1981 ATMOSPHERIC LOADING FOR LAKE ERIE

BY

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for

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Introduction

To determine atmospheric loadings of nutrients and metals to Lake Erie, the U.S. EPA's Great Lakes National Program Office operates eight (8) automatic sensing wet/dry precipitation collectors. The collectors are located at the following places (see Figure 1):

	Site I.D.	SAROAD Number
1) in New York at		
a) Dunkirk	KQ	33 1600 099
b) Grand Island (Buffalo)	LQ	33 2000 099
2) in Ohio at		
a) Ashtabula	JQ	36 0200 099
b) Fairport Harbor	IQ	36 2100 001
c) Lorain	HQ	36 3620 014
d) Put-In-Bay, South Bass Island	GQ	36 5260 001
e) Toledo (Oregon Sewage Treatment Plant)	FQ	36 3720 002
3) in Pennsylvania at		
a) Erie	SQ	39 3060 099

During 1981 four of these eight sites were operational. Because of equipment malfunctions and inconsistencies in data reporting (see plots of precipitation and loadings), the data from Lorain was rejected. As a result annual isopleths of atmospheric loadings for 1981 were drawn based on three GLAD Network sites: Toledo (Oregon Sewage Treatment Plant); Put-In-Bay (South Bass Island); and Fairport Harbor (See Figures 2-9).

Methods

The precipitation sample was collected and forwarded to a contractor at the USEPA, Region V, Central Regional Laboratory for nutrients and metals analyses. The nutrients for which an analysis is performed include nitrates, total Kjeldahl nitrogen (TKN), ammonia, total phosphorus, total organic carbon (TOC), sulfate, chloride, and silica. Each precipitation sample was also analyzed for the following metals: aluminum, barium, beryllium, boron, cadmium, calcium, chromium, cobolt, copper, iron, lead, lithium, magnesium, manganese, mercury, nickel, potassium, silver, sodium, strontium, titamium, vanadium, and zinc.

Computational Techniques

Once their concentrations were known, the atmospheric loadings for each of the nutrient parameters were calculated in mg/m^2 (or Kg/Km^2). Addition of the 1981 weekly loadings by site gave an estimate of the loadings for the year. As was done with the nutrients, the atmospheric loadings of the various metals can be determined using the product of the weekly wet sample volume (ml) and the concentration of each parameter (ug/l). These loadings were expressed in ug/m^2 or g/Km^2. Addition of the weekly loadings at each of the three sites provided an estimate of the annual metals loadings to Lake Erie for 1981 (Table 2). Table 3 is a summary of the annual atmospheric loadings of nutrients and metals at each of the three sites.

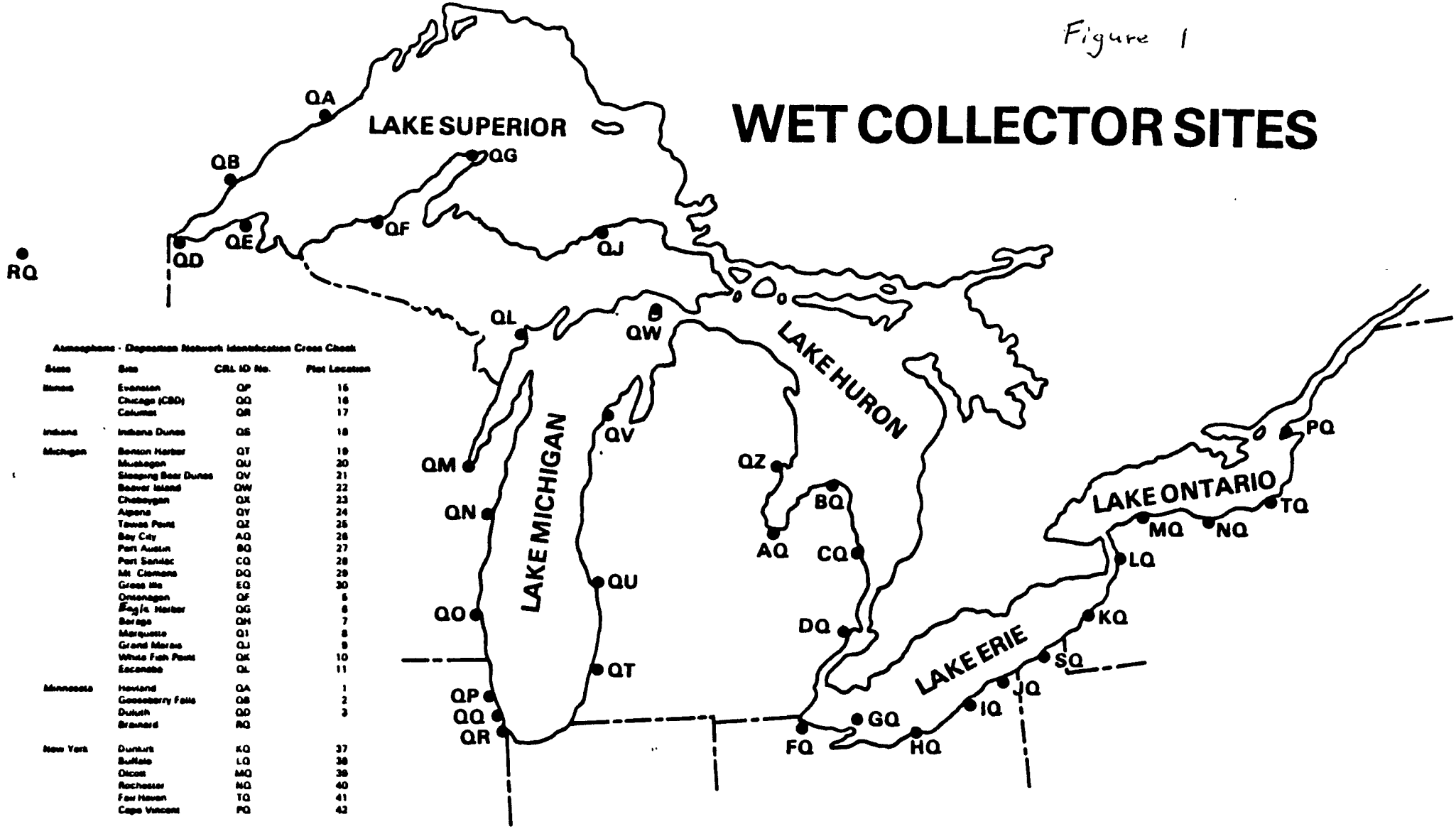
Results

Figures 2-9 are isopleths of the 1981 annual loadings of nitrates, ammonia, total phosphorus, total organic carbon, sulfates, chlorides, cadmium, and lead over Lake Erie based upon the GLAD Network measurements and the annual wind flow patterns. Also attached are the plots of weekly rainfall amounts, nutrients loadings, and metals loadings at each of the four sites (Fairport Harbor, Lorain, Toledo, and Put-In-Bay). These plots are a graphical representation of selected parameters in Table 2).

The area of Lake Erie is 25,657 Km^2. Estimates of the atmospheric loadings to the lake can be made using the 1981 data from the U.S. and Canadian atmospheric deposition networks.

Figure 1

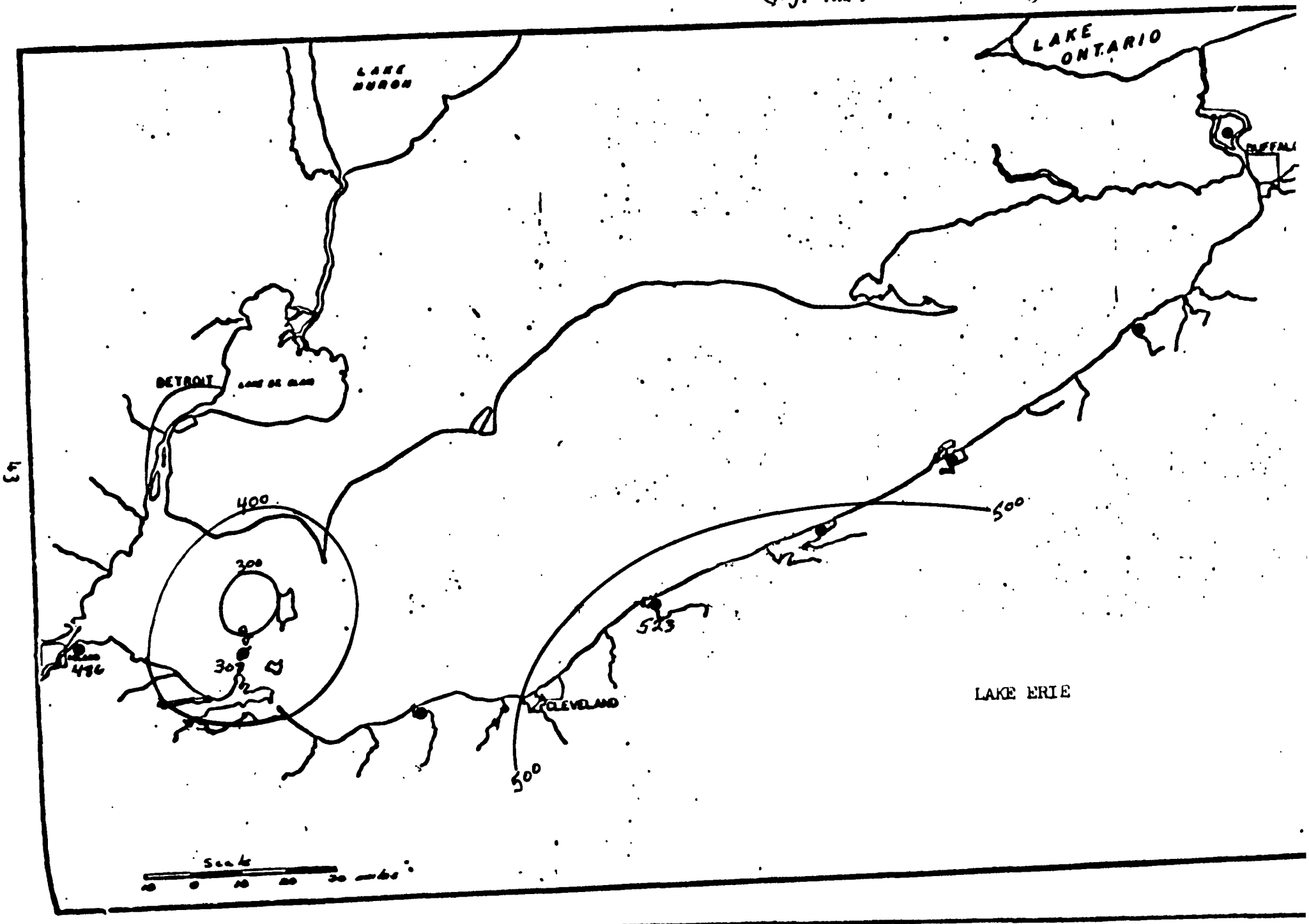
WET COLLECTOR SITES



Atmospheric - Deposition Network Identification Cross Check

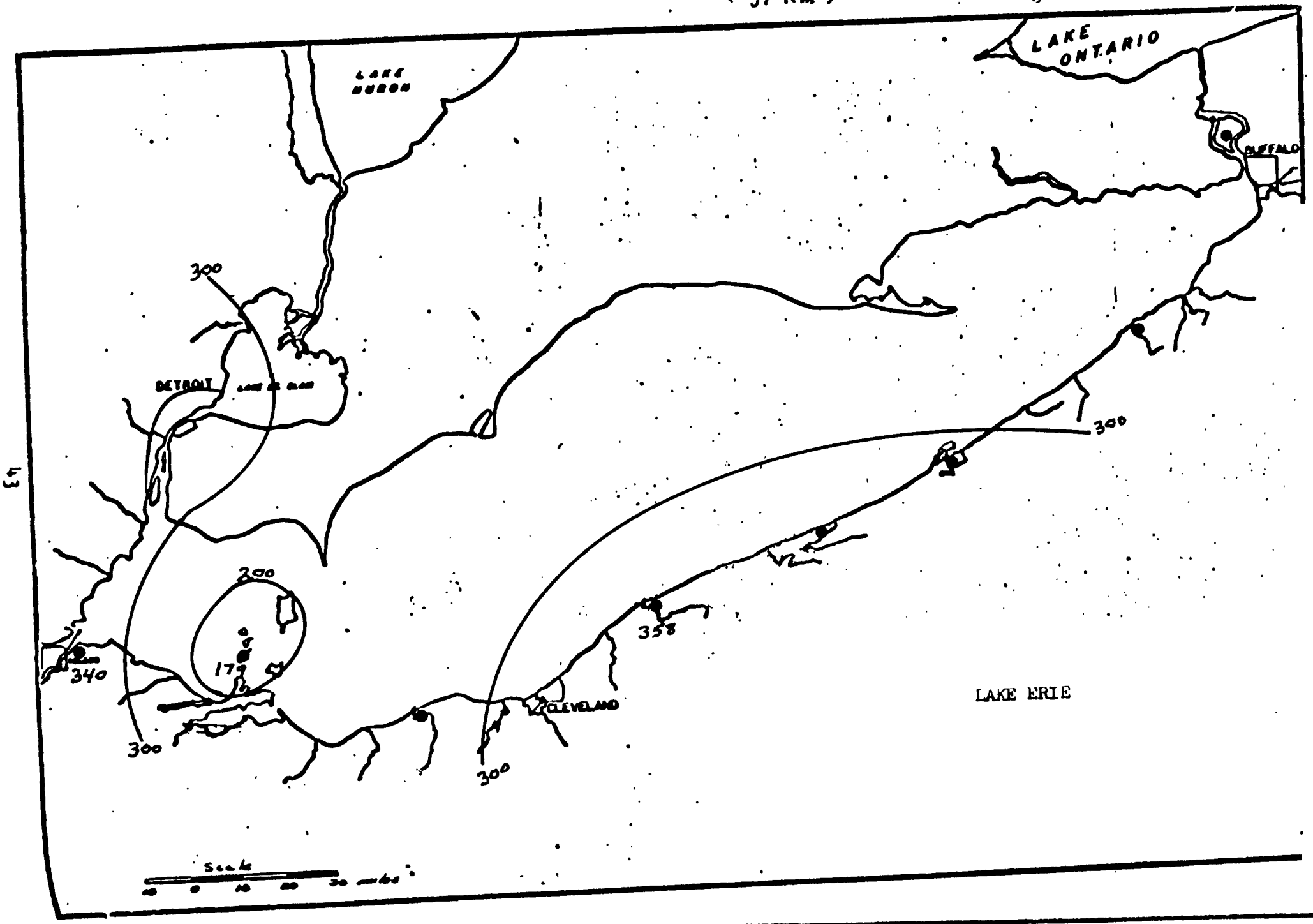
State	Site	CRL ID No.	Plot Location
Illinois	Evanston	QP	15
	Chicago (CBD)	QQ	16
	Calumet	QR	17
Indiana	Indiana Dunes	QS	18
Michigan	Benton Harbor	QT	19
	Muskegon	QU	20
	Sleeping Bear Dunes	QV	21
	Beaver Island	QW	22
	Cheboygan	QX	23
	Alpena	QY	24
	Tawas Point	QZ	25
	Bay City	AQ	26
	Port Austin	BQ	27
	Port Sanilac	CQ	28
	Mt. Clemens	DQ	29
	Grosse Ile	EQ	30
	Ontonagon	QF	5
	Eagle Harbor	QG	6
	Baraga	QH	7
	Marquette	QI	8
	Grand Marais	QJ	9
	White Fish Point	QK	10
	Escanaba	QL	11
Minnesota	Hovland	QA	1
	Gooseberry Falls	QB	2
	Duluth	QC	3
	Brainerd	RQ	
New York	Dunkirk	KQ	37
	Buffalo	LQ	38
	Olcott	MQ	39
	Rochester	NQ	40
	Fair Haven	TQ	41
	Cape Vincent	PQ	42
Ohio	Toledo	FQ	31
	Put-in-Bay	GQ	32
	Lorain	HQ	33
	Fairport Harbor	IQ	34
	Conneaut	JQ	35
Pennsylvania	Erie	SQ	36
Wisconsin	Cornucopia	QE	4
	Green Bay	QM	12
	Manitowoc	QN	13
	Milwaukee	QO	14

(Kg/Km²) Figure 2



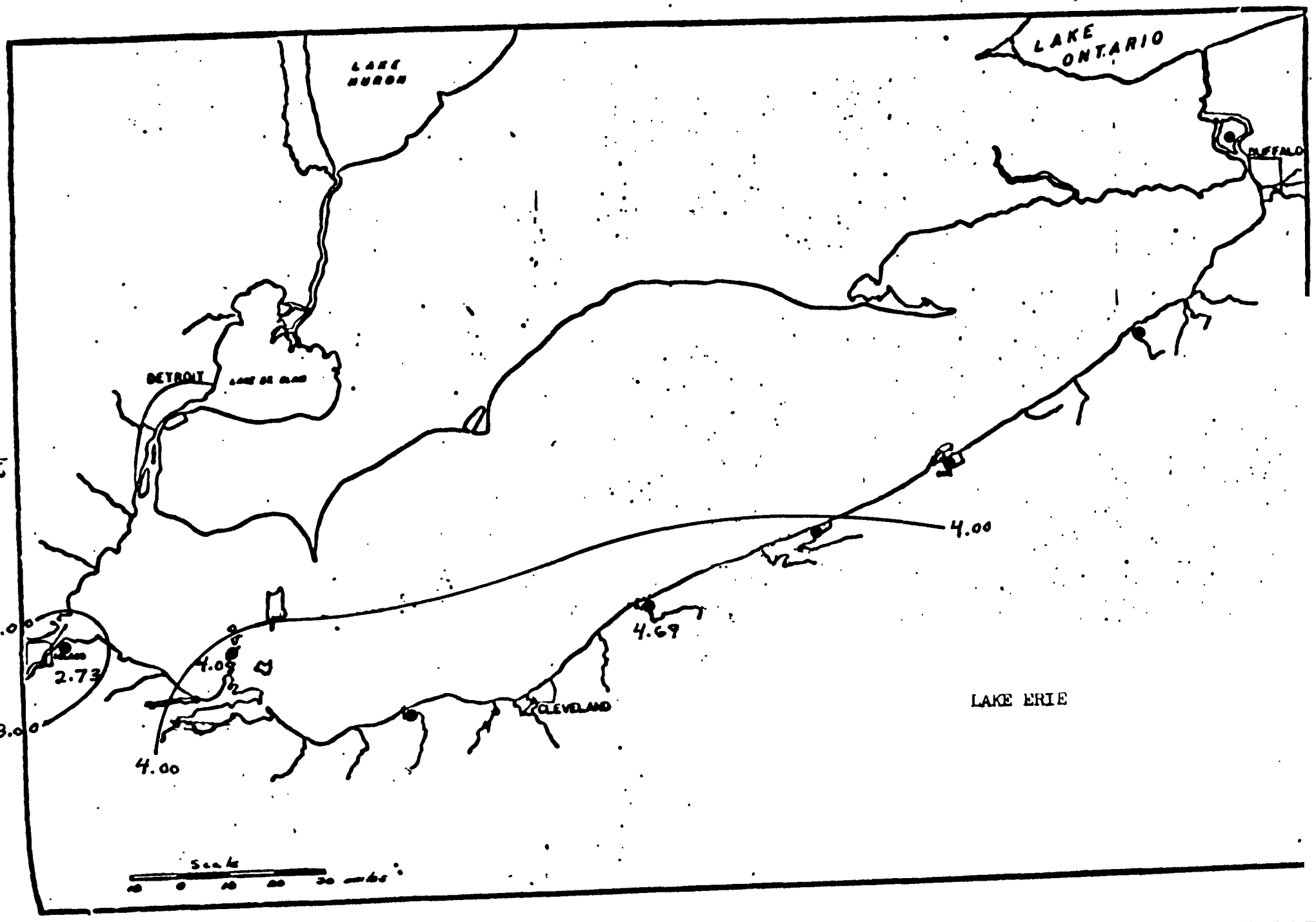
(Kg/Km²)

Figure 3



(Kg/Km²)

Figure 4



(Kg/Km²)

Figure 5

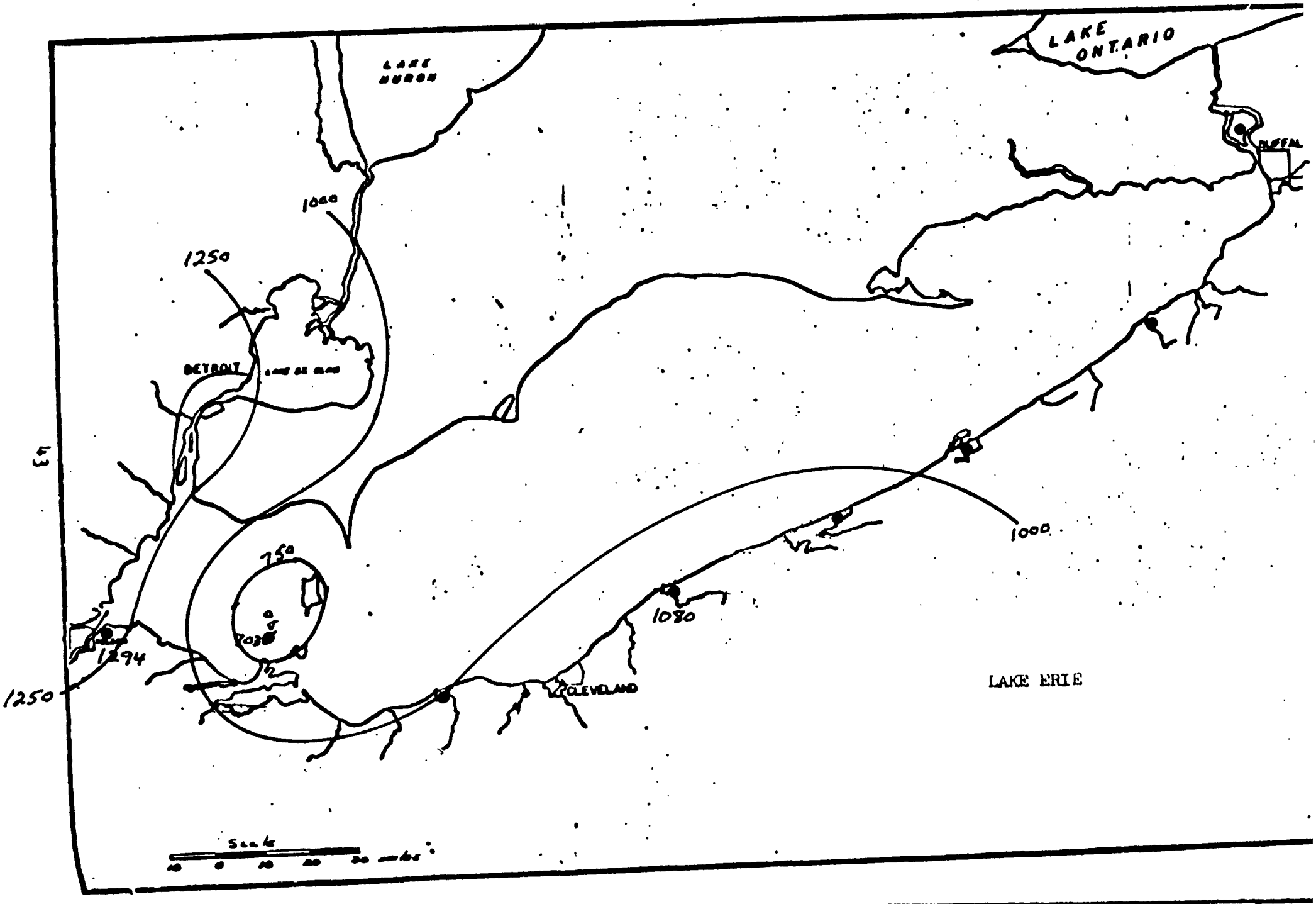
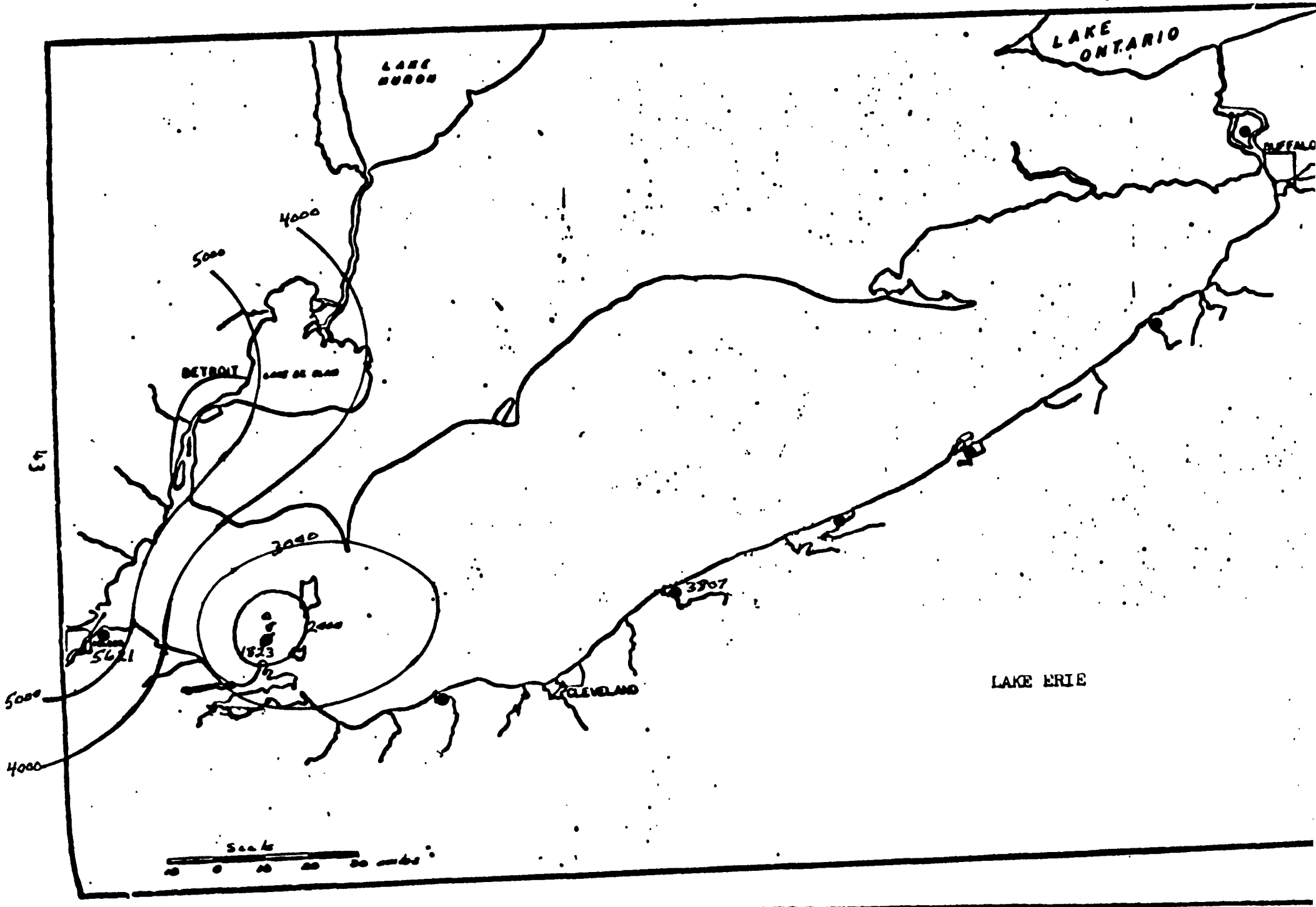
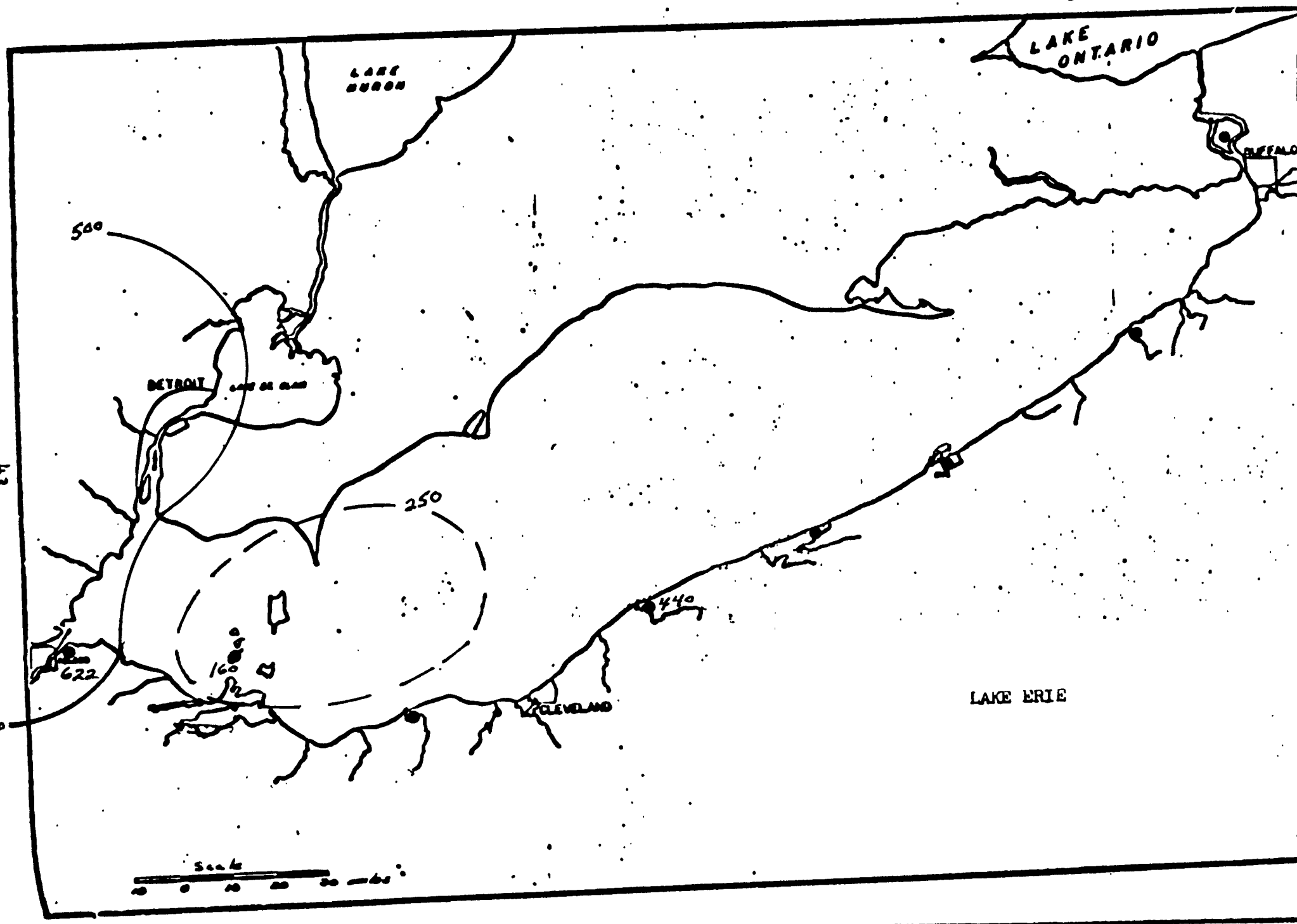


Figure 6


LAKE ONTARIO
LAKE HURON
BUFFALO
DETROIT
LAKE ST CLAIR
4000
5000
3000
2000
1823
5621
3207
CLEVELAND
LAKE ERIE
5000
4000
Scale

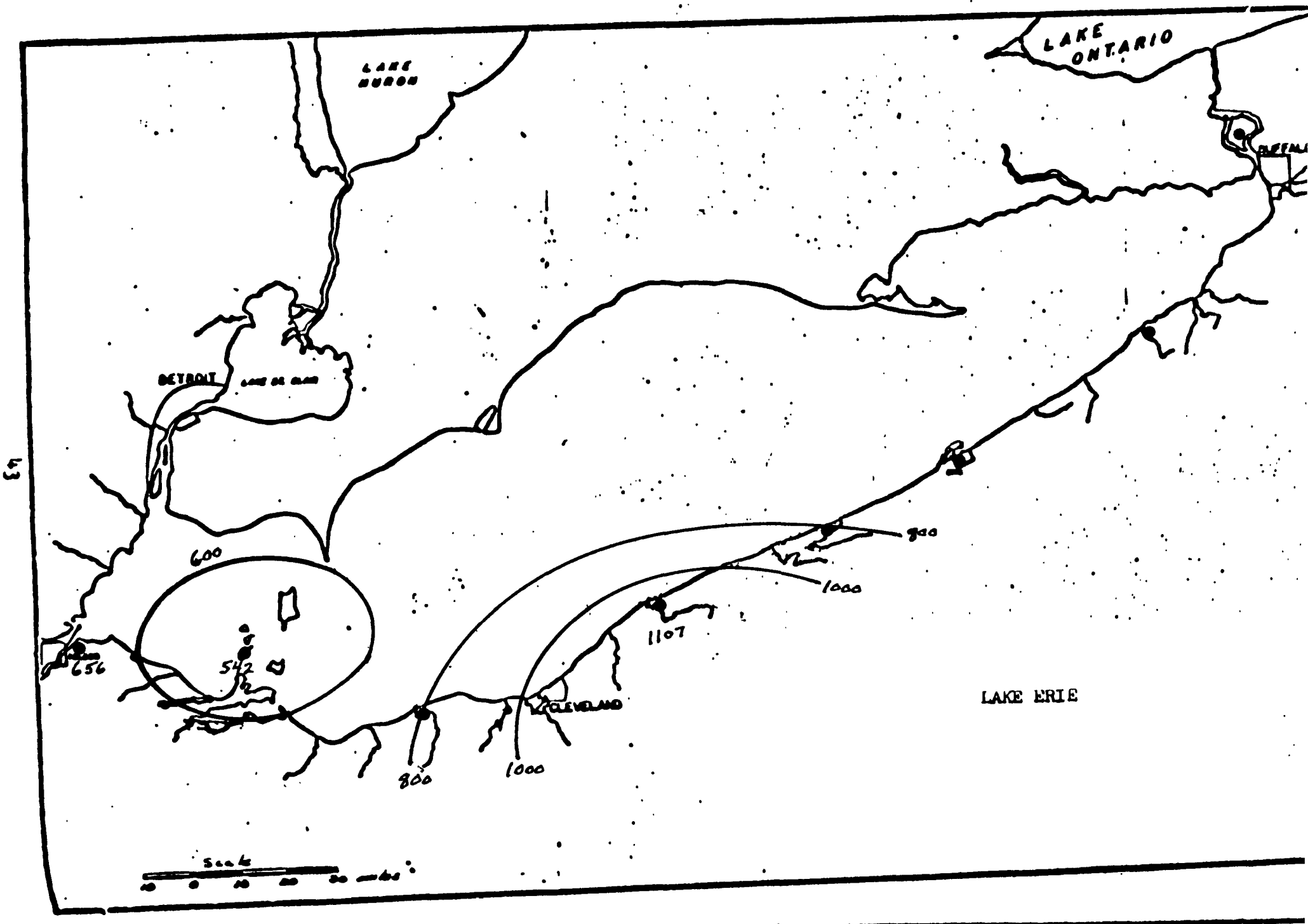
(mg/Km²)

Figure 7



(g/Km²)

Figure 8



(g / Km²)

