ENVIROMEN[redacted] RADIOLOGICAL MOMITORING PROGRAM SUMM[redacted]

R.G.& E. GINNA NUCLEAR POWER DOCKET NO. 50-244

Wayne, New York REPORTING PERIOD

PATHWAY SAMPLES (UNIT OF MEASUREMENT)	TYPE AND TOTAL NUMBER OF ANALYSES	LLD	INDICATOR LOCATIONS MEAN (1) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN NAME DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (1) RANGE	CONTROL LOCATIONS MEAN (1) RANGE
AIR: PARTICULATE (3) (pCi/Cu M)	GROSS BETA 626	0.003	0.030 (364/364) 0.010 - 0.214	ONSITE LOCATION #4 275 M 140°	0.032 0.011-0.214	0.028 (265/265) 0.010-0.097
	GAMMA SCAN 48	(2)	Zr-95 0.009 (7/28) 0.006 - 0.019	ONSITE LOCATION #4	0.019(1/4) 0.006-0.009	0.008 (3/20) 0.006 - 0.009
			Nb-95 0.016 (7/28) 0.011 - 0.028	ONSITE LOCATION #4	0.028(1/4) 0.011-0.019	0.016 (5/20) 0.010 - 0.018
			Ru-103 0.011 (7/28) 0.009- 0.013	ONSITE LOCATION #3 425 M 112°	0.013 (1/4)	0.011 - (5/20) 0.009 - 0.013
			Ce-141 0.010 (7/28) 0.008-0.017	ONSITE LOCATION #4 275 M 140°	0.017 (1/4)	0.009 (5/20) 0.007 - 0.011
IODINE (pCi/Cu M)	GAMMA SCAN 209	0.07	<LLD			<LLD
DIRECT RADITATION: FILM (MR/MONTH)	BETA/GAMMA 144	10	<10			<10
TLD (MR/WEEK)	GAMMA 135	0.12	0.99 (115/115) 0.59 - 1.37	ONSITE LOCATION #24 670 M 85°	1.15 (4/4) 1.03-1.28	0.86 (20/20) 0.72 - 1.00
WATER: DRINKING (pCi/L)	GROSS BETA 75	1.2	4.16 (75/75) 1.07 - 21.3	WELL 'B' 640 M 150°	8.78 (10/10) 6.21-21.3	
	GAMMA SCAN 22	(2)	Ra-226 31 (7/22) 16 - 54	WELL 'B'	31 (7/10) 16 - 54	
SURFACE (pCi/L)	GROSS BETA 167	1.2	3.71 (167/167) 1.84 - 12.1	DEER CREEK 200 M 90°	4.78 (12/12) 2.78 -7.32	
	GAMMA SCAN 28	(2)	Ra-226 (4/12) 16 -22	DEER CREEK	18 (4/12) 16 - 22	
RAINFALL (pCi/L)	GROSS BETA 54	1.2	13.4 (21/21) 2.86 - 55.1	ONSITE LOCATION #5 200 M 180°	13.6 (10/10) 2.86 - 55.1	11.9 (33/33) 1.27 - 42.5
MILK: (pCi/L)	IODINE 14	0.05	0.08 (14/14) 0.05 - 0.16	FARM B 2.9 MILES 240°	0.09 (4/4) 0.05 -0.16	
	GAMMA SCAN 15	(2)	<LLD			
FISH: (pCi/Kg)	GAMMA SCAN 15	(2)	Cs-137 58 (15/15) 34 - 100	DISCHARGE PLUME		
LAKE BOTTOM SEDIMENT (pCi/Kgm)	GAMMA SCAN 1	(2)	Ra-226 (1/1) 430 Cs-137 (1/1) 520 Co-60 (1/1) 68	DISCHARGE PLUME		
VEGETATION: (pCi/Kg)	GAMMA SCAN 6	(2)	<LLD			

(1) Mean and range based on detectable measurements only. Franction of detectable measurements at specified locations in parentheses.

(2) Table of LLD values attached for gamma scan measurements.

(3) High analysis values during last five weeks of year raised air particulate mean and range. Probably due to fallout from Chinese bomb test of October 17, 1980.

