

APPENDIX A
REPORT RADIOACTIVE EFFLUENTS

FACILITY: ROCHESTER GAS & ELECTRIC GINNA STATION

DOCKET: 50-244

YEAR: 1982

I. LIQUID RELEASES

	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. GROSS RADIOACTIVITY (β, γ)								
A) TOTAL RELEASED (except 2,3 & 4)	CURIES	7.89 E-2	5.48 E-2	3.08 E-2	7.13 E-3	1.76 E-2	2.14 E-2	2.11 E-1
B) AVERAGE CONCENTRATION RELEASED	μ CI/ML	2.29 E-6	7.78 E-6	1.35 E-6	9.6 E-7	1.51 E-6	1.64 E-6	N/A
C) MAXIMUM CONCENTRATION RELEASED	μ CI/ML	2.38 E-5	1.58 E-4	7.23 E-6	4.53 E-6	1.34 E-5	1.15 E-5	N/A
2. TRITIUM								
A) TOTAL RELEASED	CURIES	7.42	9.7	13.09	23.65	27.40	35.72	116.98
B) AVERAGE CONCENTRATION RELEASED	μ CI/ML	1.1 E-7	1.43 E-7	2.22 E-7	4.56 E-7	4.19 E-7	5.3 E-7	N/A
C) PERCENT OF LIMIT	%	0.004	0.005	0.007	0.015	0.014	0.018	N/A
3. DISSOLVED NOBLE GASES								
A) TOTAL RELEASED	CURIES	ND	ND	ND	ND	ND	ND	ND
B) AVERAGE CONCENTRATION RELEASED	μ CI/ML	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4. GROSS ALPHA RADIOACTIVITY								
A) TOTAL RELEASED	CURIES	ND	5.1 E-5	ND	ND	ND	ND	5.1 E-5
B) AVERAGE CONCENTRATION RELEASED	μ CI/ML	N/A	7.52 E-13	N/A	N/A	N/A	N/A	N/A
5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL	LITERS	3.91 E 6	3.92 E 6	4.38 E 6	2.35 E 6	3.54 E 6	4.61 E 6	2.27 E 7
6. VOLUME OF DILUTION WATER	LITERS	6.76 E10	6.78 E10	5.9 E10	5.18 E10	6.54 E10	6.74 E10	3.79 E11
7. ISOTOPES RELEASED	CURIES							
	""							
	""							
Cesium 137	""	1.43 E-3	3.71 E-4	4.7 E-5	7.16 E-4	6.17 E-3	6.42 E-3	1.52 E-2
Cesium 134	""	1.42 E-4	2.72 E-4	3.1 E-5	3.72 E-4	3.92 E-3	3.8 E-3	8.5 E-3
Cobalt 58	""	2.32 E-2	1.37 E-2	5.84 E-3	8.05 E-4	3.25 E-4	5.23 E-4	4.44 E-2
Cobalt 60	""	3.74 E-2	2.93 E-2	1.82 E-2	3.79 E-3	4.99 E-3	7.38 E-3	1.01 E-1
Manganese 54	""	9.31 E-3	8.15 E-3	5.24 E-3	1.24 E-3	2.22 E-3	2.39 E-3	2.86 E-2
Zirconium 95	""	2.17 E-3	ND	ND	ND	ND	ND	2.17 E-3
Niobium 95	""	5.2 E-3	2.97 E-3	3.0 E-4	2.08 E-4	ND	8.8 E-3	9.6 E-3
Cerium 144	""	ND	ND	ND	ND	ND	ND	ND
Tellurium 132	""	ND	ND	ND	ND	ND	ND	ND
Ruthenium 106	""	ND	ND	ND	ND	ND	ND	ND
Silver 110m	""	ND	3.81 E-5	ND	ND	ND	ND	3.81 E-5
Molybdenum 99	""	ND	ND	ND	ND	ND	ND	ND
Barium 140	""	ND	ND	ND	ND	ND	ND	ND
Chromium 51	""	ND	ND	ND	ND	ND	ND	ND
Iron 59	""	ND	ND	ND	ND	ND	ND	ND
Tellurium 129m	""	ND	ND	ND	ND	ND	ND	ND
Cesium 136	""	ND	ND	ND	ND	ND	ND	ND
Neptunium 239	""	ND	ND	ND	ND	ND	ND	ND
Iodine 131	""	ND	ND	7.4 E-5	ND	ND	ND	7.4 E-5
Iodine 132	""	ND	ND	1.93 E-4	ND	ND	ND	1.93 E-4
Iodine 133	""	ND	ND	4.82 E-4	ND	ND	ND	4.82 E-4
Iodine 134	""	ND	ND	8.6 E-5	ND	ND	ND	8.6 E-5
Iodine 135	""	ND	ND	3.35 E-4	ND	ND	ND	3.35 E-4
% OF TECH.SPEC. LIMIT FOR ACTIVITY RELEASED								
Tech. Spec. Limit for Liq. Released is 1 E-7	%	0.0026	0.0019	0.0027	0.0004	0.0014	0.0015	N/A