Figure 9

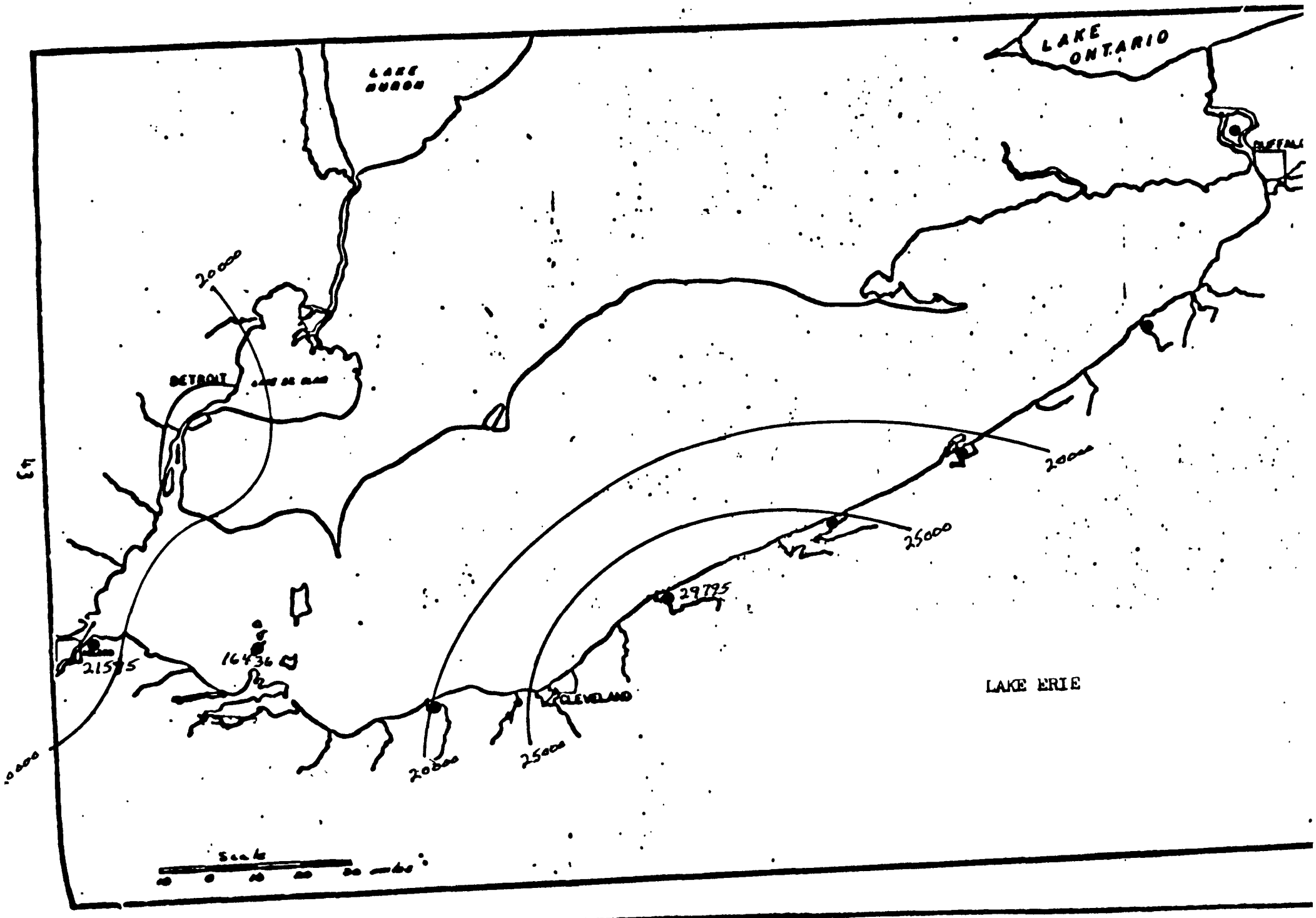


TABLE 1

Precipitation Samplers For Lake Erie

Site	Sampling Start Date	Number of Sample Months During 1981
1. Dunkirk	1/19/82	0
2. Grand Island	1/19/82	0
3. Ashtabula	1/26/82	0
4. Fairport Harbor	1/27/81	12
5. Lorain	2/17/81	11
6. Put-In-Bay	2/17/81	11
7. Toledo	1/27/81	12
8. Erie	1/18/82	0

LAKE=ERIE SITE=362100 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
2	810203	81	1225	5.71	44.0	43.0	6.80	0.59	0.23	0.32	0.007	1.00	5.80	3.50	0.10	.	2.90	0.16
3	810217	81	1115	4.25	39.5	43.0	4.40	0.42	0.05	0.03	0.004	1.00	4.40	2.10	0.10	.	9.50	0.12
4	810224	81	2165	3.99	39.0	38.0	4.10	0.62	0.25	0.09	0.003	1.00	3.30	0.30	0.10	.	13.00	0.10
5	810317	81	380	6.77	73.0	78.0	6.80	0.99	1.55	2.22	0.006	2.50	10.80	4.30	0.23	.	3.60	0.71
6	810331	81	1075	5.80	26.0	32.0	6.50	0.81	1.05	1.43	0.004	0.40	4.65	1.00	0.14	.	2.70	0.30
7	810414	81	2875	3.94	41.0	42.0	4.20	0.60	0.30	0.39	0.007	2.00	6.40	0.90	0.10	.	9.90	1.07
8	810428	81	2575	3.72	54.9	55.0	3.95	0.76	0.52	0.63	0.003	1.00	5.38	0.60	0.10	.	15.00	0.20
9	810505	81	2200	4.03	35.0	36.0	4.22	0.66	0.56	0.59	0.008	1.00	4.30	0.44	0.10	.	9.90	0.50

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
2	0.44	0.93	.	.	.	0.01	6.86	0.450	2.84	0.13	0.19	.	.	.	.	.	.
3	0.47	3.17	86.6	88.67	15.0	0.01	4.03	0.240	1.64	0.14	0.50	170.9	2.50	.	.	.	.
4	0.30	1.64	52.5	.	.	0.01	0.92	0.060	0.55	0.03	0.40	.	.	.	.	.	.
5	0.48	3.00	60.0	.	15.0	1.50	6.63	0.823	2.42	.	.	45.0	16.70	.	2.50	10.30	.
6	1.00	20.40	157.0	121.00	15.0	1.50	1.44	0.140	0.73	0.12	0.08	45.0	2.50	.	5.35	46.00	.
7	1.00	3.00	60.0	15.00	15.0	.	1.07	0.193	0.43	0.14	.	45.0	2.50	.	2.50	13.20	.
8	2.00	6.18	60.0	95.04	15.0	1.50	0.44	0.060	0.30	0.09	.	45.0	2.50	.	.	5.55	.
9	1.00	3.00	60.0	99.23	15.0	.	0.39	0.120	0.20	0.07	.	45.0	2.50	.	.	2.50	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
2	.	.	.	53.00	.	.	.	6860	450.0	2840.0	130	-5.71	-6.80	11.2503	4.3857	6.1019	0.133478	19.068
3	.	.	9.98	5.00	25.00	6.72	.	4030	240.0	1640.0	140	-4.25	-4.40	7.2896	0.8678	0.5207	0.069424	17.356
4	.	.	.	40.00	.	.	.	920	60.0	550.0	30	-3.99	-4.10	20.8942	8.4251	3.0330	0.101101	33.700
5	.	.	3.00	5.00	25.00	19.80	.	6630	823.0	2420.0	.	-6.77	-6.80	5.8559	9.1684	13.1315	0.035490	14.788
6	.	.	3.00	15.00	25.00	17.00	.	1440	140.0	730.0	120	-5.80	-6.50	13.5541	17.5701	23.9288	0.066934	6.693
7	.	.	3.00	15.00	25.00	7.80	.	1070	193.0	430.0	140	-3.94	-4.20	26.8513	13.4257	17.4534	0.313266	89.504
8	.	.	3.00	2.00	25.00	5.39	.	440	60.0	300.0	90	-3.72	-3.95	30.4627	20.8429	25.2519	0.120247	40.082
9	.	.	3.00	15.00	25.00	6.34	.	390	120.0	200.0	70	-4.03	-4.22	21.9169	19.1773	20.2047	0.273962	34.245

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CRLOAD	MGLOAD	NALOAD
2	110.60	66.739	1.90683	.	55.3	3.0509	8.390	17.734	.	.	.	0.191	130809	8580.8	54154.1
3	76.37	36.448	1.73561	.	164.9	2.0827	8.157	55.019	1503.04	1538.96	260.341	0.174	69945	4165.5	28464.0
4	111.21	10.110	3.37004	.	438.1	3.3700	10.110	55.269	1769.27	.	.	0.337	31004	2022.0	18535.2
5	63.88	25.435	1.36047	.	21.3	4.1997	2.839	17.745	354.90	.	88.726	8.873	39217	4868.1	14314.5
6	77.81	16.733	2.34268	.	45.2	5.0200	16.733	341.362	2627.15	2024.75	251.002	25.100	24096	2342.7	12215.4
7	286.41	40.277	4.47522	.	443.0	47.8849	44.752	134.257	2685.13	671.28	671.286	.	47885	8637.2	19243.5
8	215.64	24.049	4.00824	.	601.2	8.0165	80.165	247.710	2404.95	3809.44	601.237	60.124	17636	2404.9	12024.7
9	147.25	15.068	3.42452	.	339.0	17.1226	34.245	102.736	2054.71	3398.15	513.678	.	13356	4109.4	6849.0

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
2	2478.89	3.6230	.	.	.	.	.	.	.	.	.	1010.62	.	.	.	34
3	2429.85	8.6780	2966.16	43.390	.	.	.	.	.	.	173.21	86.78	433.90	116.633	.	48
4	1011.01	13.4802	.	.	.	.	.	.	.	.	.	1348.02	.	.	.	55
5	.	.	266.13	98.732	.	14.788	60.925	.	.	.	17.75	29.58	147.88	117.119	.	77
6	2008.01	1.3387	753.01	41.834	.	89.524	769.739	.	.	.	50.20	251.00	418.34	284.469	.	91
7	6265.31	.	2013.35	111.881	.	111.881	590.730	.	.	.	134.26	671.28	1118.81	349.068	.	105
8	3607.42	.	1803.71	100.206	.	.	222.458	.	.	.	120.25	80.16	1002.06	216.044	.	119
9	2397.16	.	1541.03	85.613	.	.	85.613	.	.	.	102.74	513.68	856.13	217.115	.	126

LAKE=ERIE SITE=362100 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS
10	810512	81	1885	3.57	61.0	61.0	3.88	0.73	0.50	0.54	0.001	1.00	5.88	0.49	0.10	.	17.00
11	810519	81	365	3.53	66.0	60.0	3.84	0.83	0.42	0.58	0.004	1.00	6.37	0.53	0.03	.	16.00
12	810609	81	4300	4.25	28.0	28.5	4.28	0.44	0.53	0.53	0.006	1.10	4.01	0.40	0.10	.	8.60
13	810623	81	4175	3.93	28.0	27.0	4.05	0.29	0.17	0.14	0.001	1.50	2.77	0.10	.	9.5	0.10
14	810721	81	3650	3.39	51.0	50.0	3.88	0.59	0.45	0.46	0.005	1.50	7.08	0.30	0.10	.	13.00
15	810728	81	3350	3.75	58.0	55.0	3.81	0.55	0.35	0.39	0.002	1.40	4.62	0.20	0.10	.	16.00
16	810811	81	5475	3.85	43.5	45.0	4.01	0.58	0.46	0.53	0.001	2.80	5.57	0.40	0.10	.	13.00
17	810818	81	1010	3.57	62.0	52.0	3.65	0.54	0.42	0.56	0.004	3.10	5.70	0.10	0.10	.	17.10

OBS	MERCURY	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM
10	0.30	0.14	3.00	60.0	15	.	.	0.29	0.03	0.13	0.05	.	45.0	2.50	0.50	2.50	.
11	0.72	1.00	3.00	60.0	.	15.0	1.50	0.79	0.08	0.12	0.06	.	45.0	2.50	0.50	2.50	.
12	0.10	.	3.00	60.0	.	.	.	0.65	0.97	0.24	0.08	.	45.0	2.50	.	.	.
13	.	2.00	.	.	.	.	5.00	0.34	0.04	0.17	0.08	0.08	45.0	2.50	0.50	2.50	.
14	0.13	2.00	3.00	60.0	45	15.0	5.00	824.00	73.00	43.60	.	.	45.0	2.50	0.50	2.50	9.0
15	0.40	2.00	3.00	60.0	45	15.0	5.00	195.00	15.90	30.00	.	.	45.0	2.50	0.50	5.00	9.0
16	0.16	0.02	.	11.0	.	.	.	.	.	.	.	0.27	.	.	.	.	.
17	0.10	3.00	3.00	60.0	45	15.0	5.00	569.00	42.50	30.00	.	0.39	45.0	2.50	0.50	2.50	9.0

OBS	MOLY	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD
10	.	.	.	3.00	2.00	25.00	2.50	.	290	30.0	130.0	50	-3.57	-3.88	21.420	14.671	15.845	0.02934
11	.	.	.	3.00	.	25.00	2.50	.	790	80.0	120.0	60	-3.53	-3.84	4.716	2.386	3.295	0.02273
12	.	.	.	26.52	12.46	25.00	2.50	.	650	970.0	240.0	80	-4.25	-4.28	29.451	35.475	35.475	0.40160
13	.	.	.	.	16.00	.	.	.	340	40.0	170.0	80	-3.93	-4.05	18.847	11.048	9.098	0.06499
14	.	.	.	.	.	.	2.50	.	824	73.0	43.6	.	-3.39	-3.88	33.521	25.567	26.135	0.28408
15	.	.	.	.	.	.	2.50	.	195	15.9	30.0	.	-3.75	-3.81	28.680	18.251	20.337	0.10429
16	.	.	.	.	.	.	.	.	.	.	.	.	-3.85	-4.01	49.430	39.203	45.169	0.08522
17	.	.	.	.	.	.	2.50	.	569	42.5	30.0	.	-3.57	-3.65	8.490	6.603	8.804	0.06289

OBS	TOCLOAD	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
10	29.34	172.53	14.378	2.9342	.	498.8	8.803	4.108	88.03	1760.5	440.1	.	.	8509	880	3816
11	5.68	36.19	3.011	0.1704	.	90.9	4.091	5.682	17.04	340.9	.	85.22	8.52	4488	455	682
12	73.63	268.40	26.774	6.6934	.	575.6	6.693	.	200.80	4016.0	.	.	.	43507	64926	16064
13	97.48	180.02	6.499	.	617.386	6.5	.	129.976	.	.	.	.	324.94	22096	2600	11048
14	85.22	402.26	17.065	5.6816	.	738.6	7.386	113.632	170.45	3409.0	2556.7	852.24	284.08	46816	4148	2477
15	73.00	240.91	10.429	5.2146	.	834.3	20.858	104.292	156.44	3128.8	2346.6	782.19	260.73	10168	829	1564
16	238.63	474.70	34.090	8.5224	.	1107.9	13.636	1.704	.	937.5	.	.	.	.	.	.
17	48.74	89.61	1.572	1.5722	.	268.8	1.572	47.165	47.16	943.3	707.5	235.82	78.61	8946	668	472

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
10	1467.1	.	1320.4	73.35	14.671	73.35	.	.	.	.	88.03	58.68	733.55	73.35	.	133
11	340.9	.	255.7	14.20	2.841	14.20	.	.	.	.	17.04	.	142.04	14.20	.	140
12	5354.7	.	3012.0	167.33	.	.	.	.	.	.	1775.08	834.00	1673.34	167.33	.	161
13	5199.0	5.199	2924.5	162.47	32.494	162.47	.	.	.	.	.	1039.81	.	.	.	175
14	.	.	2556.7	142.04	28.408	142.04	511.34	.	.	.	.	.	.	142.04	.	203
15	.	.	2346.6	130.37	26.073	260.73	469.31	.	.	.	.	.	.	130.37	.	210
16	.	23.010	.	.	.	.	.	.	.	.	.	.	.	.	.	224
17	.	6.131	707.5	39.30	7.861	39.30	141.49	.	.	.	.	.	.	39.30	.	231

LAKE=ERIE SITE=362100 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS
18	810901	81	1780	3.37	65.0	64.0	3.71	0.03	0.01	.	0.002	.	6.52	0.20	0.1	.	18.00
19	810908	81	5700	3.64	36.0	38.0	3.96	0.50	0.32	0.40	0.001	1.29	5.12	0.30	0.1	.	7.60
20	810922	81	2500	3.23	46.0	45.0	3.94	0.35	0.46	0.77	0.003	2.38	4.65	0.40	0.1	.	14.25
21	811027	81	970	4.38	33.0	33.5	4.36	0.92	0.41	0.53	0.003	2.63	5.10	0.67	0.2	.	10.00
22	811110	81	1910	4.16	31.0	33.0	4.15	0.71	0.59	0.73	0.002	1.54	4.70	5.00	0.1	.	9.50
23	811124	81	1880	4.86	15.2	18.0	.	0.31	0.28	0.24	0.002	1.21	48.10	1.47	0.1	.	1003.00
24	811201	81	660	4.23	21.0	24.5	.	0.28	0.09	0.02	0.002	1.21	3.22	0.20	0.1	.	8.50
25	811208	81	895	4.54	32.5	37.5	4.37	1.15	0.55	0.60	0.003	1.44	6.54	0.65	0.1	.	9.50

OBS	MERCURY	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM
18	0.1	0.24	.	13.3	.	.	.	.	.	.	.	0.44	.	.	.	.	.
19	0.1	.	.	5.8	.	.	.	.	.	.	.	0.16	.	.	.	.	.
20	0.1	0.05	.	16.4	.	.	.	.	.	.	.	0.51	.	.	.	.	.
21	0.1	0.51	2.70	49.0	.	4.2	2.97	2500	100.0	74.0	.	0.59	97.0	2.30	0.10	0.20	3.9
22	0.1	0.30	3.96	29.4	45	9.0	5.00	1630	92.7	88.2	.	0.49	55.4	2.29	0.40	3.00	9.0
23	0.1	0.22	8.70	29.1	.	9.0	7.29	1310	68.2	30.0	.	0.27	63.7	2.90	0.43	5.53	9.0
24	0.2	0.12	3.00	23.8	45	20.8	5.00	434	59.5	30.0	.	0.16	31.1	0.92	0.40	3.00	9.0
25	0.1	0.57	3.68	48.3	45	68.3	5.00	3310	160.0	121.0	.	0.86	95.0	3.03	0.40	3.00	9.0

OBS	MOLY	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD
18	.	.	.	.	.	.	.	.	.	.	.	.	-3.37	-3.71	0.831	0.277	.	0.05541
19	.	.	.	.	.	.	.	.	.	.	.	.	-3.64	-3.96	44.363	28.392	35.490	0.08873
20	.	.	.	.	.	.	.	.	.	.	.	.	-3.23	-3.94	33.078	17.901	29.965	0.11674
21	3.5	0.3	.	3.40	9.20	24.00	4.80	2.70	2500	100.0	74.0	.	-4.38	-4.36	13.891	6.191	8.002	0.04530
22	5.0	.	.	2.16	16.00	24.90	5.92	2.09	1630	92.7	88.2	.	-4.16	-4.15	21.109	17.541	21.704	0.05946
23	5.0	20.9	.	4.05	6.25	13.20	4.84	2.28	1310	68.2	30.0	.	-4.86	.	9.072	8.194	7.023	0.05853
24	5.0	4.0	.	2.00	5.00	8.30	3.24	0.90	434	59.5	30.0	.	-4.23	.	2.877	0.925	0.205	0.02055
25	5.0	4.0	.	3.58	13.00	29.50	7.11	3.46	3310	160.0	121.0	.	-4.54	-4.37	16.021	7.662	8.359	0.04179

OBS	TOCLOAD	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
18	.	180.65	5.541	2.7707	.	498.7	2.771	6.650	.	368.5	.	.	.	.	.	.
19	114.46	454.28	26.618	8.8726	.	674.3	8.873	.	.	514.6	.	.	.	.	.	.
20	92.62	180.95	15.566	3.8915	.	554.5	3.891	1.946	.	638.2	.	.	.	.	.	.
21	39.71	77.01	10.116	3.0198	.	151.0	1.510	7.701	40.77	739.9	.	63.42	44.84	37748	1510	1117
22	45.79	139.74	148.655	2.9731	.	282.4	2.973	8.919	117.73	874.1	1337.9	267.58	148.66	48462	2756	2622
23	35.41	1407.60	43.018	2.9264	.	29351.9	2.926	6.438	254.60	851.6	.	263.38	213.34	38336	1996	878
24	12.43	33.08	2.055	1.0274	.	87.3	2.055	1.233	30.82	244.5	462.3	213.69	51.37	4459	611	308
25	20.06	91.11	9.056	1.3932	.	132.3	1.393	7.941	51.27	672.9	626.9	951.53	69.66	46113	2229	1686

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
18	.	12.191	.	.	.	.	.	.	.	.	.	.	.	.	.	245
19	.	14.196	.	.	.	.	.	.	.	.	.	.	.	.	.	252
20	.	19.847	.	.	.	.	.	.	.	.	.	.	.	.	.	266
21	.	8.908	1464.6	34.73	1.510	3.02	58.89	52.847	4.530	.	51.34	138.91	362.38	72.48	40.767	301
22	.	14.568	1647.1	68.08	11.892	89.19	267.58	148.655	.	.	64.22	475.70	740.30	176.01	62.138	315
23	.	7.901	1864.1	84.87	12.584	161.83	263.38	146.320	611.619	.	113.52	182.90	386.29	141.64	66.722	329
24	.	1.644	319.5	9.45	4.109	30.82	92.46	51.368	41.094	.	20.55	51.37	85.27	33.29	9.246	336
25	.	11.981	1323.5	42.21	5.573	41.79	125.38	69.658	55.726	.	49.88	181.11	410.98	99.05	48.203	343

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKAS	ACIDS	MERCURY	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS
26	811222	81	530	4.53	16.4	16	4.46	0.43	0.23	0.15	0.002	0.90	1.43	0.5	0.1	.	5	0.1	0.12	3	21.9	45	9	5	525	118.0	184	0.02
27	811229	81	1860	4.42	19.8	26	4.15	0.29	0.13	0.04	0.002	0.64	3.14	0.3	0.1	.	8	0.1	0.09	3	24.2	45	9	5	2885	31.4	30	0.02
SITE																												

OBS	ARSENIC	ALUMINUM	BARIUM	BERYLLIUM	COBALT	CHROMIUM	MOLYBDENUM	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
26	0.28	23.8	1.25	0.4	3	9	5	4	.	2	5	6.76	2.68	1.93	525	118.0	184	20	-4.53	-4.46	3.547	1.897	1.237	0.01650	7.42
27	0.36	33.1	0.70	0.4	3	9	5	4	.	2	5	3.00	1.62	1.14	2885	31.4	30	20	-4.42	-4.15	8.396	3.764	1.158	0.05791	18.53
SITE																					485.815	339.812	386.929	2.72997	1293.59

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	ALGLOAD	CALOAD	MGLOAD	NALOAD
26	11.80	4.125	0.8250	.	41.2	0.825	0.990	24.75	180.7	371.2	74.25	41.25	4331	973	1518
27	90.91	8.686	2.8953	.	231.6	2.895	2.606	86.86	700.7	1302.9	260.57	144.76	83529	909	869
SITE	5620.94	622.093	84.0074	617.386	38235.1	183.899	656.375	2258.55	33720.7	21594.7	6436.16	1765.55	781456	122620	210920

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
26	165.0	2.310	196.3	10.31	3.300	24.75	74.25	41.250	33.000	.	16.50	41.25	55.77	22.11	15.922	357
27	579.1	10.423	958.3	20.27	11.581	86.86	260.57	144.764	115.811	.	57.91	144.76	86.86	46.90	33.006	364
SITE	33303.5	165.431	30240.8	1480.70	162.897	1346.56	3994.13	654.862	861.780	0	2857.46	7139.61	8653.89	2458.52	276.005	

---------- LAKE=ERIL SITE=363620 14 ----------

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
28	810224	81	1930	4.31	84	34.0	4.30	0.67	0.46	0.37	0.002	1.00	4.70	0.30	0.10	.	9.5	0.10
29	810331	81	730	6.71	99	88.0	7.30	1.23	1.92	3.18	0.009	1.50	16.00	1.46	1.16	.	3.6	0.00
30	810414	81	4600	4.63	69	36.0	4.80	0.58	0.66	0.57	0.004	1.50	7.90	0.90	0.24	.	6.3	0.17
31	811110	81	1200	4.36	.	30.0	.	0.53	0.27	0.30	0.002	1.69	4.73	0.60	0.10	.	8.0	0.10
32	811201	81	2100	4.29	.	31.5	.	0.32	0.20	0.32	0.003	1.69	4.35	0.60	0.10	.	11.0	0.40
33	811229	81	2600	4.56	.	47.5	4.43	0.75	0.58	0.81	0.017	3.36	10.35	0.78	0.58	.	15.0	0.10
SITE																		

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
28	0.26	0.17	97.5	61.08	15.0	0.01	4.75	0.20	0.36	0.28	0.28	45.0	2.50	.	2.50	6.11	.
29	.	14.10	696.0	84.60	15.0	1.50	4.61	0.76	0.60	0.24	0.16	271.0	10.20	.	6.30	27.40	.
30	0.17	3.00	60.0	15.00	15.0	.	1.70	0.16	0.41	0.20	.	45.0	2.50	.	2.50	8.03	.
31	0.96	.	10.8	.	.	10.50	1980.00	186.00	48.70	.	0.40	69.6	4.12	0.4	8.74	.	.
32	48.00	13.00	64.7	.	15.6	6.29	844.00	107.00	211.00	.	0.39	105.0	4.07	0.7	6.77	9.00	5
33	2.00	3.00	5.9	45.00	9.0	5.00	3640.00	453.00	266.00	0.10	0.96	311.0	5.99	0.4	3.00	9.00	5
SITE																	

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
28	.	.	11.47	5.00	25.0	17.59	.	4750	200	360.0	280	-4.31	-4.30	20.128	13.819	11.116	0.06008	30.042
29	.	.	11.20	15.00	66.6	109.00	.	4610	760	600.0	240	-6.71	-7.30	13.977	21.817	36.135	0.10227	17.045
30	.	.	3.00	15.00	25.0	37.60	.	1700	160	410.0	200	-4.63	-4.80	41.530	47.258	40.814	0.28641	107.405
31	.	.	.	23.50	.	.	8.87	1980	186	48.7	.	-4.36	.	9.900	5.043	5.604	0.03736	31.568
32	4	.	4.31	6.87	170.0	28.00	2.77	844	107	211.0	.	-4.29	.	10.460	6.538	10.460	0.09807	55.244
33	4	.	13.40	5.90	31.2	526.00	7.58	3640	453	266.0	100	-4.56	-4.43	30.354	23.474	32.782	0.68802	135.985
SITE														126.349	117.950	136.911	1.27221	377.289

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	NIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
28	141.20	9.013	3.0042	.	285.40	3.0042	7.81	5.107	2929.1	1834.99	450.64	0.300	142701	6008.5	10815.3
29	181.81	16.590	13.1813	.	40.91	0.0000	.	160.221	7908.8	961.33	170.45	17.045	52384	8636.0	6817.9
30	565.67	64.443	17.1849	.	451.10	12.1726	12.17	214.811	4296.2	1074.05	1074.05	.	121726	11456.6	29357.5
31	88.35	11.208	1.8679	.	149.43	1.8679	17.93	.	201.7	.	.	196.132	36985	3474.3	909.7
32	142.20	19.613	3.2689	.	359.57	13.0754	1569.05	424.952	2115.0	.	509.94	205.611	27589	3497.7	6897.3
33	418.68	31.568	23.4735	.	607.07	4.0472	80.94	121.415	238.8	1821.22	364.24	202.358	147317	18333.6	10765.4
SITE	1538.11	152.435	61.9807	0	1893.49	34.1674	1687.91	926.505	17689.6	5691.59	2569.32	621.446	528702	51406.7	65563.1

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
28	8411.9	8.4119	1351.9	75.106	.	75.106	183.56	.	.	.	344.59	150.21	751.1	528.4	.	55
29	2727.2	1.8181	3079.4	115.904	.	71.588	311.35	.	.	.	127.27	170.45	756.8	1238.6	.	91
30	14320.7	.	3222.2	179.009	.	179.009	574.98	.	.	.	214.81	1074.05	1790.1	2692.3	.	105
31	.	7.4717	1300.1	76.958	7.4717	163.256	.	.	.	.	.	438.96	.	.	165.685	315
32	.	12.7486	3432.3	133.043	22.8820	221.302	294.20	163.443	130.754	.	140.89	224.57	5557.1	915.3	90.547	336
33	4047.2	38.8527	12586.7	242.425	16.1886	121.415	364.24	202.358	161.886	.	542.32	238.78	1262.7	21288.1	306.775	364
SITE	29506.9	69.3029	24972.5	822.445	46.5423	831.676	1728.33	365.801	292.641	0	1369.87	2297.03	10117.7	26662.7	563.007	

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OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
34	810122	81	125	.	.	.	.	.	.	.	20.010	.	.	2.19	0.10	.	23.0	0.10
35	810203	81	970	4.35	22	33.0	4.50	0.39	0.440	0.60	0.005	1.00	2.70	0.60	0.10	.	6.7	0.10
36	810210	81	160	4.40	16	.	4.80	0.66	0.120	0.01	0.011	1.00	1.00	0.40	0.10	.	.	.
37	810217	81	1650	4.10	19	20.0	4.40	0.29	0.120	0.03	0.010	2.00	2.20	0.30	0.10	.	8.6	0.10
38	810224	81	1800	3.60	36	38.0	4.08	0.41	0.280	0.24	0.002	1.00	3.40	0.40	0.10	.	13.0	0.10
39	810317	81	230	4.20	44	52.0	4.10	1.22	1.390	1.71	0.009	1.50	7.99	1.82	0.12	.	8.1	.
40	810331	81	720	4.27	35	40.0	4.70	0.78	1.260	1.62	0.004	0.50	6.06	0.51	0.05	.	6.3	0.10
41	810414	81	2960	3.80	35	38.0	4.10	0.65	0.360	0.57	0.001	1.00	3.60	0.80	0.10	.	9.9	0.10

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
34	1.23	5.00	190.0	.	1.7	4.60	2000.00	660.000	740.00	.	0.49	1400	6.80	0.1	3.10	5.00	2.4
35	0.21	3.40	149.0	.	.	0.01	2.27	0.250	0.33	0.21	0.12	.	.	.	.	.	.
36	1.78	1.37	270.0	.	.	0.01	1.95	0.120	0.29	0.29	0.50	.	.	.	.	.	.
37	0.36	4.79	38.6	82.86	15.0	0.01	0.56	0.200	0.62	0.16	0.40	45	2.50	.	2.50	.	.
38	0.11	0.57	60.0	114.00	15.0	0.01	2.27	0.140	0.07	0.10	0.45	45	2.50	.	2.50	2.50	.
39	1.00	9.56	209.0	35.40	15.0	1.50	1.02	0.430	0.99	0.27	0.18	194	7.70	.	6.11	8.75	.
40	1.00	3.00	60.0	78.50	15.0	1.50	0.88	0.280	0.60	0.11	0.06	45	2.50	.	2.50	7.66	.
41	1.00	3.00	60.0	.	15.0	.	0.29	0.080	0.29	0.09	.	45	2.50	.	.	5.85	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
34	3.1	.	7.30	5.1	160.0	11.00	29	2000	660.0	740.0	.	.	.	.	.	.	~~38.9345~~	.
35	.	.	.	31.0	.	.	.	2270	250.0	330.0	210	-4.35	-4.50	5.8886	6.6436	9.0594	0.0755	15.0990
36	.	.	.	31.0	.	.	.	1950	120.0	290.0	290	-4.40	-4.80	1.6438	0.2989	0.0249	0.0274	2.4906
37	.	.	13.60	5.0	133.1	2.50	.	565	200.0	620.0	160	-4.10	-4.40	7.4483	3.0821	0.7705	0.2568	51.3678
38	.	.	10.94	15.0	25.0	2.50	.	2270	140.0	70.0	100	-3.60	-4.08	11.4877	7.8453	6.7245	0.0560	28.0188
39	.	.	3.00	5.0	73.0	15.30	.	1020	430.0	990.0	270	-4.20	-4.10	4.3678	4.9765	6.1221	0.0322	5.3703
40	.	.	3.00	5.0	108.0	8.39	.	880	280.0	600.0	110	-4.27	-4.70	8.7419	14.1215	18.1562	0.0448	5.6038
41	.	.	.	8.0	25.0	2.50	.	290	80.0	290.0	90	-3.80	-4.10	29.9490	16.5871	26.2630	0.0461	46.0754

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	NIONLOAD	NGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
34	.	4.2612	0.19457	.	44.75	0.1946	2.393	9.729	369.69	.	3.308	8.950	3891.5	1284.19	1439.9
35	60.767	9.0594	1.50990	.	101.16	1.5099	3.171	51.337	2249.75	.	.	0.151	34274.8	3774.75	4982.7
36	2.491	0.9962	0.24906	.	.	.	4.433	3.412	672.45	.	.	0.025	4856.6	298.87	722.3
37	56.505	7.7052	2.56839	.	220.88	2.5684	9.246	123.026	991.40	2127.65	385.258	0.257	14511.4	5136.78	15924.0
38	95.264	11.2075	2.80188	.	364.24	2.8019	3.082	15.971	1681.13	3194.14	420.282	0.280	63602.7	3922.63	1961.3
39	28.606	6.5159	0.42962	.	29.00	.	3.580	34.227	748.26	126.74	53.703	5.370	3651.8	1539.48	3544.4
40	67.918	5.7158	0.56038	.	70.61	1.1208	11.208	33.623	672.45	879.79	168.113	16.811	9862.6	3138.11	6724.5
41	165.871	36.8603	4.60754	.	456.15	4.6075	46.075	138.226	2764.52	.	691.130	.	13361.9	3686.03	13361.9

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
34	.	0.9534	2724.05	13.231	0.1946	6.032	9.729	4.6698	6.03182	.	14.204	9.92	311.32	21.403	56.4267	.
35	3170.79	1.8119	.	.	.	.	.	.	.	.	.	468.07	.	.	.	34
36	722.26	1.2453	.	.	.	.	.	.	.	.	.	77.21	.	.	.	41
37	4109.42	10.2736	1155.78	64.210	.	64.210	.	.	.	.	349.301	128.42	3418.53	64.210	.	48
38	2801.88	12.6085	1260.85	70.047	.	70.047	70.047	.	.	.	306.526	420.28	700.47	70.047	.	55
39	966.65	0.6444	694.55	27.567	.	21.875	31.327	.	.	.	10.741	17.90	261.35	54.777	.	77
40	1232.83	0.6725	504.34	28.019	.	28.019	85.850	.	.	.	33.623	56.04	1210.41	94.031	.	91
41	4146.76	.	2073.39	115.188	.	.	269.541	.	.	.	.	368.60	1151.88	115.188	.	105

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OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
42	810421	81	320	3.80	63.0	64.0	3.90	1.02	0.750	0.93	0.009	2.00	7.50	1.20	0.1	.	14.0	.
43	810428	81	610	3.90	45.0	48.0	4.06	0.74	0.560	0.75	0.002	1.00	5.10	0.61	0.1	.	14.0	0.10
44	810505	81	1730	4.00	25.0	27.0	4.21	0.40	0.360	0.35	0.003	1.00	3.02	0.65	0.1	.	9.9	0.10
45	810512	81	2100	3.80	57.0	66.0	3.82	0.89	0.800	0.90	0.003	1.00	6.50	0.64	0.1	.	19.0	0.10
46	810519	81	1940	3.80	54.0	50.0	3.91	0.73	0.400	0.48	0.002	1.00	5.33	1.02	0.1	.	17.0	0.10
47	810602	81	1270	3.60	80.0	85.0	3.70	1.06	0.990	1.03	0.003	1.60	8.25	0.40	0.1	.	32.0	0.10
48	810609	81	1920	4.10	31.0	31.0	4.08	0.32	0.420	0.39	0.001	0.30	3.47	0.32	0.1	.	12.0	0.40
49	810616	81	3510	4.30	28.0	27.5	4.38	0.17	0.003	0.01	0.028	1.60	2.74	0.91	0.1	.	11.9	0.10