APPENDIX A

REPORT RADIOACTIVE EFFLUENTS

FACILITY: ROCHESTER GAS & ELECTRIC GINNA STATION DOCKET: 50-244 YEAR: 1980

I. LIQUID RELEASES

	UNITS	JULY	AUGUST	SEPT.	OCTOBER	NOV.	DEC.	TOTAL
1. GROSS RADIOACTIVITY (β,γ)								
A) TOTAL RELEASED (except 2,3 & 4)	CURIES	3.2E-5	2.6E-5	1.9E-5	2.2E-4	1.8E-3	1.4E-3	3.5E-3
B) AVERAGE CONCENTRATION RELEASED	μCI/ML	8.1E-7	8.9E-7	8.0E-7	4.3E-7	1.6E-6	3.5E-6	-------
C) MAXIMUM CONCENTRATION RELEASED	μCI/ML	1.5E-5	5.8E-6	1.2E-5	9.3E-7	1.0E-5	4.1E-5	-------
2. TRITIUM								
A) TOTAL RELEASED	CURIES	1.7	6.8	12.2	8.99	26.5	7.5	63.7
B) AVERAGE CONCENTRATION RELEASED	μCI/ML	6.8E-4	2.7E-3	6.0E-3	2.8E-3	1.6E-2	2.6E-3	-------
C) PERCENT OF LIMIT	%	<0.001	0.003	0.006	0.004	0.003	0.004	-------
3. DISSOLVED NOBLE GASES								
A) TOTAL RELEASED	CURIES	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B) AVERAGE CONCENTRATION RELEASED	μCI/ML							-----
4. GROSS ALPHA RADIOACTIVITY								
A) TOTAL RELEASED	CURIES	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
B) AVERAGE CONCENTRATION RELEASED	μCI/ML							-----
5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL	LITERS	2.5E6	2.5E6	2.0E6	3.2E6	1.7E6	2.9E6	1.38E7
6. VOLUME OF DILUTION WATER	LITERS	6.8E10	6.8E10	6.6E10	6.8E10	3.4E10	5.8E10	3.58E10
7. ISOTOPES RELEASED	CURIES							
Cerium 141	"						3.2E-5	3.2E-5
Ruthenium 103	"	8.4E-7						8.4E-7
Cesium 137	"	2.2E-5	2.6E-5	6.4E-6	2.3E-5	5.6E-4	8.4E-4	1.48E-3
Cesium 134	"	4.4E-6		1.1E-5	1.2E-5	2.8E-4	4.7E-4	7.77E-4
Cobalt 58	"					1.5E-4		1.5E-4
Cobalt 60	"	3.5E-6		1.3E-6	1.9E-4	7.1E-4	3.2E-5	9.37E-4
Manganese 54	"					1.3E-5		1.3E-5
Zirconium 95	"							
Niobium 95	"							
Cerium 144	"							
Tellurium 132	"							
Ruthenium 106	"							
Silver 110m	"							
Molybdenum 99	"							
Barium 140	"							
Chromium 51	"							
Iron 59	"							
Tellurium 129m	"	8.4E-7						8.4E-7
Cesium 136	"							
Neptunium 239	"							
Iodine 131	"							
Tellurium 127m	"							
Barium/Lanthanum 140	"					6.3E-5		6.3E-5
Zinc 65	"							
Strontium 90	"							
Antimony 125	"						5.6E-5	5.6E-5
PRECENT OF TECHNICAL SPECIFICATION LIMIT FOR ACTIVITY RELEASED	%	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	------