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II. AIRBORNE RELEASES

	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. TOTAL NOBLE GASES	CURIES	30.66	30.83	849.62	75.64	10.72	10.74	1003.21
2. TOTAL HALOGENS	CURIES	8.11 E-5	8.54 E-5	6.26 E-3	4.1 E-3	1.38 E-5	1.52 E-4	1.07 E-2
3. TOTAL PARTICULATE GROSS RADIOACTIVITY (β, γ)	CURIES	2.84 E-6	7.9 E-7	1.5 E-7	1.46 E-7	1.68 E-6	1.26 E-6	6.86 E-6
4. TOTAL TRITIUM	CURIES	7.01	12.26	26.26	8.88	5.36	4.59	64.36
5. TOTAL PARTICULATE GROSS ALPHA RADIOACTIVITY	CURIES	9.4 E-9	ND	3.0 E-8	ND	1.98 E-7	ND	2.37 E-7
6. MAXIMUM NOBLE GAS RELEASE RATE	μ CI/SEC	11.40	11.50	328.0	337.0	4.13	66.40	N/A
7. PERCENT OF APPLICABLE LIMIT FOR:								
A) NOBLE GASSES	%	0.021	0.0198	0.55	0.05	0.012	0.0091	N/A
B) HALOGENS	%	0.014	0.029	0.27	0.187	0.008	0.029	N/A
C) PARTICULATES	%	0.0012	0.0007	ND	<0.0001	ND	ND	N/A
8. ISOTOPE RELEASED:								
PARTICULATES	CURIES							
Cesium 137	""	2.13 E-6	1.11 E-6	ND	7.19 E-8	ND	ND	3.31 E-6
Barium/Lanthanum 140	""	ND	ND	ND	ND	ND	ND	ND
Strontium 90	""	ND	ND	ND	ND	ND	ND	ND
Cesium 134	""	ND	ND	ND	ND	ND	ND	ND
Strontium 89	""	ND	ND	ND	ND	ND	ND	ND
Cobalt 60	""	2.5 E-6	1.25 E-6	ND	ND	ND	ND	3.75 E-6
	""							
	""							
	""							
HALOGENS	CURIES							
Iodine 131	""	1.09 E-5	2.24 E-5	2.06 E-4	1.45 E-4	6.3 E-6	2.24 E-5	4.13 E-4
Iodine 133	""	7.02 E-5	6.3 E-5	4.95 E-5	5.1 E-6	7.45 E-6	1.34 E-4	3.29 E-4
Iodine 135	""	ND	ND	ND	ND	ND	ND	ND
Iodine 132	""	ND	ND	6.0 E-3	3.99 E-3	ND	ND	9.99 E-3
GASES	CURIES							
Krypton 85	""	ND	1.142	1.941	1.422	0.359	0.06	4.924
Xenon 133	""	29.276	29.134	835.33	72.243	6.00	8.65	980.63
Krypton 88	""	0.009	0.018	0.006	0.0071	0.035	0.015	0.0901
Krypton 87	""	0.009	0.016	0.013	0.0084	0.038	0.021	0.105
Krypton 85m	""	0.0044	0.006	0.019	0.0044	0.020	0.011	0.065
Xenon 138	""	0.011	0.019	0.013	0.0091	0.044	0.022	0.118
Xenon 135m	""	0.102	0.141	0.149	0.0717	0.351	0.188	1.003
Xenon 135	""	1.25	0.331	4.956	0.773	3.73	1.764	12.804
Argon 41	""	0.0005	0.002	0.017	0.0034	0.007	0.0033	0.033
Xenon 133m	""	ND	0.005	6.154	0.12	ND	0.0006	6.28
Xenon 131m	""	ND	0.014	1.020	0.982	0.133	0.008	2.157
OTHERS AS APPROPRIATE (SPECIFY)	""							
	""							
	""							
	""							