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
42	1.00	3.00	156.00	.	.	.	0.790	0.220	0.66	0.13	.	157.0	6.66	.	.	2.50	.
43	1.00	3.00	60.00	72.48	15.0	3.03	0.575	0.223	0.60	.	.	45.0	2.50	.	2.50	.	.
44	2.00	3.00	60.00	15.00	15.0	1.50	0.410	0.200	0.18	0.06	.	45.0	2.50	0.5	5.33	5.37	.
45	0.16	3.00	60.00	15.00	15.0	.	0.360	0.100	0.31	0.07	.	45.0	2.50	.	2.50	2.50	.
46	0.13	3.00	60.00	76.13	15.0	.	0.270	0.060	0.20	0.03	.	45.0	2.50	.	.	8.24	.
47	.	3.00	60.00	68.73	15.0	1.50	0.360	0.080	0.20	0.10	.	45.0	2.50	0.5	2.50	.	.
48	.	.	60.00	.	.	.	0.290	0.050	0.12	0.04	.	45.0	2.50	.	.	.	.
49	3.00	11.40	60.00	45.00	15.0	5.00	194.000	36.100	438.00	.	0.20	45.0	2.50	0.5	2.50	9.00	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
42	.	.	3.00	.	60.30	12.80	.	790.0	220.0	660.0	130	-3.80	-3.90	5.0807	3.7358	4.6324	0.04483	9.962
43	.	.	3.00	5.00	25.00	2.50	.	575.0	223.0	600.0	.	-3.90	-4.06	7.0265	5.3173	7.1214	0.01899	9.495
44	.	.	3.00	15.00	25.00	2.50	.	410.0	200.0	180.0	60	-4.00	-4.21	10.7717	9.6945	9.4252	0.08079	26.929
45	.	.	3.00	39.90	25.00	7.39	.	340.0	100.0	310.0	70	-3.80	-3.82	29.0929	26.1509	29.4197	0.09807	32.689
46	.	.	3.00	15.00	25.00	2.50	.	270.0	60.0	200.0	30	-3.80	-3.91	22.0446	12.0792	14.4951	0.06040	30.198
47	.	.	19.61	15.00	25.00	2.50	.	360.0	80.0	200.0	100	-3.60	-3.70	20.9549	19.5711	20.3619	0.05931	31.630
48	.	.	27.43	15.00	25.00	2.50	.	290.0	50.0	120.0	40	-4.10	-4.08	9.5638	12.5524	11.6558	0.02989	8.966
49	.	.	.	.	.	2.50	.	194.0	36.1	438.0	.	-4.30	-4.38	9.2882	0.1639	0.5464	1.52983	87.419

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
42	37.358	5.9773	0.49811	.	69.74	.	4.981	14.943	767.09	.	.	.	3935.1	1095.85	3287.5
43	48.426	5.7921	0.94953	.	132.93	0.9495	9.495	28.486	569.72	688.22	142.429	28.771	5459.8	2117.44	5697.2
44	81.326	17.5040	2.69292	.	266.60	2.6929	53.858	80.788	1615.75	403.94	403.938	40.394	11041.0	5385.84	4847.3
45	217.476	20.9207	3.26886	.	621.08	3.2689	5.230	98.066	1961.32	490.33	490.329	.	11114.1	3268.86	10133.5
46	160.956	30.8020	3.01980	.	513.37	3.0198	3.926	90.594	1811.88	2298.98	452.971	.	8153.5	1811.88	6039.6
47	163.093	7.9075	1.97688	.	632.60	1.9769	.	59.306	1186.13	1358.71	296.532	29.653	7116.8	1581.51	3953.8
48	103.707	9.5638	2.98867	.	358.64	11.9547	.	.	1793.20	.	.	.	8667.1	1494.34	3586.4
49	149.704	49.7194	5.46367	.	650.18	5.4637	163.910	622.858	3278.20	2458.65	819.550	273.183	10599.5	1972.38	23930.9

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
42	647.55	.	782.04	33.174	.	.	12.453	.	.	.	14.943	.	300.36	63.758	.	112
43	.	.	427.29	23.738	.	23.738	.	.	.	.	28.486	47.48	237.38	23.738	.	119
44	1615.75	.	1211.81	67.323	13.4646	143.533	144.610	.	.	.	80.788	403.94	673.23	67.323	.	126
45	2288.20	.	1470.99	81.721	.	81.721	81.721	.	.	.	98.066	1304.28	817.21	241.569	.	133
46	905.94	.	1358.91	75.495	.	.	248.832	.	.	.	90.594	452.97	754.95	75.495	.	140
47	1976.88	.	889.60	49.422	9.8844	49.422	.	.	.	.	387.667	296.53	494.22	49.422	.	154
48	1195.47	.	1344.90	74.717	.	.	.	.	.	.	819.793	448.30	747.17	74.717	.	161
49	.	10.9273	2458.65	136.592	27.3183	136.592	491.730	.	.	.	.	.	.	136.592	.	168

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OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
50	810623	81	2450	3.90	34.0	31.0	4.11	0.41	0.64	0.89	0.027	0.90	1.83	0.10	0.1	.	6.3	0.10
51	810630	81	2050	4.10	23.0	.	4.19	0.25	0.19	0.16	0.001	1.60	1.42	0.20	0.1	.	5.6	0.18
52	810707	81	1220	3.50	112.0	.	3.62	1.16	0.86	1.87	0.004	2.50	11.22	0.82	0.1	.	33.3	0.10
53	810714	81	1240	4.40	25.0	26.0	4.60	0.53	0.51	0.53	0.004	1.70	4.47	0.30	0.1	.	7.6	0.10
54	810721	81	1790	3.81	42.0	39.0	4.02	0.41	0.33	0.44	0.007	1.00	3.66	0.55	0.1	.	.	0.10
55	810728	81	3580	3.70	43.0	46.0	3.80	0.47	0.27	0.36	0.001	0.60	5.34	0.10	0.1	.	15.3	0.10
56	810804	81	760	3.90	34.0	37.0	4.28	0.39	0.05	0.05	0.001	1.60	2.79	0.10	0.1	.	12.9	0.10
57	810811	81	690	3.60	68.0	66.0	4.05	0.58	0.48	0.70	0.001	2.00	4.90	1.73	0.1	.	21.9	0.10

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
50	2.00	3.00	60.00	45	15.0	5.00	0.29	0.06	51.0	0.20	0.16	45.0	2.50	0.5	2.50	9.0	.
51	2.00	3.00	60.00	45	15.0	5.00	89.00	16.30	30.0	.	.	45.0	2.50	0.5	2.50	9.0	.
52	2.00	3.00	60.00	45	15.0	5.00	357.00	97.00	30.0	.	.	45.0	2.50	0.5	2.50	9.0	.
53	2.00	3.00	60.00	45	15.0	5.00	885.00	276.00	56.1	.	.	45.0	2.50	0.5	2.50	9.0	.
54	2.00	.	.	.	.	5.00	124.00	34.50	30.0	.	.	45.0	2.50	0.5	2.50	.	.
55	3.00	3.00	60.00	45	15.0	5.00	203.00	33.70	30.0	.	0.24	45.0	2.50	0.5	2.50	9.0	.
56	3.00	3.00	60.00	45	15.0	5.00	98.00	25.00	30.0	.	0.21	45.0	2.50	0.5	2.50	9.0	.
57	3.00	3.00	60.00	45	15.0	5.00	450.00	121.00	30.0	.	0.45	45.0	2.50	0.5	2.50	9.0	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
50	.	.	.	16.00	.	2.50	.	290.0	60.0	51.0	200	-3.90	-4.11	15.636	24.407	33.942	1.0297	34.32
51	.	.	.	.	.	2.50	.	89.0	16.3	30.0	.	-4.10	-4.19	7.978	6.063	5.106	0.0319	51.06
52	.	.	.	.	.	2.50	.	357.0	97.0	30.0	.	-3.50	-3.62	22.029	16.332	35.512	0.0760	47.48
53	.	.	.	.	.	2.50	.	885.0	276.0	56.1	.	-4.40	-4.40	10.230	9.846	10.230	0.0772	32.81
54	.	.	.	.	.	.	.	124.0	34.5	30.0	.	-3.81	-4.02	11.424	9.195	12.260	0.1950	27.86
55	.	.	.	.	.	2.50	.	203.0	33.7	30.0	.	-3.70	-3.80	26.191	15.046	20.061	0.0557	33.44
56	.	.	.	.	.	2.50	.	98.0	25.0	30.0	.	-3.90	-4.28	4.614	0.592	0.592	0.0118	18.93
57	.	.	.	.	.	2.50	.	450.0	121.0	30.0	.	-3.60	-4.05	6.230	5.155	7.518	0.0107	21.48

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	NIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
50	69.79	3.814	3.8137	.	240.3	3.814	76.27	114.41	2288.2	1716.2	572.05	190.68	11060	2288.2	1945
51	45.31	6.382	3.1910	.	172.3	5.744	63.82	95.73	1914.6	1436.0	478.65	159.55	2840	520.1	957
52	213.07	15.572	1.8991	.	632.4	1.899	37.98	56.97	1139.4	854.6	284.86	94.95	6780	1842.1	570
53	86.28	5.791	1.9302	.	146.7	1.930	38.60	57.91	1158.1	868.6	289.53	96.51	17082	5327.3	1083
54	101.98	15.325	2.7863	.	.	2.786	55.73	.	.	.	.	139.32	3455	961.3	836
55	297.58	5.573	5.5726	.	852.6	5.573	167.18	167.18	3343.6	2507.7	835.89	278.63	11312	1878.0	1672
56	33.01	1.183	1.1830	.	152.6	1.183	35.49	35.49	709.8	532.4	177.45	59.15	1159	295.8	355
57	52.63	18.581	1.0741	.	235.2	1.074	32.22	32.22	644.4	483.3	161.11	53.70	4833	1299.6	322

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
50	7627.3	6.102	1716.2	95.34	19.068	95.34	343.23	.	.	.	.	610.19	.	95.34	.	175
51	.	.	1436.0	79.78	15.955	79.78	287.19	.	.	.	.	.	.	79.78	.	182
52	.	.	854.6	47.48	9.495	47.48	170.91	.	.	.	.	.	.	47.48	.	189
53	.	.	868.6	48.25	9.651	48.25	173.72	.	.	.	.	.	.	48.25	.	196
54	.	.	1253.8	69.66	13.932	69.66	.	.	.	.	.	.	.	.	.	203
55	.	13.374	2507.7	139.32	27.863	139.32	501.54	.	.	.	.	.	.	139.32	.	210
56	.	2.484	532.4	29.58	5.915	29.58	106.47	.	.	.	.	.	.	29.58	.	217
57	.	4.833	483.3	26.85	5.370	26.85	96.66	.	.	.	.	.	.	26.85	.	224

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OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
58	810901	81	2400	3.8	46.0	48.0	3.87	0.47	0.37	.	0.001	2.66	4.81	0.20	0.1	.	14.3	0.1
59	810908	81	5600	3.8	38.0	41.5	3.95	0.45	0.26	.	0.001	0.69	3.95	0.20	0.1	.	14.3	0.1
60	810922	81	2720	3.6	55.0	52.0	3.86	0.92	0.68	.	0.002	.	5.31	0.40	0.1	.	14.0	0.1
61	811006	81	2800	3.7	40.0	41.0	3.95	0.48	0.33	0.41	0.002	0.10	3.81	0.20	0.1	.	14.0	0.1
62	811020	81	1130	3.9	17.7	20.5	4.20	1.70	0.26	0.34	0.003	1.06	2.51	0.30	0.1	.	10.0	0.1
63	811027	81	5550	3.7	30.0	33.0	4.03	0.41	0.23	0.24	0.001	1.20	2.66	0.40	0.1	.	13.0	0.1
64	811103	81	1590	3.9	22.0	25.5	4.06	0.19	0.07	.	0.002	0.98	1.86	0.40	0.1	.	10.0	0.1
65	811124	81	1560	3.7	50.0	48.0	3.94	0.70	0.50	0.53	0.002	1.88	4.26	0.97	0.1	.	17.0	0.1

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
58	.	.	9.30	.	.	.	.	.	.	0.03	0.23	.	.	.	.	.	.
59	.	.	11.80	.	.	.	.	.	.	0.02	0.20	.	.	.	.	.	.
60	0.29	.	14.80	.	.	.	.	.	.	.	0.67	.	.	.	.	.	.
61	0.24	4.46	10.20	45	9.0	5.00	347.0	71.8	.	.	0.28	23.4	2.03	0.4	3.00	9.0	.
62	2.00	7.05	15.20	.	9.0	5.00	294.0	118.0	30	.	0.28	42.7	1.99	0.4	3.95	9.0	5.0
63	2.00	3.00	7.28	45	9.0	5.00	142.0	31.4	.	.	0.16	25.9	1.67	0.4	3.05	9.0	5.0
64	0.06	6.03	4.10	.	9.0	6.79	50.3	15.8	.	.	0.16	41.8	1.62	0.4	4.07	9.0	5.0
65	0.29	2.40	25.00	.	5.2	4.60	490.0	130.0	60	.	0.72	200.0	1.80	0.0	3.10	2.9	2.6

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
58	.	.	.	.	.	.	.	.	.	.	30	-3.8	-3.87	17.558	13.823	.	0.0374	99.37
59	.	.	.	.	.	.	.	.	.	.	20	-3.8	-3.95	39.226	22.664	.	0.0872	60.15
60	.	.	.	.	.	.	.	.	.	.	.	-3.6	-3.86	38.952	28.791	.	0.0847	.
61	4.00	.	2.00	5.00	22.80	3.70	1.74	347.0	71.8	.	.	-3.7	-3.95	20.921	14.383	17.870	0.0872	4.36
62	4.49	.	2.14	8.08	73.30	2.00	3.59	294.0	118.0	30	.	-3.9	-4.20	29.902	4.573	5.980	0.0528	18.64
63	4.00	.	2.00	6.11	8.78	1.76	1.51	142.0	31.4	.	.	-3.7	-4.03	35.420	19.870	20.734	0.0864	103.67
64	6.98	.	3.08	9.33	4.26	1.04	1.51	50.3	15.8	.	.	-3.9	-4.06	4.702	1.732	.	0.0495	24.25
65	2.20	.	0.50	12.00	35.00	4.50	6.00	490.0	130.0	60	.	-3.7	-3.94	16.998	12.141	12.870	0.0486	45.65

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
58	179.69	7.472	3.7358	.	534.2	3.736	.	.	347.4	.	.	.	.	.	.
59	344.32	17.436	8.7170	.	1246.5	8.717	.	.	1028.6	.	.	.	.	.	.
60	224.82	16.936	4.2340	.	592.8	4.234	12.28	.	626.6	.	.	.	.	.	.
61	166.06	8.717	4.3585	.	610.2	4.358	10.46	194.39	444.6	1961.3	392.26	217.92	15124	3129.4	.
62	44.15	5.277	1.7590	.	175.9	1.759	35.18	124.01	267.4	.	158.31	87.95	5171	2075.6	528
63	229.80	34.557	8.6391	.	1123.1	8.639	172.78	259.17	628.9	3887.6	777.52	431.96	12268	2712.7	.
64	46.03	9.900	2.4750	.	247.5	2.475	1.43	149.24	101.5	.	222.75	168.05	1245	391.0	.
65	103.45	23.554	2.4283	.	412.8	2.428	7.04	58.28	607.1	.	126.27	111.70	11899	3156.8	1457

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
58	1120.8	8.592	.	.	.	.	.	.	.	.	.	.	.	.	.	245
59	1743.4	17.434	.	.	.	.	.	.	.	.	.	.	.	.	.	252
60	.	28.367	.	.	.	.	.	.	.	.	.	.	.	.	.	266
61	.	12.204	1019.9	88.48	17.434	130.75	392.26	.	174.339	.	87.17	217.92	993.7	161.26	75.838	280
62	.	4.925	751.1	35.00	7.036	69.48	158.31	87.948	78.977	.	37.64	142.12	1239.3	35.18	63.147	294
63	.	13.823	2237.5	144.27	34.557	263.49	777.52	431.956	345.565	.	172.78	527.85	758.5	152.05	130.451	301
64	.	3.960	1034.5	40.09	9.900	100.73	222.75	123.750	172.755	.	76.23	230.92	105.4	25.74	37.372	308
65	.	17.484	4856.6	43.71	0.000	75.28	70.42	63.136	53.423	.	12.14	291.40	849.9	109.27	145.698	329

LAKE=ERIE SITE=363720 2

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM
66	811208	81	820	3.8	35	40.0	3.99	0.81	0.40	0.36	0.002	0.80	3.56	0.4	0.1	.	14.5	0.1	0.19	4.6	32.0	.	6.9	4.6	500	130.0	31
67	811229	81	2170	3.9	23	26.0	3.98	0.35	0.06	.	0.003	0.10	1.74	0.1	0.1	.	10.0	0.1	0.10	3.0	12.6	45	9.0	5.0	145	19.5	30
68	820105	82	1020	3.8	39	40.5	4.04	0.61	0.19	0.24	0.005	0.77	3.20	0.3	0.1	.	13.7	0.1	1.90	2.7	28.0	.	7.0	3.3	250	72.0	59
SITE																											

OBS	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLLIUM	COBALT	CHROMIUM	MOLY	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD
66	.	0.29	57.0	1.80	0.1	0.17	1	2.1	1.6	.	0.9	10.0	83	4.70	3.50	500	130.0	31	.	-3.8	-3.99	10.339	5.106	4.595	0.0255
67	0.04	0.16	26.8	0.96	0.4	3.00	9	5.0	4.0	.	2.0	5.0	3	1.51	0.78	145	19.5	30	40	-3.9	-3.98	11.822	2.027	.	0.1013
68	0.02	0.65	250.0	0.80	0.1	2.00	11	0.4	0.6	.	1.8	0.6	42	1.70	1.70	250	72.0	59	20	-3.8	-4.04	9.685	3.017	3.811	0.0794
SITE																						523.209	357.581	355.859	~~43.6236~~ 4.69

LAKE=ERIE SITE=363720 2

OBS	TOCLOAD	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
66	10.21	45.44	5.106	1.2764	.	185.1	1.276	2.43	58.71	408.5	.	88.07	58.71	6382	1659.3	396
67	3.38	58.77	3.378	3.3778	.	337.8	3.378	3.38	101.33	425.6	1520.0	304.00	168.89	4898	658.7	1013
68	12.23	50.81	4.763	1.5877	.	217.5	1.588	30.17	42.87	444.6	.	111.14	52.40	3969	1143.2	937
SITE	1040.61	3807.46	439.821	97.8183	0	12647.4	108.721	1107.08	2952.51	39661.8	29794.7	9307.42	2773.93	333577	70847.9	122207

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
66	.	3.702	727.6	22.98	1.276	2.17	12.76	26.805	20.423	.	11.49	127.64	1059.4	59.99	44.674	343
67	1351.1	5.405	905.3	32.43	13.511	101.33	304.00	168.891	135.113	.	67.56	168.89	101.3	51.01	26.347	364
68	317.5	7.145	3969.3	12.70	1.588	31.75	174.65	6.351	9.526	.	28.58	9.53	666.8	26.99	26.991	371
SITE	37940.6	188.970	43511.4	1816.36	243.413	1936.43	5238.25	913.506	996.152	0	2728.32	6826.39	16903.0	2240.35	606.945	

LAKE=ERIE SITE=365260 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
69	810224	81	1500	4.08	36.0	37.0	4.10	0.51	0.30	0.24	0.004	.	3.00	0.20	0.10	.	13.00	0.10
70	810331	81	800	5.65	34.5	.	.	.	.	.	.	.	.	.	.	.	.	.
71	810407	81	275	4.63	18.0	48.0	5.90	0.47	2.05	3.04	0.019	12.50	3.20	0.78	0.07	.	7.20	0.10
72	810414	81	2500	4.17	27.0	30.0	4.20	0.36	0.24	0.44	0.004	0.50	2.90	0.50	0.10	.	9.90	0.10
73	810421	81	400	3.78	58.0	64.0	3.90	0.93	0.67	0.69	0.026	1.50	6.70	0.80	0.10	.	16.00	.
74	810428	81	500	4.08	34.0	31.0	4.30	0.52	0.47	0.74	0.055	1.00	3.50	0.50	0.10	.	12.00	0.10
75	810505	81	1450	4.22	22.5	29.0	4.29	0.47	0.42	0.55	0.009	1.00	3.03	0.34	0.10	.	11.00	0.10
76	810512	81	1800	3.88	44.0	48.0	3.93	0.53	0.33	0.34	0.002	1.00	4.23	0.40	0.10	.	15.00	0.10

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
69	0.22	3.00	42.00	98.12	15.00	0.01	1.82	0.07	0.75	0.31	0.31	45.0	2.50	0.5	6.22	2.50	.
70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
71	4.67	3.00	60.00	89.60	15.00	1.50	1.21	0.50	0.23	0.26	0.13	318.0	5.06	.	2.50	18.30	.
72	0.06	3.00	60.00	15.00	.	.	0.18	0.04	0.33	0.12	.	45.0	2.50	.	2.50	2.50	.
73	1.00	3.00	60.00	122.00	.	1.50	0.44	0.15	0.46	0.23	.	45.0	2.50	.	2.50	2.50	.
74	1.00	3.00	60.00	.	.	.	0.41	0.09	0.19	0.56	.	45.0	2.50	.	.	5.67	.
75	0.14	3.00	60.00	72.29	15.00	3.07	0.29	0.10	0.32	0.20	.	111.1	2.50	.	2.50	2.50	.
76	1.00	3.00	11.00	15.00	15.00	1.50	0.20	0.04	0.59	0.12	.	45.0	2.50	.	2.50	6.01	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
69	.	.	6.79	5.00	25.0	2.50	.	1820	70.0	750.0	310	-4.08	-4.10	11.9080	7.0047	5.6038	0.093396	.
70	.	.	.	.	.	.	.	.	.	.	.	-5.65	.	.	.	.	.	.
71	.	.	6.63	15.00	25.0	13.90	.	1210	500.0	230.0	260	-4.63	-5.90	2.0119	8.7753	13.0132	0.081332	53.5081
72	.	.	.	15.00	25.0	2.50	.	180	40.0	330.0	120	-4.17	-4.20	15.6905	10.4604	19.1773	0.174339	21.7924
73	.	.	3.00	15.00	25.0	8.94	.	440	150.0	460.0	230	-3.78	-3.90	5.7906	4.1717	4.2962	0.161886	9.3396
74	.	.	.	15.00	25.0	5.38	.	410	90.0	190.0	560	-4.08	-4.30	4.0472	3.6580	5.7594	0.428065	7.7830
75	.	.	3.00	31.98	25.0	5.19	.	290	100.0	320.0	200	-4.22	-4.29	10.6082	9.4797	12.4139	0.203136	22.5707
76	.	.	3.00	39.60	25.0	2.50	.	200	40.0	590.0	120	-3.88	-3.93	14.8500	9.2462	9.5264	0.056038	28.0188

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
69	70.047	4.6698	2.3349	.	303.537	2.3349	5.1368	70.047	980.66	2291.00	350.23	0.233	42495.2	1634.43	17511.7
70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
71	13.698	3.3389	0.2996	.	30.821	0.4281	19.9906	12.842	256.84	383.55	64.21	6.421	5179.6	2140.32	984.5
72	126.396	21.7924	4.3585	.	431.490	4.3585	2.6151	130.754	2615.09	653.77	.	.	7845.3	1743.39	14383.0
73	41.717	4.9811	0.6226	.	99.622	.	6.2264	18.679	373.58	759.62	.	9.340	2739.6	933.96	2864.1
74	27.240	3.8915	0.7783	.	93.396	0.7783	7.7830	23.349	466.98	.	.	.	3191.0	700.47	1478.8
75	68.389	7.6740	2.2571	.	248.278	2.2571	3.1599	67.712	1354.24	1631.64	338.56	69.292	6545.5	2257.07	7222.6
76	118.520	11.2075	2.8019	.	420.282	2.8019	28.0188	84.056	308.21	420.28	420.28	42.028	5603.8	1120.75	16531.1

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
69	7238.19	7.2382	1050.70	58.372	11.674	145.231	58.372	.	.	.	158.54	116.74	583.72	58.372	.	55
70	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	91
71	1112.97	0.5565	1361.25	21.660	.	10.702	78.336	.	.	.	27.52	64.21	107.02	59.501	.	98
72	5230.18	.	1961.32	108.962	.	108.962	108.962	.	.	.	.	653.77	1089.62	108.962	.	105
73	1432.07	.	260.19	15.566	.	15.566	15.566	.	.	.	18.68	93.40	155.66	55.664	.	112
74	4358.48	.	350.23	19.457	.	.	44.130	.	.	.	.	116.74	194.57	41.873	.	119
75	4514.14	.	2507.60	56.427	.	56.427	56.427	.	.	.	67.71	721.81	564.27	117.142	.	126
76	3362.26	.	1260.85	70.047	.	70.047	168.393	.	.	.	84.06	1109.54	700.47	70.047	.	133

LAKE=ERIE SITE=365260 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
77	810519	81	800	3.70	55.0	61.0	3.87	0.79	0.33	0.32	0.004	2.00	5.10	0.44	0.1	.	19.00	0.10
78	810602	81	600	3.70	70.0	78.0	3.80	7.22	0.78	0.85	0.001	2.53	6.77	0.10	0.1	.	22.00	0.10
79	810609	81	2800	4.40	10.0	12.6	4.55	0.25	0.33	0.29	0.001	0.30	1.50	0.20	0.1	.	8.60	0.10
80	810623	81	2550	4.43	10.0	10.0	4.48	0.15	0.12	0.10	0.001	1.00	.	.	.	.	.	.
81	810630	81	1000	4.58	10.0	13.0	4.57	0.28	0.22	0.20	0.001	1.00	.	.	.	.	.	.
82	810707	81	400	3.99	35.0	.	4.04	0.60	0.28	0.44	0.070	2.30	4.02	0.10	0.1	.	12.40	0.12
83	810721	81	2600	4.04	32.0	38.0	4.03	0.45	0.45	0.44	0.002	0.80	4.17	0.40	0.1	.	.	0.20
84	810811	81	1800	4.08	34.0	34.0	4.32	0.55	0.45	0.51	0.004	2.80	3.78	0.20	0.1	.	11.40	0.10

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
77	0.12	3.00	9.30	42.89	15.00	.	0.27	0.06	0.47	0.12	.	45.0	2.50	.	2.50	2.5	.
78	1.00	3.00	60.00	43.21	15.00	1.5	0.20	0.03	0.60	0.08	.	45.0	2.50	0.5	2.50	2.5	.
79	1.00	3.00	60.00	15.00	.	.	0.29	0.09	0.21	0.05	.	45.0	2.50	.	.	2.5	.
80	2.00	.	2.09	.	.	5.0	82.00	42.10	30.00	.	.	45.0	2.50	0.5	2.50	.	.
81	2.00	.	2.07	.	.	5.0	243.00	61.50	36.90	.	.	45.0	2.50	0.5	2.50	.	.
82	2.00	3.00	60.00	45.00	15.00	5.0	416.00	86.00	128.00	.	.	45.0	2.50	0.5	2.50	9.0	.
83	2.00	3.00	60.00	45.00	15.00	5.0	172.00	52.30	33.40	.	.	45.0	2.50	0.5	2.50	9.0	.
84	3.00	3.00	60.00	45.00	15.00	5.0	440.00	160.00	30.00	.	0.27	45.0	2.50	0.5	2.50	9.0	.

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
77	.	.	3.00	15.00	25.0	2.50	.	270	60.0	470.0	120	-3.70	-3.87	9.838	4.109	3.985	0.04981	24.906
78	.	.	19.85	32.14	25.0	2.50	.	200	30.0	600.0	80	-3.70	-3.80	67.432	7.285	7.939	0.00934	23.629
79	.	.	26.75	5.00	25.0	2.50	.	290	90.0	210.0	50	-4.40	-4.55	10.896	14.383	12.640	0.04358	13.075
80	.	.	.	.	.	.	.	82	42.1	30.0	.	-4.43	-4.48	5.954	4.763	3.969	0.03969	39.693
81	.	.	.	.	.	.	.	243	61.5	36.9	.	-4.58	-4.57	4.358	3.425	3.113	0.01557	15.566
82	.	.	.	.	.	2.50	.	416	86.0	128.0	.	-3.99	-4.04	3.736	1.743	2.740	0.43585	14.321
83	.	.	.	.	.	2.50	.	172	52.3	33.4	.	-4.04	-4.03	18.212	18.212	17.808	0.08094	32.377
84	.	.	.	.	.	2.50	.	440	160.0	30.0	.	-4.08	-4.32	15.410	12.608	14.290	0.11208	78.453

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
77	63.51	5.479	1.2453	.	236.60	1.2453	1.494	37.36	115.8	534.1	186.79	.	3362	747.2	5852.8
78	63.23	0.934	0.9340	.	205.47	0.9340	9.340	28.02	560.4	403.6	140.09	14.01	1868	280.2	5603.8
79	65.38	8.717	4.3585	.	374.83	4.3585	43.585	130.75	2615.1	653.8	.	.	12640	3922.6	9152.8
80	.	.	.	.	.	.	79.387	.	83.0	.	.	198.47	3255	1671.1	1190.8
81	.	.	.	.	.	.	31.132	.	32.2	.	.	77.83	3783	957.3	574.4
82	25.03	0.623	0.6226	.	77.21	0.7472	12.453	19.68	373.6	280.2	93.40	31.13	2590	535.5	797.0
83	168.77	16.189	4.0472	.	.	8.0943	80.943	121.41	2428.3	1821.2	607.07	202.36	6961	2116.7	1351.8
84	105.91	5.604	2.8019	.	319.41	2.8019	84.056	84.06	1681.1	1260.8	420.28	140.09	12328	4483.0	840.6

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
77	1494.3	.	560.4	31.13	.	31.13	31.13	.	.	.	37.36	186.79	311.32	31.13	.	140
78	747.2	.	420.3	23.35	4.670	23.35	23.35	.	.	.	185.39	300.17	233.49	23.35	.	154
79	2179.2	.	1961.3	108.96	.	.	108.96	.	.	.	1165.89	217.92	1089.62	108.96	.	161
80	.	.	1786.2	99.23	19.847	99.23	.	.	.	.	.	.	.	.	.	175
81	.	.	700.5	38.91	7.783	38.91	.	.	.	.	.	.	.	.	.	182
82	.	.	280.2	15.57	3.113	15.57	56.04	.	.	.	.	.	.	15.57	.	189
83	.	.	1821.2	101.18	20.236	101.18	364.24	.	.	.	.	.	.	101.18	.	203
84	.	7.5651	1260.8	70.05	14.009	70.05	252.17	.	.	.	.	.	.	70.05	.	224

---------- LAKE=ERIE SITE=365260 1 ----------

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
85	810818	81	800	3.33	86.0	68.0	3.58	0.93	0.58	0.54	0.012	2.80	6.16	0.1	0.1	.	21.90	0.10
86	810901	81	920	3.23	110.0	73.0	3.67	.	.	0.66	0.016	2.69	7.98	0.4	0.1	.	28.50	0.10
87	810908	81	2700	3.46	46.0	37.0	3.97	0.48	0.25	.	0.015	1.56	3.47	0.1	0.1	.	14.30	0.07
88	810921	81	6700	4.12	24.0	27.0	4.01	.	.	.	0.002	.	0.71	0.2	0.1	.	8.55	0.10
89	811006	81	2910	3.98	33.0	37.0	3.94	0.44	0.25	0.29	0.003	0.30	3.38	0.1	0.1	.	13.00	0.10
90	811020	81	850	4.64	13.0	14.0	4.54	0.23	0.34	0.43	0.009	1.53	2.00	0.2	0.1	.	5.50	0.10
91	811026	81	1330	3.85	44.0	52.0	4.84	0.94	0.50	0.61	0.012	3.14	4.20	0.4	0.1	.	19.00	0.10
92	811103	81	777	2.95	26.5	30.0	4.04	0.43	0.21	0.21	0.004	1.20	2.22	0.3	0.1	.	11.00	0.20

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
85	3.00	3.00	60.00	45	15.00	5.0	381	62.9	30.0	.	0.36	45.0	2.50	0.5	2.50	9.0	.
86	.	.	11.60	.	.	.	.	.	.	.	0.27	.	.	.	.	.	.
87	.	.	7.20	.	.	.	.	.	.	0.03	0.18	.	.	.	.	.	.
88	.	.	.	.	.	.	.	.	.	0.03	.	.	.	.	.	.	.
89	0.10	3.13	10.60	45	9.44	5.0	214	38.0	30.0	.	0.31	24.6	1.80	0.4	3.00	9.0	5.0
90	0.11	.	6.06	.	.	.	.	.	.	.	.	.	.	.	.	.	.
91	0.41	0.10	26.00	.	7.00	2.8	460	79.0	19.0	.	0.71	24.0	2.10	0.0	1.40	2.5	3.9
92	1.60	5.50	10.00	45	9.00	5.0	96	25.0	.	.	0.37	25.0	1.30	0.4	3.00	9.0	5.0

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
85	.	.	.	.	.	2.50	.	381	62.9	30.0	.	-3.33	-3.58	11.581	7.223	6.725	0.14943	34.868
86	.	.	.	.	.	.	.	.	.	.	.	-3.23	-3.67	.	.	9.452	0.22913	38.523
87	.	.	.	.	.	.	.	.	.	.	30	-3.46	-3.97	20.174	10.507	.	0.63042	65.564
88	.	.	.	.	.	.	.	.	.	.	30	-4.12	-4.01	.	.	.	0.20858	.
89	4.0	.	2.00	5.0	6.8	2.70	0.90	214	38.0	30.0	.	-3.98	-3.94	19.931	11.324	13.136	0.13589	13.589
90	.	.	.	.	.	.	.	.	.	.	.	-4.64	-4.54	3.043	4.499	5.689	0.11908	20.246
91	1.9	.	0.50	0.7	21.0	4.80	1.10	460	79.0	19.0	.	-3.85	-4.84	19.461	10.351	12.629	0.24843	65.007
92	4.0	.	2.00	5.2	23.4	3.60	0.98	96	25.0	.	.	-2.95	-4.04	5.201	2.540	2.540	0.04838	14.516

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
85	76.71	1.245	1.2453	.	272.72	1.2453	37.358	37.36	747.2	560.4	186.79	62.26	4765	783.3	373.6
86	114.28	5.728	1.4321	.	408.14	1.4321	.	.	166.1	.	.	.	.	.	.
87	145.84	4.203	4.2028	.	601.00	2.9420	.	.	302.6	.	.	.	.	.	.
88	74.05	20.858	10.4292	.	891.70	10.4292	.	.	.	.	.	.	.	.	.
89	153.10	4.530	4.5297	.	588.86	4.5297	4.530	141.78	480.1	2038.4	427.60	226.49	9694	1721.3	1358.9
90	26.46	2.646	1.3231	.	72.77	1.3231	1.455	.	80.2	.	.	.	.	.	.
91	86.95	8.281	2.0703	.	393.35	2.0703	8.488	2.07	538.3	.	144.92	57.97	9523	1635.5	393.4
92	26.85	3.628	1.2095	.	133.04	2.4190	19.352	66.52	120.9	544.3	108.85	60.47	1161	302.4	.

