	97600	3593	7	3600	349,200					
3	97600	3593	7	3600	349,200					
4	97600	3593	7	3600	349,200	251400	6783	3623	10406	2,616,068
5	X									
6	X									
7	X									
8	97600	2875	7	2882	279,554					
9	97600	2695	7	2702	262,094					
10	32000	3144	7	3151	100,832					
11	X									
12	X									
13	97600	2695	7	2702	262,094	367700	8343	3137	11480	4,221,196
14	X									
15	X									
16	93600	4492	7	4499	418,407					
17	64,600	4492	7	4499	290,635					
18	97000	4402	7	4409	427,673					
19	97000	3234	7	3241	314,377	179500	5788	2755	8573	1,538,854
20	X									
21	X									
22	X									
23	X									
24	X									
25	X									
26	X									
27	73500	4312	7	4319	318,742	326600	2599	2238	4837	1,579,764
28	32260	3593	7	3600	133,920					
29	84660	3593	7	3600	302,400					
30	97600	3593	7	3600	349,200					
31										
Avg.[1]	1257.6		2		4,507,528	1125.2				9,955,882

NOTES: [1] Arithmetic average

* not Pumped this date

$\frac{4,507,528}{1257.6} = 3584$ mg/l wtd aver (TOTAL SOLIDS) for NOVEMBER, '79

$\frac{9,955,882}{1125.2} = 8848$ mg/l (wtd. aver. TOTAL SOLIDS for pumping from Gen Sump to NEW P.T.)

1-4044

85

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1979

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TI FECAL COLIFORM NO/100ML	2243121		EARWELL SUS. SOLIDS mg/l
1	0.463		570	31		52	2.1				7.8							4
2	.365		440	6		41	1.0				7.7							
3	.411		520	5		89	0.9				8.0						8.0	
4	.384		1210	130		84	2.4				8.1							5
5	.430	.30	640	47	5	49	1.6		0.08	<5	7.5					1		<4
6	.454		836	51		145	1.5				8.5				0			16
7	.448		490	160		103	3.5	0.03			9.2							4
8	.421		1370	160		107	3.2				7.8							4
9	.407		1310	140		151	2.8				8.4							5
10	.379		1150	120		89	2.9				8.2							12
11	.295		910	82		107	2.5				7.9						5.1	5
12	.452		1290	37	<5	230	1.6				8.0							17
13	.782	.38	730	39		173	1.6				7.5	10	<5	8.0		7		<4
14	.502		640	33		73	1.5				7.6				0			23
15	.317		420	10		50	1.0				7.7							
16	.292		400	9		42	0.9				7.9							
17	.336		400	9		45	0.8				8.0						5.1	
18	.344		830	90		86	2.5				9.4							13
19	.368		990	119	11	90	3.6				7.6					1		<4
20	.412	.28	900	110		122	3.1				9.4				0			<4
21	.349		1440	180		102	4.5				9.3							15
22	.523		770	60		52	2.8				9.4	13	<5	6.8				<4
23	.817		550	40		35	2.4				8.0	4	<5	6.8				5
24	.775		480	37		33	2.0				9.1	7	<5	7.0			7.2	6
25	1.005		310	7		21	1.3				7.8	6	6	7.1				
26	.535		390	6	<5	36	1.1				8.1							
27	.231	.30	400	3		48	1.5				7.8					4		
28	.217		430	2		50	1.2				7.7				0			
29	.210		410	2		48	1.3				8.0							
30	.220		415	2		47	1.2				8.2							
31	.214		410	5		55	1.1				8.1							
AVG.[1]	0.43	0.3	700	55	6	86	2	0.03	0.08	<5		8	5		0	3	6	7
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-HSE-391 (REV. 9/19/77)

070120

0444

NATIONAL LEAD COMPANY OF OHIO 1210860

HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of December 1979

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwell Cu mg/ℓ
1	.78	0.037	0.002	0.014	.96	.9	7.8		8.8	26	.01	
2	.38	Comp.	Comp.	Comp.	.61	.1	8.2		7.4	<4	.008	
3	.66	11/6-	10/9-	10/9-	.53	.2	8.1		9.5	<4	.006	
4	1.08	12/3	10/22	11/5	1.10	2.4	8.0		8.7	4	.016	.068
5	.60				.87	.8	8.0		8.0	4	.008	.070
6	.74				.99	1.4	8.1	200	8.3	4	.008	.062
7	1.44				1.27	3.6	8.9		9.0	4	.02	.052
8	1.34				1.63	4.0	8.2		7.8	7	.028	.028
9	1.37				1.37	3.4	8.0		8.8	<4	.038	.023
10	.78				1.21	2.9	8.2		6.6	4	.028	.026
11	.56				.85	1.8	8.4		7.6	5	.027	.019
12	.46				.87	.8	7.9		10.4	13	.031	.022
13	1.04				1.77	1.0	7.8	110	10.3	10	.036	.016
14	1.77				2.20	.4	8.0		10.2	<4	.012	.019
15	.62		0.001		1.78	.4	8.1		10.3	<4	.006	
16	.48		Comp.		.90	.9	8.1		10.5	<4	.002	
17	.46		10/23-		.87	.2	8.1		10.4	<4	.004	.015
18	.72		11/5		.88	2.1	8.9		9.9	<4	.010	.019
19	1.06				1.04	2.0	9.1		8.7	<4	.011	.020
20	.56				.81	1.8	8.9	7	9.5	<4	.006	.027
21	.50				1.79	3.0	6.8		7.5	<4	.015	.024
22	.92				1.51	1.8	6.9		9.9	12	.008	.018
23	2.00				4.19	1.3	7.0		9.8	6	.007	.021
24	2.00				3.39	1.3	7.0		9.9	11	.008	.021
25	1.26				2.07	.6	7.5		10.2	7	.004	
26	1.06				2.60	.5	8.1		9.0	<4	.002	
27	1.20				3.95	.5	8.2	4	9.2	<4	.004	
28	.86				1.78	.3	8.3		10.0	<4	.004	
29	.74				3.26	.4	8.1		9.8	4	.004	
30	.76				1.36	.4	8.1		9.7	<4	.005	
31	.78				1.73	.2	8.1		10.4	5	.006	
AVG.[1]	.93				1.62	1.3		28 [2]	9.2	6	.01	.03
LIMITS[3] OHIO EPA					0.0066	0.22	6.0-9.0	< 200 Mo. Geo. Mean	≥ 5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

NLCO-651 (REV. 9/19/77)

944

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of December 1979

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	7400			38	24	61	1700	2021	918		420
2	5850			33	19	57	1700	*	945		455
3	4720			39	14	60	0900	*	3239		385
4	4335			51	29	58	1800	4492	972		385
5	4220			60	35	71	0500	4492	950	520	378
6	4075	.04	Rain	51	28	60	0500	4042	864		338
7	4000			56	26	60	2100	3818	1576		329
8	3510			42	21	56	0500	4416	669		348
9	3225			48	26	56	0900	4416	639		341
10	3065			58	25	62	0900	3212	395		354
11	2885			66	48	56	2100	3051	319		312
12	2835	.31	Rain	62	39	60	2100	2890	1764	817	580
13	3030	.27	Rain	39	25	56	0500	3613	1704		191
14	3250			42	23	60	2100	3693	1065		259
15	2870			43	18	56	2000	*	578		377
16	2680			49	24	54	2100	*	*		412
17	2570			26	11	58	2100	*	*		365
18	2370			36	18	52	0500	3131	432		300
19	2290			50	25	60	1700	3051	455	449	377
20	2225			49	21	54	1700	3372	426		383
21	2225			52	25	61	0100	3412	821		353
22	2175	.60	Rain	51	45	53	1700	3372	440		265
23	4100	.31	Rain	61	54	54	2100	3212	700		206
24	15000	.85	Rain	61	39	55	1300	3212	700		147
25	22370	.12	Rain	41	38	54	1300	*	1200		206
26	16750			40	34	55	1700	*	1200	389	342
27	11850			38	27	60	0500	*	1100		412
28	7800			34	23	56	1700	*	600		412
29	6500			33	26	60	1700	*	700		412
30	5500			44	29	57	1700	*	800		341
31	4780			33	29	58	0900	*	1700	2175	418
AVG.[1]	5499	2.50 [2]						3522	961	544	358

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
*Not pumped this date.

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

E2L06E0

For the Month of December, 1979

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	7400	.463		2021	918		420	570	8.8	61	1700	86500	
2	5850	.365		*	945		455	440	7.4	57	1700	73700	
3	4720	.411		*	3239		385	520	9.5	60	0900	65700	
4	4335	.384		4492	972		385	1210	8.7	58	1800	103000	
5	4220	.430		4492	950	520	378	640	8.0	71	0500	86000	
6	4075	.454	200	4042	864		438	836	8.3	60	0500	101300	
7	4000	.448		3818	1576		329	490	9.0	60	2100	100000	
8	3510	.421		4416	669		348	1370	7.8	56	0500	84300	
9	3225	.407		4416	639		641	1310	8.8	56	0900	64100	
10	3065	.379		3212	395		354	1150	6.6	62	0900	52100	
11	2885	.295		3051	319		312	910	7.6	56	2100	109800	
12	2835	.452		2890	1764	817	589	1290	10.4	60	2100	100000	
13	3030	.782	110	3613	1704		191	720	10.3	58	0500	95600	
14	3250	.502		3693	1065		259	640	10.2	60	2100	93900	
15	2870	.317		*	578		377	420	10.3	56	2000	78800	
16	2680	.292		*	*		412	400	10.5	54	2100	57700	
17	2570	.336		*	*		365	400	10.4	58	2100	53800	
18	2370	.344		3131	432		300	830	9.9	52	0500	78000	
19	2290	.368		3051	456	449	277	990	8.7	60	1700	103800	
20	2225	.412	7	3372	426		383	900	9.5	54	1700	74200	
21	2225	.349		3412	821		353	1440	7.5	61	0100	76700	
22	2175	.523		3372	440		265	770	9.9	53	1700	46000	
23	4100	.817		3212	700		206	580	9.8	54	2100	63500	
24	15000	.775		3212	700		147	480	9.9	55	1300	88700	
25	22370	1.005		*	1200		206	310	10.2	54	1300	101800	
26	16750	.535		*	1200	389	342	390	9.0	55	1700	69600	
27	11850	.231	4	*	1100		412	400	9.2	60	0500	60500	
28	7800	.217		*	600		412	430	10.0	56	1700	54300	
29	6500	.210		*	700		412	410	9.8	60	1700	59600	
30	5500	.220		*	800		341	415	9.7	57	1700	36100	
31	4780	.214		*	1700		418	410	10.4	58	0900	59400	

NOTES: * Not pumped this date.

-4044

52

NLO-EMG-2456 (1/16/76)

Waste Water Quality Report Summary

January 18, 1980

Waste water quality was good during December. Copper concentrations remain low. The radium concentrations given in this report are well below the target value of 66 d/m/liter.

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — 2128644 — For the Month of December 79

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	(1000 gal units) TIMES TOTAL SOLIDS	EN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	PRECIPITATION VOLUME (IN 1000 gal units) TIMES TOTAL SOLIDS
1	20000	2021	7	2028	40,560					
2	*									
3	*									
4	*					213000	4170	5809	9979	2,125,527
5	22300	4492	7	4499	122,823					
6	54000	4042	7	4049	230,793					
7	141600	3818	7	3825	541,620	*	*	*	*	
8	112000	4416	7	4423	495,376					
9	75000	4416	7	4423	331,725					
10	65000	3212	7	3219	209,235					
11	37000	3051	7	3058	113,146	137000	3390	2904	6294	862,278
12	38100	2890	7	2897	110,375					
13	35300	3613	7	3620	127,786					
14	2430	3693	7	3700	8,991	*	*	*	*	
15	*									
16	*									
17	*									
18	83100	3131	7	3138	260,767	531200	2510	9950	12460	6,618,752
19	73900	3051	7	3058	225,986					
20	78300	3372	7	3379	264,576					
21	78000	3412	7	3419	266,682	*	*	*	*	
22	76800	3372	7	3379	259,507					
23	73000	3212	7	3219	234,987					
24	80800	3212	7	3219	260,095	441300	8425	7310	9735	4,031,275
25	*									
26	*									
27	*									
28	*									
29	*									
30	*									
31	*									
AVG.[1]	1154.6	2			4,105,030	1322.5				13,637,832

NOTES: [1]Arithmetic averages

* not pumped this date

$\frac{4,105,030}{1154.6} = 3555$ mg/l

WTD. AVG. TOTAL solids
As December 79
(CLEARWELL WITHDRAWALS FROM PIT

$\frac{13,637,832}{1322.5} = 10,31$

Dec 79

64

4944
081220

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of January 1980

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEW FE COL NO/			CLEAR SU SOL mg
1	0.171		340	4		44	1.1				8.0							2
2	.174		370	3	<5	47	1.4		0.1	<5	8.1					3	9.8	
3	.468	.30	1110	110		77	2.9				8.3				1			
4	.527		990	170		73	2.9				8.5							
5	.508		1015	120		151	2.9				8.2							<
6	.483		1035	100		100	2.9				8.2							<
7	.538		710	51		104	2.1				8.5							1
8	.601		825	74		110	2.9				8.9							<
9	.488		930	95	11	137	3.3				8.8					3	6.1	<
10	.428	.12	900	67		110	3.4				9.2				1			<
11	.693		450	27		65	1.8				7.7	13	<5	8.1				
12	.879		970	115		89	2.5				8.9	8	<5	7.7				1
13	.544		1370	150		143	2.8				9.5							1
14	.497		880	80		111	1.9				8.0							1
15	.573		1315	160		118	2.4				9.2							<
16	.524		970	87	10	91	2.2				8.5					1	10.4	3
17	.287	.09	490	22		75	1.3				7.6				16			
18	.275		380	3		53	1.3	0.01			7.7							
19	.209		350	3		52	1.1				7.6							
20	.226		370	3		47	1.0				8.0							
21	.187		320	3		50	1.1				8.2							
22	.227		280	3		47	1.0				8.6							
23	.257		315	3	<5	46	1.1				9.1					1	7.3	
24	.515	.11	1010	100		102	3.4				9.6				0			
25	.639		710	3		89	5.4				9.0							
26	.419		750	58		84	6.1				8.8							<
27	.446		480	11		39	1.7				8.0							
28	.283		1165	130		104	4.8				8.8							<
29	.439		1345	160		123	6.6				7.9							<
30	.489		1220	140	19	114	6.6				9.3					3	3.2	<
31	.506	.35	1375	160		133	2.9				7.7				1			
AVG.[1]	0.44	0.3	950	84	11	95	3	0.01	0.1	<5		11	<5		4	2	7	
LIMITS 2	0.9[8]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[8]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mg, Ga, Mean)			

2243120

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total or 150 mg/l from human activity.

NLO-H&S-351 (REV. 9/15/77)

044

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of January 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/ℓ	Clearwe Cu mg/ℓ
1	.54	0.001	0.001	0.014	2.31	.6	8.0		10.3	6	0.007	
2	.82	Comp.	Comp.	Comp.	1.21	.7	8.2		10.6	<4	.005	
3	2.20	12/4-	11/6-	11/6-	2.67	2.8	8.3	3	8.2	6	.008	.018
4	2.20	12/31	11/19	12/3	2.03	2.4	8.3		9.0	9	.008	.022
5	2.40				2.11	1.8	8.1		9.0	15	.010	.018
6	3.20				1.80	2.0	8.1		9.5	9	.010	.018
7	1.16				2.27	1.0	8.4		9.6	6	.008	.015
8	1.26				1.40	1.8	8.5		9.0	5	.010	.017
9	1.18				2.32	2.0	8.8		9.5	<4	.015	.013
10	.96				1.10	2.2	8.9	3	9.5	4	.015	.010
11	.68				1.15	.6	8.3		9.9	29	.008	.010
12	1.28				1.57	2.1	8.7		8.4	7	.013	.017
13	.96				1.32	3.1	8.7		9.3	<4	.012	.010
14	.64				1.18	1.6	8.3		8.8	30	.007	.010
15	.98		0.001		1.09	2.6	8.6		8.8	8	.007	.014
16	.74		Comp.		.84	1.8	8.9		10.5	9	.006	.008
17	.58		11/20-		.86	.6	8.4	1	10.1	4	.005	
18	.68		12/3		1.11	.1	8.2		9.7	<4	.006	
19	.84				1.13	.3	8.0		10.2	<4	.005	
20	.62				.99	.4	8.0		10.1	4	.004	
21	.54				1.11	.5	8.1		10.4	<4	.004	
22	.64				.81	.5	8.2		9.9	5	.004	
23	.86				1.35	.7	8.2		9.7	5	.004	.013
24	.74				1.24	2.1	9.1	30	10.8	6	.009	.009
25	.94				1.08	1.8	9.1		10.9	8	.009	.014
26	.88				.86	1.4	8.8		9.9	<4	.006	.019
27	.42				.47	.3	8.2		10.0	4	.001	
28	.52				.66	2.1	8.5		8.5	7	.004	.019
29	.46				.55	2.6	8.9		8.0	<4	.005	.014
30	.28				.46	2.3	9.1		11.2	<4	.006	.017
31	.56				.50	1.5	8.5	1	11.0	7		.016
AVG.[1]	0.99				1.28	1.5		3 [2]	9.7	7	.007	.015
LIMITS[3] OHIO EPA							6.0-9.0	< 200 Mo. Geo. Mean	≥ 5.0 AVG. 4.0 MIN.		Avg. 0.0[illegible]4)	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.3[illegible]	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

[illegible]-HS-151 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

L1L06E0

WASTE WATER QUALITY REPORT: General Data

For the Month of January 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	4350			31	30	54	0800	*	*		339
2	3785			33	30	53	1700	*	700	287	342
3	3150			35	31	53	1700	2248	700		330
4	2965	.12	Snow	33	28	52	1700	2328	456		340
5	2820			28	22	55	1300	2409	383		766
6	2750			41	22	57	1700	2489	483		483
7	2615			42	23	51	1700	1927	585		471
8	2555			29	22	51	1700	1847	548		318
9	2350			34	23	57	1700	1766	487	525	265
10	2350			51	20	59	1700	2248	973		342
11	6715	1.57	Rain	51	27	51	2100	2088	456		188
12	19800			32	22	54	1300	4215	700		260
13	17000			46	24	54	1300	3934	548		383
14	7935	.05	Rain	44	29	56	2100	3372	541		383
15	6080			45	29	58	1700	3613	517		318
16	5620			55	40	58	1000	2409	426	490	324
17	5400			56	35	61	1700	*	487		398
18	5400			43	27	60	1700	*	493		306
19	5180			44	25	56	0100	*	548		309
20	4600			43	26	57	1300	*	359		353
21	404			37	20	59	1700	*	*		330
22	3680			40	32	58	1700	*	*		289
23	3630			33	15	56	0100	*	359	305	277
24	3340			38	13	54	1300	1606	578		236
25	3325	.05	Rain	48	29	52	1700	1606	304		212
26	3600			36	25	58	1300	2168	426		324
27	3300			40	28	54	0800	*	456		312
28	3100			30	22	52	All Day	3613	395		282
29	2600			25	16	52	1700	3212	*		259
30	2350	.12	Snow	22	15	46	1300	3212	*	205	324
31	2400	.06	Snow	23	5	54	1700	3212	*		309
AVG.[1]	4682	1.97[2]						2644	516	362	335

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
*Not pumped this date.

67

944

NLI-H&S-393 (REV. 9/29/77)

Waste Water Quality Report Summary

February 1980

There were no water quality problems during January. Precipitation was 2 inches from 6 days of snow and rain. Runoff was light, however, and there was a storm sewer overflow on only two days. The average river flow was the lowest in 16 months.

Fluoride concentration at MH-175 increased near the end of the month. (The fluoride concentration in the Clearwell has also increased over the last two months.)

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

MWB 2/7

For the Month of JANUARY, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	4350	171		*	*		339	340	10.3	54	0800	57100	
2	3785	174		*	700.	287	342	370	10.6	53	1700	58000	
3	3150	468	3	2248	700		330	1110	8.2	53	1700	82400	
4	2965	527		2328	456		340	990	9.0	52	1700	73300	
5	2820	508		2409	383		766	1015	9.0	55	1300	81100	
6	2750	483		2489	483		483	1035	9.5	57	1700	57600	
7	2615	538		1927	585		471	710	9.6	51	1700	95600	
8	2555	601		1847	548		318	825	9.0	51	1700	133900	
9	2350	488		1766	487	525	265	930	9.5	57	1700	133200	
10	2350	428	3	2248	973		342	900	9.5	59	1700	117000	
11	6715	693		2088	456		188	450	9.9	51	2100	145500	
12	19800	879		4215	700		260	970	8.4	54	1300	153200	
13	17000	544		3934	548		383	1370	9.3	54	1300	93800	
14	7935	497		3372	541		383	880	8.8	56	2100	75900	
15	6080	573		3613	517		318	1315	8.8	58	1700	107900	
16	5620	524		2409	426	490	324	970	10.5	58	1000	88000**	
17	5400	287	1	*	487		398	490	10.1	61	1700	88000**	
18	5400	275		*	493		306	380	9.7	60	1700	88000**	
19	5180	209		*	548		309	350	10.2	56	0100	88000**	
20	4600	226		*	359		353	370	10.1	57	1300	88000**	
21	404	187		*	*		330	320	10.4	59	1700	88000**	
22	3680	227		*	*		289	280	9.9	58	1700	64100	
23	3630	257		*	359	305	277	315	9.7	56	0100	80800	
24	3340	515	30	1606	578		236	1010	10.8	54	1300	91800	
25	3325	639		1606	304		212	710	10.0	52	1700	99100	
26	3600	419		2168	426		324	750	9.9	58	1300	112400	
27	3300	446		*	456		312	480	10.0	54	0800	84700	
28	3100	283		3613	395		282	1165	8.5	52	All Day	61200	
29	2600	439		3212	*		259	1345	8.0	52	1700	83900	
30	2350	489		3212	*	205	324	1220	11.2	46	1300	95500	
31	2400	506	1	3212	*		309	1375	11.0	54	1700	101200	

NOTES:

* Not pumped this date.

** Estimated flow - meter out of order.

4944

NLO-ENG-2456 (1/16/76)

Rec'd. 2/1/80 pm

NATIONAL LEAD COMPANY OF OHIO 2257285

WASTE WATER QUALITY General Data

For the Month of January 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (IN 1000 gal. UNITS) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (IN 1000 gal UNITS) TIMES TOTAL SOLIDS	PRECIPITATION
1	*										
2	*										
3	140,000	2248	+7	2255	315,700	167,700	1675	945	2620	439,374	
4	151,000	2328	+7	2335	352,585						
5	150,000	2409	+7	2416	362,400						
6	144,000	2489	+7	2496	359,424						
7	70,000	1927	+7	1934	135,380						
8	147,000	1847	+7	1854	272,538	245,200	2885	3725	6610	1,620,772	
9	144,000	1766	+7	1773	255,312						
10	111,000	2248	+7	2255	250,305						
11	17500	2088	+7	2095	36,663						
12	180,000	4215	+7	4222	759,960						
13	148,000	3934	+7	3941	583,268						
14	75,000	3372	+7	3379	255,452						
15	164,000	3613	+7	3620	596,938	404,300	2945	5320	8265	3,341,540	
16	135,000	2409	+7	2416	326,160						
17	*										
18	*										
19	*										
20	*										
21	*										
22	*					337,900	2265	6970	9235	3,120,507	
23	*										
24	140,300	1606	+7	1613	226,304						
25	178,600	1606	+7	1613	288,082						
26	50,000	2168	+7	2175	108,750						
27	*										
28	75,000	3613	+7	3620	271,500						
29	119,700	3212	+7	3219	385,314	354,800	2250	12245	14535	5,157,018	
30	165,300	3212	+7	3219	532,101						
31	170,000	3212	+7	3219	547,230						
AVG.[1]	2676.9	[2]			7,221,366	1509.9				13,579,211	

NOTES: [1]Arithmetic averages

* not pumped this date

$\frac{7,221,366}{2676.9} = 2698$ mg/l WTD. AVER. TOTAL SOLIDS FOR JANUARY 1980 (CLEARWELL WITHDRAWALS FROM PIT)

$\frac{13,579,211}{1509.9} = 8993$ mg/l (WTD AVER. TOTAL SOLIDS FOR PUMPING GEN. SUMP TO PIT 5 DURING

Sp Gr 0.9992 C.W. Composite

0408342

170

-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February 1980

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE T FECAL COLIFORM NO/100ML	2243119		EA SI SOL
1	0.578		1210	120		155	5.7				8.2							<
2	.508		1220	140		158	7.7				8.6							<
3	.437		850	80		125	5.8				9.5							<
4	.412		1050	110		123	8.1				8.4							<
5	.462		525	26		65	22.0				8.1							<
6	.479		780	60	16	95	5.9		0.1	<5	8.7					7	8.7	<
7	.443	0.43	800	41		167	4.0				8.2				0			<
8	.503		990	45		124	4.4				9.2							<
9	.450		700	52		113	5.9				8.5							<
10	.377		690	46		120	5.8				8.4							<
11	.348		550	43		96	5.4				8.2							<
12	.340		575	35		78	4.4				9.0							<
13	.372		380	19	9	56	2.5				7.6					3	1.7	<
14	.430	0.23	385	9		58	2.0				8.0				0			
15	.355		595	39		71	4.7				7.3							<
16	.694		430	13		106	3.5				7.0	4	<5	7.7				<
17	.573		375	5		53	1.4				7.2							
18	.489		385	4		44	1.2				7.4							
19	.514		380	5		39	1.3				7.0							
20	.757		555	25	10	96	2.9	0.01			8.2					6	4.0	<
21	.641	0.33	470	22		74	2.9				8.0				0			<
22	.714		515	26		144	3.7				8.7	20	<5	8.1				
23	.423		780	42		216	3.6				9.0							
24	.306		970	49		308	4.0				8.9							
25	.269		665	60		205	5.7				9.4							
26	.365		550	28		103	3.1				7.4							<
27	.447		665	62	24	195	5.5				9.1					3	10.2	
28	.476	0.22	430	21		86	2.3				8.2				0			<
29	.547		370	8		95	1.0				8.0							
30																		
31																		
AVG.[1]	0.473	0.3	640	41	15	112	5	0.01	0.1	<5		10	<5		<1	5	6	
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (per 100 ml)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, natural or 190 mg/l from human activity.

H10-H&S-351 (REV. 9/15/77)

4944

71

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of February 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwe Cu mg/L
1	0.70		0.001	<0.01	.56	1.9	8.9		11.0	<4	0.006	0.014
2	.46		Comp.	Comp.	.63	2.5	8.8		8.9	<4	.010	.023
3	.28		12/4-	12/4-	.49	1.8	8.7		10.0	<4	.007	.029
4	.42		12/17	12/31	.88	1.9	8.7		10.4	<4	.010	.031
5	.36				.41	.5	8.3		10.6	14	.008	.018
6	.44				.59	1.4	8.6		9.1	5	.018	.016
7	.40				.58	.9	8.4	70	7.7	<4	.014	.011
8	.34				.40	1.0	8.8		10.4	6	.014	.013
9	.32				.41	1.0	8.6		8.3	<4	.017	.020
10	.42				.76	1.0	8.4		8.8	6	.016	.018
11	.44				.43	.8	8.4		10.9	<4	.011	.024
12	.36				.60	.8	8.6		10.6	4	.013	.018
13	.32				.33	.6	8.4		11.2	<4	.014	.024
14	.22				.22	.2	8.1	20	10.2	6	.008	.033
15	.26		0.001		.22	.8	8.7		10.0	7	.016	.038
16	.80		Comp.		1.19	.5	7.7		10.8	120	.011	
17	.56		12/18-		.84	.3	7.9		6.0	20	.012	
18	.28		12/31		.42	.3	8.1		10.0	29	.011	
19	.22				.24	.2	7.9		7.7	15	.014	
20	.80				1.19	.4	8.5		10.2	10	.016	.085
21	1.16				1.30	.6	8.5	100	10.2	7	.020	.075
22	2.40				2.77	.9	8.7		9.9	38	.015	.067
23	1.38				1.60	.7	8.7		9.8	5	.011	.049
24	1.06				1.50	.7	8.8		10.3	4	.011	.056
25	.86				1.36	1.1	9.0		10.5	30	.009	.061
26	.88				1.34	.7	8.8		7.5	6	.011	.067
27	.76				1.12	1.0	9.0		8.4	6	.006	.061
28	.56				.84	.5	8.4	150	10.0	6	.003	.060
29	.46				.67	.2	8.0		6.8	6	.003	
30												
31												
AVG.[1]	0.62				0.82	0.87		68 [2]	9.52	13	.012	.038
LIMITS[3] OHIO EPA							6.0-9.0	<200 Mo. Geo. Mean	≥5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

[illegible] (REV. 9/15/77)

72

4044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of February 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	2300			24	3	54	0500	2810	359		589
2	1900			28	0	52	2100	3131	420		353
3	1825			26	0	50	2000	2810	353		339
4	1770			17	1	54	2100	2810	426		324
5	1720	.06	Snow	30	6	50	All Day	2810	395		412
6	1755	.07	Snow	33	26	56	1800	2328	517	400	310
7	1820			32	6	54	1300	2409	426		633
8	1730			31	13	50	1900	2088	426		412
9	1700	.06	Snow	31	26	51	0500	2329	350		339
10	1780			34	18	51	0500	2409	*		412
11	1735			33	14	54	1700	1569	*		353
12	1610			30	1	56	1700	2569	502		280
13	1530			37	4	61	2100	2208	426	315	271
14	1530			39	26	52	0900	2409	380		280
15	1610	.33	Rain&Snow	41	31	40	1300	2409	380		280
16	2000	.03	Snow	32	12	50	All Day	2609	487		442
17	1780			23	4	54	1300	*	304		353
18	1500			38	3	56	2000	*	*		618
19	1530			48	21	55	1300	*	*		324
20	1935	.02	Rain	43	38	56	0900	2409	319	275	309
21	3460	.33	Rain	54	38	57	0500	2328	319		271
22	9250			57	44	60	2100	2409	410		306
23	13520			49	40	58	1300	2248	529		380
24	11000			40	32	53	0100	2569	423		368
25	6100	.05	Snow&Rain	37	24	55	1700	2409	*		533
26	4600			29	13	56	1700	2208	430		306
27	3530			31	22	58	2100	2208	395	445	677
28	3390	.29	Snow	33	9	56	1300	2168	319		353
29	3130			19	7	53	1300	*	359		500
30											
31											
AVG.[1]	3202	1.24 [2]						2427	402	359	391

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
*Not pumped this date.

1390712
73
4044

Waste Water Quality Report Summary

March, 1980

An NPDES violation occurred during the month. Fluoride in the Manhole-175 sample collected February 5 was 22 mg/L. The permit daily limit is 10 mg/L.

Total radium-226 and -228 in the plant effluent was at a low level. Radium-226 was 0.001 d/m/mL and radium-228 was <0.01 d/m/mL in the reported sampling periods.

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

ЧILO6E0

For the Month of FEBRUARY, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2300	578		2810	359		589	1210	11.0	54	0500	107600	
2	1900	508		3131	420		353	1220	8.9	52	2100	102800	
3	1825	437		2810	353		339	850	10.0	50	2000	91400	
4	1770	412		2810	426		324	1050	10.4	54	2100	57500	
5	1720	462		2810	395		412	525	10.6	50	All Day	88700	
6	1755	479		2328	517	400	310	780	9.1	56	1800	96500	
7	1820	443	70	2409	426		633	800	7.7	54	1300	101300	
8	1730	503		2088	426		412	990	10.4	50	1900	103500	
9	1700	450		2329	350		339	700	8.3	51	0500	103800	
10	1780	377		2409	*		412	690	8.8	51	0500	83200	
11	1735	348		1569	*		353	550	10.9	54	1700	90500	
12	1610	340		2569	502		280	575	10.6	56	1700	104000	
13	1530	372		2208	426	315	271	380	11.2	61	2100	118500	
14	1530	430	20	2409	380		280	385	10.2	52	0900	105700	
15	1610	355		2409	380		280	595	10.0	40	1300	94300	
16	2000	694		2609	487		442	430	10.8	50	All Day	101400	
17	1780	573		*	304		353	375	6.0	54	1300	81700	
18	1500	489		*	*		618	385	10.0	56	2000	72200	
19	1530	514		*	*		324	380	7.7	55	1300	93800	
20	1935	757		2409	319	275	309	555	10.2	56	0900	106100	
21	3460	641	100	2328	319		271	470	10.2	57	0500	113400	
22	9250	714		2409	410		306	515	[illegible]	60	2100	126900	Dissolved oxygen 9.9/o 3/7/80
23	13520	423		2248	529		380	780	9.8	58	1300	115500	
24	11000	306		2569	423		368	970	10.3	53	0100	99200	
25	6100	269		2409	*		353	665	10.5	55	1700	81100	
26	4600	365		2208	430		306	550	7.5	56	1700	86700	
27	3530	447		2208	395	445	677	865	8.4	58	2100	83100	
28	3390	476	150	2168	319		353	430	10.0	56	1300	104500	
29	3130	547		*	359		500	370	6.8	53	1300	119400	
30													
31													

NOTES: * Not pumped this date.

F-46444

75

NLO-EMC 0166 (3/76)

REC'D 3-3-80 (1140)

(14)

FOR FEBRUARY 1980
DISCARDS.

NATIONAL LEAD COMPANY OF OHIO

For the Month of February 1980

WASTE WATER QUALITY

General Data

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l		GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	PRECIPITATION
1	167,000	2810	+7	2817	470,439					2257362
2	174,000	3131	+7	3138	546,012					
3	90,000	2810	+7	2817	253,530					
4	98,600	2810	+7	2817	277,756					
5	12,900	2810	+7	2817	36,339	240,000	3710	4885	7595	1,918,800
6	116,300	2328	+7	2335	271,560					
7	100,000	2409	+7	2416	241,600					
8	93,600	2088	+7	2095	196,092					
9	87,000	2328	+7	2336	203,232					
10	94,000	2409	+7	2416	227,104					
11	94,000	2569	+7	2576	242,144					
12	94,000	2569	+7	2576	242,144	316,500	2245	1915	4160	1,316,640
13	94,000	2208	+7	2215	208,210					
14	20,000	2409	+7	2416	48,320					
15	48,000	2409	+7	2416	115,968					
16	39,936	2609	+7	2616	104,473					
17	*									
18	*									
19	*					258,500	1960	1270	3230	834,955
20	90,000	2409	+7	2416	217,440					
21	66,000	2328	+7	2335	154,110					
22	90,000	2409	+7	2416	217,440					
23	100,000	2248	+7	2255	225,500					
24	56,800	2569	+7	2576	129,830					
25	58,800	2409	+7	2416	142,061					
26	93,500	2208	+7	2416	226,621	360,000	1500	1595	2095	7,414,200
27	94,600	2208	+7	2215	209,982					
28	80,000	2168	+7	2175	174,000					
29	*									
30										11,484,595
31										
AVG.[1]	2153.136				5,381,907	1175				

NOTES: [1] Arithmetic averages

* not pumped this date

$\frac{5,381,907}{2153.136} = 2499.57$ mg/l (WTD AVER. TOTAL SOLIDS FOR FEB., 1980 CLEARWELL WITHDRAWALS)

$\frac{11,484,595}{1175} = 9774$ mg/l (WTD. AVER. TOTAL SOLIDS FOR PUMPINGS GEN. SUMP TO PITS DURING FEB., 1980)

040844

176

494

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March 1980

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATM FECAL COLIFORM NO/100ML	SUS SOLI mg/		2243118
1	0.515		325	5		49	0.9				7.6							
2	.393		325	5		38	0.9				7.7							
3	.241		330	5		36	0.8				7.8							
4	.507		80	1		13	0.1		0.15		8.0							
5	1.035		485	27	17	99	2.7			<5	9.3	50	<5	7.9		4	8.1	<4
6	.884	0.40	540	50		98	5.2				9.4	5	<5	7.9	1			4
7	.605		885	70		127	7.0	0.03			9.0							6
8	.551		570	31		90	3.4				9.2	24	<5	7.7				9
9	.500		580	27		84	2.7				7.5							9
10	.371		575	27		78	2.5				9.5							5
11	.496		555	48		97	4.3				9.3							<4
12	.393		735	57	26	104	5.2				9.0					4	5.6	<4
13	.475	0.49	550	70		104	5.4				9.2				0			<4
14	.624		475	5		90	2.9				9.2							<4
15	.403		955	100		98	4.2				9.2							8
16	.420		1505	180		134	4.8				8.6							7
17	.532		1535	180		131	4.8				9.0	<4	<5	7.9				4
18	.803		855	83		76	3.0				8.8	40	<5	7.9				4
19	.491		1425	150	18	125	4.6				8.7					4	7.9	4
20	.394	0.43	1085	100		116	4.2				8.9				0			<4
21	.817		740	65		105	3.5				8.7	<4	<5	7.9				4
22	.581		810	65		104	3.4				9.1	39	<5	8.3				27
23	.440		940	79		114	4.0				8.9							14
24	.526		790	73		98	3.8				8.6							<4
25	.624		735	54	9	81	3.0				8.7	9	<5	8.0				6
26	.415		420	15	<5	60	1.3				7.4					4	2.7	
27	.430	0.28	870	73		131	3.6				8.9				0			<4
28	.425		1030	78		153	4.2				8.7							<4
29	.805		610	54		87	3.1				8.8	4	<5	7.8				5
30	.445		1040	80		128	4.5				8.4							<4
31	.900		570	40		72	3.1				8.4	8	<5	8.1				5
AVG.[1]	0.6	0.4	723	60	15	94	4	0.03	0.15	<5		23	<5		<1	4	7	6
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mg, Ca, Na, K)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-H&S-351 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of March 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS #0/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwe Cu mg/L
1	0.38	0.004	0.001	0.017	.54	.3	8.0			6	0.002	
2	.32	Comp.	Comp.	Comp.	.52	.2	7.9		11.1	<4	.002	
3	.42	1/1 -	1/1 -	1/1 -	.63	.3	8.0		11.2	4	.008	
4	.08	1/28/80	1/14/80	1/28/80	.07	.04	9.1		11.1	14	.002	
5	2.00				1.95	.9	9.1		11.1	29	.010	0.122
6	2.20				1.97	1.0	9.3	110	10.2	8	.022	.128
7	2.80				2.58	1.7	9.4		10.9	21	.031	.122
8	3.00				3.11	1.0	8.9		10.0	46	.018	.103
9	2.80				2.53	.6	8.8		9.0	7	.017	.097
10	1.34				1.56	.8	8.9		9.6	14	.012	.015
11	2.80				2.16	1.2	9.2		10.5	49	.018	.105
12	2.40				2.19	1.5	9.2		10.2	4	.035	.138
13	2.20				2.21	1.4	9.3	70	10.2	<4	.044	.156
14	2.20				2.63	.6	9.1		10.8	5	.025	.013
15	1.08		0.002		1.37	1.5	9.1		11.8	7	.020	.061
16	1.12		Comp.		1.29	2.5	9.0		9.6	9	.019	.048
17	1.04		1/15 -		1.17	2.3	9.0		10.0	5	.021	.044
18	1.12		1/28		1.90	1.0	9.0		9.4	13	.015	.055
19	1.38				1.68	1.7	9.0		7.6	<4	.023	.048
20	1.09				1.09	1.2	9.0	70	7.8	<4	.020	.053
21	2.20				1.73	.8	9.0		7.0	8	.019	.043
22	2.60				2.11	1.2	8.7		7.5	<4	.010	.028
23	2.60				2.45	1.9	8.8		7.5	14	.008	.031
24	2.40				2.24	1.6	8.9		7.8	13	.011	.033
25	3.00				2.33	.9	8.7		7.3	11	.013	.038
26	1.14				.98	.2	8.1		8.1	4	.005	
27	2.40				1.84	1.4	8.9	20	8.0	<4	.016	.052
28	2.00				1.98	1.7	8.9		7.7	<4		
29	2.40				2.09	1.1	8.7		7.2	8		
30	3.00				2.57	1.2	8.9		7.6	<4		
31	2.40				2.35	0.9	8.7		7.8	11		
AVG.[1]	1.87				1.8	1.1		57 [2]	9.2	11	.017	.069
LIMITS[3] OHIO EPA							6.0-9.0	< 200 (Mo. Gm. Mean)	≥ 5.0 AVG. 4.0 MIN.			
LIMITS[3] ERDAM-0524	59	9	0.066	0.066								

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

[illegible] - 151 (REV. 9/15/77)

78

4044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of March 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWE LIFT STATION
1	2550	.18	Snow	16	9	54	0500	*	329		348
2	2375			20	-6	52	0100	*	359		294
3	2125			33	-12	50	1300	*	*		259
4	2135	.24	Rain	44	16	58	1300	*	304		353
5	3425	.24	Rain	46	30	54	0500	1606	365	305	309
6	7500			43	24	48	1700	2168	456		309
7	7730	.03	Rain	55	28	55	0900	1807	380		383
8	10950			62	37	48	All Day	1806	353		339
9	25000			52	32	58	0100	1766	456		398
10	19900	.07	Rain	58	29	50	1700	1606	414		398
11	14640			37	23	50	1300	1602	456		294
12	10250	.09	Snow&Rain	34	22	50	1300	1598	*	540	383
13	9300	.14	Snow&Rain	40	30	50	0100	1445	420		324
14	6180			43	28	48	1700	1598	*		383
15	4900			64	24	50	1700	3051	319		406
16	4590			67	34	56	1700	4015	365		347
17	4390	.45	Snow&Rain	59	36	53	2100	3613	*		271
18	6890			48	30	56	0500	3613	410		309
19	9490			59	27	59	2100	3372	548	395	353
20	6980	.22	Rain	57	44	60	2100	2810	702		324
21	11700	.32	Rain	56	39	54	1700	2409	810		206
22	21760			50	28	52	1700	2007	600		306
23	17530			57	33	51	0500	2007	353		339
24	13140	.36	Rain	56	45	51	0500	1927	319		259
25	10620			46	37	56	1300	1807	*		221
26	10350			40	33	52	1300	*	380	410	342
27	7885			60	26	50	All Day	1766	350		324
28	6550	.31	Rain	51	45	54	1300	1766	*		309
29	7930			53	45	52	All Day	1927	426		236
30	8300	.53	Rain	53	43	51	0100	1967	517		339
31	14860	.11	Rain	48	43	52	All Day	1927	472		206
AVG.[1]	9417	3.29[2]						2192	435	413	318

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

79

4944

NLO-H&S-391 (REV. 9/19/77)

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

80L06EC

For the Month of MARCH, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2550	515		*	329		348	325		54	0500	108500	
2	2375	393		*	359		294	325	11.1	52	0100	85600	
3	2125	241		*	*		259	330	11.2	50	1300	78500	
4	2135	507		*	304		353	80	11.1	58	1300	191000	
5	3425	1035		1606	365	305	309	485	11.1	54	0500	229000	
6	7500	884	110	2168	456		309	740	10.2	48	1700	171000	
7	7730	605		1807	380		383	885	10.9	55	0900	100500	
8	10950	551		1806	353		339	570	10.0	48	All Day	95700	
9	25000	500		1766	456		398	580	9.0	58	0100	75200	
10	19900	371		1606	414		398	525	9.6	50	1700	65100	
11	14640	496		1602	456		294	555	10.5	50	1800	89300	
12	10250	393		1598	*	540	383	735	10.2	50	1300	88300	
13	9300	475	70	1445	420		324	550	10.2	50	0100	96400	
14	6180	624		1598	*		383	475	10.8	48	1700	112000	
15	4900	403		3051	319		406	1955	11.8	50	1700	101700	
16	4590	420		4015	365		347	1505	9.6	56	1700	101200	
17	4390	532		3613	*		271	1535	10.0	53	2100	68800	
18	6890	803		3613	410		309	855	9.4	56	0500	99400	
19	9490	491		3372	548	395	353	1425	7.6	59	2100	110700	
20	6980	394	70	2810	702		324	1085	7.8	60	2100	116000	
21	11700	817		2409	810		206	740	7.0	54	1700	125400	
22	21760	581		2007	600		306	810	7.5	52	1700	109600	
23	17530	440		2007	353		339	940	7.5	51	0500	71300	
24	13140	526		1927	319		259	790	7.8	51	0500	50700	
25	10620	624		1807	*		221	735	7.3	56	1300	97500	
26	10350	415		*	380	410	342	420	8.1	52	1300	79700	
27	7885	430	20	1766	350		324	870	8.0	50	All Day	82000	
28	6550	425		1766	*		309	1030	7.7	54	1300	80400	
29	7930	805		1927	426		236	610	7.2	52	All Day	90900	
30	8300	445		1967	517		339	1040	7.6	51	0100	73900	
31	14860	900		1927	472		206	570	7.8	52	All Day	99100	

NOTES:

* Not pumped this date.

80

4944

NLO-ENG-2956 (1/16/76)

Waste Water Quality Report Summary

April 11, 1980

Wastewater quality during March was acceptable.

The fluoride concentration at Manhole-175 remains high. The average for the permit was 4 mg/L. The permit average is 6 mg/L. Most of the fluoride is from the Clearwell flow.

REC'D. 4/1/80 pm

(15) MAR. '80

NATIONAL LEAD COMPANY OF OHIO

2257407

WASTE WATER QUALITY — General Data

For the Month of March 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal. units TIMES TOTAL SOLIDS	PRECIPITATION
1	* —	—	—	—	—						
2	* —	—	—	—	—						
3	* —	—	—	—	—						
4	* —	—	—	—	—						
5	22,000	1606	+7	1623	116,856	362,500	2190	3090	5,280	1,914,000	
6	72,000	2168	+7	2175	156,600						
7	22,000	1807	+7	1814	130,608						
8	23,000	1806	+7	1813	132,349						
9	75,400	1766	+7	1773	133,684						
10	68,100	1606	+7	1613	109,845						
11	151,000	1602	+7	1609	242,959	546,400	1610	2470	4,080	2,229,312	
12	145,000	1598	+7	1605	232,725						
13	52,000	1598	+7	1605	91,485						
14	100,000	3051	+7	3058	305,100						
15	106,000	4015	+7	4022	426,332						
16	140,000	3613	+7	3620	506,800						
17	150,000	3613	+7	3620	543,000						
18	150,000	3613	+7	3620	543,000	178,100	2190	1221	3411	607,499	
19	150,000	3372	+7	3379	506,850						
20	150,000	2810	+7	2817	422,550						
21	160,000	2409	+7	2416	386,560						
22	160,000	2007	+7	2014	322,240						
23	160,000	2007	+7	2014	322,240						
24	160,000	1927	+7	1934	309,440						
25	160,000	1807	+7	1814	290,240	440,200	1085	12030	13,115	5,773,223	
26	* —	—	—	—	—						
27	160,000	1766	+7	1723	275,680						
28	160,000	1766	+7	1723	275,680						
29	160,000	1927	+7	1934	309,440						
30	160,000	1967	+7	1974	315,840						
31	160,000	1967	+7	1974	315,840						
AVG.[1]	3331.5	[illegible]			7,723,943	1,527.2	[illegible]			10,524,034	

NOTES: [1] Arithmetic averages

* not pumped this date.

$$\frac{7,723,943}{3331.5} = 2318.46 \text{ mg/l}$$

(Round to 2318)

(WTD. AVER. TOTAL SOLIDS FOR MARCH 1980 CLEAR WELL WITHDRAWALS TO 14 PITS ADED)

$$\frac{10,524,034}{1527.2} = 6891.07 \text{ mg/l}$$

(Round To 6891 mg/l)

(WTD. AVER. TOTAL SOLIDS FOR PUMPINGS GEN. SUMP TO PIT #5)

4944

NATIONAL LEAD COMPANY OF OHIO
DEPARTMENT SAFETY DIVISION

9b90bED

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April 1980

2243116

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	mg/l	mg/l
1	0.466		320	160		117	3.6				8.0							
2	.414		430	130	<5	86	3.0		0.1	<5	7.4					2	3.8	
3	.117	0.33	950	150		141	6.0				7.5				0			
4	.363		1395	130		133	6.6				8.9							<4
5	.300		2010	110		128	6.0				9.1							4
6	.346		1355	150		141	6.0				9.1							<4
7	.341		1220	130		133	6.6				9.1							<4
8	.317		1112	110		128	6.0				8.8							4
9	.436		920	85	14	101	5.0				8.6	22	<5	8.1		3	3.8	<4
10	.480	0.42	1060	86		98	5.1				8.0				0			<4
11	.225		430	5		51	2.4				7.3							
12	.490		295	4		34	1.8				7.6	7	<5	7.5				
13	.238		350	5		46	1.7				7.4							
14	.565		290	4		33	1.5				7.5	25	<5	8.0				
15	.365		440	4		110	1.3				7.6	5	<5	8.1				
16	.315		1265	130	12	149	3.8	0.02			8.8					4	6.4	10
17	.369	0.36	1040	120		138	4.0				8.5				0			6
18	.153		470	22		69	2.0				7.8							
19	.178		395	7		105	1.4				7.7							
20	.117		290	5		57	1.4				7.6							
21	.187		315	5		60	1.6				7.8							
22	.213		395	5		52	1.1				7.6							
23	.167		355	5	<5	51	1.2				8.1					1	6.6	
24	.124	0.32	285	5		53	1.4				8.0				0			
25	.160		285	5		53	1.4				8.0							
26	.294		2145	250		226	4.4				8.7							<4
27	.292		1765	190		232	4.0				8.9							<4
28	.278		1715	180		254	4.3				8.9							4
29	.310		1355	150		229	3.8				8.6							<4
30	.471		1129	100	16	188	2.9				8.6					2	3.3	<4
31																		
AVG.[1]	0.3	0.4	900	89	11	117	4	0.02	0.1	<5		17	<5		0	3	4	5
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (No. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of April 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwell Cu mg/L
1	1.32	0.006	0.001	<0.001	1.35	2.2	8.4		7.5	8	0.005	
2	.94	Comp.	Comp.	Comp.	.92	1.7	8.8		6.8	<4	.003	
3	1.10	1/29-	1/29-	1/29-	1.47	2.1	9.0	10	7.7	9	.009	
4	1.56	2/25	2/11	2/25	1.55	.3	9.1		7.3	6	.016	0.095
5	1.36				1.80	2.1	9.2		7.5	5	.098	.306
6	1.10				1.47	2.1	9.0		7.7	9	.121	.402
7	1.56				1.55	.3	9.1		7.6	6	.187	.611
8	1.36				1.80	2.1	9.2		7.6	5	.190	.615
9	1.22				1.56	1.6	9.1		7.7	11	.111	.471
10	1.24				1.74	1.4	9.0	30	7.9	10	.073	.204
11	1.02				1.36	.4	8.0		7.8	6	.020	
12	1.36				2.38	.4	8.1		8.5	13	.012	
13	2.20				2.04	.3	8.1		8.7	<4	.014	
14	1.08				1.54	.6	8.1		8.3	17	.007	
15	1.10				2.08	.4	8.3		8.4	8	.008	
16	2.40		0.001		1.90	1.7	8.3		6.9	<4	.032	.170
17	2.80		Comp.		2.24	1.7	8.6	150	7.7	7	.039	.110
18	1.00		2/12-		1.35	.4	8.1		7.3	<4	.006	
19	.60		2/25		.98	.2	8.1		6.6	11	.007	
20	.80				1.05	.1	8.1		7.4	<4	.007	
21	.98	0.006			1.25	.3	8.2		7.4	15	.008	
22	.72	Comp.			1.32	<.1	8.2		8.2	8	.005	
23	.60	2/26-			.98	<.1	8.3		8.0	<4	.006	
24	.70	3/24			1.21	.5	8.1	2	7.8	<4	.006	
25	.66				.78	.2	8.2		7.2	<4	.005	
26	1.16				1.90	3.4	8.7		7.3	<4	.029	.041
27	1.12				1.94	2.9	8.9		5.6	<4	.031	.065
28	1.30				1.30	2.6	9.1		7.4	4	.027	.048
29	1.30				1.15	2.2	8.9		7.4	<4	.052	.055
30	2.40				2.18	1.9	8.7		7.6	17	.049	.082
31												
AVG.[1]	1.27				1.54	1.2		17 [2]	7.6	7	.039	.234
LIMITS[3] OHIO EPA							6.0-9.0	<200 Geo. Av. Mont.	≥5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

MH-HS-191 (REV. 9/19/77) (4) NLO Concentration Guides

-4044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

8690bE0

For the Month of April 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	12800			49	39	53	1700	*	*		306
2	8875			69	33	54	1700	*	875	475	324
3	6975			68	45	60	1300	*	778		265
4	16340			59	36	55	0100	4416	438		368
5	12280			59	34	56	1300	4015	*		398
6	8800			66	30	60	1700	2810	426		412
7	6700			71	41	57	1300	2569	608		353
8	5445	.17	Rain	72	53	60	1300	2409	*		306
9	5200	.09	Rain	56	43	60	1300	2208	548	380	236
10	6400	.02	Rain	53	36	58	2100	2208	548		221
11	5735	.22	Rain	66	30	60	1700	*	456		294
12	5600	.07	Rain	54	41	54	2000	*	547		212
13	5800	.18	Rain	44	39	58	0100	*	639		324
14	8970	.32	Rain	52	39	55	1300	*	517		188
15	12140	.03	Snow&Rain	45	34	56	1300	*	699		418
16	10360			52	35	54	1700	3051	*	370	442
17	7370			63	28	58	1700	2248	852		342
18	5816			69	39	60	2100	*	*		353
19	4995			75	38	58	2100	*	602		341
20	4580	.04	Rain	76	41	64	1300	*	493		383
21	4350	.01	Rain	75	49	66	1300	*	*		324
22	4150			85	41	62	0100	*	456		324
23	3980			72	54	64	1700	*	310	305	368
24	3625			70	38	62	2000	*	*		347
25	3350			56	34	66	1300	*	487		309
26	2965			60	42	60	All Day	3372	*		347
27	2850	.04	Rain	58	44	58	All Day	3051	456		339
28	2750	.04	Rain	52	40	58	0500	3051	*		306
29	2700	.27	Rain	60	42	60	1700	2810	*		347
30	2670			70	37	58	1300	3051	699	690	271
31											
AVG.[1]	6486	1.50 [2]						2948	572	444	326

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.

*Not pumped this date.

85

4944

NLO-H&S-391 (REV. 9/15/77)

Waste Water Quality Report Summary

May 19, 1980

Wastewater quality was good during April. There were no NPDES problems.

Radium-228 reported for MH-175 during this period is the lowest concentration reported in one year.

There was a significant increase in the copper concentration at MH-175 and the Clearwell during the first ten days of April. All concentrations at MH-175, however, were below the NLO Concentration Guides.

0390699

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

MWB 5/9

00L06E0

For the Month of APRIL, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10³)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	12800	466		*	*		306	320	7.5	53	1700	98000	
2	8875	414		*	875	475	324	435	6.8	54	1700	109000	
3	6975	117	10	*	578		265	950	7.7	60	1300	90700	
4	16340	363		4416	438		368	1395	7.3	55	0100	83500	
5	12280	300		4015	*		398	2010	7.5	56	1300	37700	
6	8800	346		2810	426		412	1355	7.7	60	1700	56200	
7	6700	341		2569	608		353	1220	7.6	57	1300	36200	
8	5445	317		2409	*		306	1112	7.6	60	1300	81500	
9	5200	436		2208	548	380	236	920	7.7	60	1300	86500	
10	6400	480	30	2208	548		221	1060	7.9	58	2100	81000	
11	5735	225		*	456		294	430	7.8	60	1700	73700	
12	5600	490		*	547		212	295	8.5	54	2000	80900	
13	5800	238		*	639		324	390	8.7	58	0100	78900	
14	8970	565		*	517		188	290	8.3	55	1300	67900	
15	12140	365		*	699		418	440	8.4	56	1300	93100	
16	10360	315		3051	*	370	442	1265	6.9	54	1700	75900	
17	7370	369	150	2248	852		342	1040	7.7	58	1700	96400	
18	5816	153		*	*		353	470	7.3	60	2100	79300	
19	4995	178		*	602		341	395	6.6	58	2100	73200	
20	4580	117		*	493		383	290	7.4	64	1300	61300	
21	4350	187		*	*		324	315	7.4	66	1300	40100	
22	4150	213		*	456		324	395	8.2	62	0100	75200	
23	3980	167		*	310	305	368	355	8.0	64	1700	76800	
24	3625	124	2	*	*		347	285	7.8	62	2000	74800	
25	3350	160		*	487		309	285	7.2	66	1300	84500	
26	2965	294		3372	*		347	2145	7.3	60	All Day	81800	
27	2850	292		3051	456		339	1765	5.6	58	All Day	46200	
28	2750	278		3051	*		306	1715	7.4	58	0500	36100	
29	2700	310		2810	*		347	1355	7.4	60	1700	75600	
30	2670	471		3051	699	690	271	1129	7.6	58	1300	78400	
31													

NOTES: * Not pumped this date.

-4944

81

NLO-ENG-2456 (1/16/76)

RECD 5/2/80 0900

NATIONAL LEAD COMPANY OF OHIO 2257423

WASTE WATER QUALITY General Data

For the Month of April 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	PRECIPITATION
1	*										
2	*					388,200	2575	16540	19115	7,420,443	
3	*					*	*	*	*		
4	92990	4416	+7	4423	442,256						
5	146600	4015	+7	4022	589,625						
6	136000	2810	+7	2817	366,210						
7	125000	2569	+7	2576	322,000						
8	108000	2409	+7	2416	260,928	170000	2065	3380	5445	925,650	
9	136000	2208	+7	2215	301,240						
10	*					*	*	*	*		
11	*										
12	*										
13	*										
14	*										
15	*					364800	3190	1715	4905	1,495,044	
16	120000	3051	+7	3058	366,960						
17	136000	2248	+7	2255	306,680	*	*	*	*		
18	*										
19	*										
20	*										
21	*					221,000	4985	8560	13545	3,751,995	
22	*										
23	*										
24	*					*	*	*	*		
25	*										
26	136500	4015	+7	4022	549,807						
27	127000	3372	+7	3379	429,133						
28	132100	3051	+7	3058	419,252	220,000	1169	2228	3397	857,340	
29	132500	2810	+7	2817	387,338						
30	132800	3051	+7	3058	421,392						
31											
AVG.[1]	1077.69	[2]			5,162,821	1354.0				14,450,472	

NOTES: [1] Arithmetic averages

* not pumped this date

$\frac{5,162,821}{1677.69} = 3077.34$ mg/l (AVG. PER. TOTAL SOLIDS)

$\frac{14,450,472}{1354} = 10,673.4$ mg/l AVG. PER.

040816

-4944

88

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May 1980

2243115

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMENT FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	[illegible] mg/l	[illegible] mg/l
1	0.173	0.34	1780	97		197	2.7				7.7				0			<4
2	.175		750	10		86	1.6				7.3							
3	.151		372	5		63	1.5				7.6							
4	.108		352	5		57	1.6				7.6							
5	.109		268	5		53	1.4				7.6							
6	.152		331	6		54	1.4				7.8							
7	.161		315	4	<5	50	1.3		0.1	<5	8.0					2	0.43	
8	.259	0.39	386	13		49	1.1				8.0				0			
9	.259		446	12		42	1.1				7.5							
10	.264		342	11		37	1.0				7.4							
11	.245		384	12		36	0.9				7.4							
12	.267		467	12		40	0.9				7.7							
13	.472		1076	120		126	2.5				8.8	5	<5	8.1			4.87	<4
14	.316		1704	170	27	185	3.2	0.05			9.2				10	4		<4
15	.300	0.36	1452	180		196	3.4				8.4							<4
16	.254		500	27		51	1.3				7.3							
17	.700		287	8		27	1.4				7.5	5	<5	7.3				
18	.924		324	7		28	1.4				7.5	<4	<5	7.9				
19	.632		367	11		39	1.3				7.6	18	<5	7.9				
20	.515		488	10		42	1.3				7.6	7		8.0				
21	.366		584	11	<5	84	1.4				7.6					10		
22	.335	0.45	433	11		95	1.1				7.7				0		7.20	
23	.301		629	26		68	1.4				7.6							5
24	.640		350	8		34	1.5				7.5							
25	.404		420	10		40	1.5				7.5							
26	.361		.071	180		156	2.8				8.5							7
27	.321		1840	190		186	3.3				8.5							4
28	.326		1727	170	15	161	2.4			<5	8.5		<5			6	6.50	4
29	.339	0.34	1771	180		156	2.6				8.5				8			4
30	.295		819	74		86	1.9				7.8							5
31	.275		943	73		95	2.3				8.7							7
AVG.[1]	0.3	0.4	740	52	14	78	2	0.05	0.1	<5		8	<5		3	6	5	2
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0	...	6.0-9.0			6.0-9.0	200 (MO. GEO. MEAN)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month. [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-H&S-353 (REV. 9/15/77)

339061

-40447

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of May 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwell Cu mg/L
1	1.22		0.001	<0.010	1.38	1.6	8.6		8.5	<4	0.042	0.051
2	2.06		Comp.	Comp.	3.83	.8	8.0		8.4	<4	.020	
3	1.20		2/26-	2/26-	1.61	.4	8.0		8.2	<4	.014	
4	.96		3/10	3/24	1.14	.4	8.0		8.5	<4	.009	
5	.94				1.15	.4	8.1		8.6	<4	.011	
6	.70				1.28	.4	8.2		7.8	7	.010	
7	.52				.88	.1	8.3		7.9	<4	.011	
8	.42				.60	.1	7.9	0	8.4	6	.013	
9	.50				.37	.3	7.9		8.2	<4	.011	
10	.46				.40	.4	7.9		8.3	<4	.010	
11	.36				.44	.3	8.0		7.9	6	.011	
12	.44				.69	.3	7.9		7.9	<4	.009	
13	1.32				1.11	3.2	8.6		6.7	16	.023	.043
14	1.32				1.20	4.4	8.7		6.3	<4	.034	.056
15	1.08				1.29	.2	8.7	20	7.2	<4	.033	.036
16	.52		0.002		.59	.6	7.9		7.9	<4	.013	
17	.92		Comp.		1.03	.2	7.7		7.6	5	.014	
18	1.44		3/11-		1.84	.3	7.9		7.7	5	.013	
19	1.34		3/24		1.70	.4	8.0		8.0	10	.010	
20	1.06				1.67	.3	8.0		7.7	9	.017	
21	1.08				1.06	.8	8.0		7.8	<4	.015	
22	.88				.95	.1	8.0	0	7.9	<4	.015	
23	.86				1.00	.4	8.1		7.6	5	.012	.079
24	1.16				1.23	.4	7.8		7.6	23	.021	
25	.96				1.82	.4	8.0		7.4	<4	.019	
26	2.08				2.43	3.4	8.4		6.4	4	.042	.074
27	2.30				1.97	4.3	8.6		6.7	<4	.050	.053
28	2.48				2.10	3.3	8.5		6.4	<4	.040	.073
29	2.80				2.07	3.1	8.6	200	6.7	5	.040	.055
30	1.46				1.63	1.4	8.1		7.1	5	.073	.079
31	1.46				1.10	1.7	8.7		7.6	5	.012	.031
AVG.[1]	1.17				1.34	1.1		8[2]	7.6	6	.022	.057 (4)
LIMITS[3] OHIO EPA							6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.		Avg. 0.07	
LIMITS[3] ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

E690E0

WASTE WATER QUALITY REPORT: General Data

For the Month of May 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	2590			68	50	60	2100	3011	*		309
2	2335			71	44	62	2100	*	669		309
3	2260			77	49	61	0500	*	475		309
4	2150			83	46	61	2100	*	*		324
5	2050			85	47	64	1700	*	*		309
6	1995			77	54	64	1700	*	426		309
7	1835			61	48	62	0500	*	*	301	294
8	1835			57	34	60	1700	*	316		289
9	1825			66	33	62	1700	*	365		271
10	1760			70	35	63	1700	*	472		294
11	1650	.03	Rain	83	64	58	All Day	*	454		306
12	2440	.52	Rain	78	65	65	2100	*	*		309
13	6360			89	61	66	2100	2915	435		247
14	3980			69	46	66	1700	3042	656	392	353
15	2930			70	39	64	0900	2802	320		368
16	2485	.53	Rain	68	47	60	2100	*	376		342
17	2655	1.13	Rain	64	57	60	1300	*	368		189
18	13790	.32	Rain	77	58	58	All Day	*	667		183
19	11200	.36	Rain	73	60	62	1700	*	856		220
20	9943	.04	Rain	70	58	65	1700	*	825		365
21	6300			74	52	62	1300	*	889	1007	365
22	4725			80	56	66	1700	*	730		412
23	3870	.31	Rain	81	65	63	1700	3620	762		339
24	8140	.58	Rain	76	62	64	1700	*	444		253
25	8585			83	60	65	2100	*	714		359
26	7170			76	54	66	0800	3077	794		424
27	4775			78	45	67	1700	3005	571		418
28	3785			84	49	68	2100	2968	540	376	398
29	3240			88	57	69	0100	3041	584		353
30	2965			82	68	72	2100	2751	555		412
31	2780			86	70	70	All Day	2462	540		324
AVG.[1]	4336	3.82 [2]						2972	569	519	32[illegible]

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.

*Not pumped this date.

4944

NLO-H&S-391 (REV. 2/15/77)

Wastewater Quality Report Summary

For May 1980

Wastewater quality was acceptable during May. There were no NPDES violations or other quality problems.

0390694

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

MWB 6/10

For the Month of MAY, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2590	173		3011	*		309	1780	8.5	60	2100	71000	
2	2335	175		*	669		309	750	8.4	62	2100	86800	
3	2260	151		*	475		309	372	8.2	61	0500	77800	
4	2150	108		*	*		324	352	8.5	61	2100	66300	
5	2050	109		*	*		309	268	8.6	64	1700	50700	
6	1995	152		*	426		309	331	7.8	64	1700	74200	
7	1835	161		*	*	301	294	375	7.9	62	0500	85800	
8	1835	259	0	*	316		289	386	8.4	60	1700	84000	
9	1825	259		*	365		271	446	8.2	62	1700	86600	
10	1760	264		*	472		294	342	8.3	63	1700	80200	
11	1650	245		*	454		306	384	7.9	58	All Day	47900	
12	2440	267		*	*		309	467	7.9	65	2100	44800	
13	6360	472		2915	435		247	1076	6.7	66	2100	84000	
14	3980	316		3042	656	392	353	1704	6.3	66	1700	71500	
15	2930	300	20	2802	320		368	1452	7.2	64	0900	72900	
16	2485	254		*	376		342	500	7.9	60	2100	65500	
17	2655	700		*	368		188	287	7.6	60	1300	93600	
18	13790	924		*	667		183	324	7.7	58	All Day	125200	
19	11200	632		*	856		220	367	8.0	62	1700	81100	
20	9943	515		*	825		365	488	7.7	65	1700	108100	
21	6300	366		*	889	1007	365	584	7.8	62	1300	116200	
22	4725	335	0	*	730		412	433	7.9	66	1700	101500	
23	3870	301		3620	762		339	629	7.6	63	1700	94700	
24	8140	640		*	444		253	350	7.6	64	1700	117500	
25	8585	404		*	714		359	420	7.4	65	2100	61700	
26	7170	361		3077	794		424	2071	6.4	66	0800	48000	
27	4775	321		3005	571		418	1840	6.7	67	1700	52700	
28	3785	326		2968	540	376	398	1727	6.4	68	2100	72300	
29	3240	339	200	3041	584		353	1771	6.7	69	0100	83000	
30	2965	295		2751	555		412	819	7.1	72	2100	95100	
31	2780	275		2462	540		324	943	7.6	70	All Day	84900	

NOTES: * Not pumped this date.

63

-4944

NLO-ENG-2456 (1/16/76)

(47) MAY, 80

2235468

NATIONAL LEAD COMPANY OF OHIO

For the Month of May 1980

WASTE WATER QUALITY — General Data

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l	CLEARWELL (VVB-FVA) VOLUME (1000 gal units times TOTAL SOLIDS)	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) VOLUME (1000 gal units TIMES TOTAL SOLIDS)	PRECIPITATION
1	76,000	3011	+7	3018	229,368						
2	*										
3	*										
4	*					220,500	2476	36992	39473	8,703,797	
5	*										
6	*										
7	*										
8	*										
9	*										
10	*										
11	*										
12	*					168,800	4721	1499	6220	1,049,936	
13	110,000	2975	+7	2922	321,420						
14	118,000	3042	+7	3049	359,782						
15	120,000	2802	+7	2809	337,080						
16	*										
17	*										
18	*										
19	*					364,200	1807	529	2336	850,771	
20	*										
21	*										
22	*										
23	18,000	3620	+7	3627	65,286						
24	*										
25	*										
26	88,000	3077	+7	3084	274,476	204,506	1791	666	2457	502,457	
27	110,000	3055	+7	3062	336,820						
28	102,000	2968	+7	2975	303,450						
29	147,000	3041	+7	3048	438,912						
30	99,000	2751	+7	2758	273,042						
31	120,000	2762	+7	2769	332,280					11,106,961	
AVG.[1]	1106	[2]			3,271,916	958.0					

NOTES: [1] Arithmetic averages * not pumped this date

$$\frac{3,271,916}{1106} = 2958 \text{ mg/l}$$ (WTD AVER TOTAL SOLIDS FOR MAY, 80 CLEARWELL WITHDRAWALS)

$$\frac{11,105,095}{958.0} = 11,594 \text{ mg/l}$$ (WTD. AVER TOTAL SOLIDS FOR PUMPINGS GEN. SUMP TO PIT #5 DURING MAY, 80)

1494

3 1 5 0 1 4

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters — For the Month of June 1980 — 2243114

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE TREATMI FECAL COLIFORM NO/100ML	SUS. SOLID mg/l	mg/l	mg
1	0.398		1105	120		154	3.0				8.8	90	<5	7.8				8
2	.491		994	76		115	2.7				8.2	<4	<5	7.4				20
3	.367		553	36		71	1.8				7.6	<4	<5	7.6				<1
4	.410		401	14	<5	47	1.1		0.1	<5	7.4					8	2.17	
5	.461	0.49	1027	100		152	3.0				8.8				0			
6	.531		1333	130		191	3.5				8.8							
7	.497		1313	130		191	3.6				8.8							
8	.599		1282	120		179	3.5				8.8	87	<5	7.5				1
9	.399		888	75		110	2.5				7.6							1
10	.707		401	16		37	1.2				7.8	5	<5	7.8				
11	.468		372	13	<5	39	1.5				7.8					4	3.83	
12	.451	0.30	523	15		108	1.4	0.01			7.4				130			
13	.391		498	13		79	1.1				7.6							
14	.374		419	13		50	1.0				7.4							
15	.388		443	12		43	1.0				7.4							
16	.503		1071	119		124	3.0				8.7	<4	<5	8.1				
17	.447		1290	130		146	3.7				8.5							
18	.399		729	49	<5	88	1.9				8.4					2	2.14	
19	.404	0.40	387	12		99	1.1				7.3				0			
20	.439		490	12		70	1.2				7.4							
21	.292		383	11		54	1.0				7.6							
22	.213		490	14		43	1.0				7.5							
23	.230		458	13		40	0.9				7.4							
24	.418		384	12		39	1.0				7.7	6	5	7.9				
25	.364		1428	140	19	136	3.9				8.0					7	1.2	<1
26	.428	0.35	1207	150		140	4.0				8.0				0			<1
27	.434		1283	150		136	4.5				7.8							
28	.376		960	87		95	3.3				7.5							
29	.630		306	14		31	1.4				7.5	7		7.5				
30	.397		354	14		42	1.3				7.6							
31																		
AVG.[1]	.43	0.4	780	63	8	98	2	0.01	0.1	<5		21	<5		47	6	3	
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the mont [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total or 150 mg/l from human activity.

NIO-H&S-351 (REV. 9/15/77)

4047

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of June 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwe Cu mg/L
1	2.08	0.005	0.001	0.023	1.67	2.0	8.7		6.0	5	0.020	0.035
2	1.80	Comp.	Comp.	Comp.	2.08	1.5	8.4		6.4	10	.015	.031
3	1.48	3/25-	3/25-	3/25-	1.51	.7	7.8		6.8	8	.008	.029
4	1.06	4/21	4/7	4/21	.93	.3	7.9		6.6	4	.006	
5	1.44				1.26	1.9	8.6	60	5.7	6	.020	.038
6	1.16				1.37	2.3	8.7		6.1	6	.022	.042
7	.92				1.35	2.3	8.7		5.9	6	.019	.034
8	1.38				1.34	2.4	8.4		5.8	8	.023	.039
9	1.12				1.62	1.5	7.9		6.0	4	.009	.034
10	.80				.67	.3	8.1		7.2	9	.010	
11	.80				1.10	.2	7.9		7.0	<4	.006	
12	.54				.68	.6	7.8	130	6.2	4	.005	
13	.34				.86	1.1	7.9		7.3	4	.007	
14	.48				.55	.1	7.8		7.2	<4	.006	
15	.48				.64	.2	7.9		6.8	<4	.006	
16	1.32		0.001		1.54	1.6	8.5		5.8	13	.007	.074
17	1.54		Comp.		1.29	2.2	8.4		5.2	4	.033	.049
18	.64		4/8-		1.09	.9	7.8		6.8	5	.017	.109
19	.34		4/21		.66	.4	7.9	6	7.4	<4	.005	
20	.52				.92	.9	8.0		7.4	4	.002	
21	.40				.65	.1	8.0		7.7	<4	.007	
22	.46				.59	.2	8.0		6.8	<4	.008	
23	.44				.69	.3	8.0		7.4	4	.007	
24	.62				1.00	.3	8.0		7.0	5	.009	
25	.90				.12	2.3	8.3		6.1	4	.035	
26	.86				1.27	2.5	8.0	10	5.5	<4	.023	.105
27	1.06				1.16	2.8	7.8		5.4	4	.014	.092
28	.60				.88	1.8	7.2		6.0	<4	.019	.108
29	.54				.87	.6	7.4		7.0	5	.012	
30	.80				1.03	.1	8.0		6.7	<4	.013	
31												
AVG.[1]	.90				1.05	1.2		26 [2]	6.5	5	.013	.059
OHIO EPA							6.0-9.0	<200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.		Avg. 0.07	)
ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

-1044

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of June 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	5200	0.81	Rain	75	65	70	1300	2317	571		342
2	8700	.08	Rain	81	67	69	1700	2172	603		353
3	28830			85	64	68	1300	2099	*		324
4	30680			76	56	70	2100	*	394	338	393
5	21350			82	58	72	2100'	2172	501		294
6	18170			89	57	73	2100	2317	438		329
7	13320	.51	Rain	90	72	74	All Day	2172	*		365
8	11260			72	50	72	All Day	2244	*		324
9	7190	.21	Rain	76	50	68	2100	2172	*		365
10	5560	.16	Rain	69	55	64	1700	*	501		294
11	4690			69	41	65	1700	*	571	983	188
12	3920			74	45	62	0100	*	460		353
13	3410			84	45	62	1300	*	428		353
14	3095			86	58	68	1700	*	444		400
15	2880			86	68	70	2100	*	413		412
16	3110	.33	Rain	69	54	70	0100	2172	413		279
17	3240			73	47	66	All Day	2172	698		294
18	2900			81	50	75	0100	2172	492	454	309
19	2590	.12	Rain	83	51	65	2100	*	476		306
20	3140			75	46	65	1700	*	444		250
21	2365			79	50	62	0100	*	413		324
22	2220			85	50	61	2000	*	*		398
23	2100	.20	Rain	85	59	66	2100	*	*		368
24	2190			82	66	72	2100	*	380		236
25	3424			83	65	73	1800	2751	571	456	324
26	3050			89	64	73	1700	2606	444		294
27	2450			92	68	75	1700	2534	444		383
28	2160	.62	Rain	91	71	72	2100	2534	492		353
29	15260			86	70	69	1300	*	508		194
30	24350			88	57	64	1700	*	698		398
31											
AVG.[1]	8093	3.04 [2]						2307	492	558	327

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.

*Not pumped this date.

NEICHAS-391 (REV. 9/19/77)

4944

Summary of Waste Water Quality Report for June 1980

Wastewater quality was acceptable during June. There were no NPDES violations.

Radium-226 is reported for the period from March 25 to April 21, 1980. The concentration, 0.023 d/m/mL, is the highest reported in several months. It is, however, well under the target level of 0.066 d/m/mL.

1390689

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

0690EC

For the Month of JUNE, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	5200	398		2317	571		342	1105	6.0	70	1300	84000	
2	8700	491		2172	603		353	994	6.4	69	1700	85400	
3	28830	367		2099	*		324	553	6.8	68	1300	75800	
4	30680	410		*	394	338	393	461	6.6	70	2100	98600	
5	21350	461	60	2172	501		294	1027	5.7	72	2100	91400	
6	18170	531		2317	438		329	1333	6.1	73	2100	88400	
7	13320	497		2172	*		365	1313	5.9	74	All Day	123200	
8	11260	599		2244	*		324	1282	5.8	72	All Day	86500	
9	7190	399		2172	*		365	888	6.0	68	2100	64200	
10	5560	707		*	501		294	401	7.2	64	1700	95500	
11	4690	468		*	571	983	188	372	7.0	65	1700	94400	
12	3920	451	130	*	460		353	523	6.2	62	0100	113400	
13	3410	391		*	428		353	498	7.3	62	1300	43500	
14	3095	374		*	444		400	419	7.2	68	1700	70000	
15	2880	388		*	413		412	443	6.8	70	2100	50000	
16	3110	503		2172	413		279	1071	5.8	70	0100	16900	
17	3240	447		2172	698		294	1290	5.2	66	All Day	25100	
18	2900	399		2172	492	454	309	726	6.8	75	0100	27500	
19	2590	404	6	*	476		306	387	7.4	65	2100	31400	
20	3140	439		*	444		250	490	7.4	65	1700	31800	
21	2365	292		*	413		324	383	7.7	62	0100	39000	
22	2220	213		*	*		398	490	6.8	61	2000	18800	
23	2100	230		*	*		368	458	7.4	66	2100	30000	
24	2190	418		*	380		236	384	7.0	72	2100	60000	
25	3424	364		2751	571	456	324	1428	6.1	73	1800	70000	
26	3050	428	10	2606	444		294	1207	5.5	73	1700	85900	
27	2450	434		2534	444		383	1283	5.4	75	1700	96100	
28	2160	376		2534	492		353	960	6.0	72	2100	87900	
29	15260	630		*	508		194	306	7.0	69	1300	70100	
30	24350	397		*	698		398	454	6.7	64	1700	48800	
31													

NOTES: 99

* Not pumped this date.

