

PALOUSE RIVER STUDY

Latah County

Data Collected 1979

Final Summary October 1980

**Department of Health and Welfare
Division of Environment
Statehouse
Boise, Idaho 83720**

**Water Quality Summary
No. 13**

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SUMMARY OF PALOUSE RIVER STUDY

During Water Year 1979 a water quality study was conducted on the Palouse River in Latah County to determine the present water quality³ status of the river at Princeton and to obtain background information for the development of effluent limitations for the Hampton-Princeton Sewer District. The study involved monitoring one station at Princeton at a monthly frequency from October of 1978 through February 1979. The parameters included in the study were temperature, dissolved oxygen, pH, oxygen demand, bacteria, solids, nutrients, and trace inorganic toxins.

The study found water quality problems on the Palouse River at Princeton to include pH violations and bacteria violations. Trophic nutrient concentrations and iron concentrations exceeding recommended criteria were also observed occasionally. An effluent limitation evaluation for the Hampton-Princeton Sewer District has determined that secondary treatment during high stream flows will be adequate, but the District should not discharge during summer, fall and winter base flows.

DATA INVENTORY

2020041
 46 54 35.0 116 50 00.0 5
 PALOUSE RIVER AT PRINCETON
 16057 IDAHO
 PACIFIC NORTHWEST
 LOWER SNAKE RIVER BASIN
 211DSURV 760708
 0000 CLASS 00

/IYPA/AMHNI/STREAM

INDEX 1310001 002740 00290
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PARAMETER	TEMP	CENT	NUMBER	MEAN	VARIANCE	STAN DEV	COEF VAR	STAND ER	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010 WATER	TEMP	CENT	7	4.47143	58.4557	7.64563	1.70989	2.88978	21.5000	.000000	75/09/10	79/02/23
00042 ALTITUDE	FEET	AB MSL	1	2520.00					2520.00	2520.00	01/01/01	01/01/01
00061 STREAM	FLOW,	INST-CFS	2	357.900	234065	483.803	1.35178	342.100	700.000	15.8000	75/09/10	76/04/19
00070 TURB	JKSN	JTU	2	10.4500	146.205	12.0915	1.15708	8.55000	19.0000	1.90000	75/09/10	76/04/19
00076 TURB	IRBIDMR	HACH FTU	5	5.14000	37.2080	6.09984	1.18674	2.72793	16.0000	1.80000	78/10/30	79/02/23
00095 CONDUCTIVY	AT 25C	MICROMHO	6	55.5000	140.884	11.8694	.213864	4.84568	65.0000	34.0000	75/09/10	79/01/17
00116 INTNSVE	SURVEY	IDENT	6	781602-	.209E+06	.000000		.000000	781602	781602	01/01/01	79/02/23
00300 DU		MG/L	7	10.7714	1.12244	1.05945	.098358	.400435	12.0000	8.90000	75/09/10	79/02/23
00335 COD	LOWLEVEL	MG/L	3	16.1333	84.9239	9.21542	.571204	5.32052	23.5000	5.80000	78/10/30	79/02/23
00400 PH		SU	7	6.82857	.275757	.525126	.076901	.198479	7.50000	6.20000	75/09/10	79/02/23
00403 LAB	PH	SU	6	6.74999	.331103	.575416	.085247	.234913	7.60000	6.10000	75/09/10	79/02/23
00410 T ALK	CACU3	MG/L	7	27.1428	32.4766	5.69882	.209957	2.15395	36.0000	20.0000	75/09/10	79/02/23
00425 HC03 ALK	CAC03	MG/L	5	26.8000	16.2009	4.02503	.150188	1.80005	31.0000	21.0000	78/10/30	79/02/23
00430 C03 ALK	CAC03	MG/L	5	.400000	.300000	.547722	1.36931	.244949	1.00000	.000000	78/10/30	79/02/23
00500 RESIDUE	TOTAL	MG/L	7	71.9143	483.807	21.9956	.305859	8.31356	109.000	55.5000	75/09/10	79/02/23
00530 RESIDUE	TOT NFLT	MG/L	6	6.71666	56.7537	7.53351	1.12161	3.07554	19.0000	.200000	75/09/10	79/01/17
00610 NH3+NH4-	N TOTAL	MG/L	7	.064712	.002688	.051851	.801248	.019598	.122000	.002000	75/09/10	79/02/23
00615 NO2-N	TOTAL	MG/L	2	.001064	.000001	.001075	1.01015	.000760	.001824	.000304	75/09/10	76/04/19
00620 NO3-N	TOTAL	MG/L	4	.010086	.000144	.012013	1.19099	.006006	.027088	.001000	75/09/10	78/11/30
00625 TOT KjEL	N	MG/L	7	.674285	.281295	.530373	.786570	.200462	1.60000	.100000	75/09/10	79/02/23
00630 NO2&NO3	N-TOTAL	MG/L	3	.446666	.426033	.652712	1.46130	.376843	1.20000	.050000	78/12/19	79/02/23
00650 T P04	P04	MG/L	2	.155000	.008450	.091924	.593057	.065000	.220000	.090000	75/09/10	76/04/19
00665 PH05-TOT		MG/L P	7	.054286	.001162	.034087	.627914	.012884	.120000	.030000	75/09/10	79/02/23
00669 PH03-TOT	HYDRD	MG/L P	4	.030000	.000733	.027080	.902671	.013540	.070000	.010000	78/11/30	79/02/23
00680 T ORG C	C	MG/L	4	3.65000	6.37666	2.52521	.691837	1.26260	7.40000	2.10000	78/11/30	79/02/23
00900 TOT HARD	CACU3	MG/L	6	24.6667	15.4673	3.93285	.159440	1.60558	32.0000	20.0000	76/04/19	79/02/23
00916 CALCIUM	CA-TOT	MG/L	5	6.88000	1.07205	1.03540	.150494	.463045	8.00000	6.00000	78/10/30	79/02/23
00927 MGNSIUM	MG, TOT	MG/L	5	1.62800	.050121	.223877	.137517	.100121	2.02000	1.48000	78/10/30	79/02/23
00929 SODIUM	NA, TOT	MG/L	7	2.81428	.474780	.689043	.244838	.260434	3.60000	1.50000	75/09/10	79/02/23
00937 PTSSIUM	K, TOT	MG/L	7	1.41428	.251430	.501428	.354545	.189522	2.10000	.600000	75/09/10	79/02/23
00940 CHLORIDE	CL	MG/L	7	3.04285	12.5029	3.53594	1.16205	1.33646	11.0000	1.10000	75/09/10	79/02/23
00945 SULFATE	SO4-TOT	MG/L	5	10.0000	.000000	.000000		.000000	10.0000	10.0000	78/10/30	79/02/23
00951 FLUORIDE	F, TOTAL	MG/L	4	.115000	.000100	.010000	.086956	.005000	.120000	.100000	78/10/30	79/01/17
00956 SILICA	TOTAL	MG/L	4	24.3500	43.3966	6.58676	.270539	3.29381	53.3000	19.1000	78/10/30	79/02/23
01002 ARSENIC	AS, TOT	UG/L	5	10.0000	.000000	.000000		.000000	10.0000	10.0000	78/10/30	79/02/23
01022 BORON	B, TOT	UG/L	2	115.000	2450.00	49.4975	.430413	35.0000	150.000	80.0000	78/11/30	79/01/17
01025 CADMIUM	CD, DISS	UG/L	4	4.00000	4.00000	2.00000	.500000	1.00000	5.00000	1.00000	78/11/30	79/02/23
01027 CADMIUM	CD, TOT	UG/L	5	3.40000	4.80002	2.19089	.644381	.979798	5.00000	1.00000	78/10/30	79/02/23
01032 CHROMIUM	HEX-VAL	UG/L	4	50.0000	.000000	.000000		.000000	50.0000	50.0000	78/11/30	79/02/23