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
85	.	4.4830	560.4	31.13	6.226	31.13	112.08	.	.	.	.	.	.	31.13	.	231
86	.	3.8666	.	.	.	.	.	.	.	.	.	.	.	.	.	245
87	1260.8	7.5651	.	.	.	.	.	.	.	.	.	.	.	.	.	252
88	3128.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	265
89	.	14.0421	1114.3	81.53	18.119	135.89	407.67	226.49	181.19	.	90.59	226.49	308.02	122.30	40.767	280
90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	294
91	.	14.6990	496.9	43.48	0.000	28.98	51.76	80.74	39.34	.	10.35	14.49	434.76	99.37	22.773	300
92	.	4.4751	302.4	15.72	4.838	36.28	103.85	60.47	48.38	.	24.19	62.89	233.02	43.54	11.853	308

LAKE=ERIE SITE=365260 1

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PHLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOC	SULFATE	CHLORIDE	SILICA	ALKA	ACIDS	MERCURY
93	811109	81	350	3.65	64.9	59.0	3.97	.	.	.	0.002	0.99	1.98	0.5	0.1	.	12.5	0.1
94	811123	81	1400	4.04	30.0	32.5	3.99	0.52	0.35	0.34	0.005	0.99	3.35	0.2	0.1	.	16.0	0.1
95	811201	81	430	3.93	42.0	33.5	.	0.39	0.11	0.29	0.014	1.69	3.48	0.3	0.1	.	11.0	0.1
96	811208	81	380	3.95	44.0	37.0	4.08	0.92	0.34	0.31	0.002	1.07	2.07	0.2	0.1	.	13.5	0.3
97	811229	81	730	4.35	13.5	22.5	4.15	0.44	0.15	0.25	0.005	1.17	1.36	0.3	0.1	.	9.0	0.1
98	820105	82	660	4.15	45.0	29.0	4.18	0.34	0.13	0.10	0.004	0.80	2.56	0.1	0.1	.	11.0	0.1
SITE																		

OBS	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BARIUM	BERYLIUM	COBALT	CHROMIUM	MOLY
93	1.10	3.00	8.7	45	9.0	5.0	211	73.0	201.0	.	0.30	21.0	0.80	0.4	3.00	9.0	6.5
94	0.37	41.70	48.8	45	163.0	8.3	274	57.0	276.0	.	0.68	67.0	16.40	14.4	6.25	30.4	66.0
95	0.39	5.57	34.4	.	19.6	5.0	478	101.0	75.9	.	0.25	70.7	2.95	0.4	4.48	9.0	5.0
96	0.51	0.50	19.0	.	4.3	3.1	210	40.0	23.0	.	0.46	22.0	1.40	0.0	1.30	1.2	1.7
97	1.38	3.00	38.9	45	9.0	5.0	237	36.8	70.9	0.10	0.16	30.7	2.85	0.4	3.00	10.4	5.0
98	2.00	3.00	19.1	45	9.0	5.0	229	45.0	30.0	0.07	.	25.3	0.77	0.4	3.00	9.0	5.0
SITE																	

OBS	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGA	TIN	CA	MAG	NA	K	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD	TKNLOAD	TPLOAD	TOCLOAD
93	4.0	.	2.00	5.0	13.0	2.50	0.80	211	73.0	201.0	.	-3.65	-3.97	.	.	.	0.01090	5.394
94	19.8	.	6.28	35.5	25.0	10.80	10.20	274	57.0	276.0	.	-4.04	-3.99	11.332	7.627	7.409	0.10896	21.576
95	30.5	.	3.31	21.8	47.0	9.52	2.42	478	101.0	75.9	.	-3.93	.	2.610	0.736	1.941	0.09371	11.312
96	1.8	.	0.50	7.0	17.0	2.20	0.80	210	40.0	23.0	.	-3.95	-4.08	5.442	2.011	1.834	0.01183	6.329
97	4.0	.	2.00	5.0	27.5	2.47	1.87	237	36.8	70.9	100	-4.35	-4.15	5.000	1.704	2.841	0.05682	13.295
98	4.0	.	2.00	5.0	11.9	2.76	1.07	229	45.0	30.0	70	-4.15	-4.18	3.493	1.336	1.027	0.04109	8.219
SITE														308.010	179.184	201.495	4.07772	703.463

OBS	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	HIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	AGLOAD	CALOAD	MGLOAD	NALOAD
93	10.79	1.636	0.5448	.	68.10	0.5448	5.993	16.34	47.4	245.2	49.03	27.24	1150	397.7	1095.1
94	73.00	4.358	2.1792	.	348.68	2.1792	8.063	908.74	1063.5	980.7	3552.16	180.88	5971	1242.2	6014.7
95	23.29	2.008	0.6693	.	73.63	0.6693	2.610	37.28	230.3	.	131.19	33.47	3199	676.0	508.0
96	12.24	1.183	0.5915	.	79.85	1.7745	3.017	2.96	112.4	.	25.43	18.34	1242	236.6	136.0
97	15.45	3.409	1.1363	.	102.27	1.1363	15.681	34.09	442.0	511.3	102.27	56.82	2693	418.2	805.6
98	26.30	1.027	1.0274	.	113.01	1.0274	20.547	30.82	196.2	462.3	92.46	51.37	2353	462.3	308.2
SITE	1823.16	159.841	60.0528	0	6988.08	64.8620	542.415	2105.69	18772.3	16436.0	7441.64	1566.50	162117	33119.4	97333.3

OBS	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
93	.	1.6344	114.4	4.36	2.179	16.34	49.03	35.41	21.79	.	10.90	27.24	70.83	13.62	4.358	314
94	.	14.8188	1460.1	357.40	313.811	136.20	662.49	1438.30	431.49	.	136.86	773.63	544.81	235.36	222.282	328
95	.	1.6733	473.2	19.75	2.677	29.99	60.24	33.47	204.15	.	22.16	145.92	314.59	63.72	16.198	336
96	.	2.7209	130.1	8.28	0.000	7.69	7.10	10.06	10.55	.	2.96	41.41	100.56	13.01	4.732	343
97	1136.3	1.3181	348.8	32.39	4.545	34.09	118.18	56.82	45.45	.	22.73	56.82	312.49	28.07	21.249	364
98	719.1	.	259.9	7.91	4.109	30.82	92.46	51.37	41.09	.	20.55	51.37	122.26	28.36	10.993	371
SITE	37914.1	87.1562	22823.6	1440.82	437.837	1273.78	3035.94	1993.12	1023.53	0	2086.43	4981.36	7521.08	1540.28	355.206	

LAKE=ERIE SITE=393060 99

OBS	DATE	YEAR	SIZE	PHFLD	CONDFLD	CONDLAB	PNLAB	NITRATE	AMMONIA	NITROGEN	TOTALP	TOTC	SULFATE	CHLORIDE	SILICA	ALKAS	ACIDS	MERCURY	CADMIUM	COPPER	IRON	LEAD	NICKEL	SILVER	CALCIUM	MG	SODIUM	POTASS	ARSENIC	ALUMINUM	BERYLIUM	HEXAVALENT	CROMIUM	COBALT	CHROMIUM	MOLYBDENUM	VANADIUM	YTTRIUM	TITANIUM	BORON	ZINC	MANGANESE	TIN	CAD	MAGNESIUM	NEGPHF	NEGPHL	NO3LOAD	NH4LOAD
99	811209	81	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.43	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
100	811208	81	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.55	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
101	811220	81	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SITE																																																0.00	0.000
LAKE																																																1643.38	-994.527

OBS	TKNLOAD	TPLOAD	TOCLOAD	SO4LOAD	CLLOAD	SILOAD	ALKLOAD	NIONLOAD	HGLOAD	CDLOAD	CULOAD	FELOAD	PBLOAD	NILOAD	ALLOAD	CALOAD
99	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
101	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SITE	0.00	0.0000	0.00	0.0	0.00	0.000	0.000	0	0.000	0.00	0.00	0	0.0	0.0	0.00	0
LAKE	1081.19	51.7033	3414.95	12789.7	1374.19	303.859	617.386	59764	391.649	3993.78	8243.25	109844	73517.1	25754.5	6727.43	1805853

OBS	MGLOAD	NALOAD	KLOAD	ASLOAD	ALLOAD	BALOAD	BELOAD	COLOAD	CRLOAD	MOLOAD	VLOAD	YLOAD	TILOAD	BLOAD	ZNLOAD	MNLOAD	SNLOAD	DATENUM
99	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	343
101	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	355
SITE	0	0	0	0.00	0	0.00	0.00	0.00	0.0	0.00	0.0	0	0.00	0.0	0.0	0.0	0.00	
LAKE	277994	496023	138665	510.86	121548	5560.32	890.69	5388.45	13996.6	3927.29	3174.1	0	9042.08	21244.4	43195.7	32901.8	1801.16	

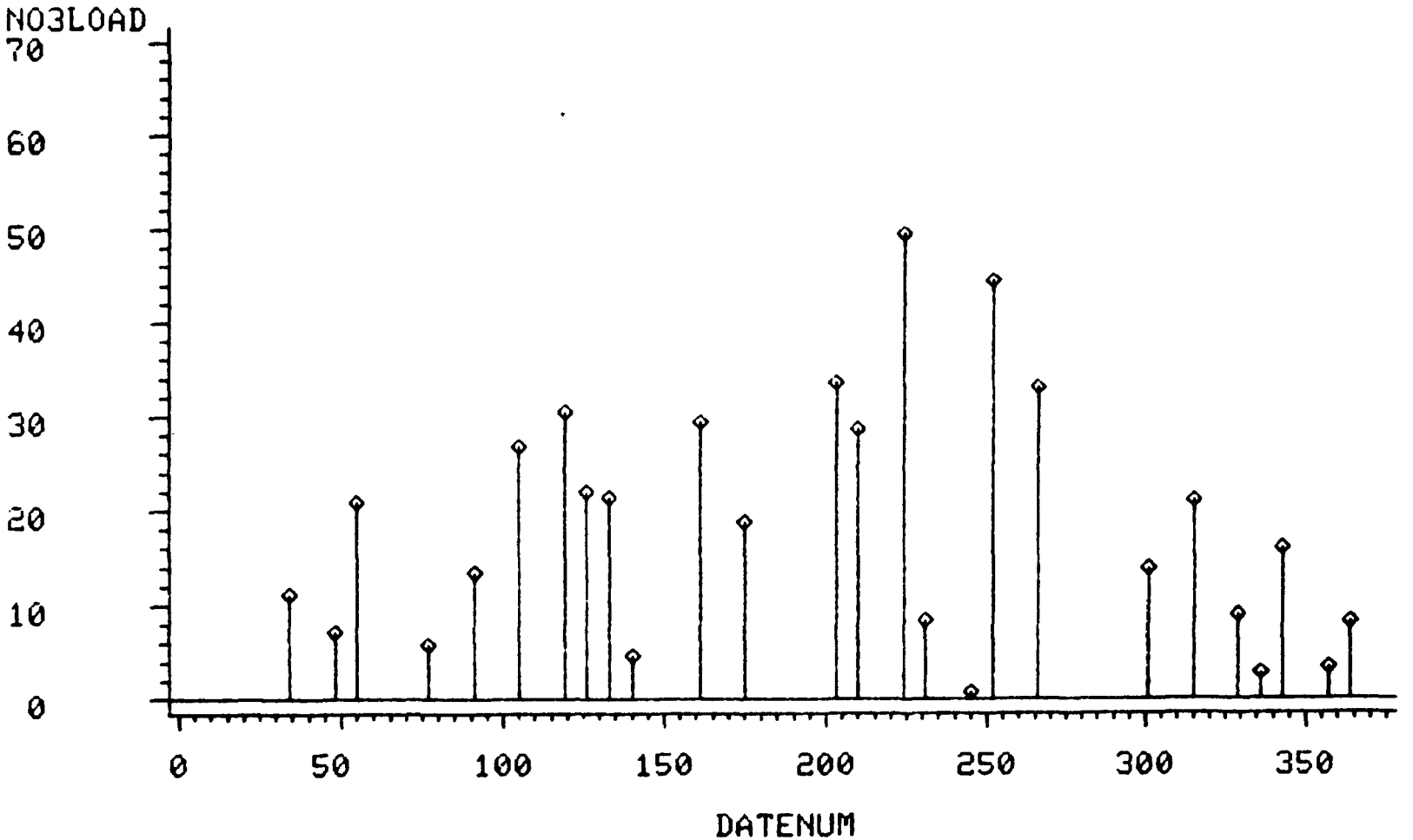
Table 3

ATMOSPHERIC LOADINGS TO LAKE ERIE

Parameter Load	Sites		
Nutrients (mg/M^2)	Fairport Harbor	Put-In-Bay	Toledo (Oregon Sewage Treatment Plant)
NO_3	523	308	486
NH_3	358	179	340
TKN	356	201	387
Total P	4.69	4.08	2.73
TOC	1041	703	1294
SO_4	3807	1823	5621
Cl	440	160	622
Si	98	60	84
Metals (ug/M^2)			
Hg	109	65	184
Cd	1107	542	656
Cu	2953	2106	2259
Fe	39662	18772	33721
Pb	29795	16436	21595
Ni	9307	7442	6436
Ag	2774	1567	1766
Ca	333577	162117	781456
Mg	70848	33119	122620
Na	122207	97333	210920
K	37941	37914	33304
As	189	87	165
Al	43511	22824	30241
Ba	1816	1441	1481
Be	243	438	163
Co	1936	1274	1347
Cr	5238	3036	3994
Mo	914	1993	655
V	996	1024	862
Ti	2728	2086	2857
B	6826	4981	7140
Zn	16903	7521	8654
Mn	2240	1540	2459
Sn	607	355	276

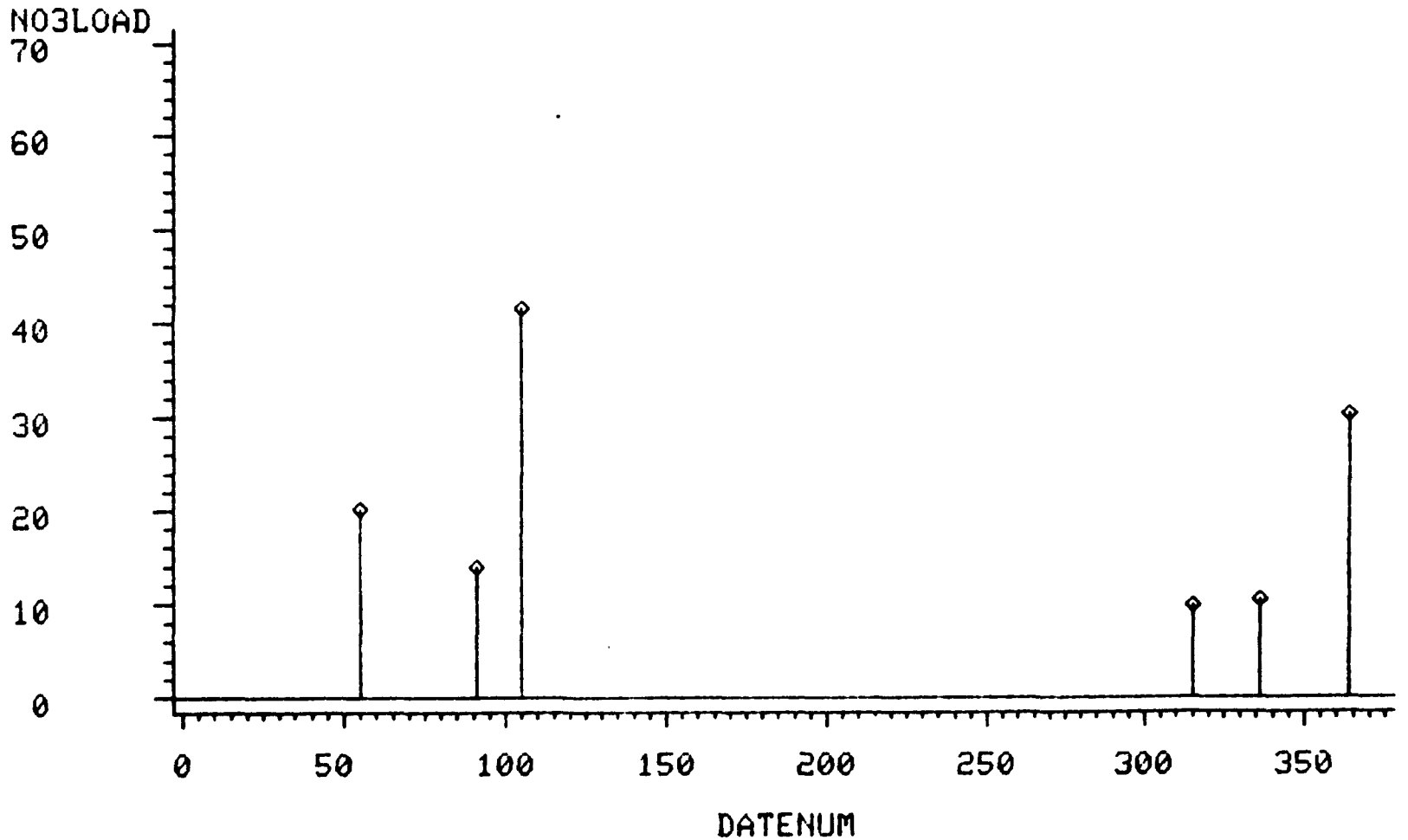
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 NITRATE LOAD (MG/M**2)
SITE=362100 1



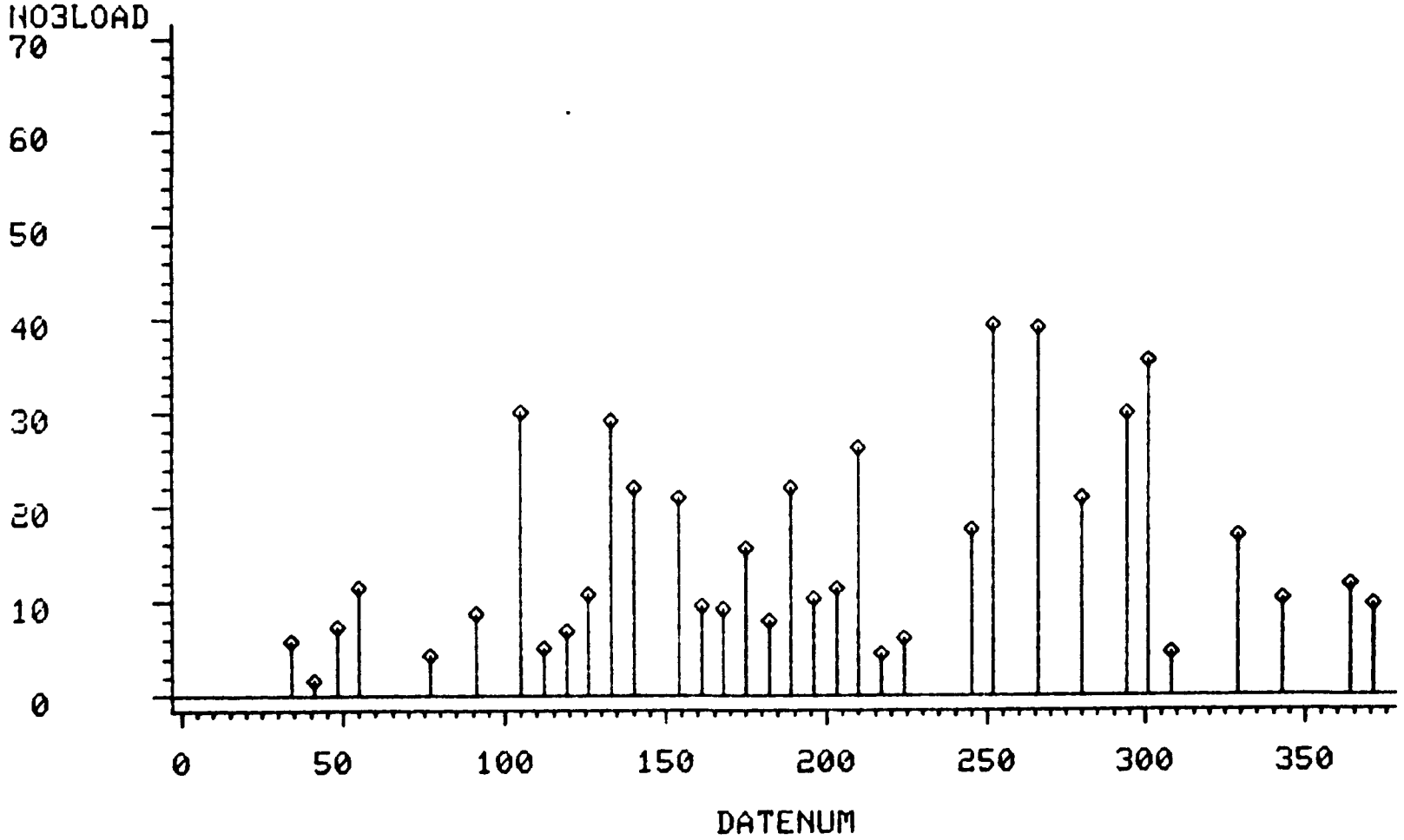
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 NITRATE LOAD (MG/M**2)
SITE=363620 14



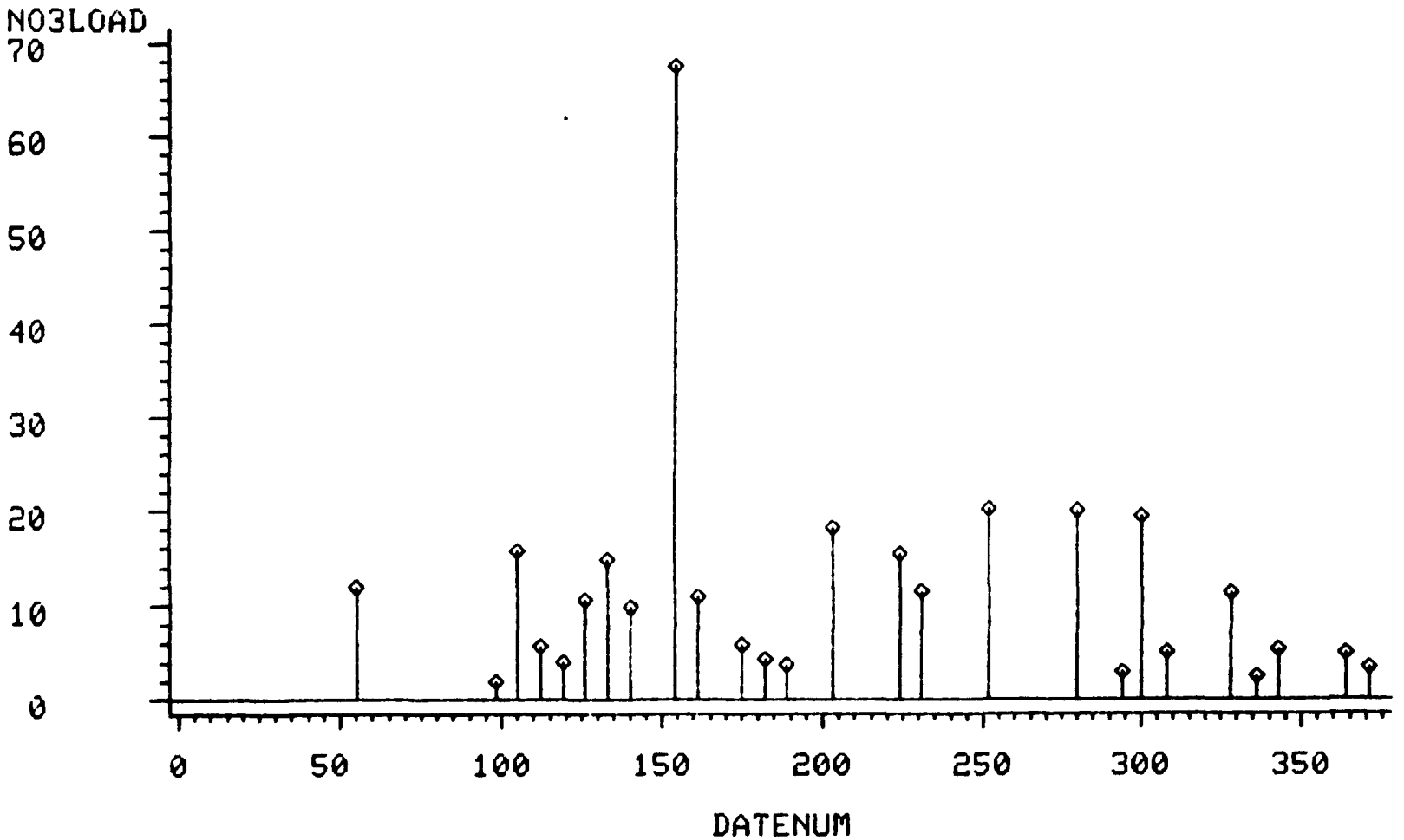
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 NITRATE LOAD (MG/M**2)
SITE=363720 2



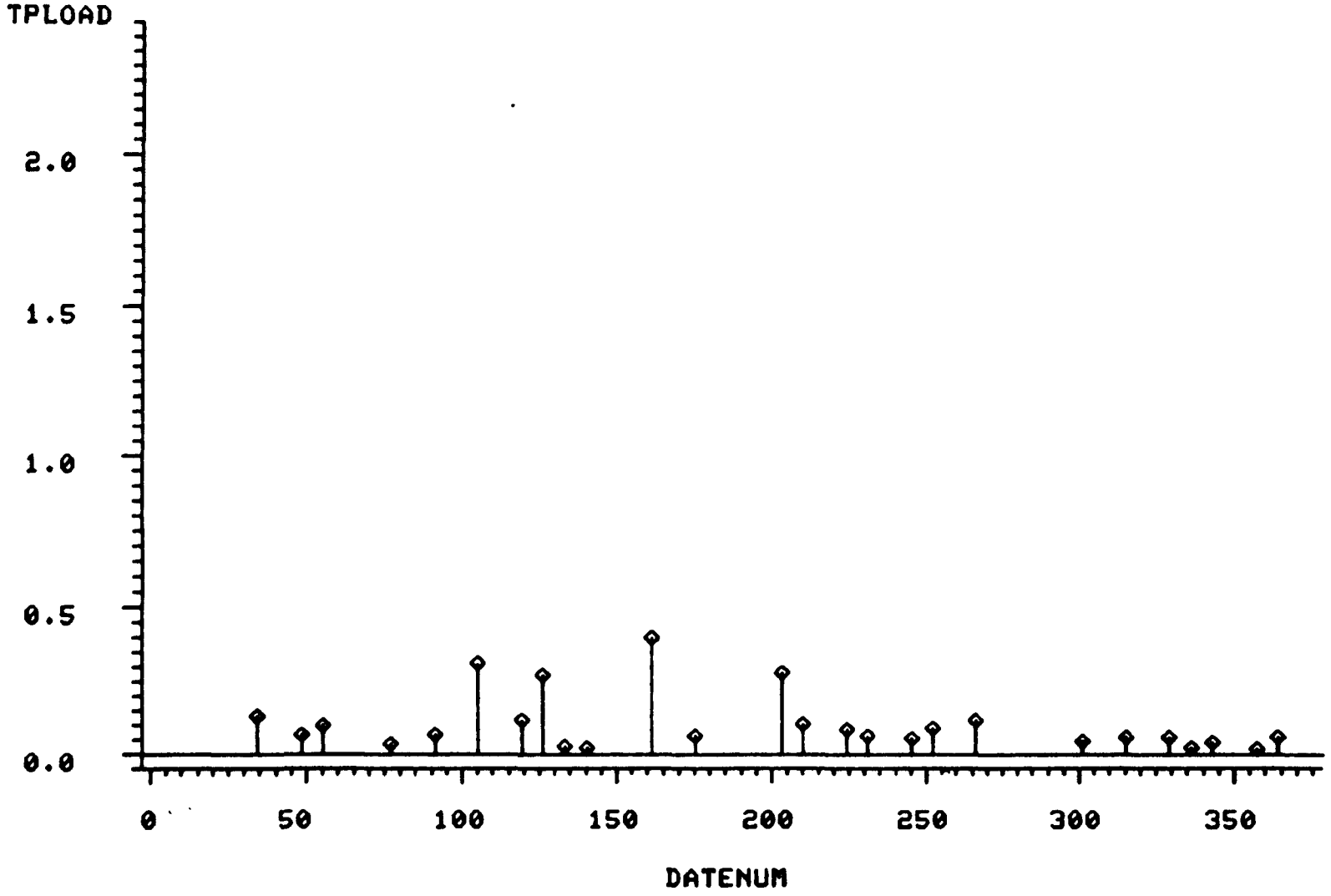
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 NITRATE LOAD (MG/M**2)
SITE=365260 1



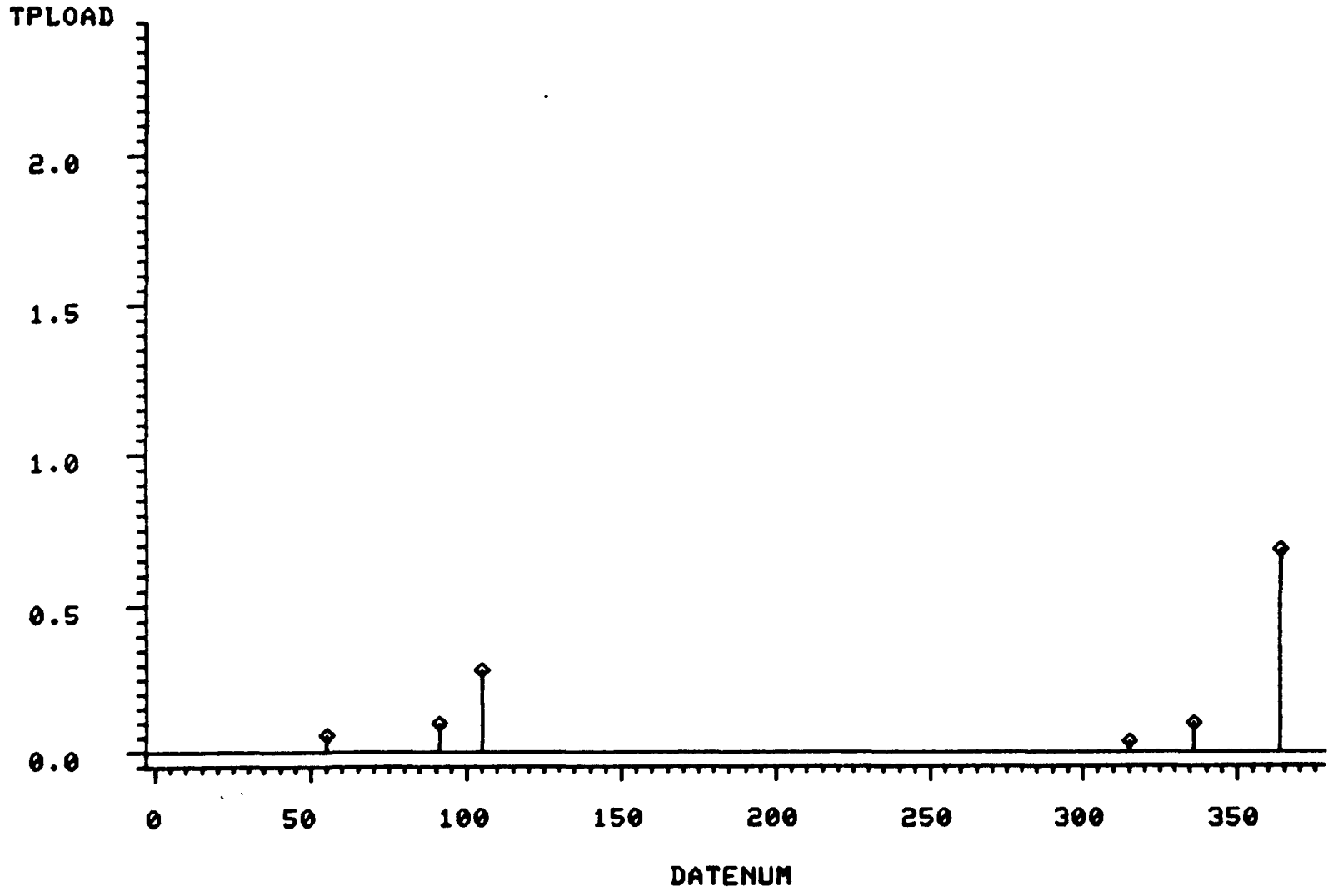
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 TOTAL PHOSPHORUS LOAD (MG/M**2)
SITE=362100 1



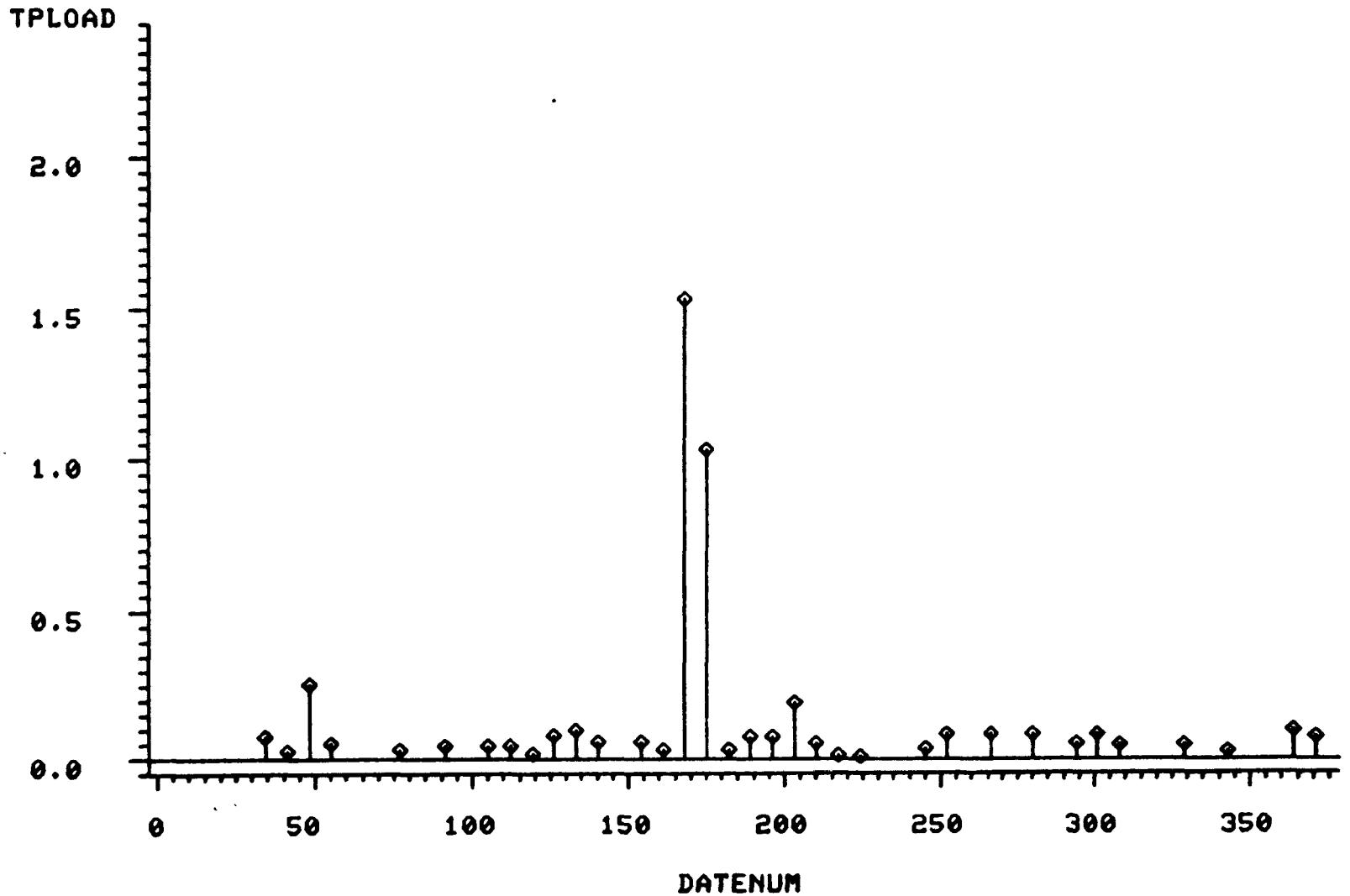
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 TOTAL PHOSPHORUS LOAD (MG/M**2)
SITE=363620 14



