

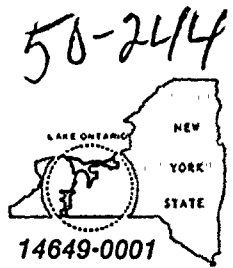


ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001

ROGER W. KOBER
VICE PRESIDENT
ELECTRIC & STEAM PRODUCTION

TELEPHONE
AREA CODE 716 546-2700

FILE COPY



March 2, 1984

Dr. Thomas E. Murley
Regional Administrator
US Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

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Included is the Semiannual Effluent Report. This is being submitted in the format outlined in Reg Guide 1.21 for the first time as will be required for all future data.

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Sincerely,

Roger W. Kober
Vice President
Electric & Steam Production

RWK/lvh

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ACCESSION NBR:8403130132 DOC.DATE: 84/03/02 NOTARIZED: NO DOCKET #
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 AUTH.NAME AUTHOR AFFILIATION
 KOBER,R.W. Rochester Gas & Electric Corp.
 RECIP.NAME RECIPIENT AFFILIATION
 MURLEY,T.E. Region 1, Office of Director

SUBJECT: Forwards "Effluent & Waste Disposal Semiannual Rept,
 Jul-Dec 1983," "Std Rept of Personnel Whole Body Exposure
 (Rem) by Exposure Groups,1983," & "Std Rept of Personnel
 & Man-Rem by Work & Job Function,1983."

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NOTES:NRR/DL/SEP 1cy. 05000244

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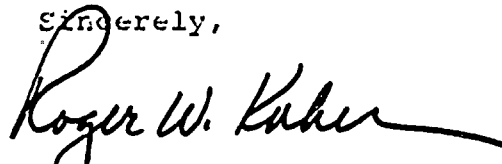
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Vice President
Electric & Steam Production

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US Nuclear Regulatory Commission
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GLNNA

July - Dec 1983

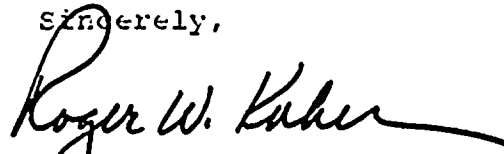
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Roger W. Kober
Vice President
Electric & Steam Production

FWK/lvh

Corrected by 8409260133, 9/15/84

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TABLE 1A
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (YEAR)
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Unit	Quarter 3	Quarter 4	Est. Total Error %
--	------	--------------	--------------	-----------------------

A. Fission & activation gases

1. Total release	Ci	1.98E 1	3.38E 1	2.8 E 1
2. Average release rate for period	uCi/sec	2.49E 0	4.30E 0	
3. Percent of technical specification limit	%	4.15E-3	7.17E-3	

B. Iodines

1. Total iodine-131	Ci	4.49E-5	1.12E-4	1.5 E 1
2. Average release rate for period	uCi/sec	5.65E-6	1.43E-5	
3. Percent of technical specification limit	%	1.95E-2	5.07E-2	

C. Particulates

1. Particulates with half-lives > 8 days	Ci	1.17E-5	3.03E-6	4.8 E 1
2. Average release rate for period	uCi/sec	1.47E-6	3.85E-7	
3. Percent of technical specification limit	%	5.07E-2	1.33E-2	
4. Gross alpha radioactivity	Ci	1.13E-6	6.67E-7	

D. Tritium

1. Total release	Ci	1.81E 1	2.33E 1	3.0 E 0
2. Average release rate for period	uCi/sec	2.28E 0	2.97E 0	
3. Percent of technical specification limit	%	3.93E 0	5.12E 0	