-4944

2235503

NATIONAL LEAD COMPANY OF OHIO

For the Month of June 1980

WASTE WATER QUALITY General Data

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units TIMES TOTAL SOLIDS	PRECIPITATION
1	144,000	2117	+7	2124	305,856						
2	144,000	2172	+7	2179	313,776						
3	48,000	2099	+7	2106	101,088	358,300	3392	51358	54750	19,616,925	
4	*										
5	116,000	2172	+7	2179	252,764						
6	144,000	2317	+7	2324	334,656						
7	288,000	2172	+7	2179	627,552						
8	216,000	2244	+7	2251	486,216						
9	91,800	2172	+7	2179	200,032						
10	*					319,400	2529	14454	16983	5,424,370	
11	*										
12	*										
13	*										
14	*										
15	*										
16	128,000	2172	+7	2179	281,091						
17	126,000	2172	+7	2179	274,554	202,000	2303	611	3914	790,628	
18	40,000	2172	+7	2179	87,160						
19	*										
20	*										
21	*										
22	*										
23	*										
24	*					220,100	3028	1676	4704	1,035,350	
25	144,000	2751	+7	2758	397,152						
26	138,000	2606	+7	2613	360,594						
27	144,000	2534	+7	2541	365,904						
28	48,000	2534	+7	2541	121,968						
29	*										
30	*										
31										26,867,273	
AVG.[1]	1960.8	2			4,510,363	1099.8					

NOTES: [1]Arithmetic averages

* not pumped this date

$\frac{4,510,363}{1960.8} = 2300$ mg/l (WTD AVER. TOTAL SOLIDS FOR JUNE, 1980; CLEARWELL WITHDRAWALS)

$\frac{26,867,273}{1099.8} = 24,429$ mg/l (WTD AVER. TOTAL SOLIDS; FOR PUMPINGS GEN. SUMP TO PIT #5 DURING JUNE 1980)

100

0 1 2 3 4 5 6 7 8 9

NATIONAL LEAD COMPANY OF OHIO
WITH A SAFETY DIVISION

SITE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of July 1980

2243113

	MANHOLE - 175											STORM SEWER OUTFALL			SEWAGE TREATM			
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l		
1	0.243		452	12		43	1.0				7.7							
2	.241		448	12	<5	45	1.1		0.05	<5	7.6					7	1.07	
3	.570	0.26	380	9		24	1.2				7.8	<4	<5	8.3	10			
4	.542		414	11		37	1.5				7.6							
5	.359		488	13		46	1.5				7.2							
6	.413		389	12		41	1.1				7.5	29	5	7.4				
7	.303		425	13		43	1.3				7.5							
8	.316		538	13		41	1.4				7.3							
9	.561		434	8	<5	32	1.9			<5	7.8	<4	<5	7.3		8	1.57	
10	.669	0.10	406	8		25	1.2				7.5	<4	9	7.2	0			
11	.725		545	33		42	1.6				7.6	<4	<5	7.4				
12	.390		1124	79		87	2.5				6.9							<1
13	.313		1039	100		105	3.2				6.6							<1
14	.261		1189	110		113	3.1				6.7							<1
15	.322		1058	90		101	2.7				7.8							<1
16	.328		1333	88	<5	101	3.6				7.6					31	2.43	<1
17	.325	0.16	1210	84		105	3.3				8.2				0			<1
18	.195		767	47		72	1.5				7.6							<1
19	.194		384	13		42	1.0				7.5							
20	.212		440	13		60	1.0				7.6							
21	.207		423	13		45	0.9				7.4							
22	.530		379	11		38	0.9				7.6	<4	<5	8.3				
23	.480		396	9	<5	35	1.3	<0.01			7.6	<4	<5	8.0		4	0.83	
24	.377	0.48	937	70		142	2.7				7.8				8			
25	.357		1148	81		157	3.3				7.7							
26	.328		1062	93		176	3.3				7.6							
27	.352		993	86		134	3.5				7.6	40	<5	7.8				
28	.473		800	66		95	3.0				7.7	<4	<5	8.3				
29	.410		1225	78		108	3.0				7.8							
30	.352		1029	83	<5	118	3.1				8.4					5	2.00	
31	.293	0.13	555	36		66	1.8				7.4				12			
AVG.[1]	0.38	0.2	692	42	<5	71	2	<0.01	0.05	<5		6	5		6	11	2	
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the mon
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total
or 150 mg/l from human activity.

HLO-H&S-351 (REV. 9/15/77)

101

-4044

NATIONAL LEAD COMPANY OF OHIO

FERNALD SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of July 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwe Cu mg/L
1	0.38	0.003	0.001	<0.010	0.84	0.2	7.9		6.8	<4	0.008	
2	.54	Comp.	Comp.	Comp.	.46	0.4	8.0		6.7	5	.010	
3	.80	4/22-	4/22-	4/22-	1.07	0.3	8.0	320	6.8	20	.012	
4	1.28	5/19	5/5	5/19	1.84	0.5	8.0		7.5	<4	.020	
5	1.06				1.65	0.3	8.1		7.0	<4	.015	
6	1.00				1.42	0.6	7.6		7.2	<4	.020	
7	.62				.75	0.2	8.0		7.5	<4	.012	
8	.56				.79	0.3	8.1		7.2	<4	.006	
9	.48				.84	0.4	7.8		7.2	<4	.015	
10	.76				.94	0.3	7.9	26	7.0	10	.015	
11	1.88				1.65	0.8	7.3		6.4	23	.020	0.025
12	2.18				1.75	1.8	7.2		5.8	<4	.021	.033
13	2.28				2.17	1.7	7.4		6.0	<4	.013	.023
14	2.92				2.47	2.1	7.2		5.7	<4	.015	.050
15	2.22				2.07	1.8	7.3		5.5	<4	.013	.029
16	2.08		0.001		1.89	1.6	7.4		5.1	<4	.013	.042
17	2.41		Comp.		2.52	1.6	7.2	28	5.0	<4	.014	.036
18	1.78		5/6-		1.66	1.0	7.6		7.3	<4	.007	.050
19	.70		5/19		1.21	0.2	7.9		6.8	<4	.006	
20	.74				.91	0.3	8.0		7.2	<4	.006	
21	.60				.66	0.2	8.0		6.8	<4	.006	
22	.58				.88	0.1	8.0		6.9	<4	.006	
23	1.04				1.58	0.3	8.0		6.5	<4		
24	1.60				1.80	1.6	7.8	200	6.3	5	.018	.056
25	1.48				1.69	1.7	7.7		6.4	6	.047	.048
26	1.84				1.63	2.1	7.8		6.2	5	.024	.067
27	1.66				1.18	2.0	7.4		6.5	9	.032	.055
28	1.40				1.58	1.9	7.6		6.0	7	.036	.062
29	1.42				1.35	1.7	7.7		5.8	<4	.027	.067
30	1.20				1.36	1.9	7.7		5.8	<4		
31	.78				.86	0.9	7.9	30	6.6	<4		
AVG.[1]	1.30				1.40	1.0		67 [2]	6.5	6	0.016	0.046
LIMITS: OHIO EPA							6.0-9.0	< 200 Mo. Geo. Mean	≥ 5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS: ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

6-151 (REV. 9/15/77)

1390682

102

40474

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of July 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	15230			84	56	68	1700	*	603		339
2	11640	1.84	Rain	90	66	73	1700	*	524	369	406
3	9950	.39	Rain	81	71	72	2100	*	508		206
4	11900			83	70	68	0100	*	540		339
5	7200	.11	Rain	90	73	66	1300	*	889		459
6	5000			82	66	65	0500	*	628		339
7	3675			86	57	64	0900	*	508		559
8	3120	1.89	Rain	98	74	82	1700	*	730		530
9	4580			97	74	76	2100	*	1016	263	250
10	12230	2.20	Rain	96	70	77	1700	*	1143		309
11	4320			92	70	75	1300	1810	984		294
12	3310	.01	Rain	93	69	78	2100	1810	571		471
13	2790			85	71	76	2100	1665	667		515
14	3310			90	64	76	1700	1810	*		530
15	2980			100	71	79	1700	1665	*		486
16	2650			96	76	82	2100	1665	1016	512	483
17	2290			89	70	82	0100	1665	952		471
18	2140			90	63	68	0100	1665	*		501
19	2075			95	68	74	1300	*	*		524
20	**			96	70	68	2100	*	794		530
21	1830	.19	Rain	94	72	66	1700	*	571		545
22	5655	.98	Rain	78	68	66	All Day	*	667		206
23	3697			81	62	76	2100	*	920	291	212
24	2525			83	59	79	2100	1667	476		398
25	2430			86	59	78	0100	1738	667		342
26	2065			87	64	78	0100	1810	444		368
27	1900	.55	Rain	77	68	78	0100	1810	603		294
28	3800			82	68	76	All Day	1810	571		206
29	2775			85	63	77	2100	1810	857		324
30	2675			86	68	76	0500	1955	587	373	324
31	2290			96	70	78	1700	1810	635		294
AVG.[1]	4734	8.16 [2]						1760	658	362	389

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
*Not pumped this date.
**Not reported.

103

-4944

NLO-H&S-351 (REV. 9/15/77)

Summary of Waste Water Quality Report for July, 1980

There were no wastewater quality problems during July. This means that, as usual, the plant effluent met requirements of the U. S. Department of Energy, the U. S. Environmental Protection Agency, and the State of Ohio Environmental Protection Agency.

Precipitation amounted to 8.16 inches, the highest monthly total since December, 1972, when the precipitation, measured as water, was 9.75 inches.

0390684

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION - WATER PLANT

WASTE WATER QUALITY REPORT

5890bE0

For the Month of JULY, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10 3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	15230	243		*	603		339	452	6.8	68	1700	66400	
2	11640	241		*	524	369	406	448	6.7	73	1700	71300	
3	9950	570	320	*	508		206	380	6.8	72	2100	114100	
4	11900	542		*	540		339	414	7.5	68	0100	89100	
5	7200	359		*	889		459	488	7.0	66	1300	58000	
6	5000	413		*	628		339	389	7.2	65	0500	53900	
7	3675	303		*	508		559	425	7.5	64	0900	41400	
8	3120	316		*	730		530	538	7.2	82	1700	56300	
9	4580	561		*	1016	263	250	434	7.2	76	2100	113600	
10	12230	669	26	*	1143		309	406	7.0	77	1700	134900	
11	4320	725		1810	984		294	545	6.4	75	1300	119000	
12	3310	390		1810	571		471	1124	5.8	78	2100	73800	
13	2790	313		1665	667		515	1039	6.0	76	2100	79200	
14	3310	261		1810	*		530	1189	5.7	76	1700	52600	
15	2980	322		1665	*		486	1058	5.5	79	1700	62600	
16	2650	328		1665	1016	512	483	1333	5.1	82	2100	80400	
17	2290	325	28	1665	952		471	1210	5.0	82	0100	78800	
18	2140	195		1665	*		501	767	7.3	68	0100	52900	
19	2075	194		*	*		524	384	6.8	74	1300	50500	
20	**	212		*	794		530	440	7.2	68	2100	52400	
21	1830	207		*	571		545	423	6.8	66	1700	53200	
22	5655	530		*	667		206	379	6.9	66	All Day	89200	
23	3697	480		*	920	291	212	396	6.5	76	2100	75400	
24	2525	377	200	1667	476		398	937	6.3	79	2100	118100	
25	2430	357		1738	667		342	1148	6.4	78	0100	97600	
26	2065	328		1810	444		368	1062	6.2	78	0100	130000	
27	1900	352		1810	603		294	993	6.5	78	0100	78500	
28	3800	473		1810	571		206	800	6.0	76	All Day	62300	
29	2775	410		1810	857		324	1225	5.8	77	2100	62300	
30	2675	352		1955	587	373	324	1029	5.8	76	0500	71500	
31	2290	293	30	1810	635		294	555	6.6	78	1700	73000	

NOTES:

* Not pumped this date.
** No reading.

-4944

NLO-ENG-2456 (1/16/76)

[illegible] LEAD COMPANY OF OHIO

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of August, 1980

	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	CHROMIUM mg/l	[illegible]	[illegible]	[illegible] mg/l	[illegible]	STORM SEWER OUTFALL [illegible]	[illegible]	[illegible]	SEWAGE TR FECAL COLIFORM MPN/100ML	2243112		AR SU OLI mg/l
1	0.376		1306	84		100	2.6				8.3							4
2	.474		1103	85		112	5.3				7.8							12
3	.449		901	70		94	3.0				7.4	<4	<5	8.2				5
4	.503		368	16		41	1.6				8.0							
5	.410		462	10		40	1.5				7.5							
6	.475		414	10	<5	39	1.5		0.03	<5	7.6					15.	1.90	
7	.676	.18	296	8		28	1.4				7.6	<4	<5	8.1	11			
8	.468		591	9		33	1.2	<0.01			7.5							
9	.456		961	76		105	2.8				7.9							7
10	.413		1114	100		124	3.4				7.8							6
11	.346		1115	96		128	3.2				7.8							9
12	.623		853	70		94	2.6				7.8	<4	<5	8.3				8
13	.490		1109	53	<5	134	3.0				7.8							7
14	.426	.06	464	14		51	1.4				7.4				1	5	.57	
15	.613		517	4		43	1.0				7.6	5	<5	7.7				
16	.674		586	5		96	1.3				7.6	<4	<5	7.8				
17	.334		540	5		83	1.0				7.5							
18	.341		1267	80		150	2.8				8.2							6
19	.862		794	38		85	2.4				7.8	<4	<5	7.7				<1
20	.537		411	7	<5	47	1.6				7.6					12	3.07	
21	.447	.15	1225	35		84	2.0				7.6				0			11
22	.441		1056	64		121	2.8				7.6							1
23	.436		1205	22		132	2.8				7.4							<1
24	.391		1354	34		141	3.1				7.5							7
25	.332		651	7		50	1.1				7.6							
26	.375		445	4		41	0.9				7.7							
27	.403		353	11	16	38	0.8				7.6					2	3.03	
28	.342	.13	408	10		35	0.9				7.7				3			
29	.465		398	9		34	0.8				7.5							
30	.366		451	10		34	0.9				7.5							
31	.472		236	10		30	1.1				7.5	<4	5	7.5				
AVG.[1]	0.47	0.1	728	34	7.4	76	2	<0.01	0.03	<5		5	<5		5	9	2	7
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	4
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	2
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mo. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-N&S-351 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO
A SAFETY DIVISION

SITE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of August 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clear Cu mg/
1	0.48		0.002	<0.010	1.60	0.98	7.9		5.5	<4	0.025	0.068
2	.48		Comp.	Comp.	.70	1.90	7.5		5.3	<4	.149	.060
3	.50		5/20-	5/20-	1.01	1.40	7.4		6.0	19	.050	.057
4	.94		6/2	6/16	2.31	.20	8.0		6.4	4	.022	
5	.80				1.01	.30	8.0		6.7	4	.022	
6	.84				.71	.02	7.9		6.8	<4		
7	.26				1.19	.06	8.0	200	6.8	6	.056	
8	.74				1.26	.10	8.0		7.6	<4	.026	
9	1.10				1.16	1.30	7.3		6.1	4	.039	.088
10	1.40				1.05	1.90	7.4		6.0	4	.082	.115
11	.66				1.16	1.80	7.4		5.7	5	.085	.102
12	1.04				.99	1.30	7.5		5.7	6	.079	.099
13	.96				1.03	1.30	7.4		4.1	<4	.099	.115
14	.70				.90	.40	7.8	150	5.8	<4	.022	
15	.60		0.002		.89	.40	7.8		5.6	6	.018	
16	.92		Comp.		1.16	.30	7.7		6.6	<4	.014	
17	.52		6/3-		.99	.40	8.0		6.7	4	.016	
18	.96		6/16		1.06	1.80	7.8		4.6	<4	.023	.057
19	1.12				1.60	1.10	7.5		4.8	8	.022	.045
20	1.40				1.36	.30	7.9		6.7	<4	.012	
21	1.42				1.21	1.00	7.7	180	5.6	<4	.012	.043
22	1.60				1.41	1.40	7.6		4.8	7	.030	.056
23	1.16				1.38	1.60	7.2		5.0	<4	.044	.047
24	1.46				1.25	1.70	7.4		4.9	<4	.047	.053
25	.82				.90	.80	7.9		6.7	<4	.025	
26	.40				.86	.20	7.9		7.0	<4	.019	
27	.54				1.01	.20	7.8		6.8	<4	.022	
28	.86				.88	.20	8.0	80	6.6	<4	.019	
29	.44				.76	.30	8.1		6.8	<4	.019	
30	.16				.38	.10	7.8		6.7	<4	.011	
31	.80				.78	.30	7.6		6.7	10	.013	
AVG.[1]	.84				1.10	.81		144[2]	6.0	5	0.037	0.072
OHIO EPA							6.0-9.0	5,000 (Mo. Geo. Mean)	5.0 AVG. 4.0 MIN.		Avg. 0.07	
ERDAM-0524	59	9	0.006	0.006							Max. 0.35	

NOTES. [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

1390671

107

(4)

GENERAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of August 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STORM SEWER LIFT STATION
1	2020	.07	Rain	90	71	79	1700	2534	603		280
2	2000	.30	Rain	94	70	79	1700	2172	476		250
3	6300	.98	Rain	83	69	75	0800	2172	635		177
4	3100			87	67	71	1700	*	508		310
5	2775			85	72	71	2100	*	952		324
6	2200			90	69	73	1300	*	518	327	324
7	8890	.65	Rain	94	71	73	2100	*	555		271
8	2935			95	75	80	2100	*	824		309
9	2340			96	74	80	1700	1810	698		383
10	2225			96	72	88	1700	1810	698		424
11	2065	.37	Rain	93	71	80	All Day	1810	698		342
12	3420			84	67	81	1700	1810	762		206
13	3631			87	65	78	All Day	1882	730	155	353
14	3110	.02	Rain	90	70	72	0500	*	634		289
15	3950	.74	Rain	75	70	74	2100	*	825		224
16	5190	.01	Rain	73	65	72	0100	*	698		368
17	3220			86	64	67	0100	*	*		424
18	8785	1.05	Rain	90	70	80	1700	2462	*		442
19	13540			85	70	77	0100	1991	651		221
20	8550			94	72	78	1700	*	762	357	353
21	5130			92	72	80	1300	1882	762		383
22	3765			83	68	80	2100	1991	1016		353
23	3250			83	59	78	All Day	1810	889		368
24	2800			86	60	78	0100	1810	413		383
25	2525			86	61	70	All Day	*	381		368
26	2140			90	63	76	2100	*	698		339
27	2020			91	66	74	0100	*	635	379	295
28	1900			92	65	72	1800	*	591		291
29	1785			89	69	72	1700	*	571		324
30	2020	.35	Rain	89	68	80	0100	*	603		309
31	1800			88	65	70	0100	*	*		236
AVG.[1]	3851	4.54 [2]						1996	671	305	320

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.

*Not pumped this date.

Summary of Waste Water Quality Report for August 1980

Wastewater quality was good during August. There were no NPDES violations.

Residual chlorine concentrations are lower than usual as a result of the Water Treatment effort to find the lowest chlorine application rate that will give adequate disinfection in the sewage treatment plant effluent. The present NPDES limit is 0.4 mg/L. The proposed limit is 0.10 mg/L.

0390679

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

0890b E0

For the Month of AUGUST, 1980

	FLOWS		FECAL COLIFORMS AT MH 175	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)	(NO./100ml)	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	2020	376		2534	603		280	1306	5.5	79	1700	120500	
2	2000	474		2172	476		250	1103	5.3	79	1700	97400	
3	6300	449		2172	635		177	901	6.0	75	0800	108400	
4	3100	503		*	508		310	368	6.4	71	1700	63700	
5	2775	410		*	952		324	462	6.7	71	2100	74700	
6	2200	475		*	518	327	324	414	6.8	73	1300	96700	
7	8890	676	200	*	555		271	296	6.8	73	2100	132600	
8	2935	468		*	824		309	591	7.6	80	2100	106700	
9	2340	456		1810	698		383	961	6.1	80	1700	103800	
10	2225	413		1810	698		424	1114	6.0	88	1700	75500	
11	2065	346		1810	698		342	1115	5.7	80	All Day	58500	
12	3420	623		1810	762		206	853	5.7	81	1700	86700	
13	3631	490		1882	730	155	353	1109	4.1	78	All Day	90000	
14	3110	426	150	*	634		289	464	5.8	72	0500	86200	
15	3950	613		*	825		224	517	5.6	74	2100	107200	
16	5190	674		*	698		368	586	6.6	72	0100	115200	
17	3220	334		*	*		424	540	6.7	67	0100	61700	
18	8785	341		2462	*		442	1267	4.6	80	1700	39600	
19	13540	862		1991	651		221	794	4.8	77	0100	125700	
20	8550	537		*	762	357	353	411	6.7	78	1700	102600	
21	5130	447	180	1882	762		383	1225	5.6	80	1300	89100	
22	3765	441		1991	1016		353	1056	4.8	80	2100	89100	
23	3250	436		1810	889		368	1205	5.0	78	All Day	96100	
24	2800	391		1810	413		383	1354	4.9	78	0100	74100	
25	2525	332		*	381		368	651	6.7	70	All Day	42900	
26	2140	375		*	698		339	445	7.0	76	2100	82800	
27	2020	403		*	635	379	294	353	6.8	74	0100	90400	
28	1900	342	80	*	591		294	408	6.6	72	1800	88200	
29	1785	465		*	571		324	398	6.8	72	1700	103000	
30	2020	366		*	603		309	451	6.7	80	0100	85600	
31	1800	472		*	*		236	358	6.7	70	0100	68100	

NOTES:

* Not pumped this date.

110

2235647

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data

For the Month of August 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal unit) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal. units) TIMES TOTAL SOLIDS	PRECIPITATI
1	24,000	2534	+7	2541	60,984						
2	144,000	2172	+7	2179	313,776						
3	144,000	2172	+7	2179	313,776						
4	*										
5	*					412,400	508	3,353	3,858	1,591,039	
6	*										
7	*										
8	*										
9	144,000	1810	+7	1817	261,648						
10	144,000	1810	+7	1817	261,648						
11	144,000	1870	+7	1817	261,648	256,000	2,176	587	2,763	707,328	
12	144,000	1810	+7	1817	261,648						
13	144,000	1882	+7	1889	272,016						
14	*										
15	*										
16	*										
17	*										
18	96,000	2462	+7	2469	237,024						
19	150,000	2250	+7	2757	413,550	254,000	17,238	2,719	19,957	5,148,863	
20	*										
21	144,000	1991	+7	1998	287,712						
22	144,000	1882	+7	1889	272,016						
23	154,000	1810	+7	1817	279,818						
24	154,000	1810	+7	1817	279,818						
25	*										
26	*					310,000	529	1,901	2,430	753,300	
27	*										
28	*										
29	*										
30	*										
31	*										
AVG.[1]	1874	2			3,777,082	1237.4				8,220,530	

NOTES: [1] Arithmetic averages

* not pumped this date

$\frac{3,777,082}{1874} = 2016$ mg/l (ppm) (WT'D AVER. TOTAL SOLIDS FOR AUG. 1980 CLEARWELL WITHDRAWALS FROM PITTADE)

0375345

$\frac{8,220,530}{1237.4} = 6643$ mg/l (ppm) (WT'D. AVER. TOTAL SOLIDS FOR PUMPINGS GEN. SUMP TO PITS DURING AUGUST 1980.)

1-4644

111

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1980

DATE	MANHOLE – 175 FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	STORM SEWER OUTFALL SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	SEWAGE T FECAL COLIFORI NO/100ML	2243111		AR
1	0.281		344	12		35	1.2				7.4							
2	.359		459	10		36	0.9				7.5							
3	.423		1094	93	33	114	2.7		.08	<5	7.9					24	1.20	
4	.369	.06	1211	110		140	3.3				7.8				200			
5	.452		1695	110		142	3.3				7.9							
6	.412		1702	120		150	3.3				8.0							1
7	.391		1691	130		165	3.6				8.0							
8	.495		1547	110		144	3.4				7.9	<4	9	7.8				
9	.443		1114	110		141	3.1				8.1							1
10	.474		1143	110	<5	139	3.4			<5	8.3					1	3.26	<
11	.383	.04	1637	140		163	3.8				8.6				0			<
12	.465		1429	130		150	3.3				8.3							
13	.428		1985	130		213	3.5				8.3							
14	.394		1885	150		190	3.7				8.2							<
15	.373		1975	150		193	3.6				8.2							
16	.344		565	27		64	1.5				7.4							
17	.530		273	10	<5	38	1.2			<5	7.4					14	3.60	
18	.359	.02	397	10		41	1.2	<0.01			7.4				1			
19	.345		541	11		102	1.0				7.5							
20	.331		442	11		78	1.0				7.3							
21	.283		425	12		53	1.1				7.3							
22	.275		453	10		40	0.9				7.3							
23	.395		338	13		34	0.9				7.4							
24	.323		381	11	<5	42	0.8			<5	7.7					13	3.00	
25	.320	.01	377	11		44	0.9				7.7				2			
26	.341		400	11		39	0.9				7.7							
27	.336		318	10		37	0.9				7.4							
28	.290		405	11		34	0.8				7.7							
29	.256		427	13		35	0.9				7.6							
30	.270		451	13		34	0.8				7.4							
31																		
AVG.[1]	0.37	0.04	358	25	12	37	1	<0.01	0.08	<5		<4	9		52	13	3	
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (No. Geo. Mean)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

NLO-H&S-351 (REV. 9/15/77)

112

-4044

NATIONAL LEAD COMPANY OF OHIO
FERNALD SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 — For the Month of September 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ml	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearw. Cu mg/l
1	[illegible]	[illegible]	[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	<1	[illegible]	
2	[illegible]	Comp.	Comp.	Comp.	[illegible]	[illegible]	[illegible]		[illegible]	<1	[illegible]	
3	.94	5/20-	6/7-	6/17-	1.23	1.30	7.5		6.6	<4	[illegible]	[illegible]
4	.86	6/16	6/30	7/14	1.01	1.90	7.5	160	5.7	4	.040	.030
5	.90				.75	1.80	7.6		5.6	<4	.056	.029
6	.60				.58	1.60	7.2		4.8	<4	.015	.033
7	.60				.96	2.20	7.3		4.4	6	.019	.035
8	.72				.56	2.10	7.2		6.6	6	.016	.036
9	.68				.60	1.80	7.5		4.6	10	.016	.037
10	.74		0.002	0.012	.83	1.60	7.8		4.8	<4	.020	.033
11	.70		Comp.	Comp.	.58	2.20	7.4	200	4.8	<4	.018	.036
12	.76		7/1-	7/15-	.71	1.90	7.6		5.4	4	.029	.057
13	.64		7/14	8/11	.78	2.00	7.1		5.3	<4	.060	.063
14	.64				.58	2.30	7.4		4.3	<4	.040	.066
15	.50				.88	2.40	7.5		4.6	<4	.043	.071
16	.60				.94	.70	7.7		6.6	<4	.037	
17	.64				.92	.40	7.9		6.4	<4	.030	
18	.72				.70	.20	7.9	200	6.1	<4	.021	
19	.52				.58	.10	7.9		6.5	<4	.027	
20	.38		0.002		.48	.20	7.9		6.6	<4	.011	
21	.42		Comp.		.57	.10	7.9		6.2	<4	.015	
22	.36		7/15-		.67	.50	7.9		6.3	<4	.011	
23	.42		7/28		.72	.20	8.0		6.5	4	.015	
24	.48				.55	.05	7.9		5.0	<4	.013	
25	.26				.33	.10	8.1	80	7.4	<4	.011	
26	.40				.54	.10	8.0		7.2	4	.016	
27	.40				1.07	.50	8.0		7.7	<4	.011	
28	.32				.93	.70	8.0		8.0	<4	.010	
29	.40				.46	.30	7.9		7.7	<4	.008	
30	.42				1.01	.30	7.8		7.6	<4	.010	
31												
AVG.[1]	.57				.74	1.01		163[2]	6.1	4	.023	.042 (4)
OHIO EPA							6.0-9.0	≤200 Max. Geo. Mean	≥5.0 AVG. 4.0 MIN.		Avg. 0.07	
ERDAM-0524	59	9	0.006	0.006							Max. 0.35	

NOTES. [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

113

-4944

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of September 1980

Date	River Flow CFS	Precipitation Inches, as Water	Precipitation Condition	Air Temperature Maximum °F	Air Temperature Minimum °F	Water Temp., MH-175 Maximum °F	Water Temp., MH-175 Time Recorded	Dissolved Solids, mg/l Clear Well	Dissolved Solids, mg/l Gen. Sump to River	Dissolved Solids, mg/l Sewage Plant Effluent	Dissolved Solids, mg/l Storm Sewer Lift Station
1	1710	.03	Rain	90	70	70	2100	*	*		353
2	1675	.12	Rain	84	67	78	2100	*	*		309
3	1865			84	60	78	1800	2136	635	331	236
4	1875			90	65	78	2100	2172	634		459
5	1710			88	67	79	1700	2172	539		294
6	1500			89	66	80	2100	2099	540		306
7	1500	.33	Rain	85	63	79	1700	2099	460		342
8	1370			88	67	80	2100	2172	*		336
9	1330	.02	Rain	91	65	80	0100	2389	655		265
10	1330			81	55	79	0100	2317	651	377	280
11	1460			78	49	76	0900	2244	*		263
12	1310			87	50	77	2100	2192	540		250
13	1220			90	65	76	All Day	2534	571		353
14	1180			90	68	76	All Day	2006	412		353
15	1130			70	57	78	0100	2679	432		342
16	1120	.03	Rain	72	52	69	All Day	*	380		254
17	1250	.24	Rain	71	60	68	All Day	*	460	426	217
18	1410			79	50	68	2000	*	697		259
19	1285			81	51	69	1700	*	444		293
20	1200			87	56	68	0100	*	508		309
21	1160			90	67	67	0100	*	*		353
22	1130	.11	Rain	88	71	71	1700	*	*		353
23	1110			73	59	71	0100	*	*		212
24	1150			73	53	78	1300	*	*	302	236
25	1160			72	56	66	All Day	*	*		236
26	1070			67	45	68	0100	*	460		265
27	1060			71	38	68	0100	*	507		309
28	1035			75	50	64	0900	*	500		353
29	1015			80	46	64	2100	*	*		282
30	1015			78	52	64	1700	*	*		309
31											
Avg.[1]	1311	0.88 [2]						2247	528	359	299

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.

*Not pumped this date.

339613

114

4944

Summary of Waste Water Quality Report for September 1980

Wastewater quality was acceptable during September. The average flow to the river was low because of the small amount of rain during the month (0.88 inch).

Radium-226 in the effluent is nearing background levels. Radium-228 is close to the lower limit of detection of the analytical procedure now in use.

Residual chlorine at MH-175 is at a low level as a result of Water Treatment efforts to meet the reduced limit expected in our new NPDES permit. In September, the average was 0.04 mg/L. The anticipated new limit is 0.01 mg/L. Present limit is 0.5 mg/L.

0390674

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

SL906E0

MWB 10/6/80

WASTE WATER QUALITY REPORT

For the Month of September, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	1710	281		*	*		353	344	7.7	70	2100	48000	
2	1675	359		*	*		309	459	7.2	78	2100	55000	
3	1865	423		2136	635	331	236	1094	6.6	78	1800	76600	
4	1875	369	160	2172	634		459	1211	5.7	78	2100	76300	
5	1710	452		2172	539		294	1695	5.6	79	1700	84000	
6	1500	412		2099	540		306	1702	4.8	80	2100	81400	
7	1500	391		2099	460		342	1691	4.4	79	1700	73600	
8	1370	495		2172	*		336	1547	6.6	80	2100	49400	
9	1330	443		2389	655		265	1114	4.6	80	0100	72600	
10	1330	474		2317	651	377	280	1143	4.8	79	0100	76700	
11	1460	383	200	2244	*		263	1637	4.8	76	0900	69300	
12	1310	465		2192	540		250	1429	5.4	77	2100	108800	
13	1220	428		2534	571		353	1985	5.3	76	All Day	106800	
14	1180	394		2006	412		353	1885	4.3	76	All Day	67100	
15	1130	373		2679	432		342	1975	4.6	78	0100	53700	
16	1120	344		*	380		254	565	6.6	69	All Day	83800	
17	1250	530		*	460	426	217	273	6.4	68	All Day	93000	
18	1410	359	200	*	697		259	397	6.1	68	2000	82200	
19	1285	345		*	444		293	541	6.5	69	1700	83200	
20	1200	331		*	508		309	442	6.6	68	0100	78000	
21	1160	283		*	*		353	425	6.2	67	0100	83400	
22	1130	275		*	*		353	453	6.3	71	1700	52000	
23	1110	395		*	*		212	338	6.5	71	0100	79700	
24	1150	323		*	*	302	236	381	5.0	78	1300	76600	
25	1160	320	80	*	*		236	377	7.4	66	All Day	81300	
26	1070	341		*	460		265	400	7.2	68	0100	85900	
27	1060	336		*	507		309	318	7.7	68	0100	78200	
28	1035	290		*	500		353	405	8.0	64	0900	46300	
29	1015	256		*	*		282	427	7.7	64	2100	51900	
30	1015	270		*	*		309	451	7.6	64	1700	66500	
31													

NOTES:

* Not pumped this day.

NLO-ENG-2456 (1/16/76)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

2243110

WASTE WATER QUALITY REPORT: General Data

For the Month of October 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	PRECIPITATION CONDITION	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP., MH-175 MAXIMUM °F	WATER TEMP., MH-175 TIME RECORDED	DISSOLVED SOLIDS, mg/l CLEAR WELL	DISSOLVED SOLIDS, mg/l GEN. SUMP TO RIVER	DISSOLVED SOLIDS, mg/l SEWAGE PLANT EFFLUENT	DISSOLVED SOLIDS, mg/l STONE HEAD LIFT STATION
1	1015			80	51	72	2100	*	*	383	259
2	1070	.12	Rain	71	53	70	0100	2896	*		218
3	1090	.04	Rain	56	46	69	0100	2751	460		236
4	990			52	39	67	1900	2534	523		265
5	1010			58	33	66	1900	2606	397		265
6	990			65	29	64	1700	2534	*		205
7	1000			74	47	65	0500	*	*		266
8	1000			85	41	65	1700	*	*	350	250
9	1000			76	52	66	1300	*	457		265
10	995			81	45	65	1700	*	444		259
11	995			66	44	66	1300	*	397		280
12	925			58	34	64	1300	*	412		306
13	895			62	28	61	1300	*	*		241
14	895			73	38	62	1700	*	*		236
15	900			80	55	64	2100	*	413	287	247
16	895			81	51	65	1700	*	*		271
17	900	1.24	Rain	72	66	66	1700	*	*		250
18	3140	.78	Rain	68	47	68	1700	*	889		188
19	2110			58	38	68	2100	*	635		294
20	1110			65	37	65	1300	*	*		265
21	1045			73	39	64	2100	*	628		250
22	1015			64	45	65	1700	*	444	428	250
23	985			68	44	64	1700	*	508		234
24	930	.88	Rain	56	41	62	1700	2172	444		206
25	1670			54	40	60	1700	2244	444		236
26	1340			44	29	58	0100	2317	*		239
27	1190	.20	Rain	46	28	64	1700	2244	*		191
28	1200			45	32	60	1700	*	428		188
29	1310			50	25	62	1700	*	571	395	294
30	1180			56	19	60	1700	*	653		294
31	1120			63	27	61	2100	*	*		323
AVG.[1]	1158	3.26[2]						2478	508	369	251

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
*Not pumped this date.

03090666

117

4044

NLCO-H&S-351 (REV. 9/15/77)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of October 1980

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORMS NO/100ML	DISSOLVED OXYGEN mg/l	SUSPENDED SOLIDS mg/l	MH-175 Cu mg/L	Clearwe Cu mg/L
1	0.66	0.004	0.002	0.015	0.59	0.10	7.9		7.4	<4	0.010	
2	1.02	Comp.	Comp.	Comp.	1.23	2.10	7.7	30	6.6	<4	.025	0.058
3	.92	6/17-	8/12-	8/12-	1.13	2.60	8.4		5.8	7	.031	.077
4	.84	7/14	8/25	9/8	.94	2.80	7.3		6.0	5	.038	.073
5	.78				.90	2.70	7.4		5.9	9	.036	.070
6	.78				1.17	2.00	7.5		6.3	4	.022	.072
7	.44				.47	.20	8.0		8.2	<4	.011	
8	.40				.44	.80	7.9		8.0	<4	.014	
9	.30				.55	.23	8.0	200	7.7	<4	.026	
10	.32				.83	1.90	8.0		7.6	<4	.024	
11	.28				1.60	.83	8.0		7.6	<4	.024	
12	.26				.84	3.40	7.9		7.7	<4	.024	
13	.48				3.90	.66	7.9		7.6	<4	.026	
14	.30		0.002		.57	.50	8.0		7.7	<4	.026	
15	.26		Comp.		.83	.30	8.1		8.0	<4	.026	
16	.32		8/26-		.63	.20	8.0	200	7.7	<4	.024	
17	.28		9/8		.32	.10	8.0		6.7	<4	.032	
18	1.14				1.43	.40	7.6		8.2	<4	.015	
19	1.22				1.98	.30	7.9		8.5	<4	.013	
20	.56				.90	.20	8.0		8.9	<4	.013	
21	.58				.76	.09	7.9		7.0	<4	.015	
22	.44				1.11	.30	7.8		7.7	<4	.010	
23	.32				.93	.30	7.8	40	7.4	<4	.012	
24	.88				1.22	2.00	8.3		7.2	8	.020	.030
25	1.46				2.07	1.30	7.8		6.9	13	.009	.032
26	2.02				2.18	2.20	8.3		7.8	7	.012	.030
27	1.74				1.57	2.70	8.2		6.0	7	.016	.032
28	1.46				1.65	.40	7.7		7.1	4	.012	
29	1.34				1.79	.40	7.8		7.7	<4	.009	
30	1.24				1.16	.20	7.9	40	8.3	<4	.011	
31	.78				.95	.20	8.0		8.2	<4	.018	
AVG.[1]	0.77				1.18	1.05		72[2]	7.4	5	.019	.053
LIMITS: OHIO EPA							6.0-9.0	<200 Mo. Geo. Mean	≥5.0 AVG. 4.0 MIN.		Avg. 0.07 (4)	
LIMITS: ERDAM-0524	59	9	0.066	0.066							Max. 0.35	

NOTES: [1] Arithmetic averages except for Fecal Coliforms.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. ERDAM-0524 guide values are promulgated as off-site limits but, in practice, are used as target values for the plant effluent.

118

49447

NATIONAL LEAD COMPANY OF OHIO

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of October 1980

DATE	MANHOLE – 175											STORM SEWER OUTFALL			SEWAGE TREATMENT PLT.			CLEARW
	FLOW MGD	RESIDUAL CHLORINE mg/l	DISS. SOLIDS mg/l	NO_3-N mg/l	NH_3-N mg/l	CHLORIDE mg/l	FLUORIDE mg/l	CHROMIUM (VI) mg/l	IRON mg/l	OIL & GREASE[6] mg/l	GRAB pH	SUS. SOLIDS mg/l	OIL & GREASE[6] mg/l	pH	FECAL COLIFORM NO/100ML	SUS. SOLIDS mg/l	5-DAY BOD mg/l	SUS. SOLID mg/l
1	0.298		400	12		35	0.9		0.1	<5	7.5						2.67	
2	.438	0.03	1470	150		146	3.3				7.8				0	1		7
3	.402		1352	180		180	3.9				8.0							11
4	.428		1340	180		170	3.9				8.3							13
5	.374		1573	210		183	4.1				7.9							13
6	.278		1148	120		114	2.8				7.4							14
7	.279		377	13		33	1.2				7.4							
8	.305		336	13	<5	36	1.0				7.4					1	3.50	
9	.336	0.02	367	11		39	1.1				7.4				200			
10	.311		409	13		36	1.2				7.5							
11	.274		400	12		34	1.1				7.3							
12	.277		312	13		36	1.0				7.3							
13	.273		324	15		37	0.8				7.2							
14	.245		358	15		36	0.9				7.2							
15	.316		396	13	<5	38	0.8				7.1					33	.40	
16	.302	0.01	508	13		106	0.9	<0.01			7.0				200			
17	.298		447	13		84	0.9				7.4							
18	.887		302	10		48	1.4			<5	7.4		<5					
19	.415		523	11		77	1.3				7.4							
20	.341		508	12		61	0.8				7.5							
21	.344		436	11	<5	58	0.8				7.3							
22	.345		339	12		46	0.9				7.4					40	1.23	
23	.347	0.04	359	11		41	0.9				7.4				48			
24	.429		1706	130		125	2.6				8.8							12
25	.908		142	72		65	2.2			<5	8.6	<4	<5	7.8				18
26	.442		1234	140		129	3.5				8.5							16
27	.368		1599	170		163	4.1				8.4							18
28	.521		389	23		37	1.5			<5	7.2	9	<5	8.2				
29	.366		502	13	<5	35	1.3				7.2					28	1.67	
30	.334	0.06	418	20		37	1.4				7.3				0			
31	.298		494	13		39	1.2				7.4							
AVG.[1]	.38	0.03	660	58	<5	77	2	<0.01	0.1	<5		4	<5		100	18	1	14
LIMITS 2	0.9[5]	0.5	12000	2000	200	350	10	0.10	3.0	15	6.5-10.0	100	15	6.5-8.5	400	40	40	40
LIMITS 3	0.9[5]	0.5	6000	900	75	290	6	0.05	1.2	15		30	15		200	20	20	20
LIMITS 4			1500[7]	35	1.5	250	1.3	0.05	1.0		6.0-9.0			6.0-9.0	200 (Mg, Cl₂, Mg AM)			

NOTES: [1]Averages are calculated on a flow-weighted basis and are not arithmetic averages; [2]NPDES "Daily Maximum"; [3]NPDES "Daily Average", which means the flow weighted average for the month; [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone; [5]Excluding precipitation run-off; [6]Organic material soluble in Freon-113; [7]1500 mg/l, total, or 150 mg/l from human activity.

039068

-4044

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

6990b E0

For the Month of OCTOBER, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	1015	298		*	*	383	259	400	7.4	72	2100	74100	
2	1070	438	30	2896	*		218	1470	6.6	70	0100	77700	
3	1090	402		2751	460		236	1352	5.8	69	0100	74400	
4	990	428		2534	523		265	1340	6.0	67	1900	73200	
5	1010	374		2606	397		265	1573	5.9	66	1900	52500	
6	990	278		2534	*		205	1148	6.3	64	1700	49300	
7	1000	279		*	*		266	377	8.2	65	0500	51400	
8	1000	305		*	*	350	250	336	8.0	65	1700	98600	
9	1000	336	200	*	457		265	367	7.7	66	1300	91300	
10	995	311		*	444		259	409	7.6	65	1700	81900	
11	995	274		*	397		280	400	7.6	66	1300	60800	
12	925	277		*	412		306	312	7.7	64	1300	51400	
13	895	273		*	*		241	324	7.6	61	1300	30600	
14	895	245		*	*		236	358	7.7	62	1700	55700	
15	900	316		*	413	287	247	396	8.0	64	2100	66400	
16	895	302	200	*	*		271	508	7.7	65	1700	92900	
17	900	298		*	*		250	447	6.7	66	1700	75700	
18	3140	887		*	889		188	362	8.2	68	1700	136000	
19	2110	415		*	635		294	523	8.5	68	2100	70900	
20	1110	341		*	*		265	508	8.9	65	1300	38400	
21	1045	344		*	628		250	436	7.0	64	2100	62900	
22	1015	345		*	444	428	250	339	7.7	65	1700	61800	
23	985	347	40	*	508		234	359	7.4	64	1700	58600	
24	930	429		2172	444		206	1706	7.2	62	1700	58500	
25	1670	908		2244	444		236	642	6.9	60	1700	90800	
26	1340	442		2317	*		339	1234	7.8	58	0100	84800	
27	1190	368		2244	*		191	1599	6.0	64	1700	55000	
28	1200	521		*	428		188	389	7.1	60	1700	77200	
29	1310	366		*	571	396	294	502	7.7	62	1700	78100	
30	1180	334	40	*	653		294	418	8.3	60	1700	80800	
31	1120	298		*	*		323	494	8.2	61	2100	89600	

NOTES:

0

* Not pumped this date.

4944

MLO-ENG-2056 (1/16/76)

Summary of Wastewater Quality Report
for October 1980

Wastewater quality was acceptable during October. There were no NPDES violations and Health & Safety received no reports of any problems.

Residual chlorine at Manhole-175 has decreased from a monthly average of 0.4 mg/L to 0.03 mg/L. This reduction is due to L. Pennington's efforts to maintain good quality sewage plant effluent while keeping the MH-175 residual chlorine concentration at a minimum. It now appears we will be able to meet the new chlorine limit which went into effect November 1, 1980: 0.1 mg/L.

Combined radium at MH-175 remains low, 0.017 d/m/ml for the period 8/12/80 to 9/8/80. This is 26% of the target level of 0.066 d/m/ml.

2235760

NATIONAL LEAD COMPANY OF OHIO

For the Month of October 1980

WASTE WATER QUALITY — General Data

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l	CLEARWELL (VVB-FVA) VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATION
1	#					266000	4129	2605	6734	1,791,244	
2	145000	2896	+7	2903	420,935						
3	149000	2751	+7	2758	410,942						
4	142000	2534	+7	2541	373,527						
5	146000	2606	+7	2613	381,498						
6	65000	2534	+7	2541	165,165	234000	1463	3141	4577	1,071,018	
7	#										
8	#										
9	#										
10	#										
11	#										
12	#										
13	#					274500	369	3193	3557	976,397	
14	#										
15	#										
16	#										
17	#										
18	#										
19	#										
20	#					176000	1303	2065	3308	582,208	
21	#										
22	#										
23	#										
24	42900	2172	+7	2179	93,479						
25	137000	2247	+7	2251	308,387						
26	148000	2317	+7	2324	343,952						
27	141000	2247	+7	2251	317,391	279000	12523	3246	16119	4,497,201	
28	#										
29	#										
30	#										
31	#										
AVG.[1]	1120.9		2		2,815,276	1229.5				8,918,068	

NOTES: [1] Arithmetic averages

not pumped this date

$\frac{2,815,276}{1,120.9} = 2512$ mg/l (ppm) WT'D AVER. TOTAL SOLIDS FOR OCTOBER 1980; CLEARWELL WITHDRAWALS FROM PIT AREA

$\frac{8,918,068}{1,229.5} = 7,253$ mg/l (ppm) WT'D AVER. TOTAL SOLIDS FOR PUMPING (GEN. SUMP TO PIT AREA)

03155530

1223

F-14944

WILCO, INC.
HEALTH & SAFETY DIVISION

2243109

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1980

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.305	7.3	<4					0.038						
2	.296	7.3	<4					.040	0.6	0.002	0.012	0.008	0.011	0.0
3	.226	7.4	<4											
4	.216	7.9						.037						
5	.265	7.5	55	5	13	<5		.039						
6	.265	7.8					0.02							
7	.333	8.6						.136	3.6	.026	.165	.077	.026	.0
8	.296	8.8						.114						
9	.296	8.5						.113	2.0	.015	.015	.021	.035	.0
10	.299	8.5						.115						
11	.312	7.4						.055						
12	.330	7.6	<4	6	18	<5		.038						
13	.246	7.5					.03							
14	.253	7.5												
15	.244	7.4												
16	.284	8.8						.114	1.8	.021	.024	.030	.029	.0
17	.272	8.8						.115						
18	.960	8.6						.112						
19	.690	9.0	8	26	162	<5		.113						
20	.488	8.8					.08	.112						
21	.395	8.7						.074						
22	.342	9.0						.075						
23	.355	9.0						.114	1.7	.009	.014	.022	.024	.0
24	.590	8.4						.112						
25	.473	8.9						.072						
26	.310	9.0	<4	25	141	<5		.075						
27	.527	8.9					.02	.105						
28	.757	9.0						.114						
29	.349	9.1						.079						
30	.292	9.0						.112	3.0	.008	.008	.064	.042	.0
31														
AVG[1]	0.376		11	16	83	<5	.04	.089	1.5	.012	.015	.029	.028	.0
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008*	0.102*	0.85	0.256	0.0
LIMITS 3			20	28	1590				6.2	0.001*	0.050*	0.41	0.124	0.0
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
*Effective June 1, 1981.

123

1404

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1980

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FEC COLI No/L
1	0.078							0.067						
2	.059							.075						
3	.059							.037						
4	.055							.056						
5	.077	7	<5					.071	7.9	1.60	0.4	4	1.1	
6	.074							.066						
7	.071							.058						
8	.089							.064						
9	.072							.055						
10	.069							.052						
11	.075							.087						
12	.078	<4	<5					.097	8.0	1.33	0.5	2	0.7	
13	.060							.089						12.
14	.073							.072						
15	.065							.067						
16	.065							.031						
17	.051							.030						
18	.700							.098						
19	.450	<4	<5					.094	8.1	2.16	0.6	18	5.0	
20	.207							.131						
21	.164							.100						
22	.139							.073						
23	.089							.076						
24	.310							.058						
25	.325			0.0003	7.9	<4	<5	.074						
26	.099	<4	<5					.070						
27	.286			.060	7.3	12	<5	.104	8.1	7.27	1.93	2	0.5	
28	.487			.0001	7.6	<4	<5	.097						10.
29	.151							.046						
30	.106							.067						
31														
AVG.[1]	0.156	* 4	<5	.021		* 12	<5	.072		* 3	0.9	* 7	1.8	* 23
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	200
LIMITS [3]		30				30				20	5.0	20	5.0	100
LIMITS [4]			5		6.5 - 9.0		5							100 (Mo. Ge

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO-H&S-351 (REV. 1/28/81)

124

4944

390069

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of November 1980

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORI[illegible] mg/l
1	0.86	0.004	<0.001	<0.010	1.23	0.5	7.9		7.8				
2	.64	Comp.	Comp.	Comp.	.96	.3	8.0		7.9				
3	.56	7/15-	9/9-	9/9-	.78	.3	7.9		7.9				
4	.52	8/11	9/22	10/6	.58	.5	8.1		7.5				
5	.76				.66	.1	8.1		7.1	<5	13	37	1.0
6	.50				.79	.4	7.9	70	7.6				
7	1.10				1.39	4.8	8.6		7.1				
8	1.00				1.14	2.9	7.7		4.9				
9	1.02				.98	3.6	8.2		7.0				
10	.86				1.23	3.3	8.3		7.6				
11	.54				.88	.9	7.7		8.2				
12	.34				.68	.3	8.0	20	9.6	<5	14	47	1.0
13	.32				.62	.3	7.9		9.0				
14	.74				1.10	.2	7.9		8.8				
15	.48				.89	.2	7.9		8.4				
16	1.32		0.002		1.42	3.5	8.8		6.9				
17	1.10		Comp.		1.42	4.1	8.7		8.9				
18	1.78		9/23-		2.13	1.1	8.4		9.6				
19	2.16		10/6		2.40	1.9	8.3		7.7	10	62	76	2.5
20	1.70				1.64	2.1	8.5	260	8.3				
21	1.56				2.00	2.5	8.5		8.2				
22	1.96				2.34	3.7	8.6		8.8				
23	1.70				1.96	4.5	8.8		8.7				
24	2.68				2.98	3.4	8.7		8.9				
25	2.50				2.38	3.6	8.8		9.2				
26	1.98				2.00	7.2	8.9		8.2	21	120	141	4.6
27	1.44				1.39	5.1	8.2	280	10.5				
28	1.98				2.45	3.1	7.5		8.0				
29	2.40				2.41	6.8	8.5		8.2				
30	1.90				1.56	7.1	8.6		8.4				
31													
AVG.[1]	1.28				1.48	2.61		100[2]	8.2	10	52	75	2.3
LIMITS[3] OHIO EPA	12						6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE MC-0524	59	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE MC-0524 guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

NLO-H&S-351 (REV. 1/28/81)

B390962

B390944

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of November 1980

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1060		58	33	58	*	444		382	476		
2	1000		60	28	59	*	444		368	485		
3	975	.12	70	32	63	*	*		353	446		
4	1000		58	37	61	*	222		294	408		
5	1015		55	31	62	*	514	281	294	429		
6	975		59	26	55	*	*		289	363		
7	950		76	53	62	2317	*		359	1488		
8	900		65	50	58	2525	492		347	1265		
9	900		72	48	59	2606	396		318	1340		
10	875		55	35	55	2534	413		300	1340		
11	850		46	26	52	1991	442		250	475		
12	875		51	24	51	*	340	386	309	356		
13	875		69	29	56	*	*		294	560		
14	860		59	45	56	*	*		265	462		
15	850	.03	45	38	55	*	*		341	475		
16	820		45	31	56	2280	413		353	1227		
17	815	.93	38	34	50	2316	343		294	1307		
18	940		40	29	50	2027	368		216	385		
19	1000		43	19	48	1810	457	371	216	655		
20	985		47	18	51	1846	540		221	912		
21	1005		44	27	55	2099	*		291	1191		
22	1090		45	20	52	2317	*		309	1228		
23	1050	.11	44	43	52	2353	432		365	1302		
24	1100	.15	45	39	54	2353	*	402	265	967		
25	1470		40	24	53	2172	1004		309	819		
26	1300		36	21	53	2244	*		306	1265		
27	1540	.75	45	36	51	2244	525		206	1042		
28	2650		36	35	50	2244	454		230	670		
29	2885		40	35	50	2208	*		377	1191		
30	1720		56	33	56	2172	*		442	1191		
31												
AVG. [1]	1144	2.09 [2]				2233	458	360	305	842		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

NLO-H&S-351 (REV. 1/28/81)

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

MWB 12/9

For the Month of NOVEMBER, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
	RIVER (CFS)	MH 175 (GAL X 10^3)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
1	1060	305		*	444		382	476	7.8	58	All Day	66800	
2	1000	296		*	444		368	485	7.9	59	0500	75400	
3	975	225		*	*		353	446	7.9	63	1300	37100	
4	1000	216		*	222		294	408	7.5	61	1700	55500	
5	1015	265		*	514	281	294	429	7.1	62	0500	71000	
6	975	265	70	*	*		289	363	7.6	55	0500	66300	
7	950	333		2317	*		359	1488	7.1	62	1300	58100	
8	900	296		2525	492		347	1265	4.9	58	1700	64400	
9	900	296		2606	396		318	1340	7.0	59	1700	55200	
10	875	299		2534	413		300	1340	7.6	55	2100	52100	
11	850	312		1991	442		250	495	8.2	52	1700	87200	
12	875	330	20	*	340	386	309	396	9.6	51	1700	96600	
13	875	246		*	*		294	560	9.0	56	1700	81900	
14	860	253		*	*		265	462	8.8	56	0100	71900	
15	850	244		*	*		341	475	8.4	55	0900	66800	
16	820	284		2280	413		353	1227	6.9	56	0100	31200	
17	815	272		2316	343		294	1302	8.9	50	All Day	30400	
18	940	960		2027	368		216	383	9.6	50	1300	97600	
19	1000	690		1810	457	371	216	655	7.7	48	1300	94000	
20	985	488	260	1846	540		221	912	8.3	51	1700	130600	
21	1005	395		2099	*		291	1191	8.2	55	1700	99800	
22	1090	342		2317	*		309	1228	8.8	52	0500	72600	
23	1050	355		2353	432		365	1302	8.7	52	All Day	75600	
24	1100	590		2353	*		265	967	8.9	54	2100	58100	
25	1470	473		2172	1004		309	819	9.2	53	2100	74400	
26	1300	310		2244	*	402	306	1265	8.2	53	1700	70400	
27	1540	527	280	2244	525		206	1042	10.5	51	0100	104400	
28	2650	757		2244	454		230	670	8.0	50	0800	97300	
29	2885	349		2208	*		377	1191	8.2	50	1700	46100	
30	1720	292		2172	*		442	1191	8.4	56	1300	66900	
31													

NOTES: * Not pumped this date.

-4944-

3390604

Summary of Wastewater Quality Report for November, 1980

A revised NPDES permit became effective November 1, 1980. One major change is the imposition of load limits. Several new parameters were added; additional sampling points were added; chloride and fluoride limits at MH-175 were removed.

The first two pages of this report contain information used to prepare the NPDES report sent to Oak Ridge, quarterly, for transmittal to the U.S. EPA. The third page contains routine MH-175 data not used for NPDES reporting. General data are recorded on page 4. This November report was delayed until new forms could be designed and printed.

Water quality during November was acceptable. There were no permit violations.

The permit load limits for hexavalent chromium and total chromium do not become effective until June 1, 1981. Some of the discharge loads in November exceeded those quantities. Since chromium is no longer used in the cooling water system, the discharges are expected to decrease so that compliance will not be a problem.

2235831

-4944

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — For the Month of NOVEMBER 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units TIMES TOTAL SOLIDS)	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units TIMES TOTAL SOLIDS)	PRECIPITATION
1	*										
2	*										
3	*										
4	*										
5	*					343,000	2608	2231	4839	1,659,777	
6	*										
7	136,000	2317	+7	2324	316,064						
8	74,000	2535	+7	2542	188,108						
9	74,000	2606	+7	2613	193,362						
10	76,000	2534	+7	2541	193,116						
11	15,000	1991	+7	1998	29,970	359,000	7729	3093	10823	3,881,867	
12	*										
13	*										
14	*										
15	*										
16	76,000	2280	+7	2287	173,812						
17	76,000	2316	+7	2323	176,548						
18	73,000	2027	+7	2034	148,482						
19	74,000	1810	+7	1817	134,458	434,500	3837	2311	6148	2,671,306	
20	74,000	1846	+7	1853	137,122						
21	74,000	2099	+7	2106	155,844						
22	75,000	2317	+7	2324	174,300						
23	76,000	2353	+7	2360	179,360						
24	74,000	2353	+7	2360	174,640						
25	72,000	2172	+7	2179	156,888						
26	75,000	2244	+7	2251	168,825	779,300	5322	2481	7803	6,080,878	
27	68,000	2244	+7	2251	153,068						
28	74,000	2244	+7	2251	166,574						
29	79,000	2208	+7	2215	174,985						
30	112,000	2172	+7	2179	244,048						
31											
AVG.[1]	1527 (x1000)	2		3	3,434,574	1915.8 (x10^3)				14,293,828	

NOTES: [1] Arithmetic averages

$\frac{3,434,574}{1527} = 2249$ mg/l (=ppm) WT'D AVER (TOTAL SOLIDS NOVEMBER 1980) CLEARWELL WITHDRAWALS FROM PIT AREA

$\frac{14,293,828}{1915.8} = 7461$ mg/l (=ppm) WT'D AVER (TOTAL SOLIDS NOVEMBER 1980) GEN. SUMP PUMPINGS TO PIT AREA

375656

XTRACOPY

MEASURED LOSSES
FOR NOVEMBER 1980
(WITH LOT DESIGNATIONS)

0375657

--4944

2129949

NOVEMBER 1980

MEASURED LOSSES

23

086822

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

BG 12/9/80.

NMC FILE COPY

ROUTINE OPERATING LOSSES FVA – VVB

Period NOVEMBER 1-30, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO 209)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS.	U LBS.	U GMS./KGS.	U LBS.	U GMS.
1.12	%U235 S112-200			(a) 0001	34						34
862	PLT2 REFINERY			7	2993					7	2993
1.25	%U235 S125-980			(a) 0001	6	(b) 0001	17				23
832	PLT9 ZIRNLC DECLAD			1	454	3	1,321			4	1,775
	TOTAL			8	3,447 40	3	1,321 17			11	4,768 57

SOURCE (GROUP CODE)	U LBS. SOLIDS	U GMS. SOLIDS
(a) GENERAL SUMP	15,037	239
(b) ZIRNLC SLURRY	3,139	43
TOTAL	18,176	282

086823

132

4944

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES VVB – FVA

Period NOVEMBER 1-30, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Deplered

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS.
1.12	%U235 S112-200			0001	13						13
662	PLT2 REFINERY			2	1,123					2	1,123
	TOTAL			2	13 1,123					2	13 1,123

WT BY SOLIDS 2996

VOLUME BY SOLIDS 46

086824

133

13 4944

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Period NOVEMBER 1-30, 1980

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		STACK (IWO 211)		RIVER (IWO 211)						TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS	U LBS.	U GMS.					U LBS.	U GMS.
1.12	%U235 5112-200			0001	72						72
862	PLT 2 REFINERY			14	6400					14	6400
1.25	%U235 5125-800	0132	27	0001	23						23
612	PLT 8 RECOVERY	5	2191	4	1629					9	4020
1.25	%U235 5125-980			0001	12						12
832	PLT. 9 ZIRNLC DECLAD			2	914					2	914
TOTAL		5	2191	20	9143						11,334

086825

134

4944

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES FVA – VVB

Period NOVEMBER 1-30, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO 210)		PIT 5 (IWO 210)		PIT 6 (IWO 210)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U GMS. KGS.	U LBS.	U KGS.
0.20 % U235	H093-530	(d) D011-0052		(a) D001							
352	PLT 5 CASTING	16	7	16	7					32	14
0.20 % U235	H093-620			(a) D001		(b)+(c) D001					
372	PLT 6 MACHINING			16	7	5	2			21	9
0.20 % U235	H093-920			(a) D001							
502	PLT 9 INGOT PREP			8	4					8	4
TOTAL		16	7	40	18	5	2			61	27

SOURCE (FOR TYPED SOLIDS)	AS (LBS) SOLIDS	VOLUME (FT³) SOLIDS
(a) GENERAL SUMP	78,946	1,255
(b) SALT OIL WASH	557	9
(c) NUSAL QUENCH	0	0
(d) CERAMICS	7,900	53

086826

135

-4944

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES VVB – FVA

Period NOVEMBER 1-30, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 210)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U KGS.
0.20	% U235 H093-530			D001							
352	PLT5 CASTING			11	5					11	5
0.20	% U235 H093-620			D001							
372	PLT6 MACHINING			11	5					11	5
	TOTAL			22	10					22	10

AT LESS SOLIDS 26,967

VOLUME AT 0% SOLIDS 431

086827

139

4944

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Period NOVEMBER 1-30, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		STACK (IWO 212)		RIVER (IWO 212)						TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.					U LBS.	U KGS.
0.20	% U235 H093-530			D001							
352	PLT5 CASTING			46	21					46	21
0.20	% U235 H093-620			D001							
372	PLT6 MACHINING			46	21					46	21
0.20	% U235 H093-920			D001							
502	PLT9 INGOT PREP			23	10					23	10
	TOTAL			115	52					115	52

086828

137

-4944

NLO-40-1742-1 (8/11/80)

OXIDATION Scrubber (PLT8 RECOVERY) 11/7/80

$$\frac{23.56}{.83} - 23.56 = 4.83$$ U-LBS Lost to atmosphere

4.83 U-LBS x 453.59 = 2.191 Kgs (= 2191 gms)

(Round to 2 Kgs for SFA Rept.; used 2191 gms (ave.) for WST

RECD 11/7/8

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Lab. Nos. [illegible]

Lot No.

Analyses Requested U#/gal

MATERIAL: Oxidation Scrubber

ACCOUNT NO.: 28200

DATE SAMPLED: 11-5-80

SUBMITTED BY: Pet 8

REMARKS: Volume?

453 gals X .052 U#/gal = 23.56 U-LBS RECOVERED

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA U#/gal					
	Q 7	.052					

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. PETERSON
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report 11/6/80

086830

DATE NOVEMBER 20, 1980

SALT OIL WASH WATER

MONTH YEAR (NOVEMBER 1980)

DATE	IDENT NO.	VOLUME (gals)		X U#/gal =	U-LBS	KgsU
11-3-80	74	500	gallons	X .00088 =	0.440	0.200
11-5-80	75	1000	"	X .00091 =	0.91	0.412
11-7-80	76	500	"	X .0017 =	0.850	0.386
11-12-80	77	1000	"	X .00062 =	0.62	0.281
11-17-80	78	500	"	X .00059 =	0.295	0.134
11-18-80	79	1000	"	X .00037 =	0.37	0.168
11-19-80	80	500	"	X .00087 =	0.435	0.197
11-24-80	81	1000	"	X .0013 =	1.30	0.590
	TOTALS	6000	"		5.22	2.37

WT(LBS) SOLIDS

6000 gals X 8.44#/gal SOLUTION X 0.011 (SOLIDS FACTOR) = 5.57 WT(LBS) SOLIDS

NOTE: 1.1% SOLIDS = ~11,000 ppm

FT³ SOLIDS

6000 gals X 0.13369 (CU.FT./gal.) X 0.011 (SOLIDS FACTOR) = 8.82 FT³ SOLIDS

= 0.001471

(ROUND TO 9 FT³)

FORM PREPARED 11/5/80

088831

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6-8322

Lot No.

MATERIAL: Salt-Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-3-80

SUBMITTED BY: V. Lacy

REMARKS: 500 gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U #/gal					
					U-LBS		Kg/SU
	74	500 gals × 0.00088		=	0.440		0.200

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy Mr. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By _____ Date of Report _____

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Lab. Nos. [illegible]

Lot No.

Analyses Requested "U" lbs./gal.

MATERIAL: Salt-Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11/5/80

SUBMITTED BY: R. Whitham

REMARKS: 1,000 gallons transferred to the pit.

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U #/gal					
					U-LBS		Kgs U
	75	0.00091	×	1000gals =	0.91		0.412

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. E. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By _____ Date of Report _____

L -4944

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6-8380

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-7-80

SUBMITTED BY: R. J. Pitham

REMARKS: 500 Gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA: U #/gal					
					U-LBS		Kgs U
	76	0.0017	×	500 gals =	0.850		0.38

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report

086834

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Lab. Nos. 6-8386

Lot No.

Analyses Requested "U" lbs./gal.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-12-80

SUBMITTED BY: V. Lacy

REMARKS: 1,000 gallons transferred to the pit.

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U #/gal					
					U-LBS		Kgs U
	77	0.00062	×	1000 gals =	0.62		0.281

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. F. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By _____ Date of Report _____

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6-8393

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-17-80

SUBMITTED BY: V. Lacy

REMARKS: 500 gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		lb#/gal					
					U-LBS		Kgs U
	78	.00059	x 500 gals.	=	0.295		0.134

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. E. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report 11/16/80

086836

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6.8374

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-18-80

SUBMITTED BY: V. Lacy

REMARKS: 1,000 gallons transferred to the pit

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		4 #/gal					
					4-LBS		Kg/SL
	79	.00037	X 1000 gals	=	0.37		0.168

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G.E. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By

Date of Report

086837

-4944

1-10

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6-8374

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11-19-80

SUBMITTED BY: V. Lacy

REMARKS: 500 gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U/gal					
					U-LBS		Kgs U
	80	.00087 X 500gals =			0.435		0.197

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy J. E. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By _____ Date of Report _____

086838

147

-4944

-1-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Lab. Nos. _____

Lot No. _____

Analyses Requested "U" lbs./gallon

MATERIAL: Salt-Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 11/24/80

SUBMITTED BY: R. Whitham

REMARKS: 1,000 gallons transferred to the pit.

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U#/gal					
					U-LBS		Kgs U
	81	1000 gals ×	0.0013	=	1.30		0.59

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy C. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By RN Date of Report 11/25/80

086839

148

MONTHLY MEASURED LOSS REQUIREMENTS

	DATE COMPLETED
1) GENERAL SUMP VOLUMES TO CHH	12-2-80 (1400) CHH TO SPENCELEY
2) WRITE-OFF FORMS TO B KIEFER	12-4-80 (0630)
3) REPORT FOR SFA	TO BG 12-8-80 (1355)
4) REPORT TO R. SPENCELEY (R. ZIMMERMAN NOTE)	NO LONGER REQUIRED
5) SUMMARY OF DISCARDS TO EEG	12-8-80 0945
6) NMC SUMMARY UPDATE OF PIT DISCARDS	TO BG 12/8/80 (1355)
7) COPY OF EFFLUENT WORK SHEET	
(a) TO W.J. ADAMS	MAILED 12/8/80 AM
(b). TO L. PENNINGTON	MAILED 12/8/80 AM
8) RETURN OF ANALYSIS (PINK) SHEETS TO D. HOOVER.	MAILED 12/5/80 (10:00) HANDED TO BG LL
9) RETURN OF DAILY LOG SHEETS TO GENERAL SUMP	MAILED 12/5/80 (10:00) HANDED TO B. GALL

23 1 ...
EC

12-2-80

GENSUMP SUMMARY
FOR NOVEMBER 1980

PLT 2
RAD-RAINWATER

00 T

Vol(gals)

24,000
9,000
14,000
26,000
10,000
83,000 T

00 T

Reptd. U-LBS

9.36
1.00
?
4.05
No spl.
14.41+T

U-LBS (TRACER)

7.50
1.02
.61
5.55
—
14.68 T

PLT 2 FILTRATE

00 T

Vol(gals)

—0—
22,000
10,000
41,000
29,600
102,600 T

00 T

Reptd. U-LBS

—
6.51
9.60
28.80+
9.32
54.23+T

00 T

U-LBS (TRACER)

—
.480
—
?
12.578
13.058+T

088841

PLI & CONDENSATE

Vol(gals)	5,000
	10,000
	29,000
	-0-
	-0-
	44,000 T
	00 T
U-LBS (TRACER)	.025
	.010
	.079
	-0-
	-0-
	.114 T
	00 T

LAB

Vol(gals)	18,000
	7,900
	21,400
	29,820
	21,000
	98,120 T
	00 T
U-LBS (TRACER)	.183
	.503
	4.302
	2.529
	.765
	8.282 T
	00 T

PILOT PLT.

Vol(gals)	-0-
	6,000
	7,000
	16,800
	7,700
	37,500 T
	00 T
U-LBS Rept'd.	—
	.153
	.144
	.222
	.016
	.535 T
	00 T
U-LBS (TRACER)	—
	.030
	.210
	.436
	.077
	.753 T

086842

	.077
	.753 T
PLT5	00 T
Vol(gals)	11,500
	5,000
	5,000
	11,500
	-0-
	33,000 T
	00 T
U-LBS (TRACER)	1.390
	3.350
	.650
	1.365
	6.755 T
PLT6	00 T
Vol(gals)	16,000
	16,000
	16,000
	16,000
	8,000
	72,000 T
	00 T
U-LBS Rept'd.	.240
	.280
	.244
	.640 -0-
	1.404+T
	00 T
U-LBS (TRACER)	.320
	.340
	.288
	.520
	.240
	1.708 T

-4944

LIME SLAKER		00 T
		— 0 —
		600
Vol (gals)		2,500
		20,000
		10,000
		33,100 T

DECONTAMINATION		00 T
		11,500
		9,100
Vol (gals)		10,100
		6,940
		13,600
		51,240 T

		00 T
U-LBS (TRACER)		.410
		.300
		.258
		.217
		.363
		1.548 T

WATER PLT. SUMP		00 T
		214,000
		260,000
		300,000
Vol (gals)		271,000
		600
		270,000
		1,315,600 T

CLEAN UP WATER		00 T
		14,300
		19,200
Vol (gals)		15,500
		13,600
		12,000
		74,600 T

086844

-4944

TANK FARM 00 T

Vol (gals)
45,000
60,000
51,500
42,120
4,000
202,620 T

00 T

U-LBS
.508
.163
.119
1.226
.004
2.020 T

GEN. SUMP TRANSFERS TO PIT 00 T

Vol (gals)
236,000
240,000
402,500
408,500
222,400
1,509,400 T

00 T

U-LBS
11.67
6.39
10.51
11.97
6.95
47.49 T

GEN. SUMP TRANSFER TO RIVER 00 T

Vol (gals)
116,000
196,000
155,000
114,000
117,000
698,000 T

00 T

U-LBS
.120
.392
.155
.114
.117
.898 T

00 T

086865

ENGINEERING DIVISION - WATER PLANT

REPORT OF SEWER DISCARDS TO THE GENERAL SUMP (SUMMARY)

During the Period NOVEMBER 1 — 30, 1980

Prepared By G. PETERSON

DATE	PAD-RAIN PLANT 2 ~~RAFFINATE~~ REPORTED GALLONS	REPORTED TOTAL LBS.	TRACER GAL.-SLAKER	TRACER TOTAL LBS.	HJ-U ~~RAFFINATE~~ TO PLANT 8 GALLONS	~~pH LOW~~ U-LBS	pH HIGH	PLANT 2 FILTRATE GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
(1) 11/1 THRU 11/6/80	24,000	9.36		7.50	-0-			-0-	—	—
(2) 11/7 THRU 11/12/80	9,000	1.00	.00021	1.02	-0-			22,000	6.51	.48
(3) 11/13 THRU 11/18/80	14,000			.61	59,000			10,000	9.6	—
(4) 11/19 THRU 11/24/80	26,000	4.05		5.55	41,000	28.8		41,000	28.8+	?
(5) 11/25 THRU 11/30/80	10,000	NO SAMPLE	.033	—	—	—	—	29,600	9.32	12.578
	83,000	14.41+	.03321	14.68+	100,000	28.8+	—	102,600	54.23+	13.058+

DATE	PLANT 2 CONDENSATE GALLONS	TRACER TOTAL LBS.	PLANT 2 DIG. CONDENSATE GALLONS	PLANT 8 FILTRATE GALLONS	TRACER TOTAL LBS.	LABORATORY GALLONS	TRACER TOTAL LBS.	PILOT PLANT GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
(1) 11/1 THRU 11/6/80	5,000	.025	-0-	-0-	—	18,000	.183	-0-	—	—
(2) 11/7 THRU 11/12/80	10,000	.01	-0-	-0-	—	7,900	.503	6,000	.153	.03
(3) 11/13 THRU 11/18/80	29,000	.079	-0-	56,000	5.29	21,400	4.302	7,000	.144	.21
(4) 11/19 THRU 11/24/80	-0-	—	-0-	93,000	.464	29,820	2.529	16,800	.222	.436
(5) 11/25 THRU 11/30/80	-0-	—	-0-	-0-	—	21,000	.765	7,700	.016	.077
	44,000	.114	-0-	149,000	5.754	98,120	8.282	37,500	.535	.753

DATE	PLANT 4 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	PLANT 5 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	PLANT 6 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	LIME SLAKER GALLONS
(1) 11/1 THRU 11/6/80	-0-	—	—	11,500	1.335	1.39	16,000	.24	.32	-0-
(2) 11/7 THRU 11/12/80	-0-	—	—	5,000	1.35	3.35	16,000	.28	.34	600
(3) 11/13 THRU 11/18/80	-0-	—	—	5,000	.70	.65	16,000	.244	.288	2500
(4) 11/19 THRU 11/24/80	-0-	—	—	11,500	.81	1.365	16,000	.64	.52	20,000
(5) 11/25 THRU 11/30/80	-0-	—	—	-0-	—	—	8,000	2	.24	10,000
	-0-	—	—	33,000	4.195	6.755	72,000	1.404+	1.708	33,100

DATE	PLANT 9 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	DECONTAMINATION GALLONS	TRACER TOTAL LBS.	WATER PLANT SUMP GALLONS	COOLING WATER GALLONS	CLEAN UP WATER GALLONS (Est.)	TANK FARM GALLONS	U-LBS.
(1) 11/1 THRU 11/6/80	-0-	—	—	11,500	.41	214,000	-0-	14,300	45,000	.508
(2) 11/7 THRU 11/12/80	-0-	—	—	9,100	.300	260,000	-0-	19,200	60,000	.163
(3) 11/13 THRU 11/ /80	6000	.48	.048	10,100	.258	300,000	-0-	15,500	51,500	119
(4) 11/19 THRU 11/24/80	-0-	—	—	6,940	.217	271,600	-0-	13,600	42,120	226
(5) 11/25 THRU 11/30/80	5000	.4	2.80	13,600	.363	270,000	2500	12,000	4,000	[illegible]
	11,000	.88	2.848	51,240	1.548	1,315,600	2500	74,600	202,620	

DATE	HEEL DISPOSITION GALLONS	LBS./GAL.	CHEMICAL PIT TOTAL LBS.	TANK 5 TOTAL LBS.	GENERAL SUMP TRANSFERS (EXCLUDING HEELS) CHEMICAL PIT GALLONS	LBS./GAL.	TOTAL LBS.	MIAMI RIVER GALLONS	LBS./GAL.
(1) 11/1 THRU 11/6/80	-0-		—	—	236,000		11.67	116,000	
(2) 11/7 THRU 11/12/80	-0-				240,000		6.39	196,000	
(3) 11/13 THRU 11/18/80	-0-				402,500		10.51	155,000	
(4) 11/19 THRU 11/24/80	-0-				408,500		11.97	114,000	
(5) 11/25 THRU 11/30/80	-0-				222,400		6.95	117,000	.117

4944

086868

REC'D 12-3-80

A SUMMARY
NOTE: NO DRY STACK WAS REPORTED FOR NOVEMBER.

NATIONAL LEAD COMPANY OF OHIO

A SUBSIDIARY OF NL INDUSTRIES, INC.

CINCINNATI, OHIO 45239

December 1, 1980

-4944

(23)

SUBJECT STACK DISCHARGE REPORT FOR THE PERIOD FROM NOVEMBER 1 THROUGH NOVEMBER 30, 1980

TO R. C. Heatherton

FROM M. W. Boback

REFERENCE

No stack discharges were estimated during the period from November 1 through November 30, 1980.

A filter change was made in the stack sampler on dust collector G4-14. The filter is being analyzed and data will be included in the next report. This filter change was not made because of a suspected loss--the filter had only a trace of visible material. The change was made to provide additional information about the discharge of uranium from the stack of a properly-operating dust collector.