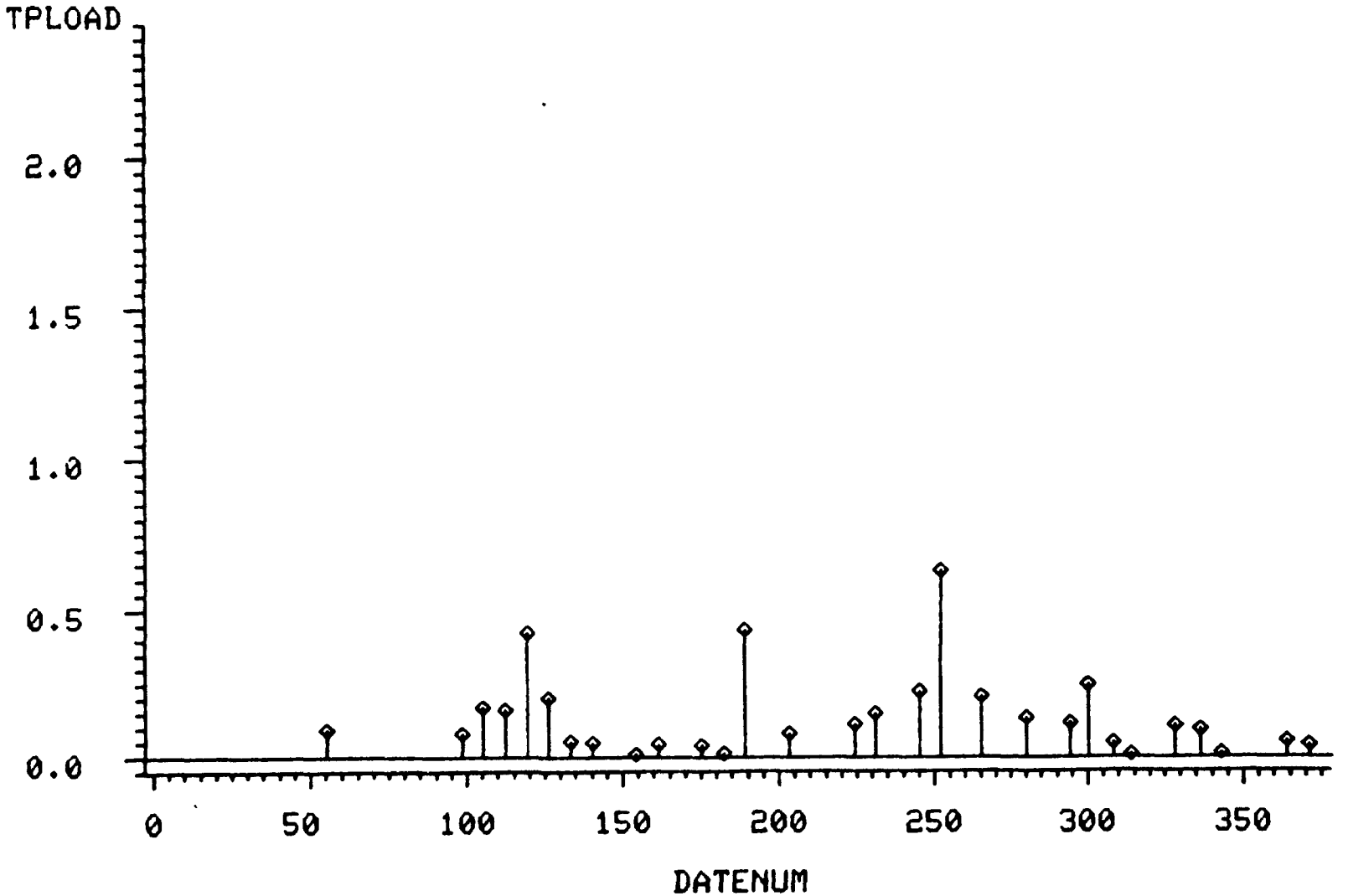
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 TOTAL PHOSPHORUS LOAD (MG/M**2)
SITE=363720 2



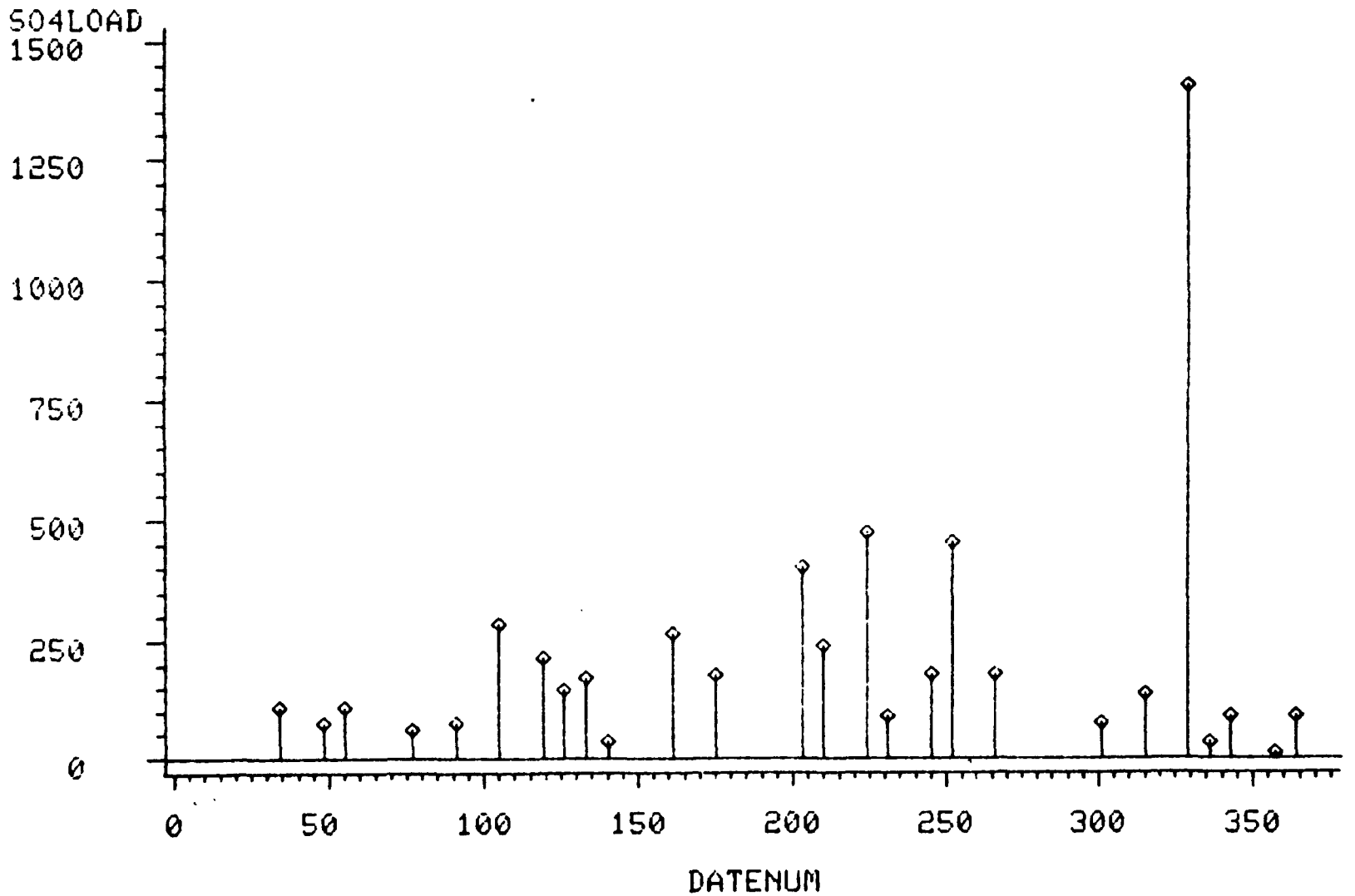
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 TOTAL PHOSPHORUS LOAD (MG/M**2)
SITE=365260 1



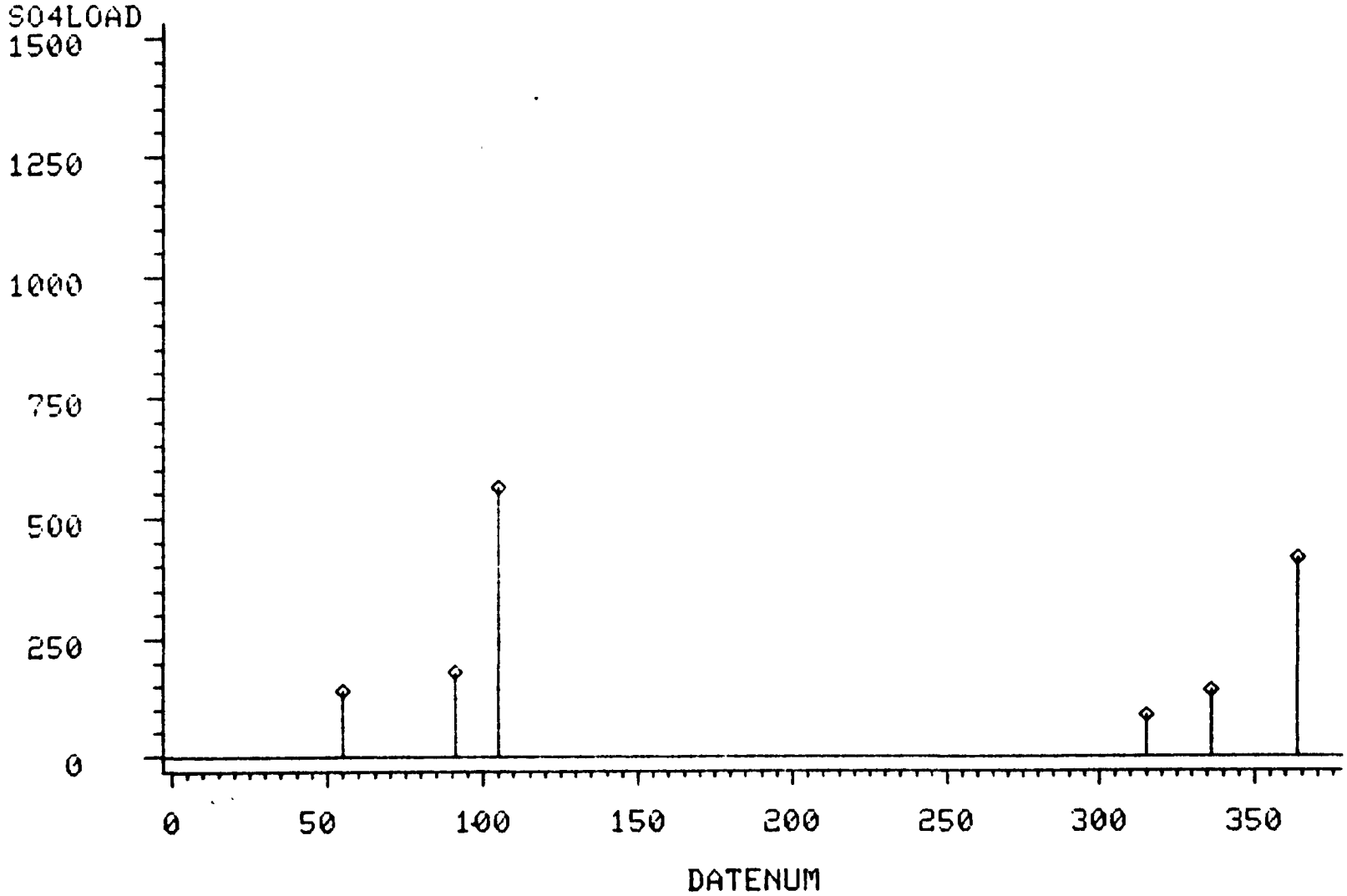
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SULFATE LOAD (MG/M**2)
SITE=362100 1



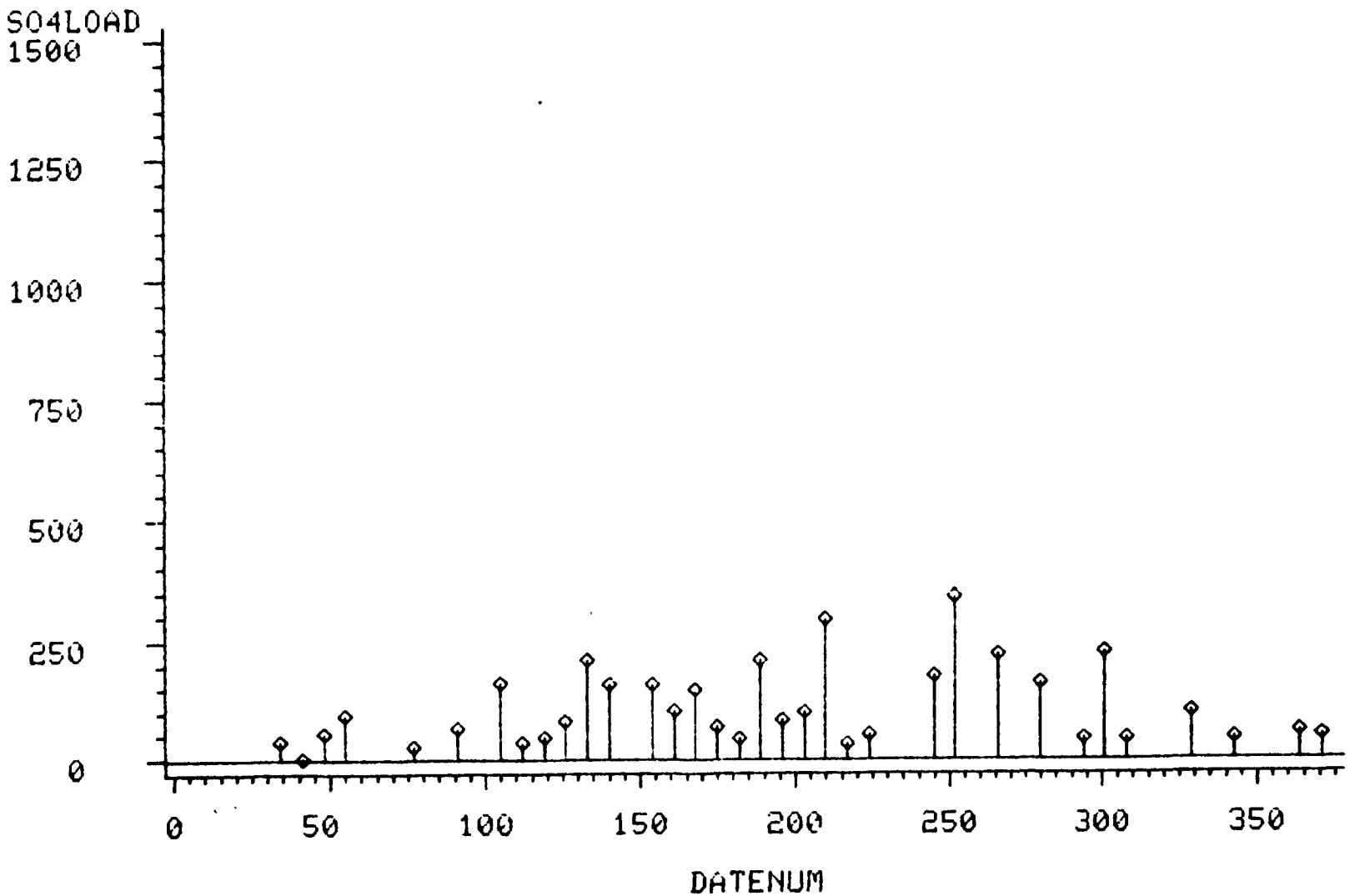
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SULFATE LOAD (MG/M**2)
SITE=363620 14



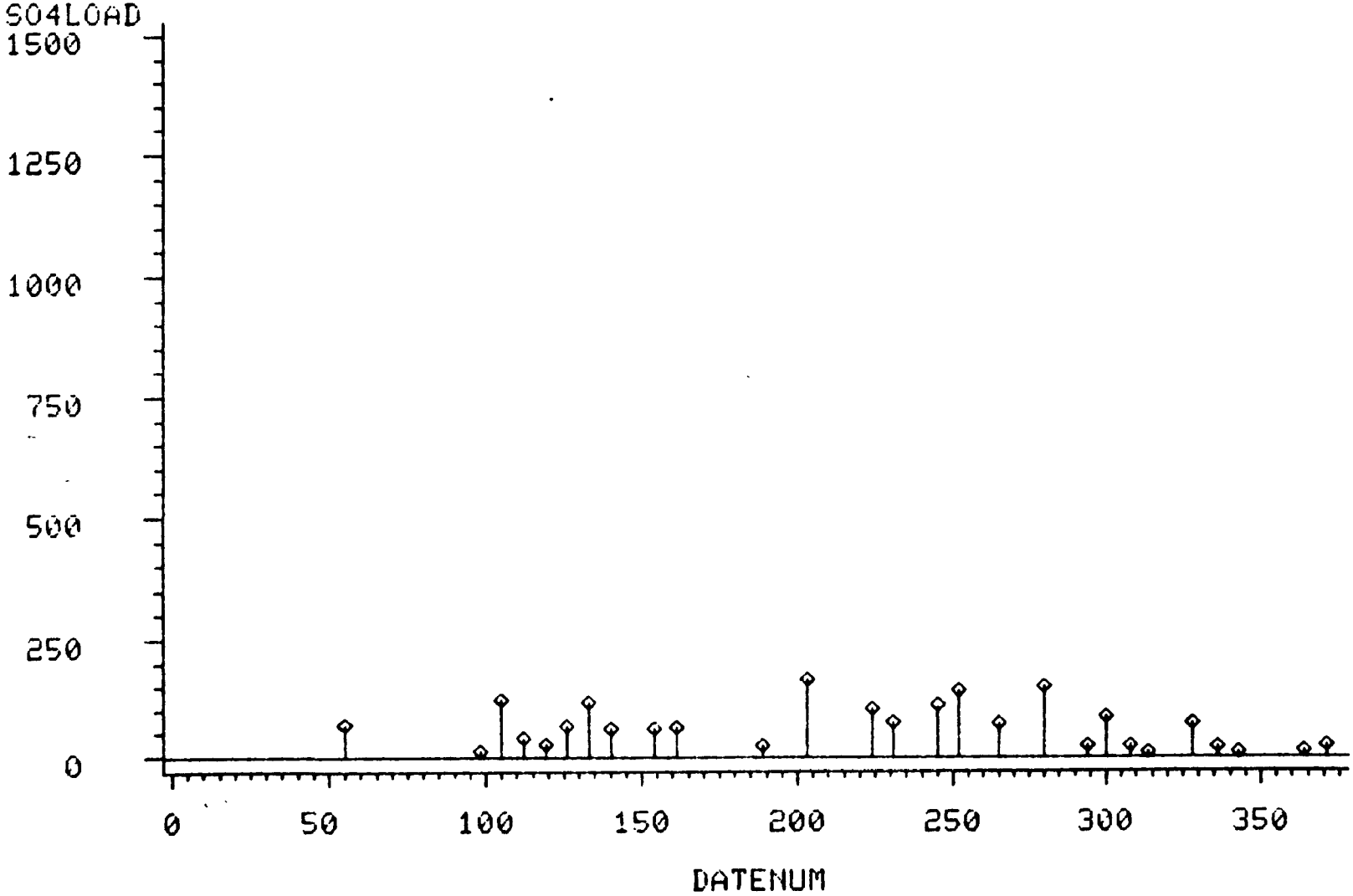
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SULFATE LOAD (MG/M**2)
SITE=363720 2



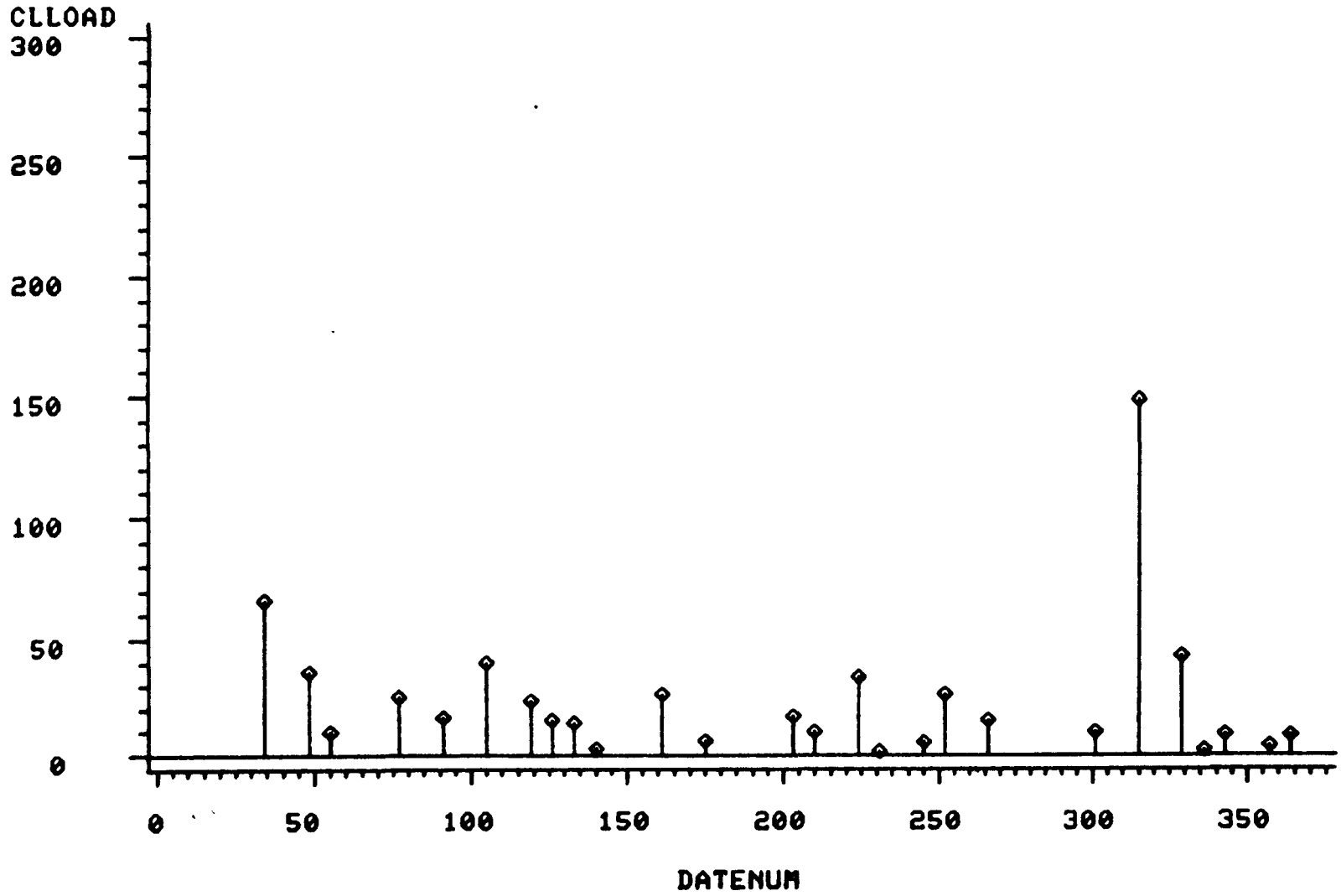
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SULFATE LOAD (MG/M**2)
SITE=365260 1



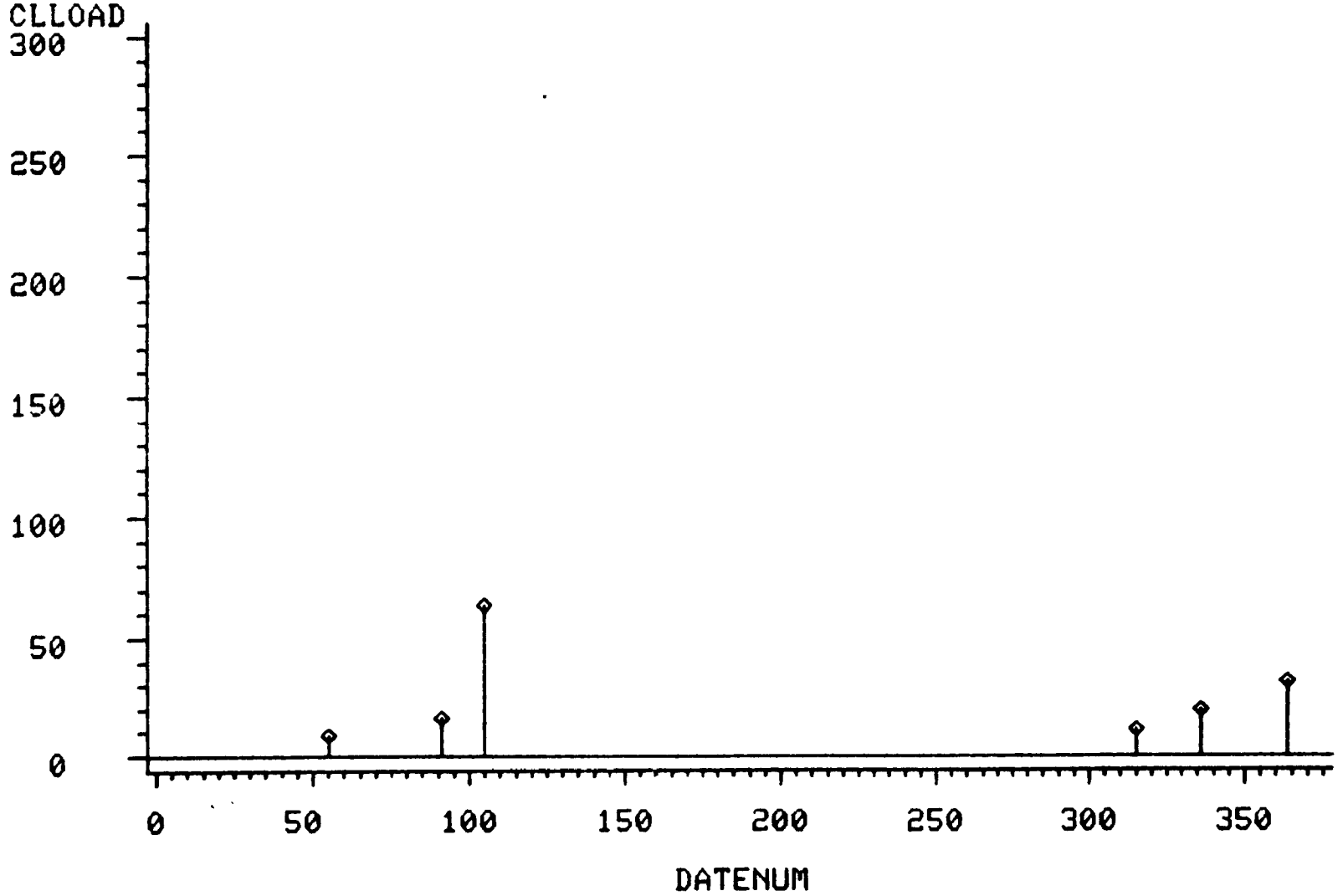
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CHLORIDE LOAD (MG/M**2)
SITE=362100 1



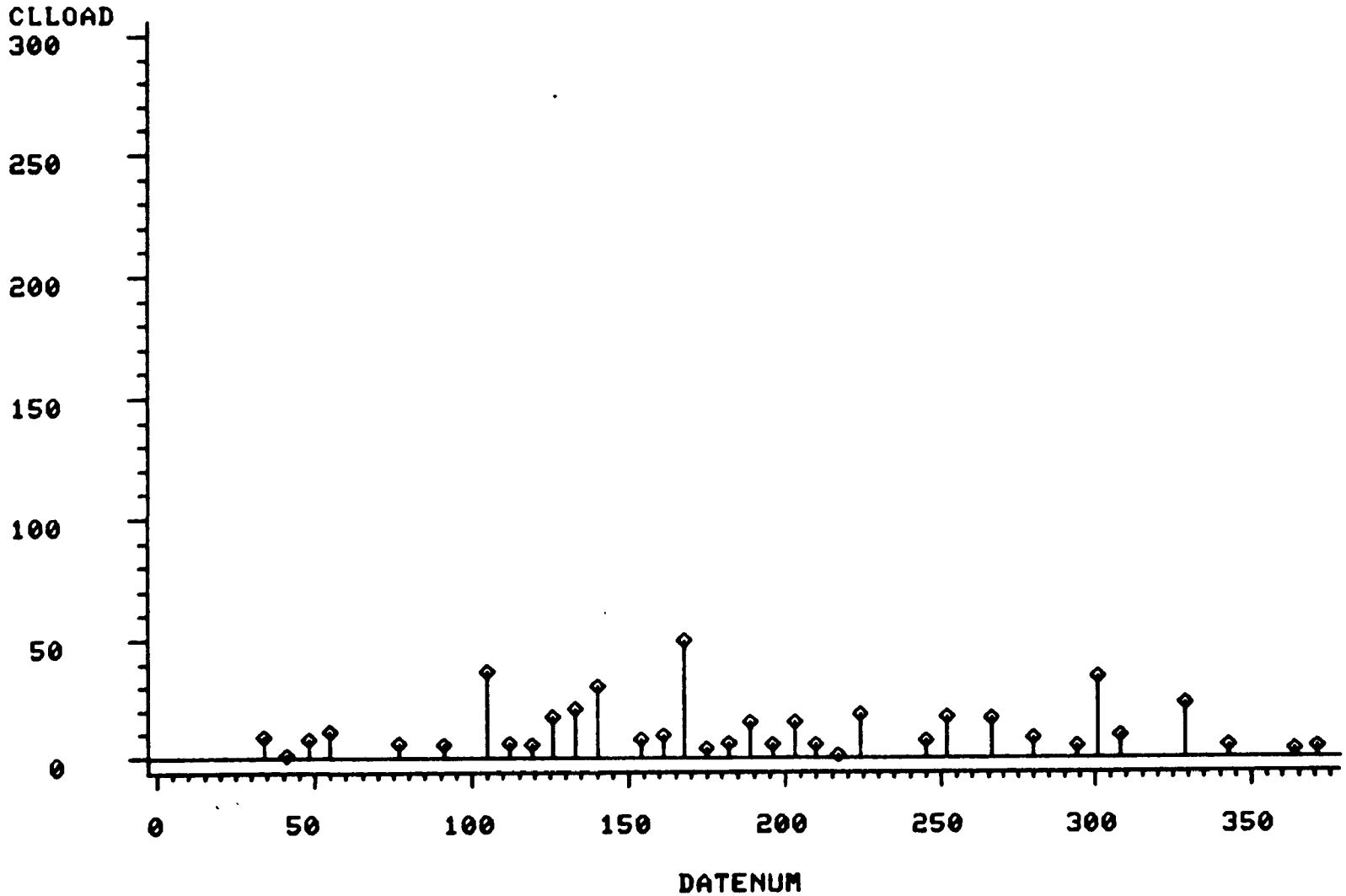
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CHLORIDE LOAD (MG/M**2)
SITE=363620 14



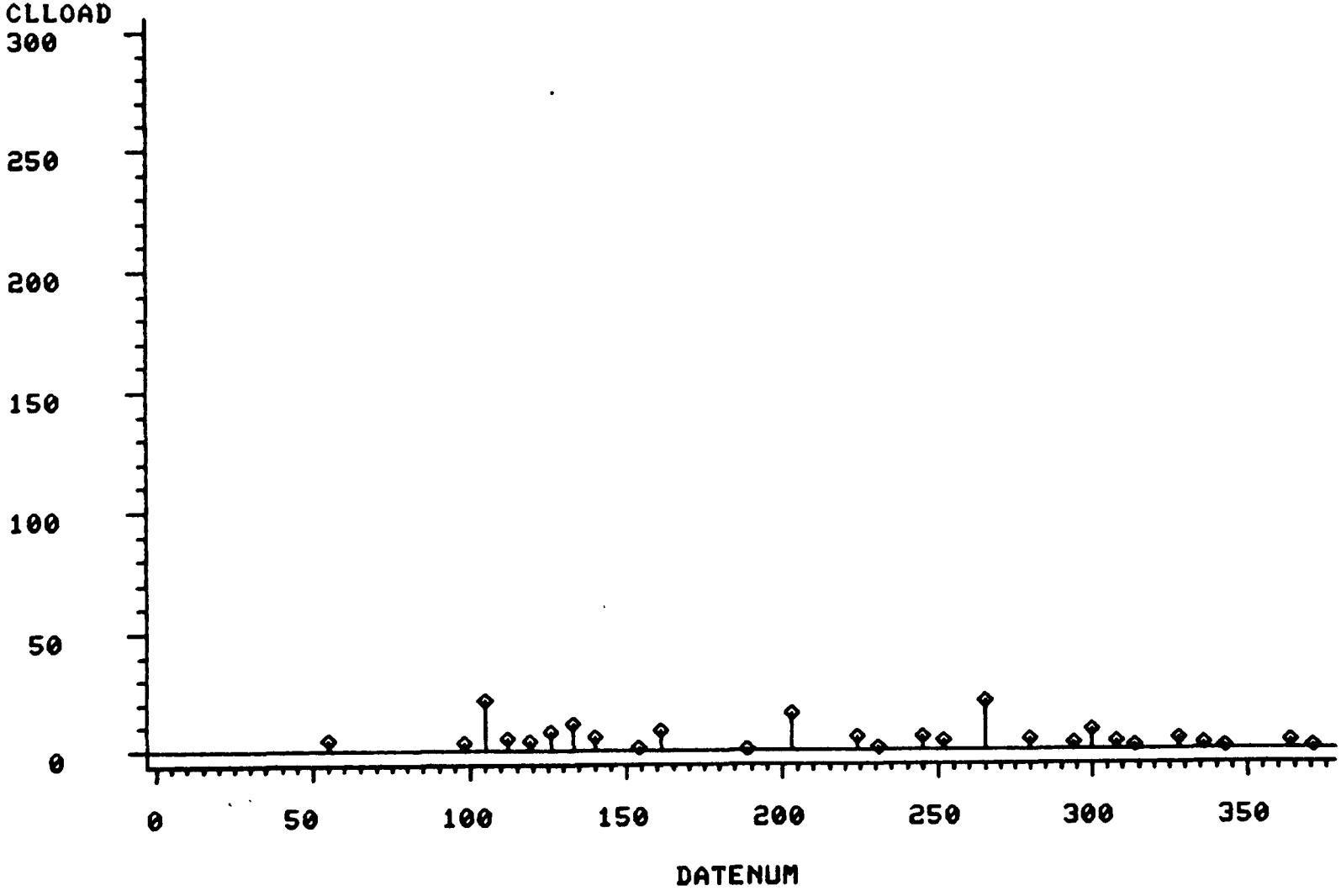
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CHLORIDE LOAD (MG/M**2)
SITE=363720 2



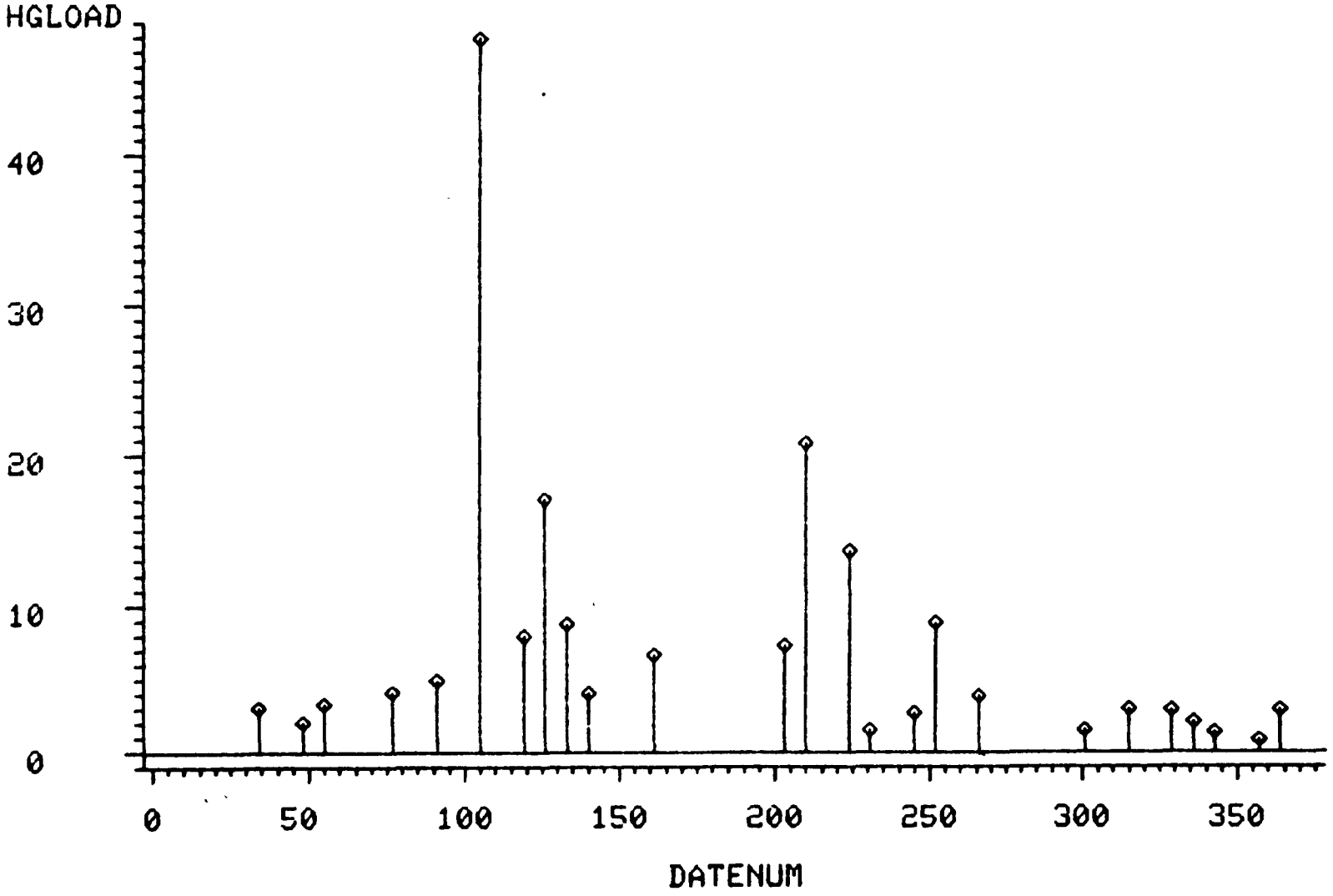
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CHLORIDE LOAD (MG/M**2)
SITE=365260 1