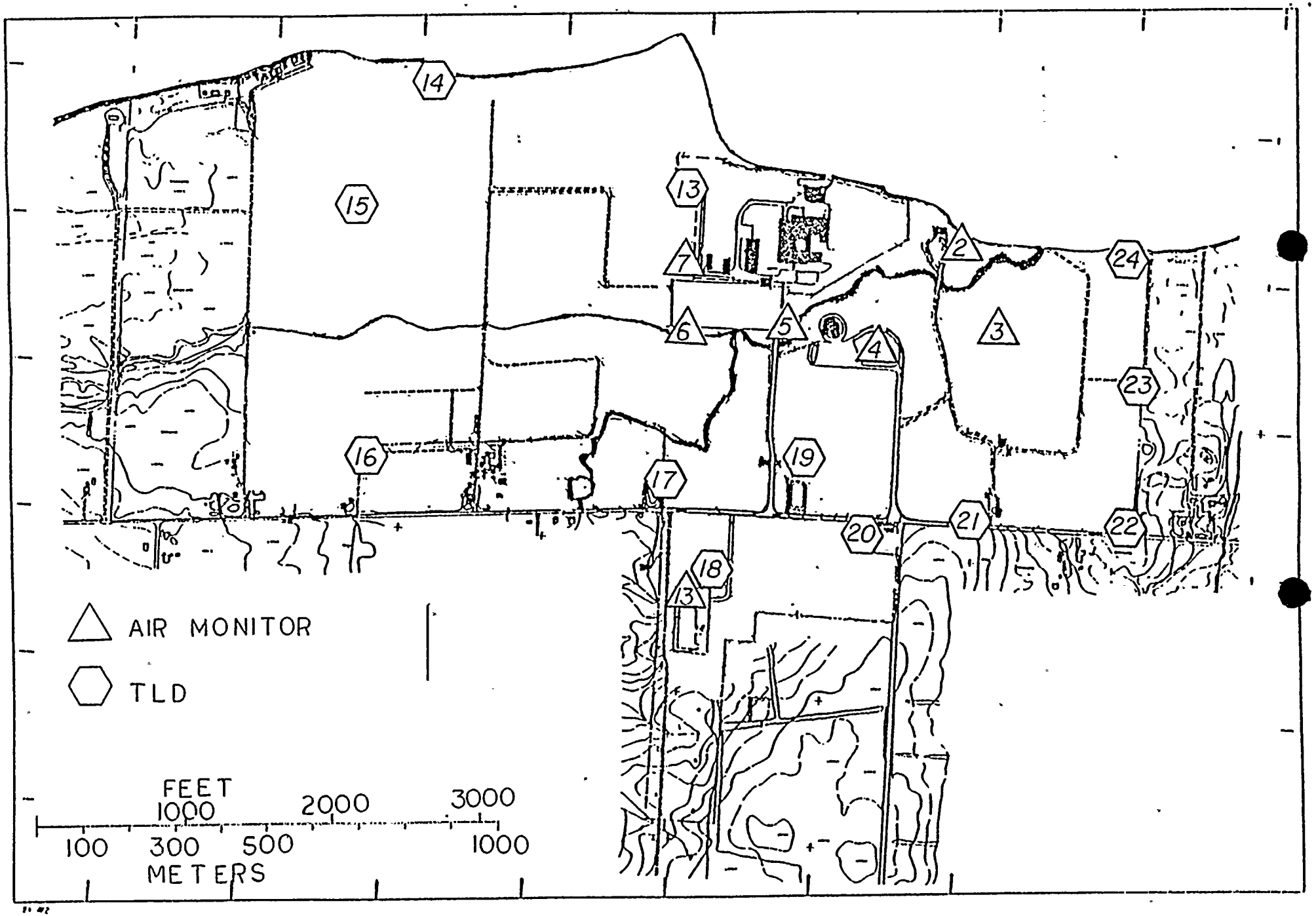
APPENDIX A

REPORT RADIOACTIVE EFFLUENTS

FACILITY: ROCHESTER GAS & ELECTRIC GINNA STATION DOCKET: 50-244 YEAR: 1980

II. AIRBORNE RELEASES

	UNITS	JULY	AUGUST	SEPT.	OCTOBER	NOV.	DEC.	TOTAL
1. TOTAL NOBLE GASES	CURIES	9.1	9.3E1	4.8	9.6E1	3.9E2	2.0E1	612.9
2. TOTAL HALOGENS	CURIES	1.4E-4	2.3E-4	7.9E-5	2.5E-5	2.9E-3	6.6E-5	3.44E-3
3. TOTAL PARTICULATE GROSS RADIOACTIVITY (,)	CURIES	1.8E-7	2.1E-7	1.1E-7	9.3E-6	6.0E-7	1.4E-7	1.05E-5
4. TOTAL TRITIUM	CURIES	2.3	3.1	3.1	4.6	3.8	2.3	19.2
5. TOTAL PARTICULATE GROSS ALPHA RADIOACTIVITY	CURIES	N.D.	N.D.	N.D.	N.D.	1.1E-8	N.D.	1.1E-8
6. MAXIMUM NOBLE GAS RELEASE RATE	µCI/SEC	2.2E1	2.5E1	3.4	7.5E3	2.0E4	3.3E1	------
7. PERCENT OF APPLICABLE LIMIT FOR:								
A) NOBLE GASSES	%	0.007	0.061	0.003	0.065	0.25	0.014	------
B) HALOGENS	%	0.046	0.042	0.020	0.034	0.092	0.018	------
C) PARTICULATES	%	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	------