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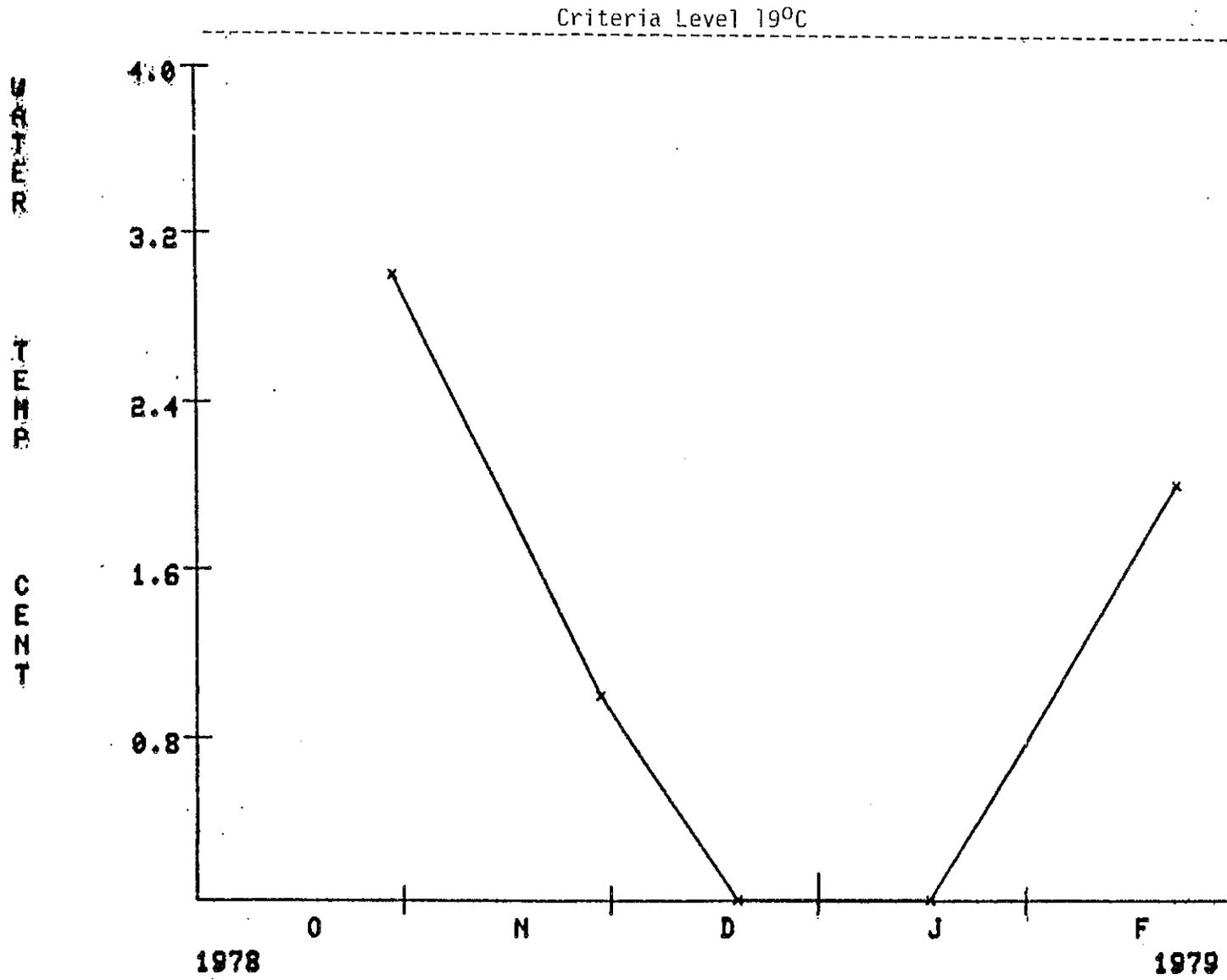
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PARAMETER