Correct
page

TABLE 1B
EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (YEAR)
GASEOUS EFFLUENTS - ELEVATED RELEASE

Nuclides Released	Unit	CONTINUOUS MODE		BATCH MODE	
		Quarter	Quarter	Quarter	Quarter
1. Fission gases		3	4	3	4
krypton-85	Ci			2.58E-1	1.31E 0
krypton-85m	Ci	3.8 E-3	7.5 E-3		
krypton-87	Ci	7.6 E-3	1.41E-2		
krypton-88	Ci	9.2 E-3	1.79E-2		
xenon-133	Ci	1.72E+01	2.99E+01	3.76E-1	6.94E-1
xenon-135	Ci	6.60E 0	1.47E 0	4.00E-4	5.2 E-3
xenon-135m	Ci	8.00E-2	1.39E-1		
xenon-138	Ci	1.41E-2	4.40E-2		
Others (specify) Xe-131m	Ci			2.60E-2	1.65E-1
	Ci				
	Ci				
unidentified	Ci				
Total for period	Ci	2.39E 1	3.16E 1	6.60E-1	2.17E 0
2. Iodines					
iodine-131	Ci	1.69E-5	6.46E-5		
iodine-133	Ci	2.81E-5	4.79E-5		
iodine-135	Ci				
Total for period	Ci	4.50E-5	1.13E-4		
3. Particulates					
strontium-89	Ci				
strontium-90	Ci				
cesium-134	Ci				
cesium-137	Ci				
barium-lanthanum-140	Ci				
Others (specify)	Ci				
Co-60	Ci	1.09E-5	5.85E-6		
	Ci				
unidentified	Ci				

TABLE 2A

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (YEAR)

LIQUID EFFLUENTS - SUMMARY OF ALL RELEASES

	Unit	Quarter 3	Quarter 4	Est. Total Error, %
A. Fission and activation products				
1. Total release (not including tritium, ceses, alpha)	Ci	6.56E-2	2.59E-2	2.4 E 1
2. Average diluted concentration during period	uCi/ml	3.27E-10	1.36E-10	
3. Percent of applicable limit	%	3.3 E-1	1.3 E-1	
B. Tritium				
1. Total release	Ci	4.46E 1	9.13E 1	3.6 E 0
2. Average diluted concentration during period	uCi/ml	2.22E-7	4.57E-7	
3. Percent of applicable limit	%	2.2 E 0	4.6 E 0	
C. Dissolved and entrained gases				
1. Total release	Ci			
2. Average diluted concentration during period	uCi/ml			
3. Percent of applicable limit	%			
D. Gross alpha radioactivity				
1. Total release				
E. Volume of waste released (prior to dilution)				
	liters	3.27E 7	3.19E 7	7.66E 0
F. Volume of dilution water used during period				
	liters	2.61E 11	2.66E 11	1.66E 0

TABLE 2B

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT (YEAR)

LIQUID EFFLUENTS

Nuclides Released	Unit	CONTINENTAL CODE		BITCH CODE	
		Quarter	Quarter	Quarter	Quarter
strontium-89	Ci				
strontium-90	Ci				
cesium-134	Ci			2.18E-2	2.66E-3
cesium-137	Ci			2.84E-2	5.92E-3
iodine-131	Ci			5.1 E-5	
cobalt-58	Ci			0.50E-5	1.57E-4
cobalt-60	Ci			1.39E-2	1.48E-2
iron-59	Ci				
zinc-65	Ci				
manganese-54	Ci			2.18E-3	2.33E-3
chromium-51	Ci				
zirconium-nickelium-95	Ci				1.3 E-5
molybdenum-99	Ci				
technetium-99m	Ci				
barium-lanthanum-140	Ci				
cerium-141	Ci				
Other (specify)	Ci				
Ag-110m	Ci				7.72E-5
	Ci				
	Ci				
unidentified	Ci				
Total for period (above)	Ci			6.56E-2	2.59E-2
xenon-133	Ci				
xenon-135	Ci				

TABLE 3

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT (YEAR)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. Solid Waste Shipped Offsite for Burial or Disposal (Not irradiated fuel)

1. Type of Waste	Unit	6-month Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	56.17 m ³ 144.5 Ci	5.62E 1 1.45E 2	1.4 E 1
b. Dry compressible waste, contaminated equip, etc.	67 m ³ 14.4E Ci	6.7 F 1 1.45E 1	1.4 L 1
c. Irradiated components, control rods, etc.	N/A		
d. Other (describe)			

2. Estimate of major nuclide composition (by type of waste)

a.	H-3	£	1.7 E 1
	Cc-58	£	1.0 E 0
	Cc-60	£	2.8 F 1
	Ni-63	£	5.4 E 0
	Cs-134	£	1.3 E 1
	Cs-137	£	3.5 E 1
b.	Cc-58	£	2.9 E 0
	Cc-60	£	3.2 E 1
	Cs-134	£	1.7 E 1
	Cs-137	£	3.2 E 1
	H-3	£	4.8 E 0
	Ni-63	£	7.1 E 0


3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
6	Highway Transport	Richland, WA
5	Highway Transport	Earnwell, SC

B. Irradiated Fuel Shipments (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None Shipped		

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NOTES:		1 1		

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1983

March 2, 1984

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US Nuclear Regulatory Commission
Region 1
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King of Prussia, PA 19406