M. W. Boback

M. W. Boback

MWB/vvs

attach.

cc: W. J. Adams
S. F. Audia - R. M. Spenceley
P. D. Ball
B. Gessiness
W. C. Hill
W. W. Mahaffey
A. J. Mangold
C. J. Mize
E. M. Nutter
J. Peterson
K. N. Ross
R. W. Wright

U86887

-4944

STACK DISCHARGE REPORT FOR THE PERIOD
FROM November 1 TO November 30, 1980

Plant	Collector No.	Status This Period	Stack Discharges Estimated During This Report Period				Total This
			kg Mat'l	% U	kg U	Sampling Interval	kg U
1	G2-63	5					
	G2-64	1					
	G2-68	5					
	G2-76	1					5.
	G2-77	5					
	G2-171	1					
	G2-172	1					6.
	G2-174	1					
	G2-235	5					
	Sly	5					1.
	Totals						13.
2/3	G1-94	5					
	G1-856	1					
	G1-252	5					
	Plt.3-N	5					1.
	Plt.3-S	5					1.
	Totals						2.
4	G4-1	5					0.
	G4-2	5					53.
	G4-3	5					
	G4-4	5					
	G4-5	2					50.
	G4-7	5					
	G4-8	5					
	G4-12	2					18.
	G4-13	5					
	G4-14	4					9.
	Totals						133.

Status: 1 Filter not inspected this period.
2 Filter inspected but not changed.
3 Filter changed, analyzed and discharge estimated.
4 Changed but analysis not complete. To be reported.
5 Filter abandoned or on standby. Stack sampler not inspected or serviced.

086868

157

STACK DISCHARGE REPORT FOR THE PERIOD -4944
FROM November 1 TO November 30, 1980

Plant	Collector No.	Status This Period	Stack Discharges Estimated During This Report Period				To Th
			kg Mat'l	% U	kg U	Sampling Interval	
8	G43-27	2					
	G43-29	2					
	G43-44C	5					
	G8-1	5					
	8035	2					
	G8-3	5					
	G8-4	5					
	G8-7	5					
	G8N1-1000	5					
	6018	5					
	8002	5					
	8021	5					
	8024	5					
	G8-2	5					
	8057	5					
	Totals						
Pilot Plt.	G37-5011	1					
	735-13-7041	1					
	735-13-7050	5					
	108843	5					
	G6-93A	5					
	Oxdn.Fce.	1					
	Totals						
Site Totals							247

Status: 1 Filter not inspected this period.
2 Filter inspected but not changed.
3 Filter changed, analyzed and discharge estimated.
4 Filter changed but analysis not complete. To be reported.
5 Collector abandoned or on standby. Stack sampler not routinely inspected or serviced.

086869

STACK DISCHARGE REPORT FOR [illegible]
FROM November 1 TO November 30, 1980 4944

Plant	Collector No.	Status This Period	Stack Discharges Estimated During This Report Period			
			kg Mat'l	% U	kg U	Sampling Interval
8	G43-27	2				
	G43-29	2				
	G43-44C	5				
	G8-1	5				
	8035	2				
	G8-3	5				
	G8-4	5				
	G8-7	5				
	G8N1-1000	5				
	6018	5				
	8002	5				
	8021	5				
	8024	5				
	G8-2	5				
	8057	5				
	Totals					
Pilot Plt.	G37-5011	1				
	735-13-7041	1				
	735-13-7050	5				
	108843	5				
	G6-93A	5				
	Oxdn.Fce.	1				
	Totals					
Site Totals						

Status:
1 Filter not inspected this period.
2 Filter inspected but not changed.
3 Filter changed, analyzed and discharge estimated.
4 Filter changed but analysis not complete. To be reported.
5 Collector abandoned or on standby. Stack sampler not routinely inspected or serviced.

086870

NLO INC.
HEALTH & SAFETY DIVISION

ER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1980

073307

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	V il.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL	PP
	86	7.8						0.109	5.16					
	92	7.8						.039	0.74					
	89	7.4	18	7.35	16.17	<5		.036						
	40	7.2					0.04	0						
5	.332	7.8						.038						
6	.317	8.6						.108						
7	.278	8.8						.114		0.01	0.02	0.02	0.01	0.0
8	.237	8.9						.068						
9	.827	9.4						.117	1.63	0.012	0.023	0.023	0.012	0.0
10	.539	9.4	<4	30.6	132.6	<5		.081						
11	.403	9.5					0.03	.109						
12	.342	9.5						.073						
13	.317	9.5						.106						
14	.349	9.4						.108	1.79	0.012	0.012	0.135	0.012	0.0
15	.299	9.3						.072						
16	.465	8.0						.095						
17	.276	9.2	<4	21.84	91.52	<5		.051						
18	.368	9.5					0.02	.088						
19	.353	9.1						.110						
20	.319	9.4						.110						
21	.301	9.8						.110	1.66	0.011	0.014	0.126	0.004	0.0
22	.265	8.8						.072						
23	.315	8.9						.072						
	.323	9.0	4		50.02	<5		.110		0.001	0.006	0.009	0.008	0.0
25	.355	8.1					0.05	.072						
26	.314	7.8						.072						
27	.365	7.9						.072						
28	.350	7.8						.112	1.57	0.010	0.015		0.010	0.0
29	.360	7.7						.100						
30	.434	9.2					0.05	.102						
31	.291	9.3	<4	15.4	72.6	<5		.102						
AVG[1]	0.352		7	16	54	<5	0.04	.082	2.1	0.011				
LIMITS 2	160	6.5 - 10.0		13	2180	15	0.10		12.8	*				
LIMITS 3				28	1560					*				
LIMITS 4		6.5 - 9.0				5	0.002							

2126585

-4944

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
*E.C.C. [illegible]

NLO, INC.

FETY DIVISION

TER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1980

	RM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
		SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100
								0.039						
								.061						
4	.078	<4	<5	0.001	7.9	<4	5	.073	7.5	4.46	1.23	24	6.63	
5	.097							.073						
6	.087							.071						0
7	.057							.082						
8	.063							.061						
9	.555							.043						
10	.346	<4	<5					.081						
11	.144							.089	7.6	6.06	1.34	15	5.05	
12	.113							.080						
13	.101							.081						200
14	.080							.075						
15	.082							.078						
16	.233							.069						
17	.071	<4	<5					.081						
18	.087							.085	7.8	6.60	2.12	4	1.29	
19	.096							.091						
20	.076							.086						240
21	.049							.080						
22	.057							.063						
23	.072							.064						
24	.080	<4	<5					.057						
	.162							.057	7.8	8.80	1.9	2	0.43	0
26	.093							.051						
27	.088							.065						
28	.088							.152						
29	.113							.059						
30	.113							.056						
31	.102	<4	<5					.058						
AVG.[1]	0.121	* <4	<5	0.001		* <4	5	.058	7.6	7.70	[illegible]		[illegible]	
								0.072		.7	[illegible]			
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	30				
LIMITS 3	101	30				30								
LIMITS 4			5		6.5 - 9.0		5							

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month. [4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

073308

4944

NI O INC.

ETY DIVISION

ER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of December 1980

073309

	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORID mg/L
	1.24	<0.001	0.001	<0.010	1.54	3.3	8.1		7.8				
	1.04	Comp.	Comp.	Comp.	.91	.2	8.0		9.7				
	.76	8/12-	10/7-	10/7-	1.20	.3	7.8		9.8	<5	11	37	1.
4	.82	9/8/80	10/20/	11/3/80	1.01	.2	8.1	450	9.6				
5	.64		80		.83	.3	8.0		10.0				
6	1.04				1.05	4.6	8.7		8.1				
7	1.48				1.53	5.5	8.8		7.6				
8	1.94				2.27	6.7	8.8		8.3				
9	1.40				1.73	4.0	8.7		7.8				
10	2.54				2.94	4.0	8.9	150	8.3	15	65	79	3.
11	1.84				2.22	4.9	8.7		8.2				
12	1.56				1.77	5.0	8.9		8.4				
13	1.62				2.48	5.0	8.7		8.1				
14	1.50				1.92	4.9	8.8		8.3				
15	1.54		0.001		2.04	7.0	8.9		8.2				
16	1.56		Comp.		1.99	3.2	8.9		8.3				
17	1.78		10/21-		1.96	4.5	9.0		9.5	21	88	134	4.
18	1.48		11/3/80		1.37	4.9	9.1	50	9.4				
19	1.30				1.61	4.5	9.0		8.9				
20	1.20				1.37	4.6	8.8		9.4				
21	1.42				1.33	5.0	9.2		9.5				
22	1.32				1.55	6.3	9.3		9.0				
23	1.20				1.25	4.5	8.9	<1	8.5				
24	.74				1.24	2.1	7.0		8.7	<5	41	82	2.
25	.70				1.22	1.2	6.9		8.3				
26	.56				1.51	2.0	7.0		8.7				
27	.44				.95	1.0	7.2		8.3				
28	.52				1.00	1.3	7.6		8.2				
29	.44				1.26	1.0	7.6		8.2				
30	.94				1.10	1.8	7.9	<1	8.4				
31	1.24				1.27	2.8	8.9		8.9	14	[illegible]	[illegible]	[illegible]
AVG. [1]	1.22				1.53	3.4		20 [2]	8.7	12	[illegible]	[illegible]	[illegible]
LIMITS [3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	25.0 AVE. 10.0 MIN.				
LIMITS [3] DOE MC-0524	59	9	[illegible]	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE MC-0524 guide values are promulgated as off-site limits but in practice are [illegible] target values for the plant effluent.

-4944

NLO, INC.
HEALTH & SAFETY DIVISION

ER QUALITY REPORT: General Data

For the Month of December 1980

	R	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	W	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
	65		61	48	65	2172	*		398	819		
	50		57	30	60	*	476		406	412		
	00		37	26	56	*	375	374	259	330		
4	1360		48	25	60	*	*		353	501		
5	1285		56	43	63	*	521		347	462		
6	1300		70	52	60	1955	394		383	1023		
7	1265		67	48	55	2009	444		400	1116		
8	1235	.29	64	49	61	2027	*		400	1228		
9	1610	.19	50	39	52	1955	540		212	670		
10	2185		40	33	52	1738	*	399	247	729		
11	2185		35	31	52	1738	619		359	893		
12	2010		56	35	56	1524	*		347	856		
13	1830		44	26	54	1884	475		389	1042		
14	1600		40	24	47	1991	260		398	1191		
15	1450	.09	40	30	52	1955	*		383	1191		
16	1400		35	27	51	1810	508		218	595		
17	1360		34	17	50	1738	*	372	308	893		
18	1275		49	34	50	1738	508		324	893		
19	1225		38	16	50	1810	413		368	912		
20	1160		20	8	45	1629	413		383	1191		
21	1050		24	7	44	2027	397		442	1340		
22	960		38	13	48	1738	*		412	1488		
	985		39	35	50	1991	*		353	1691		
24	1040	.22	35	13	54	1774	406	350	348	744		
25	995		20	-3	51	2027	*		247	595		
26	930		25	11	50	2100	*		280	670		
27	895		29	14	54	2027	413		306	580		
28	900		39	8	54	1338	*		294	633		
29	950	.08	35	28	56	1629	406		294	614		
30	1030		36	31	54	1991	444		356	[illegible]		
31	1060		36	30	54	1338	476	273	589	[illegible]		
AVG. [1]	1324	.87				1839	447	354	348	[illegible]		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

0733310

1 of 3

1944

NATIONAL LEAD COMPANY OF OHIO

ENGINEERING DIVISION – WATER PLANT

WASTE WATER QUALITY REPORT

MWB 1/8

For the Month of DECEMBER, 1980

	FLOWS		FECAL COLIFORMS AT MH 175 (NO./100ml)	DISSOLVED SOLIDS (mg/l)					DISSOLVED OXYGEN (mg/l)	WATER TEMP. AT MH 175		SANITARY SEWAGE FLOW	REMARKS
		MH 175 (GAL X 10³)		CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT DISCHARGE	STORM TO RIVER	MH 175		DAILY MAXIMUM	TIME OF DAY		
		286		2172	*		398	819	7.8	65	2100	39100	
		292		*	476		406	412	9.7	60	1700	61200	
		389		*	375	374	259	330	9.8	56	2100	73400	
		240	450	*	*		353	501	9.6	60	1700	73300	
5	1285	332		*	521		347	462	10.0	63	1700	71000	
6	1300	317		1955	394		383	1023	8.1	60	1700	82300	
7	1265	278		2009	444		400	1116	7.6	55	1300	61200	
8	1235	237		2027	*		400	1228	8.3	61	1300	43100	
9	1610	827		1955	540		212	670	7.8	52	2100	81400	
10	2185	539	150	1738	*	399	247	729	8.3	52	1700	89100	
11	2185	403		1738	619		359	893	8.2	52	0900	80000	
12	2010	342		1524	*		347	856	8.4	56	1700	80800	
13	1830	317		1884	475		389	1042	8.1	54	1300	74700	
14	1600	349		1991	260		398	1191	8.3	47	1300	78100	
15	1450	299		1955	*		383	1191	8.2	52	1700	69400	
16	1400	465		1810	508		218	595	8.3	51	1300	80800	
17	1360	276		1738	*	372	308	893	9.5	50	1700	85000	
18	1275	368	50	1738	508		324	893	9.4	50	1300	90500	
19	1225	353		1810	413		368	912	8.9	50	1300	85900	
20	1160	319		1629	413		383	1191	9.4	45	0900	80400	
	1050	301		2027	397		442	1340	9.5	44	0900	63400	
22	960	265		1738	*		412	1488	9.0	48	2100	63800	
23	985	315	0	1991	*		353	1691	8.5	50	1700	56900	
24	1040	323		1774	406	350	348	744	8.7	54	0900	56600	
25	995	355		2027	*		247	595	8.3	51	All Day	51300	
26	930	314		2100	*		280	670	8.7	50	0900	64600	
27	895	365		2027	413		306	580	8.3	54	0500	151900	
28	900	350		1338	*		294	633	8.2	54	1700	59000	
29	950	360		1629	406		294	614	8.2	56	1700	56000	
30	1030	434	0	1991	444		356	595	8.4	54	1700	58000	
31	1060	291		1338	476	273	589	1042	8.9	54	1700	58300	

NOTES:

* Not pumped this date.

073311

4044

1061

NATIONAL LEAD COMPANY OF OHIO
A SUBSIDIARY OF NL INDUSTRIES, INC.
P. O. BOX 39158
CINCINNATI, OHIO 45239

24

NOTES: MEASURED LOSSES
FOR
DECEMBER 1980

086747

165

2129948

-4944

FOR DECEMBER, 1980

-4944

FORM 90/10

(USED WHEN ENRICHMENT FOR CLEARWELL URANIUM IS 0.36 THRU 0.50% U235)

CW 10-80 = 0.42 ± 0.02 U235

PAGE 1

CALCULATIONS FOR SFA MEASURED LOSS REPORT. (MONTH/YEAR DECEMBER 1980)

BREAKDOWN (BY ENRICHMENT) OF URANIUM LOST TO THE GREAT MIAMI RIVER.

GIVEN:

(a) MH175 51.206 Kgs U

(b) CLEARWELL 14.696 Kgs U

(C) DIFFERENCE 36.510 Kgs U

STEP I ASSIGN 90% OF CLEARWELL URANIUM TO DEPLETED; 10% TO ENRICHED

DEPLETED

14.696 Kgs X .90 = 13.226 Kgs U

ENRICHED

14.696 Kgs X .10 = 1.470 Kgs U

TOTAL 14.696

STEP II ASSIGN 84% OF DIFFERENCE (C) TO DEPLETED; 16% TO ENRICHED.

DEPLETED

36.510 Kgs X .84 30.668 Kgs U

ENRICHED

36.510 Kgs X .16 5.842 Kgs U

TOTAL 36.510

STEP III SUMMARIZE (ADD STEPS I & II)

DEPLETED

13.226 Kgs U + 30.668 Kgs U = 43.894 Kgs U

ENRICHED

1.470 Kgs U + 5.842 Kgs U = 7.312* Kgs U

TOTAL 51.206

FORM REV. 2-12-80

*(ROUND TO WHOLE NUMBER Kgs FOR SFA REPORT)

086748

REVISED 4-18-80

PAGE 2

CALCULATIONS FOR URANIUM LOSS TO PADDY'S RUN DURING DECEMBER 1980.

GIVEN: URANIUM LOSS = 0.001 LBS = 0.00045 Kgs.

(A)

FOR DEPLETED

_____ Kgs. x .84 = _____ KgsU (DEPL.)

(ROUND TO 0 Kgs FOR SFA REPT.

NEGLIGIBLE (DISREGARD)

FOR ENRICHED

_____ Kgs. x .16 = _____ * KgsU (ENR)

(ROUND TO 0 Kgs. FOR SFA REPT.

NOTE:
* EXPRESS AS gms. FOR ENRICHED WST

FOR WST WRITE-OFF

(B)

	ENRICHED (gms)	DEPLETED (Kgs)
MH175	7312 gms	43.894 Kgs
PADDY'S RUN	— gms	— Kgs
TOTAL	7312 gms	43.894 Kgs

= 7 Kgs

44 Kgs

NOTE:
THESE TABULATIONS USEFUL IN ROUNDING (OR CONFIRMATION) OF VALUES IN (A) ABOVE

TO DETERMINE POUNDS OF URANIUM DIVIDE WEIGHT FROM (B) ABOVE (IN GRAMS) BY 453.59.

	FOR ENRICHED (U-LBS)		FOR DEPLETED (U-LBS)
MH175	16.120 U-LBS	MH175	96.770 U-LBS
PADDY'S RUN	— U-LBS	PADDY'S RUN	— U-LBS
TOTAL	16.120	TOTAL	96.770

086749

REVISED 4/18/80

PAGE 3

WST (A CHECK ON CALCULATIONS)

MH 175	112.89	U-LBS
PADDY'S RUN	NEGLIGIBLE	U-LBS
TOTAL	112.89	U-LBS

CALCULATIONS FROM PAGE 2

ENRICHED WST	16.120	U-LBS
DEPLETED WST	96.770	U-LBS
TOTAL	112.890	U-LBS

COMPARE

FVA - VVB

(GENERAL SUMP TRANSFERS TO CHEMICAL PIT DURING DECEMBER 1980)

TOTAL URANIUM TO PIT: 9.185 Kgs U
20.25 U-LBS

CALCULATIONS:

FOR DEPLETED URANIUM (84% OF URANIUM)

9.185 Kgs U x 0.84 = 7.715 Kgs U (DEPL)

FOR ENRICHED URANIUM (16% OF URANIUM)

9.185 Kgs U x 0.16 = 1.470 Kgs U (ENR)

TOTAL 9.185

CALCULATIONS FOR U-LBS (FVA-VVB)
NOTE: DIVIDE WT. ABOVE IN GMS. BY 453.59

FOR DEPLETED URANIUM
7715 gms ÷ 453.59 = 17.009 LBS. U (ROUND TO 17#)

FOR ENRICHED URANIUM
1470 gms ÷ 453.59 = 3.241 LBS. U
TOTAL 20.250 (ROUND TO 3#)

TOTAL 20#

FORM MODIFIED 2-12-80

FORM 9
(USED WHEN ENRICHMENT FOR CLEARWELL URANIUM IS 0.36 THRU 0.50 % U235)

VVB – FVA

CW10-80 = 0.42 ± 0.02 U235

CALCULATIONS FOR CLEARWELL WITHDRAWALS TO RIVER DURING (MONTH/YEAR) DECEMBER 1980

GIVEN: 32.40 U LBS.
14.696 KgSU

CALCULATIONS:

ENRICHED (10 % OF CLEARWELL URANIUM)

		U-LBS	KgSU
32.40 U-LBS	x 0.10 =	3.240	
14.696 KgSU	x 0.10 =		1.470

DEPLETED (90 % OF CLEARWELL URANIUM)

32.40 U-LBS	x 0.90	29.160	
14.696 KgSU	x 0.90		13.226
TOTAL		32.400 U-LBS	14.696 KgSU

FORM MODIFIED 2-12-80

1-2-81 pm

EFFLUENT TO
RIVERS DURING
DECEMBER 1980.
PART I

MH175 OOT

12/1	292,000	✓
	388,800	✓
	240,200	✓
	332,000	✓
	317,000	✓
	278,000	✓
	237,000	✓
Vol(gals)	827,000	✓
	539,000	✓
	403,000	✓
	342,000	✓
	317,000	✓
	349,000	✓
	299,000	✓
	465,000	✓
	276,000	✓
	368,000	✓
	353,000	✓
	319,000	✓
	301,000	✓
	265,000	✓
	315,000	✓
	323,000	✓
	355,000	✓
	314,000	✓
	365,000	✓
	350,000	✓
12/28	359,600	✓
	9,889,600 T	

9,009,000 T

00 T

	12/1	2.53
		2.47
		1.64
		1.77
4-LBS		2.75
		3.43
		3.84
		9.66
		11.43
		6.19
		4.45
		4.29
		4.37
		3.84
	12/15	6.05
		68.71 T

00 T

STORM SEWER LIFT

	12/1	106,000
		164,000
		78,000
		97,000
		87,000
		57,000
Vol(gals)		63,000
		555,000
		346,000
		144,000
		113,000
		101,000
		80,000
		82,000
		233,000
		70,700
		87,000
		96,000
		76,400
		48,600
		57,000
		72,000
		80,000
		162,000
		93,000
		88,000
		88,000
	12/28	113,400
		3,438,100 T

086754

00 T

	12/1	1.93
		2.55
		1.08
		1.17
		1.12
U-LBS		.88
		.99
		1.49
		9.24
		2.04
		1.45
		1.31
		1.12
		1.01
	12/15	3.62
		4.1.00 T

00 T

SCRAP PIT #5

	-0-
	-0-
	-0-
	-0-
	70,000
	76,000
	68,000
	76,700
	81,300
Vol.(gals)	71,000
	73,000
	67,000
	68,000
	72,000
	57,000
	51,000
	51,000
	72,000
	72,000
	72,000
	72,000
	72,000
	72,000
	72,000
	72,000
	72,000
	1,674,000 T

00 T

		00 T
12/1	-0-	
	-0-	
	-0-	
	-0-	
12/5	1.30	
	1.46	
	1.55	
LI-LBS	1.74	
	1.70	
	1.42	
	1.77	
	1.49	
	1.50	
	1.47	
12/15	1.21	
	16.61	T

SANITARY SEWER		00 T
12/1	61,200	
	73,400	
	73,300	
	71,000	
	82,300	
	61,200	
	43,100	
	81,400	
	89,100	
Vol(gals.)	80,000	
	80,800	
	74,700	
	78,100	
	69,400	
	80,800	
	85,000	
	90,500	
	85,900	
	80,400	
	63,400	
	63,800	
	56,900	
	56,600	
	51,300	
	64,600	
	151,900	
	59,000	
12/28	56,000	
	2,065,100	T

	12/1	39,000
		36,000
		-0-
		38,000
		38,000
		38,000
		-0-
		40,000
Vol (gals)		-0-
		38,000
		-0-
		39,000
		40,000
		-0-
		38,000
		-0-
		37,000
		38,000
		38,000
		38,000
		-0-
		-0-
		38,000
		-0-
		-0-
		-0-
		40,000
	12/28	38,000
		651,000 T

TESTWELL

	12/1	80,100
		92,200
		43,100
	12/4	89,700
		-0-
		-0-
		-0-
		-0-
		-0-
Vol (gals)		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
		-0-
	12/22	53,800
		81,000
		80,300
		97,000
		94,600
		97,700
	12/28	99,700
		909,200 T

EFFLUENT TO RIVER DURING DECEMBER 1980 1-6-81

PART II

MH175 00 T

Vol/gals 9,889,600
12/29 434,400
12/30 291,000
12/31 298,000
10,913,000 T

00 T

12/1 2,53
2,47
1.64
1,77
2,75
3,43
3,84
9,66
1.1,43
6,19
4,45
4,29
4,37
3,84
6,05
4,10
4,55
3,83
3,19
3,57
2,92
3,15
1,99
2,07
1,47
1,34
1,52
1,32
12/31 3,41
3,01
SUBTOTAL 11.0,15 T
12/31 + 2.74
TOTAL 112.89

11-LBS

-4944

STORM SEWER LIFT 00 T

		3,438,100
Vol (gals)	12/29	112,900
	12/30	101,700
	12/31	114,000
		3,766,700 T

00 T

	12/1	1.93
		2.55
		1.08
		1.17
		1.12
		.88
		.99
		1.149
U-LBS		9.24
		2.04
		1.45
		1.31
		1.12
		1.01
		3.62
		1.19
		1.64
		1.27
		1.03
		.79
		.81
		.76
	12/23	?
		1.57
		.93
		.88
		.69
		.81
		1.58
	12/30	1.61
	SUBTOTAL	56.56 T
	12/23	+ .80
	12/31	+ 1.98
TOTAL		59.34

086759

-4944

SCRAP PIT #5 00 T

		1,674,000
Vol (Gals)	12/29	63,000
	12/30	72,000
	12/31	63,000
		1,872,000 T

00 T

	-0-
	-0-
	-0-
	-0-
	1.30
	1.46
	1.55
	1.74
	1.70
4-LBS	1.42
	1.77
	1.49
	1.50
	1.47
	1.21
	.91
	1.01
	1.39
	1.39
	1.30
	1.07
	1.02
	.77
	.65
	.66
	.73
	1.03
	.97
	1.21
	1.03
SUBTOTAL	31.75 T
12/31 +	.65
TOTAL	32.40

SANITARY SEWER 00 T

		2,065,100
Vol (Gals)	12/29	58,000
	12/30	58,300
	12/31	60,600
		2,242,000 T

086760

GENERAL SUMP 00 T

4944

39,000
36,000
-0-
38,000
38,000
38,000
-0-
40,000
-0-
38,000
-0-
39,000
40,000
-0-
38,000
-0-
37,000
38,000
38,000
38,000
-0-
-0-
38,000
-0-
-0-
-0-
40,000
38,000
39,000
39,000
40,000
769.000 T

TESTWELL 00 T

12/1 80,100
92,200
43,100
12/4 89,700

-0- 17units

12/5 THRU 12/21

12/22 53,800
81,000
80,300
97,000
94,600
97,700
99,700
58,000
26,000
12/31 -0-
993,200 T

00 T

086761

MONTHLY MEASURED LOSS REQUIREMENTS

	DATE COMPLETED
1) GENERAL SUMP VOLUMES TO CHH	1-6-81 (12:50)
2) WRITE-OFF FORMS TO ~~H. KNUE~~ B. KEIFER	1-7-81 (0830)
3) REPORT FOR SFA	1-9-81 (16:00)
4) REPORT TO R. SPENCELEY (R. ZIMMERMAN NOTE)	NO LONGER NEEDED
5) SUMMARY OF DISCARDS TO EEG	1-8-81 AM
6) NMC SUMMARY UPDATE OF PIT DISCARDS	SUBMITTED 1-9-81 (1600)
7) COPY OF EFFLUENT WORK SHEET	
(a) TO W.J. ADAMS	mailed 1-13-81 AM
(b). TO L. PENNINGTON	mailed 1-13-81 AM
8) RETURN OF ANALYSIS (PINK) SHEETS TO D. HOOVER	1-9-81 AM
9) RETURN OF DAILY LOG SHEETS TO GENERAL SUMP	1-9-81 AM

-4944

NATIONAL LEAD COMPANY OF OHIO
REPORT OF ISOTOPIC ANALYSES
(NOTE: Write Firmly – Part 5 must be legible)

DATE SAMPLED:	SUBMITTED BY:	LAB NO.:
12-15-80	RWD	[illegible]
ACCOUNT/P.O. NO.: 43300	LOT NO.: 12-[illegible]	
REMARKS: Plant 2 Water Condensate		MATERIAL: [illegible]

Assay Requested:
^{232}U ___ ^{233}U ___ ^{235}U ✓ ^{236}U ___
^{230}Th ___ ^{226}Ra ___ ^{228}Ra ___ Pu ___
^{237}Np ___ Other (Specify) ___

Assay Method:
Gamma ___ Mass Spec ✓
Other (Specify) ___

LABORATORY NUMBER	SUBMITTER'S IDENTIFICATION	ANALYTICAL DATA
	12-80	[illegible]

FOR ANALYTICAL USE ONLY

Assay Basis:	Assay Units:	
Uranium ___	Wt % X	d/m/l ___
Sample ___	ppm ___	d/m/g ___
^{235}U ___	ppb ___	d/m ___

NO.	DISTRIBUTION OF COPIES
1	Lab File
2	Originator
3	Quality Control Department
4	Extra Copy
5	Analytical Department *(RECORD COPY)*

APPROVED BY:	CHECKED BY:	DATE OF REPORT:
RJH	RAJ	[illegible]

NLO-T-971 (REV. 6/28/76)

086763

181

-4944

DATE 12/19/80
Completed 1-2-81

SALT OIL WASH WATER

MONTH YEAR (DECEMBER 1980)

DATE	IDENT NO.	VOLUME (gals)	x U#/gal =	U-LBS	Kgs U
12/1/80	82	500	x 0.00072 =	0.36	0.163
"	83	500	x 0.00065 =	0.33	0.147
12/4/80	84	500	x 0.00054 =	0.27	0.122
12/8/80	85	1000	x 0.0014 =	1.40	0.635
12/10/80	86	500	x 0.00036 =	0.18	0.082
12/15/80	87	1000	x 0.00081 =	0.81	0.368
12/19/80	88	500	x 0.00027 =	0.14	0.061
TOTALS		4500		3.49 U LBS	1.578 Kgs U

(ROUND to 2 Kgs for SFA REPT.)

WT (LBS) SOLIDS

4500 gals x 8.44#/gal SOLUTION x 0.011 (SOLIDS FACTOR) = 418 WT (LBS) SOLIDS

NOTE: 1.1% SOLIDS = ~11,000 ppm

FT³ SOLIDS

4500 gals x 0.13369 (CU.FT./gal.) x 0.011 (SOLIDS FACTOR) = 6.618 FT³ SOLIDS

= 0.001471

(ROUNDED TO 7 FT³ SOLIDS)

FORM PREPARED 11/5/80

086764

DATE _____

-4944

NUSAL QUENCH (PLT. 6)

MONTH YEAR (DECEMBER 1980)

DATE	IDENT NO.	VOLUME(gals) X U#/gal. = U-LBS	K)5U

NO NUSAL FOR DECEMBER 1980

PER V. LACY 1/2/80 AM

WT(LBS) SOLIDS

_____ gals. X 8.44#/gal. X 0.011 (SOLIDS FACTOR) = _____ WT(LBS) SOLIDS

NOTE: 1.1% SOLIDS = ~11,000 PPM

FT^3 SOLIDS

_____ gals X 0.13369 X 0.011 (SOLIDS FACTOR) = _____ FT^3 SOLIDS

= 0.001471

FORM PREPARED 11/5/80

086765

(24) OC E

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. [illegible]

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12-1-80

SUBMITTED BY: R. Griffith

REMARKS: 1,000 gallons transferred to the pit.

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
				U/Kg/			
						U-LBS	Kgs U
	82	500gals X	0.00072	=		0.36	0.16
	83	500gals X	0.00066	=		0.33	0.14
	TOTAL 1000						

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Pottorff
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report

-4944

1-10

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

(24) DEC 80

Lab. Nos. 6-8420

Lot No.

Analyses Requested "U" lbs./gal.

MATERIAL: Salt-Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12-4-80

SUBMITTED BY: R. Griffiths

REMARKS: 500 Gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U #/gal					
					U-LBS		Kgs U
	84	.00054	x 500 gals	=	0.27		0.12

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy (S. P. Tarson)
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report [illegible]

185

086767

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

"U" lbs./gal.

Lab. Nos. [illegible]

Lot No.

Analyses Requested

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12-8-80

SUBMITTED BY: V. Lacy

REMARKS: 1,000 gallons transferred to the Pit

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		4 #/gal					
					4-LBS		Kg54
	85	.0014	x 1000 gals.	=	1.40		0.635

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible]

Date of Report [illegible]

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

-4944

Lab. Nos. 6-8429

Lot No.

Analyses Requested "U" lbs./gal.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12-10-80

SUBMITTED BY: V. Lacy

REMARKS: 500 gall ons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		lb #/gal					
					U-LBS		Kgs U
	86	0.000.36		X500gals=	0.18		0.082

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report

086769

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested "U" lbs./gal.

Lab. Nos. 6-8433

Lot No.

MATERIAL: Salt Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12-15-80

SUBMITTED BY: V. Lacy

REMARKS: 1,000 gallons to the pit.

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		Uhg/l					
					LBS		Kgs
	87	1000gals x	0.00081	=	0.81		0.36

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By

Date of Report 12-16-

086770

-4944

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Lab. Nos. 6-8432

Lot No.

Analyses Requested "U" lbs./gal.

MATERIAL: Salt-Oil Wash Water

ACCOUNT NO.: 26140

DATE SAMPLED: 12/19/80

SUBMITTED BY: R. Whitham

REMARKS: 500 gallons

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
		U #/gal					
					U-LBS		Kgs U
	88	0.00027		x 500gals	= 0.14		0.061

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy G. Peterson
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By [illegible] Date of Report [illegible]

086771

FOR DEC. 80 MIL

-4944

WST (ENRICHED)

LBS	gms/lb.		gms				
7 x	453.59	=	3175	+	18	=	3193
7 x	"	=	3175	+	18	=	3193
2 x	"	=	908	+	18	=	926
TOTAL			7258 gms	+	54	=	7312

FVA-VUB (DEPLETED)

	LBS			Kgs	Rounded to Kgs
	8	x 453.59	=	3.629	4
	6	x "	=	2.722	3
	3	x "	=	1.361	1
TOTAL	17 LBS				8 Kgs = (Rounded)

VUB-FVA (DEPLETED)

	LBS				
Plt5	14	x 453.59	=	6.350 Kgs	(Rounded to 6 Kgs
Plt6	15	x "	=	6.804 Kgs	(Rounded to 7 Kgs
TOTAL	29 LBS				TOTAL 13 Kgs

WST (DEPLETED)

	LBS				
Plt5	40	x 453.59	=	18.144 Kgs	(Rounded to 18 Kgs
Plt6	50	x "	=	22.680 Kgs	(Rounded to 23 Kgs
Plt9	7	x "	=	3.175 Kgs	(Rounded to 3 Kgs
TOTALS	97 LBS				TOTAL 44 Kgs

086772

1-8-81

TABULATION
ROUTINE OPERATING LOSSES
DEC, '80

	00 T
ENRICHED	
FVA-VV8	5.905
	871
TTD (4)	6.776 T
	00 T
TTD U_{235}	70
	11
	81 T
WST	00 T
SEWER	15,016
	7,312
TTD 4	22,328 T
	00 T
	170
	73
TTD U_{235}	243 T

086773

-4944

00

WST STACK 9,291
6,992
TTD(U) 16,283 T

00 T

108
67
TTD U235 175 T

00 T

00 S

00 T

ENRICHED WST 7,312
6,992
TOTAL MONTH (U) 14,304 T

[redacted]

00 T

[redacted]

00 T

TOTAL MONTH U235 73
67
140 T

00 T

243
175
~~TOTAL~~ TTD U235 418 T

00 T

WST TOTAL TO DATE Check 24,307
14,304
38,611 T

00 T

22328
16283
U 38611 T

086774

-4944

	218
CHK	140
	418 T
	00 T
TOTAL OPERATING ENRICHED	871
	14.304
MONTH (U)	15.175 T
	00 T
	11
U235	140
	151 T
	00 T
	6,776
	38,611
TTD U	45,387 T
	00 T
	81
TTD U235	418
	499 T
	00 T
	30.212
CHK	15.175
	45.387 T
	00 T
	348
CHK	151
	499 T
	00 T
	00 T
DEPLETED	59,868
	2,445
	62,313 T
	00 T
	120
	05
	125 T
	00 T
	85
	44
	129 T

086775

-4944

00 T

03
01
04 T

00 T

44
01
45 T

00 T

129
04
133 T

00 T

88
45
133 T

00 T

2445
45
2490 T

00 T

05
0
05 T

00 T

62,313
133
62,446 T

00 T

125
125 T

00 T

CHK. 59,956
2490
62,446 T

00 T

CHK 120
05
125 T

00 T

086776

-4944

Monday 1-5-81

1) Complete effluent to River totals.
   (a) Call V. SEIM
   (b) Call D. Bailey

✓ 2) Work up Gen Sump Sheet for 3rd wk (12/13 Thru 12/18)

✓ 3) Get rest of Gen Sump sheets for Dec 1980.

✓ 4) Complete dissolved Solids.

✓ 5) Get ZIRNLO Slurry data from Hinson

6) Stock losses for Dec 80
   (V. SEIM) –
   K. ROSS – expecting

Tuesday 1-6-81

1) V. SEIMS
   ✓ a) STACK Losses (according to K Ross 1-5-81 – pointed out)
   ✓ b) 4 assays needed to completed effluent.

✓ 2) Gen Sump Log Sheets – hopefully will be completed by 10:30; Gen Sump will follow up in morning (1-6-81)

✓ 3) Complete Dissolved solids for Gen Sump.

✓ 4) ~~PH 8~~ Bro Furnace #1 Scrubber – get results from E Sullivan EXT 309 or H McDaniel.
   Get this info. AM (see attach)

✓ 5) RUN TOTAL FOR EFFLUENT SHEET

086777

✓ PLT 5 CRAWFORD EXT 254
CERAMICS NONE FOR DEC. 80
(per R. CRAWFORD 1/2/80 AM)

-4944

✓ PLT 6 WHITHAM EXT. 558
NUSAL NONE FOR DEC. 80
SALTOIL ITEMS (82 THRU 88)
(per V. LACY 1/2/80 AM)

PLT. 9 HINSON EXT. 268
ZIRNLO SLURRY (LAST 743 ; 11/21/80)
will call back

✓ MASS SPEC. HELLMAN EXT 715
PLT 2 WATER Comp. 12-80 0.98% U_{235}
Rept'd out on 12/19

D. Bailey Boiler Plt EXT 576 Call Monday 1/5/81

GEN Sump. EXT 419

1573
79

✓ DETMER EXT 495
DISSOLVED SOLIDS DATA.

V. SEIMS EXT. 563

086778

1-8-81

STACK LOSS FOR DEC. '80

INFO. REC'D. FROM V. SEIM 1-6-81 (1330)

4944

	MATRL. KGS.	% U4	KGS U	Spl. INT.
PLTH (G4-14) (Depleted) UF4 PACKAGING	1.8	.28	0.5	7/2/80 – 11/26/80

ROUND TO 1 KGS AND Rept

086779

1-6-81 pm

A PLTB SCRUBBER LOSS FOR DEC. '80

-4944

BOX FURNACE #1 SCRUBBER

VOLUME (Recovered gals) = 734 gallons

U-ASSAY (U#/gal) = 0.022 U#/gal.

(PLT85pl. Q-4 (1-2-81)) LAB NO. 8-7828 (AN INVENTORY SAMPLE)

ENRICHMENT: ~1.0% U_{235}

CALCULATIONS

1) 734 gals X 0.022 U#/gal = 16.15 U# Recovered

2) $\frac{16.15}{.83} - 16.15 = 3.31$ U# Lost to ATMOSPHERE

3) 3.31 U-LBS X 453.59 = 1.501 Kgs U.

(ROUND TO 2 Kgs) SFA Rept.

086780

108

12/16/80

-4944

OXIDATION SCRUBBER LOSS

CALCULATIONS

300 gals x 2.14 U#/gal = 642 U-LBS.
(SP 12-14 12/3/80)

THEN,

0.95% = 642 U# REC'D / .83 = 642 = 131.49 U-LBS

NOTE: SAMPLE above believed to be a poor sample (not representative of this 0.95% U235 recovered scrubber section) material was drummed, deposited to floor sump in PLF8 and filtered for U-recovery. No way of getting a resample. Will estimate for December 80 loss to atmosphere by taking assay for previous campaign (SP 80,937) and computing loss.

FOR DECEMBER 80 ML

300 gals x 0.197 U#/gal = 59.10 U-LBS
(SP 80-937 12/30/80) Lab sp/no. 8-7638

59.10 / .83 = 59.10 = 12.10 U-LBS

12.10 U-LBS x 453.59 = 5,491 Kgs.

Round to 5 Kgs. (SFA Rept

086781

NLO-1-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

RECD 12/5/80 -4944 HOLD FOR DEC'E ML

Lab. Nos. _____

Lot No. _____ (24) DE

Analyses Requested _____

MATERIAL:

ACCOUNT NO.:

DATE SAMPLED:

SUBMITTED BY:

REMARKS:

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By _____ Date of Report _____

086782

200

SK #4944

NATIONAL LEAD COMPANY OF OHIO

A SUBSIDIARY OF NL INDUSTRIES, INC.

CINCINNATI, OHIO 45239

Jan. 12, 1981

SUBJECT ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM. DECEMBER, 1980

TO S. F. Audia

FROM C. H. HANDEL

REFERENCE

The following tabulations are a summary of the routine operating losses of nuclear materials from the production stream for the period DECEMBER 1 THROUGH DECEMBER 31, 1980.

Source	Quantity		Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
I. Discards to NLO Pits					
General Sump	1,302,400	gal.	9	8	1
~~Plant 2 Filter Slurry~~		~~gal.~~			
~~Plant 5 Ceramics~~		~~kgs.~~			
~~Plant 6 NuSal Quench Water~~		~~gal.~~			
Plant 6 Salt Oil Wash Water	4500	gal.	2	2	–
~~Plant 8 Raffinate Cake~~		~~lbs.~~			
Plant 9 Zirnlo Slurry	800	gal.	1	–	1
Process Residues	52,111	kgs.	2448	2448	–
Total Discards to Pits			2460	2458	2
Transfers from Pit to River			15	13	2
Net Discards to Pits			2445	2445	0

086783

A PRIME CONTRACTOR FOR THE DEPARTMENT OF ENERGY

-4944

ROUTINE OPERATING LOSSES OF NUCLEAR MATERIAL FROM THE PRODUCTION STREAM,
DECEMBER, 1980

S. F. Audia
Date Jan. 12, 1981
Page 2

Source	Quantity	Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
II. Losses to River[a]				
Manhole 175	10,913,000 gal.	51	44	7
Paddy's Run	1,440 gal.	0	0	0
Total River Losses	10,914,440 gal.	51	44	7
III. Stack Losses to Atmosphere				
PLT. 4 (G4-14)		1	1	–
PLT. 8 (OXIDATION FURNACE #1 SCRUBBER)		5	–	5
PLT. 8 (BOX FURNACE SCRUBBER)		2	–	2
Total Stack Losses		8	1	7

Resumé of Routine Operating Losses

I. Net Discards to Pits	2445	2445	0
II. Losses to River	51	44	7
III. Stack Losses to Atmosphere	8	1	7
OVER-ALL TOTAL ROUTINE OPERATING LOSSES	2504	2490	14

[a]Includes 15 Kgs. uranium transferred from Pit 5 to the river and 0 Kgs. uranium pumped to the river from the General Sump.

C. H. HANDEL

GEP/

cc: W. J. Adams
P. D. BALL
M. W. Boback - K. N. Ross
D.F. ~~A. F. Capano~~ - E. E. Gompf
A. R. Diehl
J. Farr
W. C. Hill
R. C. KISPERT
W. W. Mahaffey
A. J. Mangold
E. M. Nutter
L. Pennington
G. E. Peterson (Record Copy)
D. A. Tippenhauer - D. W. Hoover

086784

202

-4944 DEC '80
RECD 12/11/80

URANIUM IN LIQUID EFFLUENTS

Month December, 1980

Uranium Concentration, mg/l					
Storm Sewer Lift Station					
Manhole-15	Drum 1	Drum 2	Drum		
1.04	2.18				
.76	1.86	Comp.	1.9	0.14	
.82	1.66				
.64	1.44				
1.04	1.54				2.22
1.48	1.84				2.30
1.94	1.88				
1.40	2.48				2.72

[illegible] Sewer Lift Station sample is listed under "[illegible]
[illegible] Sewer Outfall result is obtained by
[illegible] the average value of Drum 2 & Drum 1, or
[illegible] the value for Drum 2 if no result is reported [illegible] Drum

086785

(2) Rec'd 12/19/80

URANIUM IN LIQUID EFFLUENTS

Month December 1980

-4944

Uranium Concentration, mg/l					
	Storm Sewer Lift Station			Storm Sewer	
Composite-175	Drum 1	Drum 2	Drum 3	Outfall	Drum
					2.74
					2.72
2.54	3.2				2.50
1.84	1.70				2.40
1.56	1.54				2.90
1.62	1.56				2.66
1.50	1.68				2.64
1.54	1.48				2.44
1.56	1.86				2.54

Storm Sewer Lift Station sample is listed under "Drum
Storm Sewer Outfall result is obtained by
taking the average value of Drum 2 & Drum 3, or
using the value for Drum 2 if no result is reported for Dr

086786

③ DEC. '80

-4944 1-5-81 noon

URANIUM IN LIQUID EFFLUENTS

Month December, 198

Uranium Concentration, mg/l

Date	Manhole-175	Storm Sewer Lift Station #2 Drum 1	Drum 2	Drum 3	Storm Sewer Outfall (7)	Drum 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
1	1.78	⑪ 2.02				⑪ 2.14
2	1.48	2.26				2.38
3	1.30	1.58				2.32
4	1.20	1.62				2.32
5	1.42	1.94				2.16
6	1.32	1.70				1.78
7	1.20	1.26				1.70
8	.74	1.20	x			1.28
9	.70	1.16				1.08
10	.56	1.20				1.10
11	.44	1.20				1.22
12	.52	.94				1.72
13	.44	.86				1.62
14	.94	1.68				2.30
15	1.24	1.90				1.72
16	1.10 x	2.08 x				1.24

Storm Sewer Lift Station sample is listed under "Drum 1"
Storm Sewer Outfall result is obtained by
taking the average value of Drum 2 & Drum 3, or
using the value for Drum 2 if no result is reported for Drum 3

205

086787

PREC. 0.87 INCHES

(4) DEC. '80

REC'd 1-6-81 Dec. -80

Precip: 0.37

1.20

1.10 2.08 1.24

086788

DECEMBER 1980

DECEMBER	RIVER PUMPINGS VOLUME (x 10³) gals — GENSUMP LOGSHEET	AS REPORTED BY WATER PLANT
1	39	39
2	36	36
3	0	0
4	38	38
5	38	38
6	38	38
7	0	0
8	40	40
9	0	0
10	38	38
11	0	0
12	39	39
13	40	40
14	0	0
15	38	38
16	0	0
17	37	37
18	38	38
19	38	38
20	38	38
21	0	0
22	0	0
23	38	0 ?
24	0	0
25	0	0
26	0	0
27	40	40
28	38	38
29	39	39
30	39	39
31	40	40

086709

NMC RECORD'S COPY

4944

Month DECEMBER, 1980

PUMPING TO GENERAL SUMP

Source	GALLONS
~~Plant 1~~ TANK FARM	99,540
Plant 2 Filtrate	81,500
~~Plant 2 Raffinate~~	--
Plant 2 ~~Condensate~~ PAD WATER & DEIONIZED WALK	46,000
Plant 4	-0-
Plant 5	27,000
Plant 6	80,000
Plant 8	332,500
Plant 9	10,000
Pilot Plant	63,600
Analytical Laboratory	84,980
Decontamination Pad	96,580
Non SS Water	1,377,500
Total	2,299,200

00 T

9.800
1.304.400
5.000
58.300
1.377.500 T

00 T

99.540
81.500
46.000
-0-
27.000
80.000
332.500
10.000
63.600
84.980
96.580
1.377.500
2.299.200 T

00 T

1-6-81

FOR DECEMBER, 1980

NON SS WATER

LIME SLAKER	9,800
WATER PLT SUMP	1,304,400
COOLING WATER	5,000
CLEAN UP WATER	58,300
TOTAL	1,377,500

086790

PREPARED BY:
G. PETERSON
NMC DEPT.
1-6-81

208

ORIGINAL TO B. SPINDLE
1/6/81 (12:50)

PROCESS RESIDUES DISCARDED TO PIT 4
DURING DECEMBER 1980

DATE OF THIS TABULATION 1-7-81

TRANSFER AUTHORITY #	NET WT (LBS.) NOTE: SHOWN AS GR. WT ON 741	U LBS. ELEMENT WEIGHT	Kgs. ELEMENT WEIGHT	ISOTOPIC U_{235}	QUANTITY U_{235} (Kgs	FT^3
FVA-VVB 801230 344 D. REDUCTION DEPLETED MgF_2	112,960	3954	1,793	0.200	4	1,255
FVA-VVB 801233 374 DEPLETED MACHINING DEPLETED RESIDUES	1,926	1,445	655	0.200	1	13
TOTALS	114,886 (= 52,111 Kgs)	5,399	2,448		5	1,268

NMC DEPT.

088791

-4944

DATE 1-2-81

-4944

VVB - FVA
(CLEARWELL WITHDRAWALS
TO RIVER, DECEMBER, 1980

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 1877 mg/l (= ppm)

CALCULATIONS:

1) 1877 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.015664 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.015664 (SOLIDS/gal. SOLUTION)
TOTAL 8.361064 (CALCULATED WT./gal. SOLUTION)

3) $\frac{0.015664 \text{ (SOLIDS/gal SOLUTION)}}{8.361064 \text{ (WT/gal SOLUTION)}}$ = 0.001873 = 0.1873 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gal) PUMPED TO RIVER FROM CLEARWELL = 1,872,000 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:

1,872,000 gals × 0.015664 (FACTOR SOLIDS/gal SOLUTION) = 29,323 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:

1,872,000 gals × 8.361064 (FACTOR WT/gal SOLUTION) × 0.001873 (SOLIDS FACTOR) = 29,316 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × SOLIDS FACTOR = FT^3 SOLIDS

1,872,000 gals × 0.13369 × 0.001873 = 469 FT^3 SOLIDS (TOTAL SOLIDS)

(24)

086782

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

CW 10-80 = 0.42 ± .02
U235

VVB - FVA

WT (LBS) SOLIDS

DEPLETED (90%)

29,323 LBS X .90 = 26,391 LBS SOLIDS (DEPL'D.)

ENRICHED (10%)

29,323 LBS X .10 = 2,932 LBS SOLIDS

TOTAL 29,323 (ENR.)

FT³ SOLIDS

DEPLETED (90%)

469 FT³ X .90 = 422 FT³ SOLIDS (DEPL'D)

ENRICHED (10%)

469 FT³ X .10 = 47 FT³ SOLIDS (ENR.)

TOTAL 469

DATE 1-5-81

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT DECEMBER, 1980

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 5255 mg/l (=ppm)

CALCULATIONS:

1) 5255 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.043855 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal. WATER)
+ 0.043855 (SOLIDS/gal. SOLUTION)
TOTAL 8.389255 (CALCULATED WT./gal SOLUTION)

3) 0.043855 (SOLIDS/gal SOLUTION) / 8.389255 (WT/gal SOLUTION) = 0.005228 = 0.5228% SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,302,400 gals.
DATE: DEC. 80

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,302,400 gals × 0.043855 (FACTOR SOLIDS/gal SOLUTION) = 57,117 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,302,400 gals × 8.389255 (FACTOR WT/gal SOLUTION) × 0.005228 (SOLIDS FACTOR) = 57,122 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × SOLIDS FACTOR = FT^3 SOLIDS

1,302,400 gals × 0.13369 × 0.005228 = 910 FT^3 SOLIDS (COMPACTED)

(24)

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA—VVB

WT(LBS) SOLIDS

DEPLETED (84%)

57,117 LBS X .84 = 47,978 LBS SOLIDS (DEPL'D)

ENRICHED (16%)

57,117 LBS X .16 = 9,139 LBS SOLIDS (ENR.)

TOTAL 57,117

FT³ SOLIDS

DEPLETED (84%)

910 FT³ X .84 = 764 FT3 SOLIDS (DEPL'D)

ENRICHED (16%)

910 FT³ X .16 = 146 FT3 SOLIDS (ENR.)

TOTAL 910

086795

1-5-81

TABULATION: DISSOLVED SOLIDS FOR DEC. '80

-4944

(24)

00 T

VVB-FVA

Clearwell (withdrawals)

69.0
— 0 —
— 0 —
— 0 —
— 0 —

70.0
76.0
68.0
77.0
77.0
81.0
71.0
67.0
68.0
72.0
57.0
51.0
51.0
72.0
72.0
72.0
72.0
72.0
72.0
72.0
72.0
72.0
72.0
72.0
63.0
72.0

Lbl (1000 gal units)

1,882.0 T

00 T

-4944

	150,351
	—0—
	—0—
	—0—
	—0—
	137,340
	153,216
TOTAL	138,312
SOLIDS	151,074
	134,365
	141,345
	108,701
	126,563
	135,864
	141,264
	103,569
	88,995
	88,995
	130,824
	117,792
	146,448
	125,640
	143,856
	128,232
	146,448
	151,704
	146,448
	125,640
	117,792
	125,874
	125,640
	3,532,292 T
	00 T
FVA-VVB	
	2.73.6
Vol (1000 gal. units)	3.13.5
	3.61.0
	2.37.5
	1.69.1
	1,3.54.7 T
	00 T
	1,358,150
TOTAL	3,019,319
SOLIDS	2,010,409
	407,312
	324,334
	7.119,524 T
	00 T

086797

-4944

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — For the Month of December 1980

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gals. units TIMES TOTAL SOLIDS)	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units TIMES TOTAL SOLIDS	PRECIPITATION 2.15
1	69000	2172	+7	2179	150,351						
2	*			—	—						
3	*			—	—	273600	1564	3700	5264	1,358,150	
4	*			—	—						
5	*			—	—						
6	70,000	1955	+7	1962	137,340						
7	76,000	2008	+7	2016	153,216						
8	68000	2027	+7	2034	138,312						
9	72,000	1955	+7	1962	151,074						
10	77,000	1738	+7	1745	134,365	313500	7506	2125	9631	3,019,319	
11	81,000	1738	+7	1745	141,345						
12	71,000	1524	+7	1531	108,701						
13	67000	1882	+7	1889	126,563						
14	68000	1991	+7	1998	135,864						
15	72000	1955	+7	1962	141,264						
16	57,000	1810	+7	1817	103,569						
17	51,000	1738	+7	1745	88,995	361000	3231	2338	5569	2,010,409	
18	51,000	1738	+7	1745	88,995						
19	72,000	1810	+7	1817	130,824						
20	72,000	1629	+7	1636	117,792						
21	72000	2027	+7	2034	146,448						
22	72,000	1738	+7	1745	125,640						
23	72,000	1991	+7	1998	143,856						
24	72,000	1774	+7	1781	128,232	237500	84	1631	1715	407,31[illegible]	
25	72,000	2027	+7	2034	146,448						
26	72,000	2100	+7	2107	151,704						
27	72,000	2027	+7	2034	146,448						
28	72,000	1738	+7	1745	125,640						
29	72,000	1629	+7	1636	117,792						
30	63000	1991	+7	1998	125,874						
31	72000	1738	+7	1745	125,640	169,100	492	1566	1912	324,334	
AVG.[1]	1662.0	[2]			3,532,292	1354.7				7,119,524	

NOTES: [1] Arithmetic averages

* Not pumped this date

$\frac{3,532,292}{1662.0} = 1877$ mg/l (=ppm) WT'D AVER. (TOTAL SOLIDS DECEMBER, 1980) CLEARWELL WITHDRAWALS FOR RELEASE

$\frac{7,119,524}{1354.7} = 5255$ mg/l (=ppm) WT'D AVER. (TOTAL SOLIDS DECEMBER, 1980) GEN. SUMP PUMPINGS TO PIT AREA.

087798

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION - NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES FVA - VVB

BG 1/9/81.

NMC ML FILECOPY Period DECEMBER 1-31, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO 209)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS.	U LBS.	U GMS. KGS.	U LBS.	U GMS.
0.98	%U235 5098-200			(a) 0001	14						14
862	PLT 2 REFINERY			3	1470					3	1470
1.25	%U235 5125-980					(b) 0001	11				11
832	PLT 9 ZIRNLO DECLAD					2	871			2	871
TOTAL				3	14 1470	2	11 871			5	25 2341

SOURCE (OR TYPE) SOLIDS	WT (LBS) SOLIDS	VOLUME (FT³) SOLIDS
(a) GENERAL SUMP	9,139	146
(b) ZIRNLO SLURRY	1570	21
TOTAL	10,709	167

0867799

4944

217

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION - NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES VVB – FVA

Period DECEMBER 1-31, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS.
0.98	%U235 5098 – 200			0001	14						14
862	PLT. 2 REFINERY			3	1470					3	1470
	TOTAL			3	14 1470					3	14 1470

WT. OF SOLIDS 2,932

VOLUME OF SOLUTION 47

088800

218

14944

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Period DECEMBER, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Prepared By GPETERSON

MATERIAL BALANCE ACCOUNT		STACK (IWO 211)		RIVER (IWO 211)						TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS.	U LBS.	U GMS.					U LBS.	U GMS.
0.98	%U235 5098-200			0001	31						
862	PLT.2 REFINERY			7	3193					7	31 3193
0.95	%U235 5095-800	0132	52	0001	30						
612	PLT.8 RECOVERY	12	5491	7	3193					19	82 8684
1.25	%U235 5125-980			0001	12						
832	PLT.9 ZIRNLO DECLAD			2	926					2	12 926
1.0	%U235 5100-800	0132	15								
612	PLT.8 RECOVERY	3	1501							3	15 1501
	TOTAL	15	67 6992	16	73 7312					31	140 14,304

088801

219

4944

NATIONAL LEAD COMPANY OF OHIO
ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES FVA – VVB

Period DECEMBER 1-31, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO 210)		PIT 5 (IWO 210)		PIT 6 (IWO 210)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U GMS./KGS.	U LBS.	U KGS.
0.20 %U235 352	H093-530. PLT5 CASTING			(a) D001 8	4					8	4
0.20 %U235 372	H093-620 PLT6 MACHINING			(a) D001 6	3	(b) D001 4	2			10	5
0.20 %U235 502	H093-920 PLT9 INGOT PREP.			(a) D001 3	1					3	1
TOTAL				17	8	4	2			21	10

SOURCE (OR TYPE) SOLIDS	WT (LBS) SOLIDS	VOLUME (FT³) SOLIDS
(a) GENERAL SUMP	47,978	764
(b) SALT OIL WASH	418	7
(c) NUSAL QUENCH	0	0
(d) CERAMICS	0	0
TOTAL	48,396	771

208980

220

4044

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES VVB – FVA

Period DECEMBER 1-31, 19

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 210)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U KGS.
0.20	% U235 H093-530			D001							
352	PLT 5 CASTING			14	6					14	6
0.20	% U235 H093-620			D001							
372	PLT 6 MACHINING			15	7					15	7
	TOTAL			29	13					29	13

WT (LBS) SOLIDS 26,391

VOLUME (FT³) SOLIDS 422

221

086803

4644

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Period DECEMBER 1-31, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		STACK (IWO 212)		RIVER (IWO 212)						TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.					U LBS.	U KGS.
0.20 % U235 352	H093-530 PLT 5 CASTING			D001 40	18					40	18
0.20 % U235 372	H093-620 PLT 6 MACHINING			D001 50	23					50	23
0.20 % U235 502	H093-920 PLT 9 INGOT PREP			D001 7	3					7	3
0.20 % U235 332	H082-400 PLANT 4 UF4	D065 2	1							2	1
	TOTAL	2	1	97	44					99	45

089804

222

1-4944

-4944

1-7-81

DECEMBER 1980
MEASURED LOSSES

X-TRA COPY

086805

ROUTINE OPERATING LOSSES FVA - VVB

Type of Material: [ ] Normal [X] Enriched [ ] Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO 209)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS.	U LBS.	U GMS./KGS.	U LBS.	U GMS.
0.98	% U235										
862	PLT 2 REFINERY			(a) 3	14 1470					3	14 1470
1.25	% U235										
632	PLT 9 ZIRNLO DECLAD					(b) 2	11 871			2	11 871
											224
											086806
TOTAL				3	14 1470	2	11 871			5	25 2341

SOURCE (OR TYPE) SOLIDS	WT (LBS) SOLIDS	VOLUME (FT³) SOLIDS
(a) GENERAL SUMP	9,139	146
(b) ZIRNLO SLURRY	1,570	21
TOTAL	10,709	167

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES VVB – FVA

Period DECEMBER 1-31, 1980

Type of Material: [ ] Natural [X] Enriched [ ] Depleted

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 209)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U GMS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS.
0.98 % U_{235}											
862	PLT. 2 REFINERY			3	1470 (14)					3	1470 (14)
	TOTAL			3	1470 (14)					3	1470 (14)

ALPHA RESULTS 2,932

VOLUME (FT³) 47

-4944

225

086807

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Period DECEMBER, 1980

Type of Material: ☐ Normal ☒ Enriched ☐ Depleted

Prepared By G PETERSON

-4944

MATERIAL BALANCE ACCOUNT		STACK (IWO 211)		RIVER (IWO 211)						TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS.	U LBS.	U GMS.					U LBS.	U GMS.
0.98	%U235										
862	PLT. 2 REFINERY			7	31 3193					7	31 3193
0.95	%U235										
612	PLT. 8 RECOVERY	12	52 5491	7	30 3193					19	82 8684
1.25	%U235										
832	PLT. 9 ZIRNLO DECLAD			2	12 926					2	12 926
1.0	%U235										
612	PLT. 8 RECOVERY	3	15 1501							3	15 1501
TOTAL		15	67 6992	16	73 7312					31	140 14,304

226

086808

ROUTINE OPERATING LOSSES FVA – VVB

Type of Material: [ ] Normal [ ] Enriched [X] Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO 210)		PIT 5 (IWO 210)		PIT 6 (IWO 210)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U KGS.	U LBS.	U GMS./KGS.	U LBS.	U KGS.
0.20	%U235										
352	PLT5 CASTING			(a) 8	4					8	4
0.20	%U235										
372	PLT6 MACHINING			(a) 6	3	(b) 4	2			10	5
0.20	%U235										
502	PLT9 INGOT PREP.			(a) 3	1					3	1
	TOTAL			17	8	4	2			21	10

SOURCE (OR TYPE) SOLIDS	U (LBS) SOLIDS	VOLUME (FT³) SOLIDS
(a) GENERAL SUMP	47,978	764
(b) SALT OIL WASH	418	7
(c) NUSAL QUENCH	0	0
(d) CERAMICS	0	0
TOTAL	48,396	771

-4944

227

086809

NLO-AC-1780 (REV. 8/2/80)

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES

VVB – FVA

Period DECEMBER 1-31, 1980

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Prepared By G. PETERSON

MATERIAL BALANCE ACCOUNT		PIT 4 (IWO)		PIT 5 (IWO 210)		PIT 6 (IWO)		PIT (IWO)		TOTAL LOSSES	
NO.	NAME	U LBS.	U GMS./KGS.	U LBS.	U KGS.	U LBS.	U GMS./KGS.	U LBS.	U GMS./KGS.	U LBS.	U KGS.
0.20	% U235										
352	PLT 5 CASTING			14	6					14	6
0.20	% U235										
372	PLT 6 MACHINING			15	7					15	7
	TOTAL			29	13					29	13

U (LBS) SOLID 26,391

VOLUME (FT³) SOLIDS 422

-4944

086810

228

NATIONAL LEAD COMPANY OF OHIO

ACCOUNTING DIVISION – NUCLEAR MATERIALS CONTROL DEPARTMENT

ROUTINE OPERATING LOSSES WST

Type of Material: ☐ Normal ☐ Enriched ☒ Depleted

Period DECEMBER 1-31, 1980

Prepared By G PETERSON

MATERIAL BALANCE ACCOUNT		STACK (IWO 212)		RIVER (IWO 212)						TOTAL LOSSES	
NO.	NAME	U LBS.	U KGS.	U LBS.	U KGS.					U LBS.	U KGS.
0.20	% U235										
352	PLT 5 CASTING			40	18					40	18
0.20	% U235										
372	PLT 6 MACHINING			50	23					50	23
0.20	% U235										
502	PLT 9 INGOT PREP			7	3					7	3
0.20	% U235										
332	PLANT 4 UF4	2	1							2	1
	TOTAL	2	1	97	44					99	45

4944

08881

1-6-81

GEN SUMP ACTIVITY
FOR PERIOD
12/25 THRU 12/31/80

(5) DEC 80

DECONTAMINATION 00 T

Vol (gals)

1,800
—0—
2,900
2,000
1,460
3,200
8,700
20,060 T

00 T

Cl-LBS

.014
—0—
NO SPL
.010
.011
.032
.174
.241 T

WATER PLT. SUMP 00 T

Vol (gals)

38,000
34,000
43,000
37,300
32,100
41,000
52,000
277,400 T

CLEAN UP WATER 00 T

Vol (gals)

4,800
1,000
1,800
800
1,200
2,100
1,400
13,100 T

GENSUMP TRANSFER TOCHEM. PIT		00 T
	55,000	
	—0—	
	4,000	
Vol (gals)	—0—	
	14,000	
	43,500	
	28,300	
	144,800	T

GEN. SUMP TRANSFER TORIVER		00 T
	—0—	
	—0—	
	40,000	
Vol (gals)	38,000	
	39,000	
	39,000	
	40,000	
	196,000	T

		00 T
	—0—	
	—0—	
	.080	
U-LBS	.038	
	.039	
	.039	
	.040	
	.236	T

	00 T

086813

-4944

(5) DEC '80

GENERAL SUMP TRANSFERS TO CHEMICAL PIT DURING PERIOD 12/25 THROUGH 12/31/80.

DATE	VOLUME (gallons)	X		(SPL NO.)	=	U-LBS
12/25	50,000	X	<.000,001	(1681)	=	.05
	5,000	X	<.000,001	(1682)	=	.01
TOTAL	55,000					.06
12/26	- 0 -					- 0 -
12/27	4,000	X	.000,01	(1683)	=	.04
12/28	- 0 -					- 0 -
12/29	6,000	X	.000,015	(1677)	=	.09
	8,000	X	.000,011	(at WP)	=	.09
TOTAL	14,000					.18
12/30	12,000	X	.000,008	(1690)	=	.10
	15,400	X	.000,05	(1692)	=	.77
	11,500	X	.000,008	(1691)	=	.09
	4,600	X	.000,006	(1693)	=	.03
TOTAL	43,500					.99
12/31	16,000	X	.000,02	(1698)	=	.32
	12,300	X	.000,005	(1699)	=	.06
TOTAL	28,300					.38

Summary	U-LBS
12/25	.06
12/26	- 0 -
12/27	.04
12/28	- 0 -
12/29	.18
12/30	.99
12/31	.38
	1.65 U-LBS

086814

ENGINEERING DIVISION - WATER PLANT

REC'D. 1-6-81 AM

During the Period 12-25-80 THRU 12-31-80

Prepared By

REPORT OF SEWER DISCARDS TO THE GENERAL SUMP

-4944

DATE	PLANT 2 RAFFINATE GALLONS	PLANT 2 RAFFINATE REPORTED TOTAL LBS.	PLANT 2 RAFFINATE TRACER GAL.-SLAKER	PLANT 2 RAFFINATE TRACER TOTAL LBS.	High U ~~RAFFINATE~~ TO PLANT 8 GALLONS	pH LOW	pH HIGH	FOR PLT 8 PLANT 2 FILTRATE TANK 3 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
12-25-80	NONE				NONE			NONE		
26	"				"			"		
27	"				"			"		
28	"				"			"		
29	8000	Not Rep'd	—	.088	"			"		
30	NONE	—	—	—	"			25500	21.93	—
31	"	—	—	—	"			NONE	—	—

DATE	PLANT 2 CONDENSATE GALLONS	PLANT 2 CONDENSATE TRACER TOTAL LBS.	PLANT 2 DIG. CONDENSATE GALLONS	PLANT 8 FILTRATE GALLONS	PLANT 8 FILTRATE TRACER TOTAL LBS.	LABORATORY GALLONS	LABORATORY TRACER TOTAL LBS.	PILOT PLANT GALLONS	PILOT PLANT REPORTED TOTAL LBS.	PILOT PLANT TRACER TOTAL LBS.
12-25-80	NONE		NONE	NONE	—	NONE	—	NONE		
26	"		"	"	—	5500	.22	"		
27	"		"	"	—	NONE	—	"		
28	"		"	"	—	"	—	"		
29	"		"	12000	.096	"	—	"		
30	"		"	NONE	—	"	—	11500	.111	.092
31	"		"	12300	.066	3000	.06	NONE	—	—

DATE	PLANT 4 GALLONS	PLANT 4 REPORTED TOTAL LBS.	PLANT 4 TRACER TOTAL LBS.	PLANT 5 GALLONS	PLANT 5 REPORTED TOTAL LBS.	PLANT 5 TRACER TOTAL LBS.	PLANT 6 GALLONS	PLANT 6 REPORTED TOTAL LBS.	PLANT 6 TRACER TOTAL LBS.	LIME SLAKER GALLONS
12-25-80	NONE			NONE			NONE	NONE		NONE
26	"			"			"	"		"
27	"			"			"	"		"
28	"			"			"	"		"
29	"			"			4000	.16	.24	"
30/31	NONE/NONE	—/—	—/—	NONE/NONE	—/—	—/—	4000/4000	.12/.28	.12/.20	NONE/"

DATE	PLANT 9 GALLONS	PLANT 9 REPORTED TOTAL LBS.	PLANT 9 TRACER TOTAL LBS.	DECONTAMINATION GALLONS	DECONTAMINATION TRACER TOTAL LBS.	WATER PLANT SUMP GALLONS	COOLING WATER GALLONS	CLEAN UP WATER GALLONS (Est.)	TANK FARM Gallons	TANK FARM #21
12-25-80	NONE			1800	.014	38000	NONE	4800	NONE	—
26	"			NONE	—	34000	"	1000	"	—
27	"			2900	No Sample	43000	5000	1800	"	—
28	"			2000	.010	37300	NONE	800	"	—
29	"			1460	.011	32100	"	1200	5040	.015
30	"			3200	.032	41000	"	2100	NONE	—
31	"			8700	.174	52000	"	1400	10000	.20

DATE	HEEL DISPOSITION GALLONS	HEEL DISPOSITION LBS./GAL.	HEEL DISPOSITION CHEMICAL PIT TOTAL LBS.	HEEL DISPOSITION TANK 5 TOTAL LBS.	GENERAL SUMP TRANSFERS (EXCLUDING HEELS) CHEMICAL PIT GALLONS	CHEMICAL PIT LBS./GAL.	CHEMICAL PIT TOTAL LBS.	MIAMI RIVER GALLONS	MIAMI RIVER LBS./GAL.
12-25-80	NONE				55000	.00001	.700	NONE	—
26	"				NONE	—	—	"	—
27	"				4000	.0000100	.040	40000	.00002
28	"				NONE	—	—	38000	.00001
29	"				14000	.0000127	.178	39000	.00001
30	"				43500	.0000227	.986	39000	.00001
31	"				28300	.0000135	.382	40000	.00001

1-6-81 pm

GEN SUMP ACTIVITY
SUMMARY FOR
DECEMBER 1980

PLT 2 PADH2O 00 T

Vol (Gals)

10,000
14,000
-0-
6,000
8,000
38,000 T

00 T

U-LBS TRACER

.045
.090
-0-
.090
.088
.313 T

PLT8 FILTRATE 00 T

Vol (Gals)

141,500
-0-
139,200
27,500
24,300
332,500 T

00 T

U-LBS

.693
-0-
1.443
.136
.162
2.434 T

00 T

-4944

	2.434 T
	00 T
LAB	
Vol (gals)	23,080 ✓
	33,800 ✓
	14,600 ✓
	5,000 ✓
	8,500 ✓
	84,980 T
	00 T
U-LBS	.889 ✓
	.694 ✓
	.387 ✓
	.450 ✓
	.280 ✓
	2.700 T
	00 T
PILOT PLT	
Vol (gals)	19,100 ✓
	10,000 ✓
	-0- ✓
	23,000 ✓
	11,500 ✓
	63,600 T
	00 T
U-LBS Rept'd.	.2700 ✓
	.2800 ✓
	-0- ✓
	.2675 ✓
	1.1110 ✓
	9.285 T
	00 T
U-LBS TRACER	.280 ✓
	.200 ✓
	-0- ✓
	.272 ✓
	.092 ✓
	.844 T

086817

-4944

PLT5

	00 T
Vol(gals)	11,000
	6,000
	5,500
	4,500
	-0-
	27,000 T
	00 T
U-LBS Rept'd.	1.32
	.06
	1.27
	.63
	-0-
	3.28 T
	00 T
U-LBS TRACER	1.48
	.78
	1.32
	1.62
	-0-
	5.20 T

PLT.6

	00 T
Vol(gals)	16,000
	20,000
	16,000
	16,000
	12,000
	80,000 T
	00 T
U-LBS Rept'd	.440
	.292
	.440
	.760
	.560
	2.492 T
	00 T
U-LBS TRACER	.700
	1.056
	.560
	.840
	.560
	3.716 T

3.7101

-4944

LIME SHAKER		00 T
Vol (gals)	1,000	
	7,800	
	1.000	
	—0—	
	—0—	
	9,800 T	

DECONTAMINATION		00 T
Vol (gals)	20,720	
	26,200	
	11,700	
	17,900	
	20,060	
	96,580 T	

U-LBS TRACER	.564
	.602
	.488
	.984
	.241
	2,879 T

WATER PLT SUMP		00 T
Vol (gals)	243,000	
	253,000	
	244,000	
	287,000	
	277,400	
	1,304,400 T	

CLEAN UP WATER		00 T
Vol (gals)	9,100	
	14,000	
	13,000	
	9,100	
	13,100	
	58,300 T	

086819

-4944

Vol(gals)	26,000
	32,000
	20,500
	6,000
	15,040
	99,540 T
	00 T
U-LBS	.024
	.520
	.240
	.360
	.215
	1.359 T
GEN. SUMP TRANSFERS TO CHEM PIT	00 T
Vol(gals)	220,000
	285,000
	339,000
	313,600
	144,800
	1,302,400 T
	00 T
U-LBS	7.64
	4.84
	3.99
	2.13
	1.65
	20.25 T
GEN SUMP TRANSFERS TO RIVER	00 T
Vol(gals)	189,000
	117,000
	153,000
	114,000
	196,000
	769,000 T
	00 T
U-LBS.	.199
	.120
	.158
	.114
	.236
	.827 T
	00 T

086820

NATIONAL LEAD COMPANY OF OHIO
ENGINEERING DIVISION - WATER PLANT

During the Period _____

Prepared By G. PETERSON

REPORT OF SEWER DISCARDS TO THE GENERAL SUMP

DATE	PAD WATER PLANT 2 ~~RAFFINATE~~ REPORTED GALLONS	REPORTED TOTAL LBS.	TRACER GAL.-SLAKER	TRACER TOTAL LBS.	HIGH U ~~RAFFINATE~~ TO PLANT 8 GALLONS	U-LBS/TRACER pH LOW	REPT'D U-LBS ~~pH HIGH~~	PLANT 2 FILTRATE GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
12/1 THRU 12/6/80	10,000			0.045	38,000	—	393.3	-0-	—	35 —
12/7 THRU 12/12/80	14,000			.09+	50,000	33+	145	-0-	—	23 —
12/13 THRU 12/18/80	—			—	—			56000	43.1	2 —
12/19 THRU 12/24/80	6,000			.09	-0-			-0-		
12/25 THRU 12/31/80	8,000			.088	-0-			25,500	21.93	
	38,000			.313+	88,000	33+	538.3	81,500	65.03	

DATE	PLANT 2 ~~CONDENSATE~~ DEJONIZER H2O GALLONS	TRACER TOTAL LBS.	PLANT 2 DIG. CONDENSATE GALLONS	PLANT 8 FILTRATE GALLONS	TRACER TOTAL LBS.	LABORATORY GALLONS	TRACER TOTAL LBS.	PILOT PLANT GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
(1) 12/1 THRU 12/6/80	-0-	—	-0-	141,500	0.693	23,080	.889	19,100	.27	.28
(2) 12/7 THRU 12/12/80	-0-	—	-0-	-0-	—	33,600	.694	10,000	.28	.20
(3) 12/13 THRU 12/18/80	8000	.08	-0-	139,200	1.443	14,600	.387	-0-	—	—
(4) 12/19 THRU 12/24/80	-0-	—	-0-	27,500	.136	5,000	.45	23,000	.2675	.272
(5) 12/25 THRU 12/31/80	-0-	—	-0-	24,300	.162	8,500	.28	11,500	.111	.092
	8000	.08	-0-	332,500	2.434	84,980	2.700	63,600	.9285	.844

DATE	PLANT 4 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	PLANT 5 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	PLANT 6 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	LIME SLAKER GALLONS
(1) 12/1 THRU 12/6/80	-0-	—	—	11,000	1.32	1.48	16,000	0.44	0.70	1000
(2) 12/7 THRU 12/12/80	-0-	—	—	6,000	.06	.78	20,000	.292	1.056	7800
(3) 12/13 THRU 12/18/80	-0-	—	—	5,500	1.27	1.32	16,000	.44	.56	1000
(4) 12/19 THRU 12/24/80	-0-	—	—	4,500	.63	1.62	16,000	.76	.84	-0-
(5) 12/25 THRU 12/31/80	-0-	—	—	-0-	—	—	12,000	.56	.56	-0-
	-0-			27,000	3.28	5.20	80,000	2.492	3.716	9,800

DATE	PLANT 9 GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	DECONTAMINATION GALLONS	TRACER TOTAL LBS.	WATER PLANT SUMP GALLONS	COOLING WATER GALLONS	CLEAN UP WATER GALLONS (Est.)	TANK FARM GALLONS	TANK FARM U-LBS
(1) 12/1 THRU 12/6/80	-0-	—	—	20,720	0.564	243,000	-0-	9,100	26,000	0.024
(2) 12/7 THRU 12/12/80	-0-	—	—	26,200	.602	253,000	-0-	14,000	32,000	.52
(3) 12/13 THRU 12/18/80	8000	.048	.24	11,700	.488	244,000	-0-	13,000	26,500	.24
(4) 12/19 THRU 12/24/80	2000	.36 (To PLT 8)	—	17,900	.964	287,000	-0-	9,100	6,000	.36
(5) 12/25 THRU 12/31/80	-0-			20,060	.241	277,400	5000	13,100	15,040	.215
	10,000	.408	.24	96,580	2.879	1,304,400	5000	58,300	99,540	

DATE	HEEL DISPOSITION GALLONS	LBS./GAL.	CHEMICAL PIT TOTAL LBS.	TANK 5 TOTAL LBS.	GENERAL SUMP TRANSFERS (EXCLUDING HEELS) CHEMICAL PIT GALLONS	LBS./GAL.	TOTAL LBS.	MIAMI RIVER GALLONS	LBS./GAL.
(1) 12/1 THRU 12/6/80	-0-			—	220,000		7.64	189,000	
(2) 12/7 THRU 12/12/80	-0-			—	285,000		4.84	117,000	
(3) 12/13 THRU 12/18/80	-0-				339,000		3.99	153,000	
(4) 12/ THRU 12/24/80	-0-				313,600		2.13	114,000	
(5) 12/25 THRU 12/31/80	-0-				144,800		1.65	196,000	

086821

2235923

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — For the Month of January 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units times TOTAL SOLIDS)	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units times TOTAL SOLIDS)	PRECIPITATION
1	63000	1810	+7	1817	114,471						
2	63000	1810	+7	1817	114,471						
3	X										
4	X										
5	X										
6	X										
7	X					485000	3892	2109	6001	2,934,489	
8	X										
9	X										
10	X										
11	X										
12	X										
13	39000	1665	+7	1672	65,208						
14	62000	1665	+7	1672	103,664	467,800	2894	5437	8331	3,897,242	
15	63000	1810	+7	1817	114,471						
16	38,200	2009	+7	2016	77,011						
17	74000	2389	+7	2396	177,304						
18	38000	2534	+7	2541	96,558						
19	36,000	2317	+7	2324	83,664						
20	50,000	2244	+7	2251	112,550						
21	52,000	2462	+7	2469	128,388	220,800	3472	13425	16897	3,730,858	
22	X										
23	X										
24	X										
25	X										
26	X										
27	X										
28	X										
29	X					291,000	294	8586	8880	2,586,990	
30	X										
31	X										
Avg.[1]	578.2	2			1,187,760	1,468.6				13,149,579	
Total (1000 gal units)											

NOTES: [1] Arithmetic averages

X not pumped this date

$\frac{1,187,760}{578.2} = 2054$ mg/l (ppm) WT'D AVER. (TOTAL SOLIDS JAN. 1981) CLEARWELL WITHDRAWALS FROM PIT AREA

$\frac{13,149,579}{1,468.6} = 8,954$ mg/l (ppm) WT'D. AVER. (TOTAL SOLIDS JAN 1981) GEN. SUMP PUMPINGS TO PIT AREA N/M.