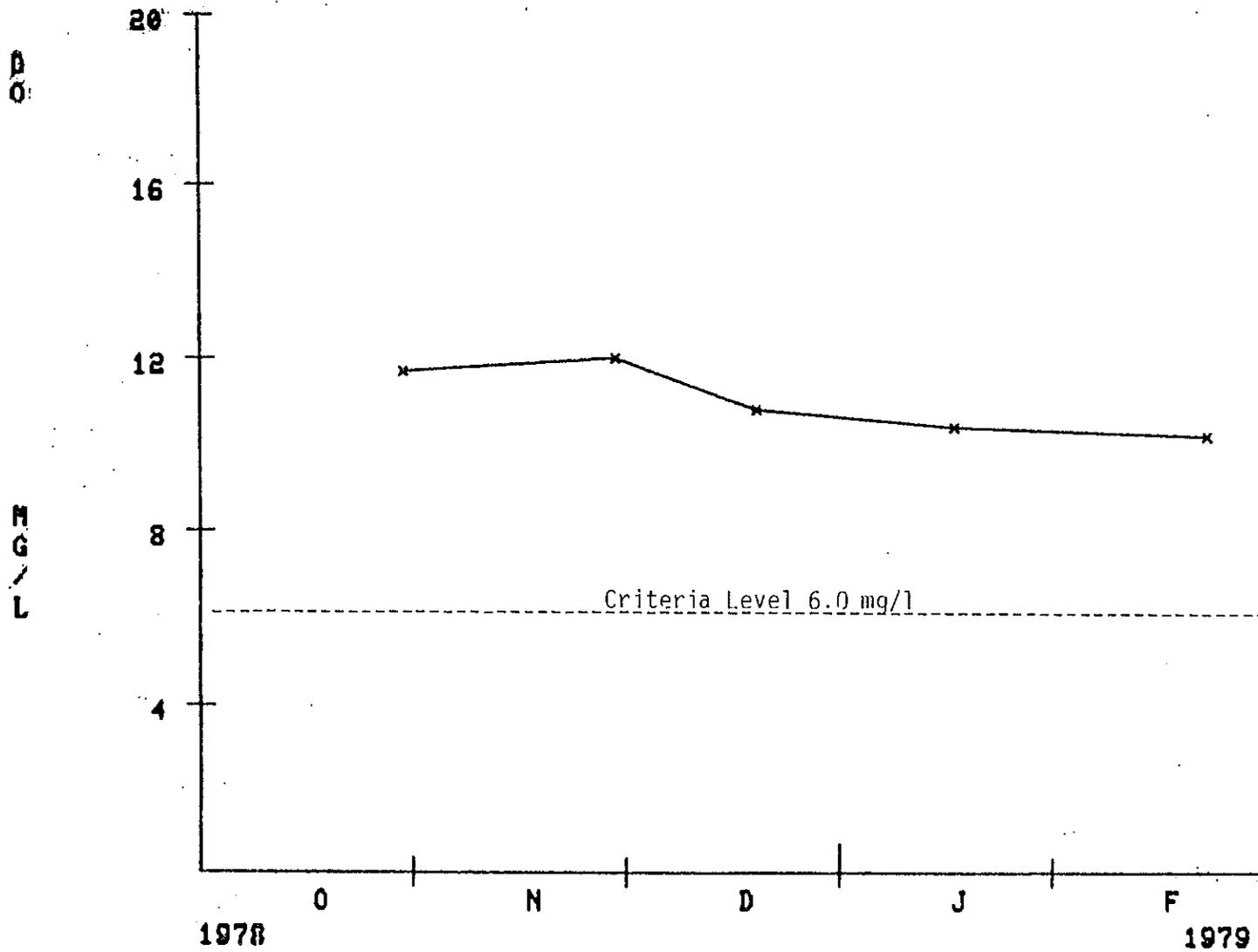
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01034 CHROMIUM CR,TOT UG/L	4	50.0000	.000000	.000000		.000000	50.0000	50.0000	78/11/30	79/02/23
01040 COPPER CU,DISS UG/L	4	10.0000	.000000	.000000		.000000	10.0000	10.0000	78/11/30	79/02/23
01042 COPPER CU,TOT UG/L	5	10.0000	.000000	.000000		.000000	10.0000	10.0000	78/10/30	79/02/23
01045 IRON FE,TOT UG/L	6	740.000	370040	608.966	.822927	248.609	1870.00	100.000	75/09/10	79/02/23
01049 LEAD PB,DISS UG/L	4	50.0000	.000000	.000000		.000000	50.0000	50.0000	78/11/30	79/02/23
01051 LEAD PB,TOT UG/L	5	50.0000	.000000	.000000		.000000	50.0000	50.0000	78/10/30	79/02/23
01055 MANGNESE MN UG/L	7	21.4286	347.620	18.6446	.870080	7.04698	60.0000	10.0000	75/09/10	79/02/23
01075 SILVER AG,DISS UG/L	4	1.00000	.000000	.000000		.000000	1.00000	1.00000	78/11/30	79/02/23
01077 SILVER AG,TOT UG/L	5	1.00000	.000000	.000000		.000000	1.00000	1.00000	78/10/30	79/02/23
01090 ZINC ZN,DISS UG/L	4	13.7500	650.250	25.5000	1.85454	12.7500	52.0000	1.00000	78/11/30	79/02/23
01092 ZINC ZN,TOT UG/L	4	14.5000	729.000	27.0000	1.86207	13.5000	55.0000	1.00000	78/11/30	79/02/23
01501 ALPHA TOTAL PC/L	2	.500000	.020000	.141421	.282843	.100000	.600000	.400000	78/11/30	79/01/17
03501 BETA TOTAL PC/L	2	3.02000	1.92081	1.38593	.458918	.980002	4.00000	2.04000	78/11/30	79/01/17
31501 TOT COLI MFIMENDU /100ML	5	5080.00	.404E+08	6363.18	1.25259	2845.70	15000.0	620.000	75/09/10	79/02/23
31616 FEC COLI MFH-FCHR /100ML	6	36.0000	982.400	31.3433	.870646	12.7958	90.0000	6.00000	75/09/10	79/02/23
31679 FECSTREP MF M-ENT /100ML	5	22.4000	194.800	13.9571	.623084	6.24180	36.0000	4.00000	78/10/30	79/02/23
70300 RESIDUE DISS-180 C MG/L	4	48.0000	27.2083	5.21616	.108670	2.60808	54.0000	41.9000	78/10/30	79/01/17
70507 PHOS-P DRIND MG/L P	6	.023427	.000001	.028300	1.20803	.011553	.080000	.003260	75/09/10	79/02/23
71900 MERCURY HG,TOTAL UG/L	4	.500000	.000000	.000000		.000000	.500000	.500000	78/10/30	79/02/23