8. ISOTOPE RELEASED:								
PARTICULATES	CURIES							
Cesium 137	"	8.4E-8	9.2E-8	2.3E-7	6.9E-7	3.0E-8	1.1E-7	1.24E-6
Barium/Lanthanum 140	"							
Strontium 90	"							
Cesium 134	"	N.D.	7.9E-8	6.0E-8	N.D.	N.D.	5.1E-8	1.9E-7
Strontium 89	"							
HALOGENS	CURIES							
Iodine 131	"	3.5E-5	3.3E-5	1.5E-5	2.7E-5	6.9E-4	1.4E-5	9.4E-4
Iodine 133	"	1.0E-4	1.9E-4	6.5E-5	8.0E-5	2.9E-5	5.2E-5	4.64E-4
Iodine 135	"							
IODINE 132	"				1.4E-4	2.2E-3		2.36E-4
GASES	CURIES							
Krypton 85	"	1.6E-1		9.6E-2		9.0E-1	2.2E-1	1.38
Xenon 133	"	8.0	9.0E1	3.6		3.9E2	1.86E1	510.2
Krypton 88	"					4.0E-4		4.0E-4
Krypton 87	"							
Krypton 85m	"	1.0E-1	2.3E-1	4.8E-2		3.3E-1	1.4E-2	7.22E-1
Xenon 138	"							
Xenon 135m	"	3.5E-3	4.6E-3	2.8E-3	1.6E-2			2.69E-2
Xenon 135	"	8.4E-1	2.3	1.9E-1		6.6E-2	1.0	4.396
Argon 41	"	4.0E-4	5.0E-4	5.0E-4	1.0E-3		1.8E-2	2.04E-2
OTHERS AS APPROPRIATE (SPECIFY)	CURIES							