240

22835922

-03-4944

NMC FILE COPY

-4944

NLO, Inc.

A SUBSIDIARY OF NL INDUSTRIES, INC.
CINCINNATI, OHIO 45239

2129947

February 10, 1981

SUBJECT ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, JANUARY 1981

TO S. F. Audia

FROM C. H. Handel

REFERENCE

The following tabulations are a summary of the routine operating losses of nuclear materials from the production stream for the period January 1 through January 31, 1981.

	Source	Quantity	Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
I.	Discards to NLO Pits				
	General Sump	1,509,800 gal.	13	11	2
	Plant 5 Ceramics	3,438 kgs.	8	8	-
	Plant 6 NuSal Quench Water	2,000 gal.	2	2	-
	Plant 6 Salt Oil Wash Water	6,000 gal.	4	4	-
	Process Residues	103,830 kgs.	8,388	8,388	-
	Total Discards to Pits		8,415	8,413	2
	Transfers from Pit to River		1	1	0
	Net Discards to Pits		8,414	8,412	2
II.	Losses to River[a]				
	Manhole 175	9,199,000 gal.	28	24	4
	Paddy's Run	36,500 gal.	0	0	0
	Total River Losses	9,235,500 gal.	28	24	4
III.	Stack Losses to Atmosphere				
	Plant 5 (G5-260; G5A-100; BLDG 55)		20	20	-
	Total Stack Losses		20	20	-

[a]Includes 1 kg. uranium transferred from Pit 5 to the river and <1 kg. uranium pumped to the river from the General Sump.

086745

241

ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, JAN. 1981
S. F. Audia
February 10, 1981
Page 2

Source	Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
~~Breakd of Routine Operating Losses~~			
I. Net Discards to Pits	8,414	8,412	2
II. Losses to River	28	24	4
III. Stack Losses to Atmosphere	20	20	-
OVER-ALL TOTAL ROUTINE OPERATING LOSSES	8,462	8,456	6

C. H. Handel

C. H. Handel

GEP/bh

cc: W. J. Adams
P. D. Ball
M. W. Boback - K. N. Ross
A. R. Diehl
J. Farr
D. F. Gutzwiler - H. J. Knue
W. C. Hill
R. C. Kispert
W. W. Mahaffey
A. J. Mangold
E. M. Nutter
L. Pennington
G. E. Peterson (Record Copy)
D. A. Tippenhauer - D. W. Hoover

(26) FEB 81

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data

For the Month of February 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l	CLEARWELL (VVB-FVA) VOLUME (1000 gal units) X TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) VOLUME	PRECIPITATION
1	84,400	3982	+7	3989	336,672						
2	140,300	3620	+7	3627	508,868						
3	164,400	3475	+7	3482	572,441	357,400	848	13636	14484	5,176,582	
4	150,600	3620	+7	3627	546,226						
5	144,000	3620	+7	3627	522,288						
6	140,000	4272	+7	4279	599,060						
7	140,000	4887	+7	4894	685,160						
8	28,000	4905	+7	4912	137,536						
9	28,000	4887	+7	4894	137,032						
10	28,000	5068	+7	5075	142,100	374,000	2611	11623	14234	5,323,516	
11	28,000	5430	+7	5437	152,236						
12	56,000	3982	+7	3989	223,384						
13	56,000	3982	+7	3989	223,384						
14	35,000	4416	+7	4423	154,805						
15	28,000	4489	+7	4496	125,888						
16	28,000	4416	+7	4423	123,844						
17	28,000	3620	+7	3627	101,556	362,600	7746	5933	13679	6,410,405	
18	0	0		—	—						
19	56,000	4416	+7	4423	247,688						
20	48,000	4344	+7	4351	208,848						
21	56,000	3765	+7	3772	211,232						
22	56,000	4344	+7	4351	243,656						
23	28,000	4344	+7	4351	121,828						
24	56,000	4344	+7	4351	243,656	495,000	4413	11267	15680	6,977,600	
25	0	0		—	—						
26	56,000	3982	+7	3989	223,384						
27	56,000	4344	+7	4351	243,656						
28	56,000	4344	+7	4351	243,656						
29											
30											
31											
AVG.[1]	1775.7	[2]			7,284,435	1539.0				23,881,103	

26 PUMPINGS

2235941

NOTES: [1] Arithmetic averages

$$\frac{7,284,435}{1775.7} = 4102 \text{ mg/l (ppm)}$$

WT'D. AVER. (TOTAL SOLIDS FEB. 1981) CLEAR WELL WITHDRAWALS FROM PIT AREA

$$\frac{23,881,103}{1539.0} = 15,517 \text{ mg/l (ppm)}$$

WT'D. AVER. (TOTAL SOLIDS FEB. 1981) GEN. SUMP PUMPINGS TO PIT AREA

NMC (26)

243

0375846

0444

-4944

ok/ARD 3/9

ok/BB 3/9

2129946

NLO, Inc.

A SUBSIDIARY OF NL INDUSTRIES, INC.

CINCINNATI, OHIO 45239

February 10, 1981

SUBJECT ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, FEBRUARY, 1981

TO R. M. Spenceley

FROM C. H. Handel

REFERENCE

The following tabulations are a summary of the routine operating losses of nuclear materials from the production stream for the period FEBRUARY 1 THROUGH FEBRUARY 28, 1981.

Source	Quantity		Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
I. Discards to NLO Pits					
General Sump	1,394,000	gal.	18	14	4
~~Plant 2 Filter Slurry~~		~~gal.~~			
Plant 5 Ceramics	3,175	kgs.	6	6	—
~~Plant 6 NuSal Quench Water~~		~~gal.~~			
Plant 6 Salt Oil Wash Water	6,000	gal.	2	2	—
~~Plant 8 Raffinate Cake~~		~~kgs.~~			
~~Plant 9 Zirnlo Slurry~~		~~gal.~~			
Process Residues	61,386	kgs.	5,356	5,356	—
Total Discards to Pits			5,382	5,376	4
Transfers from Pit to River			4	4	0
Net Discards to Pits			5,378	5,374	4

088741

244

A PRIME CONTRACTOR FOR THE DEPARTMENT OF ENERGY

ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, FEBRUARY 1981

R. M. Spenceley
Date February 10, 1981.
Page 2

	Quantity	Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
II. Losses to River[a]				
Manhole 175	17,954,200 gal.	58	46	12
Paddy's Run	178,900 gal.	0	0	0
Total River Losses	18,133,100 gal.	58	46	12
III. Stack Losses to Atmosphere				
PLT4 (G4-14)[b]		—	—	—
PLT5 (G5-256; G5-260)		7	7	—
Total Stack Losses		7	7	—

Resumé of Routine Operating Losses

I.	Net Discards to Pits	5378	5374	4
II.	Losses to River	58	46	12
III.	Stack Losses to Atmosphere	7	7	—
OVER-ALL TOTAL ROUTINE OPERATING LOSSES		5443	5427	16

[a]Includes 4 kgs. uranium transferred from Pit 5 to the river and <1 kgs. uranium pumped to the river from the General Sump.

b FILTER CHANGED BUT ANALYSIS IS NOT COMPLETE.

C. H. Handel

GEP/

cc: P. D. Ball
G. R. Blank
M. W. Boback - K. N. Ross
A. R. Diehl
J. Farr
D. F. Gutzwiler - H. J. Knue
W. C. Hill
R. C. Kispert
W. W. Mahaffey
A. J. Mangold
E. M. Nutter
L. Pennington
G. E. Peterson (Record Copy)
D. A. Tippenhauer - D. W. Hoover

086742

(26) 81

-4944

Month FEBRUARY, 1981

PUMPING TO GENERAL SUMP

Source	GALLONS
~~Plant 1~~ TANK FARM	97,100
Plant 2 Filtrate SLOP WATER	63,000
Plant 2 Raffinate	217,800
Plant 2 Condensate	41,000
Plant 4	-0-
Plant 5	28,800
Plant 6	76,000
Plant 8	584,200
Plant 9	15,000
Pilot Plant	63,300
Analytical Laboratory	118,600
Decontamination Pad	153,900
Non SS Water	1,419,400
Total	2,878,100

FEB. '81 00 T

LIME SLAKER	36.800
WATER PLT SUMP	1.333.400
COOLING WATER	13.000
CLEAN UP WATER	36.200
TOTAL	1.419.400 T

00 T

97.100
63.000
217.800
41.000
-0-
28.800
76.000
584.200
15.000
63.300
118.600
153.900
1.419.400
2.878.100 T

00 T

3-2-81

FOR FEBRUARY, 1981

NON-RADIOACTIVE WATER

LIME SLAKER	36,800
WATER PLT. SUMP	1,333,400
COOLING WATER	13,000
CLEAN UP WATER	36,200
TOTAL	1,419,400

PREPARED BY
G PETERSON
NMC DEPT
3-2-81

088743

246

ORIGINAL TO
B SPINDLER
3-2-81 (1000)

(26)

NATIONAL LEAD COMPANY OF OHIO
DIVISION - WATER PLANT

SUMMARY (MONTH)
GENERAL SUMP ACTIVITY

During the Period FEBRUARY 1-28, 1981

Prepared By G PETERSON

(26) FEB '81

SEWER DISCARDS TO THE GENERAL SUMP

	PLANT 2 RAFFINATE				HIGH-U RAFFINATE TO PLANT 8			PLANT 2 FILTRATE		
	REPORTED GALLONS	REPORTED TOTAL LBS.	TRACER GAL.-SLAKER	TRACER TOTAL LBS.	GALLONS	pH LOW	U-LBS ~~pH HIGH~~	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
①	10,700	2.306			116,000		27.28	48,000	27.28	—
②	17,400	1.62			25,500		—	58,000	—	—
③	-0-	—			22,300		—	54,000	—	—
④	-0-	—			48,200			46,000	—	—
⑤	16,700	5.623			32,800			15,000	—	—
	44,800	9,549			244,800		27.28	221,000	27.28	—

	PLANT 2 CONDENSATE		PLANT 2 DIG. CONDENSATE	PLANT 8 FILTRATE		LABORATORY		PILOT PLANT		
	GALLONS	TRACER TOTAL LBS.	GALLONS	GALLONS	TRACER TOTAL LBS.	GALLONS	TRACER TOTAL LBS.	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.
① 2/1 THRU 2/6/81	18,000	—	-0-	156,500	1.027	92,000	1.38	11,000	.251	.22
② 2/7 THRU 2/12/81	-0-	—	-0-	135,700	.53	28,000	2.66	18,500	.197	.21
③ 2/13 THRU 2/18/81	-0-	—	-0-	96,000	.454	24,000	1.614	16,000	.154	.42
④ 2/19 THRU 2/24/81	16,000	—	-0-	118,700	.50	22,500	5.089	11,500	.12	.20
⑤ 2/25 THRU 2/28/81	7,000	.13	-0-	77,300	.346	12,100	.81	6,300	.19	.19
	41,000	.13	-0-	584,200	2.857	118,600	11.553	63,300	.912	1.24

	PLANT 4			PLANT 5			PLANT 6			LIME SLAKER
	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	GALLONS
① 2/1 THRU 2/6/81	-0-	—	—	6000	.60	.66	20,000	.650	.45	5000
② 2/7 THRU 2/12/81	-0-	—	—	5800	.81	.52	16,000	.68	.84	19100
③ 2/13 THRU 2/18/81	-0-	—	—	5500	.495	.22	12,000	.44	.36	2200
④ 2/19 THRU 2/24/81	-0-	—	—	6000	1.08	.036	16,000	.298	.84	-0-
⑤ 2/25 THRU 2/28/81	-0-	—	—	5500	.32	.44	12,000	.62	.68	10500
	-0-	—	—	28,800	3.305	1.876	76,000	2.688	3.17	36,800

	PLANT 9			DECONTAMINATION		WATER PLANT SUMP	COOLING WATER	CLEAN UP WATER	TANK FARM	
	GALLONS	REPORTED TOTAL LBS.	TRACER TOTAL LBS.	GALLONS	TRACER TOTAL LBS.	GALLONS	GALLONS	GALLONS (Est.)	GALLONS	U-LBS
① 2/1 THRU 2/6/81	-0-	—	—	33,000	.738	325,300	10,000	7,100	36,000	.125
② 2/7 THRU 2/12/81	-0-	—	—	44,300	2.702	298,000	3,000	9,700	20,200	.03
③ 2/13 THRU 2/18/81	7000	.848	.932	36,500	3.935	261,100	-0-	9,400	8,900	.53
④ 2/19 THRU 2/24/81	-0-	—	—	32,500	4.90	265,000	-0-	6,500	18,000	1.86
⑤ 2/25 THRU 2/28/81	8000	.08	.24	7,600	.62	178,000	-0-	3,500	14,000	.036
	15000	.928	1.172	153,900	12.895	1,333,400	13,000	36,200	97,100	2.631

	HEEL DISPOSITION				GENERAL SUMP TRANSFERS (EXCLUDING HEELS)					
			CHEMICAL PIT	TANK 5	CHEMICAL PIT			MIAMI RIVER		
	GALLONS	LBS./GAL.	TOTAL LBS.	TOTAL LBS.	GALLONS	LBS./GAL.	TOTAL LBS.	GALLONS	LBS./GAL.	TOTAL LBS.
① 2/1 THRU 2/6/81	-0-				356,500		5.24	305,000		.305
② 2/7 THRU 2/12/81	-0-				319,500		11.01	236,000		.228
③ 2/13 THRU 2/18/81	-0-				139,200		5.60	231,000		.20
④ THRU 2/24/81	-0-				376,200		6.59	152,000		.16
⑤ THRU 2/28/81	-0-				187,600		4.20	113,000		.10
					+ 15,000 (TK 3 TO PIT 2/24/81)		6.00			
	-0-				1,394,000		38.64	1,137,000		.973

0867744

24

SK/RB 4/9/81

4944

2129945

NLO, Inc.

A SUBSIDIARY OF NL INDUSTRIES, INC.

CINCINNATI, OHIO 45239

April 10, 1981.

SUBJECT ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, MARCH, 1981

TO R. M. Spenceley

FROM C. H. Handel

REFERENCE

The following tabulations are a summary of the routine operating losses of nuclear materials from the production stream for the period MARCH 1 through MARCH 31, 1981.

Source	Quantity		Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
I. Discards to NLO Pits					
General Sump	1,539,100	gal.	15	12	3
~~Plant 2 Filter Slurry~~		~~gal.~~			
~~Plant 5 Ceramics~~		~~kgs.~~			
~~Plant 6 NuSal Quench Water~~		~~gal.~~			
Plant 6 Salt Oil Wash Water	7,500	gal.	6	6	—
~~Plant 8 Raffinate Cake~~		~~kgs.~~			
~~Plant 9 Zirnlo Slurry~~		~~gal.~~			
Process Residues	88,737	kgs.	8,267	8,267	
Total Discards to Pits			8,288	8,285	3
Transfers from Pit to River			2	2	0
Net Discards to Pits			8,286	8,283	3

086739

ROUTINE OPERATING LOSSES OF NUCLEAR MATERIALS FROM THE PRODUCTION STREAM, MARCH, 1981

R. M. Spenceley
Date April 10, 1981.
Page 2

	Quantity	Total U, Kgs.	Depl. U, Kgs.	Enr. U, Kgs.
II. Losses to River[a]				
Manhole 175	16,744,400 gal.	39	31	8
Paddy's Run	41,500 gal.	0	0	0
Total River Losses	16,785,900 gal.	39	31	8
III. Stack Losses to Atmosphere				
PLT4 (G4-14) (b)		–	–	–
Total Stack Losses		–	–	–

Resumé of Routine Operating Losses

I.	Net Discards to Pits	8286	8283	3
II.	Losses to River	39	31	8
III.	Stack Losses to Atmosphere	–	–	–
OVER-ALL TOTAL ROUTINE OPERATING LOSSES		8325	8314	11

[a]Includes 2 kgs. uranium transferred from Pit 5 to the river and 2 kgs. uranium pumped to the river from the General Sump.

(b) < 1 Kg. DEPLETED URANIUM LOSS TO ATMOSPHERE.

C. H. Handel

GEP/

cc: P. D. Ball
G. R. Blank
M. W. Boback - K. N. Ross
A. R. Diehl
J. Farr
D. F. Gutzwiler - H. J. Knue
W. C. Hill
R. C. Kispert
W. W. Mahaffey
[illegible] Mangold

249

086740

(Record Copy)
er - D. W. Hoover

NATIONAL LEAD COMPANY OF OHIO
A SUBSIDIARY OF NL INDUSTRIES, INC.
P. O. BOX 39158
CINCINNATI, OHIO 45239

086606

FOR MARCH, 1981

27

250

2129941

-54944

4/1/81

WASTE WATER
QUALITY
MARCH, 1981
VVB-FVA

00 T

	152,236
	304,472
	251,776
	71,050
	365,484
	319,872
	314,608
	157,304
	314,608
	426,300
SOLIDS	142,100
	377,664
	426,300
	481,068
	324,744
	324,744
	426,300
	284,256
	426,384
	405,930
	547,932
	547,932
	395,892
	456,708
	162,372
	487,116
	487,116
	487,116
	514,332
	517,524
	487,284
	11,388,524 T

00 T

086687

-4944

Vol (1000 gal units)

28
56
56
14
84
84
56
28
56
84
28
84
84
84
56
56
84
56
84
70
84
84
84
84
28
84
84
84
84
84
84
2,100 T

00 T

FVA-VVB

Vol (1000 gal units)

3.41,8
3.79,3
3.91,8
3.07,0
14.19,9 T

00 T

SOLIDS

5,424,024
5,154,687
5,590,594
4,860,117
21,029,422 T

00 T

086688

-4944

4/4/81
(11:10)

ORIGINALS
MARCH 1981
ML

(27)

086689

MAR 4/3/81 AM
'81

EFFLUENT
PART III (U-LBS)

MH175 00 T

SUBTOTAL THRU 3/25/81		6.718
	3/26	4.33
	3/27	2.49
U-LBS	3/28	1.11
	3/29	6.82
	3/30	3.24
	3/31	1.78
		8.695 T

STORM SEWER LIFT 00 T

SUBTOTAL THRU 3/25/81		4.641
		5.26
		2.21
U-LBS		1.15
		7.09
		2.81
		1.67
		6.660 T

STORMSEWER OUTFALL TO PADDY'S RUN 00 T

SUBTOTAL THRU 3/17		.061
	3/26	.020
U-LBS	3/29	.020
		.101 T

SCRAP PIT #5 00 T

SUBTOTAL THRU	3/25	3.43
	3/26	.06
	3/27	.04
	3/28	.04
	3/29	.10
	3/30	.11
	3/31	.11
		3.89 T

00 T

-4944

(29) MAR 81 4/1/81

EFFLUENT
PART II (VOLUMES)

MH175 00 T.

SUBTOTAL THRU 3/29	15,969,300	
3/30	431,200	
Vol(gals) 3/31	343,900	
	16,744,400	T

STORMSEWER LIFT 00 T

SUBTOTAL THRU 3/29	5,151,000	
3/30	139,000	
Vol(gals) 3/31	102,000	
	5,392,000	T

SCRAP PIT #5 (CLEARWELL 00 T

SUBTOTAL THRU 3/29	1,981,000	
Vol(gals)	84,000	
	45,500	
	2,110,500	T

SANITARYSEWER 00 T

SUBTOTAL THRU 3/29	2,481,200	
3/30	56,200	
Vol(gals) 3/31	53,400	
	2,590,800	T

GENERAL Sump 00 T

SUBTOTAL THRU 3/29	1,0~~69~~70,000	
3/30	37,000	
Vol(gals) 3/31	38,000	
	1,~~144~~145,000	T

00 T

TESTWELL 00 T

SUBTOTAL THRU 3/29	5,534,300	
Vol(gals) 3/30	115,000	
3/31	105,000	
	5,754,300	T

00 T

086691

4/1/81

(57) MAR 81

EFFLUENT
PART I

MH175 00 T

Vol (gals)

3/1	407,000
	469,000
	466,100
	1.165,900
	711,200
	540,800
	498,400
	520,700
	560,300
	497,800
	494,800
	508,500
	504,400
	491,300
	563,900
	539,300
	701,000
	637,000
	545,000
	561,700
	510,100
	439,400
	431,900
	456,600
	547,000
	741,800
	426,600
	350,800
3/29	681,000
	15,969,300 T

U-LBS

3/1	1,63
	1,96
	1,71
	1,207
	5,94
	2,98
	2,00
	1,65
	1,68
	1,74
	1,32
	1,78
	2,19
	1,64
	3,39
	1,80
	9,13
	4,36
	91
	1,22
	1,02
	1,10
	1,01
	1,22
3/25	1,73
	67,18 T

STORM SEWER 00 T
LIFT

Vol(gals)

3/1	102,000
	103,000
	97,000
	663,000
	304,000
	145,000
	133,000
	157,000
	129,000
	130,000
	127,000
	120,000
	110,000
	100,000
	197,000
	121,000
	293,000
	393,000
	120,000
	150,000
	190,000
	105,000
	93,000
	86,000
	83,000
	315,000
	113,000
	75,000
3/29	397,000
	5,151,000 T

086693

5,151,000 T

00 T

-4944

	3/1	1.99
		1.46
		1.28
		11.40
		5.07
		1.79
		1.38
LI-LBS		1.65
		1.14
		1.19
		1.00
		1.06
		.83
		.63
		3.12
		1.35
		1.76
		2.75
		.86
		.98
		1.17
		.70
		.68
		.62
	3/25	.55
		46.41 T

00 T

STORM SEWER OUTFALL TO PADDY'S RUN

Vol(gals)	28,600	3/4
	1,500	3/17
	1,300	3/26
	10,100	3/29
	41,500 T	

00 T

	3/4	.060
LI-LBS	3/17	.001
		.061 T

+

088694

SCRAP PIT #5

		0 0 T
	3/1	56,000
		56,000
		14,000
		84,000
		84,000
		56,000
		28,000
		56,000
		84,000
Vol (gals)		28,000
		84,000
		84,000
		84,000
		56,000
		56,000
		84,000
		49,000
		84,000
		70,000
		84,000
		84,000
		84,000
		84,000
		28,000
		84,000
		84,000
		84,000
		84,000
	3/29	84,000
		1,981,000 T

		0.0 T
	3/1	.33
		.34
		.05
		.28
		.59
		.20
	3/7	
		.25
		.18
U-LBS		.04
		.24
		.13
		.08
		.07
		.07
		.08
	<	.02
		.06
		.02
	<	.04
		.04
		.13
		.06
		.01
	3/25	.04
		3.35 T
	+	3/7

SEWER

Vol(gals)

3/1	47,200
	70,200
	116,100
	139,800
	118,000
	101,700
	94,600
	69,200
	109,800
	109,100
	93,100
	95,600
	89,600
	64,200
	58,200
	79,600
	96,200
	142,400
	90,800
	89,400
	81,000
	46,700
	69,300
	81,000
	81,600
	83,400
	76,600
	39,800
3/29	47,000
	2,481,200 T

GENERAL SUMP 00 T

3/1	-0-
	38,000
	37,000
	76,000
	-0-
	39,000
	38,000
	39,000
	39,000
	38,000
	-0-
	38,000
	40,000
	40,000
	32,000
	37,000
	39,000
	39,000
	40,000
	38,000
	40,000
	38,000
39	~~38~~,000
	39,000
	77,000
	37,000
	38,000
	37,000
3/29	38,000
	1,0~~09~~,000 T
	70

086696

TESTWELL 00 T

-4944

3/1	201,800
	201,800
	202,000
	203,100
	205,200
	199,100
	204,800
Vol(gals)	199,500
	198,500
	192,700
	190,700
	170,900
	180,800
	231,100
	220,700
	217,700
	223,800
	208,900
	170,600
	200,300
	186,100
	165,700
	147,600
	222,100
	221,400
	222,400
	115,000
	115,000
3/29	115,000
	5,534,300 T

00 T

00 T

086697

MONTHLY MEASURED LOSS REQUIREMENTS

	DATE COMPLETED
1) GENERAL SUMP VOLUMES TO ~~CHH~~ B KIEFER	4-3-81 (0900)
2) WRITE-OFF FORMS TO ~~H. KNUE~~	4-6-81 (0900)
3) ~~REPORT FOR SEA~~	—
4) REPORT TO R. SPENCELEY (~~R. BUMMERMAN NOTE~~)	SUBMITTED ~~4/9/81~~ AM
5) SUMMARY OF DISCARDS TO ~~EEG~~ H KNUE	4-8-81 (1445)
6) NMC SUMMARY UPDATE OF PIT DISCARDS	SUBMITTED 4/9/81 AM
7) COPY OF EFFLUENT WORK SHEET (TO BE MAILED 4/9/81 PM)	
(a) TO W.J. ADAMS	MAILED 4/10/81
(b). TO L. PENNINGTON	MAILED 4/10/81
8) RETURN OF ANALYSIS (PINK) SHEETS TO D. HOOVER.	MAILED 4/9/81 pm
9) RETURN OF DAILY LOG SHEETS TO GENERAL SUMP	MAILED 4/9/81 pm.

086698

FILM DATE: 1-12-81

CERAMICS FOR _____

LOT NO. _____

DRUM NO.

WT (LBS.) SOLIDS = _____ LBS

FT³ SOLIDS

_____ ÷ 150 LBS/FT³ = _____
WT. FACTOR

(ROUND TO ____ FT³)

DRUM NO.

WT. (LBS.) SOLIDS = _____ LBS

FT³ SOLIDS

_____ ÷ 150 LBS/FT³ = _____
WT. FACTOR

(ROUND TO. ____ FT³)

NO CERAMICS FOR MARCH, 1981

SUMMARY (PLTS CERAMICS)

NET LBS M LBS SOLIDS	FT3	DRUM NO.	Kgs NET	U-LBS	Kgs U

-4944

NATIONAL LEAD COMPANY OF OHIO
REPORT OF ISOTOPIC ANALYSES
(NOTE: Write Firmly – Part 6 must be legible)

DATE SAMPLED:	SUBMITTED BY:	LAB NO.:
3-24-81	[illegible]	
ACCOUNT/P.O. NO.: 43308	LOT NO.:	
REMARKS: [illegible]		MATERIAL:

Assay Requested:
^{232}U ___ ^{233}U ___ ^{235}U ✓ ^{238}U ___
^{230}Th ___ ^{226}Ra ___ ^{228}Ra ___ Pu ___
^{237}Np ___ Other (Specify) ___

Assay Method:
Gamma ___ Mass Spec ✓
Other (Specify) ___

LABORATORY NUMBER	SUBMITTER'S IDENTIFICATION	ANALYTICAL DATA
	3-81	

FOR ANALYTICAL USE ONLY

Assay Basis:	Assay Units:	
Uranium ___	Wt % x	d/m/l ___
Sample ___	ppm ___	d/m/g ___
^{235}U ___	ppb ___	d/m ___

NO.	DISTRIBUTION OF COPIES
1	Lab File
2	Originator
3	Quality Control Department
4	Extra Copy –
5	Analytical Department *(RECORD COPY)*

APPROVED BY:	CHECKED BY:	DATE OF REPORT:

NLO-T-971 (REV. 6/28/76)

264

086700

NOTES FOR MARCH 1981
ML

-4944

PLT 9 R. HINSON
3/26/81 13:40 NO ZIRNLO ACTIVITY FOR MARCH, 1981

"

CALL H McDANIEL EXT 354 NONE FOR MARCH 1981
PLT 8 SCRUBBER LOSSES
Per H McDANIEL 3/27/81 AM

"

PLT 6 B. WHITHAM
NO NUSAL FOR MARCH 1981

Call from B Hellman 3/27/81 (15:15)
PLT. 2 Water Composite
3-81 0.9662% U235

"

PLT 5
NO CERAMICS FOR MARCH 1981
per J. FLACK 3/30/81 10:00

086701

DATE _____

NUSAL QUENCH (PLT. 6)

MONTH YEAR (_____)

DATE	IDENT NO.	VOLUME(gals) X U#/gal. = U-LBS	Kgs U

WT(LBS) SOLIDS

_____ gals. X 8.44#/gal. X 0.011 (SOLIDS FACTOR) = _____ WT(LBS) SOLIDS

NOTE: 1.1% SOLIDS = ~11,000 PPM

FT^3 SOLIDS

_____ gals X 0.13369 X 0.011 (SOLIDS FACTOR) = _____ FT^3 SOLIDS

= 0.001471

FORM PREPARED 11/15/80

NATIONAL LEAD COMPANY OF OHIO

REPORT OF ISOTOPIC ANALYSES

(NOTE: Write Firmly – Part 6 must be legible)

DATE SAMPLED:	SUBMITTED BY:	LAB NO.:
9-20-21	[illegible]	10-7131
ACCOUNT/P.O. NO.: 43,700	LOT NO.:	
REMARKS: Tank #10. (Mark W.)		MATERIAL:

Assay Requested:

^{232}U ___ ^{233}U ___ ^{235}U ✓ ^{236}U ___

^{230}Th ___ ^{226}Ra ___ ^{228}Ra ___ Pu ___

^{237}Np ___ Other (Specify) ___

Assay Method:

Gamma ___ Mass Spec x

Other (Specify) ___

LABORATORY NUMBER	SUBMITTER'S IDENTIFICATION	ANALYTICAL DATA
		[illegible]
4134	H/C.	

FOR ANALYTICAL USE ONLY

Assay Basis:	Assay Units:	
Uranium ___	Wt % x	d/m/l ___
Sample ___	ppm ___	d/m/g ___
^{235}U ___	ppb ___	d/m ___

NO.	DISTRIBUTION OF COPIES
1	Lab File
2	Originator
3	Quality Control Department
4	Extra Copy
5	Analytical Department *(RECORD COPY)*

APPROVED BY:	CHECKED BY:	DATE OF REPORT:
JH	dPP	[illegible]

NLO-T-971 (REV. 6/28/76)

-4944

NLO-T-200 (REV. 4/19/63)

NATIONAL LEAD COMPANY OF OHIO

REPORT OF CHEMICAL ANALYSES

(NOTE: Write Firmly – Part 4 must be legible.)

Analyses Requested Sp Gr

Lab. Nos. 11-7150

Lot No.

MATERIAL: H2O

ACCOUNT NO.: 113300

DATE SAMPLED: 3-24-81

SUBMITTED BY: RWP

REMARKS: Plant 2 well Composite

LAB. NO.	IDENTIFICATION	ANALYTICAL DATA					
			Density				
	3-81		.9992				

NO.	DISTRIBUTION OF COPIES
1	Originator
2	Extra Copy
3	Quality Control Department
4	Analytical Dept. *(RECORD COPY)*

Approved By RD

Date of Report 3/25/81

088704

4/2/81

GEN. SUMP ACTIVITY
FOR 3/25 THRU 3/31/81

PLT RAFFINATE 00 T

Vol (gals)	39,400
	16,500
	4,200
	15,700
	12,000
	87,800 T

00 T

U-LBS	14,308
	9,350
	4,620
	9,250
	8,550
	46,078 T

-4944

HI-U To Plt 8 00 T

100,400
162,500
98,500
112,000
156,500
629,900 T

PLT 2 FILTRATE (SLOP) 00 T

Vol (gals)
121,000
83,000
112,500
51,000
51,000
418,500 T

00 T

U-LBS Rept'd.
2,340.8
136.8
91.6
458.2
1,302.0
5,149.4 T

PLT 2 CONDENSATE 00 T

6,000
6,000
16,500
3,000
23,500
55,000 T

U-LBS TRACER
.180
1.320
.220
.120
.437
2,277 T

PLT 2 DIG. CONDENSATE 00 T

Vol (gals)
2,000
6,000
-0-
-0-
-0-
8,000 T

086706

CONDENSATE

Vol (gals)

2,000
6,000
-0-
-0-
-0-
8,000 T

PLT 8 FILTRATE 00 T

Vol (gals)

172,900
156,500
168,800
125,500
156,600
780,300 T

00 T

U-LB TRACER

.544
1.144
.2723
.295
.293
2.5483 T

LABORATORY 00 T

Vol (gals)

49,880
36,500
46,540
39,000
24,000
195,920 T

00 T

U-LBS TRACER

2.850
2.132
1.929
2.580
.779
10.270 T

PILOT PLT. 00 T

Vol (gals)

7,000
3,500
10,000
14,000
6,000
40,500 T

00 T

U-LBS Rept'd.	.021
	.020
	.126
	.818
	.153
	1.138 T
	00 T
U-LBS TRACER	.063
	.004
	.170
	.170
	.300
	.707 T
PLANT 5	00 T
Vol(gals)	5,500
	6,000
	5,500
	6,000
	6,000
	29,000 T
	00 T
U-LBS Rept'd.	.44
	.06
	.55
	.84
	2.46
	4.35 T
	00 T
U-LBS TRACER	.50
	.18
	1.32
	.96
	4.86
	7.82 T
PLT. 6	00 T
Vol(gals)	12,000
	16,000
	16,000
	16,000
	20,000
	80,000 T
	00 T
U-LBS	.080
	2.160
	.132
	.140
	.664
	3.176 T

001

Li-LBS TRACER

.320
.504
.620
.150
.264
1.858 T

00 T

LIME SLAKER

36,100
11,500
-0-
7,200
7,000
61,800 T

00 T

DECONTAMINATION

17,820
5,700
6,200
16,000
63,500
109,220 T

00 T

Li-LBS TRACER

3,310
.266
.571
3,550
6.635
14.332 T

00 T

WATER PLANT Sump Vol (Gal)

245,000
256,000
231,000
231,000
277,000
1,240,000 T

00 T

CLEANUP WATER

11,500
7,600
9,000
13,500
36,000
77,600 T

TANK FARM 00 T

Vol(gals)

20,000
30,600
8,160
8,000
48,000
114,760 T

00 T

U-LBS

.600
.157
.016
.030
.900
1.703 T

GEN SUMP TRANSFERS TO CHEM PIT 00 T

Vol(gals)

346,900
353,100
290,000
229,500
319,600
1,539,100 T

00 T

U-LBS

9.82
6.61
4.56
4.04
6.98
32.01 T

GEN SUMP TRANSFERS TO RIVER 00 T

Vol(gals)

190,000
192,000
227,000
234,000
302,000
1,145,000 T

00 T

U-LBS

.878
.690
1.558
.580
.910
4.616 T

00 T

4/3/81 pm
per R. Crawford

G4-14

Depleted

086711

-4944

FORM 90/10
(USED WHEN ENRICHMENT FOR CLEARWELL URANIUM IS 0.35 THRU 0.50 % U235)
CW1-81 = 0.36 ± .02 % U235

PAGE 1

CALCULATIONS FOR ~~SFA~~ LMHS MEASURED LOSS REPORT. (MONTH/YEAR MARCH 1981)

BREAKDOWN (BY ENRICHMENT) OF URANIUM LOST TO THE GREAT MIAMI RIVER.

GIVEN:

(a) MH175 39.437 Kgs U
(b) CLEARWELL 1.764 Kgs U
(C) DIFFERENCE 37.673 Kgs U

STEP I ASSIGN 90 % OF CLEARWELL URANIUM TO DEPLETED ; 10 % TO ENRICHED

DEPLETED
1.764 Kgs X .90 = 1.588 Kgs U

ENRICHED
1.764 Kgs X .10 = .176 Kgs U
TOTAL 1.764

STEP II ASSIGN 79 % OF DIFFERENCE (C) TO DEPLETED ; 21 % TO ENRICHED.

DEPLETED
37.673 Kgs X .79 29.762 Kgs U

ENRICHED
37.673 Kgs X .21 7.911 Kgs U
TOTAL 37.673

STEP III SUMMARIZE (ADD STEPS I & II)

DEPLETED
1.588 Kgs U + 29.762 Kgs U = 31.350 Kgs U

ENRICHED
0.176 Kgs U + 7.911 Kgs U = 8.087* Kgs U
TOTAL

FORM REV. 2-12-80

* (ROUND TO WHOLE NUMBER Kgs FOR SFA REPORT)

086712

PAGE 2

CALCULATIONS FOR URANIUM LOSS TO PADDY'S RUN DURING MARCH, 1981.

GIVEN: URANIUM LOSS = 0.101 LBS = 0.046 Kgs.

(A)

FOR DEPLETED

0.046 Kgs. X .79 = 0.036 KgsU (DEPL.)

(ROUND TO ____ Kgs FOR SFA REPT.

FOR ENRICHED

0.046 Kgs. X .21 = 0.010 * KgsU (ENR)

(ROUND TO ____ Kgs. FOR SFA REPT.

NOTE:
* EXPRESS AS gms. FOR ENRICHED WST

FOR WST WRITE-OFF

(B)

	ENRICHED (gms)	DEPLETED (Kgs)
MH175	8087 gms	31.350 Kgs
PADDY'S RUN	10 gms	.036 Kgs
TOTAL	8097 gms	31.386 Kgs

= 8 Kgs

31 Kgs

NOTE: THESE TABULATIONS USEFUL IN ROUNDING (OR CONFIRMATION) OF VALUES IN (A) ABOVE

TO DETERMINE POUNDS OF URANIUM DIVIDE WEIGHT FROM (B) ABOVE (IN GRAMS) BY 453.59.

	FOR ENRICHED (U-LBS)	FOR DEPLETED (U-LBS)
MH175	17.830 U-LBS	69.115 U-LBS
PADDY'S RUN	.022 U-LBS	.00007 U-LBS
TOTAL	17.852	69.11507

088713

REVISED 4/18/80

PAGE 3

WST (A CHECK ON CALCULATIONS)

MH 175	86.95	U-LBS
PADDY'S RUN	.101	U-LBS
TOTAL	87.051	U-LBS

CALCULATIONS FROM PAGE 2

ENRICHED WST	17.852	U-LBS
DEPLETED WST	69.115	U-LBS
TOTAL	86.967	U-LBS

COMPARE

FVA - VVB

(GENERAL SUMP TRANSFERS TO CHEMICAL PIT DURING MARCH, 1981)

TOTAL URANIUM TO PIT: 14.519 KgsU
32.01 U-LBS

CALCULATIONS:

FOR DEPLETED URANIUM (79% OF URANIUM)

14.519 KgsU x 0.79 = 11.470 KgsU (ROUND TO 12 KgS) (DEPL)

FOR ENRICHED URANIUM (21% OF URANIUM)

14.519 KgsU x 0.21 = 3.049 KgsU (ROUND TO 3 KgS) (ENR)

TOTAL 14.519

CALCULATIONS FOR U-LBS (FVA-VVB)
NOTE: DIVIDE WT. ABOVE IN GRAMS BY 453.59

FOR DEPLETED URANIUM

11470 gms ÷ 453.59 = 25.287 LBSU (ROUND TO 25 #U)

FOR ENRICHED URANIUM

3049 gms ÷ 453.59 = 6.722 LBSU (ROUND TO 7 #U)

FORM MODIFIED 2-12-80

FORM 9
(USED WHEN ENRICHMENT FOR CLEARWELL URANIUM IS 0.35 THRU 0.50 % U235)

-4944

VVB-FVA

CW 1-81 = 0.36 ± .02 % U235

CALCULATIONS FOR CLEARWELL WITHDRAWALS TO RIVER DURING (MONTH/YEAR) MARCH, 1981

GIVEN: 3.89 U LBS.
1.764 KgSU

CALCULATIONS:

ENRICHED (10% OF CLEARWELL URANIUM)

		U-LBS	KgSU
3.89 U-LBS	X 0.10 =	0.389	
1.764 KgSU	X 0.10 =		0.176

DEPLETED (90% OF CLEARWELL URANIUM)

3.89 U-LBS	X 0.90	3.501	
1.764 KgSU	X 0.90		1.588.
TOTAL		3.890 U-LBS	1.764 KgSU

FORM MODIFIED 2-12-80

086716

2236031

NATIONAL LEAD COMPANY OF OHIO

For the Month of Mar 1981

WASTE WATER QUALITY — General Data

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (WB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (WB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (WB-FVA) TOTAL SOLIDS mg/l		GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	PRECIPI
1	28000	5430	+7	5437	152,236					
2	56000	5430	+7	5437	304,472					
3	56000	4489	+7	4496	251,776	341800	231	15638	15869	5,424,024
4	14000	5068	+7	5075	71,050					
5	84000	5344	+7	4351	365,484					
6	84000	3801	+7	3808	319,872					
7	56000	5611	+7	5618	314,608					
8	28000	5611	+7	5618	157,304					
9	56000	5611	+7	5618	314,608					
10	84000	5068	+7	5075	426,300	375300	3642	9548	13550	5,154,687
11	28000	5068	+7	5075	142,100					
12	84000	4489	+7	4496	377,664					
13	84000	5068	+7	5075	426,300					
14	84000	5720	+7	5727	481,068					
15	56000	5792	+7	5799	324,744					
16	56000	5792	+7	5799	324,744					
17	84000	5068	+7	5075	426,300	381800	627	13672	14269	5,590,594
18	56000	5068	+7	5076	284,256					
19	84000	5068	+7	5076	426,384					
20	70000	5792	+7	5799	405,930					
21	84000	6516	+7	6523	547,932					
22	84000	6516	+7	6523	547,932					
23	84000	4206	+7	4713	395,892					
24	84000	5430	+7	5437	456,708	307000	536	15285	15821	4,860,117
25	28000	5792	+7	5799	162,372					
26	84000	5792	+7	5799	487,116					
27	84000	5792	+7	5799	487,116					
28	84000	5792	+7	5799	487,116					
29	84000	6116	+7	6123	514,332					
30	84000	6154	+7	6161	517,524					
31	84000	5794	+7	5801	487,284					
AVG.[1]	2100		2		11,388,524	1419.0				21,029,422

NOTES: [1] Arithmetic averages

$\frac{11,388,524}{2100} = 5423$ mg/l (ppm) WTD. AVER. (TOTAL SOLIDS MARCH 1981) CLEARWELL WITHDRAWALS FROM PIT AREA.

$\frac{21,029,422}{1419.9}$ 14,811 mg/l (ppm) WT'D AVER. (TOTAL SOLI MARCH 19E GEN. SUMP TO PIT AR

03159992

281

DATE 6/1/81 044

VVB - FVA
(CLEARWELL WITHDRAWALS
TO RIVER, MAY 1981

2129926

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 4637 (=ppm)

CALCULATIONS:

1) 4637 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.038698 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.038698 (SOLIDS/gal. SOLUTION)
TOTAL 8.384098 (CALCULATED WT./gal. SOLUTION)

3) 0.038698 (SOLIDS/gal SOLUTION) / 8.384098 (WT/gal SOLUTION) = 0.004616 = .4616 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEARWELL MAY 1981 = 1,617,000 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:

1,617,000 gals × 0.038698 (FACTOR SOLIDS/gal SOLUTION) = 62,575 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:

1,617,000 gals × 8.384098 (FACTOR WT/gal SOLUTION) × 0.004616 (% SOLIDS) = 62,580 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS

1,617,000 gals × 0.13369 × 0.004616 = 998 FT^3 SOLIDS (TOTAL SOLIDS)

086568

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

CW4-81 = 0.38% U235

VVB - FVA

WT(LBS) SOLIDS

DEPLETED (90%)

62,575 LBS X 0.90 = 56,318 LBS SOLIDS (DEPL'D.)

ENRICHED (10%)

62,575 LBS X 0.10 = 6,257 LBS SOLIDS (ENR.)

TOTAL 62,575

FT³ SOLIDS

DEPLETED (90%)

998 FT³ X 0.90 = 898 FT³ SOLIDS (DEPL'D.)

ENRICHED (10%)

998 FT³ X 0.10 = 100 FT³ SOLIDS (ENR.)

TOTAL 998

DATE 6-3-81

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT MAY 1981.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 15360 mg/l

CALCULATIONS:

1) 15360 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.128185 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal. WATER)
+ 0.128185 (SOLIDS/gal SOLUTION)
TOTAL 8.473585 (CALCULATED WT./gal SOLUTION)

3) 0.128185 (SOLIDS/gal SOLUTION) / 8.473585 (WT/gal SOLUTION) = 0.015128 = 1.5128 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 DATE: MAY 1981 = 1,235,900 gals

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,235,900 gals × 0.128185 (FACTOR SOLIDS/gal SOLUTION) = 158,424 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,235,900 gals × 8.473585 (FACTOR WT/gal SOLUTION) × 0.015128 (% SOLIDS) = 158,428 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS

1,235,900 gals × 0.13369 × 0.015128 = 2500 FT^3 SOLIDS (TOTAL SOLIDS)

(21)

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA—VVB

WT(LBS) SOLIDS

DEPLETED (79%)

158,424 LBS X 0.79 = 125,155 LBS SOLIDS (DEPL'D)

ENRICHED (21%)

158,424 LBS X 0.21 = 33,269 LBS SOLIDS (ENR.)

TOTAL 158,424

FT³ SOLIDS

DEPLETED (79%)

2500 FT³ X 0.79 = 1975 FT3 SOLIDS (DEPL'D)

ENRICHED (21%)

2500 FT³ X 0.21 = 525 FT3 SOLIDS (ENR.)

TOTAL 2500

6/1/81 PM

FOR MAY 1981 ACTIVITY

29

VVB-FVA

00 T

84
84
84
84
84
84
84
84
84
56
-0-
-0-
-0-
-0-
-0-
63
84
84
84
84
84
-0-
-0-
-0-
-0-
-0-
-0-
84
84
84
84

VOLUME IN (1000 gal units)

1.631 T (1000 gal units)

FVA-VVB

00 T

404
355
368
210

VOLUME (1000 gal units)

1.337 T (1000 gal units)

00 T

6/1/81 PM

4944

VVB-FVA

00 T

371,532
426,300
426,300
426,300
395,892
365,484
359,436
289,884
377,580
284,200
-0-
-0-
-0-
-0-
-0-
276,381
426,300
563,892
365,484
335,076
365,484
-0-
-0-
-0-
-0-
-0-
-0-
395,892
368,508
371,532
SOLIDS 371,532
7,562,989 T

00 T

FVA-VVB

7,347,952
6,443,250
5,765,824
SOLIDS 979,020
20,536,046 T

00 T

086572

6/1/81 pm

TABULATION OF
EFFLUENT FOR
MAY 1981

(29)

MH175 00 T

5/1	444,600
	274,600
	238,900
	285,800
Vol (gals)	742,300
	614,800
	349,500
	314,700
	230,800
	419,400
	617,700
	271,500
	283,100
	935,900
	480,600
	327,000
	285,900
	854,000
	488,600
	372,000
	255,800
	242,900
	226,000
	193,600
	177,800
	549,000
	921,900
	476,500
	430,900
	499,300
5/31	304,400
	13,109,800 T

=4944

U-LBS

	3,41
	1,51
	1,44
	1,86
	6,32
	6,57
	2,45
	2,15
	1,62
	3,99
	1.0,52
	3,22
	5.01
	1.3,59
	6,18
	4.04
	3,53
	1.1,55
	7,75
	6.02
	2,48
	1.91
	1.70
	1.39
5/25	1,31
SUBTOTAL THRU 5/25	11.1,52 T

STORM SEWER LIFT 00 T

Vol (gals)

5/1	206,000
	105,000
	116,000
	100,000
	559,000
	361,000
	148,000
	112,000
	89,000
	317,000
	448,000
	149,000
	165,100
	792,000
	276,000
	145,000
	115,000
	637,000
	265,000
	151,000
	130,000
	114,000
	~~10,100~~
	~~10,100~~
	101,000
	94,000
	91,000
	426,000
	654,000
	244,000
	180,000
	319,000
5/31	140,000
	7,749,100 T

086574

00 T

	5/1	2,58
		1,19
		1,37
		1,60
		9,42
		6,09
		1,83
		1,31
		1,10
		3,60
U-LBS		8,90
		2,41
		4,99
		1.1,10
		6,91
		2,40
		2,11
		7,76
		4,47
		2,12
		1,74
		1,45
		1,31
		1,05
	5/25	1,20
SUBTOTAL THRU 5/25		3.0,01 T
	+	

STORM SEWER OUTFALL TO PADDY'S RUN 00 T

	6,200
	21,500
Vol (gals)	1,000
	116,800
	102,700
	900
	19,400
	16,700
	285,200 T

00 T

		.010
U-LBS		.030
		.001
		.140
	5/18	.100
SUBTOTAL THRU 5/18		.281 T
	+	

SCRAP PIT #5 (CLEARWELL) 00 T

Vol (gals)

	84,000
	84,000
	84,000
	84,000
	84,000
	84,000
	84,000
	84,000
	42,000
	-0-
	-0-
	-0-
	-0-
	-0-
5/15	63,000
	84,000
	84,000
	84,000
	84,000
	84,000
	-0-
	-0-
	-0-
	-0-
	-0-
	-0-
	84,000
	84,000
	84,000
	84,000
	84,000
	1,617,000 T

U-LBS

	00 T
	.36
	.34
	.31
	.35
	.46
	.66
	.66
	.48
	.27
	-0-
	-0-
	-0-
	-0-
	-0-
5/15	1.02
	1.04
	1.63
	2.29
	1.82
5/20	2.17
	-0-
	-0-
	-0-
	-0-
	-0-
	-0-
SUBTOTAL THRU 5/26	1.386 T

+

086576

SANITARY SEWER

Vol (gals)

5/1	79,600	✓
	47,600	✓
	38,900	✓
	65,800	✓
	61,300	✓
	92,800	✓
	78,500	✓
	72,700	✓
	69,800	✓
	64,400	✓
	93,700	✓
	83,500	✓
	82,900	✓
	153,900	✓
	102,600	✓
	63,000	✓
	48,900	✓
	133,000	✓
	99,600	✓
	99,000	✓
	87,800	✓
	88,900	✓
	85,000	✓
	59,600	✓
	47,800	✓
	84,000	✓
	104,900	✓
	110,500	✓
	91,900	✓
	57,300	✓
5/31	42,400	✓
	2,491,600	T

GEN. SUMP OOT

Vol (gals)

75,000
38,000
—o—
36,000
38,000
77,000
39,000
38,000
—o—
38,000
76,000
39,000
35,000
40,000
39,000
35,000
38,000
—o—
40,000
38,000
38,000
40,000
40,000
40,000
39,000
39,000
79,000
38,000
75,000
39,000
38,000
1,206,000 T

OOT

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data

For the Month of May 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	PRECIPITATION
1	84000	4416	+7	4423	371 532						
2	84000	5068	+7	5075	426 300						
3	84000	5068	+7	5075	426 300						
4	84000	5068	+7	5075	426 300						
5	84000	4706	+7	4713	395 892						
6	84000	4344	+7	4351	365 484						
7	84000	4272	+7	4279	359 436						
8	84000	3444	+7	3451	289 884	404000	4423	13765	18188	7,347,952	
9	84000	4487	+7	4495	377 580						
10	56000	5068	+7	5075	284 200						
11	—	—		—	—						
12	—	—		—	—						
13	—	—		—	—						
14	—	—		—	—						
15	—	—		—	—	355000	9606	14544	18150	6,443,250	
16	63000	4380	+7	4387	276 381						
17	84000	5068	+7	5075	426 300						
18	84000	6706	+7	6713	563 892						
19	84000	4344	+7	4351	365 484						
20	84000	3987	+7	3989	335 076						
21	84000	4344	+7	4351	365 484						
22	—	—		—	—	368000	8761	6507	15668	5,765,824	
23	—	—		—	—						
24	—	—		—	—						
25	—	—		—	—						
26	—	—		—	—						
27	—	—		—	—						
28	84000	4706	+7	4713	395 892						
29	84000	4380	+7	4387	368 508	210000	450	9212	9662	979 020	
30	84000	4416	+7	4423	371 532						
31	84000	4416	+7	4423	371 532						
AVG.[1]	1631 (1000 gal units)	[2]			7,562,989	1337 (1000 gal units)				20,536,046	

NOTES: [1] Arithmetic averages

$$\frac{7,562,989}{1631} = 4637 \text{ mg/l (ppm)}$$

WT'D. AVER (TOTAL SOLIDS MAY 1981) CLEARWELL WITHDRAWAL FROM PIT TAKEN

$$\frac{20,536,046}{1337} = 15,360 \text{ mg/l (ppm)}$$

WT'D. A (TOTAL SO GEN. SUM TO PIT TAKEN

086579

NATIONAL LEAD COMPANY OF OHIO

2129853

WASTE WATER QUALITY — General Data

For the Month of July 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	CLEARWELL (VVB-FVA) SUSPENDED SOLIDS mg/l	CLEARWELL (VVB-FVA) TOTAL SOLIDS mg/l	CLEARWELL (VVB-FVA) VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) DISSOLVED SOLIDS, mg/l	GEN. SUMP TO PIT (FVA-VVB) TOTAL SOLIDS mg/l	GEN. SUMP TO PIT (FVA-VVB) VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	PRECIPITATION
1	84,000	2606	+7	2613	219 492						
2	84,000	3475	+7	3482	292 488						
3	84,000	1593	+7	1600	134 400						
4	84,000	1593	+7	1600	134 400						
5	42,000	1665	+7	1672	70 224	24,000	184	3040	3224	796,328	
6	84,000	1448	+7	1455	122 220						
7	84,000	2606	+7	2613	219 492						
8	84,000	2535	+7	2542	213 528						
9	84,000	2896	+7	2903	243 852						
10	—	—		—	—						
11	—	—		—	—						
12	84,000	2226	+7	2233	187 572	320,000	4520	1367	5887	1,883,840	
13	21,000	2374	+7	2381	50 001						
14	42,000	2244	+7	2251	94 542						
15	42,000	2172	+7	2179	91 518						
16	42,000	2317	+7	2324	97 608						
17	42,000	2462	+7	2469	103 698						
18	42,000	2389	+7	2396	100 632						
19	28,000	2317	+7	2324	65 072	323,000	6680	3606	9686	3,128,578	
20	28,000	2534	+7	2541	71 148						
21	42,000	2606	+7	2613	109 746						
22	42,000	2027	+7	2034	85 428						
23	42,000	2172	+7	2179	91 518						
24	42,000	2244	+7	2251	94 542						
25	42,000	2534	+7	2541	106 722						
26	42,000	2317	+7	2324	97 608	110,000	900	2677	3577	393,470	
27	42,000	2244	+7	2251	94 542						
28	28,000	2100	+7	2107	58 996						
29	28,000	2100	+7	2107	58 996						
30	28,000	2172	+7	2179	61 012						
31	28,000	2389	+7	2396	67 088	36,500	1108	1128	2236	685,334	
AVG.[1]		[2]									

NOTES: [1] Arithmetic averages

$\frac{3,438,085}{1,491} = 2306$ mg/l (=ppm) WT'D AVER. (TOTAL SOLIDS JULY 1981) CLEARWELL WITHDRAWALS FROM PIT AREA

$\frac{6,887,550}{1,306.5} = 5272$ mg/l (=ppm) WT'D AVER. (TOTAL SOLIDS JULY 1981) GEN. SUMP PUMPINGS TO PIT AREA

NMC (31)

086248

-4944

294

2129843

VVB – FVA

(CLEARWELL WITHDRAWALS TO RIVER, AUGUST 1981.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 2502 mg/l (=ppm)

CALCULATIONS:

1) 2502 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.020880 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.020880 (SOLIDS/gal. SOLUTION)
TOTAL 8.366280 (CALCULATED WT/gal. SOLUTION)

3) 0.020880 (SOLIDS/gal SOLUTION) / 8.366280 (WT/gal SOLUTION) = 0.002496 = 0.2496 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEARWELL = 1,158,500 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:

1,158,500 gals × 0.020880 (FACTOR SOLIDS/gal SOLUTION) = 24,189 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:

1,158,500 gals × 8.366280 (FACTOR WT/gal SOLUTION) × 0.002496 (% SOLIDS FACTOR) = 24,192 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:

VOLUME (gals) × 0.13369 × % SOLIDS FACTOR = FT^3 SOLIDS

1,158,500 gals × 0.13369 × 0.002496 = 387 FT^3 SOLIDS (TOTAL SOLIDS)

CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

VVB – FVA

WT (LBS) SOLIDS

DEPLETED (95%)

24,189 LBS × 0.95 = 22,980 LBS SOLIDS (DEPL'D.)

ENRICHED (5%)

24,189 LBS × 0.05 = 1,209 LBS SOLIDS (ENR.)

CHECK TOTAL 24,189

FT^3 SOLIDS

DEPLETED (95%)

387 FT^3 × 0.95 = 368 FT^3 SOLIDS (DEPL'D.)

ENRICHED (5%)

387 FT^3 × 0.05 = 19 FT^3 SOLIDS (ENR.)

CHECK TOTAL 387

NMC

4944
295
0862098

DATE 9/1/81

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT AUGUST, 1981

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 8803 mg/l

CALCULATIONS:

1) 8803 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.073465 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal. WATER)
+ 0.073465 (SOLIDS/gal. SOLUTION)
TOTAL 8.418865 (CALCULATED WT./gal SOLUTION)

3) 0.073465 (SOLIDS/gal SOLUTION) / 8.418865 (WT/gal SOLUTION) = 0.008726 = 0.8726 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,105,100 gals
DATE: AUGUST 1981

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,105,100 gals × 0.073465 (FACTOR SOLIDS/gal SOLUTION) = 81,186 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,105,100 gals × 8.418865 (FACTOR WT/gal SOLUTION) × 0.008726 (% SOLIDS FACTOR) = 81,184 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS (FACTOR) = FT^3 SOLIDS

1,105,100 gals × 0.13369 × 0.008726 = 1,289 FT^3 SOLIDS (TOTAL SOLIDS)

-2-

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED (79%)
81,186 LBS × 0.79 = 64,137 LBS SOLIDS (DEPL'D)

ENRICHED (21%)
81,186 LBS × 0.21 = 17,049 LBS SOLIDS (ENR.)
CHECK TOTAL 81,186

FT^3 SOLIDS

DEPLETED (79%)
1,289 FT^3 × 0.79 = 1,018 FT^3 SOLIDS (DEPL'D)

ENRICHED (21%)
1,289 FT^3 × 0.21 = 271 FT^3 SOLIDS (ENR.)
CHECK TOTAL 1,289

494
296
086209

RECD 8/31/81 NOON

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY General Data

For the Month of August 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATION
1	28000	2534	+7	2541	71,148						
2	28000	2534	+7	2541	71,148						
3	28000	2534	+7	2541	71,148						
4	—	—	—	—	—	250000	10864	1441	12305	3,076,250	
5	28000	2751	+7	2758	77,224						
6	58000	2606	+7	2613	146,328						
7	56000	2317	+7	2324	130,144						
8	67000	2317	+7	2324	155,708						
9	42000	2389	+7	2396	100,632						
10	42000	2389	+7	2396	100,632						
11	42000	2249	+7	2251	94,542						
12	84000	2244	+7	2251	189,084	220000	476	2707	3183	719,358	
13	42000	2129	+7	2131	89,502						
14	84000	2317	+7	2324	195,216						
15	42000	2462	+7	2469	103,698						
16	42000	2317	+7	2324	99,932						
17	42000	2317	+7	2324	97,608						
18	42000	2317	+7	2324	97,608						
19	42000	2317	+7	2324	97,608	155000	10091	2477	12568	2,501,032	
20	42000	2462	+7	2469	103,698						
21	42000	2606	+7	2613	109,746						
22	42000	2606	+7	2613	109,746						
23	28000	2896	+7	2903	81,284						
24	28000	2606	+7	2613	73,164						
25	28000	2751	+7	2758	77,224						
26	X	—	—	—	—						
27	X	—	—	—	—						
28	X	—	—	—	—	115000	1567	4154	5721	657,915	
29	X	—	—	—	—						
30	28000	3900	+7	3907	109,396						
31	28000	3900	+7	3907	109,396						
AVG.[1]	1104	[2]			2,762,564	790				6,954,555	

NOTES: [1] Arithmetic averages

$$\frac{2,762,564}{1104} = 2502 \text{ mg/l (ppm)}$$

WT'D AVER. (TOTAL SOLIDS AUG. 1981) CLEARWELL WITHDRAWALS FROM PIT AREA

$$\frac{6,954,555}{790} = 8803 \text{ mg/l (ppm)}$$

WT'D AVER (TOTAL SOLI AUG. 198 GEN. SUMP Pumping TO PIT ARE

-4944

29

08210

VVB-FVA

Vol (1000 gal units)

	00 T
	28
	28
	28
	-0-
	28
	56
	56
	67
	42
	42
	42
	84
	42
	84
	42
	43
	42
	42
	42
	42
	42
	42
	28
	28
	28
	-0-
	-0-
	-0-
	-0-
	28
	28
	1,104 T
	00 T
	71,148
	71,148
	71,148
	-0-
	77,224
SOLIDS	146,328
	130,144
	155,708
	100,632
	100,632
	94,542
	189,084
	89,502
	195,216
	103,698
	99,932
	97,608
	97,608
	97,608
	103,698
	109,746
	109,746
	81,284
	73,164
	77,224

086211

298

-4944

	-0-
	28
	28
	1,104 T
	00 T
	71,148
	71,148
	71,148
	-0-
	77,224
SOLIDS	146,328
	130,144
	155,708
	100,632
	100,632
	94,542
	189,084
	89,502
	195,216
	103,698
	99,932
	97,608
	97,608
	97,608
	103,698
	109,746
	109,746
	81,284
	73,164
	77,224
	-0-
	-0-
	-0-
	-0-
	109,396
	109,396
	2,762,564 T
FVA-VVB	00 T
Vol (1000 gal units)	250
	226
	199
	115
	790 T
	00 T
	3,076,250
SOLIDS	719,358
	2,501,032
	657,915
	6,954,555 T
	~~00 T~~

086212

DATE 10-2-81

2129820

VVB - FVA
(CLEARWELL WITHDRAWALS
TO RIVER, SEPTEMBER 1981

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 2215 mg/l (=ppm)

CALCULATIONS:

1) 2215 mg/l × 8.3454 (FACTOR) × 10^{-6} = 0.018485 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.018485 (SOLIDS/gal. SOLUTION)
TOTAL 8.363885 (CALCULATED WT./gal. SOLUTION)

3) $\frac{0.018485 \text{ (SOLIDS/gal SOLUTION)}}{8.363885 \text{ (WT/gal SOLUTION)}}$ = 0.002210 = 0.2210 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEARWELL = 1,471,500 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:
1,471,500 gals × 0.018485 (FACTOR SOLIDS/gal SOLUTION) = 27,201 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,471,500 gals × 8.363885 (FACTOR WT/gal SOLUTION) × 0.002210 (% SOLIDS) = 27,199 LBS (TOTAL SOLIDS)

FOR FT³ SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT³ SOLIDS
1,471,500 gals × 0.13369 × 0.002210 = 435 FT³ SOLIDS (TOTAL SOLIDS)

300

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)
CW7-81 = 0.32 ± .02% U_{235}

VVB - FVA

WT (LBS) SOLIDS

DEPLETED (95%)
27,201 LBS × 0.95 = 25,841 LBS SOLIDS (DEPL'D.)

ENRICHED (5%)
27,201 LBS × 0.05 = 1,360 LBS SOLIDS (ENR.)
CHECK TOTAL 27,201

FT³ SOLIDS

DEPLETED (95%)
435 FT³ × 0.95 = 413 FT³ SOLIDS (DEPL'D.)

ENRICHED (5%)
435 FT³ × 0.05 = 22 FT³ SOLIDS (ENR.)
CHECK TOTAL 435

0081104

494

DATE 10-2-81

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT SEPTEMBER 1981

CALCULATED TOTAL (WT'D / AVER.) SOLIDS = 6917 mg/l

CALCULATIONS:

1) 6917 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.057725 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal WATER)
+ 0.057725 (SOLIDS/gal SOLUTION)
TOTAL 8.403125 (CALCULATED WT./gal SOLUTION)

3) 0.057725 (SOLIDS/gal SOLUTION) / 8.403125 (WT/gal SOLUTION) = 0.006869 = 0.6869 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,058,800 gals
DATE: SEPTEMBER 1981

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,058,800 gals × 0.057725 (FACTOR SOLIDS/gal SOLUTION) = 61,119 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,058,800 gals × 8.403125 (FACTOR WT/gal SOLUTION) × 0.006869 (% SOLIDS) = 61,115 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
1,058,800 gals × 0.13369 × 0.006869 = 972 FT3 SOLIDS (TOTAL SOLIDS)

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED 79%
61,119 LBS × 0.79 = 48,284 LBS SOLIDS (DEPL'D)

ENRICHED 21%
61,119 LBS × 0.21 = 12,835 LBS SOLIDS (ENR.)
CHECK TOTAL 61,119

FT^3 SOLIDS

DEPLETED 79%
972 FT^3 × 0.79 = 768 FT3 SOLIDS (DEPL'D)

ENRICHED 21%
972 FT^3 × 0.21 = 204 FT3 SOLIDS (ENR.)
CHECK TOTAL 972

10-1-81

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — For the Month of September 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	PRECIPITATION VOLUME (1000 gal units) TIME TOTAL SOLIDS
1	84,000	2192	+7	2179	183,036					
2	84,000	2172	+7	2179	183,036					
3	67,000	1991	+7	1998	133,866					
4	56,000	1738	+7	1745	97,720	47,000	10,288	2875	10573	4,430,087
5	84,000	1557	+7	1564	131,376					
6	56,000	1701	+7	1708	95,648					
7	84,000	1738	+7	1745	146,580					
8	84,000	1701	+7	1708	143,472					
9	7,000	1629	+7	1636	11,452					
10	X			—						
11	X			—		18,000	1259	6562	8226	1,505,358
12	X			—						
13	X			—						
14	X			—						
15	X			—						
16	X			—						
17	X			—						
18	X			—		32,000	658	2093	2751	883,071
19	X			—						
20	X			—						
21	X			—						
22	X			—						
23	X			—						
24	X			—						
25	X			—						
26	127,000	1882	+7	1889	239,903	53,000	565	3513	4078	623,934
27	40,000	2241	+7	2251	90,040					
28	216,000	2317	+7	2324	501,984					
29	216,000	2222	+7	2229	481,464					
30	135,000	2534	+7	2541	343,035					
31										
WT'D AVG.[1]	1256 1000 gal. units	[2]			2,782,612	1076 (1000 gal units)				7,442,450

NOTES: [1] Arithmetic averages

X not pumped this dates

$\frac{2,782,612}{1256} = 2215$ mg/l (ppm) — WT'D AVER. (TOTAL SOLIDS SEPT. 1981) CLEARWELL WITHDRAWALS FROM PIT AREA

$\frac{7,442,450}{1076} = 6917$ mg/l (ppm) — WT'D AVER. (TOTAL SOLIDS SEPT. 1981) GEN. SUMP PUMPINGS TO PIT AREA NMC

001980

302

4944

-4944

9130/81 PM

ACTIVITY FOR SEPT. 1981

VVB-FVA
(CLEARWELL WITHDRAWALS)

00 T

Vol (1000 gal units)

9/1 84
84
67
56
84
56
84
9/7 07

9/26 127
40
216
216
9/30 135
1,256 T

00 T

183,036
183,036
133,866
97,720
131,376
95,648
146,580
143,472
11,452

SOLIDS

239,903
90,040
501,984
481,464
343,035
2,782,612 T

00 T

FVA-VVB

Vol (1000 gal. units)

419
183
321
153
1,076 T

088107

90,040
501,984
481,464
343,035
2,782,612 T

00 T

FVA-VVB

Vol (1000 gal. units)

419
183
321
153
1,076 T

00 T

SOLIDS

4,430,087
1,505,358
883,071
623,934
7,442,450 T

00 T

NATIONAL LEAD COMPANY OF OHIO

2129742

WASTE WATER QUALITY — General Data — For the Month of October 1981

	CLEAR WELL VOLUME (gals)	CLEARWELL (VVE-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATI
1	216,000	2860	+7	2867	619,272						
2	144,000	2606	+7	2613	376,272						
3	144,000	3773	+7	3780	544,320						
4	50,000	3330	+7	3337	166,850						
5	216,000	3258	+7	3265	705,240						
6	72,000	2896	+7	2903	209,016						
7		X				340000	5785	1079	6864	2,333,760	
8		X									
9		X									
10		X									
11		X									
12		X									
13		X									
14		X				270000	6703	1002	7705	2,080,350	
15		X									
16		X									
17		X									
18		X									
19		X									
20	72000	2317	+7	2324	167,328						
21	72000	2606	+7	2613	188,136	353000	7548	2579	10527	4,031,841	
22	72000	2896	+7	2903	203,210						
23	36000	2824	+7	2831	101,916						
24		X									
25		X									
26		X									
27		X									
28		X				585000	833	6821	7654	4,508,206	
29		X									
30	36000	2534	+7	2541	91,476						
31	36000	2534	+7	2541	91,476						
AVG.[1]	1,164 units	[2]			3,464,512	1,582				12,954,157	

NOTES: [1] Arithmetic averages

X not pumped this date

$\frac{3,464,512}{1,164} = 2976$ mg/l (ppm) WT'D AVER (TOTAL SOLIDS OCT. 1981) CLEARWELL WITHDRAWALS

$\frac{12,954,157}{1,582} = 8188$ mg/l (ppm) WT'D AVER. (TOTAL SOLIDS OCT. 1981) GEN. SUMP PUMPINGS TO PIT AREA

305

-49447

DATE 11-3-81

VVB - FVA

(CLEARWELL WITHDRAWALS TO RIVER, OCTOBER 1981

ALCULATED TOTAL (WT'D AVER.) SOLIDS = 2976 mg/l (=ppm)

CALCULATIONS:

1) 2976 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.024836 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.024836 (SOLIDS/gal. SOLUTION)
TOTAL 8.370236 (CALCULATED WT/gal. SOLUTION)

3) $\frac{0.024836 \text{ (SOLIDS/gal SOLUTION)}}{8.370236 \text{ (WT/gal SOLUTION)}}$ = 0.002967 = 0.2967 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gal) PUMPED TO RIVER FROM CLEAR WELL = 968,000 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:

968,000 gals × 0.024836 (FACTOR SOLIDS/gal SOLUTION) = 24,041 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:

968,000 gals × 8.370236 (FACTOR WT/gal SOLUTION) × 0.002967 (% SOLIDS FACTOR) = 24,040 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:

VOLUME (gals) × 0.13369 × % SOLIDS (FACTOR) = FT^3 SOLIDS

968,800 gals × 0.13369 × 0.002967 = 384 FT^3 SOLIDS (TOTAL SOLIDS)

306

(34)

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)
CW 10-81 = 0.36 ±.02% U235

VVB - FVA

WT (LBS) SOLIDS

DEPLETED (90%)

24,041 LBS × 0.90 = 21,637 LBS SOLIDS (DEPL'D.)

ENRICHED (10%)

24,041 LBS × 0.10 = 2,404 LBS SOLIDS (ENR.)

CHECK TOTAL 24,041

FT^3 SOLIDS

DEPLETED (90%)

384 FT^3 × 0.90 = 346 FT^3 SOLIDS (DEPL'D.)

ENRICHED (10%)

384 FT^3 × 0.10 = 38 FT^3 SOLIDS (ENR.)

CHECK TOTAL 384

085749

-4944

DATE 11-3-81

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT OCTOBER 1981

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 8188 mg/l

CALCULATIONS:

1) 8188 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.068332 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal WATER)
+ 0.068332 (SOLIDS/gal. SOLUTION)
TOTAL 8.413732 (CALCULATED WT./gal SOLUTION)

3) 0.068332 (SOLIDS/gal/SOLUTION) / 8.413732 (WT/gal SOLUTION) = 0.008121 = 0.8121 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,387,800 gals
DATE: OCTOBER 1981

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,387,800 gals × 0.068332 (FACTOR SOLIDS/gal SOLUTION) = 94,831 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,387,800 gals × 8.413732 (FACTOR WT/gal SOLUTION) × .008121 (SOLIDS FACTOR) = 94,825 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × SOLIDS FACTOR = FT^3 SOLIDS

1,387,800 gals × 0.13369 × .008121 = 1507 FT3 SOLIDS (TOTAL SOLIDS)

-2-

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED (77%)
94,831 LBS × 0.77 = 73,020 LBS SOLIDS (DEPL'D)

ENRICHED (23%)
94,831 LBS × 0.23 = 21,811 LBS SOLIDS (ENR.)
CHECK TOTAL 94,831

FT^3 SOLIDS

DEPLETED (77%)
1507 FT^3 × 0.77 = 1160 FT3 SOLIDS (DEPL'D)

ENRICHED (23%)
1507 FT^3 × 0.23 = 347 FT3 SOLIDS (ENR.)
CHECK TOTAL 1507

087960

-4944 DISSOLVED SOLI. FOR OCTOBER 19

VVB-FVA 00

Volume. (1000gal units)

10/1	216
	144
	144
	50
	216
10/6	72
10/20	72
	72
	70
10/23	36
10/30	36
10/31	36
	1,164

SOLIDS ( ) 00

10/1	619,272
	376,272
	544,320
	166,850
	705,240
10/6	209,016
10/20	167,328
	188,136
	203,210
10/23	101,916
10/30	91,476
10/31	91,476
	3,464,512

00

FVA-VVB

VOLUME (1000gal units)

340
270
383
589
1.582

085751

308 SOLIDS ( ) 00

2,333,760
2,080,350

-4944

10/20	167,32
	188,13
	203,21
10/23	101,91
10/30	91,476
10/31	91,476
	3,464,512

00

FVA-VVB

VOLUME (1000gal units)

340
270
383
589
1.582

00

SOLIDS ( )

2,333,700
2,080,350
4,031,841
4,508,200
12,954,1[illegible]

00

085752

RECD. 12/31/81 (1030)
FOR DECEMBER 1981 ML

NATIONAL LEAD COMPANY OF OHIO

2129697

WASTE WATER QUALITY — General Data

For the Month of December 1981

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT (FVA-VVB) VOLUME TO PIT (gals)	SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATION
1	36,000	1662	+7	1669	60,084						
2	216,000	1593	+7	1600	345,600						
3	252,000	1629	+7	1636	412,272						
4	252,000	1953	+7	1960	493,920	27,000	4670	4018	8688	2,354,448	
5	252,000	2027	+7	2034	512,568						
6	*	*			—						
7	252,000	1951	+7	1998	503,496						
8	252,000	2316	+7	2323	585,396						
9	84,000	2534	+7	2541	213,444						
10	252,000	2099	+7	2106	530,712						
11	252,000	2099	+7	2106	530,712	156,000	12950	3711	15661	2,474,438	
12	*				—						
13	*				—						
14	*				—						
15	*				—						
16	*				—						
17	*				—						
18	*				—	205,000	14890	7085	21975	4,504,875	
19	*				—						
20	*				—						
21	*				—						
22	*				—						
23	*				—						
24	*				—						
25	84,000	2317	+7	2324	195,216	256,000	2045	655	2700	772,200	
26	84,000	2317	+7	2324	195,216						
27	*										
28	84,000	2172	+7	2179	183,036						
29	*										
30	*										
31	*										
AVG.[1]	2352 UNITS	2			4,761,672	920 UNITS				10,105,961	

NOTES: [1] Arithmetic averages *not pumped

VVB-FVA

$$\frac{4,761,672}{2,352} = 2025 \text{ mg/l } (= \text{ppm})$$

WT'D AVER. (TOTAL SOLIDS DEC. 1981) CLEARWELL WITHDRAWALS

FVA-VVB

$$\frac{10,105,961}{920} = 10,985 \text{ mg/l } (= \text{ppm})$$

WT'D. AVER. (TOTAL SOLIDS DEC 1981) GEN. SUMP

0855965

4944

310

DATE 1-5-82

085569

VVB - FVA

(CLEARWELL WITHDRAWALS TO RIVER, DECEMBER.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 2025 mg/l (=ppm)

CALCULATIONS:

1) 2025 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.016899 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.016899 (SOLIDS/gal. SOLUTION)
TOTAL 8.362299 (CALCULATED WT./gal. SOLUTION)

3) $\frac{0.016899 \text{ (SOLIDS/gal SOLUTION)}}{8.362299 \text{ (WT/gal SOLUTION)}}$ = 0.002021 = 0.2021 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEAR WELL = 2,568,000 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:

2,568,000 gals × 0.016899 (FACTOR SOLIDS/gal SOLUTION) = 43,397 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:

2,568,000 gals × 8.362299 (FACTOR WT/gal SOLUTION) × 0.002021 (% SOLIDS FACTOR) = 43,400 LBS (TOTAL SOLIDS)

FOR FT³ SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS FACTOR = FT³ SOLIDS

2,568,000 gals × 0.13369 × 0.002021 = 694 FT³ SOLIDS (TOTAL SOLIDS)

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

VVB - FVA

WT (LBS) SOLIDS

DEPLETED (90%)

43,397 LBS × 0.90 = 39,057 LBS SOLIDS (DEPL'D.)