GRAPHICS

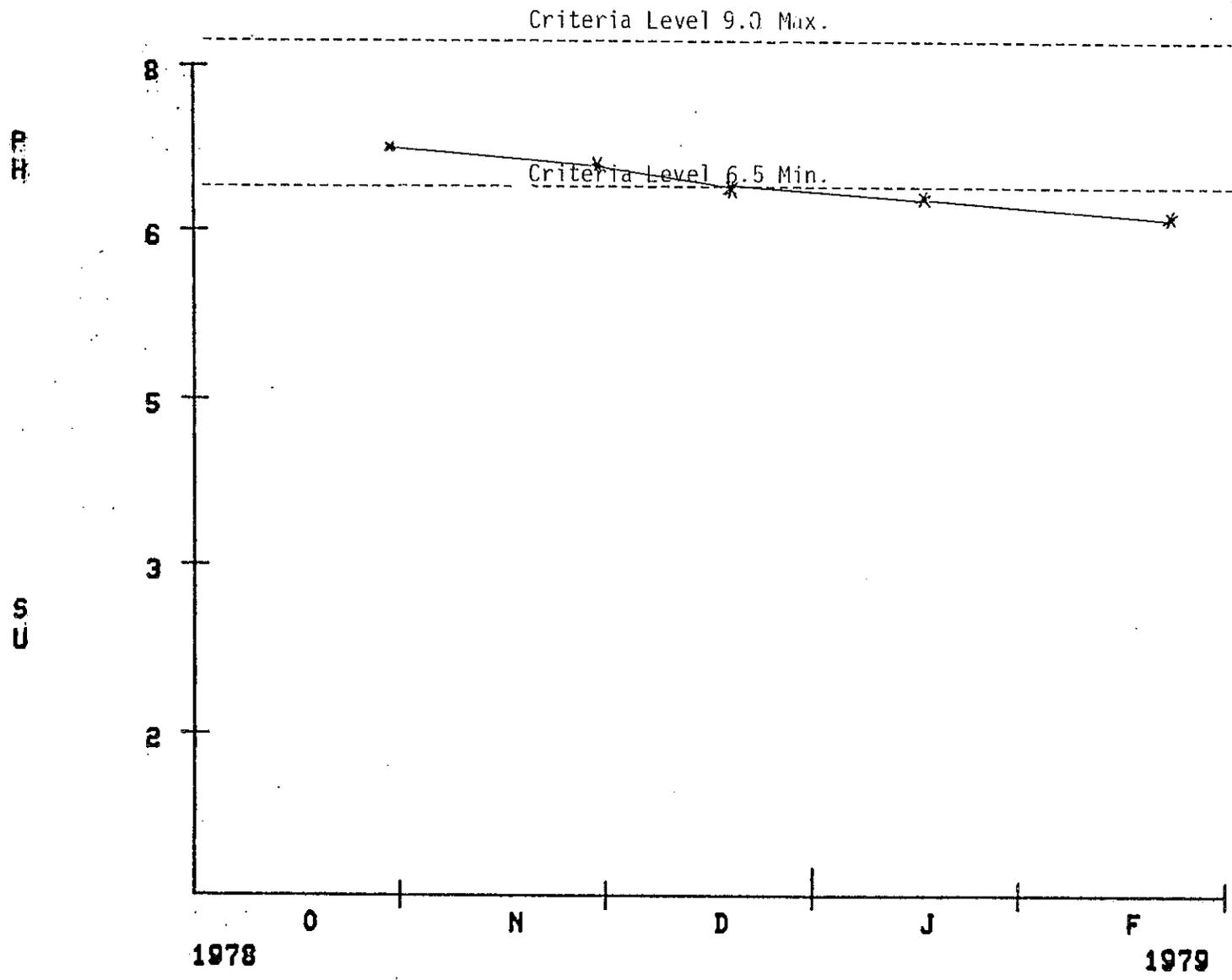
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PALOUSE RIVER AT PRINCETON



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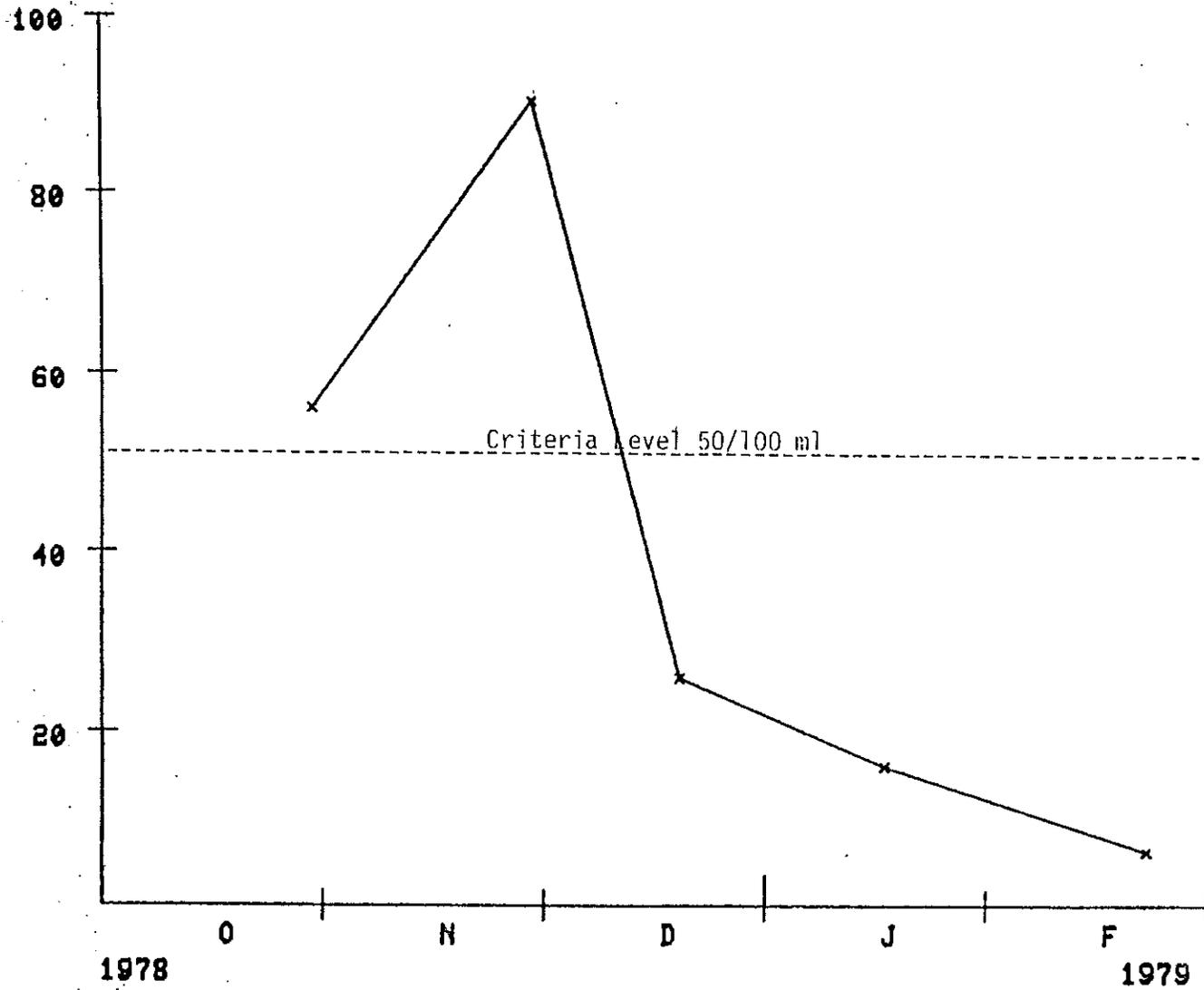