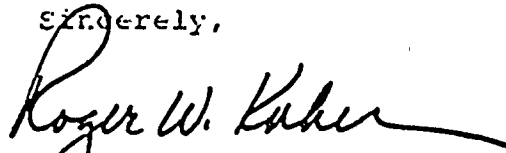
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Electric & Steam Production

RW/lvh

8403130132 840302
PDR ADOCK 05000244
R PDR

11/11/83

ROCHESTER GAS AND ELECTRIC CORPORATION
 ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
 R. E. GINNA NUCLEAR POWER PLANT DOCKET NO. 50-244
 WAYNE, NEW YORK REPORTING PERIOD 1983

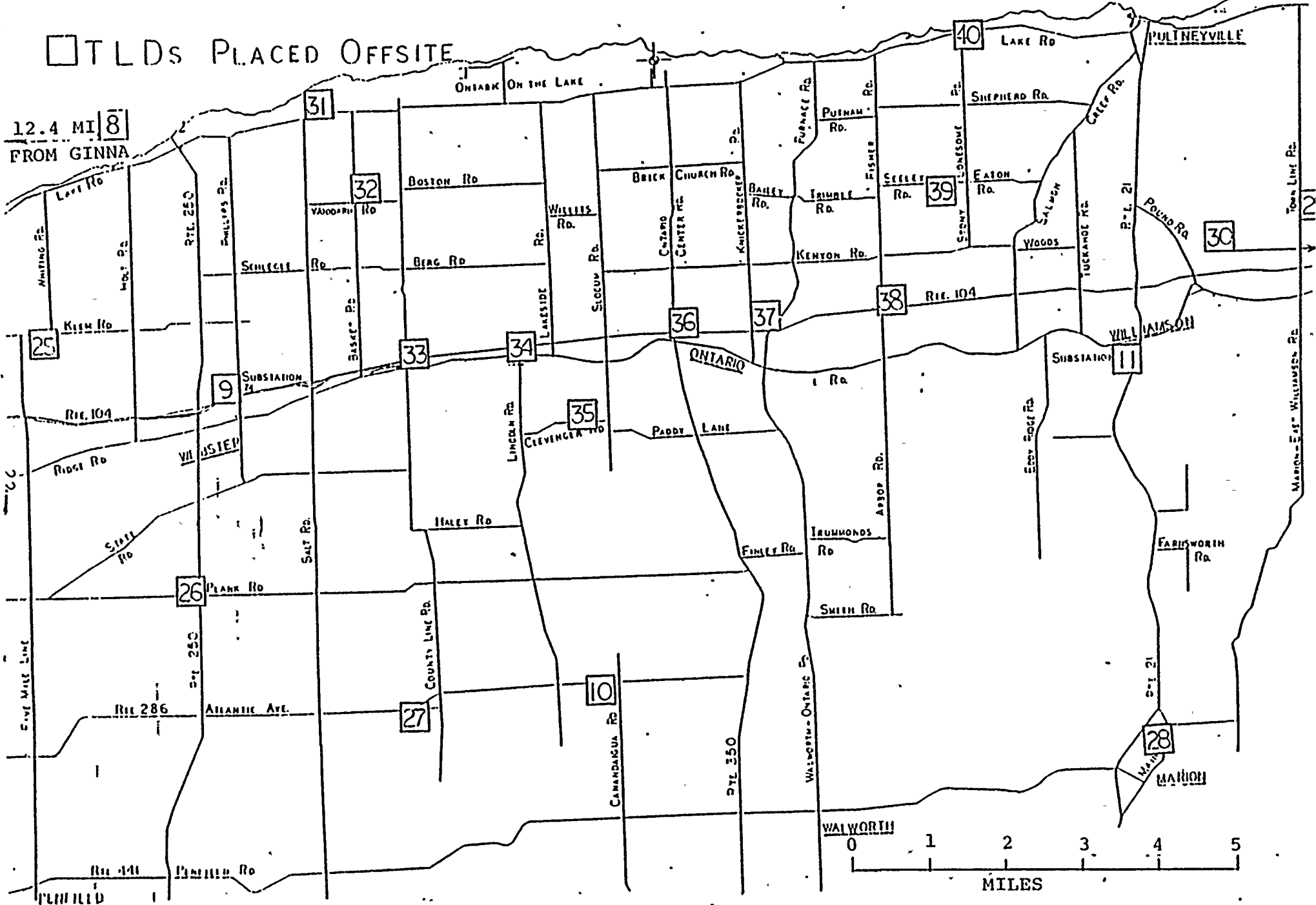
MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	TYPE AND TOTAL OF ANALYSES PERFORMED	LLD	INDICATOR LOCATIONS MEAN (1) RANGE	LOCATION WITH HIGHEST ANNUAL MEAN		CONTROL LOCATIONS MEAN (1) RANGE
				NAME DISTANCE AND DIRECTION	MEAN (1) RANGE	
AIR: PARTICULATE (pCi/Cu.M.)	GROSS BETA 618	0.003	0.020 (360/360) 0.006 - 0.086	ONSITE LOCATION #2 360 M 88	0.022 (52/52) 0.006 - 0.086	0.020 (258/258) 0.006 - 0.074
	GAMMA SCAN 48	(2)	< LLD (28/28)	-----	-----	< LLD (20/20)
	IODINE	GAMMA SCAN 208	0.02	< LLD (104/104)	-----	-----