ENRICHED (10%)

43,397 LBS × 0.10 (CHECK TOTAL) = 4,340 LBS SOLIDS (ENR.)
43,397

FT³ SOLIDS

DEPLETED (90%)

694 FT³ × 0.90 = 625 FT³ SOLIDS (DEPL'D.)

ENRICHED (10%)

694 FT³ × 0.10 (CHECK TOTAL) = 69 FT³ SOLIDS (ENR.)
694

36

-4044

DATE 1-5-82

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT DECEMBER.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 10,985 mg/l

CALCULATIONS:

1) 10,985 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.091674 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal WATER)
+ 0.091674 (SOLIDS/gal SOLUTION)
TOTAL 8.437074 (CALCULATED WT./gal SOLUTION)

3) 0.091674 (SOLIDS/gal/SOLUTION) / 8.437074 (WT/gal SOLUTION) = 0.010866 = 1.0866 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,086,800 gals
DATE: DECEMBER 1981

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,086,800 gals × 0.091674 (FACTOR SOLIDS/gal SOLUTION) = 99,631 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,086,800 gals × 8.437074 (FACTOR WT/gal SOLUTION) × 0.010866 (SOLIDS FACTOR) = 99,635 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS (FACTOR) = FT^3 SOLIDS

1,086,800 gals × 0.13369 × 0.010866 = 1579 FT3 SOLIDS (TOTAL SOLIDS)

085587

312

(36)

-2-

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED (77%)
99,631 LBS × 0.77 = 76,716 LBS SOLIDS (DEPL'D)

ENRICHED (23%)
99,631 LBS × 0.23 = 22,915 LBS SOLIDS (ENR.)
CHECK TOTAL 99,631

FT^3 SOLIDS

DEPLETED (77%)
1579 FT^3 × 0.77 = 1216 FT3 SOLIDS (DEPL'D)

ENRICHED (23%)
1579 FT^3 × 0.23 = 363 FT3 SOLIDS (ENR.)
CHECK TOTAL 1579

4944

NLO, IN
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196228

For the Month of January, 1982

3

DATE	MANHOLE – 175 FLOW 10^{6} gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^{6} gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.891	9.5						0.290	3.8					
2	.599	9.7						.292						
3	.527	8.9						.036	0.6	0.0001	0.0001	0.004	0.003	0.003
4	.936	9.4						.147						
5	.823	9.4						.290						
6	.411	8.0	<4	2.3	22	<5		.073						
7	.624	9.5					.10	.291						
8	.349	8.7						.032						
9	.599	9.7						.292						
10	.405	7.7						.101	7.9	.003	.007	.027	.018	.012
11	.603	9.8						.277						
12	.508	9.9						.236						
13	.392	9.4	4	9.4	21	<5	.10	.097						
14	.453	8.2						.100						
15	.549	8.1						.207						
16	.498	9.6						.165						
17	.430	9.6						.123	6	.003	.008	.012	.028	.009
18	.403	9.7						.119						
19	.469	9.9						.218						
20	.282	7.7	4	6.8	26	<5		.040						
21	.720	9.5						.291						
22	.495	7.6					.10	.126						
23	1.010	9.2						.125						
24	.626	7.8						.107	1.6	.003	.007	.234	.014	.016
25	.339	7.8						.040						
26	.450	9.3						.126						
27	.376	9.3	8	17.8	67	<5	.10	.067						
28	.623	9.9						.292						
29	.681	9.8						.329						
30	.665	9.1						.291						
31	1.103	7.7						.163	5.8	.003	.010	.148	.067	.012
[1]	0.575		5	9	34	<5	.10	0.174	4.3	0.002	0.006	0.085	0.026	0.010
LIMITS [2]		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.061
LIMITS [3]			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS [4]		6.5 - 9.0				5	0.007							

0259665

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of January 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	.509			0.170	7.6	<4	<5	0.092	7.7					
2	.230							.077	8.0					
3	.408		<5	.081	7.5	<4	<5	.083	8.0					
4	.665			.292	7.7	19	<5	.124	7.8					
5	.411							.122	7.8					
6	.220	<4	<5					.118	7.7	10	4.3	2	0.9	
7	.207							.126	8.1					610
8	.180							.137	7.7					
9	.159							.148	7.7					
10	.172							.132	7.9					
11	.152							.174	8.7					
12	.144							.128	7.7					
13	.178	<4	<5					.117	8.0					
14	.198							.155	8.0	6	0.6	17	10.0	990
15	.183							.159	7.8					
16	.181							.152	7.9					
17	.137							.171	8.0					
18	.133							.151	7.7					
19	.105							.146	7.4					1000
20	.109	<4	<5					.133	7.5	5	2.4	3	1.5	
21	.297			0.0003	7.4	<4	5	.132	7.5					
22	.238							.139	7.7					
23	.668			.992	7.9	<4	<5	.217	7.7					
24	.354			.003	8.0	<4	<5	.165	7.7					
25	.179							.120	7.6					
26	.193							.130	7.6					
27	.178	<4	<5					.131	7.7	9	4.5	8	4.0	
28	.162							.169	7.7					100
29	.212							.140	7.6					
30	.266		<5	.013	7.5	8	<5	.108	7.5					
31	.742		<5	1.424	7.5	<4	<5	.198	7.6					
AVG.[1]	0.264	<4	<5	0.372		6	<5	.139		7	3.0	8	4.1	660
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Max. Geo. Mean)

0259666

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of January 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	2.18	0.002	0.002	<0.010	2.37	2.4	9.0		9.6				
2	0.18	Comp.	Comp.	Comp.	2.58	5.4	9.3		9.4				
3	2.00	9/1-	11/1-	11/1-	2.14	2.3	8.8		9.8				
4	2.64	9/30/81	11/30/81	11/30/81	3.08	2.0	9.0		9.8				
5	2.62				2.88	3.5	9.3		9.8				
6	.98				1.33	7.8	7.9		9.7	1.5	14	56	1.2
7	2.54				2.26	4.3	9.1	60	10.1				
8	1.42				1.76	2.3	8.8		9.7				
9	1.08				.96	3.5	9.2		10.2				
10	1.12				.94	2.1	9.1		10.0				
11	1.04				1.12	2.5	9.1		10.4				
12	.56				.58	5.4	10.0		10.2				
13	.94				1.10	0.2	8.0		10.0	6.3	14	52	1.5
14	.52	0.002	0.017	<0.010	.99	3.3	9.8	1200	10.0				
15	.58	Comp.	Comp.	Comp.	.84	3.6	10.0		10.2				
16	.32	10/1-	12/1-	12/1-	.67	2.2	9.5		10.4				
17	.58	10/31/81	12/31/81	12/31/81	.95	2.5	9.5		11.2				
18	.40				.61	2.6	9.6		10.2				
19	.28				.47	2.5	9.5	1500	10.4				
20	.28				.55	0.7	8.9		8.9	6.4	24	66	1.9
21	.64				.94	2.0	9.4		9.4				
22	.86				1.10	1.9	9.6		9.7				
23	.80				1.10	0.6	8.4		10.8				
24	1.72				2.25	1.0	9.0		11.2				
25	1.28				2.00	0.2	8.0		9.6				
26	1.34				1.01	2.3	9.5		11.6				
27	.48				.93	1.3	9.2		10.8	12.5	47	242	2.1
28	.58				.98	3.2	9.7	780	11.1				
29	1.12				1.43	3.1	9.6		10.8				
30	.90				.93	5.6	9.6		10.3				
31	1.14				1.30	2.4	9.3		11.6				
AVG.[1]	1.07				1.36	2.7		539 [2]	10.2	7	25	104	1.7
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE MC-0524	59	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE MC-0524 guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259667

NLO, IN

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of January 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	4470		42	26	52	2534	501		253	819
2	4770	.17	42	25	52	*	635		353	1413
3	4790	.37	52	40	51	2534	603		265	653
4	14740	.24	59	29	48	2534	*		236	544
5	20720		45	25	52	1810	762		309	856
6	14280		52	37	64	*	619	355	400	558
7	9760		38	18	50	1882	667		383	967
8	6680		32	11	52	2244	*		324	706
9	5100	.03	29	3	55	2462	635		264	930
10	3320		-4	-13	50	2534	508		309	744
11	1690		10	-5	52	2534	375		309	744
12	2140	.04	21	3	60	1955	438		347	893
13	3200	.13	27	19	55	1991	397		309	476
14	3035		23	15	52	2244	476	288	530	967
15	2760		32	-8	46	2317	444		383	1116
16	2525		32	-11	50	2534	394		342	819
17	1800		5	-15	48	2534	381		309	893
18	1665		31	-1	51	2317	375		294	819
19	1990		33	13	53	2534	495		501	707
20	1900	.09	34	29	54	2462	698	270	1178	1191
21	1990		34	25	56	2172	540		736	1116
22	1975	1.51	50	23	49	2172	560		736	1116
23	31800	.31	52	24	50	1890	675		271	447
24	19670		24	11	53	*	1000		536	819
25	10100	.15	23	10	52	2600	700		368	651
26	6590		24	-1	50	1448	444		648	893
27	4890		39	-3	54	1448	555	286	1001	825
28	4010		43	28	48	1520	495		824	1191
29	3960		40	18	56	1448	540		1296	1042
30	4800	1.25	53	37	45	2534	508		913	1414
31	44100	1.76	48	25	42	2806	635		191	856
Avg. [1]	7910	6.05 [2]				2217	554	300	488	877

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

4944

315

025948

WASTEWATER QUALITY REPORT SUMMARY

FOR

JANUARY, 1982

Wastewater quality was acceptable during January. The daily average quantity of hexavalent chromium continues to be acceptable at 0.002 kg/day, which is 50% of the NPDES limit. The daily average concentration for residual chlorine was 0.01 mg/L, which equalled the NPDES limit. The MH-175 December monthly composite samples for radium-226 and radium-228 were 26% and less than 15% respectively, of their DOE limits.

NATIONAL LEAD COMPANY OF OHIO

2129674

085450

WASTE WATER QUALITY General Data For the Month of January 1982

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (WB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATION
1	252000	2534	+7	2541	640,332						
2	*			—	—						
3	252000	2534	+7	2541	640,332						
4	147000	2534	+7	2541	373,527	337000	2961	3554	6515	2,195,555	
5	252000	1810	+7	1817	457,884						
6	*	—		—	—						
7	252000	1882	+7	1889	476,028						
8	31500	2244	+7	2251	70,907						
9	215000	2464	+7	2471	531,265						
10	63000	2534	+7	2541	160,083						
11	252000	2534	+7	2541	640,332						
12	200000	1955	+7	1962	392,400						
13	21000	2244	+7	2251	47,271	675000	5325	2560	8235	5,558,625	
14	100000	1991	+7	1998	199,800						
15	168000	2317	+7	2324	390,432						
16	126000	2534	+7	2541	320,166						
17	84000	2534	+7	2541	213,444						
18	80000	2317	+7	2324	185,920						
19	180000	2534	+7	2541	457,380						
20	*			—	—	295000	6546	12157	18703	5,517,385	
21	252000	2462	+7	2469	622,188						
22	86000	2172	+7	2179	187,394						
23	86000	1882	+7	1889	162,454						
24	29000	1882	+7	1889	54,781						
25	* —	—		—	—						
26	86000	1448	+7	1455	125,130				16184		
27	28800	1448	+7	1455	41,904	587000	3937	12247	~~17185~~	9,500,008	
28	252000	1520	+7	1527	384,804						
29	252000	1448	+7	1455	366,660						
30	252000	2856	+7	2903	731,556						
31	86400	2534	+7	2541	219,542						
AVG.[1]	3999.7	UNITS[2]			9,093,916	1894	UNITS			22,771,573	

NOTES: [1] Arithmetic averages * not pumped this date

VVB-FVA

$$\frac{9,093,916}{3999.7} = 2274 \text{ mg/l (=ppm)}$$

WT'D SOLIDS (TOTAL SOLIDS JAN 1982) CLEARWELL WITHDRAWALS

FVA-VVB

$$\frac{22,771,573}{1894} = 12,023 \text{ mg/l (=ppm)}$$

WTD. AVER. (TOTAL SOLIDS JAN 1982) GEN. SUMP PUMPINGS

DATE 2-3-82
PM

085451

VVB - FVA
(CLEARWELL WITHDRAWALS TO RIVER, JANUARY 1982

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 2274 mg/l (= ppm)

CALCULATIONS:

1) 2274 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.018977 LBS SOLIDS/gal. SOLUTION

2) 8.3454 (WT. gal. WATER)
+ 0.018977 (SOLIDS/gal. SOLUTION)
TOTAL 8.364377 (CALCULATED WT./gal. SOLUTION)

3) 0.018977 (SOLIDS/gal SOLUTION) / 8.364377 (WT/gal SOLUTION) = 0.002269 = 0.2269 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEAR WELL = 4,942,700 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:
4,942,700 gals × 0.018977 (FACTOR SOLIDS/gal SOLUTION) = 93,798 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
4,942,700 gals × 8.364377 (FACTOR WT/gal SOLUTION) × .002269 (% SOLIDS) = 93,806 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
4,942,700 gals × 0.13369 × 0.002269 = 1499 FT^3 SOLIDS (TOTAL SOLIDS)

08913

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

VVB - FVA

WT (LBS) SOLIDS

DEPLETED 95%
93,798 LBS × 0.95 = 89,108 LBS SOLIDS (DEPL'D.)

ENRICHED 5%
93,798 LBS × 0.05 = 4690 LBS SOLIDS (ENR.)
CHECK TOTAL 93,798

FT^3 SOLIDS

DEPLETED 95%
1499 FT^3 × 0.95 = 1424 FT^3 SOLIDS (DEPL'D.)

ENRICHED 5%
1499 FT^3 × 0.05 = 75 FT^3 SOLIDS (ENR.)
CHECK TOTAL 1499

-4944

DATE 2-3-82 pm

085452

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT JANUARY 1982

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 12,023 mg/l

CALCULATIONS:

1) 12,023 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.100337 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal WATER)
+ 0.100337 (SOLIDS/gal. SOLUTION)
TOTAL 8.445737 (CALCULATED WT./gal SOLUTION)

3) 0.100337 (SOLIDS/gal SOLUTION) / 8.445737 (WT/gal SOLUTION) = 0.011880 = 1.1880 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 1,915,500 gals
DATE: JANUARY 1982

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
1,915,500 gals × 0.100337 (FACTOR SOLIDS/gal SOLUTION) = 192,196 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
1,915,500 gals × 8.445737 (FACTOR WT/gal SOLUTION) × 0.011880 (% SOLIDS) = 192,192 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
1,915,500 gals × 0.13369 × 0.011880 = 3042 FT3 SOLIDS (TOTAL SOLIDS)

320

-2-

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED 77%
192,196 LBS × 0.77 = 147,991 LBS SOLIDS (DEPL'D)

ENRICHED 23%
192,196 LBS × 0.23 = 44,205 LBS SOLIDS (ENR.)
CHECK TOTAL 192,196

FT^3 SOLIDS

DEPLETED 77%
3042 FT^3 × 0.77 = 2342 FT3 SOLIDS (DEPL'D)

ENRICHED 23%
3042 FT^3 × 0.23 = 700 FT3 SOLIDS (ENR.)
CHECK TOTAL 3042

-1044

ILO, INC
HEALTH & SAFETY DIVISION

2196227

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February 1982

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.617	9.9						0.525						
2	.446	9.8						.526						
3	.859	9.5	<4	2.0	78	<5		.290						
4	.316	9.6					.08	.519						
5	.904	9.6						.486						
6	.807	9.7						.466						
7	.419	9.3						.178	8.5	0.005	0.021	0.15	0.064	0.043
8	.449	9.6						.178						
9	.723	9.6						.376						
10	.446	8.0	5	25.3	145	<5		.162						
11	.694	9.7					.08	.290						
12	.553	9.7						.256						
13	.579	9.8						.294						
14	.310	8.0						.038	0.6	0.0001	0.001	0.02	0.007	0.003
15	.677	9.6						.293						
16	.783	9.5						.144						
17	.953	8.2	10	36.1	206	<5		.126						
18	.672	9.2					.09	.162						
19	.618	9.0						.212						
20	.563	9.0						.209						
21	.344	9.3						.040	0.6	0.0002	0.002	0.01	0.010	0.002
22	.481	9.2						.205						
23	.520	9.3						.208						
24	.352	8.9	5	9.2	57	<5	.10	.064						
25	.502	9.2						.210						
26	.534	9.2						.248						
27	.506	7.9						.207						
28	.277	7.6						.036	0.6	0.0001	0.002	0.01	0.004	0.001
29														
30														
31														
AVG[1]	0.675		* 6	18.2	122	5	.09	0.248	2.6	0.001	0.006	0.05	0.021	0.012
LIMITS [2]		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.011
LIMITS [3]			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS [4]		6.5 - 9.0				5	0.002							

0259660

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

LO, INC

EALTH & SA. ETY DIVISION

/ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	.349		<5	0.547	7.7	<4	<5	0.185	7.8					
2	.236							.126	7.8					
3	.433	12	<5					.136	7.7	10.5	5.4	3	1.5	
4	.614		<5	.343	7.6	<4	<5	.183	7.8					0
5	.263							.154	7.7					
6	.205							.136	7.5					
7	.151							.090	7.7					
8	.155							.116	7.6					
9	.222							.135	7.5					50
10	.157	7	<5				<5	.127	7.6	9.9	4.8	5	2.4	
11	.159							.127	7.6					
12	.166							.130	7.4					
13	.158							.127	7.9					
14	.140							.132	7.8					
15	.270							.114	7.6					
16	.513		<5	.132	8.2	7	<5	.126	7.8					
17	.683	<4	5	.171	7.6	<4	<5	.144	7.8	9.9	5.4	15	8.2	
18	.336							.174	7.7					670
19	.261							.145	7.7					
20	.218							.136	7.6					
21	.189							.115	7.7					
22	.175							.101	8.8					
23	.174							.138	8.6					
24	.146	<4						.142	8.1	6.2	3.3	8	4.3	
25	.166							.126	7.9					1120
26	.161							.125	7.6					
27	.172							.127	7.5					
28	.133							.108	7.5					
29														
30														
31														
VG.[1]	0.250	• 7	<5	0.298		• 5	<5	0.133		• 9	4.7	• 8	4.1	• 460
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

0259661

OTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of February 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #0/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.48	0.005	0.012	0.016	2.01	2.1	9.1		10.6				
2	1.26	Comp.	Comp.	Comp.	1.87	8.2	9.4		11.0				
3	.90	11/1-	1/1-	1/1-	1.05	0.8	9.8		9.2	0.6	24	65	1.1
4	2.14	11/30/81	1/31/82	1/31/82	2.44	2.9	9.5	50	11.8				
5	1.90				2.14	3.9	9.2		10.8				
6	1.52				1.89	4.5	9.4		10.8				
7	1.10				1.80	3.4	9.1		11.7				
8	1.04				1.65	3.5	9.1		9.3				
9	.80				.99	4.3	9.5	100	10.0				
10	.52				.87	2.5	9.2		9.6	15.0	86	109	1.8
11	.56				1.13	3.9	9.0		10.2				
12	.54				.78	4.9	9.3		10.2				
13	.58				1.13	4.8	9.4		10.4				
14	.56				1.15	0.8	8.5		10.6				
15	.94				1.63	4.6	9.3		10.6				
16	1.68	0.006			1.76	2.8	9.3		10.2				
17	2.48	Comp.			3.34	1.8	8.8		10.2	10.0	57	138	1.7
18	1.62	12/1-			2.55	2.9	9.0	140	10.0				
19	1.68	12/31/81			2.42	3.6	9.1		10.4				
20	1.64				2.13	4.6	8.9		9.7				
21	1.58				1.88	0.4	8.4		9.8				
22	1.22				2.02	6.3	9.2		10.0				
23	1.62				1.73	5.9	9.2		10.0				
24	.78				1.23	1.2	8.8		9.3	6.9	43	56	1.1
25	1.62				1.73	13.0	9.0	570	10.2				
26	1.62				1.90	5.5	9.1		10.7				
27	1.14				1.49	4.1	8.9		10.0				
28	.90				1.88	0.2	8.6		9.6				
29													
30													
31													
AVG.[1]	1.27				1.74	3.9		141[2]	10.0	8	53	92	1.4
LIMITS OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	0259662		2.0
LIMITS DOE Order 5480.1	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1 guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

10-815-313 (REV. 1/28/61)

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of February 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	47400		30	23	46	2534	667		400	670		
2	27100		40	24	60	2172	1143		412	1340		
3	12400	.45	37	27	60	1014	762	405	276	446		
4	12240		29	23	48	778	762		342	707		
5	8230	.02	34	22	46	1207	1714		524	893		
6	6700		23	7	58	1810	762		471	1451		
7	5800		34	5	56	2172	603		442	1340		
8	5280	.22	34	14	49	2027	508		406	1042		
9	4450	.21	28	5	54	1882	444		347	930		
10	4090		15	-13	52	1810	444	303	471	744		
11	3685		34	7	48	1810	476		353	967		
12	3590		33	4	54	1882	444		368	1042		
13	3280		36	21	56	2679	437		353	1488		
14	3100		46	20	53	*	437		353	1302		
15	4950		52	33	48	2968	386		427	1414		
16	7820	.25	47	40	48	2751	412		330	819		
17	26710	.02	42	34	49	2896	667	270	424	874		
18	29070		41	34	51	2174	*		471	893		
19	24820	.03	39	35	53	2172	587		456	893		
20	19770		54	37	56	2896	540		500	1265		
21	19000		43	31	55	*	1270		471	707		
22	18810		48	29	56	2751	501		412	1191		
23	15800		65	28	60	2534	508		353	1042		
24	15200		41	31	56	2751	495	301	353	484		
25	16220		39	23	54	2244	508		324	1191		
26	12160		41	20	50	2896	343		347	1488		
27	7750		48	28	55	*	444		294	1191		
28	6500		52	24	58	*	368		342	432		
29												
30												
31	13283	1.20				2200	616	320	394	1009		
AVG. [1]		[2]										

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

324

0259bb3

NLO-H&S-351 (REV. 1/28/81)

WASTEWATER QUALITY REPORT SUMMARY

For

February, 1982

Wastewater quality was acceptable during February. The total uranium results are being compared with the limit of 1.8 mg U/L from DOE Order 5480.1, which has replaced DOE Manual Chapter 0524. The previous limit was 59 mg U/L. The February, 1982 uranium effluent concentration at Manhole-175 was 71% of the DOE Order guide value. The average residual chlorine concentration level was reduced to 0.09 mg/L from the January level of 0.10 mg/L, and the NPDES daily maximum was not exceeded and was equalled only once.

NATIONAL LEAD COMPANY OF OHIO

WASTE WATER QUALITY — General Data — 2129649 — For the Month of February 1982

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (WB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	GEN. TO PIT VOLUME (gals)	SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal units) TIMES TOTAL SOLIDS	PRECIPITATION
1	1,000,000	2534	+7	2541	2,561,328						
2	1,000,000	2896	+7	2903	2,926,224						
3	220,000	2534	+7	2541	640,332	693,000	7222	6516	13738	9,520,434	
4	180,000	778	+7	785	376,800						
5	447,000	1267	+7	1274	569,478						
6	429,000	1810	+7	1817	779,493						
7	140,000	2172	+7	2179	305,060						
8	140,000	2027	+7	2034	284,760						
9	300,000	1882	+7	1889	566,700	384,000	2886	2563	5449	3,820,416	
10	124,000	1810	+7	1817	225,308						
11	216,000	1810	+7	1817	392,472						
12	216,000	1882	+7	1889	408,024						
13	216,000	2679	+7	2686	580,176						
14	X	X	—	—	—						
15	216,000	2968	+7	2975	642,600						
16	144,000	2751	+7	2758	397,152	533,000	1818	18588	20406	10,876,398	
17	83,000	2896	+7	2903	240,949						
18	162,000	2177	+7	2184	353,808						
19	173,000	2172	+7	2179	376,967						
20	169,000	2896	+7	2903	490,607						
21	X	X	—	—	—						
22	170,000	2751	+7	2758	468,860						
23	170,000	2534	+7	2541	431,970						
24	25,000	2751	+7	2758	68,950	563,000	8826	14776	23704	13,345,352	
25	170,000	2244	+7	2251	382,670						
26	170,000	2896	+7	2903	493,510						
27	X	X									
28	X	X									
29											
30											
31											
Av. [1]		[2]									

NOTES: [1] Arithmetic averages

VVB-FVA

$\frac{14,964,198}{6628} = 2258$ mg/l (ppm)

WT'D SOLIDS (TOTAL SOLIDS FEB. 1982) CLEARWELL WITHDRAWALS FROM PIT AVER.

FVA-VVB

$\frac{37,562,600}{2173} = 17,286$ mg/l (ppm)

WT'D. AVER. (TOTAL SOLIDS FEB. 1982) GEN. SUMP PUMPINGS TO PITS AVER.

08939

329

-4944

3/1/82

-4944

SOLIDS
FOR FEB 1982

VVB-FVA

	00 T
Volume (1000 gal. units)	1,008
	1,008
	252
	480
	447
	429
	140
	140
	300
	124
	216
	216
	216
	-0-
	216
	144
	83
	162
	173
	169
	-0-
	170
	170
	25
	170
	170
	-0-
	-0-
	6,628 T

	00 T
WT'D. SOLIDS (ppm)	2,561,328
	2,920,224
	640,332
	376,800
	569,478
	779,493
	305,060
	284,760
	566,700
	225,308
	392,472
	408,024
	580,176
	-0-
	642,600
	597,152
	240,949
	553,808
	376,967
	490,607
	-0-
	468,860
	431,970
	68,950

085354

5 9 7,1 5 2
2 4 0,9 4 9
5 5 3,8 0 8
3 7 6,9 6 7
4 9 0,6 0 7
-0-
4 6 8,8 6 0
4 3 1,9 7 0
6 8,9 5 0
3 8 2,6 7 0
4 9 3,5 1 0
-0-
-0-
1 4,9 6 4,1 9 8 T
0 0 T

FYA-VVB

6 9 3
3 8 4
5 3 3
5 6 3
2,1 7 3 T
0 0 T

WT'D. SOLIDS (ppm)	
	9,5 2 0,4 3 4
	3,8 2 0,4 1 6
	1 0,8 7 0,3 9 8
	1 3,3 4 5,3 5 2
	3 7,5 0 2,6 0 0 T
	0 0 T

085355

DATE 3-1-82 PM

085356

VVB - FVA
(CLEARWELL WITHDRAWALS TO RIVER, FEBRUARY 1982

ALCULATED TOTAL (WT'D AVER.) SOLIDS = 2,258 mg/l (=ppm)

CALCULATIONS:

1) 2,258 mg/l × 8.3454 × 10^{-6} = 0.018844 LBS SOLIDS/gal. SOLUTION
(FACTOR)

2) 8.3454 (WT. gal. WATER)
+ 0.018844 (SOLIDS/gal. SOLUTION)
TOTAL 8.364244 (CALCULATED WT./gal. SOLUTION)

3) 0.018844 (SOLIDS/gal SOLUTION) / 8.364244 (WT/gal SOLUTION) = 0.002253 = 0.2253 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEARWELL = 5,795,400 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:
5,795,400 gals × 0.018844 (FACTOR SOLIDS/gal SOLUTION) = 109,209 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
5,795,400 gals × 8.364244 (FACTOR WT/gal SOLUTION) × 0.002253 (% SOLIDS) = 109,212 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
5,795,400 gals × 0.13369 × 0.002253 = 1746 FT^3 SOLIDS (TOTAL SOLIDS)

329

-2-

- CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)
CW 1-82 = 0.35% U235

VVB - FVA

WT (LBS) SOLIDS

DEPLETED 95%
109,209 LBS × 0.95 = 103,749 LBS SOLIDS (DEPL'D.)

ENRICHED 5%
109,209 LBS × 0.05 = 5,460 LBS SOLIDS (ENR.)
CHECK TOTAL 109,209

FT^3 SOLIDS

DEPLETED 95%
1746 FT^3 × 0.95 = 1659 FT^3 SOLIDS (DEPL'D.)

ENRICHED 5%
1746 FT^3 × 0.05 = 87 FT^3 SOLIDS (ENR.)
CHECK TOTAL 1746

38

-4944

DATE 3-1-82

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT FEBRUARY 1982

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 17,286 mg/l

CALCULATIONS:

1) 17,286 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.144259 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal WATER)
+ 0.144259 (SOLIDS/gal. SOLUTION)
TOTAL 8.489659 (CALCULATED WT./gal SOLUTION)

3) 0.144259 (SOLIDS/gal SOLUTION) / 8.489659 (WT/gal SOLUTION) = 0.016992 = 1.6992 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 2,069,100 gals
DATE: FEB 1982

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
2,069,100 gals × 0.144259 (FACTOR SOLIDS/gal SOLUTION) = 298,486 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
2,069,100 gals × 8.489659 (FACTOR WT/gal SOLUTION) × 0.016992 (% SOLIDS) = 298,481 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
2,069,100 gals × 0.13369 × 0.016992 = 4700 FT^3 SOLIDS (TOTAL SOLIDS)

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED 77%
298,486 LBS × 0.77 = 229,834 LBS SOLIDS (DEPL'D)

ENRICHED 23%
298,486 LBS × 0.23 = 68,652 LBS SOLIDS (ENR.)
CHECK TOTAL 298,486

FT^3 SOLIDS

DEPLETED 77%
4700 FT^3 × 0.77 = 3619 FT^3 SOLIDS (DEPL'D)

ENRICHED 23%
4700 FT^3 × 0.23 = 1081 FT^3 SOLIDS (ENR.)
CHECK TOTAL 4700

080367

330

-4944-

_O, INC.
_ALTH & SAF DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196226

For the Month of March 1982

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10⁶ gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10⁶ gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (T6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.492	8.8						0.076						
2	.440	9.3						.181						
3	.505	9.1	9	12.2	164	<5		.059						
4	.754	8.8					.08	.256						
5	.811	9.0						.251						
6	.567	9.0						.291						
7	.377	7.6						.111	2.5	0.0041	0.018	0.03	0.024	0.0104
8	.478	9.0						.255						
9	.465	9.0						.216						
0	.523	8.7	<4		436	<5		.255						
1	.345	8.2		11.5				.022						
2	.878	8.7					.08	.255						
3	.674	8.7						.236						
4	.470	8.8						.110	3.6	0.0033	0.015	0.04	0.025	0.0084
5	.793	8.5						.254						
6	.707	8.5						.254						
7	.723	7.7	<4	3.3	115	<5		.074						
8	.422	7.7					.07	.078						
9	.580	8.8						.040						
0	1.184	8.4						.292						
1	.737	7.8						.109	1.7	0.0034	0.009	0.10	0.033	0.0097
2	.605	8.5						.294						
3	.588	8.1						.295						
4	.425	8.2	<4	16.1	499	<5		.111						
5	.580	8.4					.03	.254						
6	.581	8.6						.187						
7	.534	8.6						.235						
8	.393	7.7						.137	2.1	0.0051	0.014	0.06	0.037	0.021
9	.561	8.9						.302						
0	.570	8.8						.293						
1	.666	8.1	8	22.2	353	<5		.091						
1	0.588		* 6	13	313	<5	.07	0.190	2.5	0.004	0.014	0.07	0.030	0.012
2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
4		6.5 - 9.0				5	0.002							

4944

331

0259655

OTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March, 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.131							0.085	7.9					
2	.139							.120	7.7					
3	.312	<4	<5	0.008	7.5	<4	<5	.134	7.6	7.8	4.0	1	0.5	
4	.367		<5	.058	7.4	4	<5	.131	7.8					900
5	.426							.134	7.6					
6	.158							.118	7.6					
7	.143							.123	7.6					
8	.123							.100	7.7					
9	.129							.120	7.9					
10	.130	<4	<5					.138	7.7	7.7	4.0	12	6.3	
11	.193							.129	7.6					120
12	.548		<5	.314	7.7	<4	<5	.075	7.7					
13	.328		<5	.145	7.5	10	<5	.110	7.5					
14	.244							.116	7.7					
15	.414		<5	.162	7.7	<4	<5	.125	7.6					
16	.328							.125	7.5					
17	.495	<4	<5	.164	7.7	<4	10	.154	7.7	8.1	4.7	2	1.2	
18	.220							.124	7.6					100
19	.405			.107	7.6	<4	<5	.134	7.5					
20	.735		<5	.269	7.6	<4	<5	.157	7.8					
21	.497		<5	.169	7.6	<4	<5	.131	7.8					
22	.236							.115	7.8					
23	.190							.103	8.0					
24	.186	<4						.128	7.8	3.6	1.7	1	0.5	
25	.212		<5	.001	7.3	<4	<5	.114	7.7					20
26	.281		<5	.007	7.7	<4	<5	.112	7.8					
27	.185							.114	7.5					
28	.137							.119	7.6					
29	.156							.104	7.9					
30	.167							.111	7.7					
31	.436		<5	.154	7.7	<4	<5	.138	7.7	7.5	3.9	2	1.0	
AVG.[1]	0.279	* <4	<5	0.130		* 4	5	0.121		* 7	3.7	* 4	1.9	* 285
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	30	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]	*		5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

0259b5b

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of March, 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM MO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.88		0.017	<0.010	1.20	0.2	8.7		10.2				
2	.98		Comp.	Comp.	1.43	8.0	9.3		10.2				
3	1.72		2/1-	2/1-	2.27	2.1	8.4		10.2	6.4	86	122	1.4
4	1.18		2/28	2/28	1.88	5.4	9.1	40	10.9				
5	1.54				2.57	5.3	9.1		10.6				
6	1.16				1.48	7.7	8.8		10.8				
7	1.02				1.42	3.3	8.6		11.0				
8	1.42				1.43	6.2	8.9		11.4				
9	1.22				1.72	6.5	8.7		10.8				
10	.84				1.05	5.1	8.7		12.0		220	161	1.6
11	1.10				1.96	1.9	8.3	80	11.4	8.8			
12	1.64				2.43	5.7	8.0		10.2				
13	1.46				1.59	7.8	8.6		9.8				
14	1.96				2.13	5.3	8.5		9.9				
15	2.14				1.96	12.1	8.8		10.0				
16	2.50				2.35	12.3	8.6		9.6				
17	2.32				2.66	2.3	8.1		10.0	1.2	42	74	1.5
18	1.72				1.49	22.2	8.1	100	9.3				
19	2.54				3.20	1.0	8.2		10.2				
20	2.08				2.40	13.6	8.0		10.6				
21	2.46				2.01	6.0	8.3		11.8				
22	2.46				2.44	13.1	8.5		8.8				
23	3.10				2.77	14.7	8.6		8.0				
24	2.20				2.10	9.0	7.9		9.2	10.0	310	150	1.9
25	2.46				2.74	17.9	8.6	50	9.5				
26	2.54				3.14	12.5	8.8		8.5				
27	2.16				1.84	16.5	8.7		8.8				
28	1.04				1.23	7.7	8.5		9.8				
29	1.62				1.63	16.7	8.8		9.5				
30	1.68				1.85	17.5	8.9		10.0				
31	1.48				1.59	6.1	8.2		9.8	8.8	140	67	1.7
AVG.[1]	1.79				2.00	8.8		63 [2]	10.1	7	160	115	1.6
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

Thorium results unavailable. Will be reported in the April report.

4944

330

0259657

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of March, 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	5750		58	26	56	*	413		353	446		
2	5850	.15	60	32	60	6878	460		309	2381		
3	5350	.03	30	24	52	6468	556	599	383	828		
4	7275	.28	58	28	50	2043	402		1178	2242		
5	9800		34	31	60	5467	1673		589	2419		
6	14400		35	29	54	4706	3809		530	2902		
7	10000		35	21	57	5068	584		471	1488		
8	7275		41	17	48	5068	571		471	2381		
9	5800		41	22	54	4340	*		383	2237		
10	5000		52	31	53	4340	508	590	471	2237		
11	4470	.70	61	42	54	4660	*		347	831		
12	15580		69	29	59	5580	514		221	1150		
13	16400	.19	68	41	58	4960	679		406	1757		
14	17800	.03	59	34	60	4960	661		436	1144		
15	15400	.33	46	42	54	4960	514		294	1789		
16	12640	.62	76	45	56	3751	595		368	1629		
17	21200		59	42	66	4092	588	276	324	1118		
18	18600	.24	73	40	65	*	8080		412	1278		
19	14550	.39	53	40	53	*	4407		263	588		
20	21950	.32	74	43	58	3720	5876		280	1278		
21	23160		62	41	58	3720	1249		294	1022		
22	16150		42	36	54	3720	2020		456	1661		
23	11680		53	36	59	3162	1616		365	2237		
24	8050		67	35	62	2844	6170	711	457	1981		
25	7500	.17	54	33	56	4340	2493		347	2109		
26	7400	.02	36	29	53	4040	*		306	1853		
27	7300		36	25	56	6200	*		418	2493		
28	6500		53	18	52	6200	433		353	1278		
29	5930		63	24	58	6200	404		365	2556		
30	5125	.05	73	54	63	4960	735		353	2556		
31	8400	.66	68	42	62	6200	900	370	265	1022		
AVG. [1]	10041	4.18 [2]				4745	1737	509	402	1706		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

334

0259658

NLO-HAS-361 (REV. 1/28/81)

WASTEWATER QUALITY REPORT SUMMARY
FOR
MARCH, 1982

Wastewater quality was acceptable during March. Residual chlorine at Manhole-175 has dropped to 0.07 mg/L from the limit of 0.10 mg/L in January and 0.09 mg/L in February. Uranium at Manhole-175 averaged 1.79 mg/L, slightly under cur target value of 1.8 mg/L. Hexavalent chromium at the manhole was 64% of the NPDES "daily maximum" and equalled the NPDES "daily average" limit of 0.004 mg/L.

FOR MARCH 1982 ML

RECD 3/31/82

NATIONAL LEAD COMPANY OF OHIO

2129769

WASTE WATER QUALITY — General Data

For the Month of MARCH 1982

DATE	CLEAR WELL VOLUME (gals)	CLEARWELL (VVB-FVA) DISSOLVED SOLIDS, mg/l	SUSPENDED SOLIDS mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	GEN. SUMP TO PIT VOLUME (gals)	GEN. SUMP TO PIT (FVA-VVB) SUSPENDED SOLIDS mg/l	DISSOLVED SOLIDS, mg/l	TOTAL SOLIDS mg/l	VOLUME (1000 gal UNITS) TIMES TOTAL SOLIDS	PRECIPITATION
1	X										
2	142,000	6878	+7	6885	977,670	526,000	6115	8141	14256	8,240,256	
3	213,000	6468	+7	6475	1,379,175						
4	216,000	7043	+7	7050	1,522,600						
5	216,000	5430	+7	5437	1,174,392						
6	216,000	4706	+7	4713	1,018,008						
7	72,000	5068	+7	5075	365,400						
8	216,000	5068	+7	5075	1,096,200						
9	216,000	4340	+7	4347	938,952	608,000	7133	7209	14342	8,734,278	
10	216,000	4340	+7	4347	938,952						
11	225,000	4826	+7	4843	1,089,675						
12	216,000	5580	+7	5587	1,206,792						
13	198,000	4960	+7	4967	983,466						
14	72,000	4960	+7	4967	357,624						
15	216,000	4960	+7	4967	1,072,872	483,000	2634	8146	10780	5,206,740	
16	216,000	3751	+7	3758	811,728						
17	36,000	4092	+7	4099	147,564						
18	X			—	—						
19	X			—	—						
20	216,000	3720	+7	3727	805,032						
21	72,000	3720	+7	3727	268,344						
22	216,000	3720	+7	3727	805,032						
23	216,000	3162	+7	3169	684,504	608,000	3881	16854	20735	12,482,470	
24	72,000	2844	+7	2851	205,272						
25	216,000	4340	+7	4347	938,952						
26	187,000	4340	+7	4347	812,889						
27	235,000	6200	+7	6207	1,458,645						
28	99,000	6200	+7	6207	614,493						
29	263,000	6200	+7	6207	1,632,441	370,000	9608	17833	26840	9,930,800	
30	257,000	4960	+7	4967	1,261,618						
31	53,000	6200	+7	6207	328,971						
AVG.[1]	5001				24,857,463	2,640				44,594,544	

NOTES: [1] Arithmetic average

VVB - FVA

$\frac{24,857,463}{5001} = 4979$ mg/l (=ppm) WT'D SOLIDS (TOTAL SOLIDS FOR MARCH 1982) CLEARWELL

FVA-VVB

$\frac{44,594,544}{2,640} = 16,892$ mg/l (=ppm) WT'D AVER. (TOTAL SOLIDS FOR MARCH 1982. GEN. SUMP PUMPINGS TO PIT AREA

336

-4044

DATE 4/5/82

VVB – FVA
(CLEARWELL WITHDRAWALS TO RIVER, MARCH 1982.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 4,979 mg/l (= ppm)

CALCULATIONS:

1) 4,979 mg/l × 8.3454 × 10^{-6} = 0.041552 LBS SOLIDS/gal. SOLUTION (FACTOR)

2) 8.3454 (WT. gal. WATER)
+ 0.041552 (SOLIDS/gal. SOLUTION)
TOTAL 8.386952 (CALCULATED WT/gal. SOLUTION)

3) 0.041552 (SOLIDS/gal SOLUTION) / 8.386952 (WT/gal SOLUTION) = 0.004954 = 0.4954% SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO RIVER FROM CLEAR WELL MARCH 1982 = 4,844,900 gals

FOR WT. (LBS.) SOLIDS

1) BY DIRECT CALCULATION:
4,844,900 gals × 0.041552 (FACTOR SOLIDS/gal SOLUTION) = 201,315 LBS (TOTAL SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
4,844,900 gals × 8.386952 (FACTOR WT/gal SOLUTION) × 0.004954 (% SOLIDS) = 201,301 LBS (TOTAL SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
4,844,900 gals × 0.13369 × 0.004954 = 3209 FT^3 SOLIDS (TOTAL SOLIDS)

– CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)
CW 1-82 = 0.35% U235

VVB – FVA

WT (LBS) SOLIDS

DEPLETED 95%
201,315 LBS × 0.95 = 191,249 LBS SOLIDS (DEPL'D.)

ENRICHED 5%
201,315 LBS × 0.05 (CHECK TOTAL) = 10,066 LBS SOLIDS (ENR.)
201,315

FT^3 SOLIDS

DEPLETED 95%
3209 FT^3 × 0.95 = 3049 FT^3 SOLIDS (DEPL'D.)

ENRICHED 5%
3209 FT^3 × 0.05 (CHECK TOTAL) = 160 FT^3 SOLIDS (ENR.)
3209

168580

-4944

DATE 4-5-82

FVA-VVB

GEN. SUMP PUMPINGS TO CHEMICAL PIT MARCH 1982.

CALCULATED TOTAL (WT'D AVER.) SOLIDS = 16,892 mg/l

CALCULATIONS:

1) 16,892 mg/l × 8.3454 × 10^{-6} (FACTOR) = 0.140970 LBS (SOLIDS/gal. SOLUTION)

2) 8.3454 (WT. gal. WATER)
+ 0.140970 (SOLIDS/gal. SOLUTION)
TOTAL 8.486370 (CALCULATED WT./gal SOLUTION)

3) 0.140970 (SOLIDS/gal SOLUTION) / 8.486370 (WT/gal SOLUTION) = 0.016611 = 1.6611 % SOLIDS (IN SOLUTION PUMPED)

GIVEN: VOLUME (gals) PUMPED TO PIT #5 = 2,549,900 gals
DATE: MARCH 1982

FOR WT (LBS) SOLIDS

1) BY DIRECT CALCULATIONS:
2,549,900 gals × 0.140970 (FACTOR SOLIDS/gal SOLUTION) = 359,459 LBS (TOTAL WT. SOLIDS)

2) BY CALCULATED (CURRENT) FACTORS:
2,549,900 gals × 8.486370 (FACTOR WT/gal SOLUTION) × 0.016611 (% SOLIDS) = 359,459 LBS (TOTAL WT. SOLIDS)

FOR FT^3 SOLIDS

FORMULA:
VOLUME (gals) × 0.13369 × % SOLIDS = FT^3 SOLIDS
2,549,900 gals × 0.13369 × 0.016611 = 5663 FT^3 SOLIDS (TOTAL SOLIDS)

— CONTINUED (BREAKDOWN ACCORDING TO ENRICHMENT)

FVA-VVB

WT (LBS) SOLIDS

DEPLETED 77%
359,459 LBS × 0.77 = 276,783 LBS SOLIDS (DEPL'D)

ENRICHED 23%
359,459 LBS × 0.23 = 82,676 LBS SOLIDS (ENR.)
CHECK TOTAL 359,459

FT^3 SOLIDS

DEPLETED 77%
5663 FT^3 × 0.77 = 4361 FT^3 SOLIDS (DEPL'D)

ENRICHED 23%
5663 FT^3 × 0.23 = 1302 FT^3 SOLIDS (ENR.)
CHECK TOTAL 5663

ILO, INC.
EALTH & S Y DIVISION

2196225

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April 1982

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.728	8.7					0.094	0.277						
2	.646	8.2						.318						
3	.917	8.7						.297						
4	.612	8.4						.125	1.9	0.0033	0.006	0.09	0.003	0.012
5	.359	8.5						.039						
6	.771	7.9						.176						
7	.452	7.9	6	6.7	152	<5		.115						
8	.617	8.3					.056	.260						
9	.771	7.9						.258						
10	.892	8.0						.259						
11	.604	7.4						.112	1.7	0.0032	0.014	0.05	0.031	0.013
12	.460	8.2						.038						
13	.703	8.9						.287						
14	.507	8.6	9	8.4	211	<5		.114						
15	.547	8.7					.069	.251						
16	.521	8.7						.291						
17	.639	9.1						.276						
18	.312	7.7						.041	0.6	0.001	0.006	0.02	0.030	0.007
19	.488	8.8						.267						
20	.520	8.6						.294						
21	.335	7.6	<4	3.3	165	<5		.064						
22	.287	7.7					.093	.038						
23	.472	8.8						.234						
24	.533	8.5						.273						
25	.294	8.1						.079	1.3	0.0005	0.005	0.03	0.012	0.005
26	.547	9.1						.254						
27	.523	8.7						.185						
28	.364	8.5	7	8.8	386	<5		.180						
29	.477	8.8					.075	.180						
30	.337	7.6						.182						
31														
[1]	0.541		7	7	229	<5	0.08	0.192	1.4	0.002	0.008	0.05	0.019	0.009
[2]		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.003	0.102	0.85	0.256	0.051
[3]			20	28	1590				6.2	0.001	0.050	0.41	0.124	0.025
[4]		6.5 - 9.0				5	0.002							

NOTES: [1] Arithmetic averages except for (*) which is a flow-weighted average. [2] NPDES "Daily Maximum". [3] NPDES "Daily Average" which means the average for the month.
[4] Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

4944

3305

0259650

(REV. 1/28/81)

NLO, IN.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.312		<5	0.012	7.8	<4	<5	0.136	7.7					34
2	.198							.130	7.8					
3	.465		<5	.427	7.6	7	<5	.155	7.6					340
4	.337							.150	7.7					
5	.190							.130	7.8					
6	.461		<5	.048	7.8	<4	<5	.134	7.7					
7	.215	<4	<5					.122	7.7	3.5	1.6	2	0.9	
8	.192							.165	7.7					10
9	.383							.130	7.6					
10	.536							.097	7.6					
11	.406							.086	7.8					
12	.343							.079	7.7					
13	.323							.093	7.7					
14	.311	<4	<5					.082	7.8	1.1	0.3	2	0.6	
15	.163							.134	7.7					190
16	.130							.100	7.7					
17	.264		<5	.015	7.2	10	<5	.098	8.1					
18	.170							.101	7.6					
19	.140							.081	7.8					
20	.165							.061	7.8	4.8	1.1			
21	.173	<4	<5					.098	7.8			13	4.8	
22	.146							.103	7.6					10
23	.140							.098	7.5					
24	.152							.109	7.9					
25	.126							.090	7.8					
26	.204							.090	7.7					
27	.146							.092	8.0					
28	.141	<4	<5					.102	7.6	2.4	0.9	2	0.8	
29	.141							.098	7.7					140
30	.143							.103	7.5					
31														
AVG.[1]	0.241	• <4	<5	0.126		• 6	<5	0.108		• 3	1.0	• 5	1.8	• 77
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

0259651

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, IN

HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of April 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM MO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	2.00				1.87	13.0	8.6	28	8.1				
2	1.54				1.66	15.1	8.8		7.0				
3	1.32				1.25	11.0	8.3		9.6				
4	1.26				1.73	2.9	8.0		10.2				
5	1.02				1.15	0.2	8.4		10.2				
6	1.64				1.37	7.6	8.5		10.0				
7	1.18				1.52	2.8	8.1		9.8	3.9	89	82	1.0
8	1.72				1.88	8.1	8.6	40	9.3				
9	1.88				2.37	6.9	7.1		9.8				
10	1.38				1.72	4.8	7.1		10.4				
11	.86				1.10	3.2	7.4		10.2				
12	.54				3.61	10.9	8.0		10.0				
13	.92				1.35	6.6	9.0		9.2				
14	.74				.93	3.0	8.6		9.9	4.4	110	58	1.0
15	.90				1.45	9.5	8.8	130	10.0				
16	1.12				1.31	10.6	8.2		8.5				
17	1.36				1.21	8.6	8.4		8.1				
18	1.08				1.21	3.7	8.1		9.3				
19	1.18				1.33	10.3	8.7		7.9				
20	1.12				1.28	9.0	8.8		8.4				
21	1.00				1.12	3.0	7.1		10.2	2.6	130	63	1.0
22	.56				.94	0.2	7.5	10	9.8				
23	.66				.91	6.5	7.4		9.1				
24	.82				.63	8.0	8.1		9.8				
25	.70				.90	4.1	7.5		9.6				
26	.98				1.57	9.9	8.5		7.8				
27	.66				.99	10.9	8.7		8.3				
28	.90				1.18	0.1	7.8		9.4	6.3	280	177	1.9
29	1.04				1.06	9.4	8.7	30	9.0				
30	.48				1.07	3.6	8.1		8.8				
31													
AVG.[1]	1.09				1.39	6.8		34[2]	9.3	4	152	95	1.2
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE Order 5480.1	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.

[2]Monthly geometric mean.

[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1 guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259652

341

NLO, IN

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of April 1982

DATE 4044	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	13380		69	33	59	6324	573		383	1917		
2	10880	0.26	73	41	60	6820	507		359	2237		
3	13670	0.65	62	43	57	5580	514		221	1725		
4	11130		45	33	55	6200	550		336	735		
5	8595	0.26	42	33	56	*	624		383	447		
6	8340		41	25	55	4960	*		206	1406		
7	6845		37	22	56	5084	661	683	400	895		
8	6150	0.07	42	30	56	4960	551		353	1598		
9	5890		37	32	56	3100	533		383	1278		
10	6020		53	31	58	3658	735		224	1022		
11	9070		55	31	56	3534	533		247	760		
12	7850		69	32	59	*	624		250	307		
13	7150		70	44	64	3720	573		241	1595		
14	6150		61	34	60	3410	477	360	277	767		
15	5240		79	33	62	3960	*		324	2556		
16	4530	0.04	74	53	62	5580	654		424	2876		
17	4350	0.07	67	46	61	6820	499		353	2876		
18	4300		66	34	59	7440	*		324	1470		
19	4240		72	44	64	7936	*		330	3834		
20	3885		64	45	63	7440	514		318	3834		
21	3580		59	34	62	7440	514	266	312	1022		
22	3250		59	34	63	*	514		294	380		
23	3140		67	29	64	7440	477		368	2492		
24	2820		71	33	62	6200	639		342	2939		
25	2700	0.07	69	39	60	7316	639		306	1661		
26	2750	0.01	69	54	65	8060	*		289	2876		
27	2790		58	46	62	7316	533		324	6195		
28	2750		62	33	66	7316	521	755	383	2044		
29	2450		63	43	60	7440	477		476	2876		
30	2370		70	51	62	7440	477		265	1272		
31												
AVG. [1]	5876	1.43 [2]				6018	557	516	323	1930		

NOTES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

342

025963

NLO-H&S-361 (REV. 1/28/61)

WASTEWATER QUALITY REPORT SUMMARY
FOR
APRIL, 1982

Wastewater quality was acceptable during April. Uranium was 1.09 mg/L at Manhole-175, which is 61% of our target value of 1.8 mg/L. Hexavalent chromium was 0.002 kg/day in the combined general sump and clearwell flows, which is 50% of the NPDES daily average limit.

0259654

Water Pollution Control Proje
Friday, Apr 2, 1982

-49

-4944

2115120

Rice Cross

Geo Scott - HQ
Ltr, 2MS to ~~Oak Ridge~~ Geo. Scott Nov. 24, 1981. Written by Bob Mode
"Water Pollution Control ~~Project~~ Cost Increase Justification"

Mark 31 - depleted - discarded
Mark 15 - enriched - reprocessing.

needs words for back-up.

M. Thurain

avg for 1981 was 145 kg/day

Now	200 kg NO_3-N/d	&	400 tons U/yr
1984	6300 kg NO_3-N/d	&	~~1300~~ 3400 tons U/yr *

JACK KENNEDY
Ref: 100 M
SRO 1107 MT
RMI 1578
591
Y-12 842
RF 126

Billets of RMI
400 M

* 2500 tons/yr MK-15
800-900 billets tons/yr NPR
3300 - 3400

1986 MK15 — 2330
" Ref load, UO_3, 600 tons

858 kg/day NO_3-N when refining produces 600 MTU/yr

$\frac{1263}{145} = 8.7$

028830 $\frac{20}{20}$ = 8.5

NITRATE NITROGEN DISCHARGE 4944

MONTH & YEAR	MH-175 VOLUME, 10^6 gal	AVG NO_3 mg/L	AVG NO_3-N mg/L	AVG NO_3-N kg/day
MARCH, 1977	0.490	4093	925	1715
JUNE, 1977	0.361	4088	924	1263
JULY, 1977	0.500	3677	831	1573
MARCH, 1975	0.433	9,805	2216	4470
APRIL 1975	0.295	11,182 *	2527	2822
JUNE 11, 1977	ASSUME 0.5	11,500	2599	4918
JUNE 5, 1977	0.5	3200	723	1368

* MAXIMUM MONTHLY AVERAGE, OCT. 1970 — FEB. 1982

028831

MWE 4/21

$\frac{N}{NO_3} = \frac{14.008}{14.008 + 48} = \frac{14.008}{62.008} = 0.226$

-4944

Note on Wes Ostendorf's drawing

6300 kg/d NO_3-N based on operations during June 1977 when one refinery operated at approx 10 MTU/day.

100

↓ 100 mg/L = 0.1 g/L = 0.1×10^{-3} kg/L = 0.3785×10^{-3} kg/gal

100 ~~(illegible)(illegible)~~

924 mg/L = 0.924 g/L = 9.24×10^{-4} kg/L = 34.97×10^{-4} kg/ga

---

D[illegible] June, 1977 = 924 mg/L

Max monthly avg in 1977 = 925 mg/L in March

Volume @ MH-175 in June 1977 = 0.361×10^6 gal/day

" in March 1977 = 0.490×10^6 gal/day

" in July 1977 = 0.500×10^6 gal/day

$$\frac{\text{mg/L} \times 3.785\ \text{L/gal} \times 10^6\ \text{gal/day}}{1000\ \text{mg/g} \times 1000\ \text{g/kg}} = \frac{3.785 \times 10^6}{10^6} = 3.785$$

1977 MONTH	10^6 GAL VOL	NO_3 mg/L	kg NO_3/day	kg NO_3-[illegible]
MARCH	0.490	925	4716 kg/d	388
JUNE	0.361	924	1263	265
JU[illegible]	0.500	831	1573	355
[illegible]	0.483	[illegible]	16,069	3632

028832

346

1981 100 MTU thru refinery
avg of 145 kg/day in 1981

1986 600 MTU thru refinery
avg of 1263 kg/day in June 1977

$\frac{600}{100} = 6$

$\frac{1263}{145} = 8.5$

P.S. of over. cost due to better storage ponds.
Dec. 16 1981, Hill to Van Fosen "Water Pollution Control - FMPC
(M. Thomas got a copy of this ltr) (RCH also got copy)

9.7×10^6 (2×10^6 addl included in this figure)

NATIONAL LEAD COMPANY OF OHIO
HEALTH & SAFETY DIVISION
WASTE WATER QUALITY REPORT

For the Month of June 197

DATE	FLOWS RIVER (CFS)	FLOWS MH 175 (GAL. x 10^6)
1	710	.284
2	680	.260
3	675	.199
4	640	.228
5	610	.157
6	575	.408
7	615	.375
8	590	.200
9	615	.475
10	765	.253
11	695	.263
12	980	.193
13	805	.209
14	1045	.271
15	815	.241
16	705	.244
17	650	.265
18	610	.235
19	1885	.189
20	680	.177
21	620	.222
22	560	.153
23	585	.787
24	550	.300
25	565	.587
26	1315	.653
27	710	.553
28	970	.975
29	820	.835
30	690	.646
31		
AVG.	739	.361

MAXIMUM CONCENTRATIONS IN THE MIAMI RIVE

NOTES: [1]Applicable only when

DATE	AMMONIA NITROGEN (mg/l)	CHLORIDE (mg/l)	CHROMIUM HEXAVALENT (mg/l)	FLUORIDE (mg/l)	IRON (mg/l)	NITRATE NITROGEN (mg/l)	RESIDUAL CHLORINE (mg/l)		NO_3-N kg/day		
1		58		2.8		230			247		
2	56	52		3.2	1	730	0.4		718		
3		46		2.4		290			218		
4		42		2.2		90			78		
5		155		3.3		130			77		
6		48		3.0		30			46		
7		197	0.09	3.0		430			610		
8	5	47		1.7		200			151		
9		59		2.0		210	0.4		378		
10		204		2.9		230			220		
11		168		4.3		2580			2568		
12		162		4.1		1260			920		
13		239		3.4		1070			846		
14		180		2.4		1320			1354		
15	22	109	0.08	2.1		830			757		
16		395	0.07	2.5		1470			1358		
17		131	0.10	4.3		1635	0.3		1640		
18		103		2.7		630			548		
19		103		4.1		1990			1424		
20		96		4.4		2160			300		
21		78		3.9		1540			1294		
22	27	67		3.4		810			469		
23		83		2.4		1300	0.2		3872		
24		214		5.2		830			942		
25		44		3.4		930			2066		
26		114		2.8		1180			2916		
27		51		3.4		580			1214		
28		44		2.2		340			1254		
29	124	204		3.4		1690			5341		
30		100		2.5		990	0.3		2421		
31											
AVERAGE	47	120	0.09	3.1	1	924	0.3		1263		
LIMITS: Ohio standards for Miami River	1.5	250	0.05	1.3	1.0	35					
LIMITS: NPDES[1] Daily Maximum	200	450	0.25	15	3.0	4000	0.5				
LIMITS: NPDES[1] Monthly Avg.	75	290	0.15	6	1.2	1800					

NOTES: [1]NPDES limits apply to the effluent

348

YEAR	ENRICHED MTU ①	kg NO_3-N/day ②	Refining MTU
1984	$\frac{3400}{400} = 8.5$	④ $\frac{1263}{145} = 8.7$	$\frac{600}{100} = 6.0$
1981		③	

① mark 15 plus NDR

② Bioreactor sized to convert avg of 608 kg/day, based on flow diagram from Wm Oxtendorf. (784 mg/L NO_3-N, 0.204×10^6 gal)

③ Avg NO_3-N kg/d @ MH-175 during 1981 when 100 MTU produced in refinery.

④ avg NO_3-N kg/d @ MH-175 during June 1977 when 10 MTU/day produced in refinery.

MWB 4/5/82

L. Pennington 4/5/82

	NO_3	Assume	NO_3-N	kg/d
June 3, 1977	3200 mg/L	0.5×10^6 gal	723 mg/L	1368
June 11, 1977	11,500	0.5×10^6 gal	2599 mg/L	4919

Assume

During June 1977, Clearwell not pumped 9 days.

J. Patton 4/5/82 Not in. Off sick

Mel Mendel 4/5/82
He will check file & call.
Frank Lockwood-Greene 50% completion report.
Drawings included. They show a flow of
216,000 gal/day to bioreactors. Conc of 5000 ppm
NO_3-N

(0.216×10^6) (5000) (3.785) = 4088 kg/day

Assume 90% removal efficiency & 90% on-stream time
(4088) (.9) (.9) = 3240 kg/day.

MWB 4/51

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196224

For the Month of May 1982

DATE	MANHOLE - 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.287	7.5						0.039	0.6	0.0001	0.001	0.01	0.002	0.001
2	.252	7.7						.039						
3	.244	7.8						.039						
4	.275	7.1						.037						
5	.302	7.8	<4	1.1	7	<5		.040						
6	.290	7.4					0.068	.039						
7	.419	8.5						.167						
8	1.080	8.5						.271						
9	.444	8.5						.078	1.2	0.0003	0.002	0.02	0.009	0.007
10	.517	8.4						.260						
11	.338	7.5						.095						
12	.253	7.7	<4	1.0	6	<5								
13	.257	7.7					.065							
14	.378	8.2						.076						
15	.246	8.2												
16	.262	7.7						.039	0.6	0.0001	0.002	0.02	0.004	0.002
17	.514	8.4						.327						
18	.566	8.2						.327						
19	.407	8.1	<4	20.2	485	<5		.122						
20	.574	8.6					.074	.327						
21	.877	8.4						.326						
22	.990	8.6						.363						
23	.388	7.7						.038	0.6	0.001	0.001	0.009	0.007	0.001
24	.546	8.4						.288						
25	.555	8.3						.325						
26	.326	7.7	<4	5.7	136	<5		.038						
27	.627	9.2					.071	.324						
28	.613	9.2						.327						
29	.553	9.1						.291						
30	.680	7.7						.069	1.2	0.0031	0.007	0.02	0.042	0.008
31	.511	8.9						.288						
AVG[1]	0.470		* <4	7	158	<5	0.07	0.179	0.8	0.001	0.003	0.02	0.013	0.004
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259645

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May, 1982

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.142							0.089	7.5					
2	.137							.074	7.5					
3	.123							.074	7.7					
4	.136							.098	7.6					
5	.143	<4	<5					.116	7.2	6.1	2.7	3	1.3	
6	.137							.114	7.5					
7	.154							.111	7.6					0
8	.690		<5	0.374	7.5	<4	<5	.133	7.5					
9	.243							.114	7.4					
10	.160							.055	7.4					
11	.161							.106	7.4	3.9	1.6			
12	.167	<4	<5					.106	7.6			2	0.8	
13	.160							.108	7.5					780
14	.189							.116	7.5					
15	.161							.107	7.6					
16	.196							.095	7.5					
17	.125							.074	7.7					
18	.162							.121	7.7	1.5	0.7			
19	.167	<4	<5					.125	7.5			2	1.0	
20	.163							.082	7.7					0
21	.439		<5	.238	7.8	<4	<5	.112	7.6					
22	.546		<5	.282	7.6	<4	<5	.081	7.7					
23	.287		<5	.009	7.6	<4	<5	.063	7.6					
24	.188							.070	7.6					
25	.173							.097	7.6	5.2	2.1			
26	.181	<4	<5					.107	7.6			9	3.7	
27	.189							.114	7.6					1420
28	.170							.116	7.7					
29	.162							.100	7.6					
30	.523		<5	.113	7.3	4	<5	.088	7.6					
31	.170							.053	7.8					
[1]	0.218	• <4	<5	0.203		• <4	<5	0.097		• 4	2.0	• 4	1.7	• 592
[2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
[3]		30				30				20	5.0	20	5.0	1000
[4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

0259646

TES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of May, 1982

	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100mL	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.48		0.031	0.018	0.84	0.2	7.3		9.1				
2	.88		Comp.	Comp.	1.03	0.2	7.7		9.4				
3	.64		3/1-	3/1-	.94	0.3	8.0		9.3				
4	.54		3/31/82	3/31/82	.78	0.1	8.1		9.4				
5	.42				.63	<0.01	8.0		9.1	<1.0	5.9	38	1.1
6	.50				.70	0.1	7.9	40	8.9				
7	.60				.83	2.4	7.8		7.5				
8	1.62				2.48	7.6	6.8		7.8				
9	1.12				1.71	0.9	7.4		8.5				
10	1.28				1.43	16.3	8.2		7.3				
11	1.36				1.49	6.8	7.8		8.8				
12	1.42				1.87	0.2	7.7		8.9	<1.0	6.0	52	1.2
13	.80				1.19	0.3	7.8	430	9.1				
14	.46				.95	0.5	8.1		8.7				
15	.64				.90	0.3	7.7		9.0				
16	.42		<0.010	0.032	.74	0.08	8.0		8.9				
17	.98		Comp.	Comp.	1.12	18.8	8.2		7.4				
18	.80		4/1-	4/1-	1.02	17.5	8.3		6.8	13.1			
19	.56		4/30/82	4/30/82	.68	9.3	8.0		8.1		315.0	132	3.0
20	.54				1.21	23.0	8.6	0	7.0				
21	.80				1.03	23.0	8.6		7.1				
22	2.06				2.18	16.1	7.6		6.0				
23	1.64				2.33	2.1	7.3		7.1				
24	1.32				1.38	18.9	8.1		6.8				
25	1.92				1.60	20.7	8.5		6.2				
26	.94				1.38	4.1	6.8		8.3	4.6	110.0	62	1.4
27	1.10				1.14	22.1	8.6	350	6.8				
28	.88				1.07	28.4	8.9		7.1				
29	.64				.98	26.9	8.8		7.0				
30	1.14				1.78	11.6	7.0		8.5				
31	1.22				1.58	29.6	8.6		7.5				
AVG.[1]	0.96				1.26	10.0		50 [2]	8.0	5	109	71	1.7
LIMITS OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259647

NLO, INC

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of May 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	2300		74	53	68	*	404		265	351		
2	2200		74	46	68	*	881		294	415		
3	2100		78	40	66	*	551		294	351		
4	1950		81	44	66	*	514		265	320		
5	1950		85	46	68	*	404	386	265	511		
6	1865		85	50	72	*	405		265	288		
7	1850	.57	75	58	67	7440	404		283	767		
8	2950	.43	72	51	62	7440	514		294	1757		
9	3500		77	49	64	*	918		300	655		
10	3265		80	47	66	7440	588		309	3195		
11	2590		83	45	65	7440	459		324	1725		
12	2200		87	51	67	*	*	363	294	345		
13	2065		87	53	68	*	*		265	326		
14	1880		89	55	69	*	477		294	326		
15	1750		86	64	70	*	441		359	320		
16	1635		85	58	70	*	459		271	332		
17	1660		87	56	69	7440	514		294	3834		
18	1560		88	60	71	7440	459		271	3515		
19	1625		85	62	73	7688	471	367	324	1981		
20	2275	.04	82	63	75	8680	459		259	3834		
21	8570	2.90	78	61	72	7564	433		236	3195		
22	8150		81	60	69	7440	720		324	2237		
23	5500	.05	75	64	70	*	720		309	863		
24	3440		79	60	74	7440	*		353	3515		
25	2800		76	58	70	7440	698		324	3195		
26	2350	.04	80	62	73	*	551	391	339	895		
27	2560		83	66	75	9300	606		412	3831		
28	9300		80	59	74	9300	569		306	3834		
29	13820	.76	80	65	74	9300	470		412	3834		
30	16320		80	67	71	9920	646		359	1595		
31	12130		85	64	72	9300	*		353	3898		
AVG. [1]	4133	4.79 [2]				8118	546	377	307	1808		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

944
354
025968

Wastewater Quality Report Summary

For

May, 1982

Wastewater quality was acceptable during May. Uranium was 0.96 mg/L at MH-175, which is 53% of the target value of 1.8 mg/L. Gross beta at MH-175 was 10.0 d/m/mL, up from 6.8 d/m/mL in April, and higher than the annual average of 6.0 d/m/mL for 1981. The radium-228 concentration was 0.032 d/m/mL at MH-175 for April, which is 48% of the target value of 0.066 d/m/mL.

0259649

ASTEWATER QUALITY REPORT: NPDES Permit Parameters

For the Month of June 1982

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.738	8.0						0.327						
2	.381	8.4	10	1.44	90.9	<5		.039						
3	.541	8.8					.088	.273						
4	.583	8.8						.269						
5	.628	8.8						.205						
6	.338	7.7						.072	2.3	0.0031	0.011	0.049	0.027	0.007
7	.509	8.9						.237						
8	.752	8.4						.231						
9	.539	8.1	7	.61	199.9	<5		.078						
10	.611	8.6					.071	.251						
11	.629	8.7						.263						
12	.419	9.0						.351	6.8	.0043	.014	.063	.032	.012
13	.351	8.3						.118						
14	.269	8.4						.114						
15	.376	8.5						.079						
16	.684	8.5	8	3.88	699.0	<5		.119						
17	.838	8.6					.083	.301						
18	.633	8.6						.289						
19	.535	8.6						.261						
20	.279	7.6						.039	0.7	.0007	.005	.014	.004	.003
21	.254	7.8						.039						
22	.287	7.7						.040						
23	.345	7.8	35	4.44	352.6	12		.117						
24	.298	7.8					.099	.078						
25	.541	8.6						.280						
26	.523	8.8						.294						
27	.223	7.9						.039	0.6	.0004	.004	.006	.006	.006
28	.401	8.4						.193						
29	.620	7.5						.114						
30	.368	7.6	<4	0.84	232.6	<5		.078						
31														
AVG[1]	0.483		13	2	315	6	0.09	0.176	2.6	.002	.009	.03	.017	.007
LIMITS 2		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

0259640

LO, INC
EALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of June 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100 ml
1	.254			0.151	7.6	<4	<5	0.071	7.7					
2	.241	<4	15					.094	7.7	2.8	0.98	3	1.07	
3	.198							.093	7.7					0
4	.101							.101	7.8					[illegible]
5	.302		<5	.003	7.5	<4	<5	.103	7.7					[illegible]
6	.172							.093	7.6					3
7	.155							.065	7.7					
8	.324			.177	7.6	19	<5	.123	7.6					
9	.403	<4	<5	.007	7.7	<4	<5	.115	7.7	4.0	1.74	2	0.87	
10	.219							.108	7.5					220
11	.224							.102	7.7					
12	.159							.091	7.8					
13	.135							.096	7.6					
14	.096							.160	7.7					
15	.125							.138	7.5					
16	.415	<4	<5	.104	7.6	<4	<5	.138	7.6	6.7	3.50	11	5.75	
17	.411			.120	7.9	<4	<5	.125	7.6					620
18	.199							.108	7.6					
19	.176							.094	7.4					
20	.150							.089	7.5					
21	.144							.065	7.8					
22	.159							.104	7.6					
23	.134	<4	<5					.096	7.7	3.8	1.38	12	4.36	
24	.131							.090	7.7					430
25	.131							.093	7.8					
26	.129							.098	7.7					
27	.103							.093	7.6					
28	.103							.075	7.9					
29	.370		<5	.130	7.7	<4	<5	.115	7.5					
30	.198	<4	<5					.111	7.5	4.6	1.93	15	6.30	
31														
AVG.[1]	0.205	• <4	7	0.099		• 8	<5	0.102		• 4	1.9	• 9	3.7	• 336
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Mo. Geom. Mean)

0259641

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

ILO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of June 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM MPN/100ml	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.02	0.006	0.029	0.032	1.48	26.3	8.7		7.8				
2	1.80	Comp.	Comp.	Comp.	2.49	3.2	7.8		7.6	1.0	63	51	0.9
3	.88	1/1-	5/1-	5/1-	1.31	27.1	8.3	130	7.4				
4	.44	1/31/82	5/31/82	5/31/82	.74	28.0	8.6		6.7				
5	.80				1.24	25.6	7.7		7.8				
6	1.18				1.28	8.3	7.1		8.7				
7	.54				1.27	46.0	8.7		6.7				
8	.50				1.04	38.6	8.6		7.6				
9	1.04				1.30	5.6	7.6		5.6	0.3	93	44	1.4
10	.64				.94	29.8	7.2	127	5.1				
11	.52				1.16	35.8	7.9		4.9				
12	.90				1.52	43.2	7.7		5.6				
13	1.18				2.27	20.6	7.8		5.5				
14	.72				1.66	33.8	8.0		7.9				
15	.60				1.25	7.3	7.2		6.7				
16	1.26				.96	8.5	7.4		4.9	1.5	270	234	2.0
17	1.26				1.31	32.0	7.7	110	6.4				
18	.72				1.27	53.8	8.4		4.8				
19	1.00				1.58	58.6	8.3		5.2				
20	1.24				2.04	16.0	7.2		6.4				
21	1.24				1.87	2.7	7.7		8.0				
22	.96				1.43	1.9	8.0		8.0				
23	.58				1.31	18.3	7.1		8.1	3.4	270	111	1.3
24	.88				1.54	15.9	7.1	400	8.3				
25	.56				1.54	70.5	8.8		7.3				
26	.84				1.22	53.2	8.3		4.9				
27	.48				1.00	15.9	7.4		5.8				
28	.68				1.32	67.5	8.3		6.6				
29	1.08				1.82	44.0	7.3		6.0				
30	1.96				1.86	3.6	7.5		8.4	0.6	167	35	2.1
31													
AVG.[1]	0.92				1.43	28.1		164 [2]	6.7	1	173	95	1.5
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
DOE Order 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259642

49 of 49

35

ILO, IN

EALTH & SAFETY DIVISION

/ASTE WATER QUALITY REPORT: General Data

For the Month of June 1982

DATE 4944

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	10180	.58	70	57	70	9920	569		324	3770		
2	8200		74	50	70	*	881	332	353	562		
3	6065		76	60	72	8680	*		318	3515		
4	4410	.13	67	56	72	7564	1689		294	3253		
5	3700		75	56	70	7564	*		259	2812		
6	3150		80	51	70	9300	808		312	1438		
7	2750	.04	76	55	71	9920	*		389	4793		
8	6725	1.20	82	65	71	8680	*		339	3834		
9	4070		85	67	73	7440	509	403	324	703		
10	5150		75	59	74	7440	1249		336	3067		
11	4100		75	51	73	7440	2424		318	3323		
12	3250		70	61	72	7440	588		414	3834		
13	2790		80	57	74	8680	2938		406	2173		
14	2580		80	50	78	8370	588		383	2556		
15	2215	.23	83	56	79	*	3673		368	1278		
16	2800	.52	70	63	75	*	5876	1237	277	1981		
17	7250		75	59	85	8680	4407		353	2876		
18	9760		79	53	76	9920	6611		383	4410		
19	6400		71	57	74	8680	5876		426	4473		
20	4450	.05	75	48	72	*	1322		412	1438		
21	3500		78	55	72	*	1102		412	588		
22	3370		76	52	80	*	506		383	454		
23	3440		76	47	74	*	4407	390	353	1598		
24	2700		77	47	80	*	5142		339	1598		
25	2290		83	50	85	12152	5949		353	5112		
26	2065		82	59	83	12152	6611		294	6390		
27	1915		88	64	73	*	5803		318	2045		
28	1865	.72	80	61	73	12400	4407		318	5112		
29	4350	.04	85	70	74	12400	4407		241	2045		
30	5050		78	59	75	*	3673	331	459	1086		
31												
[1]	4351	3.51 [2]				9241	3154	539	349	2737		

359

0259643

NOTES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

WASTEWATER QUALITY REPORT SUMMARY

FOR
JUNE 1982

Wastewater quality was acceptable during June. Uranium was 0.92 mg/L at MH-175, which is 51% of the target value of 1.8 mg/L. Gross beta was 28.1 d/m/mL for June, up from 10 d/m/mL in May and higher than the reported 1981 maximum value of 16.9 d/m/mL for gross beta. The value of 2737 mg/L dissolved solids at MH-175 was also an increase over 1808 mg/L dissolved solids reported for May at MH-175.

0259644

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196222

For the Month of July, 1982

DATE	MANHOLE - 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.234	7.8					.053	0						
2	.270	7.8						.039						
3	.559	8.5						.279						
4	.311	8.1						.037	0.56	0.0001	0.003	0.007	0.006	0.0004
5	.412	8.3						.201						
6	.395	8.1						.193						
7	.298	7.7	<4	1.02	168	<5		.076						
8	.291	7.8					.02	.038						
9	.284	8.3						.039						
0	.185	7.7						0						
1	.229	7.6						.072	1.09	0.0031	0.009	0.025	0.028	0.0100
2	.321	8.2						.201						
3	.372	7.6						.222						
4	.157	7.7	<4	0.12	65	<5		0						
5	.447	8.2					.025	.240						
6	.344	8.0						.113						
7	.252	8.8						.054						
8	.218	7.7						.033	0.87	0.0001	0.001	0.006	0.001	0.0010
9	.271	7.6						.040						
0	.357	8.0						.040						
1	.260	8.9	5	0.59	5	<5		.038						
2	.297	7.9					.085	.078						
3	.677	8.0						0						
4	.261	7.7						0						
5	.286	8.2						.040	0.61	0.0002	0.002	0.013	0.002	0.0005
6	.561	7.9						.324						
7	.601	7.9						.353						
8	.476	7.4	4	3.60	467	<5		.171						
9	.319	7.4					.083	.038						
0	.320	8.0						.038						
1	.332	7.8						.038						
1	0.342		4	1	176	<5	.05	0.117	0.8	0.001	0.004	0.01	0.009	0.003
2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.009	0.102	0.85	0.256	0.051
3			20	28	1590				6.2	0.005	0.059	0.41	0.124	0.025
4		6.5 - 9.0				5	0.002							

0259635

TES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

LO, INC.
EALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of July, 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.151							0.093	7.7					0
2	.132							.105	7.7					
3	.155		5	0.028	7.6	10	<5	.110	7.9					
4	.176		<5	.010	7.9	<4	<5	.076	7.7					
5	.111							.069	7.8					
6	.119							.071	8.0					
7	.142	<4	<5					.100	7.7	4.35	.435	3	1.1	
8	.148							.110	7.8					0
9	.141							.107	8.0					
10	.106							.108	7.7					
11	.078							.096	7.7					
12	.068							.089	7.8					
13	.071							.059	7.4					
14	.084	<4	<5					.058	7.7	2.85	.626	1	0.2	
15	.091							.105	7.5					42
16	.097							.051	7.5					
17	.122							.032	7.7					
18	.089							.050	7.8					
19	.091							.056	7.6					
20	.185			.032	8.1	<4	6	.067	7.7					
21	.091	<4						.023	7.6	2.05	.179	1	0.1	
22	.075							.041	7.9					0
23	.048		<5	.186	7.9	<4	<5	.045	7.6					
24	.147							.116	7.7					
25	.099							.124	7.6					
26	.096							.139	7.9					
27	.134							.104	7.6					
28	.205	<4	<5	.019	7.8	<4	<5	.108	7.6	6.6	2.698	1	0.4	
29	.131							.108	7.6					0
30	.119							.114	7.9					
31	.146							.115	7.5					
AVG.[1]	0.117	• <4	<5	0.055		• 5	5	0.086		• 5	1.3	• 2	0.5	• <1
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (Max. Geo. Mean)

0259636

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Poddy's Run downstream from the effluent mixing zone.