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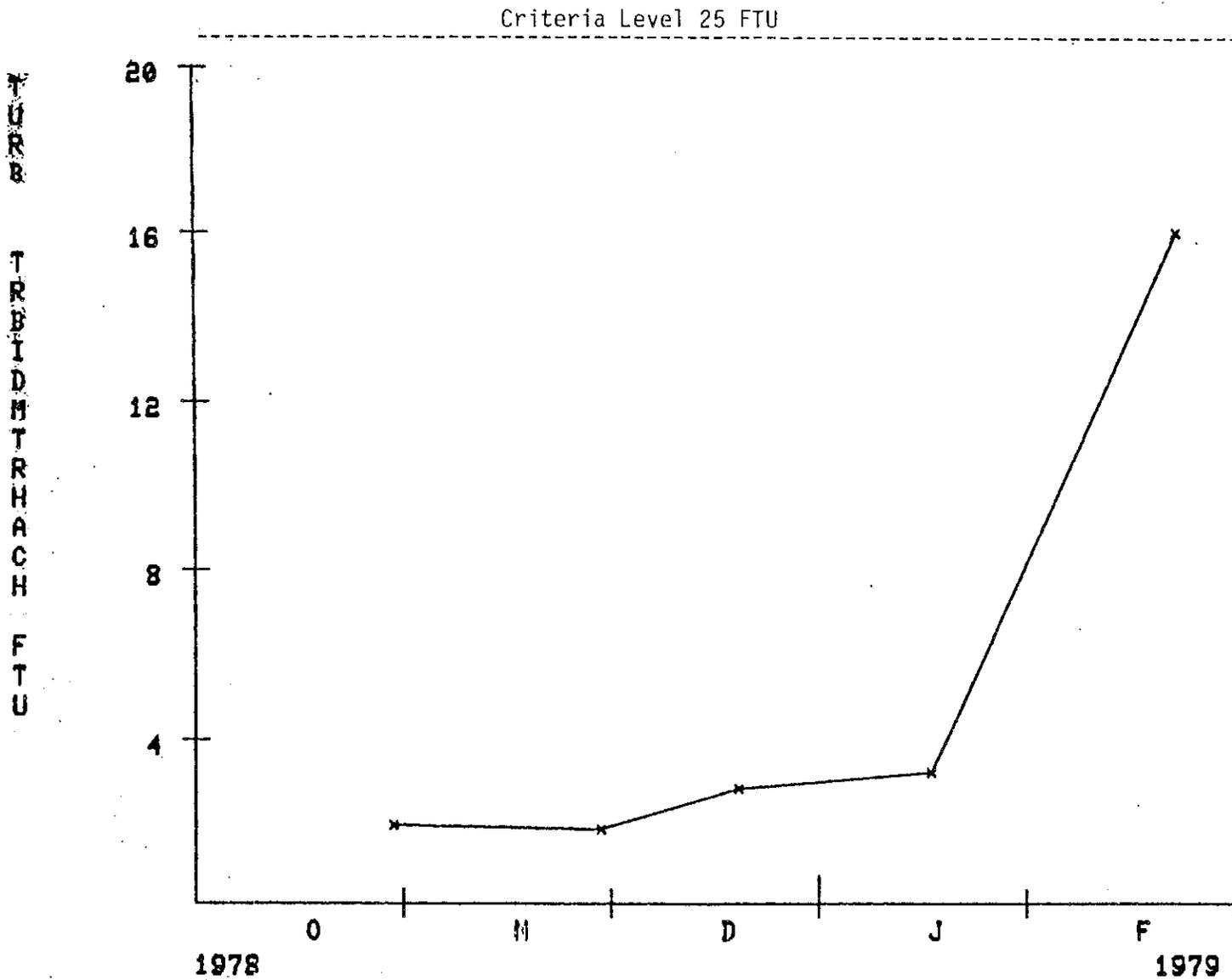