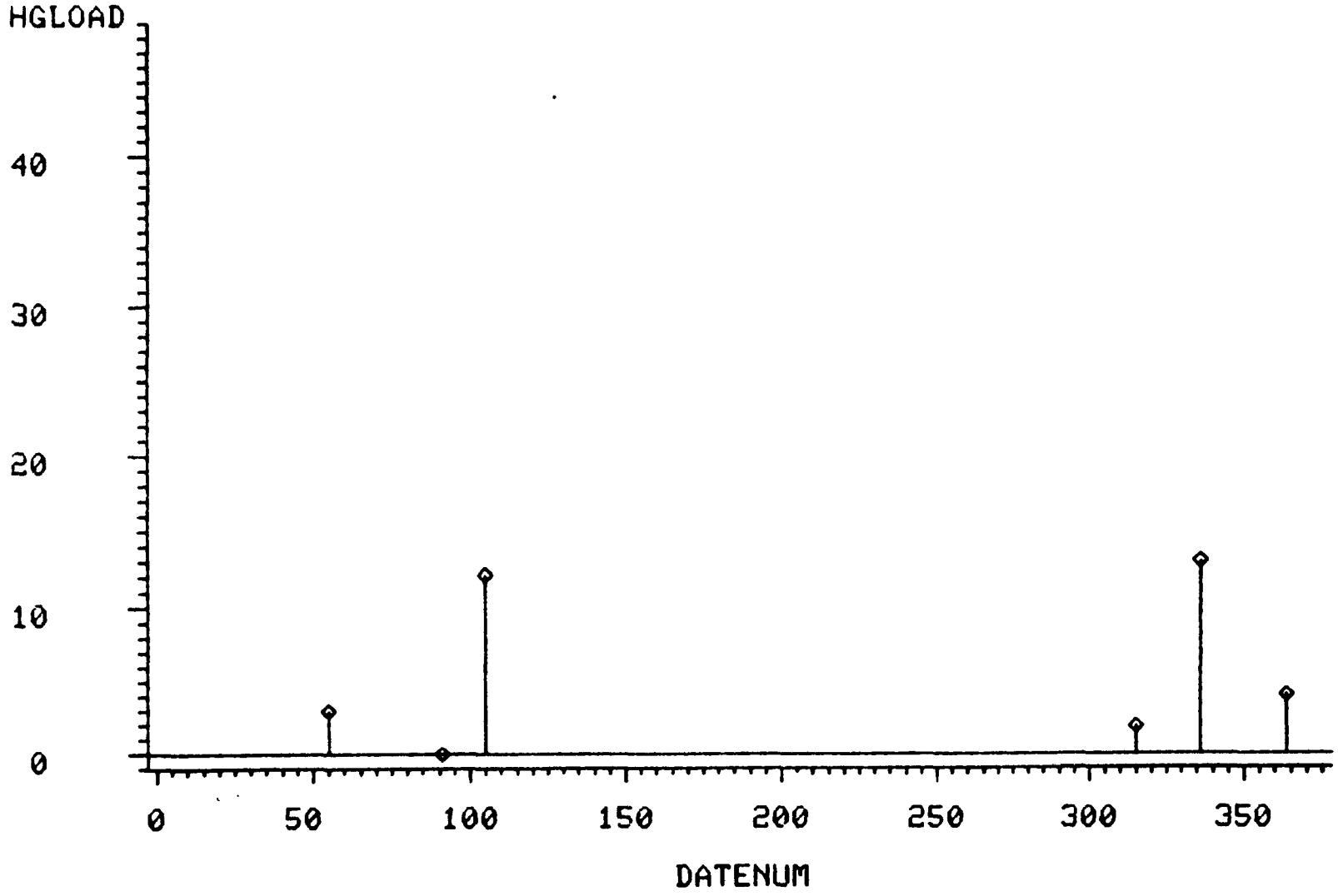
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MERCURY LOAD (UG/M**2)
SITE=362100 1



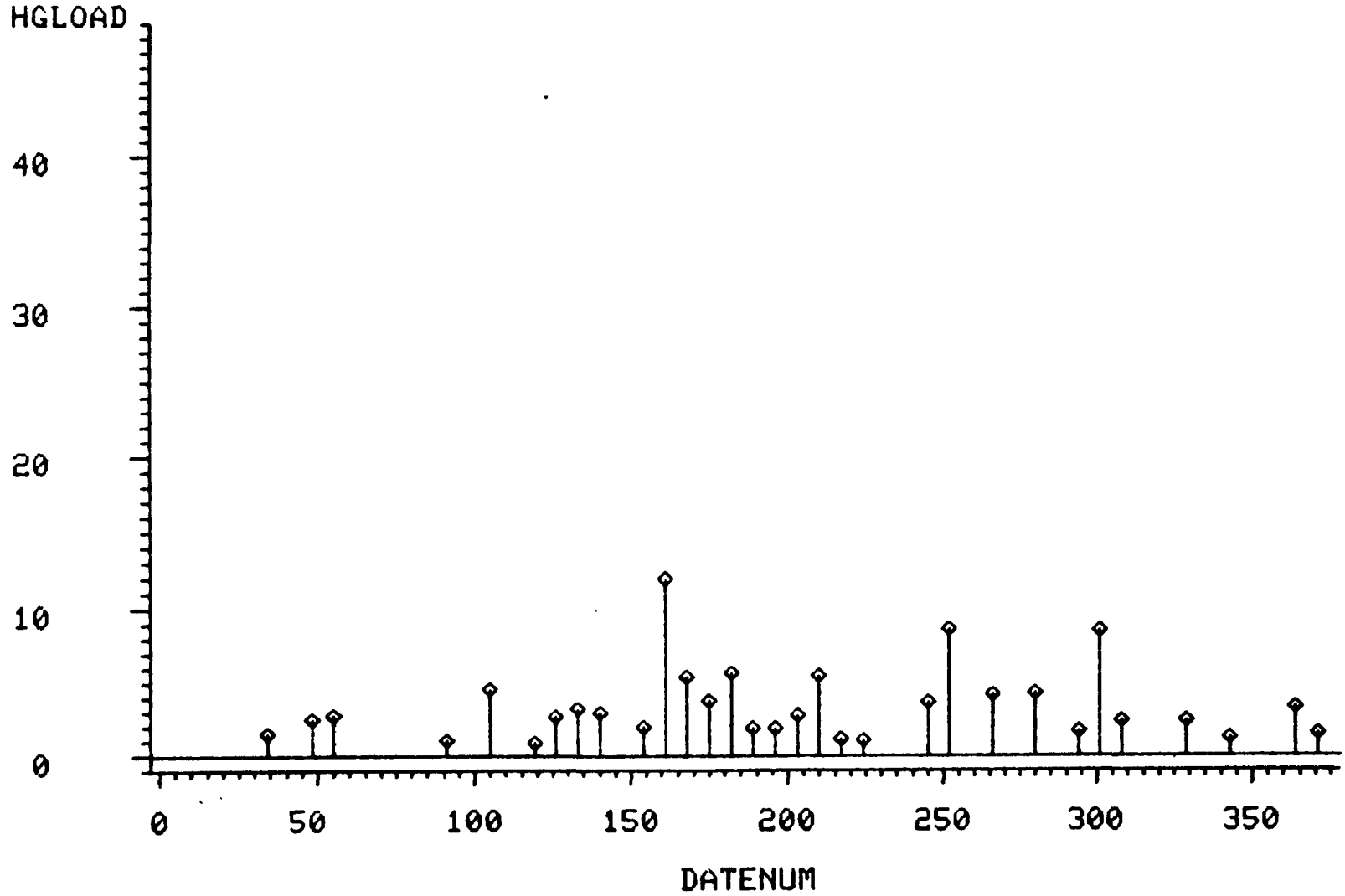
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MERCURY LOAD (UG/M**2)
SITE=363620 14



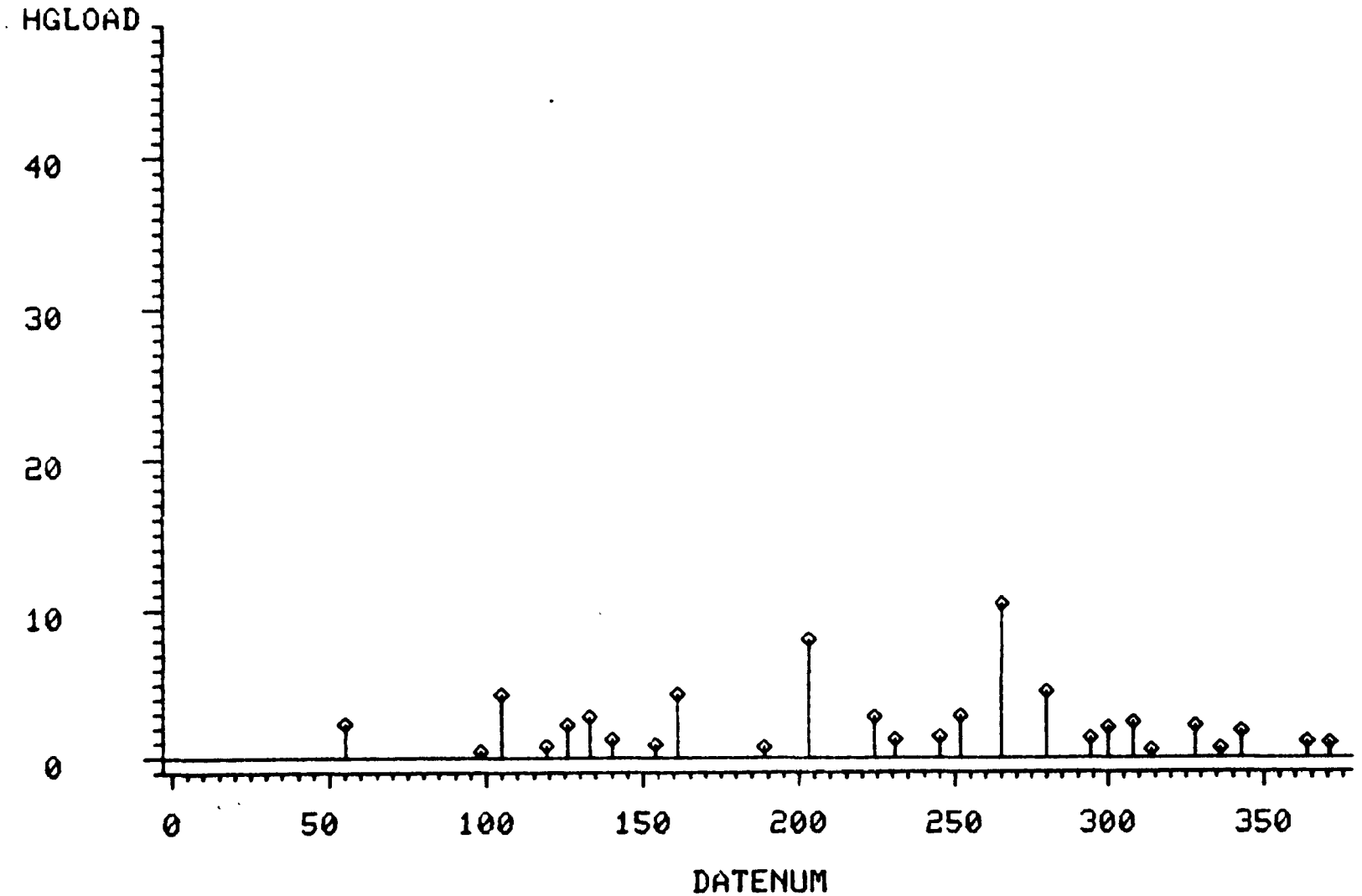
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MERCURY LOAD (UG/M**2)
SITE=363720 2



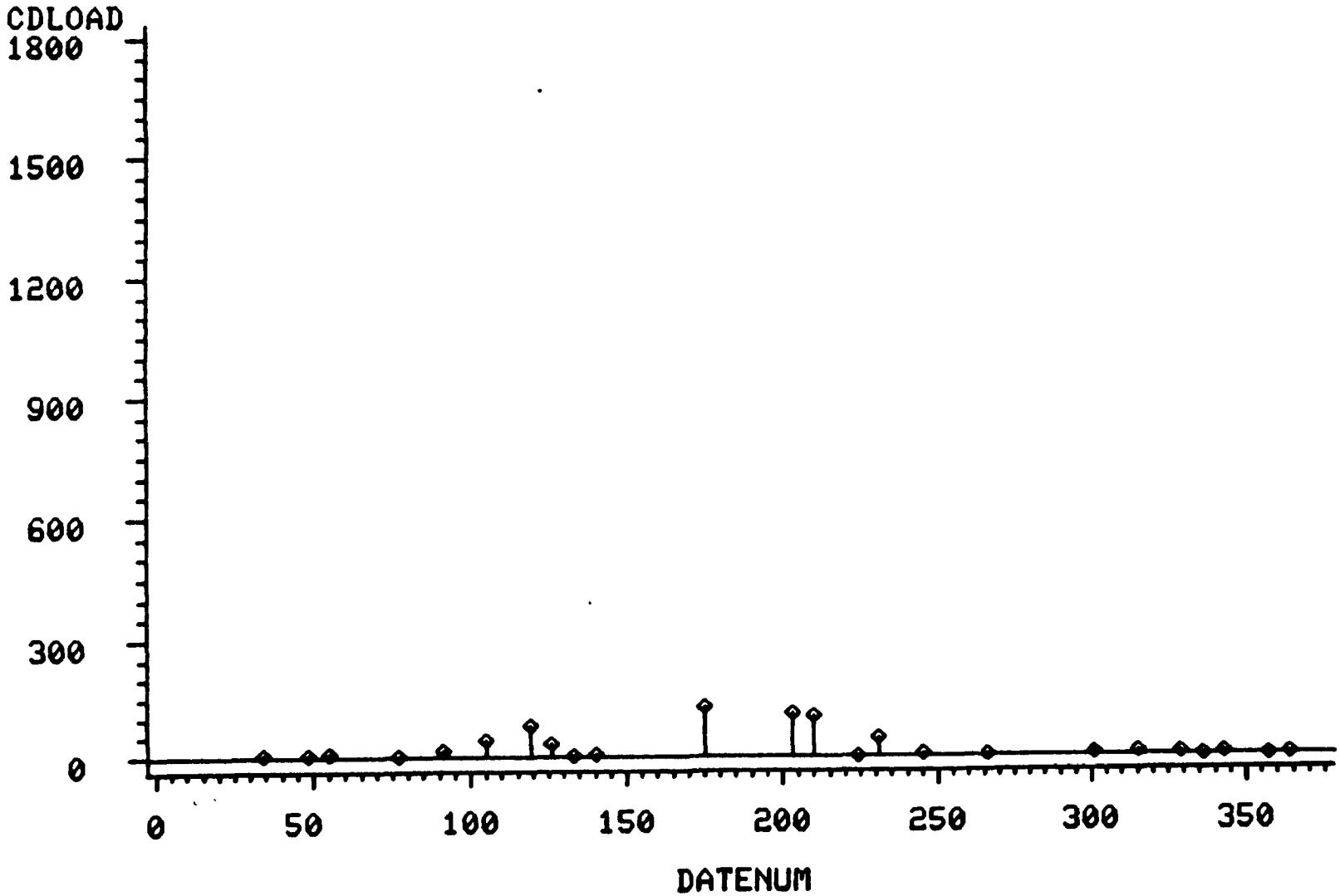
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MERCURY LOAD (UG/M**2)
SITE=365260 1



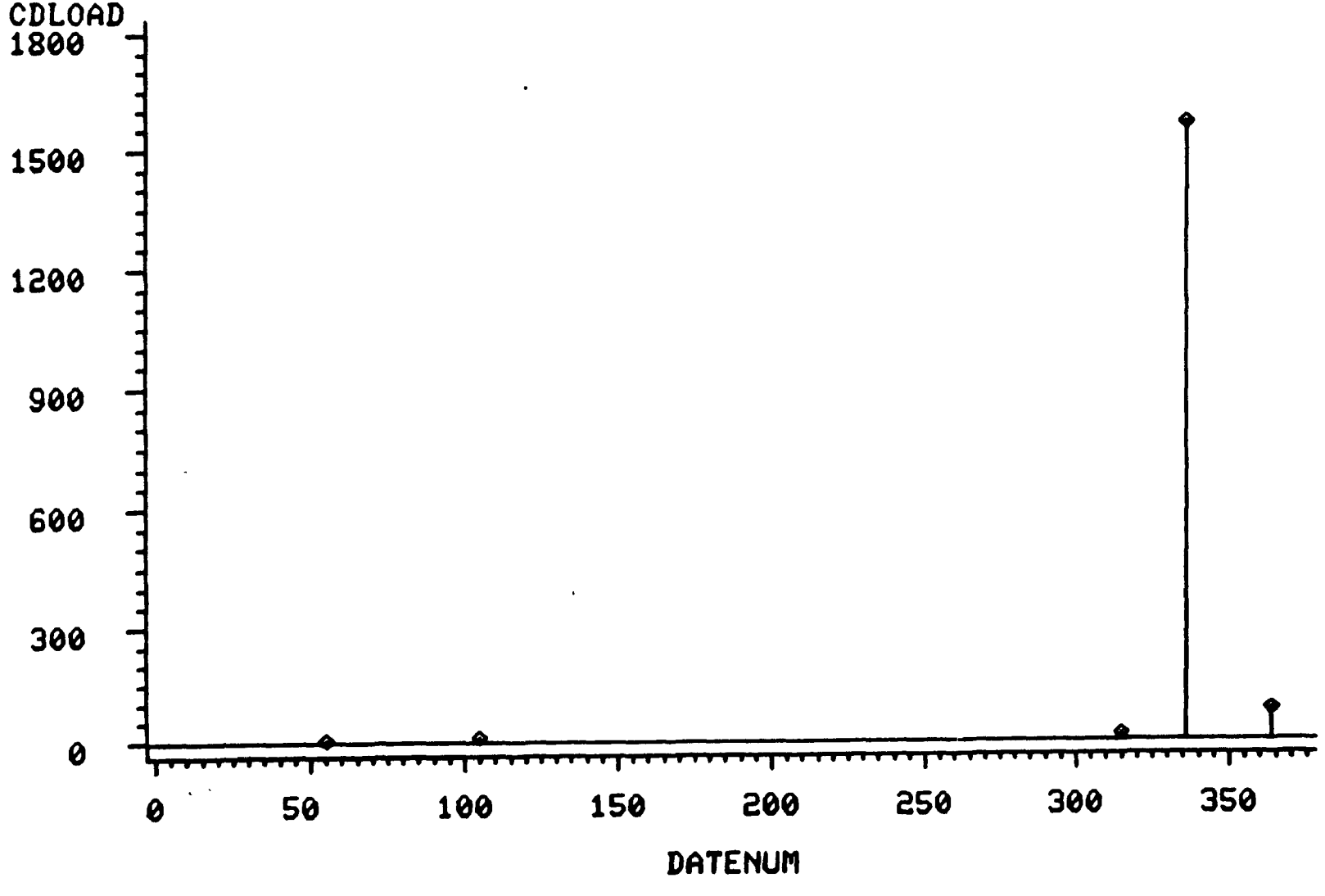
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CADMIUM LOAD (UG/M**2)
SITE=362100 1



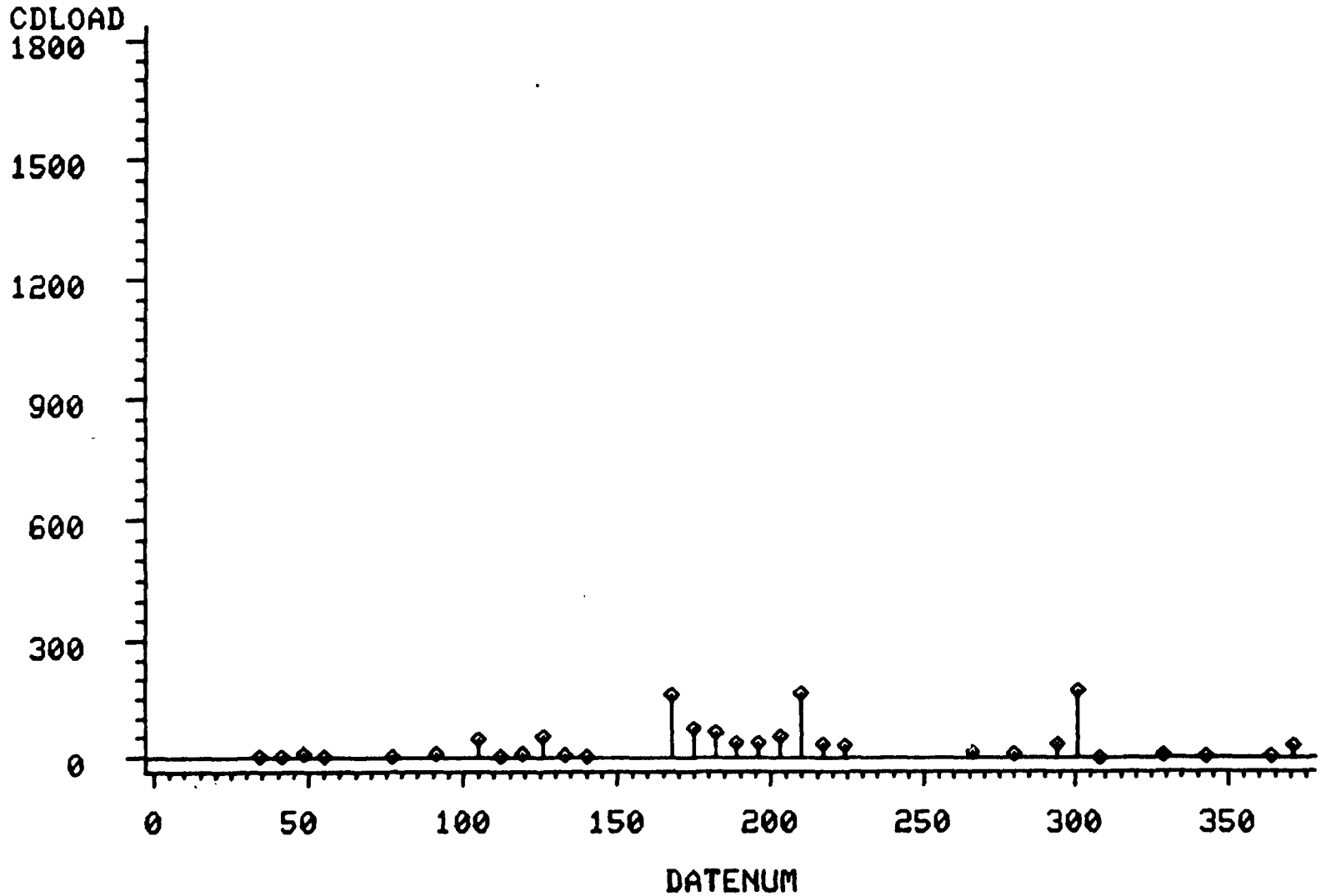
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CADMIUM LOAD (UG/M**2)
SITE=363620 14



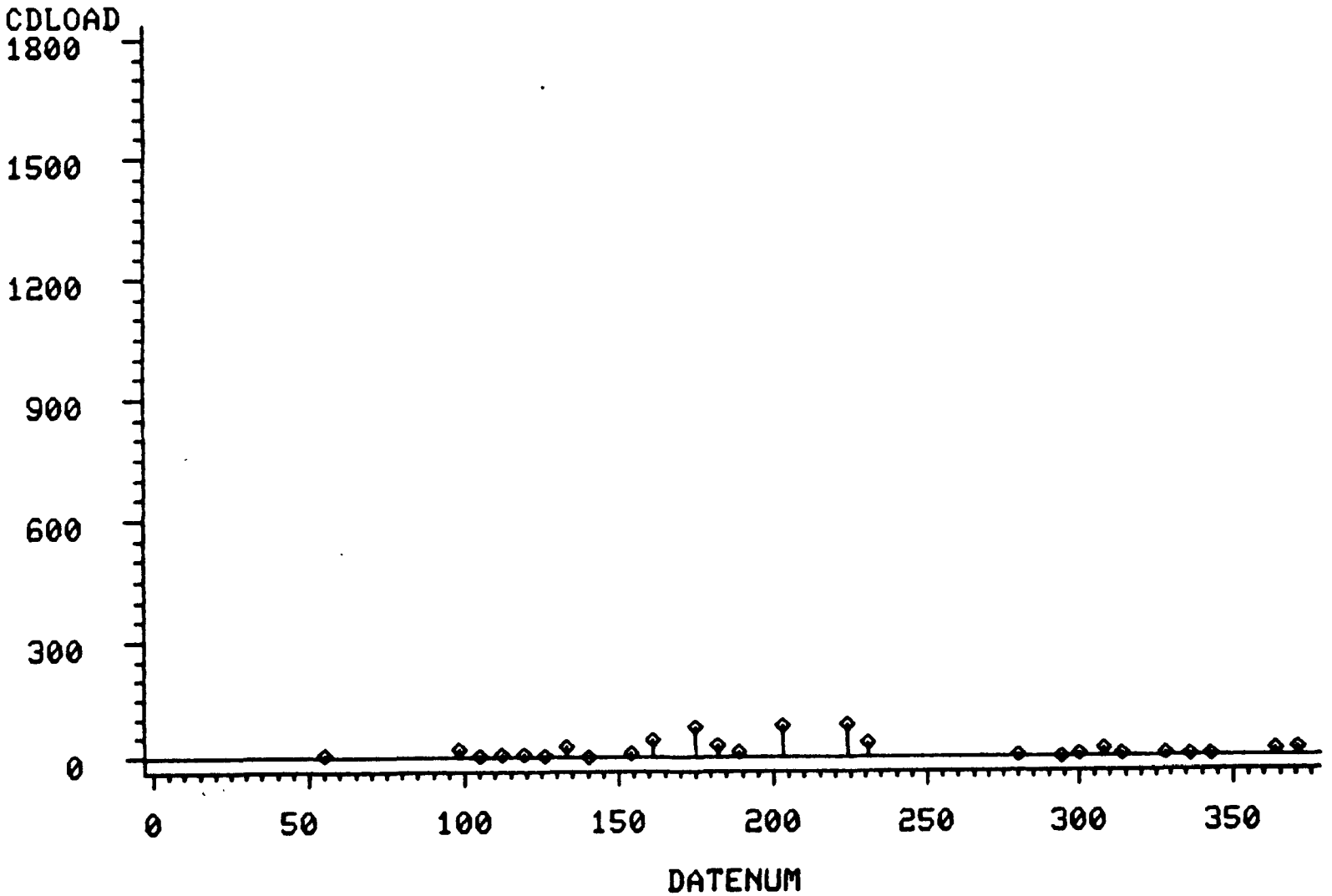
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CADMIUM LOAD (UG/M**2)
SITE=363720 2



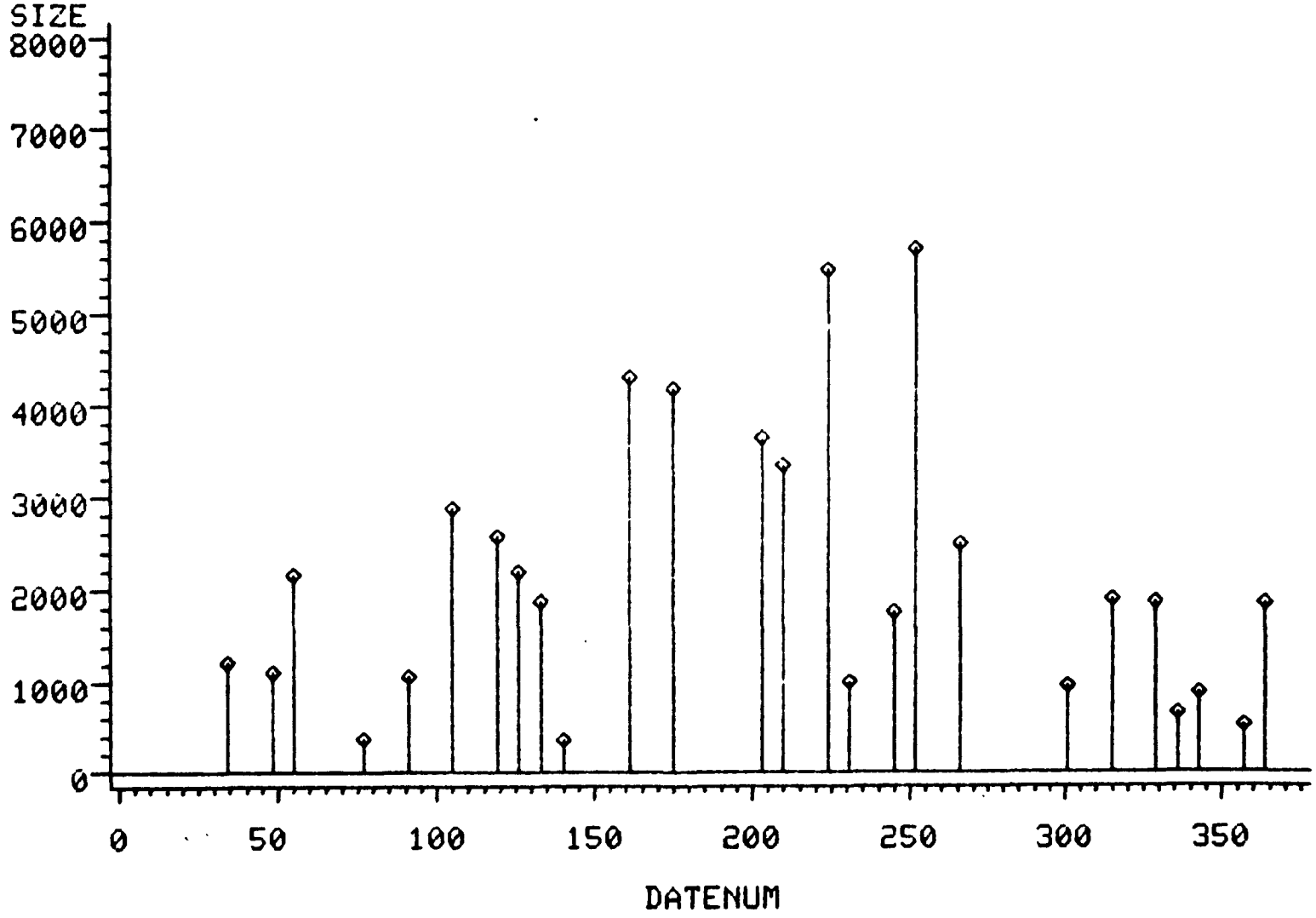
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CADMIUM LOAD (UG/M**2)
SITE=365260 1



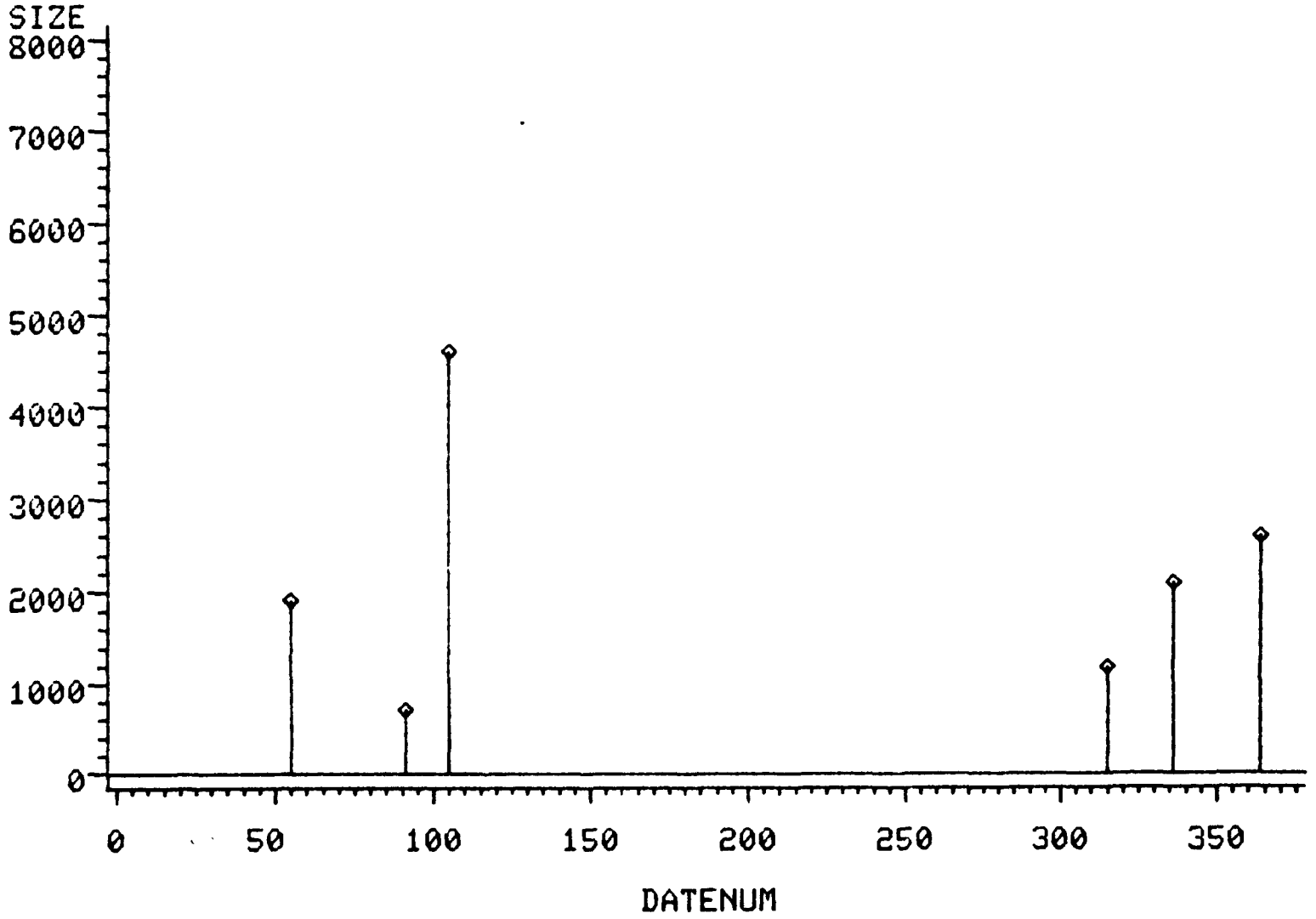
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 PRECIPITATION (ML)
SITE=362100 1