ALTH & SAF DIVISION

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of July, 1982

	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.96	<0.001	0.017	0.034	1.26	1.5	7.8	240	7.8				
2	.62	Comp.	Comp.	Comp.	1.16	0.9	8.0		8.0				
3	.94	2/1-	6/1-	6/1-	1.12	69.6	7.6		6.7				
4	1.42	2/28/82	6/30/82	6/30/82	2.01	5.0	7.5		7.7				
5	.78				1.19	83.6	8.2		6.8				
6	.70				1.11	66.9	7.8		6.3				
7	.52				.84	0.6	7.4		7.3	0.9	149	104	1.5
8	.58				1.02	2.3	7.0	50	6.2				
9	.58				.86	1.7	7.7		7.0				
10	.66				1.22	0.5	7.9		7.0				
11	.64				1.03	25.2	7.4		8.0				
12	.66				1.33	58.3	8.2		9.4				
13	.52				1.10	69.7	8.2		5.2				
14	.86				1.48	9.1	7.6		7.7	0.2	110	52	1.2
15	1.80				1.48	67.3	8.2	74	7.3				
16	.92				1.17	40.4	7.7		6.8				
17	.94				1.26	21.7	7.3		8.3				
18	.90				1.16	0.6	7.8		7.7				
19	1.02				1.28	0.4	7.9		8.3				
20	.92				1.50	0.3	8.1		8.8				
21	.56				3.42	0.1	8.2		8.0	0.6	5	33	0.8
22	.66				.92	46.6	8.1	400	8.2				
23	1.52				2.63	0.4	8.0		7.8				
24	1.84				2.66	0.5	8.0		8.7				
25	1.40				1.98	0.3	8.0		8.4				
26	.98				1.28	56.7	8.0		6.4				
27	.82				1.16	54.3	8.0		5.8				
28	.72				1.31	21.8	7.5		5.8	2.0	259	58	1.9
29	.56				1.07	3.8	7.8	50	7.0				
30	.46				.84	3.0	8.0		7.9				
31	.48				1.12	3.1	7.8		7.4				
AVG. [1]	0.87				1.39	23.1		112 [2]		1	131	62	1.4
OHIO EPA							6.5-9.0	200 (Geo. Mean)	5.0AVG. 4.0MIN.	13	23		2.0
DOE Order 5480.1A	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.

[2]Monthly geometric mean.

[3]Ohio EPA limits are for the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259637

ASTE WATER QUALITY REPORT: General Data

For the Month of July, 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	2315		77	51	74	*	*		324	345		
2	2760		80	54	75	*	1212		305	511		
3	2150	.04	83	69	75	9930	650		442	4473		
4	1865		90	69	77	*	1000		265	895		
5	1850		89	66	79	9920	*		306	5112		
6	1675		92	67	82	11160	800		309	4473		
7	1610	.08	88	72	84	*	2424	312	324	1086		
8	1510		84	69	88	*	2938		259	8946		
9	1980		88	69	77	*	4774		309	1002		
0	1500		86	68	77	*	*		324	351		
1	1600		85	68	76	9920	551		324	1725		
2	1375		86	60	76	9920	433		377	3834		
3	1350		86	59	78	9920	433		368	4793		
4	1350		88	61	76	*	*	200	368	959		
5	1250		91	62	77	9920	441		368	3834		
6	1145		91	65	75	9920	353		324	2876		
7	1150		93	70	76	9920	239		400	1534		
8	1100		90	72	74	*	337		383	383		
9	1160	.15	88	73	75	*	316		368	320		
0	1623		87	71	76	*	375		250	281		
1	1245		87	60	76	*	588	224	147	313		
2	1145	1.71	84	65	74	*	441		147	294		
3	1635		82	66	74	*	*		224	272		
4	1315		88	63	72	*	*		398	320		
5	1250		90	64	76	*	447		406	332		
6	1100		90	70	78	8680	358		412	3834		
7	1135	.13	88	70	90	8680	845		471	3706		
8	1460		89	67	77	7502	2865	286	309	1789		
9	1060		82	58	75	*	2350		353	639		
0	1025		86	64	75	*	750		324	447		
1	940		84	64	74	*	735		324	447		
1	1536	2.11 [2]				9616	1066	256	329	1940		

ES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

364

9638

WASTEWATER QUALITY REPORT SUMMARY

FOR

JULY, 1982

Wastewater quality was acceptable during July. Uranium averaged 0.87 mg/L at MH-175, which is 48% of the target value of 1.8 mg/L. Gross beta averaged 23.1 d/m/mL at MH-175 for July, compared with a 1981 maximum value of 16.9 d/m/mL. Concentrations of Ra-226 and Ra-228 were 0.017 and 0.034 d/m/mL, respectively, during June, below the target value of 0.066 d/m/mL for these nuclides.

O. .NC.
LTH & SAFETY DIVISION

STE WATER QUALITY REPORT: NPDES Permit Parameters

2196221

For the Month of August, 1982

MANHOLE - 175							COMBINED GENERAL SUMP & CLEARWELL						
FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
.285	7.6						0.038	0.6	0.0001	0.001	0.004	0.009	0.001
.292	7.6						.039						
.476	8.6						.210						
.383	8.0	<4	*6	390	<5		.076						
.812	8.4					0.076	.263						
.681	8.4						.194						
.413	8.3						.077						
.318	7.9						.039	0.6	.0003	.009	.009	.010	.002
.417	7.8						.164						
.514	8.6						.179						
.583	8.1	5	1	234	<5		.077						
.519	7.7					0.095	.189						
.430	7.6						.131						
.329	7.7						.062						
.354	7.6						.076	1.2	.0003	.0003	.004	.003	.003
.355	8.7						.144						
.555	8.7						.244						
.382	8.2	10	1	545	<5		.078						
.573	9.1					0.047	.269						
.595	9.2						.264						
.741	9.7						.270						
.232	7.6						.039	0.9	.0004	.005	.009	.004	.002
.478	9.6						.202						
.416	7.8						.148						
.470	7.6	8	3	66	<5		.038						
.449	9.0					0.036	.150						
.438	8.9						.114						
.397	9.5						.115						
.300	8.1						.076	1.2	.002	.008	.028	.006	.002
.247	8.0						.039						
.740	9.2						.201						
0.457		7	3	309	<5	0.06	0.136	0.9	0.001	0.005	0.01	0.006	0.002
2	6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
3		20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
4	6.5 - 9.0				5	0.002							

[1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

4944

366

0259630

LO, INC
EALTH & SAFETY DIVISION

Page

VASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of August 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.125							0.097	7.5					
2	.106							.100	7.6					
3	.154							.111	7.4					
4	.169	<4	<5					.127	8.0	2	0.8	1	0.5	
5	.358			0.089	7.6	<4	<5	.145	8.0					900
6	.333							.154	7.9					
7	.190							.146	7.5					
8	.187							.113	7.3					
9	.149							.098	7.8					
10	.145							.129	7.9					
11	.555	6	<5	.046	7.7	<4	<5	.055	7.8	5	1.0	2	0.4	
12	.304			.001	8.0	<4	<5	.084	7.9					0
13	.128							.110	7.7					
14	.126							.100	7.7					
15	.110							.121	7.7					
16	.138							.080	8.0					
17	.273							.131	7.9					
18	.258	<4	<5					.120	7.7	3	1.2	2	0.9	
19	.248							.115	7.8					13
20	.305							.131	7.6					
21	.300			.040	7.5	<4	<5	.116	7.4					
22	.120							.084	7.5					
23	.153							.060	8.0					
24	.441							.101	7.5					
25	.357	<4	<5	.067	7.7	<4	<5	.118	7.8	4	1.6	2	0.9	
26	.125							.106	7.7					200
27	.126							.173	7.8					
28	.127							.108	7.5					
29	.080							.092	8.1					
30	.070							.089	7.8					
31	.366			.068	7.8	9	<5	.118	8.2					
AVG.[1]	0.214	• 5	<5	0.052		• 5	<5	0.111		• 4	1.2	• 2	0.7	• 345
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Max. Geo. Me.)

0259631

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

.O, INC
ALTH & SAFETY DIVISION

Page

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of August 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/ml	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORIDE mg/l
1	0.52	*	0.012	0.018	1.16	2.8	8.0		7.5				
2	.50		Comp.	Comp.	1.03	2.9	8.0		9.0				
3	.60		7/1-	7/1-	1.35	58.8	8.4		6.8				
4	.50		7/31	7/31	1.00	24.4	8.1		7.6	3.8	269	129	1.3
5	.92				1.82	31.5	8.0	900	6.6				
6	.80				1.82	49.6	8.1		6.0				
7	.58				.90	14.2	7.6		7.0				
8	.58				1.19	10.6	7.9		7.3				
9	.44				1.91	53.0	8.2		6.3				
10	.40				.94	44.7	8.3		6.5				
11	1.22				1.57	7.5	7.8		6.7	0.4	106	33	0.9
12	1.10				1.84	40.2	8.3	400	6.7				
13	.58				1.19	50.3	7.7		6.5				
14	.96				1.18	17.9	7.5		8.8				
15	1.40				1.21	3.2	7.9		8.7				
16	.86				1.51	43.0	8.1		5.6				
17	.38				1.18	47.5	8.8		7.7				
18	.26				.78	12.1	7.9		7.4	0.8	377	141	2.1
19	1.43				1.43	57.1	8.9	0	6.6				
20	.22				.83	53.7	8.9		6.9				
21	.68				.82	41.4	8.9		7.0				
22	.72				.92	10.3	7.7		7.3				
23	.22				.81	52.1	9.8		7.9				
24	.40				.79	24.6	8.7		7.5				
25	.60				1.14	1.7	8.2		7.3	1.8	37	40	1.5
26	.53				.97	46.6	9.0	322	5.8				
27	.64				.84	42.2	8.9		5.8				
28	1.28				1.81	28.3	8.8		5.4				
29	.76				1.17	23.2	8.4		7.9				
30	.58				1.18	7.7	8.2		5.5				
31	1.04				1.69	16.5	9.0		6.0				
AVG. 1	0.70				1.23	29.7		104 2	7.0	2	197	86	1.5
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	5.0 AVG. 4.0 MIN.	13	23		2.0
DOE Order 5480.1A	1.8	9	0.066	0.066									

4044

38

..O, .INC
ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: General Data

For the Month of August 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	850		84	59	73	*	477		309	441		
2	775		85	61	75	*	514		324	400		
3	745		92	65	80	9920	477		365	3706		
4	822	.15	92	70	75	7440	624	604	280	1917		
5	1200	.44	89	70	74	8680	*		342	2876		
6	1245		90	72	86	8680	*		545	3195		
7	935		87	72	86	*	7345		589	1917		
8	950		86	69	83	*	8080		353	1917		
9	1500		84	65	82	9920	6611		353	5112		
10	1326	.05	72	58	82	12400	4407		280	3834		
11	1060	.30	75	57	78	*	2424	391	236	1022		
12	950		76	49	81	12400	845		381	3067		
13	870		79	52	81	11160	16159		277	4473		
14	790		82	50	79	9920	4407		442	1789		
15	750		86	55	79	*	624		324	639		
16	715		85	61	82	10540	514		324	3834		
17	720		90	65	84	10168	5803		318	5112		
18	750		83	54	83	*	4407	724	442	2109		
19	685		85	52	84	12400	5949		259	5112		
20	660	.22	78	57	83	12400	3673		259	5112		
21	720		76	55	80	12400	3673		247	4984		
22	780		80	49	79	*	3158		294	1470		
23	715		77	65	80	12400	2204		309	6390		
24	635	.31	82	62	80	12400	4407		353	2556		
25	692		78	59	86	*	1307	331	247	351		
26	2335		79	52	82	12400	8814		265	3834		
27	1410	.03	80	66	83	12400	7345		324	3834		
28	1145		76	57	80	12400	7345		271	3515		
29	960		76	50	82	*	5142		324	2556		
30	830	.48	72	56	79	*	3673		324	1789		
31	885		89	69	80	11160	7712		250	2492		
	949	1.98				11079	4418	513	329	2947		

ES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

-4944
369
029633

WASTEWATER QUALITY REPORT SUMMARY

FOR

AUGUST, 1982

Wastewater quality was acceptable during August. Uranium at MH-175 averaged 0.70 mg/L which is 39% of the target value of 1.8 mg/L. Radium-226 and Radium-228 concentrations were at 18% and 27%, respectively, of the target value of 0.066 d/m/mL at MH-175. Gross beta at MH-175 averaged 29.7 d/m/mL for August, compared with a 1981 maximum value of 16.9 d/m/mL. Dissolved solids were at 2947 mg/L at MH-175, compared with a 1981 maximum of 1919 mg/L for this location.

HEALTH & SAFETY DIVISION

2196220

371

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1982

-4944

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.394	9.2	17	0.89	376	<5		0.039						
2	.514	9.2					0.04	.261						
3	.711	9.5						.237						
4	.471	9.5						.186						
5	.243	7.8						.050	1.4	0.002	0.003	0.02	0.005	0.010
6	.325	9.7						.152						
7	.304	9.2						.112						
8	.321	7.9	9	2.79	535	<5		.098						
9	.428	9.0					.10	.154						
10	.392	8.4						.110						
11	.358	8.4						.115						
12	.209	7.9						.038	0.6	.001	.001	0.03	.001	.012
13	.302	8.4						.122						
14	.346	8.5						.155						
15	.327	7.8	<4	0.12	521	<5		.053						
16	.446	8.5					.06	.140						
17	.475	8.5						.175						
18	.415	8.2						.110						
19	.322	7.6						.055	1.7	.002	.006	0.01	.010	.014
20	.373	8.1						.121						
21	.392	8.4						.123						
22	.344	7.8	<4	0.39	413	<5		.072						
23	.509	8.6					.06	.164						
24	.542	8.4						.152						
25	.646	8.4						.107						
26	.371	7.6						.104	4.3	.005	.082	0.03	.008	.031
27	.063	7.6						0						
28	.402	8.0						.078						
29	.406	8.1	<4	3.38	426	5		.078						
30	.302	8.5					.05	0						
31														
AVG[1]	0.388		8	2	454	<5	0.06	0.120	2.0	0.003	0.023	0.02	0.006	0.017
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.86	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

0259625

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum" [3]NPDES "Daily Average"

LO, INC
EALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.140	<4	<5											
2	.129							0.124	7.5	3	1.3	3	1.4	
3	.299			0.063	7.9	<4	<5	.113	7.6					
4	.127							.120	7.7					9
5	.080							.114	7.4					
6	.076							.074	7.4					
7	.075							.042	7.8					
8	.082	<4	<5					.048	7.6					
9	.098							.095	7.5	2	0.7	4	1.4	
0	.099							.097	7.5					
1	.106							.116	7.3					950
2	.086							.109	8.0					
3	.088							.070	7.8					
4	.115							.043	7.6					
5	.126	<4	<5					.094	7.8					
6	.133							.113	7.4	4	1.7	4	1.7	
7	.136							.107	7.6					
8	.153							.104	7.8					0
9	.121							.104	7.9					
0	.117							.048	7.6					
	.142							.050	7.8					
	.124	<4	<5					.070	7.6					
	.153							.105	7.5	5	2.1	3	1.2	3
	.172							.098	7.6					
	.534			.095	7.8	7	<5	.125	7.5					
	.293							.110	7.4					
	.016			.340	7.8	<4	<5	.075	7.6					
	.247			.037	7.9	<4	<5	.059	7.6					
	.283	<4	47					.101	7.9					
	.165							.105	7.9	1	0.4	2	0.8	2
								.117	7.8					
1	0.151	• <4	13	0.134		• 5	<5	0.092		• 3	1.2	• 3	1.3	• 178
2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
3		30				30				20	5.0	20	5.0	1000
4			5		6.5 - 9.0		5							• 1000 (Mo. Geo. Mean)

ES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259626

HIS 251 (REV. 3/28/81)

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of September 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORM (Col/100ml)	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORIDE mg/l
1	0.94		0.015	0.110	0.92	17.3	8.2		6.2	0.6	252	49	2.0
2	.46		Comp.	Comp.	0.78	30.8	9.5	4	7.4				
3	.76		8/1-	8/1-	1.28	27.2	9.4		4.7				
4	.54		8/31	8/31	1.33	24.5	9.3		5.4				
5	.72				1.55	12.4	7.3		5.8				
6	.36				1.01	21.7	9.3		8.0				
7	.42				0.89	19.0	9.1		7.9				
8	.50				0.62	17.0	8.1		8.3	2.3	440	82	2.9
9	.44				0.90	22.5	8.7	660	7.8				
10	.30				0.82	25.5	8.4		7.1				
11	.36				0.67	15.7	7.2		7.1				
12	.44				1.05	9.9	7.3		7.6				
13	.30				0.93	17.0	8.3		7.7				
14	.32				0.72	17.0	8.2		6.5				
15	.34				0.71	24.7	7.5		8.2	0.1	421	53	3.0
16	.36				0.84	27.8	8.1	270	7.7				
17	.34				0.56	19.9	8.4		7.8				
18	.26				0.94	16.8	7.2		7.9				
19	.36				0.88	8.8	7.0		8.3				
20	.36				1.07	20.5	8.3		5.6				
21	.28				1.07	24.1	8.7		5.9				
22	.44				0.95	13.1	8.3		7.9	0.3	317	59	2.0
23	.74				1.11	27.3	8.8	0	7.0				
24	.40				1.13	31.5	8.5		8.4				
25	1.54				2.33	16.3	7.0		7.8				
26	.64				1.39	16.7	7.6		8.4				
27	.24				0.62	0.5	7.8		8.6				
28	1.08				1.54	5.1	7.9		7.2				
29	.82				1.44	6.2	7.0		6.8	2.2	277	109	2.5
30	.68				1.51	0.6	7.7		8.5				
31													
AVG.[1]	0.52				1.05	17.8		29[2]	7.3	1	341	70	2.5
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
DOE Order 5480.1A	1.8	9	0.066	0.066									

0259627

NOTES: [1]Arithmetic averages except for Fecal Coliform.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

NLO 251 (REV. 1/28/81)

LO, INC
ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: General Data

For the Month of September 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	815		76	72	87	*	5949	279	383	1534		
2	750	.33	84	68	83	11160	5876		465	3770		
3	720		75	53	85	11160	6611		212	3195		
4	685		76	46	79	9920	7345		318	3834		
5	700		80	45	76	7440	441		365	2396		
6	700		79	49	77	8680	1626		353	3834		
7	675		80	64	79	8680	1322		342	3451		
8	700		82	61	79	6200	5142	417	271	2237		
9	656		82	54	79	6200	6611		324	2556		
10	642		83	61	80	6820	8814		221	2556		
11	635		88	59	80	6200	2791		294	2237		
12	625		83	64	81	*	5876		253	1917		
13	625		82	67	80	6200	845		236	2237		
14	625		88	71	81	6200	5142		265	2556		
15	670		85	66	79	6200	5142	408	191	2556		
16	620		75	54	80	6200	7345		183	3917		
17	605		80	49	76	6200	3673		450	2028		
18	590		76	52	77	6200	5876		318	2237		
19	575		74	42	76	6820	5509		200	1406		
20	560		68	45	75	6820	1359		165	2237		
21	560		64	49	73	6820	2277		236	2109		
22	625	.06	59	45	75	6200	5729	361	206	1342		
23	605		70	40	77	6200	4407		159	2237		
24	585	.04	60	49	72	6820	4407		383	2620		
25	680	.02	66	57	74	7440	3673		212	1470		
26	700	.30	71	59	72	7440	3673		236	2237		
27	735	.06	64	54	73	*	5876		247	320		
28	830		74	52	75	*	4407		206	1022		
29	820		79	48	76	*	5876	702	253	1342		
30	745		80	48	76	*	*		194	288		
[1]	669	0.81 [2]				7259	4608	433	271	2256		

FS: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4944

374

0259628

WASTEWATER QUALITY REPORT SUMMARY

For

SEPTEMBER, 1982

The wastewater quality results for September, 1982 were all within limits for NPDES parameters with the exception of one grab sample at the storm sewer lift station collected on 9/29/82 which contained 47 mg/L oil and grease, exceeding the 15 mg/L NPDES daily maximum limit. The NPDES daily maximum limit of 0.10 mg/L for residual chlorine at MH-175 was equalled, but not exceeded, for one sample. The combined general sump and clearwell results for hexavalent chromium, total chromium, and copper were 75%, 46%, and 68% respectively, of their daily average limits.

The Ra-228 concentration in the August MH-175 composite sample was 0.110 d/m/mL which exceeds our target value of 0.066 d/m/mL. The Ra-226 result for August was 0.015 d/m/mL, which is well within the target value of 0.066 d/m/mL.

ALTH & SAFETY DIVISION

2196219

STE TER QUALITY REPORT: NPDES Permit Parameters.

For the Month of October 1982

	MANHOLE – 175								COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10⁶ gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10⁶ gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
	0.444	9.3						0.206						
	.352	9.2						.209						
	.271	9.1						.061	0.9	0.003	0.007	0.01	0.007	0.008
	.451	9.1						.265						
	.441	9.1						.217						
	.281	8.4	7	4	175	<5		.039						
	.359	8.1					.07	.083						
	.442	8.4						.097						
	.360	7.1						.098						
	.524	7.2						.057	1.5	0.003	0.003	<.01	0.010	0.002
	.386	8.8						.191						
	.385	9.2						.189						
	.376	8.0	<4	3	165	<5		.069						
	.471	8.4					.01	.158						
	.474	8.5						.210						
	.462	8.3						.206						
	.233	7.7						.059	1.7	0.003	0.006	0.03	0.005	0.002
	.349	8.9						.167						
	.411	8.9						.170						
	.250	7.7	9	9	109	<5		.040						
	.404	7.8					.10	.039						
	.329	6.9						.075						
	.279	7.3						.040						
	.259	7.3						.039	1.5	0.0004	0.002	<.01	0.003	0.001
	.341	8.8						.136						
	.323	8.4						.080						
	.330	8.2	5	<1	139	<5		.078						
	.302	7.7					.10	.038						
	.328	7.6						.038						
	.331	7.1						.077						
	.258	7.5						.038	0.6	0.0001	0.001	<.01	0.0001	0.002
1	0.362		6	4	147	<5	0.07	0.112	1.2	0.002	0.004	0.01	0.005	0.003
2		6.5 - 10.0	60	43	2180	15	0.10		12.2	0.009	0.102	0.85	0.256	0.051
3			20	28	1590				6.2	0.004	0.050	[illegible]	0.124	0.025
4		6.5 - 9.0				5	0.002							

0259620

LO, INC.
:ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of October 1982

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM #/100ml
1	0.120							0.117	7.8					17
2	.131							.113	7.8					37
3	.116							.094	7.3					
4	.111							.075	7.7					
5	.124							.100	7.9	3	1.2	3	1.1	
6	.130	<4	<5					.112	7.8					40
7	.158							.118	8.0					
8	.224							.121	7.9					
9	.155							.108	7.6					
0	.372		<5	0.046	7.9	8	<5	.096	8.0					
1	.134							.062	7.4					
2	.151							.045	7.6					
3	.146	<4	<5					.161	8.0	2	1.3	3	1.8	
4	.146							.167	7.8					270
5	.148							.116	7.6					
6	.148							.108	7.6					
7	.110							.064	7.9					
8	.109							.073	8.1					
9	.130							.111	8.0					
0	.096		<5					.115	8.1	2	1.1	2	0.9	
1	.252	4	<5	0.032	7.6	4	<5	.113	7.6					0
2	.148							.106	7.9					
3	.136							.121	7.7					
4	.096							.124	7.8					
5	.096							.110	7.9					
6	.139							.104	8.0					
7	.132	<4	<5					.120	8.0	5	2.2	3	1.4	112
8	.146							.118	7.9					
9	.152							.138	8.0					
0	.132							.122	7.5					
1	.126							.094	7.4					
[1]	0.146	<4	<5	0.039		6	<5	0.104		• 3	1.5	• 3	1.3	• 123
[2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
[3]		30				30				20	5.0	20	5.0	1000
[4]			5		6.5 - 9.0		5							1000 (Max. Geom. Mean)

0259621

TES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

ILO, INC.
HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of October 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.46	0.021			1.54	43.4	9.3		7.6				
2	.54	Comp.			.90	45.5	9.2		7.7				
3	1.02	3/1 -			1.32	33.3	9.1		7.4				
4	.50	3/31			.78	30.6	9.2		7.0				
5	.41				1.34	45.8	9.1		6.8				
6	.46				1.06	12.7	8.4		8.1	3.7	165	59	2.0
7	.38				.94	32.2	8.1	80	7.1				
8	.86				1.81	32.0	8.4		7.6				
9	.46				1.11	44.5	7.1		6.1				
10	.96				1.92	16.8	7.2		6.2				
11	.68				1.24	56.4	8.8		6.2				
12	.36				1.01	61.7	9.2		6.9				
13	.36				1.35	10.2	8.0		8.5	1.9	116	62	1.7
14	.60	0.021			1.21	39.9	8.4	1700	8.3				
15	.58	Comp.			.98	42.6	8.5		8.3				
16	.56	4/1 -			1.63	42.0	8.3		7.6				
17	.52	4/30			1.76	18.2	7.7		9.4				
18	.54				1.90	40.0	8.9		8.5				
19	.34				1.58	42.0	8.9		8.6				
20	.60				1.20	1.2	7.7		9.0	<10.0	115	131	1.5
21	1.08				2.28	7.0	7.8	1020	8.5				
22	.26				.98	2.5	6.9		8.6				
23	.36				.80	0.9	7.3		9.3				
24	.40				.75	1.3	7.3		9.5				
25	.38				1.50	39.3	8.8		9.5				
26	.32				1.03	24.2	8.4		9.6				
27	.36	0.004			.96	2.6	8.2		9.0	<0.3	111	30	1.6
28	.44	Comp.			.96	1.3	7.7	600	8.7				
29	.33	5/1 -			.62	0.1	7.6		9.1				
30	.42	5/31			.88	1.2	7.7		9.1				
31	.68				.86	0.2	7.6		8.7				
Avg.[1]	0.52				1.23	25.2		537 [2]	8.1	4	127	71	1.7
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259622

NLO, IN

HEALTH & SAFETY DIVISION

Page

WASTE WATER QUALITY REPORT: General Data

For the Month of October 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	760		84	51	76	6510	1175		191	2876		
2	715		84	56	76	7440	367		342	3067		
3	660		81	57	75	7440	401		212	2556		
4	605		79	63	76	6820	356		206	3195		
5	585		84	58	78	8680	441		191	2876		
6	485		86	56	78	*	1116	345	212	895		
7	450	.16	78	65	80	8680	5876		191	1661		
8	535		81	63	80	9920	3085		236	1757		
9	730	.30	72	67	77	9920	5876		342	2556		
10	675		80	57	78	11160	1028		177	1150		
11	975		64	46	77	9920	1469		200	3131		
12	790		59	52	75	9920	441		171	3195		
13	735		68	46	74	9300	735	431	177	735		
14	700		60	49	73	11160	5876		342	2237		
15	628		70	45	73	11160	1910		183	2684		
16	627		55	40	75	9920	5509		294	3195		
17	600		57	28	68	9920	1322		194	1150		
18	585		70	34	69	9920	881		194	2492		
19	600		72	41	67	8680	1836		177	2492		
20	645	.16	65	45	73	*	1102	704	200	735		
21	645		49	40	72	*	1910		177	495		
22	610		53	28	74	*	2938		221	703		
23	600		54	25	71	*	1322		265	383		
24	580		60	22	66	*	1689		212	447		
25	560		62	30	68	8680	514		221	2492		
26	545		65	26	72	8680	992		189	1278		
27	565		70	30	74	*	1763	259	153	1118		
28	592		72	36	70	*	1836		250	599		
29	560		64	44	72	*	1542		247	511		
30	530		67	37	74	*	2020		247	831		
31	510		75	59	72	*	955		271	569		
[1]	625	.62 [2]				9192	1880	435	222	1744		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4944

379

025923

WASTEWATER QUALITY REPORT SUMMARY

FOR

OCTOBER, 1982

Wastewater quality was acceptable during October. No NPDES limits were exceeded. The NPDES "daily maximum" for residual chlorine of 0.10 mg/L was equalled on two weekly samples. The gross beta activity level at MH-175 was 25.2 d/m/mL for October. Gross beta has exceeded the 1981 maximum of 16.9 d/m/mL for the last five months at MH-175.

0259624

EALTH SAFETY DIVISION

ASTE ATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1982

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.252	8.0						0.038						
2	.279	7.4						.036						
3	.483	7.9	6	1.28	146.3	<5	0.038	.077						
4	.701	8.4						.226						
5	.428	9.1						.166						
6	.426	9.1						.186						
7	.278	8.3						.096	4.62	0.007	0.024	0.018	0.004	0.011
8	.267	8.6						.094						
9	.272	8.8						.054						
10	.307	7.9	5	2.56	153.4	<5		.141						
11	.333	7.8					.095	.078						
12	.549	8.4						.153						
13	.937	9.2						.185						
14	.281	9.6						.038	0.58	0.0003	0.0003	0.001	0.001	0.001
15	.333	9.4						.127						
16	.452	9.1						.212						
17	.303	7.8	<4	0.46	68.8	<5		.039						
18	.400	9.4					.033	.153						
19	.467	9.3						.183						
20	.674	8.9						.150						
21	.800	8.6						.038	0.58	0.0004	0.0055	0.007	0.001	0.004
22	.782	8.4						.039						
23	.543	8.5	6	3.13	489.2			.184						
24	.690	8.1				13		.110						
25	.401	8.6					.09	.105						
26	.391	8.7						.151						
27	.638	8.5						.145						
28	.535	7.8						.039	0.59	0.0007	0.0027	0.006	0.008	0.004
29	.613	7.6						.040						
30	.389	7.9						.078						
31														
6[1]	0.473		5	2	214	7	0.06	0.112	1.6	0.002	0.008	0.01	0.004	0.005
2		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
3			20	28	1590				6.2	0.003	0.050	0.41	0.124	0.025
4		6.5 - 9.0				5	0.002							

0259615

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month

.O, INC
ALTH & SAFETY DIVISION

STEWATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1982

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.138							0.076	7.3					
2	.144							.099	7.4					
3	.269	<4	<5	0.072	8.1	6	<5	.137	7.5			7	3.6	
4	.259							.116	7.7	1.0	0.4			110
5	.147							.115	7.7					
6	.128							.112	8.0					
7	.092							.090	7.7					
8	.109							.063	7.8					
9	.117							.102	7.7					
10	.123	<4	<5					.170	7.7			2	1.3	
11	.137							.118	7.8	5.4	2.4			10
12	.298							.098	7.5					
13	.677			.143	7.6	<4	11.5	.081	7.5					
14	.130							.113	7.6					
15	.123							.082	7.9					
16	.135							.105	8.2					
17	.146	<4	<5					.118	8.0			3	1.3	
18	.137							.110	8.0	3.3	1.4			2
19	.166							.118	8.1					
20	.404			.128	7.3	<4	<5	.120	7.8					
21	.616			.309	7.7	<4	<5	.146	7.8					
22	.614			.305	7.9	<4	<5	.129	7.7					
23	.246							.113	7.7					
24	.442	<4	8	.083	7.9	<4	<5	.138	7.8			4	2.1	
25	.180							.116	7.7	7.2	3.2			200
26	.150							.090	8.3					
27	.408			.051	8.0	<4	<5	.085	7.8					
28	.397			.324	7.9	4	<5	.098	7.7					
29	.467			.107	7.9	<4	<5	.106	7.6					
30	.212							.099	8.0					
.[1]	0.254	<4	6	0.169		4	6	0.109		• 4	1.9	• 4	2.1	• 81
2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
3		30				30				20	5.0	20	5.0	1000
4			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

TES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259616

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of November 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.64	0.039	0.008	0.090	1.09	0.3	7.8		8.5				
2	.62	Comp.	Comp.	Comp.	1.30	0.3	8.0		8.6				
3	.73	6/1-	9/1-	9/1-	1.35	1.4	7.8		8.6	<0.7	80	53	2.0
4	1.30	6/30/82	9/30/82	9/30/82	2.26	34.8	8.7	120	9.5				
5	.68				1.39	55.0	8.7		9.8				
6	.70				1.59	48.3	8.7		9.5				
7	.82				1.84	37.1	7.0		9.7				
8	.84				1.83	34.7	8.7		7.2				
9	.71				1.02	34.6	8.1		8.1				
10	.68				0.76	16.7	7.9		9.5	2.2	132	52	2.3
11	.47				.84	1.7	7.5	390	8.6				
12	.59				1.06	22.6	8.8		8.2				
13	.92				1.89	21.2	7.4		6.5				
14	1.10				1.71	7.2	7.5		8.6				
15	.90				1.65	34.9	9.4		9.2				
16	.54				1.44	27.2	9.6		9.3				
17	.54				1.09	3.5	8.2		9.5	0.4	60	40	1.3
18	.50				.94	20.4	9.0	2	9.9				
19	.44				.77	23.7	9.4		8.4				
20	.56				1.25	24.3	8.8		9.6				
21	1.90				3.65	1.8	7.7		9.1				
22	2.28				3.10	0.7	7.6		8.7				
23	1.58				1.50	17.2	8.3		8.9		238	84	2.0
24	1.48				1.80	5.1	8.1		8.9	1.2			
25	1.04				1.20	20.5	7.1	175	9.2				
26	0.68				1.14	22.7	7.0		8.8				
27	1.58				3.06	16.3	7.4		8.8				
28	1.40				1.95	1.4	7.6		11.0				
29	1.84				2.91	0.4	7.8		8.9				
30	1.48				2.22	1.3	7.9		8.2				
31													
AVG.[1]	0.98				1.65	17.9		64[2]	8.9	1	128	57	1.9
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
DOE ORDER 5480.1A	1.8	0	0.066	0.066									

0259617

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

NLO, II

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of November 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	580		77	63	74	*	881		294	575		
2	600	.36	77	60	78	*	455		280	435		
3	550	.08	61	42	72	*	2424		294	703		
4	760		44	33	70	12400	2938	446	324	3131		
5	670		37	28	67	13020	*		530	4154		
6	580		47	22	65	12400	992		481	3834		
7	585		62	23	65	11780	533		459	3195		
8	600		67	37	67	9920	588		412	2876		
9	625		70	37	70	23560	*		353	2553		
10	620		70	40	69	9920	*	276	265	959		
11	635		66	59	70	*	1836		265	831		
12	730	.67	65	34	70	9920	2938		342	2364		
13	1315		34	26	65	8680	4040		353	1661		
14	980		40	26	63	*	1836		412	831		
15	750		38	22	64	8680	1469		412	2876		
16	735		50	21	64	7440	2204		309	2402		
17	675		55	31	68	*	507	279	289	525		
18	700		59	49	68	8680	1322		368	1917		
19	675	.07	62	59	72	7440	3158		247	2556		
20	735	.57	62	56	68	7440	169		212	2556		
21	1050	1.08	63	52	68	*	1836		206	415		
22	3175	.01	55	50	70	*	1249		206	320		
23	2600	.22	61	[illegible]	68	7440	2497		368	1856		
24	2600		45	21	72	7440	1763	347	206	799		
25	2200		36	18	64	7440	*		309	1629		
26	1900	.23	39	26	68	7378	1836		300	2237		
27	1865		41	34	63	7440	1542		206	1406		
28	2065	.94	61	33	62	*	1689		153	447		
29	4950		55	34	64	*	1469		236	383		
30	3530		66	32	68	*	2204		412	783		
31												
AVG. [1]	1335	4.23 [2]				9917	1707	337	317	1710		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4944

384

0259618

WASTEWATER QUALITY REPORT SUMMARY

FOR

November, 1982

Wastewater quality was acceptable during November. No NPDES limits were exceeded. One Manhole-175 sample was 87% of the NPDES "daily maximum" for oil and grease, and one storm sewer outfall sample was 77% of that limit also.

Radioactivity analysis showed that the Manhole-175 September composite concentration for Ra-228 was 0.090 d/m/mL, which exceeded our effluent guide value of 0.066 d/m/mL. The 9-month average Ra-228 concentration for 1982 is 0.040 d/m/mL, which is 61% of the effluent guide.

259619

LTH A SA Y DIVISION

STE WATER QUALITY REPORT: NPDES Permit Parameters

2196217

For the Month of December 1982

388

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
	0.318	7.6	14	.12	14.1	<5		0.038						
	.556	8.4					0.082	.112						
	.448	8.4						.140						
	.367	8.0						.098						
	.299	7.9						.038	.58	0.0001	0.0001	0.079	0.004	0.001
	.340	7.8						.037						
	.341	7.8						.077						
	.320	8.0	5	.85	5.7	<5		.078						
	.451	9.2					0.037	.172						
	.441	9.2						.173						
	.522	9.0						.168						
	.262	7.0						.026	.59	0.0020	0.0020	0.001	0.001	0.003
	.328	9.0						.105						
	.423	9.0						.171						
	.435	8.7	26	2.31	191.0	<5		.073						
	1.028	8.9					0.058	.198						
	.651	9.2						.242						
	.536	9.2						.246						
	.497	7.5						.058	1.02	0.0019	0.0020	0.018	0.004	0.0024
	.680	8.6						.170						
	.542	9.1	8	1.86	317.6			.229						
	.328	7.8				<5		.036						
	.516	9.1					0.069	.220						
	.679	9.1						.211						
	.539	9.0						.247						
	.708	7.7						.038	.58	0.0001	0.0001	0.003	0.001	0.0007
	.628	9.0						.116						
	1.067	8.8						.218						
	.563	7.7	<4	1.49	66.9	<5	0.047	.091						
	.471	8.4						.160						
	.484	8.6						.162						
	0.509		* 11	1	119	<5	0.06	0.134	0.7	0.001	0.001	0.03	0.003	0.002
2		6.5 - 10.0	60	43	2190	15	0.15		10.9	[illegible]	[illegible]	0.55	0.256	0.051
3			20	23	1900				[illegible]	[illegible]			[illegible]	[illegible]
4		6.5 - 9.0												

0259610

NOTES: *Arithmetic averages except for (*) which is a flow weighted average. 1 NPDES "Daily Maximum" 2 NPDES "Daily Average" which means the average for the month

...), INC.
...TH & SAF DIVISION

...TE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1982

STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM [illegible]
.176	<4	<5					0.104	7.7	2.1	0.8	2	0.8	
.036			0.057	7.9	42	9	.108	7.6					15
.016							.092	8.0					
.180							.090	7.8					
.161							.100	8.1					
.133							.070	8.0					
.184							.080	8.2					
.162	<4	<5					.080	8.1	1.4	0.4	2	0.6	
.213							.066	7.8					7
.168							.100	7.9					
.254							.100	7.8					
.136							.100	7.8					
.123							.100	7.9					
.152							.100	7.9					
.261	12	<5	.052	7.8	5	<5	.100	8.0	2.3	0.9	4	1.5	
.668			.554	7.8	<4	<5	.162	8.0					66
.266							.143	7.7					
.205							.085	7.7					
.350			.182	7.8	4	<5	.089	7.7					
.402			.055	7.8	<4	<5	.108	7.8					
.216							.097	8.0					
.191	<4	<5					.100	7.7	3.4	1.3	1	0.4	
.196							.100	7.9					30
.414			.087	7.6	<4	<5	.053	7.7					
.255							.037	8.0					
.569			.293	7.6	<4	<5	.101	7.8					
.420			.351	7.7	10	<5	.092	7.9					
.636			.293	7.7	7	<5	.153	7.9					
.358	<4	<5	.001	8.0	<4	<5	.115	8.0	7.7	3.4	1	0.4	
.223							.088	8.1					70
.201							.121	7.8					
0.275	6	<5	0.193		9	5	0.098		• 3	1.4	• 2	0.7	• 42
	100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
	30				30				20	[illegible]	20	5.0	1000
		5		6.5 - 9.0		5							1000

0259611

[1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

...

.O, INC.
ALTH & SA. ;Y DIVISION

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of December 1982

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.24	<0.001	0.025	0.078	1.46	0.4	7.7		9.8	<0.1	11.7	38	1.2
2	.94	Comp.	Comp.	Comp.	.88	9.8	8.3	3	9.2				88
3	.96	8/1-	10/1-	10/1-	1.23	14.3	7.8		8.6				38
4	.80	8/31/82	10/31/82	10/31/82	1.32	17.9	7.4		8.2				
5	.90				1.24	1.6	7.8		8.2				
6	1.52				2.19	0.5	7.9		8.4				
7	.60				1.63	0.3	7.9		8.8				
8	1.28				1.85	0.4	7.9		9.8	0.7	4.7	51	1.3
9	.88				1.21	15.8	8.4	28	8.3				
10	1.30				1.30	18.3	8.6		8.0				
11	.72				1.46	16.1	8.6		8.5				
12	.76				1.10	8.7	7.6		8.5				
13	.52				1.20	17.5	8.9		8.4				
14	.52				.65	17.4	8.9		8.5				
15	1.00				1.52	6.7	7.9		9.7	1.5	116	73	1.8
16	.88				2.53	19.6	8.9	60	10.0				
17	1.10				1.31	12.6	8.8		10.3				
18	.74				.87	12.3	8.2		8.1				
19	1.14				1.81	5.3	7.6		8.5				
20	1.20				2.04	6.2	8.7		9.6				
21	.94				1.61	9.1	8.7		10.0		154.8	121	2.7
22	1.14				1.43	2.2	7.1		8.4	1.5			
23	.80				.81	8.1	7.5	40	11.6				
24	1.30				1.96	8.0	8.4		8.5				
25	.94				1.79	9.0	8.9		10.0				
26	.74				2.61	2.0	7.7		10.0				
27	1.78				2.58	6.5	8.5		8.9				
28	1.50				1.69	3.6	8.3		9.4				
29	1.64				2.48	2.2	8.2		9.6	0.7	31.4	41	2.5
30	1.50				1.55	5.9	8.2	80	10.6				
31	.92				1.04	6.2	7.4		10.6				
AVG.[1]	1.04				1.56	8.5		28 [2]	9.2	1	64	65	1.9
OHIO EPA							6.5-9.0	200 (Monthly Mean)	5.0 AVG. 4.0 MIN.	1[illegible]	[illegible]		7.0
DOE ORDER 5480.1A	1.8	0	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259612

-4944

ASTE WATER QUALITY REPORT: General Data

For the Month of December 1982

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1935	.21	66	54	70	*	*	335	339	575		
2	1880		78	58	68	4960	1800		206	1022		
3	1935		79	67	70	4340	1836		289	1470		
4	1840		69	63	71	4340	*		294	1342		
5	1675	.04	66	52	71	*	881		324	575		
6	1660		53	28	68	*	1175		271	396		
7	1630		50	25	70	*	881		294	511		
8	1550		54	25	67	*	661	379	250	447		
9	1300		43	22	65	3720	*		289	1885		
10	1130	.08	36	18	64	4340	*		250	2237		
11	1080		36	26	60	4960	*		309	1534		
12	1050		31	16	61	4960	*		280	1150		
13	1020		36	9	60	5580	*		294	1981		
14	970		50	28	63	3720	*		259	1757		
15	950	.98	51	43	66	3906	2865	369	236	1086		
16	3775		45	36	64	3720	2644		206	709		
17	4000		36	22	68	4712	2865		342	1566		
18	4430	.29	42	27	63	3720	1910		324	1693		
19	3300	.15	47	34	63	3720	881		218	8946		
20	3300		36	33	62	3720	1465		242	1022		
21	3017		40	25	69	3652	1469		353	1278		
22	2760		49	23	63	*	1616	328	324	639		
23	2400	.23	54	46	63	3410	992		324	1278		
24	2275	.06	67	53	63	3534	1469		221	1150		
25	2240	.58	64	58	64	3720	1028		294	1342		
26	4990		63	45	63	*	1469		218	979		
27	5200	1.00	63	45	63	3100	1175		294	990		
28	18000		64	36	56	3038	1616		259	751		
29	14600		37	23	63	3038	2204	330	324	671		
30	9068		33	25	62	2418	2571		359	1150		
31	**		39	21		2418	3085		353	1150		
	3555	3.62 [2]				3864	1676	348	285	1396		

ES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

* Not pumped this date.

** No readings taken by Miami Conservancy.

1044

389

025963

WASTEWATER QUALITY REPORT SUMMARY
FOR
DECEMBER, 1982

Wastewater quality was acceptable during December. No NPDES limits were exceeded. Gross beta radioactivity at Manhole-175 for December was 8.5 d/m/mL, an improvement over the past several months' results. Radium-228 for October at Manhole-175 showed a composite concentration of 0.078 d/m/mL, which was also an improvement over the September result, but still exceeded the NLO effluent guide value of 0.066 d/m/mL. The 1982 10-month average Ra-228 concentration is 0.044 d/m/mL, which is 67% of the effluent guide.

0259614

.O, INC.
ALTH - SAFL DIVISION

.STE WATER QUALITY REPORT: NPDES Permit Parameters

2196216

For the Month of January 1983

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.431	8.6						0.182						
2	.323	8.0						.088	1.3	0.001	0.003	0.03	0.032	0.001
1	.338	7.7						.136						
1	.378	8.8						.160						
5	.327	7.8	4	1.5	21	<5		.038						
6	.529	9.1					.08	.259						
7	.520	8.6						.249						
1	.542	9.3						.242						
9	.249	7.8						.097	2.0	0.001	0.004	0.04	0.006	0.004
0	.415	9.4						.183						
	.496	9.4						.246						
2	.337	7.9	4	3.8	82	<5		.076						
3	.535	9.5					.09	.256						
1	.555	9.5						.294						
5	.556	8.9						.299						
9	.244	7.8						.053	0.8	0.001	0.002	0.01	0.003	0.002
7	.384	9.2						.203						
1	.475	9.8						.228						
9	.353	7.5	9	2.0	144	<5		.108						
0	.443	9.8					.08	.181						
1	.391	9.0						.144						
2	1.064	9.0						.127						
3	.763	7.8						.050	1.3	0.001	0.003	0.02	0.007	0.004
1	.634	9.1						.196						
5	.533	8.7						.196						
5	.390	9.1	<4	1.3	707	<5		.077						
7	.335	9.3					.09	.163						
1	.474	8.7						.190						
9	.437	8.4						.169						
0	.338	7.7						.053	2.2	0.002	0.005	0.02	0.025	0.006
1	.390	9.0						.170						
1	0.457		* 5	2	239	<5	0. 09	0.165	1.5	0.001	0.003	0.02	0.015	0.003
2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.009	0.102	0.85	0.256	0.051
3			20	28	1590				6.2	[illegible]	0.060	0.41	0.124	0.025
4		6.5 - 9.0				5	0.002							

0259605

TES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of January 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	.173													
2	.159							0.077	7.8					
3	.153							.076	7.9					
4	.158							.050	8.0					
5	.175	<4	<5					.060	7.9					
6	.159							.114	8.0	6.2	2.7	4	1.7	
7	.149							.111	8.0					
8	.144							.122	7.8					1000
9	.128							.118	8.0					
0	.150							.100	7.8					
1	.146							.082	7.6					
2	.137	5	<5					.104	7.8					
3	.155							.124	7.8	0.4	0.2	1	0.5	
4	.149							.124	7.5					
5	.153							.112	8.1					880
6	.117							.107	7.6					
7	.117							.071	7.6					
8	.153							.065	7.9					
9	.143	<4	<5					.095	7.9					
0	.142							.102	7.8	4.2	1.6	6	2.3	
1	.138							.120	7.9					
2	.788			0.630	7.8	<4	<5	.113	7.9					130
3	.572			.035	7.7	<4	<5	.149	7.9					
4	.345							.141	7.6					
5	.229							.093	7.9					
6	.196	5	<5					.108	7.6					
7	.160							.117	8.1	4.4	1.9	2	0.9	
8	.172							.112	7.8					
9	.165							.112	7.8					170
0	.210							.103	8.1					
1	.168							.075	7.8					
[1]	0.197	<5	<5	0.333		<4	<5	.052	7.8					
2		100	15		6.5 - 9.0	100	15	0.100		• 4	1.6	• 3	1.4	• 545
3		30				30			6.5 - 9.0	40	10.0	40	10.0	2000
4			5		6.5 - 9.0		5			20	5.0	20	5.0	1000
														1000 (Max. Geom. Mean)

TES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259606

3042

NLO, INC.
HEALTH & SAFE DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of January 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.06	0.005*	0.010	0.051	1.18	6.6	7.3		10.1				
2	.92	Comp.	Comp.	Comp.	.92	1.9	7.7		9.1				
3	1.12	6/1-	11/1-	11/1-	1.39	4.5	7.6		9.6				
4	.86	6/30/82	11/30/82	11/30/82	1.38	6.5	7.9		9.0				
5	.48				1.06	0.8	7.8		9.6	1.2	17	83	1.8
6	.84				.73	7.9	8.8	650	8.8				
7	.78				.73	9.5	8.9		9.2				
8	.62				.83	12.3	8.7		9.9				
9	.56				.82	4.3	7.7		9.8				
10	.62				1.28	16.5	8.9		9.2				
11	.46				.90	16.2	9.1		9.4				
12	.44	0.002			.69	4.3	7.8		8.2	3.0	64	58	2.2
13	.36	Comp.			.53	15.5	9.2	180	8.5				
14	.30	7/1-			.93	19.9	9.3		8.2				
15	.28	7/31/82			.60	19.7	9.1		8.0				
16	.38				.65	7.8	7.5		8.7				
17	.38				.50	14.6	8.6		8.5				
18	.26				.68	17.8	9.5		8.6				
19	.32				.78	8.5	9.0		8.4	1.5	108	66	2.6
20	.24				.39	20.6	9.7	0	8.7				
21	.88				.92	20.3	9.4		8.9				
22	1.30				1.35	12.0	8.3		9.3				
23	1.74				1.75	2.2	7.9		9.6				
24	1.80				2.06	19.2	8.8		8.6				
25	.88				1.06	20.1	8.9		9.2				
26	1.20				1.97	13.0	7.5		9.4	0.9	479	115	0.9
27	.76	0.002			.93	26.7	8.6	130	9.5				
28	.44	Comp.			1.05	24.4	8.7		10.4				
29	.62	12/1-			1.14	39.5	7.2		9.0				
30	1.30	12/31/82			1.56	12.0	7.6		9.0				
31	1.26				1.57	24.3	8.7		9.5				
AVG.[1]	0.76				1.04	13.9		62[2]	9.1	2	167	81	1.9
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	0	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.
*Correction from report dated November, 1982

-4944

393

0259607

WASTE WATER QUALITY REPORT: General Data

For the Month of January 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	271		44	19	60	2418	2571		359	1150		
2	*		35	23	62	2418	3085		353	1150		
3	267		35	19	60	2418	1689		353	831		
4	375		43	17	54	2418	1175		324	1118		
5	2675		43	20	67	*	1285	675	324	487		
6	2430		49	34	54	2720	769		263	1130		
7	2275		49	25	54	2958	770		277	1113		
8	2080		36	24	54	3441	699		335	1520		
9	1950		45	22	54	3579	610		295	855		
10	1835		52	42	54	4023	*		244	1755		
11	1879		43	32	56	4023	*		330	1823		
12	1865		33	27	55	3353	685	321	264	743		
13	1800		44	25	55	3674	311		273	1586		
14	1730		51	21	55	3869	1840		219	1822		
15	1690		34	25	55	3082	1275		289	1531		
16	1635		29	19	55	3142	701		314	736		
17	1535		28	18	55	3698	454		251	1413		
18	1509		25	10	58	3737	506		250	1715		
19	1326		25	7	55	3612	383	311	236	904		
20	1300		30	14	52	4982	1688		332	1746		
21	1400	.66	35	22	53	6228	2251		322	2058		
22	3700	.63	42	31	52	6851	900		417	1497		
23	6680	.04	39	35	47	7474	1407		228	437		
24	5430		36	33	49	7474	957		261	1871		
25	4708		37	33	48	7474	732		334	2183		
26	3902		33	30	48	*	6754	614	445	3056		
27	3250		34	23	48	8719	18010		417	6237		
28	2792		41	21	49	8719	11256		384	3742		
29	2511		48	25	48	8719	12382		278	4366		
30	2321	.05	48	34	48	8719	3377		278	1247		
31	2843		44	31	49	8719	3377		292	3119		
AVG. [1]	2655	1.38 [2]				4919	2824	480	308	1772		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

**Measurement not obtained for this date.

0259608

WASTEWATER QUALITY REPORT SUMMARY

FOR

JANUARY, 1983

Wastewater quality was acceptable during January. No NPDES limits were exceeded. Gross beta activity at MH-175 was 13.9 d/m/mL compared to the annual 1981 average of 6 d/m/mL for gross beta. Uranium averaged 0.76 mg/L at MH-175, which is 42% of the effluent guide.

The Ra-228 result of 0.051 d/m/mL reported for the November 1982 composite is 77% of the effluent guide.

0259609

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196215

For the Month of February 1983

396

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.480	9.1												
2	.777	8.8	17	8.8	288	<5		0.248	2.6					
3	.716	8.8					0.063	.121						
4	.670	8.9						.254						
5	.521	9.1						.279						
6	.362	7.6						.239						
7	.434	8.2						.065	2.2	0.0035	0.008	0.010	0.012	0.014
8	.329	7.8						.216						
9	.342	7.8	24	0.9	10	<5		.038						
10	.505	8.7					.075	.076						
11	.549	9.3						.247						
12	.564	9.0						.275						
13	.275	7.7						.248						
14	.408	8.6						.088	3.5	.0038	.0065	.024	.0235	.009
15	.470	8.9						.210						
16	.340	9.1	14	4.8	224	6		.207						
17	.323	8.5					.044	.081						
18	.426	9.0						.108						
19	.228	8.2						.185						
20	.229	8.0						.094						
21	.324	9.2						.102	4.3	.0040	.006	.021	.024	.010
22	.355	9.0						.197						
23	.214	7.6	4	6.2	134	<5		.214						
24	.405	9.0						.021						
25	.426	9.0						.189						
26	.301	7.8					.068	.170						
27	.235	7.8						.088						
28	.183	7.8						.038	0.6	.0001	.0003	.001	.0001	.001
29								.038						
30														
31														
AVG[1]	0.407		15	5	164	5	0.06	0.155	2.6	0.003	0.005	0.01	0.015	0.009
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		[illegible]	[illegible]	0.102	0.85	0.256	0.051
LIMITS 3			30	28	1590				[illegible]	[illegible]	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

0259600

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February 1983

DATE	STORM SEWER LIFT STATION FLOW 10^6 gal.	STORM SEWER LIFT STATION SUSPENDED SOLIDS mg/L	STORM SEWER LIFT STATION OIL & GREASE mg/L	STORM SEWER OUTFALL FLOW 10^6 gal.	STORM SEWER OUTFALL GRAB pH	STORM SEWER OUTFALL SUSPENDED SOLIDS mg/L	STORM SEWER OUTFALL OIL & GREASE mg/L	SEWAGE TREATMENT PLANT FLOW 10^6 gal.	SEWAGE TREATMENT PLANT GRAB pH	SEWAGE TREATMENT PLANT 5-DAY BOD mg/L	SEWAGE TREATMENT PLANT 5-DAY BOD kg/day	SEWAGE TREATMENT PLANT SUSPENDED SOLIDS mg/L	SEWAGE TREATMENT PLANT SUSPENDED SOLIDS kg/day	SEWAGE TREATMENT PLANT FECAL COLIFORM Bc/100 ml
1	0.182													
2	.512	5	<5	0.230	7.7	4	<5	0.050	8.0					
3	.402							.144	7.8	4.0	2.18	5	2.73	
4	.232							.136	7.7					
5	.171							.159	7.8					0
6	.152							.111	7.9					
7	.141							.145	7.5					
8	.166							.077	7.8					
9	.159	<4	<5					.125	7.8					
10	.104							.107	8.2	3.4	1.38	1	0.41	
11	.151							.154	7.7					
12	.213							.123	8.0					0
13	.135							.103	8.0					
14	.139							.052	7.8					
15	.160							.060	7.7					
16	.150	4	6					.104	8.1					
17	.145							.109	8.1	0.6	0.25	5	2.06	
18	.139							.107	8.0					
19	.043							.102	8.0					230
20	.060							.091	8.1					
21	.095							.068	7.9					
22	.106							.032	7.9					
23	.118	<4	<5					.035	7.7					
24	.130							.075	7.7	0.4	0.11	4	1.14	
25	.120							.086	7.8					
26	.110							.135	7.9					
27	.119							.103	7.8					140
28	.094							.078	7.8					
29								.051	7.8					
30														
31														
AVG.[1]	0.159	4	5	0.230		4	<5	0.097		• 2	1.0	• 4	1.6	• 82
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]	•		5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259601

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of February 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/ml	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM 88/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.76	0.006	0.004	0.017	1.40	35.7	8.9		7.7				
2	.92	Comp.	Comp.	Comp.	1.14	8.3	7.6		9.7	3.0	88.0	40	1.5
3	1.48	1/1-	1/1-	1/1-	1.87	17.5	8.6	30	10.0				
4	1.36	1/31/83	1/31/83	1/31/83	1.63	20.4	8.6		8.7				
5	.88				1.30	22.9	7.9		10.2				
6	.64				1.18	9.8	7.5		9.8				
7	1.28				1.68	20.3	8.5		8.9				
8	.72				1.28	1.5	7.9		9.7				
9	.68				1.49	0.2	8.0		10.2	0.7	8.1	41	1.3
10	.50				1.22	14.4	8.4	10	8.9				
11	.56				.76	24.5	8.7		8.5				
12	.84				1.47	20.4	8.4		9.8				
13	.62				1.31	5.8	7.3		9.4				
14	.66				1.25	13.1	8.6		10.0				
15	.68				1.11	22.6	8.6		12.4				
16	.54				.77	8.4	7.6		8.0	3.7	174	67	2.1
17	.46				.77	9.5	7.8	180	7.9				
18	.28				.92	13.6	8.5		8.1				
19	.34				2.15	20.6	7.1		7.4				
20	.44				1.24	14.5	7.2		8.0				
21	.38				1.28	8.5	8.6		10.6				
22	.40				.93	22.1	8.9		8.3				
23	.52				.88	8.4	7.7		8.0	7.6	166	65	1.4
24	.48				.75	17.2	9.1		10.8				
25	.46				.88	19.6	8.9	80	9.7				
26	.62				1.33	16.3	8.3		8.1				
27	.44				.62	0.9	8.0		10.0				
28	.62				1.36	0.3	8.1		10.8				
29													
30													
31													
AVG. [1]	0.66				1.21	14.2		46 [2]	9.3	4	109	53	1.6
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	≥5.0 AVG. 4.0 MIN.	13	23		2.0
DOE MC-0524	59	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE MC-0524 guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259602

0-855-382 (REV. 1/28/83)

NLO, IN
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of February 1983

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L					
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]	
1	2825	.15	40	29	72	8719	2251		250	3306	
2	3300	.32	57	40	48	7474	1013	517	228	811	
3	6475	.05	46	22	49	6851	4502		334	2245	
4	7450		25	16	48	5979	5628		384	3119	
5	5050		30	14	49	7474	732		445	2807	
6	3775	.07	33	25	49	8096	2251		389	1508	
7	3350		38	21	49	7474	704		322	2494	
8	3070		39	21	49	*	394		292	515	
9	2740		43	27	50	*	445	302	272	387	
10	2560		38	32	50	8719	3489		345	2820	
11	2580	.08	33	29	50	6228	2814		384	3119	
12	2400		29	27	51	6228	788		1501	2807	
13	2200		30	25	52	*	675		403	1497	
14	2000		45	25	51	6552	1688		339	3119	
15	1900		53	25	52	6228	1407		389	2620	
16	1865		55	25	52	4733	1632	335	570	1310	
17	1840		43	40	52	2180	1970		267	1060	
18	1850		49	33	52	2055	7216		264	1247	
19	1865		60	25	51	4360	1013		334	1996	
20	1800		67	29	62	5979	2251		278	2869	
21	1740		69	30	62	5979	478		278	2994	
22	1675		70	34	62	4671	*		236	2370	
23	1635		57	29	62	5605	928	392	334	1185	
24	1550		48	28	62	5605	689		222	1497	
25	1485		38	27	62	5543	512		345	2370	
26	1420		42	17	62	5605	394		278	1684	
27	1350		53	19	62	*	332		234	443	
28	1260		59	26	71	*	366		261	349	
29											
30											
31											
AVG. [1]	2608	0.67 [2]				6015	1725	387	364	1948	

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

4944

399

0259603

NLO-HES-361 (REV. 1/29/81)

WASTEWATER QUALITY REPORT SUMMARY

FOR

FEBRUARY, 1983

Wastewater quality was acceptable during February. No NPDES limits were exceeded. Suspended solids at Manhole-175 averaged 15 mg/L, which is 75% of the NPDES "daily average" limit. Hexavalent chromium averaged 0.003 kg/day at Manhole-175, which is also 75% of the NPDES "daily average" limit. Uranium averaged 0.66 mg/L at Manhole-175, which is 37% of the effluent guide.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196214

For the Month of March 1983

DATE	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.297	9.1						0.077						
2	.244	7.8	<4	0.6	146	<5		.038						
3	.241	8.0					.045	.038						
4	.255	7.7						.038						
5	.224	7.8						.038						
6	.304	7.6						.039	0.59	0.0007	0.0007	0.0038	0.0003	0.001
7	.538	8.6						.076						
8	.466	7.8						.180						
9	.317	9.1	15	2.3	421	<5		.076						
10	.578	9.0					.075	.253						
11	.572	9.1						.265						
12	.517	9.2						.228						
13	.307	7.9						.056	1.19	0.0019	0.0038	0.0108	0.0138	0.0055
14	.248	8.0						.038						
15	.299	8.0						.038						
16	.322	7.8	5	0.9	13	<5		.076						
17	.503	8.8					.045	.214						
18	.594	8.6						.204						
19	.583	8.7						.246						
20	.301	7.7						.086	4.24	0.005	0.0083	0.0386	0.0196	0.0075
21	.072	8.0						.076						
22	.440	7.9						.075						
23	.401	7.8	<4	2.3	249	<5		.076						
24	.460	8.0					.081	.155						
25	.480	7.7						.192						
26	.504	9.0						.233						
27	.305	7.6						.056	1.61	0.0017	0.0036	0.0162	0.0136	0.0044
28	.481	8.6						.148						
29	.459	8.7						.187						
30	.355	7.9	<4	1.7	128	<5		.076						
31	.405	8.8					.051	.158						
AVG[1]	0.389		* 6	2	191	<5	0.06	0.121	1.9	0.002	0.004	0.02	0.012	0.005
LIMITS 2		6.5 - 10.0	30	43	2180	15	0.10		[illegible]	[illegible]	0.10[illegible]	[illegible]	0.256	0.051
LIMITS 3			20	28	1590				[illegible]	[illegible]	[illegible]	0.41	0.194	[illegible]
LIMITS 4		6.5 - 9.0				5	0.002							

0259595

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100 ml
1	0.[illegible]													
2	.1[illegible]1		<5					0.104	7.7					
3	.109							.094	7.8	2.9	1.0	5	1.8	
4	.116							.094	7.8					
5	.104							.101	7.9					1330
6	.223			0.080	7.8	22	<5	.082	7.8					
7	.401			.163	7.7	<4	<5	.042	7.7					
8	.186			.114	7.7	12	<5	.061	7.6					
9	.146	5	<5	.046	7.6	<4	<5	.100	7.7					
10	.175							.095	7.7	2.8	1.0	10	3.6	
11	.167							.149	7.5					
12	.155							.140	7.7					800
13	.122							.134	7.8					
14	.112							.128	7.7					
15	.139							.098	7.8					
16	.136	<4	<5					.122	7.5					
17	.138							.110	7.6	6.6	2.7	3	1.3	
18	.246							.151	7.6					
19	.208							.144	7.7					228
20	.117							.129	7.6					
21	.513			.398	7.9	<4	<5	.098	7.4					
22	.238							.127	7.8					
23	.164	<4	<5					.082	7.7					
24	.154							.161	7.7	0.6	0.4	1	0.6	
25	.148							.151	7.7					
26	.144							.141	7.6					200
27	.144							.127	7.6					
28	.237			.044	7.9	<4	<5	.105	7.6					
29	.154							.096	7.8					
30	.142	<4	<5					.118	8.0					
31	.123							.137	7.6	7.0	3.6	8	4.2	44
AVG.[1]	0.174	4	<5	0.141		7	<5	.124	7.6					
LIMITS 2		100	15		6.5 - 9.0	100	15	0.114		• 4	1.7	• 5	2.3	• 474
LIMITS 3		30				30			6.5 - 9.0	30	10.0	30	10.0	2000
LIMITS 4			5		6.5 - 9.0		5			20	5.0	20	5.0	1000
														1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259596

402

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of March 1983

4944 403

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100 ml	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORIDE mg/l
1	0.52		0.007	0.036	1.01	0.9	8.4		10.4				
2	.60		Comp.	Comp.	1.77	5.9	7.7		9.4		158	100	2.4
3	.58		2/1-	2/1-	1.06	1.9	7.8		9.7				
4	3.90		2/28/83	2/28/83	6.27	[illegible].4	8.2	665	9.6				
5	4.90				7.98	[illegible].0	7.1		9.0				
6	1.24				2.05	0.7	7.5		9.7				
7	2.00				2.63	0.4	7.5		8.7				
8	1.38				3.67	20.9	8.7		8.8				
9	1.52				2.06	8.7	7.6		9.2	1.9	351	49	6.5
10	.90				1.24	24.7	8.9	770	9.0				
11	.62				1.11	[illegible].4	9.0		9.2				
12	.46				.89	27.5	8.7		10.0				
13	.50				1.07	12.0	8.1		10.2				
14	.72				1.09	0.5	8.0		11.1				
15	.50				.91	0.6	8.0		10.0				
16	.38				1.00	25.6	8.3		9.8	0.75	10.3	38	1.1
17	.44				.67	21.9	8.7	1480	8.1				
18	.66				1.25	26.2	9.6		9.4				
19	.76				1.19	17.0	7.4		7.6				
20	.48				.74	10.0	7.3		9.1				
21	1.06				1.71	26.5	8.2		10.4				
22	1.02				1.76	5.8	7.9		9.7	1.5			
23	.50				.80	12.7	7.9		9.4		164	39	1.5
24	.78				1.01	20.8	8.3	1000	9.6				
25	.86				1.19	24.8	8.5		8.7				
26	.94				1.08	25.3	8.6		8.3				
27	.94				1.23	9.8	7.7		8.5				
28	.96				1.62	20.4	8.3		6.9				
29	.58				1.08	23.0	8.2		7.4				
30	.34				1.09	6.7	7.4		9.3	9.5	95	145	1.5
31	.76				1.03	22.3	8.3	27	9.5				
AVG.[1]	1.03				1.72	14.1		459[2]	9.2	3	156	74	2.6
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mon. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	0	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259597

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of March 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1230		62	31	67	*	2050		250	331		
2	1220		68	27	63	*	2814	776	211	436		
3	1210		73	32	62	*	507		264	617		
4	1210		79	42	62	*	591		272	349		
5	1230		78	51	64	*	445		239	343		
6	1400	.96	70	58	64	*	507		289	374		
7	2035		74	47	64	*	788		257	343		
8	1675	.23	55	42	63	6166	749		384	2183		
9	2140		43	32	64	*	3419	339	250	1809		
10	2400		37	28	64	3986	3377		350	2495		
11	2300		39	33	63	4235	2031		328	2183		
12	1950		48	32	61	8719	984		272	2682		
13	1750		53	27	64	7474	478		294	1622		
14	1550		66	39	66	*	393		322	436		
15	1485		60	29	66	*	394		267	405		
16	1400		62	38	66	*	371	378	267	362		
17	1325	.05	59	40	67	8096	4502		389	3119		
18	1300	.10	54	42	66	7598	1047		292	2682		
19	1400		51	42	71	7474	2645		255	2806		
20	1350	.85	48	36	68	7474	787		278	1434		
21	3470		44	30	60	*	787		183	433		
22	3400		34	19	60	*	2491		334	873		
23	4163		39	19	60	*	2814	339	394	1123		
24	3000		38	25	60	7598	2533		289	2432		
25	2480		43	21	60	6228	3095		289	3119		
26	2140		55	26	59	8719	675		500	3430		
27	1920	.18	62	42	59	8719	1407		455	1746		
28	1960		49	38	65	7474	647		306	2744		
29	1975		47	35	67	7474	1069		473	3056		
30	1825		48	33	62	*	1564	746	400	1372		
31	715		54	35	59	7474	1094		384	2432		
AVG. [1]	1891	2.37 [2]				7182	1518	516	314	1606		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

1944

4001

025998

NLO-HES-351 (REV. 1/28/81)

WASTEWATER QUALITY REPORT
FOR
MARCH, 1983

Wastewater quality was acceptable during March. No NPDES limits were exceeded. The monthly average uranium concentration at Manhole-175 was 1.03 mg/L, which is 57% of the effluent target value. One sample collected during March at Manhole-175 reached 63% of the NPDES "daily maximum" limit for hexavalent chromium.

The February Manhole-175 composite sample contained a Radium-228 concentration of 0.036 d/m/mL, which is 55% of the effluent target value.

2190213

STE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April, 1983

MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
.393	9.0						0.153						
.508	8.9						.158						
.613	7.7						.056	1.1	0.0013	0.003	0.017	0.010	0.002
.367	7.9						.038						
.342	7.6						.076						
.456	7.8	9	5.2	183	<5	0.091	.076						
.556	7.7						.076						
.802	8.5						.038						
1.070	8.8						.292						
.762	8.1						.062	0.9	0.0023	0.006	0.022	0.018	0.006
.811	8.7						.242						
.710	8.4						.294						
.583	8.8	5	1.8	88	<5	0.090	.097						
.978	8.2						.248						
.867	8.5						.265						
.548	7.8						.163						
.343	7.8						.034	1.4	0.0004	0.001	0.014	0.002	0.003
.303	7.8						.038						
.531	8.0						.255						
.376	8.2	22	3.7	212	<5	0.092	.071						
.696	8.5						.324						
.688	8.8						.350						
.594	8.8						.277						
.321	7.5						.033	1.2	0.0027	0.007	0.009	0.025	0.004
.450	7.4						.241						
.543	8.6						.280						
.378	8.1	12	4.3	755	20	0.057	.093						
.611	8.5						.329						
.604	7.4						.266						
.652	7.4						.269						
0.582		* 11	4	310	9	0.08	0.173	1.2	0.002	0.004	0.02	0.014	0.004
2	6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
3		20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
4	6.5 - 9.0				5	0.002							

0259590

[1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

D, INC.
LTH & SAFET IVISION

STE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April, 1983

STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100mL
0.12							0.116	7.8					
.271			0.024	7.6	8	<5	.079	7.6					
.483			.025	7.7	7	<5	.074	7.7					
.259							.070	7.6					
.177							.089	7.9					
.206	<4	<5	.050	7.9	5	<5	.174	7.6	4.0	2.8	6	3.9	
.345			.012	7.6	6	<5	.135	7.6					980
.574			.280	8.0	11		.190	7.6					
.593			.424	7.6	5	<5	.185	7.8					
.560			.252	7.8	5	<5	.140	7.8					
.462			.055	7.8	<4	<5	.107	8.0					
.296							.120	7.7					
.286	10	<5	.044	7.8	10	<5	.122	7.8	12	5.7	5	2.3	
.589			.454	7.8	4	<5	.141	7.9					1080
.441			.147	7.9	<4	<5	.161	7.7					
.245							.140	7.7					
.198							.111	7.7					
.178							.087	7.8					
.172							.103	7.8					
.178	<4	6					.128	7.8	8	3.8	4	1.9	
.174							.198	7.7					60
.176							.162	7.9					
.179							.138	7.7					
.167							.121	7.8					
.132							.077	7.9					
.117							.146	7.8					
.135	<4	<5					.150	7.8	2	1.0	10	5.7	
.143							.139	7.6					1120
.196			.052	7.7	<4	<5	.142	7.8					
.262			.108	7.7		<5	.122	7.6					
0.277	6	5	0.148		6	<5	0.129		• 6	3.3	• 6	3.5	• 738
	100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
	30				30				20	5.0	20	5.0	1000
		5		6.5 - 9.0		5					0259591		1000 (Mo. Geo. Mean)

S: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

O, INC.
LTH & SAFE. DIVISION

TE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of April, 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.90	0.002	0.005	0.020	0.84	23.9	7.9		8.0				
2	.92	Comp.	Comp.	Comp.	1.14	19.4	8.1		7.0				
3	1.16	2/1-	3/1-	3/1-	2.94	6.5	7.6		10.1				
4	2.06	2/28/83	3/31/83	3/31/83	3.28	0.5	7.8		8.4				
5	.82				1.49	3.2	7.6		8.4				
6	.90				1.03	2.7	7.5		9.4	3.0	106	62	1.6
7	1.14				1.66	1.5	7.6	160	9.6				
8	1.16				2.35	2.0	7.7		10.4				
9	1.10				1.60	12.9	8.5		9.5				
10	1.38				2.03	4.9	7.4		10.0				
11	1.26				1.64	19.4	8.7		9.2				
12	.84				1.02	21.3	8.5		10.6				
13	.90				1.15	3.0	7.9		11.0	0.8	40	102	1.3
14	1.40				1.69	8.8	7.7	280	11.4				
15	2.08				2.75	8.2	8.0		10.4				
16	1.30				1.61	13.5	7.2		11.2				
17	.86				1.48	1.6	7.7		10.6				
18	.86				1.46	4.6	7.8		9.8				
19	1.48				1.62	25.5	8.3		7.9				
20	.66				.87	14.3	7.6		8.2	2.6	149	61	1.9
21	.94				1.63	58.9	8.6	320	6.2				
22	.66				1.05	52.8	8.4		7.0				
23	1.06				1.39	47.0	7.8		7.2				
24	1.06				1.66	26.5	7.5		9.5				
25	1.10				2.12	62.3	8.5		5.5				
26	.84				1.64	60.1	8.4		7.8				
27	.44				1.31	34.3	7.5		6.3	3.0	528	115	3.3
28	.68				1.35	29.7	8.1	160	5.2				
29	1.30				2.44	52.1	7.9		5.4				
30	1.30				1.67	51.2	7.4		5.3				
31													
AVG. [1]	1.09				1.66	22.4		219 [2]	8.6	2	206	85	2.0
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
DOE ORDER 5480.1A	1.8	9	0.066	0.066									

0259592

ES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

ASTE WATER QUALITY REPORT: General Data

For the Month of April, 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1635	.13	59	42	61	6228	450		278	2303		
2	1750	.15	57	43	57	6228	1548		209	1996		
3	2660	.13	44	40	44	6228	760		195	811		
4	4990		57	35	59	*	900		250	467		
5	4300		56	45	58	*	2251		289	873		
6	3438	.19	69	50	73	*	2251	353	328	873		
7	3200	.15	64	49	62	*	3139		250	611		
8	3940	1.20	50	42	63	*	2251		189	499		
9	10050	.40	55	44	58	7474	1407		250	1403		
0	9915	.15	49	41	58	8096	900		222	748		
1	8965		47	38	58	4982	1238		264	1528		
2	6750		62	29	58	3488	3377		306	1159		
3	5500	.32	65	50	58	2740	1013	424	2[illegible]	645		
4	6900	.35	66	44	58	1868	3517		209	1091		
5	13600		45	36	58	1494	6754		278	624		
6	12200		54	29	58	1245	6191		334	1496		
7	8275		45	36	58	*	956		334	592		
8	6265		40	31	58	*	2757		334	670		
9	5100		43	27	58	5965	956		334	2245		
0	4300		51	26	58	5605	984	329	334	1237		
1	3630		60	30	58	7474	6754		389	3742		
2	3200		66	35	58	7474	11819		445	4990		
3	2860		65	48	57	9964	7879		411	4678		
4	2675		58	46	57	9964	*		285	1871		
5	2500		67	32	57	9964	*		278	4990		
6	2400		74	36	56	9342	957		334	4366		
7	2250		81	48	55	6851	9049	341	384	3742		
8	2020	.11	74	60	55	7847	6866		375	4990		
9	1990		67	57	54	9965	4502		383	4366		
0	2500	.92	73	60	54	7123	1013		384	2370		
1	4992	4.2 [2]				6444	3301	362	304	2066		

ES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

WASTEWATER QUALITY REPORT SUMMARY
FOR
APRIL, 1983

The wastewater quality results for April, 1983, were all within limits for NPDES parameters with the exception of one grab sample at Manhole-175 collected on 4/27/83 which contained 20 mg/L oil and grease, exceeding the 15 mg/L NPDES daily maximum limit.

Uranium at Manhole-175 averaged 1.09 mg/L, which is 61% of the target limit. Gross beta activity at Manhole-175 was 22.4 d/m/mL compared to average MH-175 gross beta values of 6.0 d/m/mL and 15.2 d/m/mL in 1981 and 1982, respectively.