DIRECT RADIATION: FILM (mR/MONTH)	BETA/GAMMA 144	10	< 10 (72/72)	-----	-----	< 10 (72/72)
TLD (mR/WEEK)	GAMMA 152	0.06	1.17 0.91 - 1.56	ONSITE LOCATION #5 200 M 185	1.40 (4/4) 1.27 - 1.56	1.05 0.73 - 1.77
WATER: DRINKING (pCi/LITER)	GROSS BETA 76	2.4	3.72 1.20 - 7.35	WELL "B" 640 M 150	5.41 2.67 - 7.35	-----
	GAMMA SCAN 50	(2)	Ra-226 17 (8/50) 14 - 26	WELL "B" 640 M 150	18 (7/12) 14 - 26	-----
SURFACE (pCi/LITER)	GROSS BETA 162	2.4	3.28 1.20 - 9.28	LAKE ONTARIO INTAKE 0 M 0	3.35 1.20 - 5.73	4.21 (52/52) 1.20 - 9.28
	GAMMA SCAN 76	(2)	< LLD	-----	-----	-----
RAINFALL (pCi/sq.M/day)	GROSS BETA 60	2.4	7.76 1.20 - 18.6	ONSITE LOCATION #5 200 M 185	7.39 (12/12) 1.99 - 15.7	9.17 1.20 - 17.0
MILK: (pCi/LITER)	IODINE 12	0.05	0.32 (3/12) 0.23 - 0.37	FARM "A" 5.1 MILES 120	0.36 (1/4)	-----
	GAMMA SCAN	(2)	< LLD (12/12)	-----	-----	-----
FISII: (pCi/Kg)	GAMMA SCAN 13	(2)	Cs-137 44 (11/11) 20 - 88	DISCHARGE PLUME	-----	Cs-137 20 (2/2) 20
VEGETATION: (pCi/Kg)	GAMMA SCAN 7	(2)	< LLD	-----	-----	-----