Cobalt 60	"		9.3E-8		7.2E-7	3.5E-8	1.2E-7	9.68E-7
Manganese 54	"		2.3E-8		1.8E-6			1.82E-6
Niobium 95	"				6.0E-6			6.0E-6
Cobalt 58	"					5.9E-8		5.9E-8
	"							
Xenon 133m	"				1.1E-2	2.5E-1		2.61E-1
Xenon 131m	"				2.5E-1	1.7E-1	2.7E-1	6.9E-1
	"							
	"							
	"							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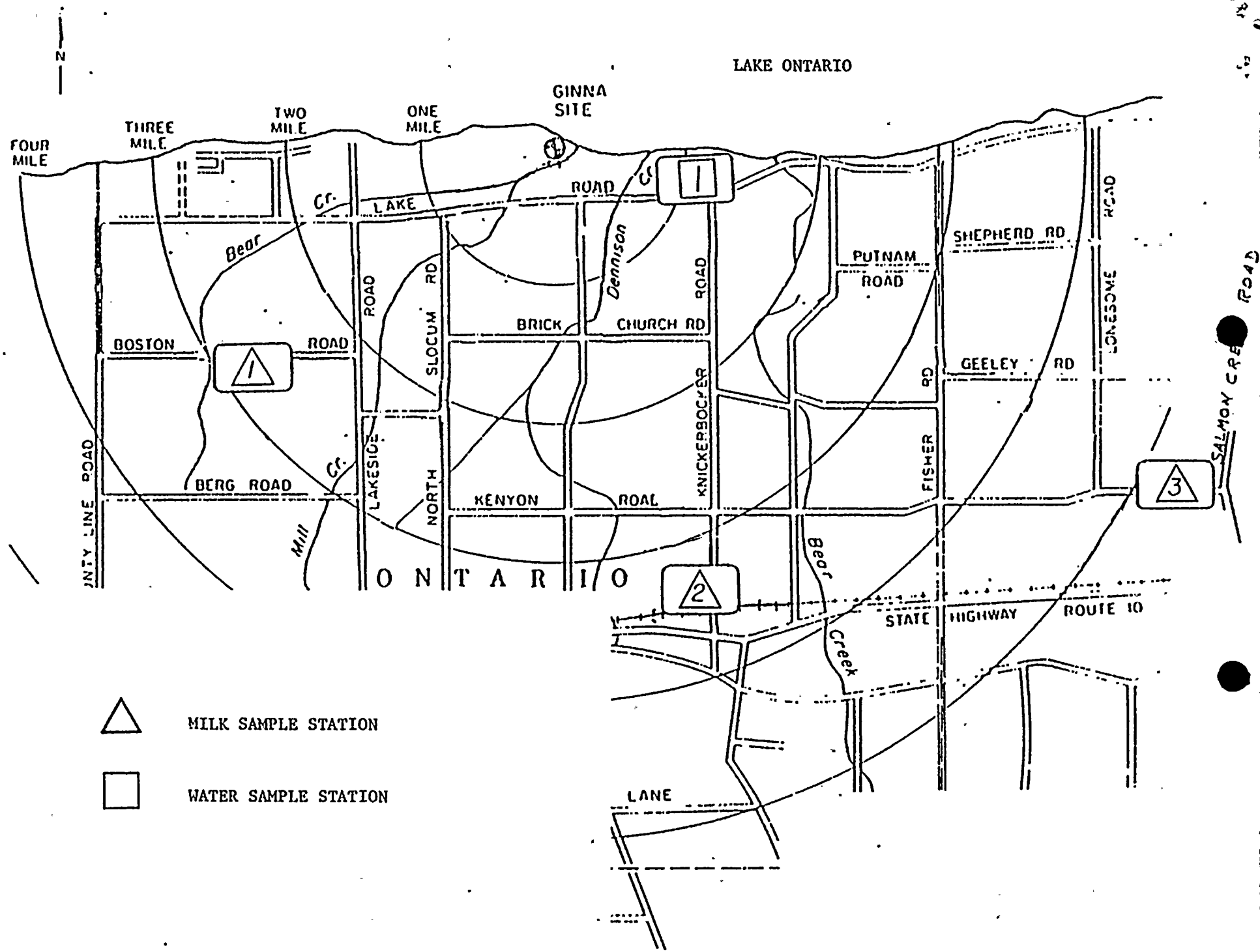
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LAKE ONTARIO
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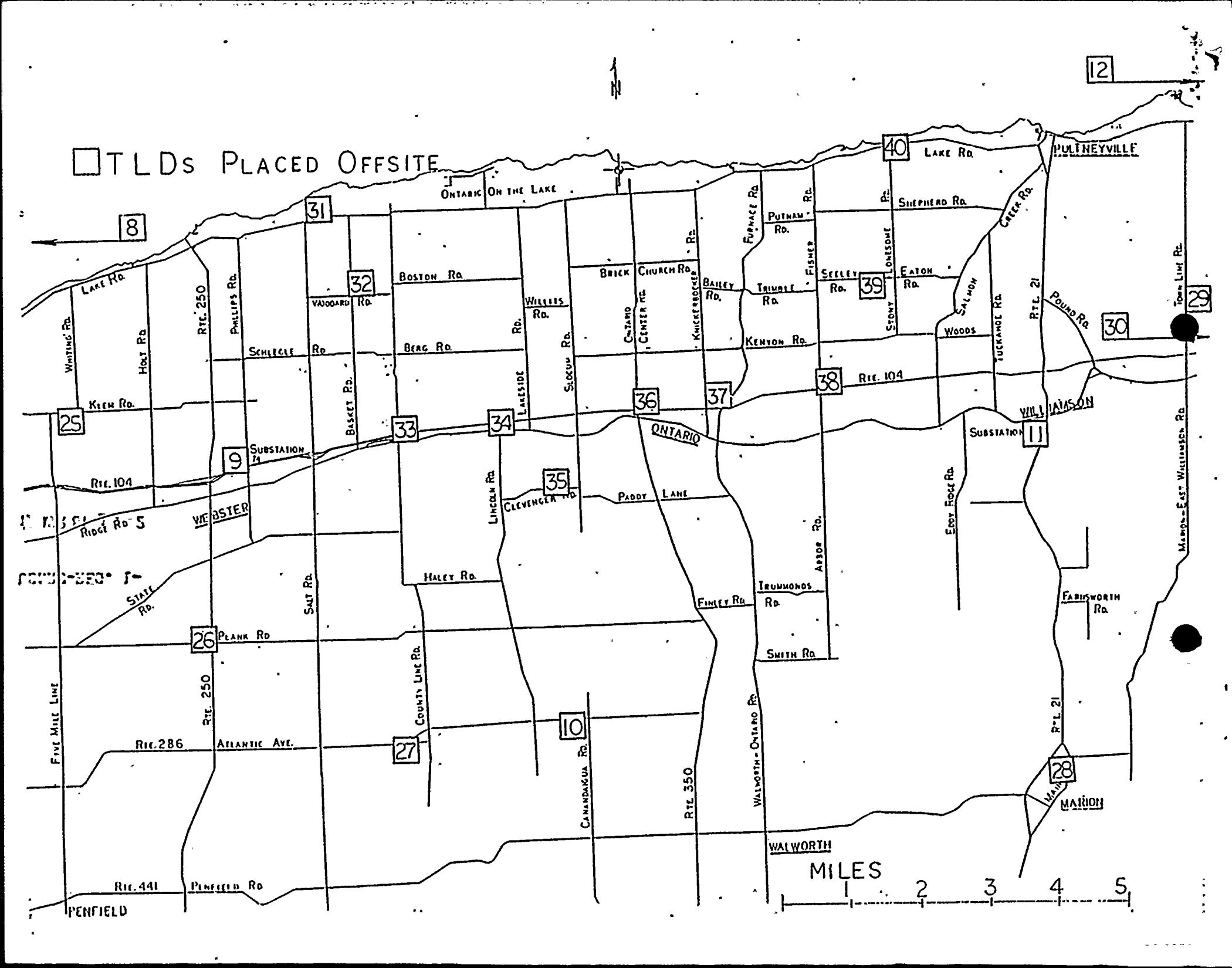
TLDs PLACED OFFSITE
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LAKE RD.
PULTNEYVILLE
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BOSTON RD.
VANDOARD RD.
LAKE RD.
WHITING RD.
HOLT RD.
RTE. 250
PHILLIPS RD.
SCHLEGEL RD.
BERG RD.
KEEM RD.
25
9
SUBSTATION 14
RTE. 104
RIDGE RD. S
WEBSTER
BASKET RD.
33
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LAKESIDE RD.