HLO, INC.
HEALTH & SAFETY DIVISION

2196212

Page 1

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.807	7.8												
2	1.103	8.4						0.075	1.6	0.003	0.008	0.043	0.030	0.008
3	1.171	8.2						.275						
4	.845	8.0	5	17.3	608	6		.388						
5	.816	7.8					0.056	.179						
6	.617	8.4						.379						
7	.539	8.6						.272						
8	.595	7.7						.267						
9	.559	8.6						.056	1.0	0.001	0.003	0.019	0.032	0.003
10	.536	8.6						.252						
11	.389	7.7	<4	2.7	218	<5		.247						
12	.582	8.4					0.096	.074						
13	.541	8.5						.258						
14	.558	8.4						.209						
15	.750	8.1						.248						
16	1.032	8.3						.060	0.9	0.001	0.004	0.038	0.011	0.005
17	.694	8.0						.310						
18	.443	8.1	28	4.7	580	55		.301						
19	.725	8.1					0.098	.098						
20	.751	8.4						.309						
21	.610	8.5						.277						
22	.458	8.8						.306						
23	.737	8.5						.049	0.7	0.001	0.003	0.022	0.004	0.003
24	.681	8.5						.305						
25	.384	9.4	19	2.2	868	<5		.379						
26	.623	8.4					0.060	.074						
27	.592	8.8						.300						
28	.532	8.8						.285						
29	.365	7.7						.269						
30	.650	8.8						.062	2.2	<0.001	0.004	0.019	0.011	0.004
31	.653	8.6						.308						
AVG[1]	0.656		* 12	7	568	18	0.08	.300						
LIMITS 2		6.5 - 10.0	60	43	3180	15	0.10	0.231	1.3	0.001	0.004	0.028	0.018	0.005
LIMITS 3			20	28	1590				12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 4		6.5 - 9.0				5	0.002		6.2	0.004	0.050	0.124		0.025

4944

0259585

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100 ml
1	0.604			0.483	7.9	47	<5	0.128	7.7					
2	.622			.944	7.7	10	<5	.206	7.9					
3	.538			.773	7.8	<4	<5	.244	7.9					
4	.452	4	<5	.454	7.8	<4	<5	.214	7.8	5.2	4.2	4	3.2	
5	.279							.157	7.8					640
6	.197							.147	7.7					
7	.179							.093	7.5					
8	.399			.262	7.7	6	<5	.140	7.6					
9	.195							.112	7.7					
10	.182							.107	7.6					
11	.183	<4	<5					.132	7.6	5.3	2.6	10	5.0	
12	.187							.136	7.6					500
13	.203							.130	7.6					
14	.183							.127	7.6					
15	.540			.434	7.7	12	<5	.150	7.7					
16	.485			.627	7.7	<4	<5	.236	7.8					
17	.271							.118	7.9					
18	.230	<4	<5					.115	7.7	2.4	1.0	6	2.6	
19	.285			.024	7.6	<4	<5	.131	7.8					260
20	.326			.017	7.8	<4	<5	.148	7.8					
21	.182							.123	7.6					
22	.303			.056	7.7	6	<5	.106	7.6					
23	.347			.103	7.8	<4	<5	.085	7.5					
24	.203							.099	7.6					
25	.175	<4	<5					.135	7.7	5.4	2.8	8	4.1	
26	.189							.134	7.6					200
27	.169							.138	7.6					
28	.141							.123	7.7					
29	.234			.082	8.1	6	<5	.080	7.7					
30	.263			.099	7.8	<4	<5	.079	7.7					
31	.192							.161	7.7					
AVG.[1]	0.288	<4	<5	0.335		11	<5	0.137		* 5	2.7	* 7	3.7	* 410
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

-4944

412

0259586

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of May 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORM MPN/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.50	0.005			2.72	13.5	7.3		6.4				
2	1.58	Comp.			2.95	30.2	7.8		5.7				
3	1.10	3/1-			2.13	30.4	7.7		5.9				
4	.40	3/31/83			.77	18.6	7.9		6.8	5.4	190	69	1.5
5	1.70				1.92	33.3	7.6	160	6.5				
6	2.40				2.99	24.0	7.7		7.5				
7	2.08				3.27	28.6	7.6		6.1				
8	1.48				1.94	7.3	7.4		7.2				
9	1.96				2.84	28.3	8.0		6.8				
10	1.68				1.94	28.6	7.9		6.9				
11	1.12				1.68	12.5	7.6		8.7	1.8	148	71	1.6
12	1.28				1.99	34.1	7.6	100	8.5				
13	1.28				1.54	34.4	7.9		6.8				
14	1.28				1.67	44.2	7.1		5.9				
15	1.10				1.46	11.8	7.3		9.5				
16	1.54				1.67	24.3	7.1		8.4				
17	2.02				1.89	26.9	7.7		7.8				
18	1.48				2.13	6.3	7.6		7.8	2.8	346	51	1.3
19	1.22				1.62	17.0	7.7	300	7.8				
20	1.40				1.52	22.9	7.8		7.6				
21	2.14				2.24	30.5	7.6		7.6				
22	1.14				1.57	8.0	7.5		8.3				
23	2.38				2.64	28.9	7.6		7.6				
24	1.28				1.32	30.8	8.1		8.2				
25	.82				1.09	7.2	7.8		9.5	1.5	597	51	1.4
26	1.08				1.21	81.2	8.1	300	8.3				
27	.80				1.31	35.1	8.1		7.2				
28	.66				.77	36.5	7.6		7.2				
29	.86				1.53	8.7	7.2		8.1				
30	1.06				1.42	35.9	7.9		6.2				
31	.98				1.35	56.1	9.1		7.7				
AVG.[1]	1.38				1.84	27.0		195 [2]	7.4	3	320	61	1.5
LIMITS[3] OHIO EPA							6.5-9.0	200 (No. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

413

0259587

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of May 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	53000	1.15	70	60	54	8719	1125		139	2432		
2	32280	1.17	72	61	54	8719	2281		178	3679		
3	36000	1.00	76	49	54	9965	1632		278	2370		
4	30700		68	42	54	8595	2251	266	272	1372		
5	21400		65	40	54	6228	5628		417	2994		
6	13700		76	43	53	3986	*		333	1740		
7	8900	.64	78	57	54	3736	*		389	2182		
8	9000		58	43	53	4982	900		200	748		
9	8000		60	34	53	4982	1013		344	2182		
10	6941		67	35	53	4858	872		295	2370		
11	5688		78	37	54	5605	732	377	345	1123		
12	5100		80	53	53	6228	2251		361	2620		
13	4400		74	62	54	6228	3377		345	3119		
14	4650	.96	78	62	54	6228	3377		306	3430		
15	4550	1.70	70	49	53	6228	1126		156	998		
16	6500		64	46	53	6228	1013		178	1590		
17	4600		70	39	54	3737	1463		417	1933		
18	3960		70	53	53	*	7654	357	334	1996		
19	3500	.12	75	59	61	3737	3377		260	1871		
20	3350		73	55	62	4858	21949		322	2869		
21	3100		72	58	62	4982	16884		361	4990		
22	3530	.51	74	65	61	5107	7879		209	1216		
23	5115		74	55	61	5107	863		211	2120		
24	4300		74	46	62	5014	10130		345	4990		
25	3630		67	50	61	*	13845	368	403	3742		
26	3320		63	38	61	4982	408		278	2495		
27	3030		68	38	61	5605	563		368	2495		
28	2790	.28	59	55	61	5107	647		339	2807		
29	2690	.42	72	57	62	5605	422		189	873		
30	3280		65	51	62	5605	605		209	2495		
31	2690		64	49	61	6228	619		278	2994		
AVG. [1]	9797	7.95 [2]				5765	3962	342	292	2414		

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

4944

414

025958B

NLO-HAS-361 (REV. 1/28/81)

WASTEWATER QUALITY REPORT SUMMARY
FOR
MAY, 1983

Water quality for May, 1983, was acceptable with the exception of one NPDES violation for oil and grease at Manhole-175 on 5/18/83. Two results for residual chlorine at Manhole-175 equalled but did not exceed the NPDES limit of 0.10 mg/L.

The uranium concentration at Manhole-175 averaged 1.38 mg/L, which is 77% of the target value for plant effluent.

PLD, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196211

For the Month of June 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.386	8.6	7	4.5	218	<5		0.075						
2	.609	7.7					0.050	.312						
3	.679	8.5						.332						
4	.841	8.4						.305						
5	.352	7.7						.057	0.9	0.0002	0.0019	0.0050	0.0045	0.0009
6	.509	8.3						.261						
7	.589	8.3						.282						
8	.352	7.7	<4	1.9	64	<5		.038						
9	.620	8.7					0.032	.315						
10	.612	8.9						.276						
11	.620	9.2						.310						
12	.282	8.0						.061	1.4	0.0029	0.0069	0.0199	0.0071	0.0062
13	.521	8.9						.280						
14	.611	8.7						.299						
15	.390	7.9	<4	1.0	627	<5		.076						
16	.326	7.8					0.096	.038						
17	.351	7.9						.038						
18	.374	7.8						.076						
19	.328	7.8						.037	0.6	0.0001	0.0001	0.0025	0.0053	0.0003
20	.505	7.7						.037						
21	.348	7.7						.038						
22	.373	7.7	<4	1.4	11	<5		.038						
23	.358	7.8					0.060	.036						
24	.502	8.4						.196						
25	.501	8.8						.183						
26	.313	8.6						.063	1.0	0.0030	0.0043	0.0074	0.0105	0.0038
27	.456	9.0						.230						
28	.595	8.7						.230						
29	.459	8.8	16	1.7	73	<5		.084						
30	.612	9.0					0.045	.271						
31														
AVG[1]	0.479		7	2	199	<5	0.06	0.163	1.0	0.002	0.003	0.01	0.007	0.003
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	[illegible]
LIMITS 3			20	28	1500				6.2	0.004	0.050	0.41	0.124	[illegible]
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

4164

0259580

VLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of June, 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.163	<4	<5					0.148	7.7	2.83	1.6	6	3.4	
2	.160							.137	7.7					
3	.177							.170	7.7					520
4	.369			0.155	7.8	<4	<5	.167	7.5					
5	.179							.116	7.5					
6	.156							.093	7.8					
7	.196							.111	7.9					
8	.159	<4	<5					.155	7.6	3.45	2.0	4	2.3	
9	.173							.132	7.7					
10	.163							.173	7.5					400
11	.149							.161	7.4					
12	.096							.125	7.6					
13	.116							.125	7.4					
14	.159							.153	7.4					
15	.167	14	<5					.147	7.5	4.85	2.7	2	1.1	
16	.147							.141	7.4					
17	.166							.147	7.5					200
18	.172							.166	7.6					
19	.161							.130	7.7					
20	.337			.138	7.7	<4	<5	.131	7.6					
21	.200							.110	7.5					
22	.182	<4	<5					.153	7.7	2.60	1.5	1	0.6	
23	.169							.153	7.6					
24	.163							.143	7.7					2
25	.160							.158	7.6					
26	.107							.144	7.6					
27	.101							.125	7.5					
28	.198							.166	7.5					
29	.212	<4	<5	.019	7.4	8	<5	.163	7.5	3.30	2.0	2	1.2	
30	.164							.177	7.3					
31														
AVG.[1]	0.174	6	<5	0.104		5	<5	0.144		• 3	2.0	• 3	1.7	0
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	• 204
LIMITS 3	417	30				30				20	5.0	20	5.0	2000
LIMITS 4			5		6.5 - 9.0		5							1000 (Max. Geo. Mean)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259581

4494

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of June, 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.72	0.0007	0.008	0.041	1.50	13.5	7.3		6.6	3.1	149	55	2.5
2	.86	Comp.	Comp.	Comp.	1.32	109.1	7.9	360	6.0				
3	.74	4/1-	4/1-	4/1-	1.43	33.1	8.9		6.8				
4	1.08	4/30/83	4/30/83	4/30/83	1.77	32.4	8.2		6.3				
5	.80				1.66	9.0	7.3		7.2				
6	.78				1.40	40.4	7.6		6.5				
7	.74				1.08	37.4	7.7		5.8				
8	.54				.89	3.3	7.7		8.6	1.4	48	151	1.8
9	.64				.92	33.8	7.9	520	8.0				
10	.70				1.01	35.5	8.9		7.5				
11	.50				1.08	28.9	8.6		6.2				
12	.18				.78	14.4	7.7		6.8				
13	.46				1.02	37.2	8.8		7.3				
14	.48				1.26	40.5	8.7		6.0				
15	.22				.93	15.8	8.7		8.1	0.7	425	27	2.1
16	.42				.70	4.2	7.9	230	8.4				
17	.36				.48	0.6	8.0		8.9				
18	.36				.78	0.3	7.9		8.5				
19	.56				1.13	0.3	7.7		8.2				
20	1.08				1.21	0.4	7.6		8.6				
21	.90				.68	0.5	7.8		8.5				
22	.58				.89	0.2	8.0		8.3	<1.0	8	37	1.2
23	.40				1.23	0.2	7.8	24	10.0				
24	.56				.81	20.9	8.3		8.3				
25	.52				.84	17.9	8.1		7.9				
26	.44				.83	7.1	7.6		9.5				
27	.66				1.24	24.0	8.8		6.7				
28	.32				1.37	18.7	8.6		6.2				
29	.26				.63	2.1	6.3		9.5	1.0	42	36	0.9
30	.30				.38	19.2	8.7	45	7.0				
31													
AVG.[1]	0.57				1.04	20.0		136[2]	7.6	1	134	61	1.7
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

418

0250582

1494

NLO, Inc.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of June 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	2525		70	51	61	4982	495	221	361	1060		
2	2300		74	43	62	5979	478		250	3119		
3	2035	.60	69	57	61	6228	7316		361	3742		
4	2725		78	60	80	6228	3939		200	2495		
5	2400		82	52	60	*	2701		267	1216		
6	2020		72	55	60	5605	535		278	3430		
7	1950		77	49	60	5605	535		339	2807		
8	1865		79	49	60	*	1632	474	271	717		
9	1785		82	50	59	5605	2251		334	3119		
10	1635		84	53	74	6228	563		334	2557		
11	1560		87	54	72	6228	3377		361	3119		
12	1450		89	59	66	6228	450		300	1403		
13	1360		88	60	72	6851	408		278	3119		
14	1360		87	59	74	6228	8442		220	3742		
15	1340		78	61	76	*	28140	295	447	6237		
16	1315		87	62	74	*	501		236	717		
17	1350		81	66	74	*	422		250	343		
18	1325		80	64	76	*	393		236	306		
19	1545	.96	82	68	75	*	408		250	327		
20	2260		82	66	76	*	450		236	262		
21	3760		84	62	74	*	843		250	380		
22	3500		85	66	74	*	417	384	245	312		
23	2150		90	62	74	*	501		245	486		
24	1825		93	65	78	6228	380		320	2620		
25	1560		88	63	80	6228	450		445	2495		
26	1375		90	63	75	6228	338		311	1497		
27	1250		88	65	76	6228	366		345	3119		
28	2430		85	71	74	6228	704		445	2495		
29	2400		83	70	74	7444	338	282	200	361		
30	3250		85	72	75	5979	922		289	2181		
31												
AVG. [1]	1987	1.56 [2]				6136	2290	331	297	1993		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

419

0259583

WASTEWATER QUALITY REPORT SUMMARY
FOR
JUNE, 1983

Water quality for June, 1983 was acceptable. No NPDES violations occurred this month and oil and grease results for the Storm Sewer Lift Station, Storm Sewer Outfall, and for Manhole-175 were all <5 mg/L. The result for residual chlorine at MH-175 equalled but did not exceed the NPDES limit of 0.10 mg/L on 6/16/83.

Uranium at MH-175 averaged 0.57 mg/L which is 32% of the target value for plant effluent of 1.8 mg/L. Gross beta activity at MH-175 was 20.0 d/m/mL during June, down slightly from 27.0 d/m/mL in May, but still greater than the annual average MH-175 beta concentrations of 6.0 d/m/mL and 15.2 d/m/mL in 1981 and 1982, respectively.

The MH-175 concentration of Ra-228 for April was 0.041 d/m/mL, which is 62% of the target value.

NLO, INC.
HEALTH & SAFETY DIVISION

2196210

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of July, 1983

DATE	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.581	9.1						0.239						
2	.569	8.4						.247						
3	.324	7.8						.080	2.0	0.006	0.008	0.01	0.010	0.004
4	.483	8.5						.037						
5	.617	7.8						.038						
6	.462	8.2	9	1.4	13.9	<5		.076						
7	.517	8.8					0.013	.186						
8	.545	8.7						.215						
9	.499	8.7						.210						
10	.277	8.5						.038	0.6	0.001	0.001	0.01	0.001	0.0001
11	.243	7.9						.038						
12	.312	7.9						.036						
13	.262	7.4	<4	1.7	4.9	<5		.038						
14	.236	7.8					.039	.038						
15	.256	7.8						.038						
16	.250	7.8						.038						
17	.232	7.8						.038	0.6	0.002	0.002	0.003	0.002	0.0001
18	.375	8.4						.192						
19	.681	8.4						.245						
20	.294	7.6	9	0.3	51.1	<5		.038						
21	.468	8.3					.066	.231						
22	.501	8.0						.240						
23	.328	7.7						.038						
24	.310	7.7						.038	0.6	0.001	0.001	0.004	0.0004	0.0001
25	.287	7.9						.038						
26	.349	7.7						.038						
27	.422	8.0	<4	0.8	7.0	7		.076						
28	.424	7.7					.094	.076						
29	.390	7.7						.037						
30	.360	7.6						.038						
31	.291	7.8						.038	0.6	0.0001	0.001	0.006	0.001	0.006
AVG[1]	0.392		* 7	1	19	6	.05	0.097	0.9	0.002	0.003	0.01	0.003	0.002
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

421

0259575

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of July, 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100 ml
1	0.172							0.171	7.6					
2	.165							.157	7.7					
3	.125							.119	7.7					
4	.312			0.013	7.8	<4	<5	.134	7.7					
5	.434			.135	7.9	<4	<5	.145	7.6					
6	.272	<4	<5					.111	7.7	<5	2.1	1	0.4	
7	.188							.144	7.7					
8	.175							.155	7.7					0
9	.147							.143	7.9					
10	.123							.116	7.9					
11	.105							.100	7.9					
12	.127							.149	7.9					
13	.117	5	<5					.107	7.8	<5	2.0	1	0.4	
14	.113							.085	7.7					
15	.128							.090	7.7					2
16	.108							.104	7.7					
17	.082							.112	7.7					
18	.083							.100	7.6					
19	.282			.136	7.8	<4	<5	.154	7.4					
20	.136	<4	<5					.120	7.5	3.8	1.7	3	1.4	
21	.111							.126	7.7					
22	.141							.120	7.6					0
23	.161							.129	7.8					
24	.181							.090	7.7					
25	.154							.095	7.7					
26	.169							.148	7.6					
27	.170	<4	<5					.176	7.6	5.2	3.5	1	0.7	0
28	.173							.175	7.7					
29	.172							.178	7.9					
30	.167							.155	7.6					
31	.122							.131	7.6					
AVG.[1]	0.165	4	<5	0.095		<4	<5	0.130		• 5	2.3	• 2	0.7	• <1
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	400
LIMITS 3	422	30				30				20	5.0	20	5.0	
LIMITS 4			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

0259576

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of July, 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM 30/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.18	0.005	0.006	0.020	0.49	17.2	8.1		6.5				
2	.12	Comp.	Comp.	Comp.	.59	18.7	8.2		5.2				
3	.12	5/1-	5/1-	5/1-	.56	11.1	7.5		7.8				
4	.24	5/31/83	5/31/83	5/31/83	1.47	0.3	7.4		6.8				
5	.92				1.41	0.3	8.6		7.8				
6	.52				.85	0.2	7.9		9.0	0.8	8.0	32	1.0
7	.44				.66	13.3	8.2	40	8.0				
8	.42				.62	8.5	8.0		6.3				
9	.40				.69	16.5	7.2		6.2				
10	.42				.86	15.4	7.3		6.2				
11	.52				1.08	1.9	8.1		8.5				
12	.44				.86	0.1	8.0		8.8				
13	.86				1.75	0.4	8.3		9.2	1.69	5.0	34	1.0
14	.34				.99	0.4	8.3	3	9.2				
15	.32				1.03	0.2	8.3		10.0				
16	.38				.60	0.2	7.8		9.8				
17	.34				.58	0.3	8.0		9.6				
18	.38				1.03	14.2	7.7		7.8				
19	.68				1.14	12.3	8.0		8.1				
20	.50				1.84	2.0	7.5		8.4	<0.25	45.9	43	1.8
21	.40				.80	15.3	7.5	35	7.4				
22	.48				.57	16.1	7.3		7.4				
23	.66				1.03	2.0	7.7		8.4				
24	.58				1.44	0.3	7.8		7.3				
25	.50				.86	0.3	8.0		8.3				
26	.40				.62	0.1	8.2		8.7				
27	.30				2.11	0.1	8.3		9.0	0.5	4.4	52	0.6
28	.38				.89	0.1	8.2	20	7.5				
29	.24				.63	0.1	8.0		7.4				
30	.28				.43	0.1	7.7		7.0				
31	.38				.69	0.2	7.7		7.4				
AVG.[1]	0.42				0.94	5.4		17 [2]	7.9	1	16	40	1.1
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

423

0259577

4044

NLO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of July, 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	4725		92	67	78	4982	422		222	2495		
2	4800		93	75	78	4982	422		217	2495		
3	3500	.43	87	70	78	4982	422		267	1435		
4	2675	1.29	87	71	76	*	506		375	405		
5	3800		82	64	73	*	366		250	243		
6	2960		72	53	76	*	399	442	200	296		
7	2600		79	49	76	4982	388		270	1731		
8	2035		81	52	76	4982	366		267	1871		
9	1635		88	57	76	4982	534		306	2070		
10	1500		86	66	78	*	405		316	561		
11	1340		89	64	75	*	366		250	2376		
12	1270		94	65	75	*	501		289	311		
13	1210		93	70	76	*	436	258	261	311		
14	1150		92	67	77	*	422		256	367		
15	1075		93	69	78	*	231		245	274		
16	1020		92	71	78	*	253		250	281		
17	1000		95	69	78	*	239		278	281		
18	970	.46	95	71	78	4982	295		264	2058		
19	1500	.15	93	72	78	4982	332		217	1809		
20	1300		93	74	78	*	450	280	278	617		
21	1150		98	75	80	4982	394		256	2370		
22	1100		98	72	80	4982	478		233	2432		
23	1030		98	73	78	*	450		216	568		
24	1020		90	72	77	*	338		222	287		
25	1900		83	67	78	*	343		209	267		
26	1190		83	61	78	*	506		206	281		
27	1091		88	58	78	*	315	367	200	312		
28	1000		93	65	78	*	332		212	312		
29	890		92	71	78	*	366		222	281		
30	820		93	67	78	*	295		222	281		
31	800		93	73	78	*	332		256	299		
AVG. [1]	1744	2.33 [2]				4982	384	337	249	967		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
* Not pumped this date.

87-4984

WASTEWATER QUALITY REPORT SUMMARY

FOR

JULY, 1983

Wastewater quality was acceptable during July, 1983. No NPDES violations occurred during the month. The maximum daily result for residual chlorine was 90% of the limit of 0.10 mg/L at Manhole-175 and the maximum result for hexavalent chromium in the combined General Sump and Clearwell flow was 0.006 kg/day, which is 75% of the NPDES "daily maximum" limit.

Gross beta activity at Manhole-175 was 5.4 d/m/mL which is down from 20 d/m/mL in June, 1983.

LO, INC.
EALTH & SAF Y DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196203

For the Month of August 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/d	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.229	8.1												
2	.430	8.0						0.038						
3	.440	8.3	6	0.183	8.16	<5		.076						
4	.592	8.8					0.074	.076						
5	.571	8.7						.226						
6	.519	8.2						.222						
7	.235	8.7						.215						
8	.204	8.2						.038	0.575	0.001	0.001	0.0086	0.0027	0.0004
9	.338	7.8						.037						
10	.326	7.8	<4	0.123	5.43	<5		.038						
11	.407	8.4						.038						
12	.627	8.5					0.078	.138						
13	.461	7.6						.181						
14	.253	7.6						.142						
15	.320	8.2						.061	2.055	0.003	0.004	0.0103	0.0088	0.0027
16	.319	8.2						.192						
17	.345	8.2	<4	1.567	32.65	5		.180						
18	.568	8.2						.038						
19	.459	8.2					0.068	.244						
20	.445	8.1						.185						
21	.299	8.9						.193						
22	.382	8.1						.038	0.575	0.0001	0.0004	0.1042	0.0029	0.0006
23	.486	8.4						.174						
24	.372	7.8	<4	0.422	92.93	<5		.188						
25	.440	7.6						.038						
26	.326	7.6					0.049	.038						
27	.327	7.8						.038						
28	.314	7.5						.038						
29	.499	8.1						.038	0.863	0.0001	0.0001	0.0076	0.0030	0.0003
30	.491	8.1						.295						
31	.404	8.4	<4	0.459	111.63	<5		.229						
[1]	0.401		4	11	50	<5	0.07	.076						
[2]		6.5 - 10.0	60	43	2180	15	0.10	0.121	1.0	0.001	0.001	0.03	0.004	0.00
[3]			20	28	1590				12.9	0.002	0.102	0.85	0.256	0.05
[4]		6.5 - 9.0				5	0.002		[illegible]	[illegible]	0.090	0.41	0.124	0.02

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259570

-4944

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of August 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100mL
1	0.115							0.076	7.5					
2	.197							.157	7.6					
3	.178	<4	<5					.186	7.6	5.8	4.1	3	2.1	
4	.194							.172	7.6					
5	.196			0.009	7.8	<4	<5	.153	7.5					180
6	.160							.144	7.7					
7	.120							.077	7.6					
8	.126							.041	7.9					
9	.162							.138	7.5					
10	.152	<4	<5					.136	7.5	1.2	0.6	4	2.1	
11	.148							.121	7.5					
12	.327			.120	8.0	<4	<5	.119	7.4					64
13	.175							.144	7.3					
14	.112							.080	7.2					
15	.047							.031	7.1					
16	.150							.061	7.2					
17	.177	<4	<5					.130	7.6	7.2	3.5	5	2.5	
18	.204							.120	7.7					
19	.182							.092	7.4					12
20	.172							.080	7.4					
21	.177							.084	7.4					
22	.140							.067	7.7					
23	.177							.121	7.6					
24	.194	<4	<5	.010	7.7	<4	<5	.140	7.4	6.3	3.3	1	0.5	
25	.158							.244	7.5					
26	.152							.136	7.6					3
27	.154							.135	7.3					
28	.167			.015	7.4	<4	<5	.109	7.4					
29	.113							.091	7.5					
30	.146							.117	7.6					
31	.158		<5					.170	7.4	5.9	3.8	1	0.6	
AVG.[1]	0.162	<4	<5	0.039		<4	<5	0.119		5	3.1	3	1.6	65
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	20[illegible]
LIMITS 3		30				30				20	5.0	20	5.0	1[illegible]
LIMITS 4			5		6.5 - 9.0		5							10[illegible] (Max. for Year)

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

421

025951

WASTE WATER QUALITY REPORT: General Data

For the Month of August 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	780		89	68	78	*	337		256	299		
2	720		88	59	76	*	388		334	343		
3	720		91	60	78	*	281	319	278	362		
4	700		86	63	78	7474	450		434	2370		
5	700		94	68	78	6228	350		393	2495		
6	770		90	69	78	6228	388		261	2495		
7	700		91	68	78	*	293		211	530		
8	660		95	61	78	*	388		200	306		
9	660		90	64	78	*	383		200	281		
10	640		90	64	78	*	332	311	195	265		
11	630	1.07	83	70	78	6228	450		256	1871		
12	1200		80	66	78	4982	394		389	1372		
13	780		80	54	78	6228	507		236	2495		
14	660		82	53	78	6851	405		278	1891		
15	600		87	57	78	6851	450		278	2895		
16	590		90	61	79	6851	464		234	2495		
17	600		83	66	78	*	394	430	211	561		
18	570		93	75	78	7474	394		211	2370		
19	565		98	75	78	7474	405		195	2682		
20	530		100	75	78	7474	394		195	3119		
21	520		99	72	79	*	310		211	686		
22	510		93	72	78	8719	338		222	3430		
23	480		90	72	78	9342	557		306	3742		
24	520		91	73	78	*	388	367	211	561		
25	500		96	65	79	*	563		200	343		
26	490		94	67	78	*	338		200	281		
27	490	0.08	93	69	78	*	371		450	281		
28	465		86	69	78	*	436		225	274		
29	1400		92	64	78	9965	231		203	6237		
30	750		95	61	78	12456	675		192	4990		
31	600	0.05	86	81	78	*	380	374	211	733		
AVG. [1]	661	1.2 [2]				7552	401	360	254	1711		

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

428

HEALTH & SAF . Y DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of August 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM no/100mL	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/L	FLUORIDE mg/l
1	0.42	0.004			0.92	0.2	7.7		5.2				
2	.20	Comp.			.79	<0.1	7.7		6.8				
3	.40	6/1-			1.32	0.1	8.3		7.0	0.1	4.9	61	1.0
4	.28	6/30/83			1.03	10.3	8.4	80	7.4				
5	.30				.57	10.7	8.2		7.5				
6	.22				.56	11.7	7.2		6.6				
7	.26				.56	2.5	7.8		8.2				
8	.34				.67	0.1	8.1		7.5				
9	.26				.54	0.1	8.3		7.9				
10	.24				.47	0.2	8.4		7.9	<0.1	4.4	30	0.9
11	.26				.34	8.0	7.6	170	5.4				
12	.98				1.12	5.9	8.3		5.2				
13	.30				1.36	9.0	6.9		5.0				
14	.32				1.45	6.3	7.1		4.8				
15	.36				1.06	12.3	7.4		5.0				
16	.36				.84	11.3	7.5		4.7				
17	.32				.69	0.5	7.8		7.0	1.2	25.0	51	1.7
18	.11				.48	9.2	8.5	300	5.6				
19	.26				.71	12.6	7.5		5.1				
20	.20				.97	12.9	6.9		4.6				
21	.22				.69	2.2	7.6		6.7				
22	.36				.78	14.5	7.3		4.4				
23	.60				1.07	20.0	7.2		4.5				
24	.38				.67	1.1	7.4		6.4	0.3	66.0	41	1.7
25	.22				1.08	0.9	8.1	30	7.8				
26	.24				1.12	0.6	8.1		6.8				
27	.16				.75	0.2	8.2		7.5				
28	.42				1.10	0.4	7.8		6.8				
29	.44				.96	37.6	7.9		4.4				
30	.40				1.27	32.8	7.6		4.0				
31	.16				.47	3.1	7.6		7.9	0.3	73	107	1.4
AVG.[1]	0.32				0.85	7.7		105[2]	6.2	<1	35	58	1.3
LIMITS[3] OHIO EPA							6.5-9.0	200 (Max. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2
LIMITS[3] DOE ORDER 5480.1A	1.8	0	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.

[2]Monthly geometric mean.

[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259513

4044

HO-885-361 (REV. 9/16/82)

4944

WASTEWATER QUALITY REPORT SUMMARY

FOR

AUGUST, 1983

Wastewater quality was acceptable during August, 1983. No NPDES violations occurred during the month. All NPDES oil and grease results were at or below the detection level of 5 mg/L.

The average uranium concentration at MH-175 was 18% of the plant effluent target value. Gross beta activity at MH-175 was 7.7 d/m/mL, which is well below the average level of 18.6 d/m/mL for the first six months of 1983.

0259574

HEALTH & SAI (DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196208

For the Month of September 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (T6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.567	8.0												
2	.513	8.2					0.060	0.226						
3	.472	8.0						.219						
4	.198	7.8						.247						
5	.417	8.1						.038	0.9	0.0001	0.0004	0.004	0.003	0.0006
6	.379	8.0						.237						
7	.301	8.6	<4	0.3	123	<5		.222						
8	.427	7.8						.076						
9	.328	7.5					.053	.181						
10	.215	7.5						.070						
11	.167	7.5						.037						
12	.189	7.5	<4	0.1	14	<5		.038						
13	.279	7.5						.038	0.7	0.0001	0.0004	0.005	0.003	0.0006
14	.299	7.7	<4		12			.038						
15	.272	7.6						.038						
16	.439	7.4						.038						
17	.358	7.2					.089	.098						
18	.414	7.3						.066						
19	.274	7.4						.089						
20	.323	7.5	<4	4.4	532	<5		.095						
21	.610	7.7					.047	.067	3.0	0.0008	0.0091	0.035	0.038	0.0123
22	.365	7.2						.084						
23	.357	7.4						.078						
24	.362	7.5						.083						
25	.286	7.6						.118						
26	.242	8.0						.087						
27	.367	8.1						.080						
28	.386	8.1	8	2.8	874	<5		.114						
29	.397	7.6					.062	.091	1.7	0.0023	0.0142	0.042	0.037	0.010
30	.393	7.6						.106						
31								.107						
Avg[1]	0.353		* 5	2	311	<5	0.06	0.104	1.6	0.001	0.006	0.02	0.020	.006
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.9	0.008	0.10	0.85	0.256	0.051
LIMITS 3			20	28	1590							0.41	0.174	
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

43

02595 65

4044

HEALTH & SAF DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM Bact/100ml
1	0.186							0.157	7.4					
2	.145							.149	7.5					10
3	.174							.051	7.4					
4	.119							.041	7.4					
5	.123							.057	7.4					
6	.104							.054	7.4					
7	.158	<4	<5					.067	7.5	9.5	2.4	3	0.8	
8	.152							.094	7.3					
9	.149							.109	7.3					
10	.140							.038	7.3					700
11	.108							.021	7.3					
12	.114	<4	<5					.037	7.2					
13	.153							.088	7.0					
14	.138							.123	7.1	5.3	2.5	2	0.9	140
15	.132							.102	7.1					
16	.211			0.026	7.6	8	<5	.130	7.2					
17	.171							.121	7.2					
18	.219							.106	7.3					
19	.102							.077	7.4					
20	.126	<4	<5					.130	7.5					
21	.391		<5	.114	7.8	<4	<5	.135	7.2	5.55	2.8	1	0.5	1000
22	.163							.124	7.5					
23	.123							.150	7.3					
24	.114							.131	7.3					
25	.081							.118	7.5					
26	.076							.086	7.7					
27	.123							.130	7.6					
28	.138	<4	<5					.156	7.5	2.25	1.3	1	0.6	200
29	.148							.143	7.4					
30	.137							.150	7.4					
31														
AVG.[1]	0.147	<4	<5	0.085		6	<5	0.103		6	2.3	2	0.7	393
LIMITS 2	432	100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				30	5.0	30	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259566

(Over)

EL-65-351 (REV. 1/78/P11)

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of September 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/ml	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM per 100ml	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORIDE mg/l
1	0.36		0.006	0.017	0.45	44.8	6.8	120	5.0				
2	.36		Comp.	Comp.	.59	36.4	7.4		3.8				
3	.30		6/1-	6/1-	.62	41.3	7.3		5.7				
4	.19		6/30/83	6/30/83	.56	3.9	7.3		7.7				
5	.38				.63	46.5	6.8		4.1				
6	.28				.51	45.1	7.2		4.0				
7	.18				.38	4.2	7.7		6.9	0.3	108	136	1.5
8	.20				.46	40.7	7.1		6.0				
9	.18				.64	18.8	7.1		7.4				
10	.15				.82	0.3	7.7		7.4				
11	.26				.53	0.5	7.8		8.3				
12	.24				.53	0.4	7.8		7.2	0.2	19	32	
13	.24				.49	0.2	7.9	330	7.8				
14	.17				.67	0.2	8.0		8.1		11	110	0.9
15	.16				.57	0.2	8.1		7.4				
16	.62				.85	23.5	7.3		7.4				
17	.34				1.04	27.0	6.6		7.1				
18	.26				.47	24.8	6.8		7.1				
19	.22				.50	35.7	6.9		5.8				
20	.26				.64	20.3	7.1	130	5.5	3.6	435	62	2.6
21	.98				2.82	12.1	7.3		7.0				
22	.50				1.51	28.2	7.2		6.3				
23	.42				.89	22.8	7.4		6.1				
24	.33				.63	24.0	6.8		5.9				
25	.30				1.06	23.6	7.2		6.2				
26	.32				.51	27.5	7.6		6.1				
27	.34				1.11	20.4	7.6		6.1				
28	.32				.79	19.4	7.5	260	6.2	1.9	598	89	2.5
29	.64				2.37	28.0	7.6		5.4				
30	.30				.60	26.0	7.7		6.1				
31													
AVG.[1]	0.33				0.81	21.6		191 [2]	6.4	2	234	86	1.9
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	0	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

433

0259567

494

NEO, INC
HEALTH & S TY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of September 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	530		86	62	78	12456	591		183	4990
2	500		86	58	78	13079	563		353	5613
3	490		89	59	77	12456	292		328	5613
4	460		89	63	80	*	326		217	936
5	440		89	73	78	12456	338		211	6549
6	365		89	78	78	12456	422		222	6861
7	395		87	60	78	*	394		528	858
8	490		89	50	78	12456	704	312	389	4989
9	420		94	50	78	12456	535		334	2370
10	430		95	61	78	*	416		195	312
11	430		92	65	78	*	321		206	298
12	430		83	68	78	*	338		217	306
13	430		79	64	78	*	349		195	290
14	430		75	53	72	*	338	680	189	420
15	405		76	37	72	*	445		295	374
16	385		81	60	72	12456	388		183	2620
17	400		80	50	72	12456	675		473	3617
18	440		81	62	71	12767	416		473	3181
19	450		90	63	72	13702	436		256	4927
20	375	.34	86	61	72	13072	535		278	2370
21	490	.21	62	43	72	13079	383	287	250	1123
22	700		60	39	72	13079	394		295	2195
23	550		63	36	72	13702	1970		334	2526
24	480		68	34	72	12456	1313		389	3867
25	450		73	36	72	12767	774		236	3680
26	415		72	57	74	12783	1463		222	3929
27	410		78	48	74	13390	4277		209	3742
28	450		80	46	72	13702	1576		322	3056
29	450		81	46	71	12767	1237	343	322	3680
30	440		80	42	71	12456	1069		473	3181
31										
AVG. [1]	451	.55 [2]				12839	776	406	293	2959

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

4944

431

025956B

WASTEWATER QUALITY REPORT SUMMARY

FOR

SEPTEMBER, 1983

Wastewater quality was acceptable during September, 1983. No NPDES violations occurred during the month.

The average uranium concentration at MH-175 was 18% of the plant effluent target value. The radium-228 concentration was 0.017 d/m/mL at MH-175 in June, which is 26% of the DOE guide value.

NLO, INC.
HEALTH & SAFETY DIVISION

2196206

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (H6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.388	8.8												
2	.332	8.9						0.210						
3	.547	8.7						.190						
4	.405	8.8						.170						
5	.296	8.8						.171						
6	.197	9.0						.113						
7	.187	9.1	<2	15.6	108	6		.112						
8	.269	7.8						.107	0.8	0.004	0.015	0.10	0.036	0.012
9	.370	7.6						.116						
10	.215	7.7						.114						
11	.550	9.1						.110						
12	.338	7.7						.239						
13	.171	7.6						.119						
14	.170	9.1						.116						
15	.513	8.2	2	22.1	482	<5		.115						
16	.982	8.9						.155	1.7	0.003	0.015	0.06	0.042	0.011
17	.658	8.8						.218						
18	.541	9.[illegible]						.189						
19	.461	8.7						.186						
20	.568	8.5						.167						
21	.545	8.6						.149						
22	.416	8.6						.146						
23	.[illegible]2	8.5	5	22.4	1196	<5		.099						
24	.942	8.6						.171	2.0	0.005	0.006	0.22	0.055	0.015
25	.661	8.7						.352						
26	.534	8.7						.342						
27	.462	8.8						.249						
28	.940	8.2						.188						
29	.730	8.8						.246						
30	.527	8.3						.240						
31								.192						
AVG[1]	0.485		* <3	20	595	<5	**	0.176	1.5	0.004	0.012	0.13	0.044	0.013
LIMITS 2		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
**Monitoring not required per Ohio EPA

4339

4044

0259559

...O, INC.
EALTH & SAFETY DIVISION

...ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.123							0.098	7.6					
2	.151							.062	7.5	1.95	0.46	3	0.7	
3	.310			0.128	7.5	<2	<5	.191	7.6					
4	.161							.151	7.6					
5	.143							.134	7.7					
6	.096							.091	7.7					
7	.091	<2	<5					.057	7.8					
8	.129							.085	7.7					
9	.126							.175	7.7	10.6	7.05	5	3.3	
10	.139							.094	7.6					
11	.514			.289	7.7	6	<5	.188	7.7					
12	.265							.155	7.5					
13	.105							.059	7.5					
14	.096							.068	7.7					
15	.193	15	<5	.089	7.7	8	<5	.165	7.6					
16	.492			.240	8.1	<2	<5	.167	7.7	6.6	4.17	2	1.3	
17	.297							.146	7.6					
18	.173							.138	7.6					
19	.147							.106	7.7					
20	.218			.039	7.6	18	<5	.158	7.6					
21	.248			.004	7.4	<2	<5	.080	7.8					
22	.151							.106	7.5					
23	.203	68	<5	.009	7.6	23	<5	.210	7.7	7.2	5.72	1	0.8	
24	.443			.406	7.6	<2	<5	.184	7.6					
25	.186							.086	7.6					
26	.145							.088	7.7					
27	.137							.061	7.7					
28	.483			.557	7.7	6	<5	.125	7.6					
29	.294			.004	7.7	<2	<5	.152	7.7					
30	.178							.098	7.8	6.6	2.4	1	0.4	
31														
AVG.[1]	0.215	*<35	<5	0.177		* <5	<5	0.123		• 7	4.0	• 2	1.3	**
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.
**Monitoring not required per Ohio EPA

#4944

0259560

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of November 1983

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM MO/100 ml	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.68	0.003	0.002	0.010	.70	23.0	8.5		6.8				
2	.62	Comp.	Comp.	Comp.	1.05	21.5	8.2	50	6.4				
3	1.06	8/1-	8/1-	8/1-	1.68	13.4	7.6		6.0				
4	.96	8/31/83	8/31/83	8/31/83	1.63	21.7	7.5		6.0				
5	.56				1.60	16.2	7.1		6.2				
6	.48				2.26	19.9	7.7		6.3				
7	.72				1.24	19.5	8.3		6.1	22	153	127	3.2
8	.52				.95	29.7	8.2	2100	7.4				
9	.28				.74	12.7	8.2		7.4				
10	.34				.77	13.6	8.4		7.0				
11	1.54				1.82	11.4	8.5		8.0				
12	1.28				1.66	15.6	8.3		7.4				
13	.98				2.24	12.7	8.5		8.0				
14	.48				.98	18.3	8.5		7.7				
15	.88				1.00	9.1	8.6		7.2	11.4	248	104	2.5
16	1.68				2.43	9.0	8.6		7.7				
17	1.74				2.28	13.9	8.5	390	7.4				
18	1.20				1.33	16.8	8.2		7.7				
19	1.24				1.93	18.1	8.1		7.6				
20	1.12				1.52	15.3	7.8		7.6				
21	1.98				2.30	16.1	8.1		6.9				
22	1.26				1.27	12.7	8.0		7.8				
23	1.02				1.10	14.2	8.0	4000	6.4	9.5	508	163	3.9
24	1.84				1.87	14.2	7.1		7.6				
25	1.82				1.48	21.3	7.9		8.0				
26	1.12				1.65	19.2	7.9		7.0				
27	1.62				1.43	18.3	7.9		6.5				
28	1.14				1.40	12.2	7.8		7.0				
29	1.58				1.42	14.4	8.1		6.5				
30	1.04				1.54	11.8	7.8		6.8				
31													
AVG.[1]	1.09				1.51	16.2		636[2]	7.1	14.3	303	131	3.2
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9.	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

944
435
175561

NLO, INC
HEALTH & SAFETY DIVISION

Page ..

WASTE WATER QUALITY REPORT: General Data

For the Month of November 1983

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L					
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]	
1	940		71	49	61	6228	1294		389	388	
2	950	.39	67	47	61	6228	2533	377	222	332	
3	1375	.02	61	41	61	6228	2194		209	547	
4	1350		47	31	61	7474	3377		251	405	
5	1250		54	30	61	7474	2251		417	296	
6	1200		60	27	61	7474	2533		306	197	
7	1200		61	36	61	8096	2251		328	187	
8	1230		66	31	60	7474	2426		381	269	
9	1130		71	34	61	8719	2139	394	334	370	
10	1000	.64	59	42	61	7474	2026		360	215	
11	2400	.11	45	36	61	9965	2701		306	940	
12	2450		40	28	60	7474	1628		361	539	
13	3400		44	26	62	9342	1407		339	280	
14	3000		47	25	60	8119	1323		382	279	
15	2400	.47	48	43	61	8719	900		289	513	
16	2800		44	41	60	8719	563	320	278	982	
17	5500		46	35	61	7474	774		389	658	
18	5200		55	36	60	7474	704		417	541	
19	4000		70	52	61	8096	647		473	461	
20	3400	.19	62	44	61	8719	788		250	568	
21	3400		63	42	62	8657	900		250	545	
22	3700		69	34	61	8719	967		289	416	
23	3400	1.10	64	48	64	8719	788	501	389	622	
24	9500		49	28	62	7474	900		278	942	
25	9500		52	26	60	7474	1013		334	661	
26	7200		59	40	60	8719	1266		375	534	
27	6000	.69	47	33	60	6228	1294		378	462	
28	10800	.08	55	36	61	7474	1294		195	940	
29	12250		39	33	61	6228	1013		320	730	
30	19000		43	30	61	6228	1323		439	527	
31											
AVG. [1]	4367	3.69 [2]				7763	1507	398	331	512	

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4944

4330

0259567

WASTEWATER QUALITY REPORT SUMMARY
FOR
NOVEMBER, 1983

Wastewater quality was acceptable during November, 1983. One NPDES violation occurred at the Storm Sewer Lift Station. The "daily average" concentration of suspended solids was 35 mg/L on a flow-weighted average basis for the month of November, which exceeds the permissible "daily average" of 30 mg/L. All other NPDES parameters were within limits. The Ohio EPA has informed NLO that chlorination of the Sewage Plant effluent is not necessary for the period from November 1 through April 30 and, therefore, NPDES monitoring for residual chlorine and fecal coliform is not reported.

The average uranium concentration at MH-175 for November was 61% of the plant effluent target value.

...LO, INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196205

For the Month of December 1983

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/l	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.576	8.3	4	19.8	876	<5		0.184	2.4	0.008	0.013	0.55	0.051	0.015
2	.530	8.5						.190						
3	.678	8.6						.154						
4	.732	8.3						.145						
5	.689	8.0						.144						
6	.642	7.9						.141						
7	.578	8.3						.142						
8	.481	8.4						.139						
9	.513	8.3	2	17.7	883	<5		.134	2.3	0.004	0.014	0.08	0.034	0.006
10	.480	8.4						.130						
11	.497	8.3						.146						
12	.986	8.3	6	39.6	1329	<5		.261	8.6	0.006	0.032	0.30	0.080	0.015
13	.620	8.6						.192						
14	.646	8.5						.189						
15	.710	8.4						.196						
16	.550	8.6						.150						
17	.517	8.5						.164						
18	.487	8.7						.195						
19	.436	8.5						.152						
20	.507	8.6	4	15.9	449	<5		.167	2.0	0.004	0.011	0.06	0.026	0.011
21	.508	8.6						.156						
22	.875	8.8						.108						
23	.533	9.1						.142						
24	.478	9.1						.174						
25	.470	9.3						.126						
26	.523	9.1						.171						
27	.490	7.6						.172						
28	.502	7.7	4	14.6	266	5		.129	6.6	0.006	0.010	0.08	0.028	0.017
29	.568	7.9						.139						
30	.616	9.3						.184						
31	.445	9.4						.135						
AVG[1]	0.576		4	22	761	<5	(a)	0.160	4.4	0.005	0.016	0.21	0.044	0.013
LIMITS 2	4	6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

0259554

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
(a) Monitoring not required per Ohio EPA: Letter Valerie Brinker to W. Hibbitts, dated 11/29/83

.O, INC.
ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1983

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.157	<2	<5					0.204	7.7					
2	.149							.148	7.7					
3	.399			0.071	7.5	<2	<5	.129	7.5					
4	.436			.413	7.5	6	<5	.110	7.7					
5	.365							.111	7.8					
6	.313			.039	7.5	3	<5	.146	7.6					
7	.243							.169	7.7	9.0	5.8	8	5.1	
8	.196							.108	7.6					
9	.184	<2	<5					.160	7.6					
10	.142							.168	7.7					
11	.172							.108	7.8					
12	.468	<2	<5	.433	8.2	<2	<5	.163	7.9					
13	.255							.121	7.7					
14	.197							.165	7.8	9.3	5.8	1	0.6	
15	.310			.005	7.8	<2	<5	.157	7.7					
16	.187							.144	7.8					
17	.161							.130	7.9					
18	.109							.108	7.9					
19	.109							.091	8.1					
20	.140	2	<5					.098	7.9					
21	.141							.181	7.6	7.3	5.0	1	0.7	
22	.565			.122	7.6	3	<5	.167	7.8					
23	.220							.145	7.8					
24	.130							.136	7.8					
25	.129							.138	7.8					
26	.161							.109	7.8					
27	.170							.118	7.9					
28	.235	20	<5	.049	7.7	23	<5	.120	7.6	5.6	2.5	3	1.4	
29	.302			.077	7.7	14	<5	.136	7.8					
30	.190							.166	7.8					
31	.146							.138	7.4					
AVG.[1]	0.228	<6	<5	0.151		<5	<5	0.139		• 8	4.8	• 3	1.9	• (a)
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.
(a) Monitoring not required per Ohio EPA; letter, Valerie Brinker to W. Hibbitts, dated 11/29/83.

442
555920
4044

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of December 1983

DATE	TOTAL URANIUM mg/l	TOTAL THORIUM mg/l	TOTAL RADIUM 226 d/m/ml	TOTAL RADIUM 228 d/m/ml	GROSS ALPHA d/m/ml	GROSS BETA d/m/ml	pH OF 24-HR COMPOSITE	FECAL COLIFORM MPN/100 ml	DISSOLVED OXYGEN mg/l	AMMONIA NITROGEN mg/l	NITRATE NITROGEN mg/l	CHLORIDE mg/l	FLUORIDE mg/l
1	1.26	0.004	0.004	0.015	2.09	13.7	7.8		7.4	9.1	402	131	4.4
2	1.24	Comp.	Comp.	Comp.	1.53	13.5	7.8		7.4				
3	2.32	9/1-	9/1-	9/1-	2.30	8.2	7.3		7.2				
4	2.04	9/30	9/30	9/30	2.27	5.2	7.5		10.0				
5	1.80				2.18	6.6	7.6		7.7				
6	1.72				2.23	6.0	7.8		8.0				
7	1.80				2.25	7.1	7.4		7.1				
8	1.28				1.72	7.9	7.7		8.1				
9	1.52				1.62	7.7	7.8		7.2	9.1	455	85	5.1
10	1.06				1.53	7.6	7.1		7.0				
11	1.48				1.46	7.6	7.2		6.3				
12	2.16				2.59	7.8	7.7		7.6	10.6	356	74	4.2
13	2.00				2.15	27.6	7.6		6.8				
14	1.50				1.59	8.3	7.6		6.5				
15	1.54				2.11	6.4	7.5		6.6				
16	1.40				1.51	7.1	7.9		7.8				
17	1.34				1.38	7.2	7.6		7.8				
18	1.24				1.19	7.9	7.9		7.5				
19	1.58				1.81	8.6	8.1		8.0				
20	.80				.91	6.0	8.2		8.3	8.3	234	97	4.3
21	.92				1.37	4.8	7.9		7.2				
22	1.84				2.09	2.6	7.8		9.1				
23	1.12				1.84	5.8	8.3		8.4				
24	1.12				1.52	6.9	8.9		9.6				
25	.88				1.10	5.8	8.9		8.3				
26	.78				.49	4.8	9.0		8.6				
27	.66				1.65	8.1	9.2		8.6				
28	.40				.77	4.9	9.2		9.4	7.7	140	60	2.3
29	.54				1.09	3.3	8.8		8.6				
30	.38				1.03	5.3	9.1		8.8				
31	.32				.93	6.2	8.9		8.2				
AVG.	1.29				1.62	7.6		(a)	7.9	9	317	89	4.3
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

0259556

NOTES: [1] Arithmetic averages except for Fecal Coliform.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

NLO, IN.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of December 1983

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	6800		34	24	61	7474	1688		423	2370		
2	5000	.29	33	22	61	7474	2223		403	2994		
3	4500	.34	38	33	60	6228	3377		278	1728		
4	7000	.21	43	38	61	6228	2251		195	1060		
5	8100		47	32	61	6228	1970		267	1559		
6	10000	.13	50	28	61	6228	2251		320	1341		
7	10750		37	22	61	4982	2814	347	325	1559		
8	10000		36	32	60	5730	1857		400	2183		
9	7200		47	32	60	5605	4721		389	1871		
10	5700	.06	41	33	61	4989	1688		389	2027		
11	7300	.51	51	39	61	6228	1801		292	2432		
12	11250	.06	51	41	61	6228	1745		222	2183		
13	13500		42	39	60	5481	3039		556	2495		
14	10500	.08	45	34	60	6228	6132	813	489	2195		
15	8000		35	31	60	6041	1829		389	1871		
16	5300		31	24	60	6228	900		395	1840		
17	5100		33	21	60	5605	2533		384	1871		
18	4100		26	16	60	4982	1210		322	2183		
19	3500		16	8	60	4982	647		388	2370		
20	3000		26	16	60	4982	675		300	1247		
21	3020	.29	41	41	60	4982	605	580	361	1590		
22	3200	.10	39	9	61	5605	675		417	1060		
23	3000		9	4	60	4671	366		289	1622		
24	2600		4	-9	61	4982	732		328	2058		
25	2350		3	-9	61	4982	788		300	1746		
26	2150		18	2	60	4982	619		489	1403		
27	2000		25	18	60	4982	816		278	2495		
28	2200	.40	33	19	60	4982	326		272	873		
29	2500		20	4	60	4360	394		1390	1559		
30	2150		12	-2	60	4960	343		945	1653		
31	2100		28	2	60	4982	436		528	1715		
AVG. [1]	5609	2.47 [2]				5568	1660	580	410	1844		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4444

0259557

WASTEWATER QUALITY REPORT SUMMARY
FOR
DECEMBER, 1983

Wastewater quality was acceptable during December, 1983. One NPDES violation occurred for the combined General Sump and Clearwell flows. The "daily average" loading of hexavalent chromium was 0.005 kg/d for the month of December, which exceeded the permissible "daily average" of 0.004 kg/d for the combined General Sump and Clearwell flows. All other NPDES parameters were within limits.

The average uranium concentration at MH-175 for December was 1.29 mg U/L which is 72% of the plant effluent target value.

..O, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196204

For the Month of January 1984

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB PH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (T6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.377	9.2						0.135						
2	.436	9.3						.128						
3	.558	9.3						.130						
4	.535	9.1						.164						
5	.464	8.8	4	46	474	<5		.141	8.2	0.0038	0.012	0.122	0.0349	0.0175
6	.516	9.0						.185						
7	.557	9.2						.190						
8	.406	9.1						.145						
9	.384	9.0						.128						
10	.464	9.0						.118						
11	.498	8.9						.116						
12	.455	8.4						.092						
13	.430	8.9	7	32	260	<5		.093	1.9	0.0019	0.0078	0.087	0.018	0.0217
14	.427	8.6						.081						
15	.339	8.7						.087						
16	.328	9.1	2	19	345	<5		.130	1.2	0.0015	0.0089	0.1175	0.0167	0.0163
17	.441	8.8						.196						
18	.567	8.8						.203						
19	.576	9.2						.181						
20	.451	9.3						.200						
21	.413	8.9						.132						
22	.436	7.7						.118						
23	.329	8.7						.120						
24	.670	8.4	28	3	86	<5		.098	0.7	0.0013	0.0023	0.0131	0.0118	0.0102
25	.758	8.7						.159						
26	.368	9.1						.086						
27	.495	8.9						.172						
28	.393	9.2						.133		0.0029	0.0058	0.0467	0.0622	0.0162
29	.401	9.0						.169						
30	.348	9.1						.129						
31	.463	9.1						.168						
AVG[1]	0.461		* 13	25	291	<5	**	0.140	3.0	0.002	0.007	0.08	0.029	0.016
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.[illegible]
LIMITS 3	449		20	28	1590				5.2	0.004	0.056	0.41	0.124	0.[illegible]
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
*Monitoring not required per Ohio [illegible] Letter Valerie Brinker to M. Hibbitts dated 11/20/83

0259549

1484

...., INC.
ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of January 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.118							0.125	7.7					
2	.183			0.0003	7.9	7	<5	.124	7.7					
3	.308			.0080	7.8	2	<5	.120	7.8					
4	.227							.143	7.8	9.7	5.3	1	0.5	
5	.167	<2	<5					.155	7.7					
6	.174							.158	7.7					
7	.199							.167	7.8					
8	.126							.135	8.0					
9	.135							.122	7.8					
10	.192							.154	8.0					
11	.216							.167	7.9	3.3	2.1	5	3.2	
12	.173							.190	7.9					
13	.153	<2	<5					.184	7.7					
14	.167							.179	7.6					
15	.123							.129	7.5					
16	.121	<2	<5					.077	7.6					
17	.143							.102	7.7					
18	.143							.221	7.8	6.2	5.2	1	0.8	
19	.160							.235	7.7					
20	.130							.121	7.8					
21	.145							.136	7.8					
22	.122							.196	7.6					
23	.103							.106	7.6					
24	.445	15	<5	0.2000	7.4	12	<5	.127	7.7					
25	.441			0.2310	7.7	<2	7	.158	7.8	8.1	4.8	4	2.4	
26	.134							.149	7.7					
27	.180							.143	7.6					
28	.125							.135	7.7					
29	.108							.124	7.6					
30	.118							.101	7.6					
31	.165							.130	7.7					
1	0.176	* 9	<5	0.110		* 7	<5	0.146		* 7	4.4	* 3	1.7	**
2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
3		30				30				20	5.0	20	5.0	1000
4			5		6.5 - 9.0		5	.684						1000 (Monthly Mean)

0259550

4944

ES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.
**Monitoring not required per Ohio EPA: Letter, Valerie Brinker to W. Hibbitts, dated 11/29/83.

12.4

.O, INC.
ALTH & SAFETY DIVISION

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of January 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.44	0.004	0.005	0.027	0.77	7.3	9.0		7.9				
2	.44	Comp.	Comp.	Comp.	.83	6.0	9.0		8.3				
3	.76	10/1-	10/1-	10/1-	1.44	2.2	9.1		8.3				
4	.46	10/31/83	10/31/83	10/31/83	.52	3.8	8.8		8.2				
5	.74				1.03	5.1	8.7	4700	8.5	26.4	270	201	3.9
6	.72				1.19	7.1	8.8		7.9				
7	.82				1.03	7.3	8.5		8.4				
8	.54				1.08	6.8	8.6		8.5				
9	.64				.96	6.9	8.6		8.0				
10	.96				1.28	6.2	8.6		8.6				
11	.94				1.47	5.7	8.9		8.6				
12	.48				.93	5.8	8.6	1760	8.6				
13	.36				.48	4.4	8.8		8.8	19.7	160	72	2.3
14	.44				.61	2.7	8.3		8.7				
15	.40				.72	5.5	8.5		8.6				
16	.34				.59	4.3	8.8		8.5	15.2	278	64	1.8
17	.48				.84	9.0	8.8	5600	8.0				
18	.34				.75	8.2	8.8		8.5				
19	.46				.89	8.4	8.9		8.2				
20	.32				.87	13.9	9.0		8.4				
21	.30				.90	9.3	8.5		8.0				
22	.28				.79	1.0	7.6		9.0				
23	.36				.80	0.1	8.3		9.2				
24	.98				1.18	0.9	8.1		11.5	1.3	39	310	1.8
25	1.20				1.84	6.2	8.7		8.5				
26	.9[illegible]				1.83	16.3	8.7	9200	9.5				
27	.3[illegible]				1.42	13.5	8.7		8.8				
28	.80				1.16	17.6	8.6		8.4				
29	1.02				1.30	0.9	8.7		8.0				
30	1.30				1.88	20.9	8.8		8.3				
31	.86				1.41	17.3	8.9		8.4				
AVG.[1]	0.65				1.06	7.4		4544 [2]	8.6	16	187	162	2.5
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

1944
0259551

..ILO, .INC
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of January 1984

	RIVER	PRECIPI-TATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L				
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	2050		37	24	60	4982	450		667	2058
2	1855		43	30	61	4982	506		1008	2183
3	1765		22	28	60	4982	732		890	1809
4	1725		39	34	60	4733	732	277	306	1123
5	1679		40	34	60	4982	445		500	316
6	1715		40	32	60	4982	625		417	1933
7	1845		38	20	60	4982	506		445	2339
8	1650		42	31	60	5605	450		334	2370
9	1515		50	30	60	6103	619		345	1871
10	1515	.12	42	14	60	6228	507		528	1809
11	1525		21	0	60	7274	552	278	1390	1372
12	1330		26	10	60	7474	568		384	1622
13	1400	.02	36	14	60	4982	450		306	1123
14	1320		31	22	60	4920	450		556	795
15	1200		25	19	60	4982	394		375	1372
16	1140		25	9	63	4982	388		316	1122
17	1140		28	20	60	4982	562		322	1871
18	1100	.12	20	10	60	6228	523	472	361	1886
19	1075		12	-14	60	9965	436		653	3056
20	970		10	-15	60	6228	464		278	3056
21	825		8	-22	60	8719	506		264	1808
22	800		29	- 8	60	8719	405		284	437
23	910	.18	37	9	60	8096	394		311	374
24	1215	.15	39	36	61	8719	408		1112	998
25	4460		36	32	60	8096	672	350	556	1559
26	3125		47	31	60	9342	*		556	2432
27	4100		36	27	60	9964	577		612	2495
28	3700	.02	34	21	60	8719	450		556	3119
29	2965		35	30	60	8719	445		445	2993
30	2200	.05	38	25	60	8719	501		459	3025
31	1925		30	17	57	8719	577		639	2807
AVG. [1]	1798	0.66 [2]				6810	510	344	522	1843

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

1944

449

025952

WASTEWATER QUALITY REPORT SUMMARY
FOR
JANUARY, 1984

Wastewater quality was acceptable during January, 1984. One NPDES violation occurred at Manhole-175. On January 5, 1984, an effluent stream loading of 46 kg/d of ammonia-nitrogen was measured, which exceeded the permissible "daily maximum" of 43 kg/d. All other NPDES parameters were within limits during January.

The average uranium concentration at Manhole-175 for January was 0.65 mg U/L, which is 36% of the plant effluent target limit value. Radium-226 and radium-228 results are reported for October, 1983, and these were 8% and 41% of their respective effluent target values.

ILO, INC.
HEALTH & SAFETY DIVISION

2196203

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February, 1984

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (VI) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.469	9.1	2	30	462	<5		0.155	2.369	0.021	0.0149	0.0546	0.0487	0.0307
2	.507	9.1						.161		.0021				
3	.716	8.8						.219						
4	.742	8.9						.222						
5	.570	8.9						.189						
6	.542	9.2						.229						
7	.481	8.5						.123						
8	.479	8.6						.137						
9	.471	8.7	4	29	1426	9		.134	2.832	0.0052	0.0277	0.0817	0.0783	0.0328
10	.523	8.6						.178						
11	.742	8.6						.174						
12	.540	8.7						.139						
13	.572	8.0						.141						
14	.883	8.6						.208						
15	.624	8.9						.176						
16	.513	8.8						.140						
17	.570	8.8	2	23	1802	7		.160	3.982	0.0056	0.0250	0.0911	0.0878	0.0297
18	.558	8.4						.150						
19	.520	8.4						.153						
20	.457	8.5						.152						
21	.445	8.6	5	14	1550	6		.151	2.854	0.0037	0.0212	0.1066	0.0699	0.0262
22	.541	8.5						.193						
23	.496	8.2						.150						
24	.596	7.9						.190						
25	.775	7.9						.134						
26	.523	7.9						.158						
27	.451	7.7						.112						
28	.802	8.0	5	10	1427	<5		.134	2.105	0.0048	0.0187	0.0624	0.0668	0.0278
29	.844	7.8						.189						
30														
31														
AVG[1]	0.585		* 4	21	1333	6	**	0.164	2.8	0.004	0.021	0.08	0.070	0.029
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LIMITS 3			30	29	1590				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LIMITS 4		6.5 - 9.0					[illegible]							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[illegible] downstream from the effluent mixing zone.

0259544

..., INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of February, 1984

Page .

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.127	<2	<5					0.170	7.7	10.9	7.26	1	0.7	
2	.132							.160	7.8					
3	.262			0.086	7.9	27	<5	.145	7.8					
4	.391			.056	7.7	<2	<5	.141	7.7					
5	.212							.111	7.7					
6	.184							.077	7.6					
7	.179							.133	8.0					
8	.167							.134	7.7	9.9	5.02	4	2.0	
9	.159	<2	<5					.141	7.8					
10	.160							.154	7.7					
11	.369			.102	7.6	4	<5	.165	7.6					
12	.245							.123	7.6					
13	.288			.046	7.6	48	5	.107	7.6					
14	.485			.247	7.6	<2	<5	.193	7.6					
15	.303							.178	7.5	8.2	5.53	1	0.7	
16	.202							.155	7.3					
17	.225	<2	<5					.156	7.4					
18	.218							.159	7.5					
19	.202							.135	7.5					
20	.166							.094	7.7					
21	.155	<2	<5					.069	7.8					
22	.186							.110	8.0	2.8	1.18	2	0.8	
23	.185							.120	7.8					
24	.188							.177	7.8					
25	.420			.244	7.6	<2	<5	.149	7.7					
26	.263							.092	7.6					
27	.183							.076	7.8					
28	.436	<2	<5	.007	7.5	3	<5	.160	7.7					
29	.467							.146	7.7	4.5	2.49	3	1.7	
30														
31														
AVG.[1]	0.247	* <2	<5	0.113		* 8	<5	0.136		* 8	4.3	* 2	1.2	**
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.
**No testing required. Ref: Letter, Valerie Brinker to H. Wayne Hibbitts, dated 11/29/83.

4944

45

0259545

.O, INC.
ALTH & SAFETY DIVISION

STE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of February, 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.66	0.0006	0.004	0.015	0.89	13.2	8.7		8.8	17	260	182	2.5
2	.82	Comp.	Comp.	Comp.	1.31	23.5	8.8	8000	9.0				
3	2.24	11/1-	11/1-	11/1-	3.19	17.3	9.0		8.6				
4	1.62	11/30/83	11/30/83	11/30/83	1.94	23.3	8.5		8.4				
5	1.42				1.89	32.2	8.6		8.6				
6	1.28				1.31	32.5	8.8		9.1				
7	.78				1.10	19.8	8.8		10.1				
8	.22				.75	19.9	8.6		8.7				
9	.58				1.06	27.5	8.6	4700	8.8	16	800	110	2.1
10	.30				1.46	27.3	8.5		8.6				
11	1.64				2.18	23.0	7.7		8.3				
12	1.56				1.82	27.7	8.2		8.6				
13	1.76				2.06	26.5	8.2		7.6				
14	2.22				3.87	11.3	8.2		7.9				
15	1.30	0.0007	0.004	0.010	1.88	22.9	8.2		7.8				
16	.88	Comp.	Comp.	Comp.	1.48	20.5	8.2	3800	7.8				
17	.94	12/1-	12/1-	12/1-	1.63	21.3	8.3		7.7	10.8	835	118	2.2
18	1.14	12/31/83	12/31/83	12/31/83	1.48	20.8	7.3		7.2				
19	1.72				2.91	23.1	7.3		6.7				
20	2.06				2.70	28.4	7.7		6.4	8.4	920	162	2.5
21	1.14				2.21	23.6	8.1		7.6				
22	.96				1.51	21.6	8.0		7.3				
23	.86				1.38	25.6	7.9	1400	8.0				
24	.76				1.21	21.5	8.0		8.3				
25	1.38				1.40	18.7	7.2		8.3				
26	1.50				1.93	18.0	7.4		6.8				
27	1.54				1.73	21.9	7.6		7.5				
28	.94				2.56	12.0	7.7		8.8	3.28	470	363	2.1
29	2.30				2.07	13.6	7.5		7.7				
30													
31													
AVG.[1]	1.26				1.82	22.0		3761[2]	8.1	11	657	187	2.3
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.

[2]Monthly geometric mean.

[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259546

NLO, Il .
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of February, 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1740		46	27	60	9965	507	296	473	1996		
2	1640		58	24	61	11210	422		400	3742		
3	3190	.20	52	31	61	12456	563		500	2807		
4	10130		43	32	60	11210	543		820	2557		
5	7410		33	25	60	12456	543		562	4990		
6	4655		26	16	60	12456	492		445	4990		
7	3160		27	11	61	12456	619		334	3119		
8	2800		40	12	60	12456	400	421	445	2495		
9	2200		56	23	60	11210	366		275	3742		
10	1980	.28	54	31	60	12456	332		389	3181		
11	3540		58	42	60	12456	478		556	3119		
12	4100		71	40	60	12456	732		489	3742		
13	4900	.55	63	44	60	12456	1688		384	3119		
14	11350		60	34	60	12456	1013		456	2994		
15	11140		60	29	60	15570	675	387	528	3742		
16	7690		59	37	60	14947	591		456	3742		
17	6500		52	42	60	17438	591		395	3898		
18	5380		56	35	60	12456	512		389	3898		
19	4735		57	41	60	12456	450		403	4990		
20	4440		49	35	60	11210	552		403	4900		
21	4020		54	30	60	11958	501		384	3867		
22	3800		62	21	60	9965	506	750	417	3742		
23	3160		67	28	60	14947	507		445	3742		
24	2840	.45	60	31	60	14698	535		378	3181		
25	3320	.10	41	29	60	14449	422		361	2994		
26	3800		45	27	60	14449	563		361	3087		
27	3500	.43	35	30	60	14449	506		361	3243		
28	3680	.35	32	27	60	12705	506		890	2807		
29	3480		29	20	60	10712	664	377	1168	3056		
30												
31												
AVG. [1]	4630	2.36 [2]				12,778	579	446	478	3499		

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4944

454

0259947

NLO-HES-361 (REV. 1/28/81)

WASTEWATER QUALITY
REPORT SUMMARY
FOR
FEBRUARY, 1984

Wastewater quality was acceptable during February, 1984. One NPDES violation occurred for the combined General Sump and Clearwell flows. The "daily average" copper loading in the Combined General Sump and Clearwell effluent stream was 0.029 kg/d during February, 1984, which exceeded the NPDES permit limit of 0.025 kg/d. All other NPDES parameters were within limits during February.

The average uranium concentration at Manhole-175 for February was 1.26 mg U/L, which is 70% of the plant effluent target limit value.

FILO, INC.
HEALTH & SAFETY DIVISION

2196202

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March 1984

456

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.579	7.9						0.140						
2	.723	7.9						.196						
3	.824	8.1						.223						
4	.685	8.0						.185						
5	.771	8.1						.184						
6	.948	7.9						.236						
7	.666	8.0	4	11.0	1941	7		.173	3.6	0.0073	0.0277	0.15	0.099	0.035
8	.749	8.0						.228						
9	.600	8.0						.178						
10	.737	7.9						.278						
11	.618	8.2						.240						
12	.574	8.3						.239						
13	.810	8.3						.237						
14	.928	8.0						.273						
15	.523	7.8	<2	0.4	129	<5		.038	0.43	0.0003	0.0027	0.15	0.003	0.006
16	.830	8.0						.170						
17	.824	8.0						.272						
18	.707	8.2						.222						
19	.640	8.3						.236						
20	.765	8.1						.240						
21	.962	8.0						.279						
22	.974	8.1						.222						
23	.774	8.2	6	12.6	2241	<5		.236	5.07	0.0121	0.0474	0.45	0.161	0.104
24	.691	8.1						.219						
25	.697	8.0						.211						
26	.685	8.0	10	8.8	1763	<5		.213	5.6	0.0094	0.0261	0.34	0.106	0.037
27	.660	8.0						.240						
28	.718	8.0						.204						
29	.921	8.0						.198						
30	.715	8.3						.209						
31	.711	8.0						.244						
AVG[1]	0.742		* <6	8	1519	<6	**	0.215	3.7	0.007	0.026	0.27	0.092	0.045
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		[illegible]	0.009	0.102	0.86	0.256	0.051
LIMITS 3			30	28	1590				[illegible]	[illegible]	0.080	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				[illegible]	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259539

CO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of March 1984

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100mL
1	.265							0.144	7.7					
2	.280							.169	7.6					
3	.389			0.047	7.7	<2	<5	.150	7.7					
4	.298							.146	7.7					
5	.354			.209	7.7	10	<5	.134	7.8					
6	.499			.286	7.6	<2	<5	.175	7.8					
7	.290	<2	<5					.153	7.8	4.8	2.8	1	0.6	
8	.283							.172	7.8					
9	.208							.162	7.7					
10	.210							.193	7.4					
11	.193							.128	7.5					
12	.163							.082	7.7					
13	.388			.142	7.7	9	<5	.111	7.9					
14	.421			.147	7.6	<2	<5	.228	7.7	5.3	4.6	1	0.9	
15	.280	<2	<5					.166	7.6					
16	.418			.203	7.7	2	<5	.177	7.4					
17	.352							.154	7.7					
18	.322							.123	7.7					
19	.250							.081	7.7					
20	.295			.039	7.7	42	<5	.148	7.7					
21	.485			.594	7.6	<2	<5	.202	7.5	6.2	4.7	2	1.5	
22	.497							.171	7.7					
23	.307	<2	<5					.160	7.7					
24	.251							.150	7.6					
25	.284			.012	7.5	10	<5	.108	7.4					
26	.320	<2	<5	.022	7.4	<2	<5	.090	7.6					
27	.225							.147	7.7					
28	.285							.164	7.6	5.7	3.5	1	0.6	
29	.514			.292	7.6	<2	<5	.183	7.7					
30	.281							.162	7.8					
31	.232							.174	7.5					
AVG.[1]	0.317	* <2	<5	0.181		* <7	<5	0.152		* 5.5	3.9	* 1	0.9	**
[2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
[3]		30				30				20	5.0	20	5.0	1000
[4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

1984 025940

), INC.
.TH & SAFETY DIVISION

TE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175 For the Month of March 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	2.16	0.004	0.007	0.014	3.58	17.9	7.5	6000	7.2				
2	1.78	Comp.	Comp.	Comp.	2.08	22.3	7.6		7.2				
3	1.76	1/1-	1/1-	1/1-	2.43	20.7	7.1		7.9				
4	1.82	1/31/84	1/31/84	1/31/84	2.28	28.0	7.4		7.9				
5	2.36				3.20	22.5	7.5		8.7				
6	1.88				2.35	21.2	7.6		7.3				
7	2.16				3.45	23.2	7.6		7.9	4.4	770	129	2.3
8	1.78				2.79	22.1	7.6	2100	8.7				
9	2.62				3.75	25.7	7.4		7.8				
10	1.80				2.93	26.6	7.0		7.7				
11	1.74				2.60	31.6	7.2		7.8				
12	2.30				3.36	33.9	7.6		8.4				
13	1.94				3.38	21.5	7.6		9.3				
14	2.64				3.21	21.1	7.5		8.3				
15	1.32				2.61	2.3	7.8	2100	8.6	0.2	65	88	1.3
16	2.02				3.20	17.6	7.6		8.5				
17	2.28				2.81	23.1	7.2		9.6				
18	2.22	0.007	0.151	0.180	3.37	35.4	7.2		8.0				
19	2.54	Comp.	Comp.	Comp.	3.52	29.2	7.7		7.6				
20	2.26	2/1-	2/1-	2/1-	2.51	20.0	7.9		8.4				
21	2.38	2/29/84	2/29/84	2/29/84	3.28	19.4	7.6		8.7				
22	2.12				3.66	25.6	7.6	1400	8.2				
23	2.20				3.52	28.7	7.6		8.4	4.3	765	109	3.7
24	2.06				2.85	32.1	7.2		8.3				
25	2.16				2.95	25.9	7.4		8.8				
26	2.45				3.22	31.7	7.7		7.7	3.4	680	98	3.1
27	1.52				2.58	31.9	7.6		7.5				
28	1.50				2.47	34.9	7.7		6.7				
29	1.32				2.60	23.8	7.6	2900	7.9				
30	1.50				1.87	30.9	7.6		6.8				
31	1.52				1.58	29.7	7.2		6.6				
[1]	2.00				2.90	25.2		2548 [2]	8.0	3.1	570	106	2.6
OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
DOE ORDER 5480.1A	1.8	9	0.066	0.066									

S: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259541

LO, INC
EALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: General Data

For the Month of March 1984

DATE	RIVER F C	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	2950		33	10	60	16621	624		633	4260		
2	2650		41	20	60	17220	577		512	5221		
3	2740		35	12	60	17504	643		510	4053		
4	2600		40	21	60	18379	637		407	4769		
5	3000	.33	45	33	60	17504	599		335	4133		
6	5730		36	25	60	17663	3383		342	4036		
7	5900		35	21	60	14033	493	439	391	4699		
8	4800	.12	35	12	61	15004	517		326	4308		
9	4135		26	0	60	15601	1409		447	5304		
10	3325		35	11	60	11886	621		423	5940		
11	3150		33	19	60	13770	1705		339	6789		
12	3030	.29	36	12	60	14495	664		335	6874		
13	2790	.13	43	33	60	14495	1979		233	6125		
14	4550		39	30	60	14094	943	463	439	3765		
15	4400	.05	75	34	60	0	593		389	720		
16	16100	.45	64	39	60	14410	612		314	3133		
17	19620	.08	39	33	60	15793	706		563	3206		
18	17880		39	34	60	15793	699		450	4526		
19	14550		55	33	60	14089	706		450	5960		
20	10800	.70	58	37	60	13080	651		360	5024		
21	20800	.06	38	34	60	13968	734	460	221	2977		
22	21300		40	35	60	13922	674		297	3634		
23	18000		50	30	60	13111	904		383	4204		
24	13150		51	30	59	11193	725		347	3688		
25	10180	.17	45	36	60	10310	861		241	3192		
26	11350		55	36	60	10310	947		273	3547		
27	13750		58	45	60	13532	696		428	4474		
28	11240	.50	48	40	60	13532	752	333	331	4474		
29	12100		46	36	60	13669	848		271	3076		
30	10460		45	31	60	13445	940		414	4589		
31	7600		47	25	59	13464	746		373	3966		
G.[1]	9180	2.88 [2]				14426	890	424	380	4344		

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

4044

0259542

WASTEWATER QUALITY
REPORT SUMMARY
FOR
MARCH, 1984

Wastewater quality was acceptable during March, 1984. Five NPDES violations occurred for the combined General Sump and Clearwell flows. The "daily average" limits for copper and hexavalent chromium were exceeded for the month, and "daily maximum" limits were exceeded for copper on 3/23/84, and for hexavalent chromium on 3/23/84 and on 3/26/84. All other NPDES permit parameters were within limits during March.