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TEMPERATURE / 100 ML

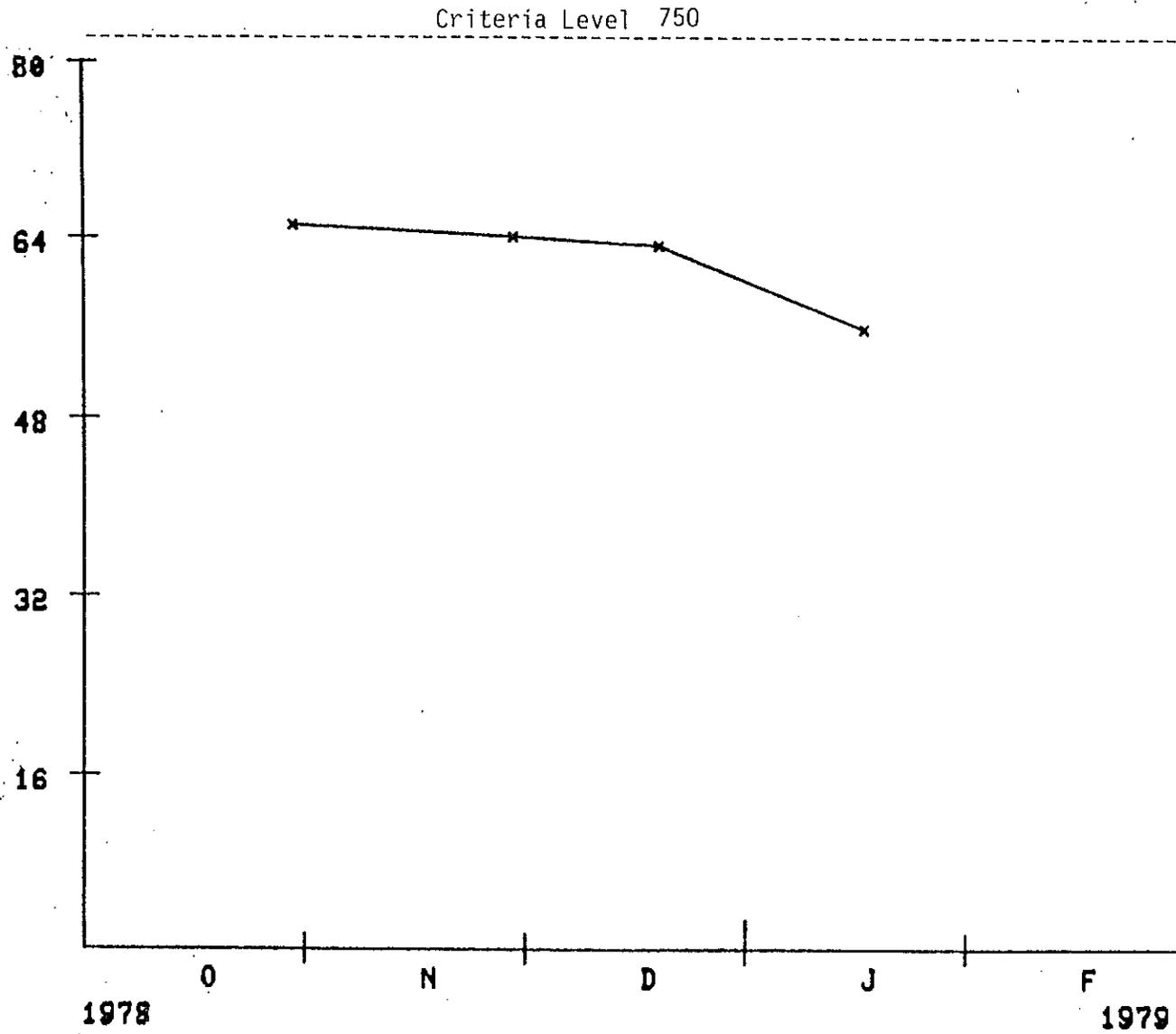


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