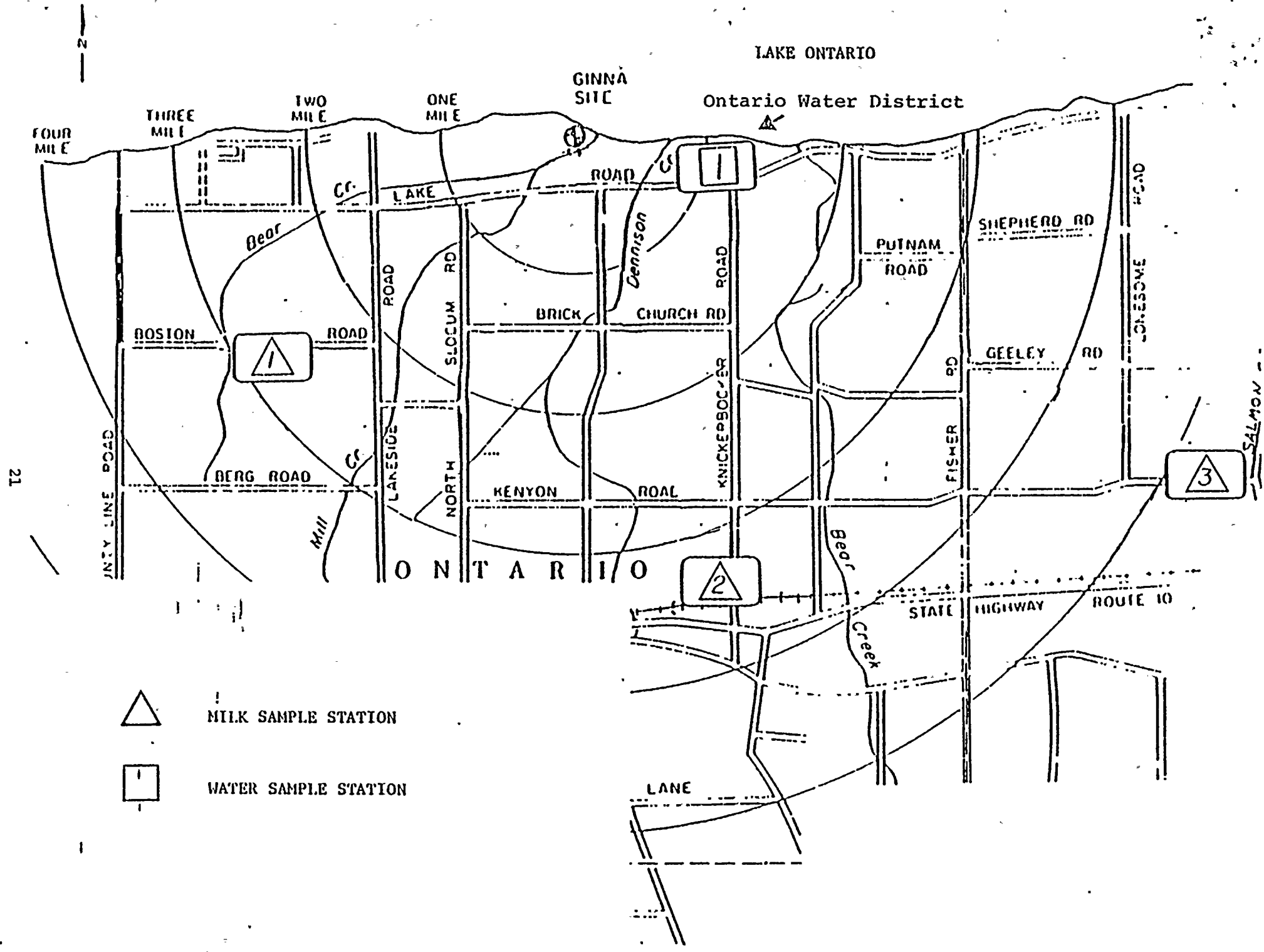
(1) Mean and range based on detectable measurements only. Fraction of detectable measurements at specified locations in parenthesis.
 (2) Table of LLD values attached for gamma scan measurements.