WILLETS RD.
SCOTT RD.
BRICK CHURCH RD.
CENTER RD.
ONTARIO
KNICKERBOCKER RD.
BAILEY RD.
FURNACE RD.
PUTNAM RD.
TRIMBLE RD.
FISHER RD.
SHEPHERD RD.
SEELEY RD.
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LONESOME
STONY
EATON RD.
SALMON CREEK RD.
WOODS
TUCKAHOE RD.
RTE. 21
POUND RD.
TOWN LINE RD.
29
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KENYON RD.
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RTE. 104
WILLIAMSON
SUBSTATION 11
MACEDON-EAST WILLIAMSON RD.
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CLEVENGER RD.
PADDY LANE
LINCOLN RD.
ARBOR RD.
EBBY RIDGE RD.
STATE RD.
HALEY RD.
SALT RD.
FINLEY RD.
TRUMMONDS RD.
SMITH RD.
FARNSWORTH RD.
26
PLANK RD.
FIVE MILE LINE
RTE. 250
COUNTY LINE RD.
10
27
RTE. 286
ATLANTIC AVE.
CANANDAIGUA RD.
RTE. 350
WALWORTH-ONTARIO RD.
RTE. 21
28
MARION
WALWORTH
RTE. 441
PENFIELD RD.
PENFIELD
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