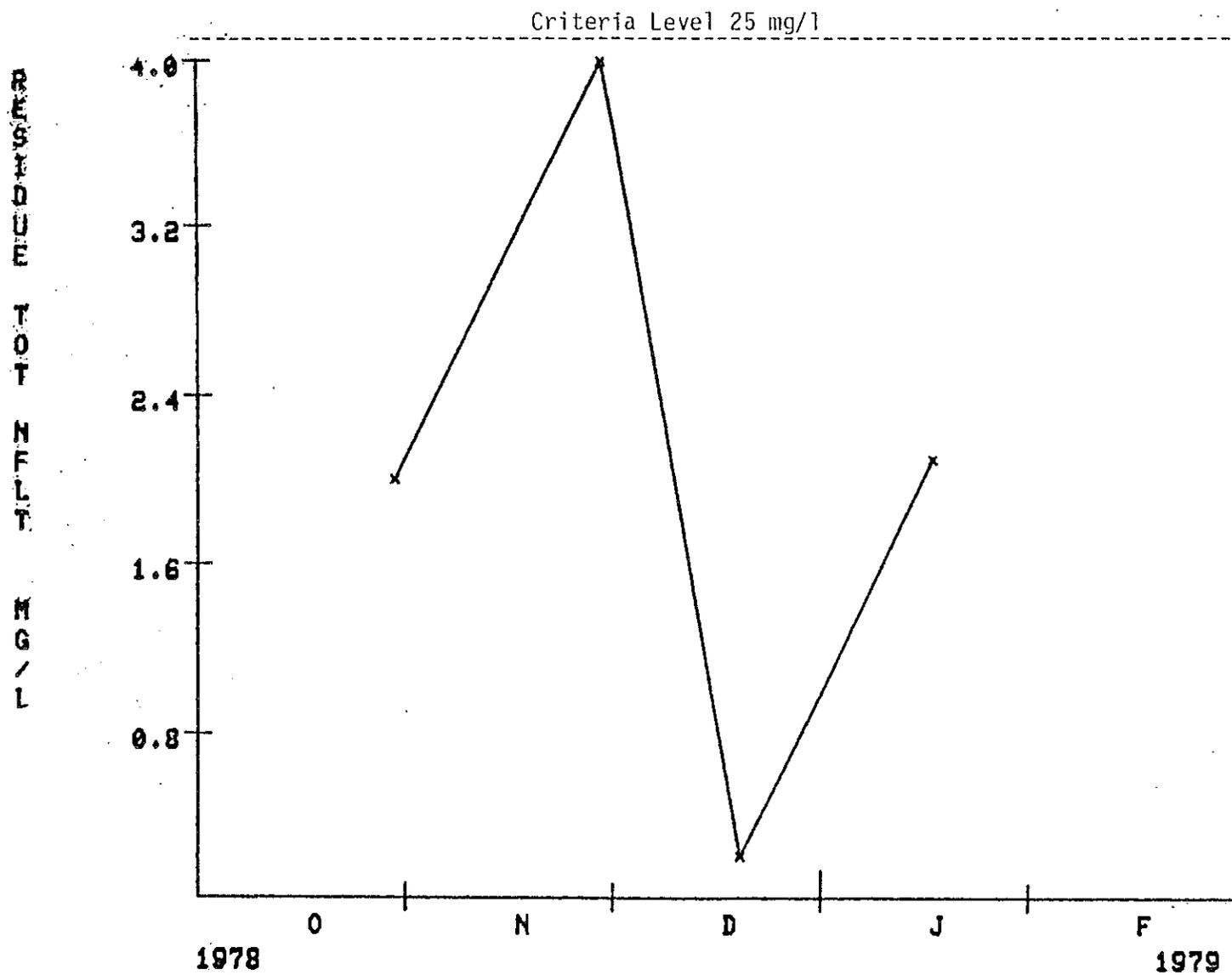


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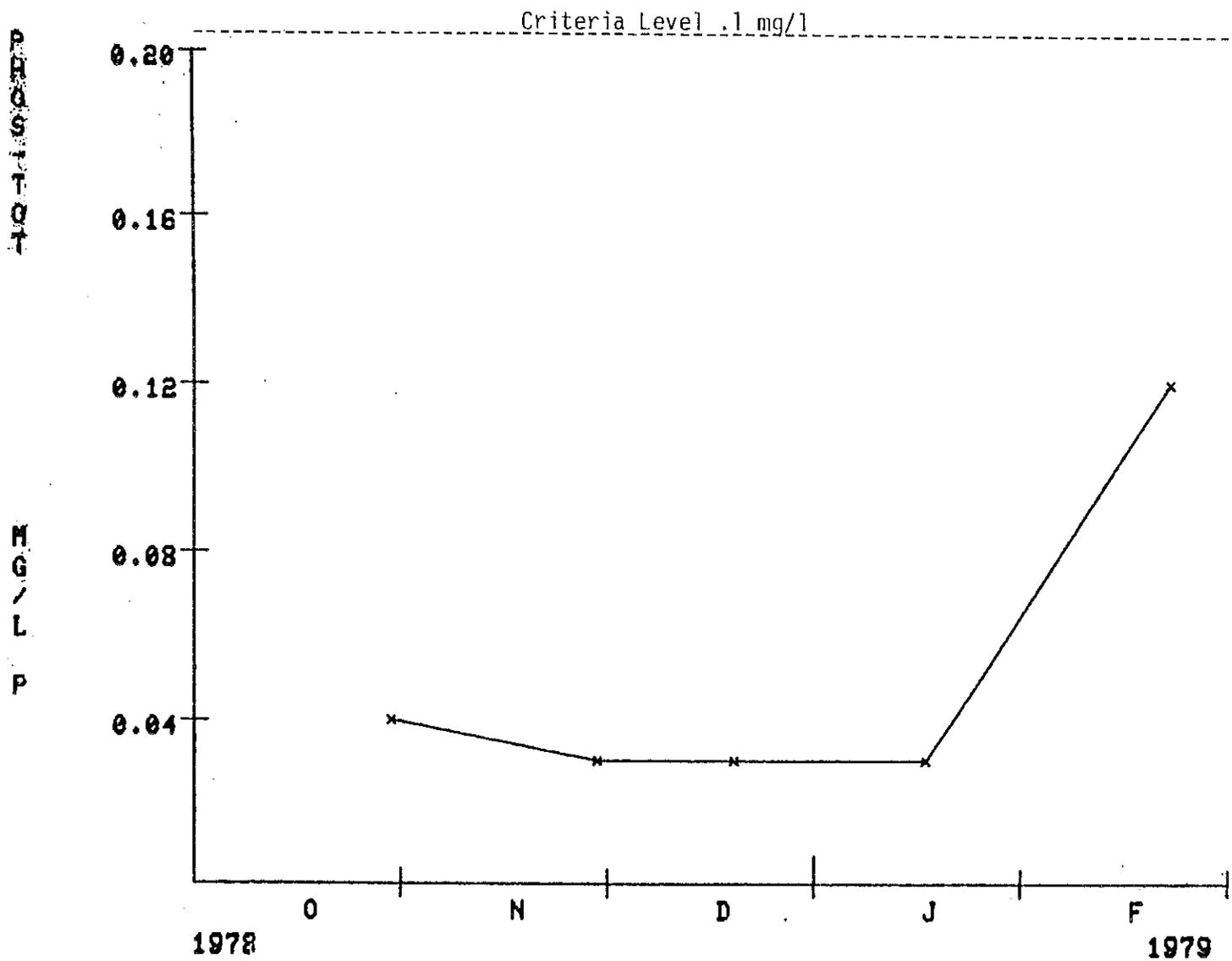
CHLOROPHYLL A
MICROPHOTOMETRIC