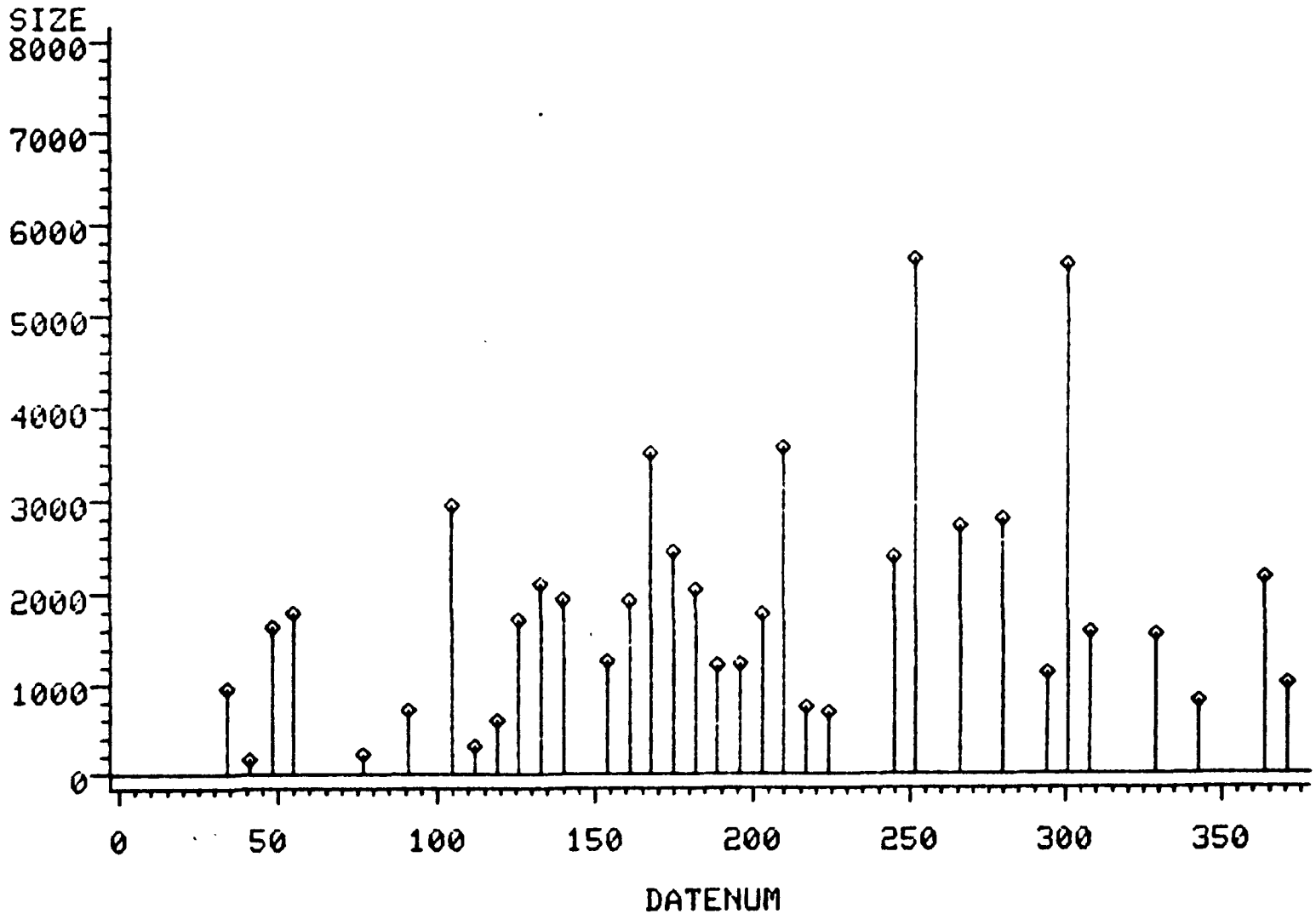
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 PRECIPITATION (ML)
SITE=363620 14



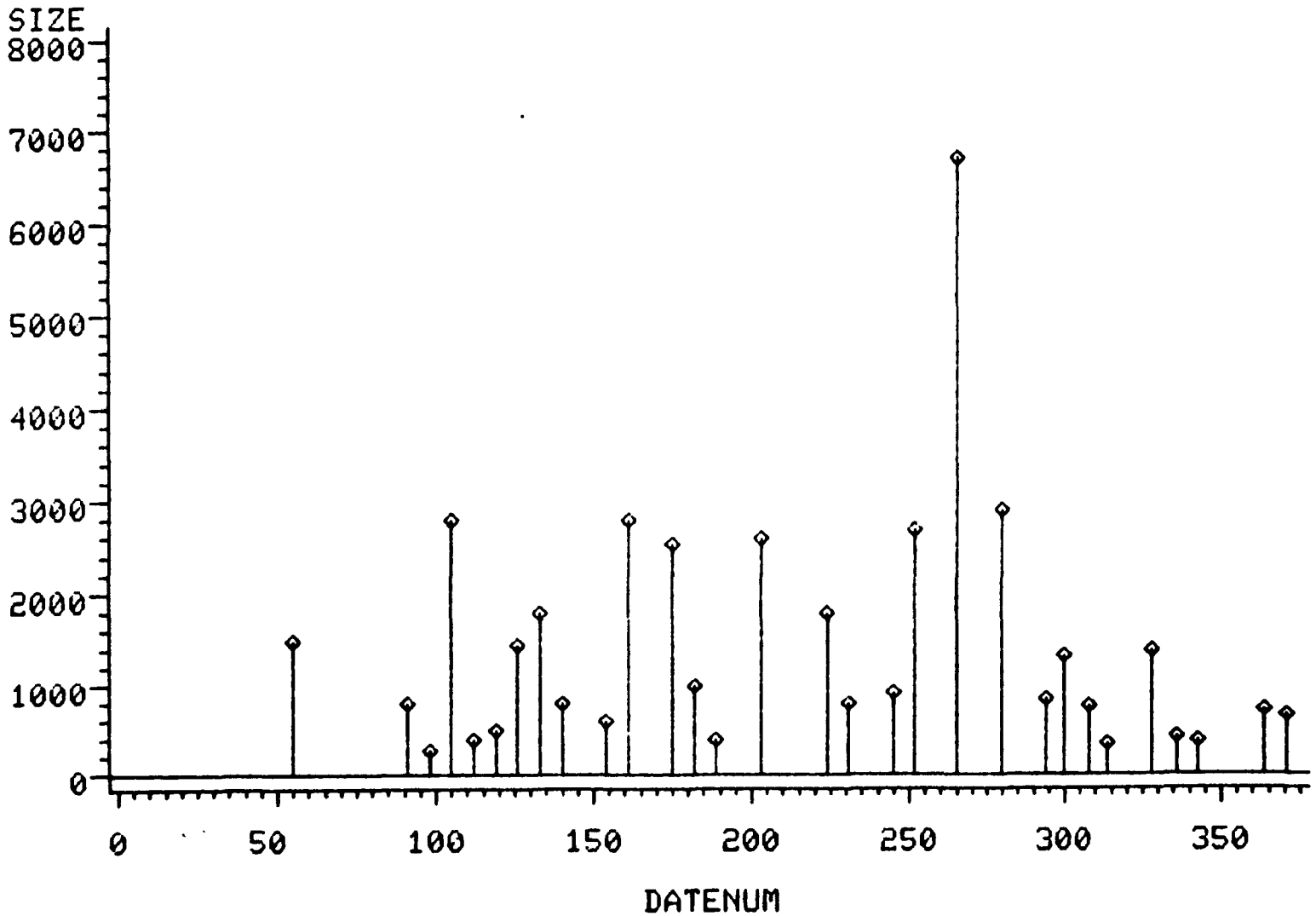
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 PRECIPITATION (ML)
SITE=363720 2



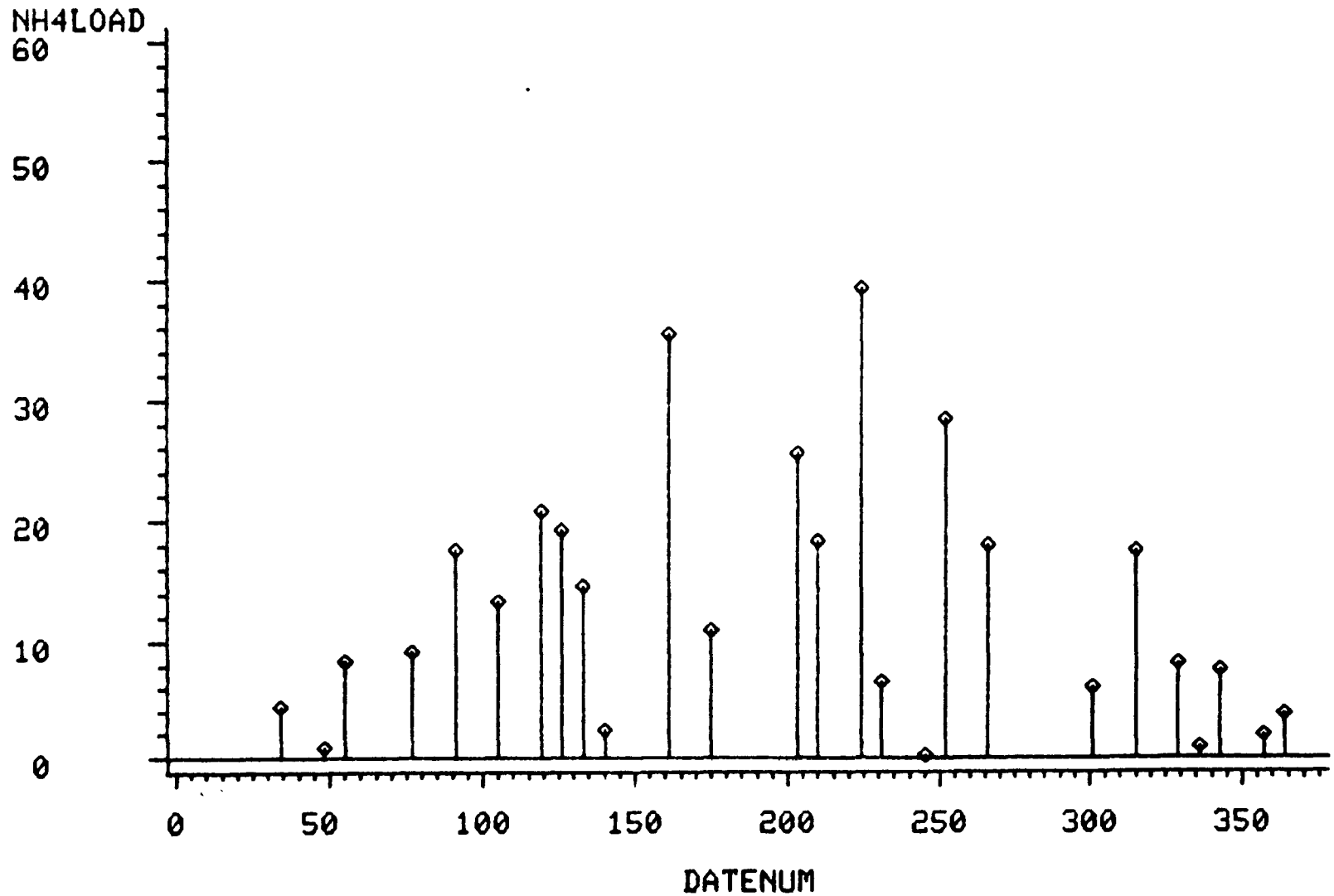
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 PRECIPITATION (ML)
SITE=365260 1



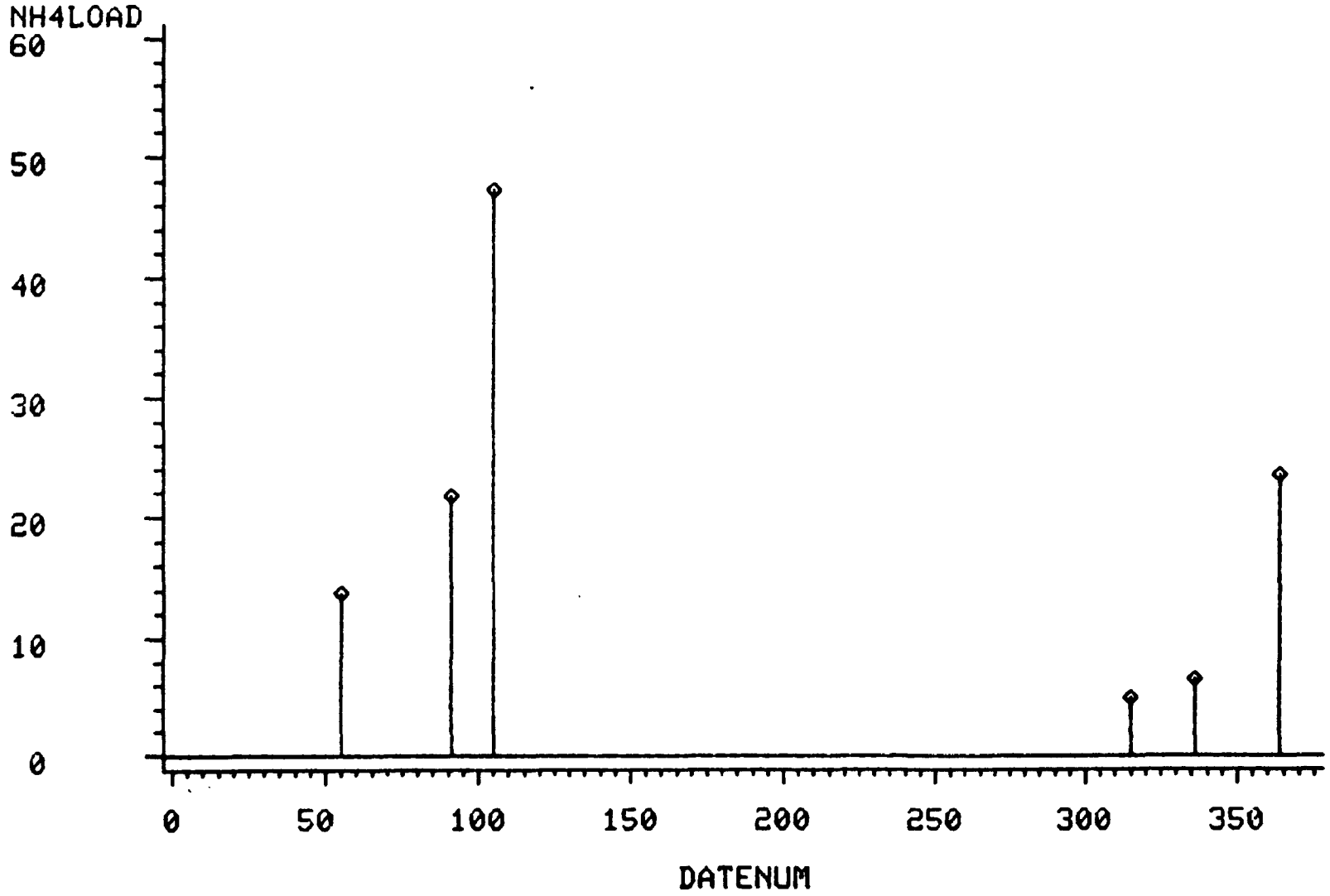
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 AMMONIA LOAD (MG/M**2)
SITE=362100 1



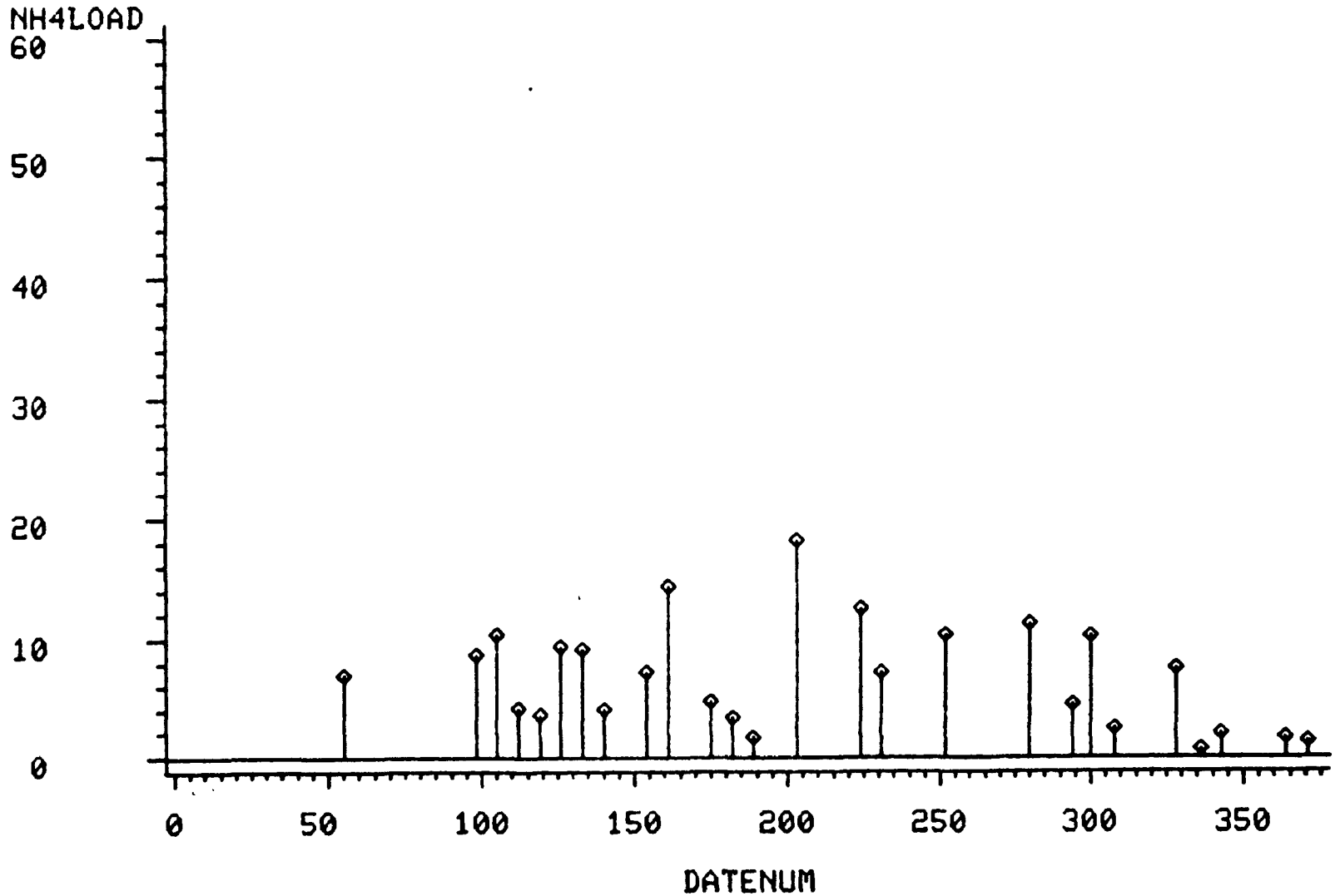
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 AMMONIA LOAD (MG/M**2)
SITE=363620 14



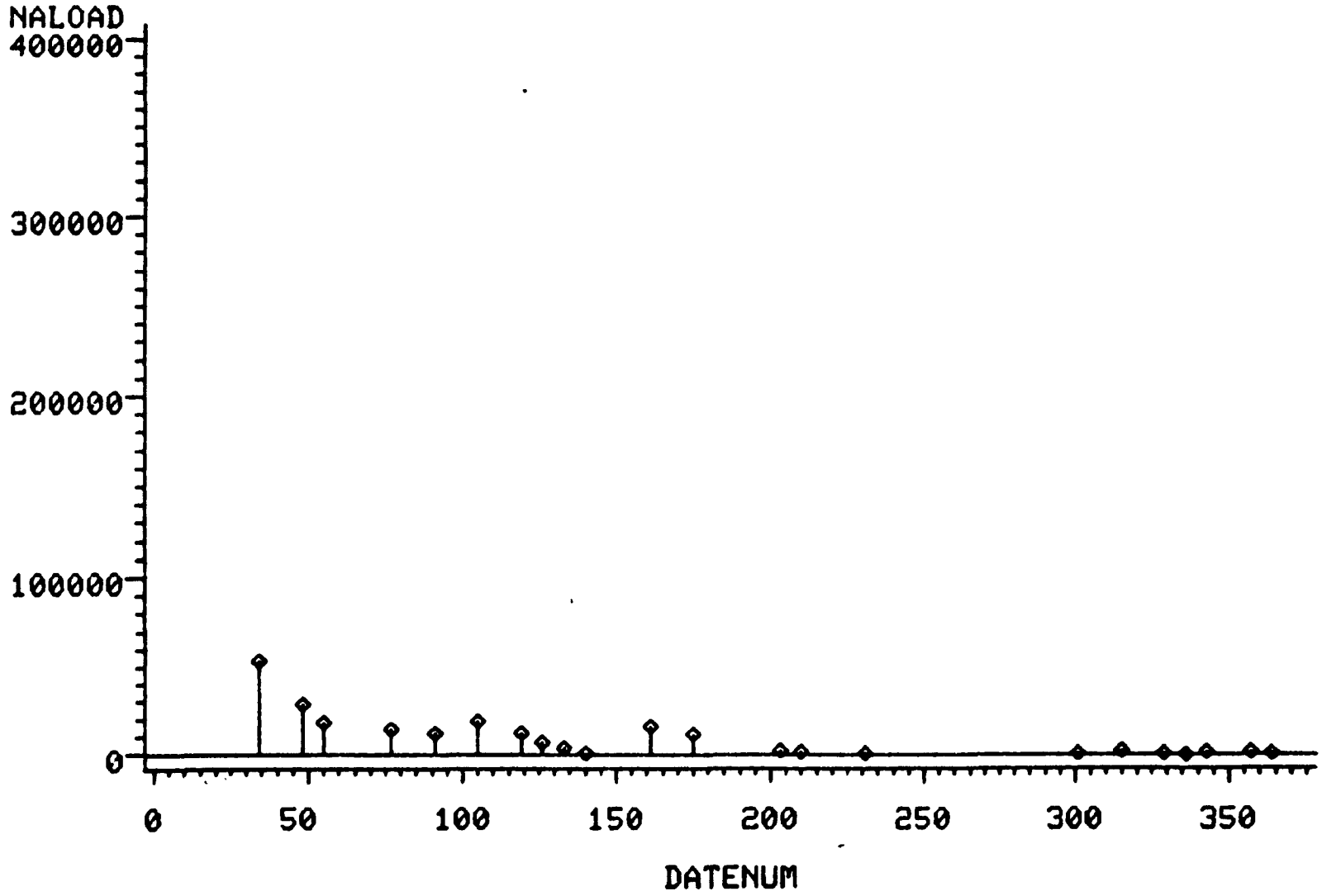
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 AMMONIA LOAD (MG/M**2)
SITE=365260 1



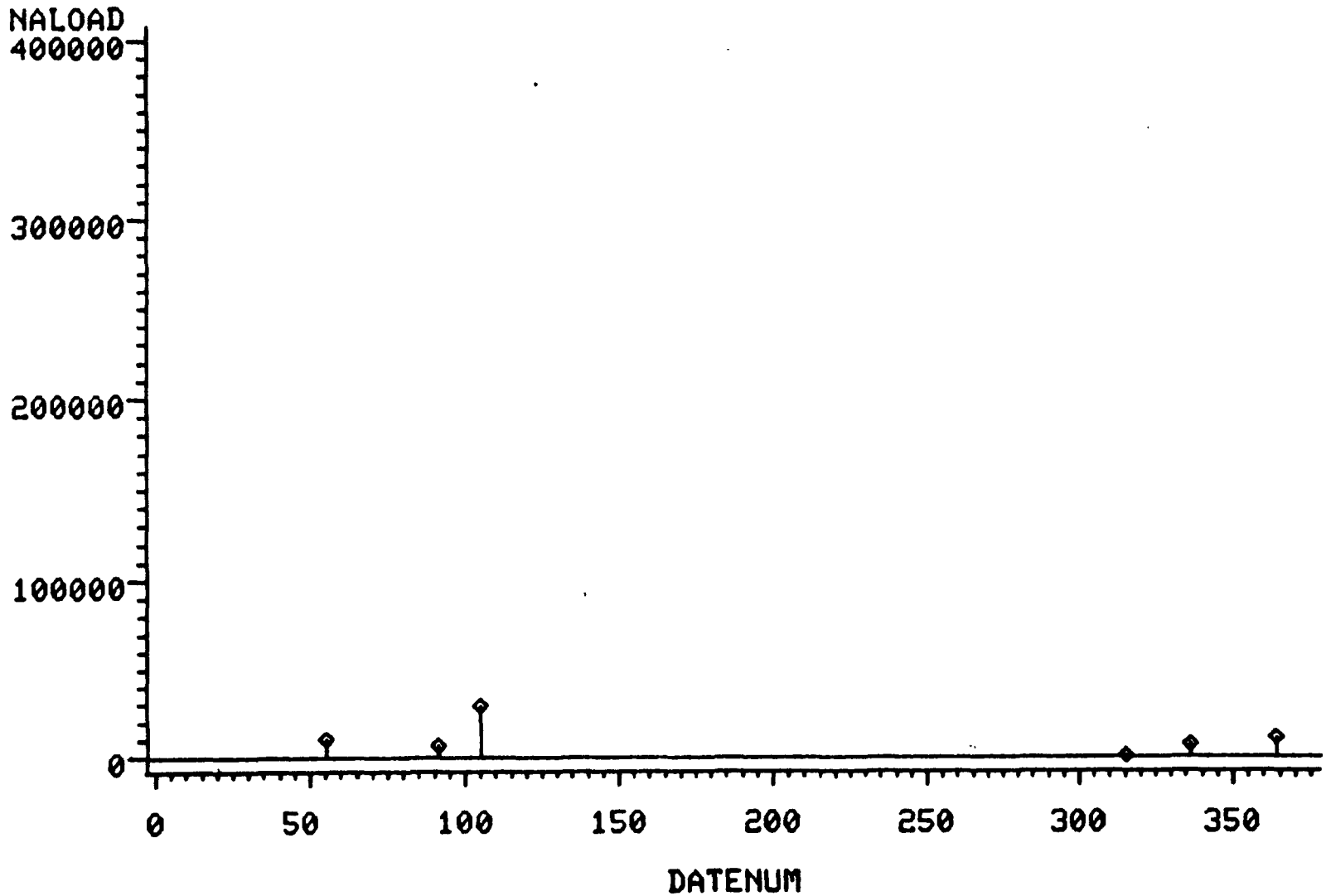
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SODIUM LOAD (MG/M**2)
SITE=362100 1



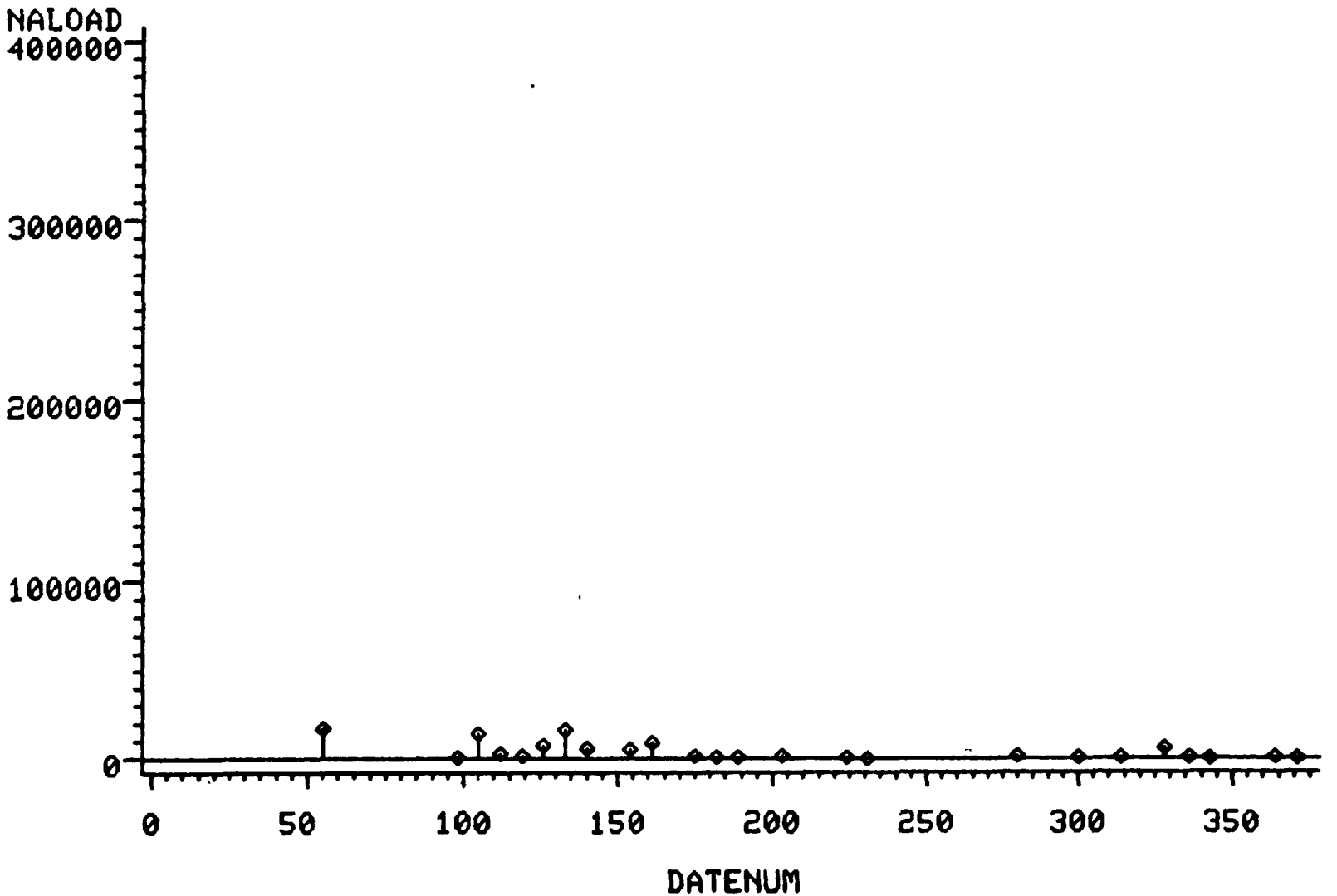
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SODIUM LOAD (MG/M**2)
SITE=363620 14



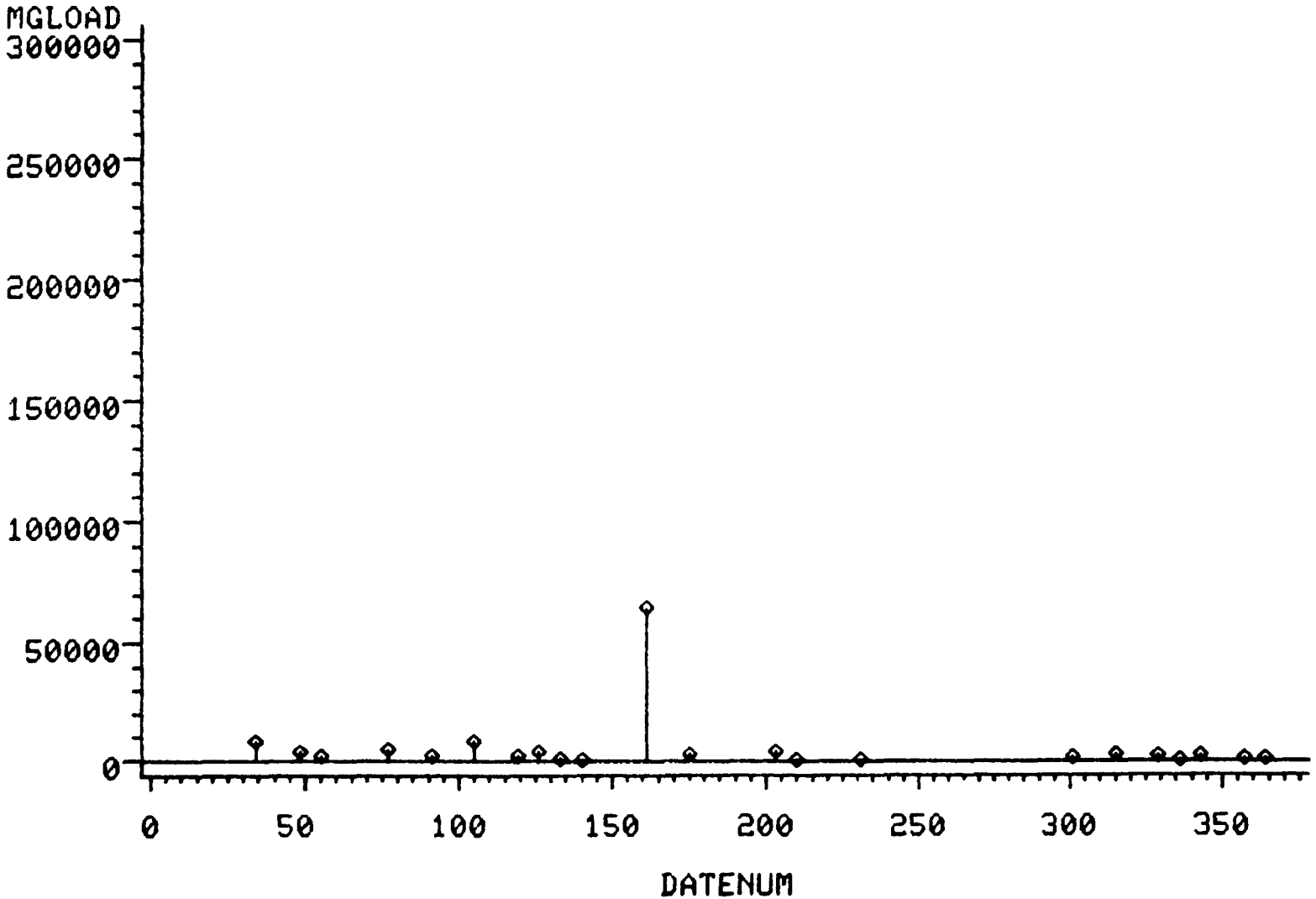
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 SODIUM LOAD (MG/M**2)
SITE=365260 1



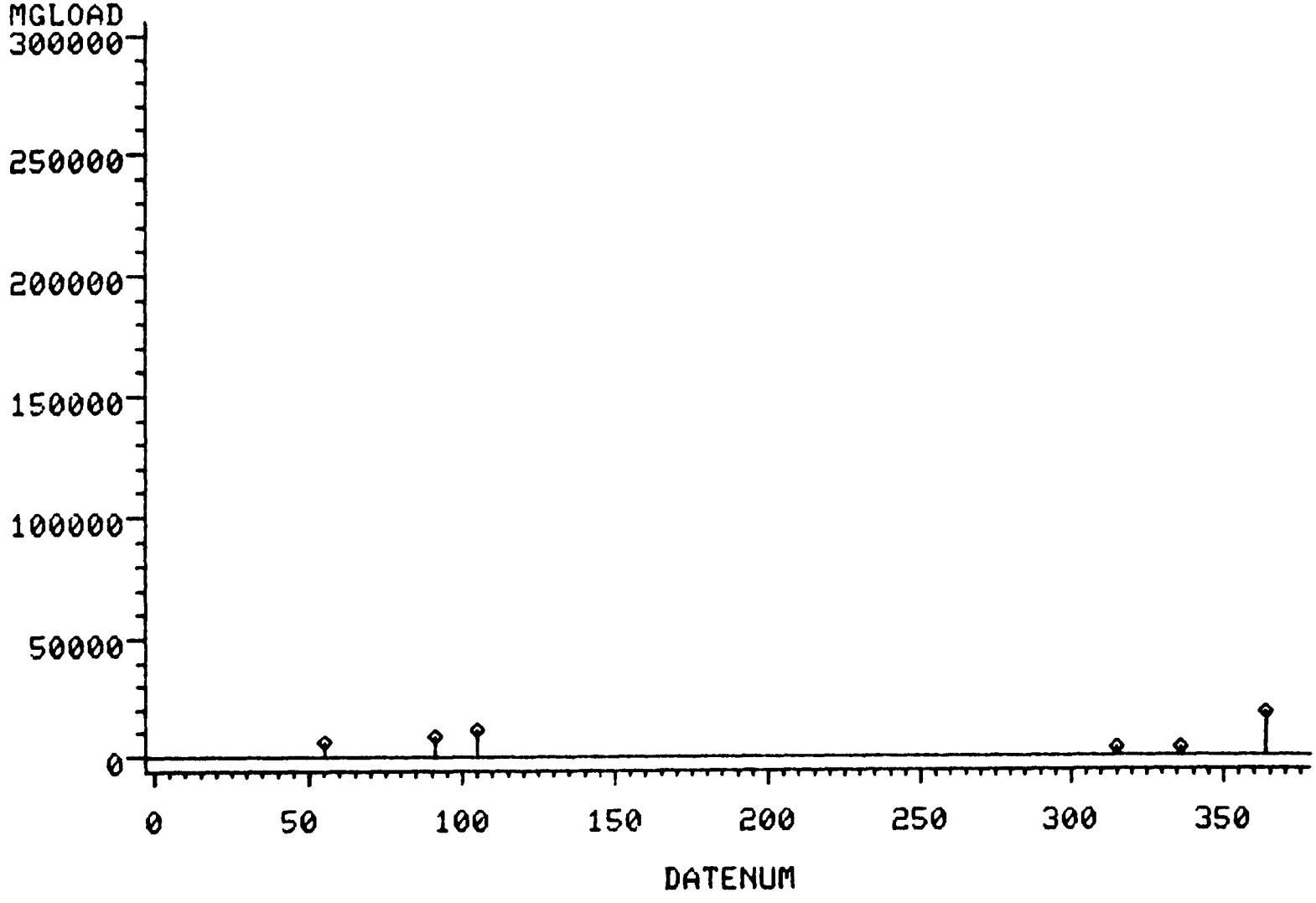
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MAGNESIUM LOAD (MG/M**2)
SITE=362100 1