The average uranium concentration at Manhole-175 for March was 2.0 mg U/L, and the average radium-226 and radium-228 concentrations for February were 0.151 d/m/mL and 0.180 d/m/mL, respectively. These one-month results for uranium, radium-226 and radium-228 were above the annual average plant effluent target values.

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196201

For the Month of April, 1984

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.623	8.1						0.212						
2	.564	7.9						.205						
3	.624	8.3	5	4	1613	<5		.211	8.7	0.009	0.018	0.36	0.045	0.029
4	.812	7.5						.199						
5	.994	8.0						.251						
6	.452	8.1						.253						
7	.752	8.0						.249						
8	.684	8.0						.307						
9	.683	7.8						.263						
10	.696	8.2						.308						
11	.716	8.8	8	4	1745	7		.254	6.1	0.007	0.027	0.64	0.073	0.029
12	.664	8.2						.244						
13	.715	8.0						.246						
14	.671	7.8						.235						
15	.670	8.0						.236						
16	.706	7.9						.232						
17	.795	7.7						.237						
18	.795	7.7						.240						
19	.673	8.4	2	6	1707	5		.230	5.8	0.003	0.032	0.66	0.062	0.041
20	.709	7.8						.243						
21	.741	7.5						.206						
22	1.018	7.6						.228						
23	.862	7.6						.247						
24	.900	7.9						.279						
25	.719	8.[illegible]						.249						
26	.669	7.8						.239						
27	.663	8.1	16	6	1498	<5		.269	7.8	0.007	0.028	0.46	0.072	0.050
28	.598	8.2						.236						
29	.702	8.0						.239						
30	.678	8.8						.237						
31														
[1]	0.718		* 8	5	1641	<6	**	0.243	9.6	0.006	0.026	0.53	0.063	0.037
[2]		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
[3]			20	28	1590				6.2	0.001	0.050	0.41	0.124	0.025
[4]		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
**Not required. Ref: Letter, Valerie Brinker to W. Hibbitts, dated 11/29/83

-HAS-351 (REV. 3/28/81)

0259534

461

DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of April, 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT							
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml	
1	0.179														
2	.179														
3	.202	<2	<5					0.149	7.6						
4	.388							.088	7.7						
5	.471			0.146	7.6	2	<5	.117	7.7						
6	.452			.677	7.7	10	<5	.181	7.6	6.3	4.3	10	6.9		
7	.315			.272	7.7	<2	<5	.227	7.5						
8	.210							.195	7.7						
9	.232							.147	7.8						
10	.168							.139	7.7						
11	.204	<2	<5					.114	7.6						
12	.193							.128	7.8						
13	.272							.186	7.8	2.0	1.4	10	7.0		
14	.229			.030	7.5	4	<5	.162	7.7						
15	.259			.069	7.5	38	<5	.140	8.0						
16	.165			.025	7.7	3	<5	.132	7.5						
17	.431			.051	7.5	3	<5	.123	7.5						
18	.324							.057	7.5						
19	.270	<2	<5					.113	7.4						
20	.260							.195	7.5	6.1	4.5	2	1.5		
21	.400							.144	7.4						
22	.592			.042	8.0	64	<5	.135	7.6						
23	.446			.868	7.7	17	<5	.073	7.7						
24	.445			.156	7.5	11	<5	.158	7.7						
25	.257			.194	7.5	<2	<5	.104	7.6						
26	.206							.142	7.6						
27	.166	9	<5					.140	7.5	6.0	3.2	5	2.7		
28	.154							.130	7.6						
29	.268							.146	7.5						
30	.295							.143	7.6						
31				.010	7.5	17	<5	.135	7.4						
	0.288	<4	<5	0.212				.082	7.7						
		100	15			12	<5	0.212							
					6.5 - 9.0	100	15			5	3.4	7	4.5	**	
		30							6.5 - 9.0	40	10.0	40	10.0	2000	
						30									
			5		6.5 - 9.0		5			20	5.0	20	5.0	1000	
														1000 (Mo. Geo. Mean)	

S: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
* [4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.
**Not required. Ref: Letter, Valerie Brinker to W. Hibbitts, dated 11/29/83

-4944

025935

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of April 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.44	0.009	0.096	0.084	1.90	31.6	7.3		7.2				
2	1.32	Comp.	Comp.	Comp.	1.72	29.8	7.6		6.8				
3	1.64	3/1-	3/1-	3/1-	1.97	32.9	7.6	2600	7.6	1.7	683	142	2.8
4	1.82	3/31/84	3/31/84	3/31/84	2.19	23.0	7.5		7.2				
5	1.38				1.48	2.1	7.5		8.1				
6	1.44				2.34	20.5	7.7		7.1				
7	1.10				1.52	27.9	7.2		6.1				
8	1.32				1.69	30.3	7.3		6.8				
9	2.08				2.14	24.1	7.5		7.2				
10	1.90				2.69	26.9	7.5		7.1				
11	0.98				1.93	30.5	7.5		6.7	1.4	644	56	2.0
12	1.84				2.85	42.9	7.5	2400	5.4				
13	1.68				2.48	42.9	7.5		6.4				
14	1.90				2.81	46.3	7.0		7.4				
15	2.08				3.21	42.9	7.1		6.3				
16	1.32				2.47	39.0	7.5		8.2				
17	1.80				3.21	38.0	7.4		7.8				
18	1.18				1.76	21.7	7.4		7.6				
19	1.06				1.72	35.0	7.5	3400	8.2	2.5	670	128	2.3
20	0.86				1.40	35.8	6.9		7.8				
21	3.84				5.64	27.2	7.0		8.0				
22	1.84				3.57	25.8	7.0		7.5				
23	2.36				3.66	28.2	7.4		6.0				
24	2.06				2.32	33.5	7.4		5.5				
25	2.42				2.46	26.7	7.5		5.6				
26	2.70				2.91	21.1	7.5	3000	5.4				
27	2.16				2.60	25.1	7.5		5.9	2.5	597	145	2.7
28	2.30				2.45	26.4	7.0		4.5				
29	1.70				1.91	25.8	7.1		4.2				
30	1.52				1.86	25.3	7.4		5.6				
Avg.[1]	1.77				2.43	29.6		2825	6.7	2	649	118	2.5
LIMITS[3] OHIO EPA								[2]					
DOE ORDER 5480.1A	1.8	9	0.066	0.066			6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259536

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of April 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	6200		55	29	59	13043	678		373	3966		
2	5040		61	28	59	10939	665		342	4506		
3	4000	.33	51	47	59	18182	597		332	4608		
4	5840	.80	56	48	60	11328	10835	436	310	13312		
5	17950	.57	49	43	60	11437	707		141	2560		
6	23370		48	37	60	11060	844		301	2628		
7	17900		60	37	60	9016	1169		371	4222		
8	12500		59	39	60	9016	1113		349	4982		
9	9925		57	46	60	9016	1039		344	3800		
10	7050		64	46	60	6935	816		306	3799		
11	5700		65	30	60	6935	668	407	363	3419		
12	4900	.13	68	38	61	7909	668		376	5151		
13	4575		70	45	60	13136	847		242	4844		
14	4360	.28	64	47	61	13136	706		373	4118		
15	4555	.04	57	40	60	13793	565		261	4925		
16	5000	.20	51	45	60	13875	759		224	4844		
17	10130		48	40	60	10180	1059		213	4077		
18	11780		42	38	60	10673	847	829	469	4359		
19	10100		50	35	60	9852	830		240	3633		
20	8150		58	31	60	13136	583		384	6459		
21	6835	.78	53	47	60	14778	551		240	4844		
22	9125	.61	71	46	60	14778	671		165	4764		
23	17800	.22	54	43	60	13957	653		252	4037		
24	22450		55	40	60	12315	742		330	3431		
25	18850		78	38	60	9031	600	413	320	3390		
26	13520		84	47	60	6568	918		293	3230		
27	10100		78	61	60	6240	847		666	4031		
28	7440		78	53	62	9852	918		474	4521		
29	*		77	50	64	9934	692		264	4037		
30	5040		72	51	60	9975	649		234	3471		
31												
AVG. [1]	10,006	3.96 [2]				11,001	1,108	521	318	4,466		

NOTES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

404

025953

WASTEWATER QUALITY
REPORT SUMMARY
FOR
APRIL, 1984

Wastewater quality was acceptable during April, 1984. Seven NPDES violations occurred during April--six at the combined General Sump and Clearwell flows and one at Manhole-175. The "daily average" limits for suspended solids, hexavalent chromium, iron, and copper were exceeded for the combined General Sump & Clearwell flows. The "daily average" limit for nitrate-nitrogen was exceeded at Manhole-175. "Daily maximum" limits were exceeded for suspended solids on 4/27/84, and for hexavalent chromium on 4/3/84 at the combined General Sump and Clearwell. All other NPDES permit parameters were within limits during April.

Average Manhole-175 radium-226 and radium-228 concentrations for March were 0.096 d/m/mL and 0.084 d/m/mL, respectively. These results are lower than those for February but were above the annual average plant effluent target values.

EALTH & S TY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196200

For the Month of May, 1984

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.582	8.6	10	10	1901	8		0.229	6.8	0.002	0.029	0.31	0.108	0.043
2	.670	8.6						.284						
3	.623	9.2					0.07	.242						
4	1.102	8.2						.274						
5	.742	8.3						.224						
6	.727	7.7						.239						
7	.690	7.8						.240						
8	.688	8.4	9	8	1378	7		.245	7.1	0.008	0.028	0.27	0.057	0.020
9	.606	7.7						.165						
10	.542	7.8					0.06	.176						
11	.692	8.4						.259						
12	.714	8.8						.250						
13	.623	8.6						.209						
14	.568	8.5						.164						
15	.449	8.3						.174						
16	.558	8.3	33	9.5	1162	7		.175						
17	.532	8.2					0.025	.178	5.5	0.010	0.019	0.29	0.055	0.023
18	.551	8.1						.182						
19	.543	8.0						.188						
20	.505	8.0						.187						
21	.655	7.8						.182						
22	.514	7.8						.189						
23	.814	7.9						.208						
24	.593	8.4	6	3.6	1439	6	0.04	.182	3.0	0.011	0.044	0.23	0.114	0.034
25	.650	8.1						.233						
26	.733	7.4						.195						
27	.510	8.0						.183						
28	.600	7.8						.178						
29	.696	8.0						.166						
30	.575	7.9						.164						
31	.475	8.0						.164						
[1]	0.630		* 14	8	1470	7	0.05	0.204	5.6	0.008	0.030	0.27	0.083	0.030
[2]		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
[3]			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
[4]		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259529

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of May 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100mL
1	.185	<2	<5					0.084	7.7					
2	.180							.110	7.6	3.0	1.25	3	1.25	
3	.145							.166	7.7					980
4	.557			0.508	7.7	<2	<5	.228	7.5					
5	.319			.016	7.7	<2	<5	.141	7.5					
6	.256			.161	7.6	2	<5	.106	7.7					
7	.263							.096	7.8					
8	.233	12	<5	.132	7.7	5	<5	.129	7.7					
9	.304			.028	7.7	<2	<5	.192	7.8	8.3	6.03	12	8.72	
10	.191							.136	7.7					200
11	.149							.096	7.8					
12	.233			.025	7.6	<2	<5	.168	7.3					
13	.156							.125	7.7					
14	.187			.030	7.8	<2	<5	.137	7.7					
15	.156							.020	7.8					1000
16	.131	17	<5					.158	7.8	8.9	5.32	5	2.99	
17	.158							.145	7.7					
18	.153							.142	7.6					
19	.165							.131	7.7					
20	.121							.148	7.7					
21	.324			.116	7.7	10	<5	.098	7.8					
22	.145							.134	7.6					
23	.384			.230	7.8	<2	<5	.183	7.5	6.6	4.57	6	4.16	
24	.275	7	<5					.127	7.7					1000
25	.209							.127	7.6					
26	.349			.154	7.5	2	<5	.150	7.7					
27	.206							.080	7.7					
28	.287			.051	7.6	17	<5	.084	7.7					
29	.358			.112	7.8	<2	<5	.118	7.8					
30	.224							.127	7.7	3.7	1.78	4	1.92	
31	.179							.109	7.7					1000
AVG.[1]	0.232	* 9	<5	0.130		* 3	<5	0.129		* 7	3.8	* 6	3.8	* 775
[2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
[3]		30				30				20	5.0	20	5.0	1000
[4]			5		6.5 - 9.0		5							1000 (Mo. Geo. Mean)

NOTES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259530

0-1185-351 (REV. 1/28/81)

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of May, 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.72	0.004			2.00	33.4	8.0		8.5	4.7	863	125	2.7
2	1.10	Comp.			1.93	29.1	7.9		4.5				
3	1.14	4/1-			1.61	31.8	8.1	1500	6.0				
4	1.44	4/30/84			2.44	20.5	7.7		6.4				
5	1.84				2.14	22.8	7.2		5.3				
6	1.84				2.25	22.5	7.2		7.6				
7	3.40				4.16	22.1	7.9		6.9				
8	1.96				2.48	20.3	8.0		7.0	3.2	529	139	4.5
9	1.82				2.74	15.6	7.8		9.5				
10	2.34				2.68	21.0	8.2	600	7.2				
11	1.78				2.17	25.1	8.2		6.4				
12	2.46				2.75	21.1	7.4		6.9				
13	2.68				3.07	24.3	7.4		5.6				
14	2.84				3.83	19.0	8.0		5.5				
15	2.18				3.13	21.3	8.0	2000	7.2				
16	1.44				2.12	19.1	7.9		6.3	4.5	550	131	3.8
17	1.80				2.45	18.9	7.9		6.2				
18	1.92				2.86	19.7	7.7		6.3				
19	1.42				1.95	20.3	7.2		5.7				
20	1.40				1.96	22.3	7.1		5.4				
21	1.66				2.42	15.3	7.4		6.7				
22	.96				1.24	15.3	7.6		6.0				
23	1.26				1.65	14.7	7.6		6.7				
24	1.00				1.58	14.2	7.8	1900	6.0	1.6	641	72	6.3
25	.76				1.55	18.3	7.8		5.2				
26	1.40				1.76	10.9	7.2		7.7				
27	1.48				2.41	17.2	7.2		5.1				
28	1.22				2.09	15.3	7.3		6.7				
29	1.72				2.19	14.0	7.5		5.4				
30	1.08				1.89	14.2	7.6		5.4				
31	1.36				1.62	19.3	7.5	3000	6.7				
AVG.[1]	1.69				2.29	20.0		1593 [2]	6.4	3.5	646	117	4.3
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

4944

463

0259531

WASTE WATER QUALITY REPORT: General Data

For the Month of May, 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	4790		66	40	62	7882	777		266	4844		
2	4160		68	45	60	11494	653	411	373	4844		
3	3225	1.15	60	50	60	12315	706		266	4844		
4	6210	.11	56	50	60	12808	692		240	3149		
5	4500		68	46	62	10673	706		346	3956		
6	4150	.23	64	53	63	9852	742		240	4037		
7	4460		71	61	63	9442	653		325	4000		
8	4000	.16	62	46	63	8292	1204		314	3229		
9	4400		52	43	61	10024	759	441	266	2826		
10	3900		69	35	61	10673	812		314	4441		
11	3500		76	62	63	11494	565		426	5652		
12	3300	.02	75	54	60	10673	725		298	4844		
13	3100	.09	70	46	60	11083	*		288	5248		
14	3000		64	49	63	10673	*		261	4804		
15	2820		65	37	60	11494	636		426	4844		
16	2650		66	38	64	13136	636	674	346	3876		
17	2440		74	37	64	13136	600		234	4764		
18	2325		82	51	72	11494	551		330	4844		
19	2225		86	55	75	13136	431		253	4844		
20	2150	.36	79	65	67	13136	431		271	4360		
21	2170		81	65	67	13136	477		226	3956		
22	6930	.13	87	63	66	10714	670		240	3189		
23	6165	.42	75	56	72	11494	742	374	234	2826		
24	8285		77	48	72	13136	883		320	3310		
25	6280		80	53	72	13136	551		360	5006		
26	4400	.37	78	62	72	13317	635		218	3149		
27	3700		70	58	72	13218	635		309	4844		
28	3200	.52	74	53	70	16420	565		213	3997		
29	1150		56	49	72	13341	1766		224	3310		
30	3525		65	41	72	3956	847	298	346	3956		
31	3240		72	41	71	12726	821		346	4117		
AVG. [1]	3977	3.56 [2]				11532	720	440	294	4191		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

4044

469

025952

Wastewater Quality

Report Summary

for

May, 1984

Wastewater quality was acceptable during May, 1984. Four NPDES violations occurred during May for the combined General Sump and Clearwell flows. The "daily average" limits for hexavalent chromium and copper were exceeded for the month, and "daily maximum" limits for hexavalent chromium were exceeded on 5/17/84 and 5/24/84. All other NPDES permit parameters were within limits during May.

The concentration of uranium at Manhole-175 averaged 1.69 mg/L, which is less than the plant effluent target value of 1.8 mg/L.

0259533

LO, INC.
EALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196199

For the Month of June 1984

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.618	8.4	9	2.99	1871	6		.220	3.3	.009	.031	.43	.062	.037
2	.399	7.8						.038						
3	.364	7.8						.038						
4	.414	7.9	8	1.57	1050	<5		.124	4.2	.007	.017	.08	.071	.011
5	.408	7.6						.090						
6	.473	7.9						.087						
7	.483	7.8					.05	.125						
8	.486	7.7						.088						
9	.466	7.5						.113						
10	.402	8.1						.115						
11	.367	7.6						.078						
12	.454	7.9	<2	.34	327	<5	.04	.075	4.4	.004	.009	.07	.025	.006
13	.453	8.2						.113						
14	.468	7.5						.080						
15	.530	7.7						.079						
16	.431	7.8						.079						
17	.385	7.6						.080						
18	.395	7.8						.080						
19	.574	8.0						.076						
20	.456	7.7	<2	.35	276	<5	.04	.078	.6	.004	.013	.06	.015	.008
21	.742	8.2						.252						
22	1.025	7.7						.313						
23	.767	7.5						.262						
24	.842	7.5						.269						
25	.685	7.9						.268						
26	.649	8.1						.278						
27	.723	8.1						.288						
28	.625	7.8	4	.24	2318	<5	.07	.170	4.8	.003	.012	.37	.029	.015
29	.665	8.4						.255						
30	.727	8.6						.305						
31														
[1]	.549		* 5	1	1168	5	.05	.151	3.5	.005	.016	.20	.040	.015
[2]		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
[3]			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
[4]		6.5 - 9.0				5	0.002							

TES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

-4944

P-4

0259524

.O, INC.
ALTH & SAFETY DIVISION

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of June 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100mL
1	.186	<2	<5					.153	7.7					
2	.172							.150	7.7					
3	.137							.144	7.8					
4	.110	<2	<5					.117	7.6					
5	.180							.124	7.8					
6	.206							.126	7.7					
7	.211							.132	7.6	2.9	1.4	12	6.0	
8	.195							.175	7.8					
9	.192							.134	7.7					2000
0	.150							.081	7.8					
1	.153							.076	7.7					
2	.216	4	<5					.140	7.7					
3	.209							.123	7.7	2.2	1.0	6	2.8	
4	.319			.081	7.4	7	<5	.155	7.7					
5	.294							.139	7.6					600
6	.192							.134	7.8					
7	.168							.122	7.6					
8	.160							.117	7.7					
9	.258			.036	7.5	<2	9	.184	7.7					
0	.208	3	<5					.146	7.5					
1	.108			1.000	7.8	9	<5	.136	7.8	2.4	1.3	7	3.9	
2	.529							.136	7.7					
3	.278							.127	7.8					700
4	.350			.131	7.5	<2	5	.127	7.6					
5	.223							.136	7.7					
6	.200							.136	7.7					
7	.126							.136	7.8	3.4	1.8	4	2.1	
8	.232	29	<5					.136	7.9					
9	.180							.136	7.7					250
0	.151							.146	7.7					
1														
.1	.210	8	<5	.312		5	6	.134		• 3	1.4	• 7	4	• 888
2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
3		30				30				20	5.0	20	5.0	1000
4			5		6.5 - 9.0		5					0259	525	1000 (Mo. Geo. Mean)

ES: [1]Arithmetic average except for (*) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of June 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	.78		0.005	0.040	1.03	19.5	7.7		6.4	1.28	800	84	6.8
2	.76		Comp.	Comp.	1.18	6.5	7.5		8.0				
3	.74		4/1-	4/1-	1.37	1.8	7.8		7.5				
4	.96		4/30/84	4/30/84	1.53	15.7	7.6		4.5	1.0	670	142	7.7
5	.64				.97	15.3	7.7		8.1				
6	.60				1.02	13.0	7.8		5.6				
7	.52				.82	7.9	7.8	400	7.4				
8	.50				.88	3.6	7.8		7.0				
9	.54				1.22	13.7	7.8		8.5				
10	.50				1.04	7.3	7.9		6.7				
11	.48				.75	8.0	7.9		7.0				
12	.48				.87	5.7	7.8		7.3	0.2	190	58	3.8
13	.28				.71	4.9	8.1		9.1				
14	.88				1.16	5.0	7.6	900	6.7				
15	.50				.82	5.5	7.6		7.0				
16	.52				.75	6.4	7.5		6.9				
17	.48				.87	5.6	7.5		6.7				
18	.52		0.028	0.036	1.53	6.2	7.7		7.5				
19	.56		Comp.	Comp.	.88	4.2	7.6		7.3				
20	.42		5/1-	5/1-	.72	5.1	7.7		7.3	0.2	160	129	3.2
21	.38		5/31/84	5/31/84	.89	15.8	7.4	1000	6.0				
22	.78				1.10	11.8	7.6		7.4				
23	.80				1.05	13.3	7.4		7.5				
24	3.44				3.92	12.7	7.5		6.4				
25	1.64				1.98	10.5	7.6		8.1				
26	1.44				1.89	7.5	7.8		8.1				
27	1.18				1.35	5.6	7.9		8.2				
28	.98				1.47	4.9	8.6	500	8.1	<0.1	220	75	4.9
29	1.04				1.00	6.8	8.2		7.8				
30	1.06				.99	6.9	8.1		7.8				
31													
AVG. [1]	0.81				1.19	8.6		651 [2]	7.3	0.6	408	98	5.3
LIMITS [3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS [3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

025952b

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of June 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	3000		78	44	71	12520	677		246	4844
2	2800		85	56	70	*	600		373	568
3	2500		82	62	71	*	545		293	824
4	2250		82	52	70	13136	545		261	3633
5	2000		87	60	72	14778	883		304	3189
6	1900		86	64	73	13300	706	522	264	2220
7	1640		86	73	73	13136	636		213	1776
8	1565		89	74	74	14860	706		205	1574
9	1460		90	62	80	13135	494		224	2826
10	1380		89	64	76	14778	457		213	1897
11	1310		90	66	74	14572	480		213	1817
12	1280		91	60	74	9852	636		175	1292
13	1235	.16	92	69	74	12315	600	315	213	1292
14	1610		87	66	77	13300	335		208	969
15	1600		82	64	77	13136	777		416	1534
16	1320		90	67	73	13136	494		240	1534
17	1240		91	71	73	13218	551		213	1656
18	1085	.24	92	71	74	14778	480		213	1615
19	1160		89	67	75	14778	487		245	1413
20	1250	4.50	89	68	75	13136	742	944	234	1453
21	2350		85	65	78	15189	494		640	4683
22	1590	.03	87	70	78	13300	1236		298	3633
23	1300	.61	82	66	75	8538	847		320	4037
24	1675		81	62	76	9852	741		277	3229
25	3355		82	58	76	8210	840		319	3875
26	3190		83	51	76	7389	826		261	2422
27	2150		85	66	75	7799	635	455	245	2139
28	1690		85	58	75	4926	596		314	1615
29	1410		82	61	75	6568	635		279	2422
30	1225		78	60	76	6568	530		293	2886
31										
AVG. [1]	1784	5.54 [2]				11793	640	559	274	2296

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

0259521

Wastewater Quality Report Summary

for June 1984

The quality of the final wastewater effluent for the FMPC facility was acceptable during June 1984. It should be noted that two NPDES violations occurred during June for the combined General Sump and Clearwell flows. The "daily average" limit for hexavalent chromium was exceeded for the month, and the "daily maximum" limit for haxavalent chromium was exceeded on June 1, 1984. All other NPDES permit parameters were within limits during the month of June.

The concentration of uranium at Manhole 175 averaged 0.81 mg/l for June, which is less than the plant effluent target value of 1.8 mg/l.

0259528

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196198

For the Month of July 1984

DATE	MANHOLE - 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (T6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.618	8.5						0.255						
2	.614	7.9						.261						
3	.653	8.6						.263						
4	.832	7.8						.267						
5	.953	7.8						.254						
6	.974	8.1	21	0.4	1548	<5	0.02	.564	4.1	0.013	0.018	0.335	0.047	0.019
7	.887	7.7						.279						
8	.726	7.7						.271						
9	.652	7.9	6	1.5	987	<5		.266	10.6	0.006	0.004	0.206	0.041	0.052
10	.686	7.9						.266						
11	.704	7.9					0.08	.256						
12	.652	7.9						.247						
13	.705	7.9						.268						
14	.712	8.0						.302						
15	.565	7.8						.263						
16	.438	7.9						.191						
17	.428	8.2	5	0.2	697	<5		.190	3.1	0.003	0.020	0.150	0.037	0.033
18	.432	8.4						.195						
19	.597	8.4					0.08	.235						
20	.599	8.0						.248						
21	.623	7.8						.225						
22	.417	8.4						.115						
23	.533	7.4						.155						
24	.615	8.0						.217						
25	.639	8.3	9	1.7	992	<5		.257	12.6	0.010	0.015	0.332	0.040	0.012
26	.741	8.7					0.08	.249						
27	.740	8.0						.243						
28	.513	7.4	4		427			.171						
29	.282	7.7						.038						
30	.301	8.7						0						
31	.456	8.6		1.0				.038						
AVG[1]	0.622		* 10.7	1	930	<5	0.07	0.235	7.6	0.008	0.014	0.255	0.041	0.029
LIMITS 2		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month. [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259519

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of July 1984

Page

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100 ml
1	0.151							0.091	7.8					
2	.153							.074	8.0					
3	.202							.143	7.8					
4	.324			0.326	7.7	<2	<5	.175	7.7	4.7	3.1	2	1.3	
5	.517			.366	7.6	<2	<5	.161	7.8					200
6	.444	16	<5	.178	7.8	<2	<5	.174	7.7					
7	.397			.097	7.7	<2	<5	.158	7.8					
8	.223							.130	7.8					
9	.212	<2	<5					.090	7.9					
10	.281							.139	7.9					
11	.253							.156	7.9			3	1.8	
12	.245							.144	7.9	2.1	1.1			420
13	.221							.200	7.7					
14	.221							.137	7.8					
15	.146							.058	8.0					
16	.185							.081	7.9					
17	.080	15	7					.112	7.8					600
18	.181							.069	7.9	2.7	0.7	2	0.5	
19	.147							.060	7.7					
20	.129							.136	7.9					
21	.210							.121	7.9					
22	.218							.144	7.9					
23	.228							.092	8.1					
24	.224							.108	8.0			8	3.3	
25	.166	25	<5					.128	7.9	0.2	0.1			440
26	.310			.145	7.7	<2	<5	.090	7.9					
27	.351			.082	7.9	8	<5	.086	7.7					
28	.181							.079	8.0					
29	.103	29						.071	8.3					
30	.155							.059	8.3					
31	.233							.130	8.1					
AVG.[1]	0.229	• 17	<5	0.199		• <3	<5	0.116	7.9	• 3	1.3	• 4	1.7	• 397
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000 (Dec. Jan. Mar.)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

NLO-H&S 251 (REV. 12-22-63)

025920

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of July 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM MO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	.80	0.004	0.029	0.010	.84	9.0	8.1		7.4				
2	.82	Comp.	Comp.	Comp.	.76	8.7	8.0		6.4				
3	.74	5/1-	6/1-	6/1-	.84	8.0	8.1		6.4				
4	1.04	5/31/84	6/30/84	6/30/84	1.78	7.2	7.4		6.7				
5	1.30				1.98	10.0	7.5	200	6.2				
6	1.28				.75	9.6	7.8		5.1	<0.1	420	105	10.2
7	1.36				1.63	10.8	7.6		5.2				
8	1.50				1.60	12.8	7.7		5.1				
9	1.24				1.36	12.1	7.9		6.0	0.6	400	129	9.2
10	.98				1.52	11.8	7.8		5.5				
11	.96				1.49	12.2	7.8		5.4				
12	.92				1.01	14.9	7.7	100	6.6				
13	.86				1.74	14.5	7.8		6.1				
14	.84				1.65	16.2	7.8		5.0				
15	.74				1.26	21.4	7.7		6.6				
16	.50				1.29	17.2	7.4		7.9				
17	.44				.57	11.8	8.4	800	8.1	10	430	146	5.6
18	.46				.77	13.0	8.1		7.9				
19	.64				1.14	19.1	8.1		8.3				
20	.62				1.19	16.1	7.6		7.9				
21	.44				.68	12.4	7.7		8.1				
22	.38				.68	12.6	7.9		8.6				
23	.28				.63	11.5	7.9		8.6				
24	.32				.84	13.0	7.8		8.7	0.7			
25	.24				.62	10.5	8.4		8.7		410	221	5.2
26	1.00				1.44	8.5	7.7	210	7.4				
27	1.32				1.57	8.0	8.1		8.0				
28	.74				1.16	7.6	7.5		8.4				
29	.58				1.33	12.6	8.2		8.7				
30	.74				1.04	0.1	7.9		7.9				
31	.60				.85	0.3	8.1		8.1				
AVG.[1]	0.80				1.16	11.4		241[2]	7.1	2.9	415	150	7.6
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259521

HEALTH AFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of July 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	1075		80	55	74	6568	530		293	2886
2	1035		84	63	75	6568	480		181	3230
3	1175		87	58	76	6650	459		208	3310
4	1290	1.64	80	68	75	6609	671	893	272	3068
5	2490	.39	78	69	75	6732	491		208	1356
6	2800	.26	82	65	75	8210	579		202	2422
7	3490		73	53	76	4269	706		314	2584
8	2800		77	51	75	6568	636		272	2786
9	1950		85	58	74	6486	777		256	2725
10	1550		92	72	75	6568	713		240	2664
11	1350		87	70	75	6527	692	342	317	2584
12	1150		86	60	78	6650	593		320	3149
13	1100		88	63	75	6650	579		280	2826
14	1020		90	64	78	8210	441		266	3229
15	950		83	64	78	8210	529		226	4037
16	900		84	65	75	7799	487		239	3270
17	875		86	57	75	7882	424		191	2422
18	840		78	57	75	8210	451	805	256	2664
19	800		81	51	75	6896	480		288	3956
20	770		77	57	76	7389	1412		319	3269
21	760		85	63	75	6568	494		224	2664
22	740		87	59	75	6568	*		202	2422
23	725		90	61	76	6486	*		186	2430
24	725		90	65	76	5337	*		213	2987
25	680	.55	75	67	75	5090	635	820	213	2826
26	760	.45	75	65	75	4926	847		186	2018
27	1356		86	62	75	4885	713		186	1857
28	935		79	59	76	4844	855		240	1857
29	800		81	56	74	*	706		240	565
30	715		82	57	75	*	*		213	339
31	700		86	61	75	*	2507		213	573
AVG. [1]	1236	3.29 [2]				6584	700	715	241	2548

NOTES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

-4944

479

0259522

HLO-H&S-351 (REV. 1/28/81)

WASTEWATER QUALITY REPORT SUMMARY
for July 1984

Wastewater quality was acceptable during July, 1984. There were six violations of the NPDES limits for the combined General Sump and Clearwell flows during July. The "daily maximum" limit was exceeded once for Cu and twice for Cr^{+6}. The "daily average" limit was exceeded for the month of July for Cu, Cr^{+6}, and suspended solids. All other NPDES permit parameters were within limits during July.

The concentration of uranium at Manhole-175 averaged 0.80 mg/L for July, which is 44% of the plant effluent target value of 1.8 mg/L. The concentrations of Ra-226 and Ra-228 for the June composite sample were 0.029 d/m/mL and 0.010 d/m/mL respectively, which are 44% and 15% of their target limits.

HEALTH & SAFETY DIVISION

2196197

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of August 1984

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.568	7.9						0.076						
2	.684	7.7	11	.207	120	<5	.018	.122	3.1	0.004	0.013	0.023	0.024	0.012
3	.586	7.7						.038						
4	.541	7.6						.038						
5	.467	7.8						.038						
6	.480	7.8						.038						
7	.520	7.7						.038						
8	.505	7.7						.038						
9	.593	7.7					.061	.105						
10	.518	7.8	7	.196	176	<5		.062	1.2	0.002	0.005	0.014	0.010	0.004
11	.728	7.6						.154						
12	.541	7.6						.154						
13	.421	7.7	<2	.159	510	<5		.098	2.6	0.002	0.010	0.031	0.019	0.025
14	.525	7.8						.138						
15	.551	7.6						.160						
16	.613	7.8					.002	.196						
17	.594	7.5						.153						
18	.609	7.8						.166						
19	.566	7.5						.206						
20	.506	7.6						.166						
21	.533	7.6	3	.726	480	<5		.150	7.5	0.004	0.022	0.128	0.045	0.015
22	.534	8.1						.148						
23	.577	8.1					.014	.147						
24	.518	7.6						.158						
25	.488	8.8						.158						
26	.393	7.7						.121						
27	.424	7.6						.160						
28	.495	7.7						.120						
29	.598	7.7	5	.905	883	<5		.183	6.5	0.005	0.017	0.072	0.047	0.017
30	.541	7.6					.050	.160						
31	.581	7.6						.209						
AVG[1]	0.542		* 6	0.439	570	<5	0.029	0.126	4.2	0.003	0.013	0.054	0.029	0.014
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

0259514

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month. [4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of August 1984

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.267							0.121	7.9	4.7	2.15	2	0.9	
2	.375	<2	<5	0.041	7.6	3	<5	.076	7.8					1
3	.335			.006	7.5	14	<5	.072	7.8					
4	.312							.072	7.7					
5	.236			.015	7.4	18	<5	.067	7.6					
6	.261							.057	7.8					
7	.268							.077	7.6					0
8	.238			.040	7.7	40	<5	.067	7.7	9.0	2.28	8	2.0	
9	.278							.093	7.5					2
10	.235	<2	<5					.086	7.7					
11	.324			.096	7.8	2	<5	.097	7.7					
12	.205							.057	7.8					
13	.168	8	<5					.043	7.9					
14	.185							.058	8.0					6
15	.180							.064	7.9	5.7	1.38	2	0.5	
16	.199							.086	7.8					0
17	.202							.100	7.3					
18	.220			.062	7.8	5	<5	.070	7.7					
19	.233							.042	7.8					
20	.159							.040	7.9					
21	.187	<2	<5					.098	7.7					2
22	.178							.098	7.7	10.5	3.89	2	0.7	
23	.293			.046	7.8	<2	<5	.093	7.6					2
24	.168							.094	7.7					
25	.195							.068	7.8					
26	.144							.074	7.6					
27	.144							.072	7.7					
28	.208							.104	7.7					
29	.272	<2	<5					.098	7.7	10.2	3.78	4	1.5	
30	.204							.125	7.3					2
31	.189							.113	7.5					
[1]	0.228	• 3	<5	0.044		• 9	<5	0.080		• 8.0	2.7	• 3	1.1	• 2
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (M. Geo. Mean)

0259515

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of August 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.44	0.010	0.029	<0.010	1.52	0.5	8.4		8.4				
2	.92	Comp.	Comp.	Comp.	1.50	6.1	8.0	800	7.9	0.08	120	64	2.7
3	.92	6/1-	6/1-	6/1-	1.28	0.5	8.0		9.1				
4	.62	6/30/84	6/30/84	6/30/84	1.08	0.4	7.7		8.5				
5	.86				1.10	0.2	7.9		8.7				
6	.72				1.47	0.9	8.0		8.8				
7	.46				.87	0.1	8.1	300	9.3				
8	.88				1.81	0.8	8.1		9.4				
9	.78				1.28	6.6	8.1	600	7.1				
10	.66				1.31	4.8	8.0		7.1	0.10	90	87	1.4
11	1.18				2.18	13.1	7.4		6.6				
12	.74				1.48	18.9	7.7		6.7				
13	.58				.90	12.3	8.2		6.8	<0.10	320	86	2.7
14	.62				.96	15.0	8.1	30	6.7				
15	.44				.92	20.7	7.8		6.0				
16	.42				.69	21.2	8.2	300	4.8				
17	.44	0.005			1.20	18.2	8.0		5.4				
18	.42	Comp.			.99	26.8	7.4		6.2				
19	.86	7/1-			1.75	26.0	7.5		4.1				
20	.62	7/31/84			1.19	31.4	7.8		6.4				
21	1.04				1.40	23.6	7.9	300	6.1	0.36	480	99	2.9
22	.42				1.02	22.6	7.8		6.5				
23	.92				1.39	23.6	8.2	100	6.4				
24	.60				1.19	26.2	7.9		7.2				
25	.48				1.41	38.8	7.9		7.6				
26	.54				1.04	36.2	7.6		7.3				
27	.38				1.16	33.0	8.1		8.2				
28	1.84				3.93	21.0	7.8		8.2				
29	.80				1.11	18.8	8.2		6.3	0.40	390	69	1.0
30	.50				.66	20.8	7.9	900	7.2				
31	.44				.68	23.1	8.1		6.0				
AVG.[1]	0.69				1.31	16.5		277 [2]	7.1	0.51	280	81	2.1
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259516

WASTE WATER QUALITY REPORT: General Data

For the Month of August 1984

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	690	.26	85	66	76	0	607		202	468		
2	710	.06	84	71	75	6559	565	323	186	1138		
3	725		84	71	74	0	558		155	371		
4	690	.12	82	68	76	0	511		266	423		
5	910		85	70	76	0	353		186	565		
6	1060		87	68	75	0	324		191	395		
7	825		91	72	76	0	565		192	371		
8	850	.06	90	74	76	0	491	331	173	371		
9	1625		90	70	76	9852	561		170	1291		
10	1085	.45	90	69	76	11494	399		240	1089		
11	1050		86	68	76	10180	564		261	2422		
12	1100		84	66	78	11494	459		245	3230		
13	1225		90	61	76	11411	564		239	2422		
14	1050		87	63	76	12315	777		277	3148		
15	980		88	62	77	12397	706	295	279	3997		
16	810		88	62	78	13136	777		202	3633		
17	750		88	65	76	13464	636		213	3230		
18	825	.31	82	68	78	14778	501		309	4663		
19	770		80	65	77	14367	1201		213	4521		
20	730		80	60	77	13136	776		234	5490		
21	680		86	52	77	10673	551		226	3230		
22	650	.22	85	61	76	13136	635	363	245	3916		
23	750		77	57	76	13136	777		226	3229		
24	690		77	51	76	15599	742		250	3633		
25	610		80	50	76	13136	*		336	4441		
26	600		84	54	76	13218	777		245	4844		
27	590		87	52	76	13382	583		224	4764		
28	680	.11	80	67	76	13546	741		266	3189		
29	600		88	69	76	12315	635	275	226	2745		
30	610		86	66	76	13135	635		229	3229		
31	590		82	53	76	13135	635		319	4037		
AVG. [1]	823	1.59 [2]				12458	620	317	233	2726		

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

*Not pumped this date.

WASTEWATER QUALITY REPORT SUMMARY

FOR

AUGUST, 1984

Wastewater quality was acceptable during August, 1984. There were no NPDES violations during the month. The daily average hexavalent chromium concentration was 0.003 kg/d, which is 75% of the NPDES limit. A significant reduction was recorded in fecal coliform in the sewage treatment plant effluent due to good operation of the new UV disinfection unit.

The concentration of uranium at Manhole-175 was 0.69 mg/L, which is 38% of the DOE guideline. The June results for radium at Manhole-175 show that the concentrations are decreasing from those recorded in February, 1984. The average concentrations of radium-226 and radium-228 for the period January - June, 1984 were 0.057 d/m/mL and 0.061 d/m/mL respectively, which are 86% and 92% of their target values for plant effluent.

0259518

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196196

For the Month of September 1984

	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (H6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.475	7.8						0.143						
2	.445	7.8						.194						
3	.465	7.8						.189						
4	.622	7.8						.183						
5	.509	7.9						.168						
6	.537	7.7	<2	2.8	650	<5	0.014	.144	3.9	0.005	0.013	0.04	0.027	0.019
7	.456	8.3						.144						
8	.538	8.0						.202						
9	.488	8.1						.201						
10	.556	7.8						.193						
11	.561	7.8						.238						
12	.540	7.8						.176						
13	.481	7.6						.156						
14	.539	7.7	7	0.8	1102	<5	.026	.168	2.3	0.005	0.024	0.119	0.045	0.015
15	.440	7.7						.119						
16	.293	7.6						.039						
17	.394	7.8	<2	0.3	761	<5		.132	4.2	0.004	0.012	0.084	0.035	0.022
18	.479	7.3						.141						
19	.362	7.6						.101						
20	.423	7.4					.047	.115						
21	.397	7.7						.038						
22	.511	7.3						.115						
23	.582	7.5						.161						
24	.670	7.4						.184						
25	.718	7.7	6	0.1	2174	<5		.144	3.7	<0.001	0.011	0.191	0.032	0.012
26	.758	7.8						.176						
27	.693	7.7					.036	.174						
28	.720	7.5						.189						
29	.677	7.8						.160						
30	.760	8.0						.179						
31														
AVG[1]	0.536		* 4	1	1172	<5	0.031	0.156	3.5	0.004	0.015	0.109	0.035	0.017
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259509

4944

486

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of September 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No./100ml
1	0.177							0.086	7.7					
2	.146							.052	7.5					
3	.158							.052	7.7					
4	.354			0.110	8.0	<2	<5	.048	7.4					
5	.196							.079	7.5	7.3	2.18	2	0.598	
6	.213	<2	<5					.123	7.3					
7	.180							.075	7.5					2
8	.171							.100	7.5					
9	.154							.081	7.6					
10	.249							.059	7.6					
11	.173							.095	7.6					
12	.184							.098	7.6	8.7	3.23	1	0.371	2
13	.188							.086	7.7					
14	.198	4	<5					.109	7.6					
15	.211							.082	7.6					
16	.141							.057	7.6					
17	.133	<2	<5					.062	7.5					
18	.146							.128	7.3					
19	.063			.027	8.0	13	<5	.092	7.6	8.3	2.89	7	2.438	
20	.168							.084	7.6					26
21	.217							.088	7.5					
22	.254							.081	7.5					
23	.274							.084	7.6					
24	.409							.066	7.6					
25	.408	10	<5	.094	8.2	25	<5	.099	7.6					
26	.393			.234	8.3	9	<5	.115	7.3	5.9	2.57	1	0.435	
27	.330							.105	7.7					
28	.343							.105	7.6					1
29	.307							.083	7.7					
30	.384							.084	7.6					
31														
6.[1]	0.231	• 5	<5	0.116		• 12	<5	0.085		• 7.6	2.7	• 3	1.0	• 8
2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
3		30				30				20	5.0	20	5.0	1000
4			5		6.5 - 9.0		5							1000 (Monthly Avg.)

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259510

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of September 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM #0/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.40				0.65	27.1	7.5		7.6				
2	.38				.90	38.5	7.9		7.2				
3	.30				.79	37.0	7.9		7.1				
4	.96				2.05	27.7	7.7		7.2				
5	.54				1.47	27.0	8.0		7.6				
6	.56				1.13	17.4	8.3	200	7.6	1.4	320	129	0.9
7	.40				1.05	23.7	8.2		7.6				
8	.46				.96	30.5	7.6		7.6				
9	.34				.70	31.6	8.0		7.7				
10	.90				1.22	28.6	7.8		7.3				
11	.46				.87	33.8	8.2	100	7.0				
12	.36				.61	23.6	7.9		7.5				
13	.32				.43	14.6	8.1		7.8				
14	.34				1.07	21.4	7.8		6.8	0.4	540	143	3.9
15	.76				1.50	9.7	7.7		7.9				
16	.50				1.57	0.4	8.1		8.2				
17	.34				.77	21.3	8.4		6.8	0.17	510	108	3.3
18	.28				.60	18.9	7.9		7.5				
19	.34				1.11	15.5	8.1		6.8				
20	.34				.86	21.9	8.0	80	6.0				
21	.26				.58	0.1	7.9		6.8				
22	.28				.71	12.2	7.5		7.0				
23	.62				1.01	17.7	7.5		7.0				
24	1.62				2.05	14.2	7.6		6.2				
25	1.40				2.13	9.4	7.6		7.2	0.03	180	51	2.4
26	1.04				1.83	11.1	7.7		7.3				
27	1.14				1.64	15.6	7.6	500	6.0				
28	1.50				1.67	18.3	7.7		9.7				
29	.62				.82	13.0	8.1		6.6				
30	.48				.75	16.4	8.1		7.5				
31													
AVG.[1]	0.61				1.12	19.9		168[2]	7.3	0.5	388	108	2.6
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259511

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of September 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	560		86	57	76	13136	706		272	3876		
2	550		94	67	76	14778	494		213	5006		
3	540	.53	80	64	76	13957	579		224	5087		
4	1020		73	54	75	13546	547		221	4683		
5	710	.05	69	53	75	19852	713	425	346	4198		
6	650		72	42	75	13400	777		279	2584		
7	630		82	60	74	13957	593		325	3835		
8	580		82	61	75	13136	600		288	4441		
9	560	.16	76	64	76	13218	551		213	4037		
10	550		80	67	76	13054	565		181	4037		
11	525		85	66	74	13893	600		320	3956		
12	555		85	58	76	13054	635	267	306	3229		
13	590		92	58	76	10673	565		245	2826		
14	555	.07	77	62	76	8210	600		266	3473		
15	750		67	47	75	11494	423		218	1615		
16	680		62	40	74	*	381		213	505		
17	630		70	39	74	11658	480		299	3230		
18	600		77	47	74	10673	706		245	3228		
19	575		81	42	75	13054	636	507	245	2272		
20	585		88	50	75	11412	635		253	2987		
21	600		89	54	76	*	371		240	484		
22	560		90	56	75	12315	430		319	2019		
23	550	.84	72	64	76	12397	600		287	2581		
24	580	.76	70	67	76	11494	551		240	2422		
25	950	.76	85	60	75	12807	564		192	1776		
26	1000		62	50	74	11084	636	357	245	1978		
27	1150		55	48	74	11494	872		362	2500		
28	900		62	42	74	11248	777		240	3633		
29	780		60	40	74	12312	706		266	2664		
30	750		62	50	74	12109	2119		186	3209		
31												
AVG. [1]	674	3.17 [2]				12622	647	389	258	3079		

NOTES: [1] Arithmetic averages except for Precipitation.
[2] Total precipitation, in inches, measured as water.
[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

4944
489
025952

WASTEWATER QUALITY REPORT SUMMARY

FOR

SEPTEMBER, 1984

Wastewater quality was acceptable during September, 1984. No NPDES violations were recorded during the month. The daily average hexavalent chromium concentration was 0.004 kg/day, which is equal to but does not exceed the NPDES limit. The continued use of the new UV disinfection unit at the Sewage Treatment Plant has maintained a significant reduction in fecal coliforms.

The concentration of uranium at Manhole-175 was 0.61 mg/L (38% of the DOE guideline). The results from the radium analyses for the months of July through September are still pending. As of June, 1984, the average radium-226 and radium-228 concentrations were 86% and 92% of their respective target values for plant effluent.

0259513

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

2196195

For the Month of October 1984

4944

491

DATE	MANHOLE – 175 FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	COMBINED GENERAL SUMP & CLEARWELL FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (+6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	0.588	7.6						0.192						
2	.583	7.6						.149						
3	.394	7.4	16	1.34	761	<5		.142	11.5	0.0065	0.0132	0.104	0.0409	0.0147
4	.411	7.8					0.045	.172						
5	.422	7.7						.158						
6	.423	7.8						.162						
7	.430	7.8						.211						
8	.850	7.8						.247						
9	.573	7.5						.172						
10	.511	7.6						.182						
11	.436	7.7	17	0.54	545	<5	.07	.125	4.6	0.0054	0.0071	0.064	0.0223	0.0106
12	.518	7.6						.241						
13	.457	7.6						.203						
14	.338	7.4						.148						
15	.429	7.3						.184						
16	.506	7.5						.234						
17	.439	7.3						.209						
18	.072	7.6						0						
19	.403	7.9	3	2.73	503	<5	.05	.164	2.9	0.0063	0.0163	0.063	0.0194	0.0090
20	.386	7.6						.144						
21	.498	7.8						.170						
22	.666	8.0	3	1.39	681	<5		.156	4.8	0.0061	0.0096	0.073	0.0273	0.0099
23	.784	7.8						.200						
24	.474	7.9						.151						
25	.382	7.6						.120						
26	.693	8.6					.06	.136						
27	.520	7.8						.169						
28	.383	7.9						.127						
29	.801	7.8						.179						
30	.552	7.7	7	4.18	418	<5		.137	3.4	0.0038	0.0098	0.144	0.0176	0.0052
31	.435	8.0						.180						
AVG[1]	0.495	7.7	9	2	581	<5	0.06	0.172	5.4	0.006	0.011	0.09	0.026	0.010
LIMITS 2		6.5 - 10.0	60	43	3480	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.

0259504

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of October 1984

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	OIL & GREASE mg/L	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/L	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/L	SUSPENDED SOLIDS kg/day	FECAL COLIFORM No/100ml
1	0.312							0.084	7.6					
2	.331							.103	7.5					
3	.152	14	<5					.100	7.5	11.9	4.50	2	0.8	
4	.145							.095	7.5					
5	.165							.099	7.5					1
6	.175							.087	7.5					
7	.163							.056	7.4					
8	.512			0.367	8.0	<2	<5	.098	7.4					
9	.302			.012	7.7	20	<5	.099	7.5					
10	.236							.094	7.3	3.3	1.17	3	1.1	
11	.205	<2	<5					.106	7.7					
12	.180							.096	7.6					0
13	.174							.080	7.6					
14	.143							.047	7.5					
15	.197							.048	7.5					
16	.176							.096	7.5					
17	.161							.069	7.3	4.1	1.07	6	1.6	2
18	0			.025	7.6	<2	<5	.072	7.5					
19	.112	<2	<5	.010	7.6	<2	<5	.128	7.7					
20	.159			.002	7.9	39	<5	.082	7.6					
21	.266			.076	7.7	<2	<5	.063	7.6					
22	.451	7	<5	.087	7.8	<2	<5	.059	7.5					
23	.461			.020	7.8	5	<5	.103	7.7					
24	.228							.095	7.6	0.7	0.25	6	2.2	
25	.174			.008	7.9	<2	<5	.089	7.6					
26	.452			.118	7.8	9	<5	.104	7.7					0
27	.268							.083	7.6					
28	.177							.079	7.6					
29	.520			.303	7.9	3	<5	.101	7.7					
30	.293	<2	<5					.122	7.6					
31	.158			.010	7.8	5	<5	.097	7.6	7.8	2.85	7	2.6	
AVG.[1]	0.249	• 5	<5	0.087	7.8	• 3	<5	0.088	7.5	• 6	2.0	• 5	1.7	• 1
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

0259505

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of October 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100mL	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	0.68	0.003	0.026	0.010	1.43	4.7	8.4		7.3				
2	.54	Comp.	Comp.	Comp.	.72	14.4	7.9		7.1				
3	.50	8/1-	7/1-	7/1-	.80	18.1	8.1		6.0	0.9	510	126	4.1
4	.54	8/31/84	7/31/84	7/31/84	.88	14.4	7.9	30	6.8				
5	.46				.94	16.3	7.9		6.0				
6	.44				.77	15.0	7.4		7.7				
7	.58				.74	20.1	7.7		5.7				
8	1.38				2.42	11.4	7.6		7.8				
9	.86				1.09	10.8	7.8		5.1				
10	.80				1.18	12.8	7.6		6.9				
11	.42				.69	9.3	7.5	80	5.6	0.33	330	85	4.8
12	.48				1.11	11.9	7.7		5.6				
13	.44				.77	13.8	7.2		3.9				
14	.68				.88	13.5	7.3		4.3				
15	.94	0.006	0.038	<0.010	1.45	10.4	7.4		4.8				
16	.72	Comp.	Comp.	Comp.	.94	12.6	7.5	80	4.4				
17	.56	9/1-	8/1-	8/1-	.85	12.2	7.5		4.8				
18	.14	9/30/84	8/31/84	8/31/84	.35	6.7	7.7		9.7				
19	.42				.58	0.6	8.0		6.5	1.79	330	71	8.8
20	.58				.64	8.8	7.3		4.9				
21	.58				.80	9.9	7.5		7.2				
22	1.54				2.89	6.8	7.6		8.4	0.55	270	63	11.6
23	1.98				2.41	11.4	7.7		7.0				
24	1.08				1.17	8.8	7.8		5.4				
25	.74				.79	7.1	7.7	100	5.6				
26	1.62				1.91	4.7	7.7		6.5				
27	.96				1.47	5.3	7.5		5.7				
28	.94				1.60	6.9	7.1		6.3				
29	1.68				2.07	3.9	7.7		7.6				
30	1.58				1.97	4.8	7.8		8.1	2.00	200	140	15.4
31	1.32				1.18	9.0	7.8		5.7				
AVG.[1]	0.84				1.21	10.2		66 [2]	6.3	1.1	328	97	8.9
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.
[2] Monthly geometric mean.
[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0257506

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of October 1984

-4944

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	750		60	40	74	12119	988		186	3956		
2	700		67	31	74	12315	636		213	2584		
3	620		75	50	75	12109	600	350	320	2644		
4	600		72	44	75	11494	621		226	3230		
5	600		74	54	76	11289	629		213	3633		
6	625		70	54	76	11576	642		293	3391		
7	600	.81	65	59	76	9852	600		239	4764		
8	680		70	59	79	9810	600		173	2584		
9	850		74	59	75	10180	2119		266	2624		
10	660		77	59	75	9852	713	305	501	3189		
11	650		75	58	75	11000	742		261	2019		
12	650		65	55	75	9031	636		293	3068		
13	630		69	56	75	9852	643		314	3189		
14	620	.02	77	60	75	9031	*		340	3512		
15	600		76	56	74	8210	636		202	3229		
16	520		79	58	74	7389	671		392	3230		
17	640		72	49	74	9934	742	1692	320	4198		
18	700		79	44	74	0	0		0	1292		
19	700		72	54	74	11494	600		240	2220		
20	675		68	38	74	8210	508		306	1292		
21	700	.34	69	56	75	8210	636		173	969		
22	880	.47	57	51	74	8374	706		213	1978		
23	925		54	50	74	1396	494		186	888		
24	890		64	46	75	1560	480	365	192	987		
25	870	.41	62	49	75	1601	1271		197	1009		
26	920		78	61	75	5747	1236		199	1461		
27	850		79	53	75	3489	600		266	1049		
28	800	.74	73	60	74	4105	360		213	1291		
29	3200	.02	65	50	74	4105	416		181	969		
30	3000		71	49	75	4064	706		266	1373		
31	1950		74	55	76	3694	988	1164	266	1453		
[1]	905	2.81 [2]				8036	732	775	255	2364		

NOTES: [1]Arithmetic averages except for Precipitation.
[2]Total precipitation, in inches, measured as water.
[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.
*Not pumped this date.

025950

WASTEWATER QUALITY REPORT SUMMARY
FOR
OCTOBER, 1984

Wastewater quality was acceptable for October, 1984. One NPDES violation was recorded during the month. The average daily limit for hexavalent chromium (0.004 kg/day) was exceeded for the month of October. The recorded value was 0.006 kg Cr^{+6}/day and was due to increased Clearwell flows caused by above-average rainfall during the month of October.

The average concentration of uranium at Manhole-175 was 0.84 mg/L, which is approximately 47% of the DOE guideline. Also, the average concentrations of radium-226 and radium-228 were 0.032 d/m/mL and 0.010 d/m/mL, respectively, for the period of July through August of 1984. These concentrations are both well below the target value for plant effluent (0.066 d/m/mL).

0259508

EALTH & SA TY DIVISION

2196194

ASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November, 1984

DATE	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/L	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/L	RESIDUAL CHLORINE mg/L	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (16) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.491	7.6						0.213						
2	.767	7.8						.069						
3	.574	8.1						.211						
4	.588	7.8						.217						
5	.803	8.0						.210						
6	.548	8.0						.187						
7	.514	8.1	<2	1.6	311	<5	AH	.156	5.2	0.001	0.0084	0.2905	0.0247	0.0065
8	.524	7.6						.192						
9	.547	8.0						.154						
10	.840	7.9						.192						
11	.524	8.0						.211						
12	.597	7.9						.240						
13	.504	8.4						.185						
14	.589	8.2						.270						
15	.316	7.4	6	1.2	215	<5	AH	.110	8.1	0.0004	0.0068	0.1417	0.0133	0.0054
16	.604	8.0						.300						
17	.516	8.2						.217						
18	.509	7.8						.237						
19	.888	7.7						.228						
20	.642	7.7	7	1.7	510	<5	AH	.246	10.9	0.0042	0.0117	0.3144	0.0312	0.0794
21	.537	8.2						.229						
22	.578	8.7						.268						
23	.415	8.2						.187						
24	.381	8.2						.171						
25	.379	8.2						.168						
26	.381	8.5						.166						
27	.426	8.5						.168						
28	.732	7.7	<2	0.3	222	<5	AH	.124	3.3	0.0007	0.0063	0.0959	0.0205	0.0141
29	.716	8.3						.186						
30	.576	8.2						.211						
31														
[1]	0.567		* 7	1.2	315	<5		0.197	6.9	0.002	0.008	0.21	0.022	0.026
[2]		6.5 - 10.0	60	43	3180	15	0.10		12.8	0.003	0.102	0.85	0.256	0.051
[3]			20	28	1590				6.2	0.001	0.050	0.41	0.124	0.025
[4]		6.5 - 9.0				5	0.002							

4944

0259499

TES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
AH = no testing required. Ref: Letter, Valerie Brinker to W. Hibbitts, dated November 29, 1983.

HEALTH & SA. Y DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of November 1984

	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM no/100ml
1	0.192							0.086	7.6					
2	.573			0.479	7.8	6	<5	.125	7.6					
3	.264							.099	7.7					
4	.277			.183	7.7	11	<5	.092	7.8					
5	.507			.149	7.8	<2	<5	.087	7.5					
6	.270							.091	7.7					
7	.277	3	<5					.081	7.9	11.9	0.96	3	0.9	AH
8	.228							.104	7.7					
9	.289			.029	7.8	6	<5	.105	7.7					
10	.530			.399	7.6	2	<5	.118	7.7					
11	.529			.108	7.7	<2	<5	.084	7.7					
12	.274							.083	7.8					
13	.208							.111	7.8					
14	.222							.097	7.7	15.8	1.53	4	1.5	AH
15	.109	18	<5					.097	7.6					
16	.198							.106	7.6					
17	.199							.100	7.4					
18	.192							.080	7.5					
19	.574			.009	7.8	<2	<5	.086	7.7					
20	.297	<2	<5					.099	7.7					
21	.225							.083	7.6	18.4	1.53	1	0.3	AH
22	.187							.123	7.7					
23	.164							.064	7.5					
24	.153							.057	7.7					
25	.148							.063	7.6					
26	.149							.066	7.6					
27	.157							.105	7.6					
28	.472	22	<5	.567	7.8	8	<5	.136	7.6	9	1.22	9	4.6	AH
29	.406							.124	7.7					
30	.254							.111	7.7					
31														
AVG.[1]	0.284	• 12	<5	0.240		• 8	<5	0.095	7.7	• 13	1.3	• 5	1.8	•
LIMITS 2		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS 3		30				30				20	5.0	20	5.0	1000
LIMITS 4			5		6.5 - 9.0		5							1000

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

• AH = no testing required. Ref: Letter, Valerie Brinker to W. Hibbitts, dated November 29, 1983

0259500

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of November 1984

-4944

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORIDE mg/L
1	1.32	0.004			1.18	9.1	7.8	500	6.8				
2	1.36	Comp.			1.96	2.1	7.6		6.6				
3	1.36	10/1-			1.71	5.4	7.7		7.1				
4	1.58	10/31/84			1.95	6.1	7.7		7.2				
5	2.18				2.57	3.6	7.8		7.8				
6	1.34				2.16	4.0	7.8		6.9				
7	1.38				1.66	3.4	7.8		7.5	0.81	160	123	10.6
8	1.14				1.35	3.0	7.9	200	8.5				
9	1.38				1.37	3.4	7.8		8.0				
10	1.68				2.01	3.3	7.4		8.6				
11	2.00				1.97	4.0	7.6		7.6				
12	1.60				2.35	5.5	7.8		7.7				
13	1.54				1.92	5.8	7.9	300	9.5				
14	1.56				1.51	6.5	8.2		8.4				
15	0.98				1.36	5.2	7.9		8.3	1.0	180	93	8.8
16	1.08				1.15	6.3	8.0		8.3				
17	0.88				.87	6.5	7.9		8.4				
18	1.06				.94	8.7	7.9		8.4				
19	1.96				2.61	5.4	7.9	100	9.4				
20	1.46				1.67	6.1	7.7		7.1	0.69	210	85	15.8
21	1.52				1.22	9.2	8.0		6.6				
22	1.06				1.31	9.5	7.5		8.3				
23	1.10				1.47	11.2	7.5		7.0				
24	1.28				1.66	10.8	7.9		6.4				
25	1.26				1.51	10.0	8.0		8.9				
[illegible]	1.16				1.09	7.4	8.9		6.7				
27	0.76				.73	9.1	8.5		7.0				
28	1.02				1.43	3.6	7.9		9.3	0.10	80	56	6.5
29	1.50				1.76	5.8	7.9	30	7.1				
30	0.86				1.06	6.1	8.1		6.8				
31													
AVG.[1]	1.35				1.58	6.2		155 [2]	7.7	<1	158	89	10.4
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1] Arithmetic averages except for Fecal Coliform.

[2] Monthly geometric mean.

[3] Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

0259501

HEALTH & S ETY DIVISION

WASTE WATER QUALITY REPORT: General Data

For the Month of November, 1984

-4944

499

Pag

	RIVER	PRECIPITATION	AIR TEMPERATURE		WATER TEMP. MH-175	DISSOLVED SOLIDS, mg/L						
	FLOW CFS	INCHES, AS WATER	MAXIMUM °F	MINIMUM °F	MAXIMUM °F	CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]		
1	1450	.95	71	49	76	3284	989		240	456		
2	3850		54	35	72	4269	883		234	670		
3	3000		59	32	74	4926	636		271	542		
4	3200	.72	60	55	74	4844	670		213	957		
5	6300		58	39	74	4187	777		277	711		
6	4250		49	31	72	4572	926		261	499		
7	3050		55	27	72	4043	722	944	412	487		
8	2175	.05	54	41	72	4586	488		375	459		
9	2100	.42	62	49	72	4591	671		204	501		
10	3750	.61	60	46	70	4097	604		251	757		
11	4900		41	37	70	4006	610		265	723		
12	4500		42	29	70	4462	554		337	564		
13	3950		48	25	69	4287	660		291	549		
14	3600		55	26	68	4156	557	305	304	538		
15	2575		60	44	73	4334	610		258	250		
16	2400		45	27	68	3779	435		217	542		
17	2050		45	21	68	2438	459		209	465		
18	1850	.40	38	35	66	4852	492		167	475		
19	2050		40	30	60	4973	653		240	820		
20	1950		35	22	60	4973	653		240	537		
21	1800		38	17	60	5979	548	464	431	847		
22	1720		43	15	60	5463	473		318	533		
23	1630		52	22	60	5729	456		344	360		
24	1550		57	22	60	5784	482		276	336		
25	1475		54	23	60	5645	509		331	331		
26	1400		66	32	60	5621	496		354	332		
27	1400	.59	68	41	60	6091	553		295	389		
28	3350	.51	50	30	60	5543	430	801	206	669		
29	550		50	28	60	5874	733		295	622		
30	4500		51	39	62	5757	482		335	514		
31												
AVG. [1]	2744	4.25 [2]				4772	607	629	282	548		

NOTES: [1]Arithmetic averages except for Precipitation.

[2]Total precipitation, in inches, measured as water.

[3]Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

0259502

NLO-H&S-351 (REV. 1/28/81)

WASTEWATER QUALITY REPORT SUMMARY

FOR

NOVEMBER, 1984

The overall wastewater quality for November of 1984 was acceptable; however, three (3) NPDES violations were recorded during the month. All three violations occurred at the Combined General Sump/Clearwell location and are as follows:

Suspended solids (average daily)	- actual value of 6.9 kg/day (limit - 6.2 kg/day
Copper (average daily)	- actual value of 0.026 kg/day (limit = 0.025 kg/day)
Copper (maximum daily)	- actual value of 0.079 kg/day (limit = 0.051 kg/day)

These recorded values were due largely by the increased flows from the Clearwell, resulting from the above-average amount of precipitation for the month of November.

The average concentration of uranium at Manhole-175 was 1.35 mg/L, which is 75% of the DOE guideline. It should be noted that the use of the ultraviolet disinfection unit was discontinued for the winter months (ref: Letter, Valerie Brinker to W. Hibbitts, dated November 29, 1983).

NLO, INC.
HEALTH & SAF. . DIVISION

2196193

Page 1

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1984

501

DATE	MANHOLE – 175							COMBINED GENERAL SUMP & CLEARWELL						
	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	AMMONIA (N) kg/day	NITRATE (N) kg/day	OIL & GREASE mg/l	RESIDUAL CHLORINE mg/l	FLOW 10^6 gal.	SUSPENDED SOLIDS kg/day	CHROMIUM (I6) kg/day	CHROMIUM (TOTAL) kg/day	IRON kg/day	NICKEL kg/day	COPPER kg/day
1	.420	7.9						0.166						
2	.404	7.9						.159						
3	.464	8.2	4	0.5	209	5	AH	.168	7.3	0.007	0.029	0.59	0.093	0.048
4	.483	8.8						.204						
5	.426	8.8						.160						
6	.524	8.4						.186						
7	.498	8.6						.167						
8	.477	8.5						.230						
9	.405	8.3						.160						
10	.568	8.1						.176						
11	.703	8.0	5	2.2	905	<5	AH	.173	6.9	0.007	0.019	0.20	0.056	0.023
12	.512	7.6						.177						
13	.544	7.6						.190						
14	.902	7.8						.219						
15	.506	7.8						.152						
16	.418	8.0						.173						
17	.413	9.0						.169						
18	.567	8.2						.312						
19	.464	8.0	<2	0.2	1405	<5	AH	.178	4.5	0.009	0.023	0.14	0.052	0.038
20	.639	8.2						.336						
21	.642	7.5						.196						
22	.907	7.8						.268						
23	.480	7.7						.172						
24	.420	7.7						.148						
25	.391	7.7						.186						
26	.378	7.7						.168						
27	.442	7.8	2	1.5	753	<5	AH	.189	1.4	0.008	0.023	0.06	0.019	0.016
28	.460	7.7						.179						
29	.416	7.6						.146						
30	.747	7.6						.174						
31	.735	7.6						.274						
AVG[1]	0.528		* 3	1	893	<5		0.192	5.1	0.008	0.023	0.25	0.055	0.031
LIMITS 2		6.5 - 10.0	60	43	2180	15	0.10		12.8	0.008	0.102	0.85	0.256	0.051
LIMITS 3			20	28	1590				6.2	0.004	0.050	0.41	0.124	0.025
LIMITS 4		6.5 - 9.0				5	0.002							

-4944

0259494

NOTES: [1]Arithmetic averages except for (*) which is a flow-weighted average. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River, downstream from the effluent mixing zone.
"" – no testing required. Ref: Letter, Valerie Brinker to H. W. Hibbitts, dated 11/29/83.

HEALTH & SAFE DIVISION

WASTE WATER QUALITY REPORT: NPDES Permit Parameters

For the Month of December 1984

502

4944

DATE	STORM SEWER LIFT STATION			STORM SEWER OUTFALL				SEWAGE TREATMENT PLANT						
	FLOW 10^6 gal.	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	SUSPENDED SOLIDS mg/l	OIL & GREASE mg/l	FLOW 10^6 gal.	GRAB pH	5-DAY BOD mg/l	5-DAY BOD kg/day	SUSPENDED SOLIDS mg/l	SUSPENDED SOLIDS kg/day	FECAL COLIFORM #/100 ml
1	0.224							0.100	7.5					
2	.185							.083	7.4					
3	.258	9	5					.082	7.5					
4	.212							.114	7.5					
5	.210							.107	7.5	7.5	3.0	1	0.4	AH
6	.288							.106	7.4					
7	.261							.107	7.5					
8	.210							.096	7.8					
9	.262							.099	7.6					
10	.370			0.126	7.9	12	<5	.097	7.6					
11	.507	8	<5	.052	7.8	<2	<5	.198	7.5					
12	.282							.161	7.6	7.9	4.8	1	0.6	AH
13	.343			.046	7.8	22	<5	.111	7.5					
14	.632			.162	7.6	3	<5	.223	7.4					
15	.338			.001	8.5	<2	<5	.192	7.4					
16	.247							.086	7.1					
17	.217							.088	7.5					
18	.198							.155	7.5					
19	.230	73	<5	.006	7.7	38	<5	.148	7.5	0.8	0.4	1	0.6	AH
20	.297			.015	7.9	<2	<5	.146	7.4					
21	.397			.285	8.1	30	<5	.167	7.4					
22	.590			.748	7.6	3	17	.246	7.6					
23	.284							.148	7.6					
24	.232							.122	7.6					
25	.195							.102	7.8					
26	.194							.099	7.6	14.0	5.2	2	0.7	AH
27	.226	<2	<5					.130	7.7					
28	.197							.144	7.6					
29	.194							.141	7.7					
30	.492			.605	7.7	8	<5	.186	7.7					
31	.447			.029	8.1	50	<5	.162	7.7					
AVG.[1]	0.297	• 19	<5	0.189		• 10	<6	0.133		• 7	3.4	• 1	0.6	•
LIMITS [2]		100	15		6.5 - 9.0	100	15		6.5 - 9.0	40	10.0	40	10.0	2000
LIMITS [3]		30				30				20	5.0	20	5.0	1000
LIMITS [4]			5		6.5 - 9.0		5							1000 (M.P.N. Per 100 ml)

0259495

NOTES: [1]Arithmetic average except for (•) which are flow-weighted averages. [2]NPDES "Daily Maximum". [3]NPDES "Daily Average" which means the average for the month.
[4]Ohio EPA limits which apply to the Great Miami River and Paddy's Run downstream from the effluent mixing zone.

AH = no testing required. Ref: Letter, Valerie Brinker to W. Hibbitts, dated 11/29/83

NLO, INC.
HEALTH & SAFETY DIVISION

WASTE WATER QUALITY REPORT: Radioactivity and Miscellaneous Data, MH-175

For the Month of December 1984

DATE	TOTAL URANIUM mg/L	TOTAL THORIUM mg/L	TOTAL RADIUM 226 d/m/mL	TOTAL RADIUM 228 d/m/mL	GROSS ALPHA d/m/mL	GROSS BETA d/m/mL	pH OF 24-HR COMPOSITE	FECAL COLIFORM NO/100ML	DISSOLVED OXYGEN mg/L	AMMONIA NITROGEN mg/L	NITRATE NITROGEN mg/L	CHLORIDE mg/L	FLUORID mg/l
1	1.24	0.005			1.33	9.3	7.6		6.2				
2	1.18	Comp.			1.53	12.7	7.8		6.1				
3	1.48	11/1-			1.53	10.9	8.0		6.0	0.26	290	79	8.0
4	1.04	11/30/84			1.75	10.4	8.4		8.1				
5	.82				1.08	14.3	8.8		7.3				
6	.76				1.34	11.2	8.6		6.5				
7	1.02				1.27	16.1	8.2		6.1				
8	.98				1.62	17.0	7.6		6.7				
9	1.56				2.33	17.8	7.5		6.0				
10	1.96				2.52	17.4	7.7		5.7				
11	1.84				2.87	13.6	7.7		5.3	0.81	340	173	5.3
12	1.62				1.97	20.9	7.8		5.8				
13	1.54				2.38	19.4	7.9		9.5				
14	2.58				3.05	15.2	7.6		8.5				
15	1.98				2.29	20.0	7.4		6.8				
16	1.74				2.34	26.0	7.4		5.4				
17	1.46				1.82	35.6	7.8		4.1				
18	1.82				1.48	35.3	8.5		4.7				
19	1.70				1.47	32.0	8.0		8.7	0.14	800	115	5.2
20	1.80				2.25	32.6	7.9		3.5				
21	1.40				1.68	28.4	7.6		5.2				
22	1.22				1.90	21.3	7.0		7.2				
23	1.76				2.17	28.7	7.1		5.3				
24	1.40				1.90	31.7	7.1		5.6				
25	1.16				1.52	33.8	7.2		6.5				
26	1.12				1.90	30.0	7.2		6.1				
27	1.88				2.44	22.1	8.2		10.2	0.87	450	120	2.7
28	1.22				1.43	14.7	7.3		7.7				
29	1.32				1.33	22.6	7.6		6.2				
30	1.40				1.47	17.9	7.4		9.1				
31	1.68				2.14	23.4	7.5		6.8				
AVG.[1]	1.47				1.87	21.4		[2]	6.6	0.5	470	122	5.3
LIMITS[3] OHIO EPA							6.5-9.0	200 (Mo. Geo. Mean)	>5.0 AVG. 4.0 MIN.	13	23		2.0
LIMITS[3] DOE ORDER 5480.1A	1.8	9	0.066	0.066									

NOTES: [1]Arithmetic averages except for Fecal Coliform.
[2]Monthly geometric mean.
[3]Ohio EPA limits apply in the Great Miami River, downstream from the effluent mixing zone. DOE Order 5480.1A guide values are promulgated as off-site limits but in practice are used as target values for the plant effluent.

-4944

0259496

WASTE WATER QUALITY REPORT: General Data

For the Month of December 1984

DATE	RIVER FLOW CFS	PRECIPITATION INCHES, AS WATER	AIR TEMPERATURE MAXIMUM °F	AIR TEMPERATURE MINIMUM °F	WATER TEMP. MH-175 MAXIMUM °F	DISSOLVED SOLIDS, mg/L CLEAR WELL	GEN. SUMP TO RIVER	SEWAGE PLANT EFFLUENT	STORM SEWER LIFT STATION	MH-175 [3]
1	3650		52	30	62	5549	708		346	1792
2	2900	.10	51	29	61	6253	472		340	2150
3	2375		44	27	61	6409	460		304	2115
4	2050		32	20	61	6253	1074		352	2186
5	2200	.37	27	21	61	7816	693	724	273	2222
6	1950		27	6	60	9223	419		340	2294
7	1700		23	2	59	10942	419		789	3046
8	1500		47	22	60	11724	472		1276	3584
9	1400		45	18	60	10942	561		1519	3656
10	1650	.21	51	40	58	11021	525		1086	3620
11	4500		47	39	60	9848	693		638	2437
12	3850		61	43	60	11724	1535	387	601	3297
13	3900	.25	62	46	60	12506	697		483	2509
14	7400	.13	67	44	63	10942	590		473	1842
15	10500		61	50	62	11724	584		534	2712
16	8800		68	53	63	12506	457		425	3212
17	5850		70	43	62	10943	502		395	4283
18	4600		60	38	62	11507	649		364	5663
19	3700	.15	47	32	62	12506	590	452	486	3799
20	3400		40	35	62	12115	1122		486	4301
21	3300	1.48	60	39	62	12506	590		365	2796
22	10000		50	27	60	12427	584		304	2724
23	3800		49	23	60	12466	484		413	3584
24	6000		47	29	60	12506	561		340	3656
25	4800		29	15	60	12427	649		358	4301
26	3800		42	24	60	10942	590	623	304	3727
27	3250		63	40	60	9379	555		286	2796
28	3150		69	59	62	8988	649		322	2867
29	3100	.30	67	54	63	7816	602		310	2437
30	11250	.75	54	45	61	8589	596		182	1505
31	15750	.10	53	45	62	8754	708		334	2760
AVG. [1]	4873	3.84 [2]				10,298	638	547	485	3028

NOTES: [1] Arithmetic averages except for Precipitation.

[2] Total precipitation, in inches, measured as water.

[3] Ohio EPA limit for the Great Miami River is 1500 mg/L, total, or 150 mg/L from human activity. This limit applies downstream from the effluent mixing zone.

WASTEWATER QUALITY REPORT SUMMARY

FOR

DECEMBER, 1984

The overall wastewater quality for December of 1984 was acceptable; however, four (4) NPDES violations were recorded during the month. Three of the violations occurred at the combined general sump/clearwell location and are as follows:

Total Copper (Average daily)	- actual value of 0.031 kg/day (limit = 0.025 kg/day)
Hexavalent Chromium (Average daily)	- actual value of 0.008 kg/day (limit = 0.004 kg/day)
Hexavalent Chromium (Maximum daily)	- actual value of 0.009 kg/day (limit = 0.008 kg/day)

The remaining violation occurred at the storm sewer outfall location:

Oil and grease (Maximum daily)	- actual value of 17 mg/L (limit = 15 mg/L)

All of the aforementioned violations were due largely to the increased flows associated with the heavy precipitation in December.

The average concentration of uranium at MH-175 was 1.47, which is 82% of the DOE guideline.