12.5 MI FROM GINNA

□ TLDs PLACED OFFSITE

12.4 MI FROM GINNA

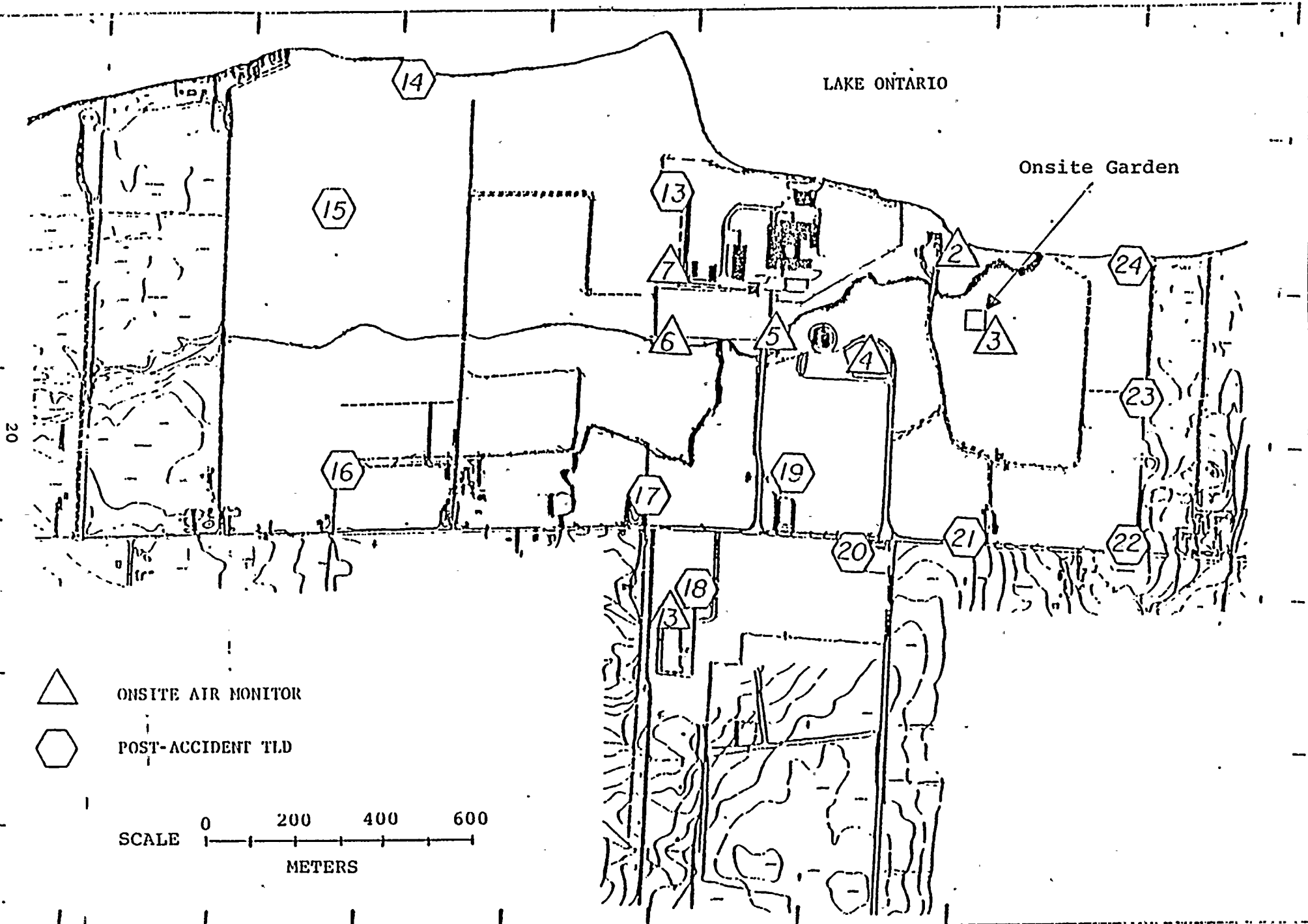




MILK SAMPLE STATION



WATER SAMPLE STATION

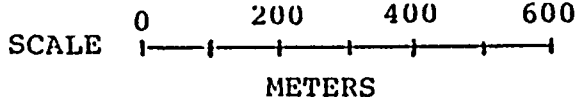


LAKE ONTARIO

Onsite Garden

△ ONSITE AIR MONITOR

⬡ POST-ACCIDENT TLD



LOWER LIMIT OF DETECTION (LLD)
Before Correction For Decay

	<u>Air Filters</u> pCi/M ³ (minimum Sple 3500 M ³ /Qt.	<u>Water</u> pCi/liter (Sample of 3.5 liters)	<u>Milk</u> pCi/liter (Sample of 3.5 liters)	<u>Fish</u> pCi/kgm (minimum Sple 2.0 kgms)	<u>Vegetation(a)</u> pCi/kgm (Sample of 3.0 kgms.)
Be ⁷	0.014	52		91	61
K ⁴⁰	0.027	81	81	137	91
Cr ⁵¹	0.013	52		91	61
Mn ⁵⁴	0.002	5		9	6
Fe ⁵⁹	0.004	12		20	13
Co ⁵⁸	0.004	5		9	6
Co ⁶⁰	0.002	6	6	11	7
Zn ⁶⁵	0.004	11		19	13
Zr ⁹⁵	0.004	12		22	15
Nb ⁹⁵	0.002	5		9	6
Ru ¹⁰³	0.002	6		11	7
Ru ¹⁰⁶	0.015	53		93	62
I ¹³¹	0.03(b)	7	7(Gamma Scan) 0.05(Beta)	12	8
Cs ¹³⁴	0.002	6		10	7
Cs ¹³⁷	0.002	7	7	11	8
BaLa ¹⁴⁰	0.002	5	5	9	6
Ce ¹⁴¹	0.002	9		16	11
Ce ¹⁴⁴	0.007	41		72	48
Ra ²²⁶	0.003	14		25	17
Beta	0.002	1.2			

(a) Leaf vegetable or pasture grass samples would be 50% higher due to sample sizes of 2.0 kg.
(b) Charcoal Cartridge

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