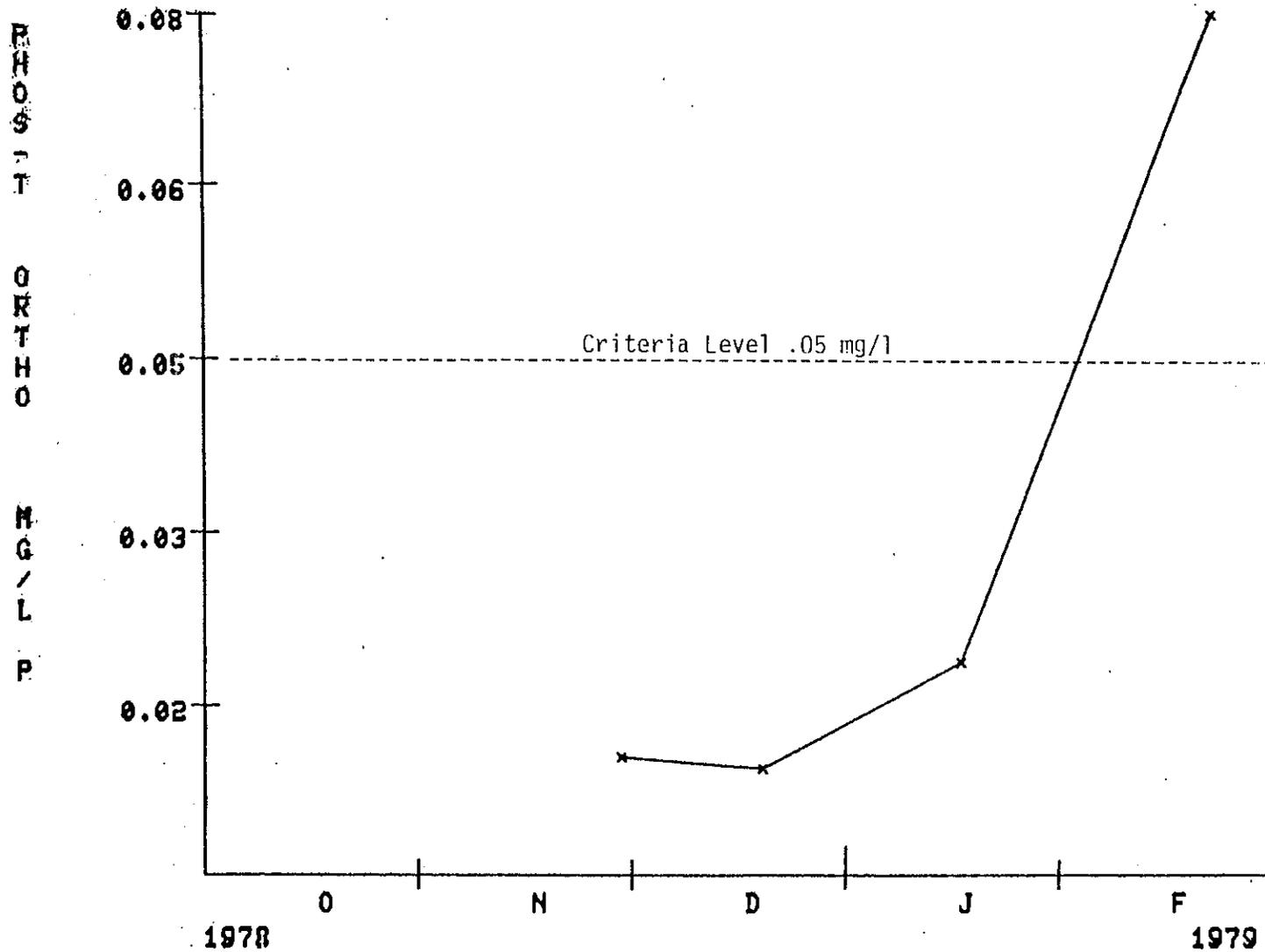
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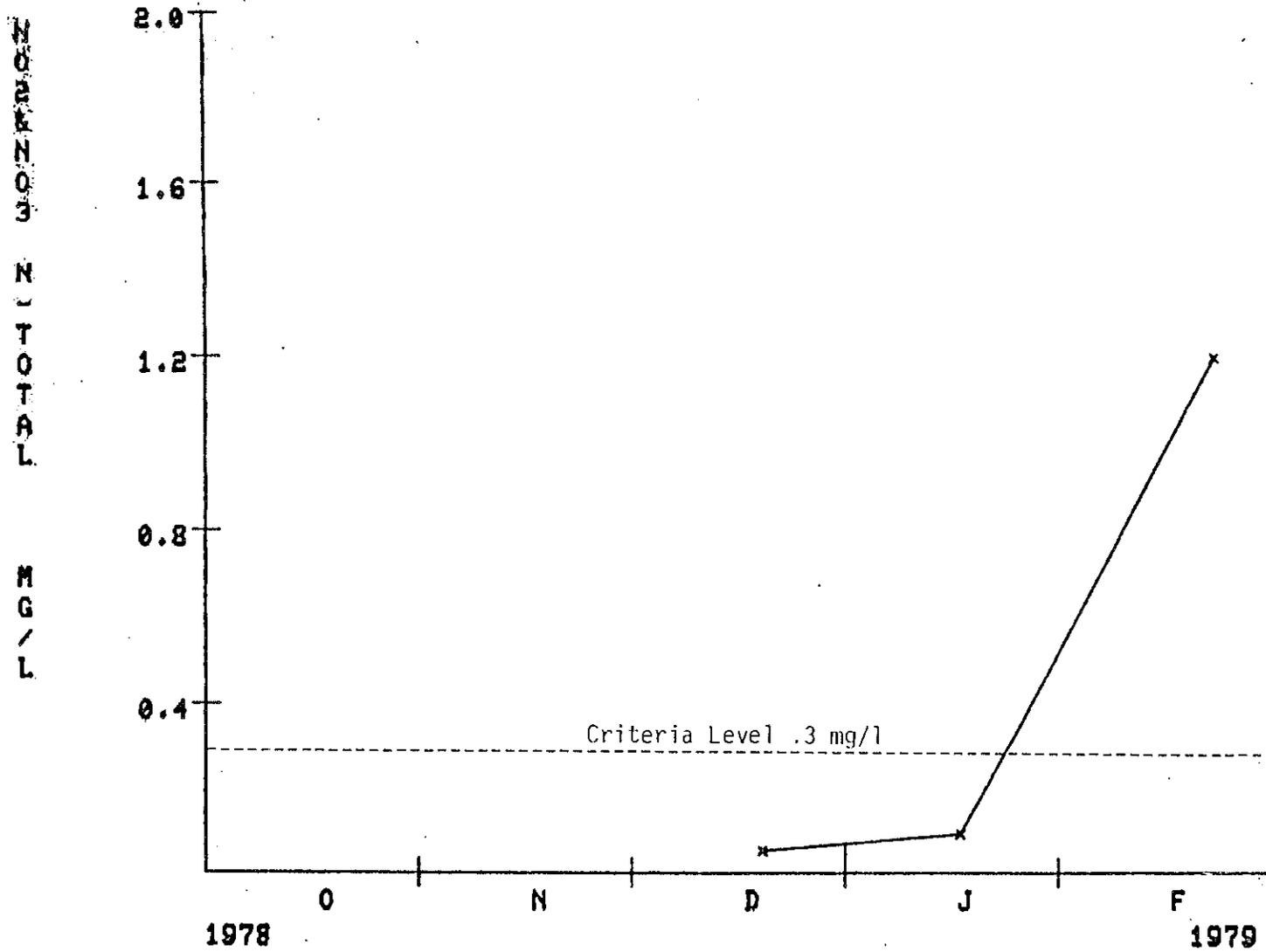
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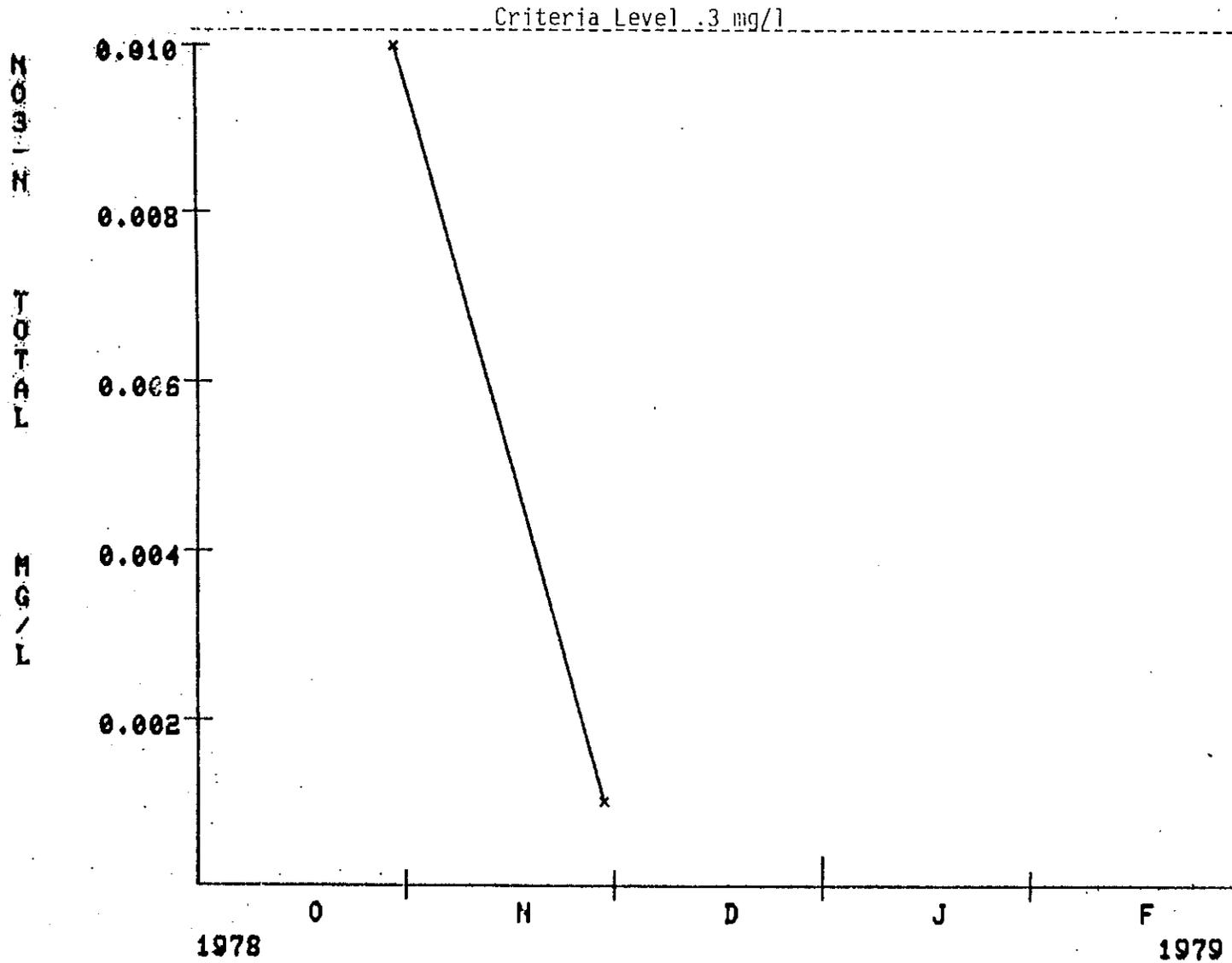
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