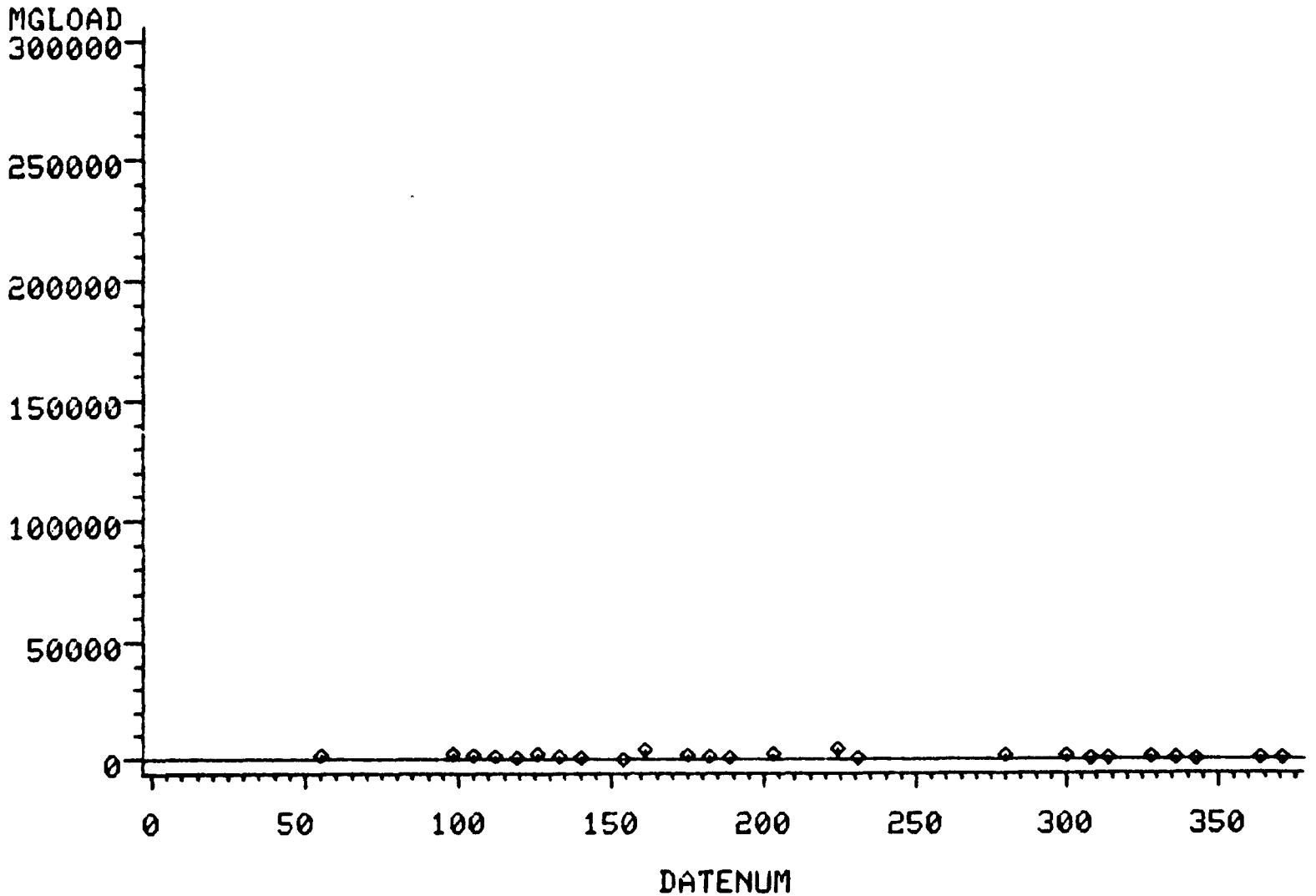
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MAGNESIUM LOAD (MG/M**2)
SITE=363620 14



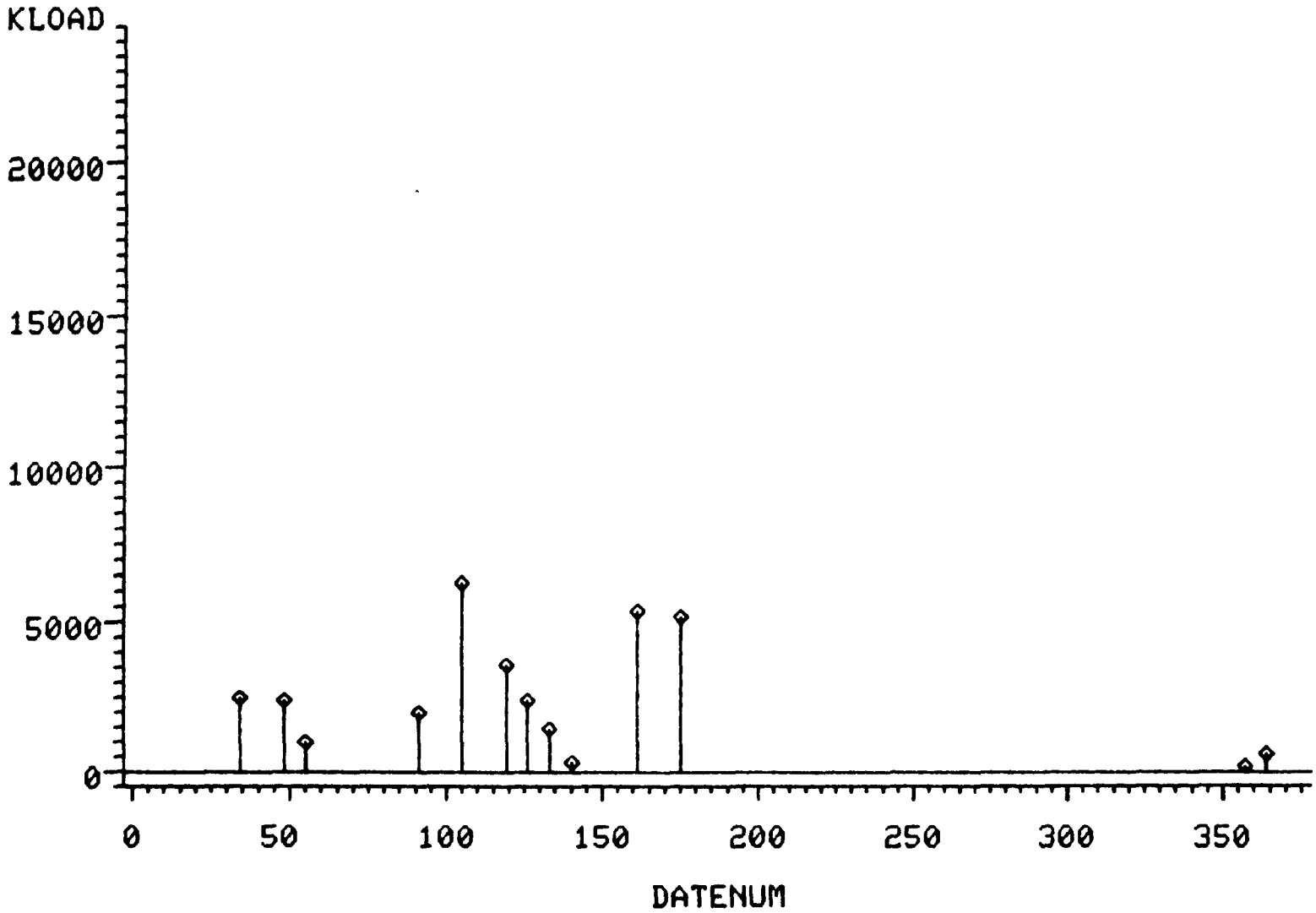
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 MAGNESIUM LOAD (MG/M**2)
SITE=365260 1



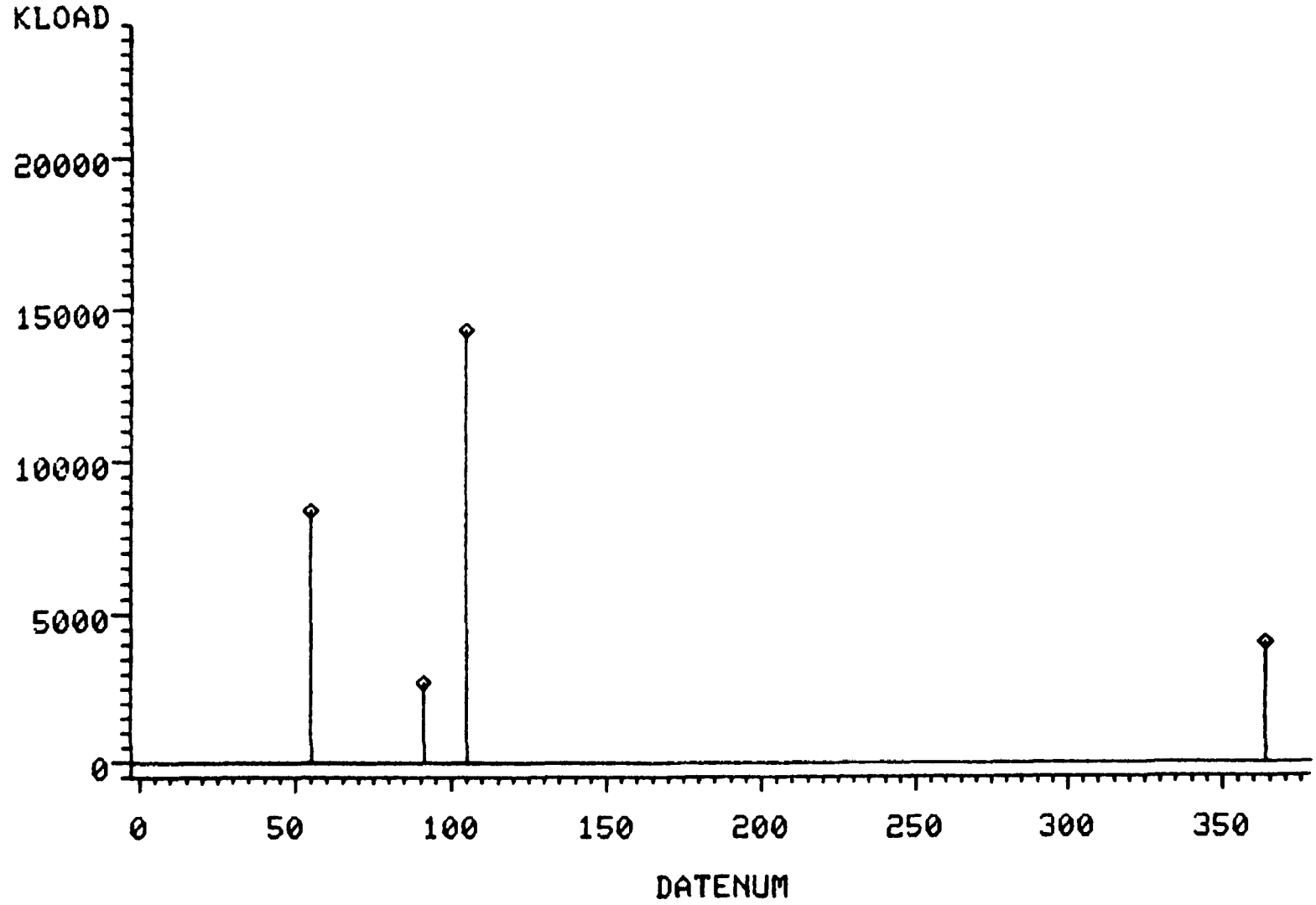
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 POTASSIUM LOAD (MG/M**2)
SITE=362100 1



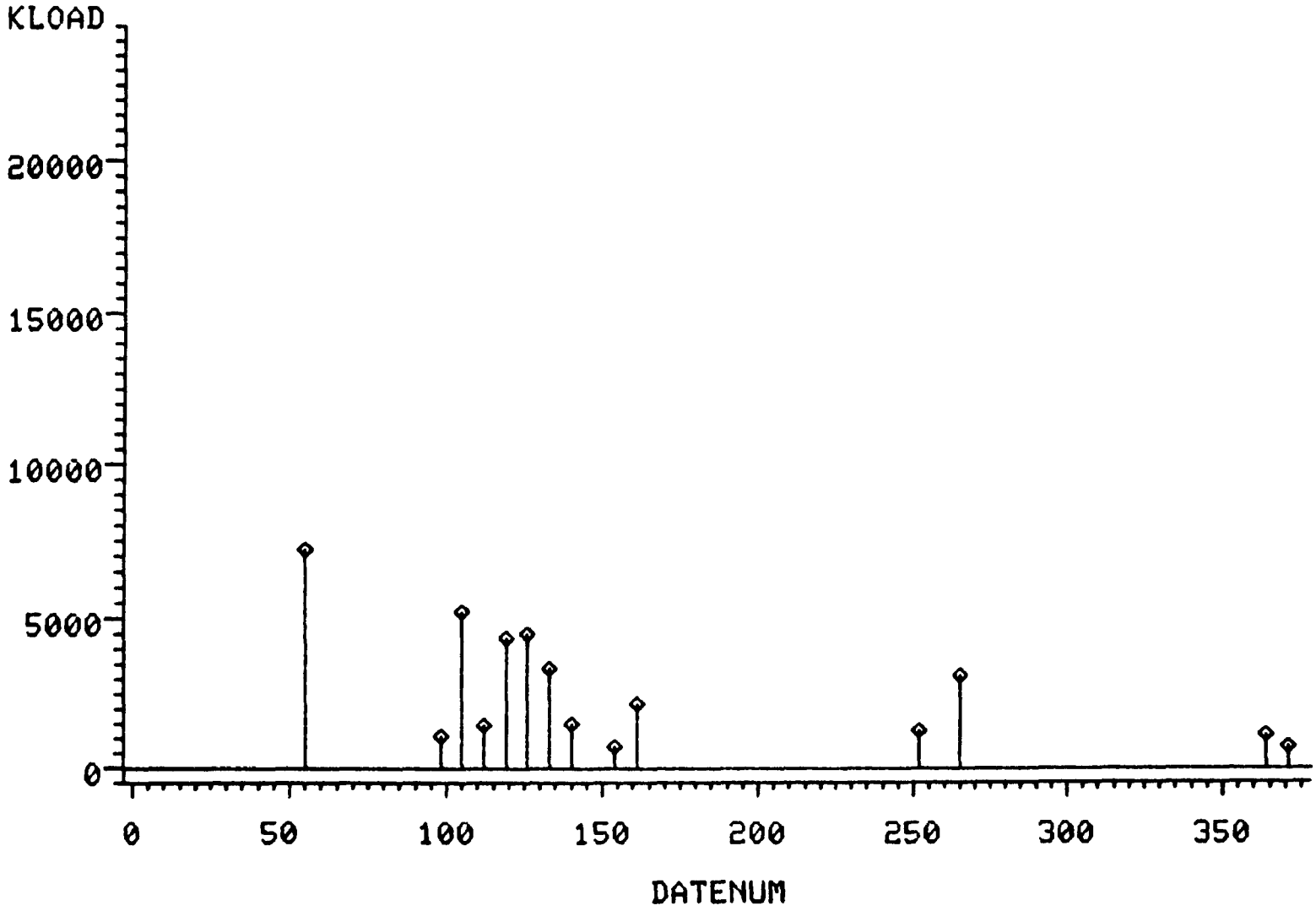
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 POTASSIUM LOAD (MG/M**2)
SITE=363620 14



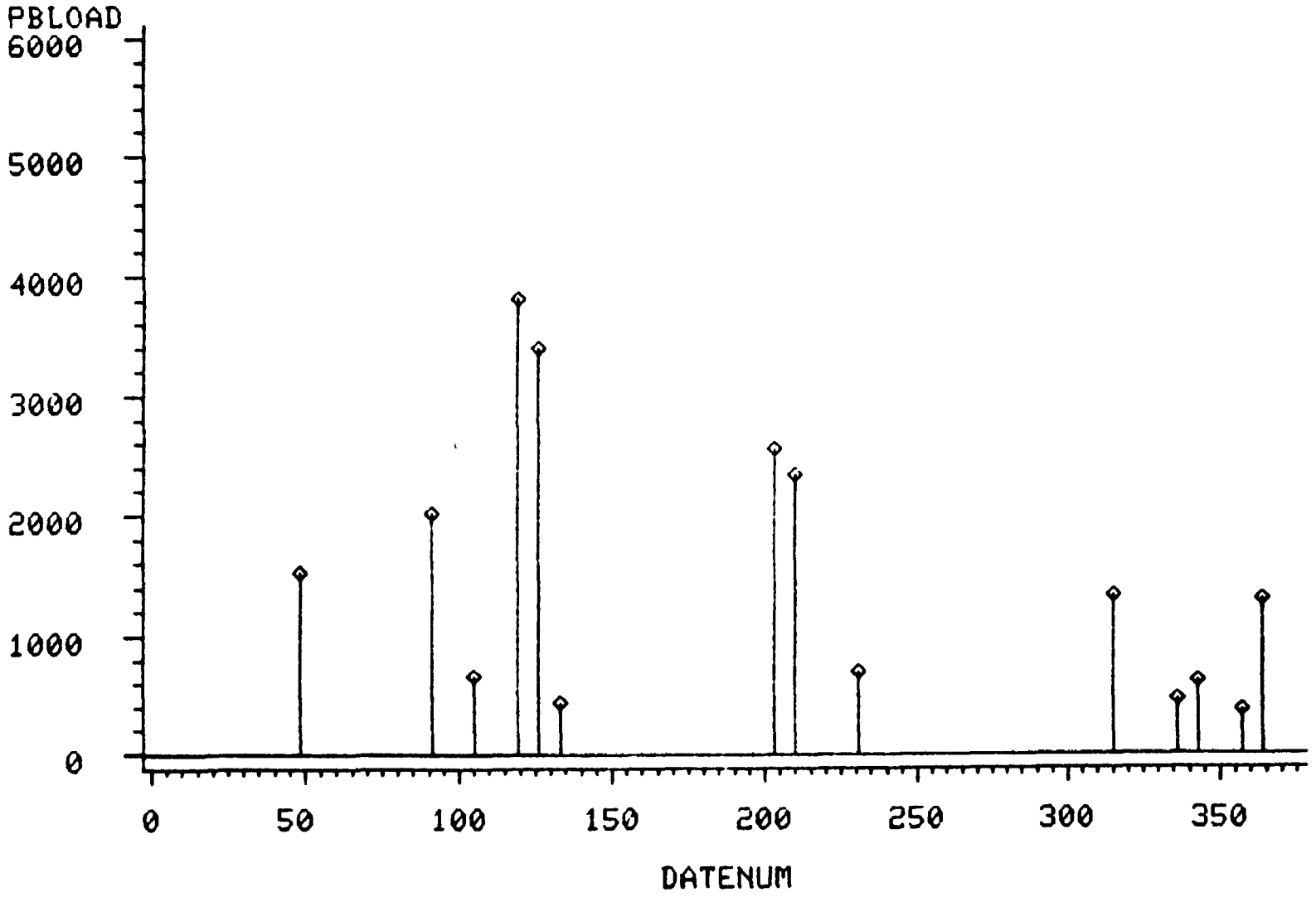
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 POTASSIUM LOAD (MG/M**2)
SITE=365260 1



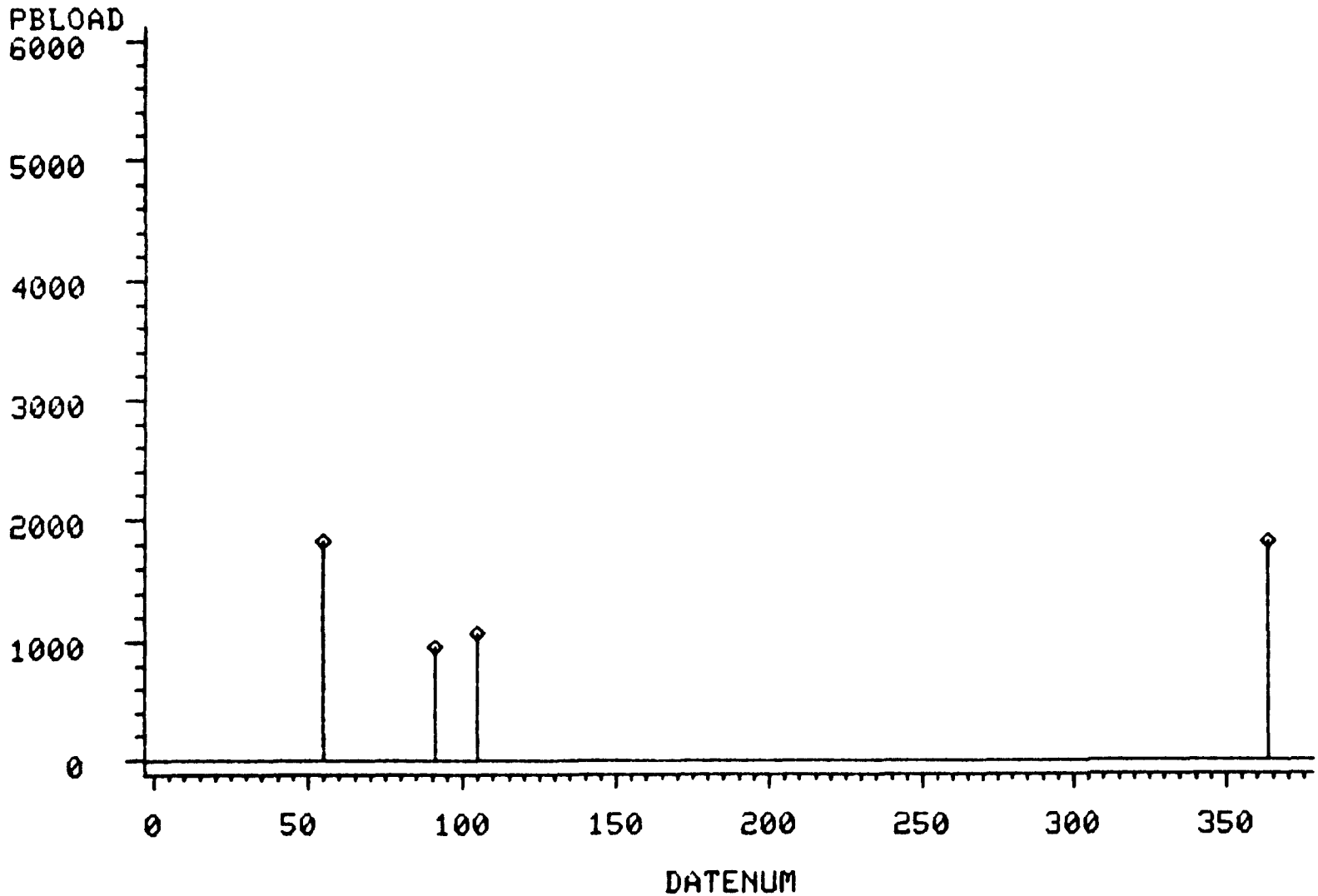
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 LEAD LOAD (MG/M**2)
SITE=362100 1



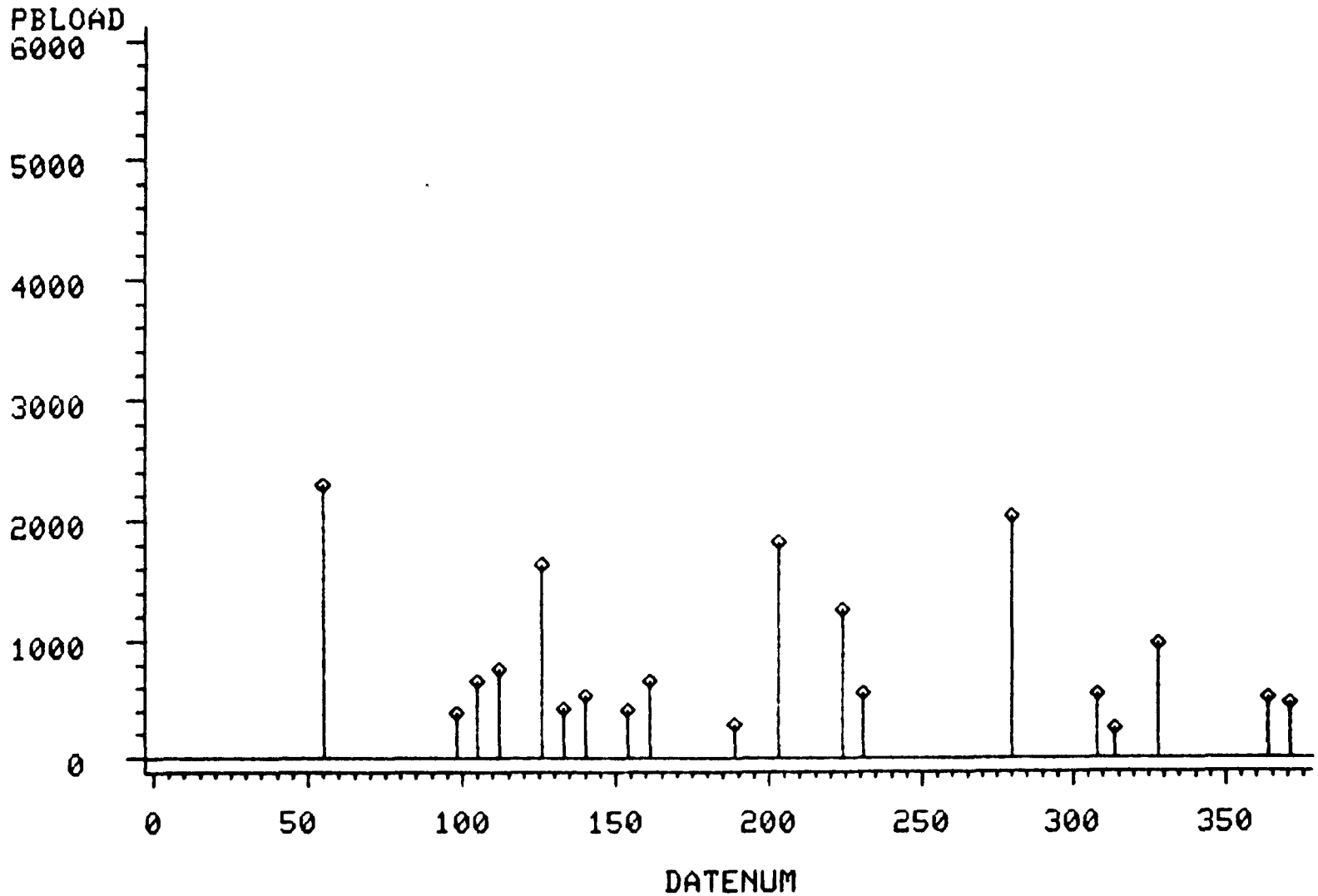
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 LEAD LOAD (MG/M**2)
SITE=363620 14



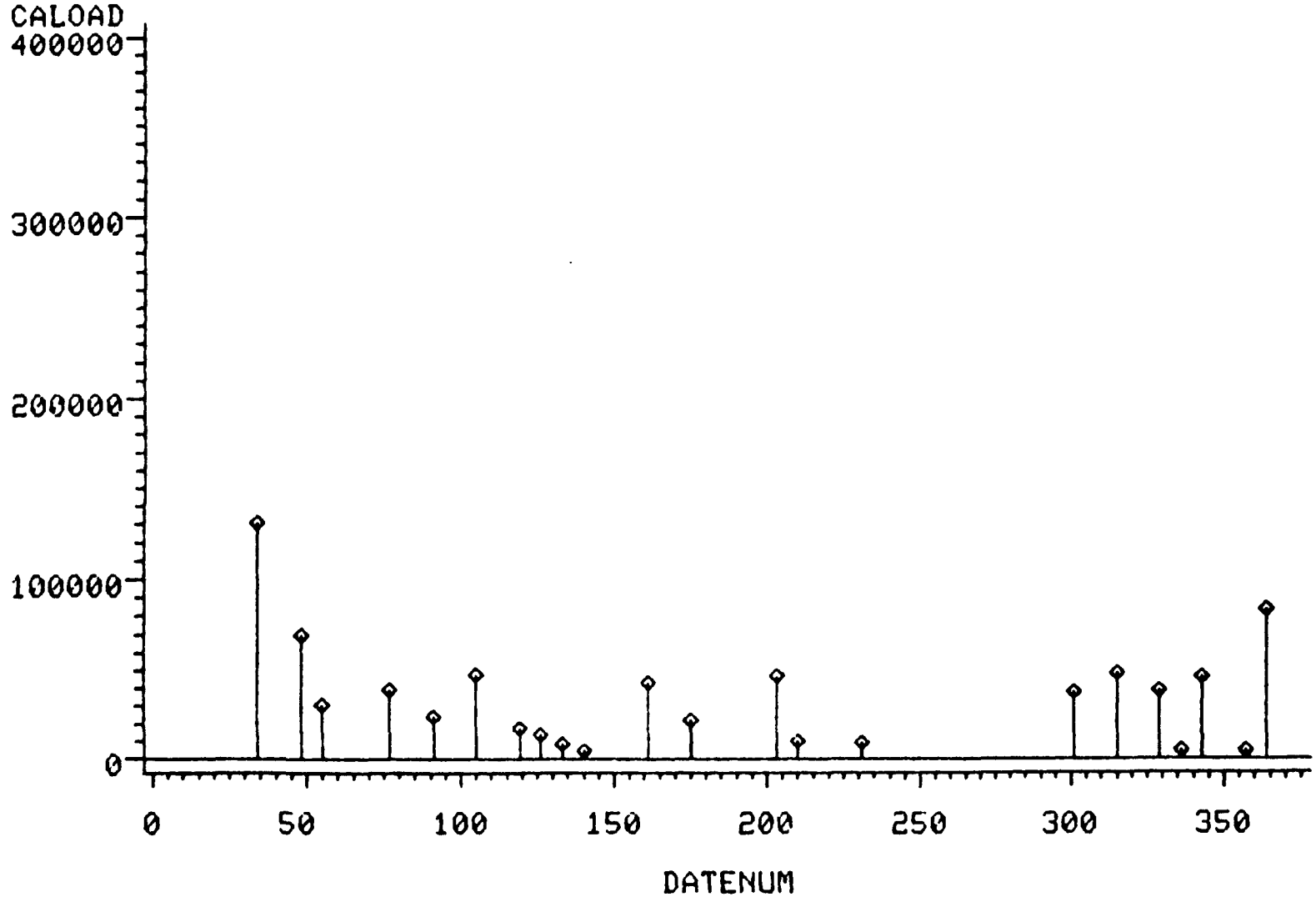
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 LEAD LOAD (MG/M**2)
SITE=365260 1



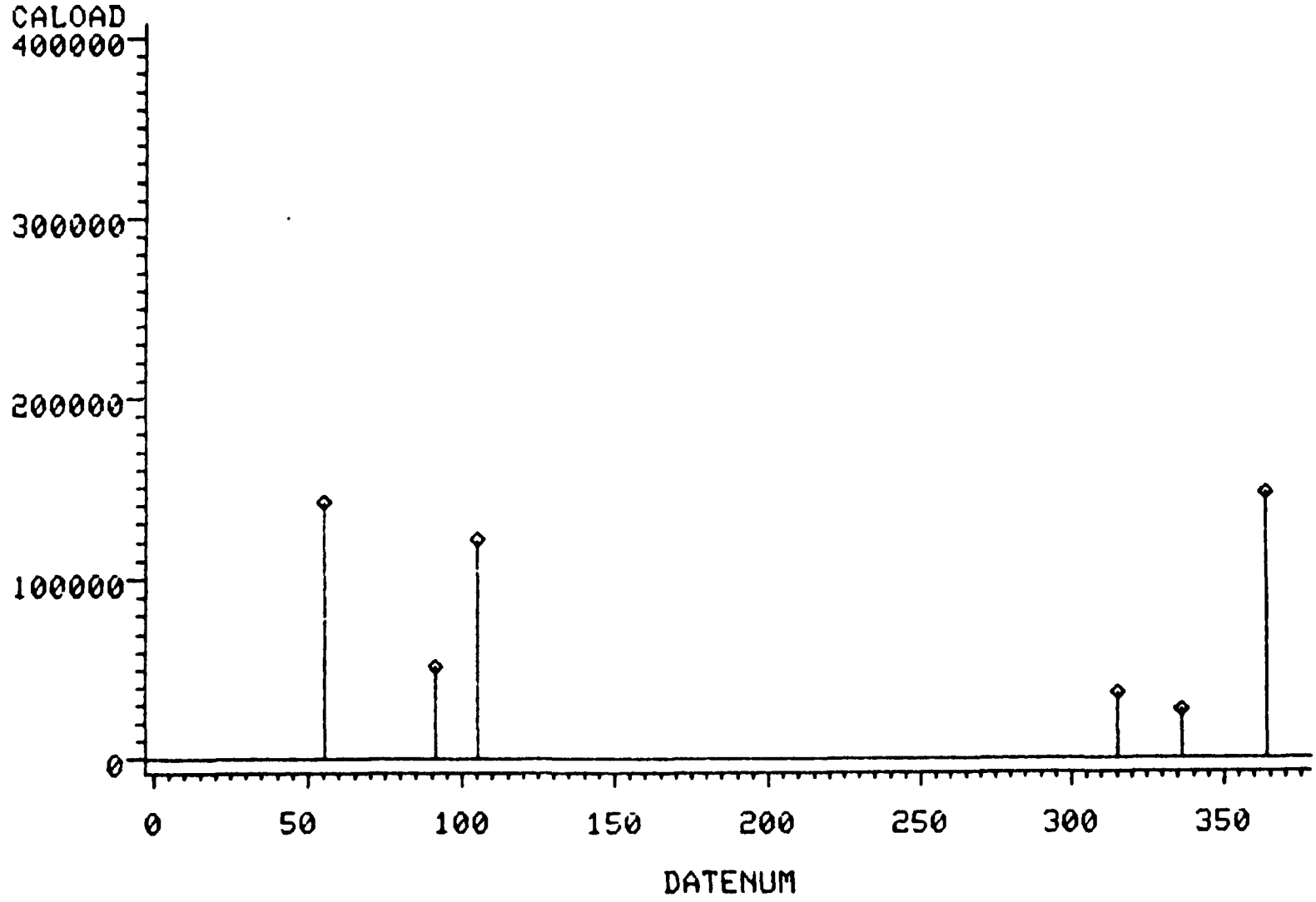
GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CALCIUM LOAD (MG/M**2)
SITE=362100 1



GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CALCIUM LOAD (MG/M**2)
SITE=363620 14



GREAT LAKES ATMOSPHERIC DEPOSITION (GLAD) PROGRAM

WET SAMPLES
1981 CALCIUM LOAD (MG/M**2)
SITE=365260 1