UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/21/90

I. LIQUID RELEASES — YEAR : 1989

| | UNITS | 1ST QTR | 2ND QTR | 3RD QTR | 4TH QTR | TOTAL |
|---|---|---|---|---|---|---|
| 1. GROSS RADIOACTIVITY | | | | | | |
| A. TOTAL RELEASE | CURIES | 4.61E-01 | 6.63E-02 | 7.61E-01 | 2.54E-01 | 1.54E+00 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 5.87E-10 | 7.61E-11 | 9.45E-10 | 2.56E-10 | 4.46E-10 |
| C. MAXIMUM CONCENTRATION RELEASED | UCI/ML | 9.95E-09 | 1.95E-09 | 1.87E-08 | 7.05E-09 | 1.37E-08 |
| 2. TRITTIUM | | | | | | |
| A. TOTAL RELEASE | CURIES | 8.99E+01 | 7.60E+01 | 1.25E+02 | 1.32E+02 | 4.23E+02 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 1.15E-07 | 8.72E-08 | 1.55E-07 | 1.34E-07 | 1.22E-07 |
| 3. DISSOLVED NOBLE GASES | | | | | | |
| A. TOTAL RELEASE | CURIES | 8.44E-02 | 2.19E-02 | 6.81E-02 | 9.81E-02 | 2.63E-01 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 1.08E-10 | 2.51E-11 | 7.84E-11 | 9.89E-11 | 7.60E-11 |
| 4. GROSS ALPHA ACTIVITY | | | | | | |
| A. TOTAL RELEASE | CURIES | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL | LITERS | 1.32E+07 | 1.08E+07 | 2.44E+06 | 1.12E+06 | 2.75E+07 |
| 6. VOLUME OF DILUTION WATER | LITERS | 7.85E+11 | 8.72E+11 | 8.05E+11 | 9.92E+11 | 3.45E+12 |
| 7. RADIONUCLIDES RELEASED | CURIES | | | | | |
| BE-7 | | 4.46E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.46E-05 |
| F-18 | | 8.41E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.41E-03 |
| NA-24 | | 2.68E-04 | 5.43E-05 | 3.81E-04 | 8.62E-05 | 7.89E-04 |
| K-40 | | 7.91E-04 | 3.10E-04 | 6.56E-05 | 5.11E-05 | 1.22E-03 |
| CR-51 | | 1.11E-02 | 3.87E-03 | 9.10E-02 | 1.34E-02 | 1.19E-01 |
| MN-54 | | 1.03E-02 | 1.67E-03 | 1.76E-02 | 8.87E-03 | 3.80E-02 |
| FE-55 | | 6.80E-02 | 9.45E-03 | 5.23E-02 | 5.68E-02 | 1.87E-01 |
| FE-59 | | 9.86E-04 | 1.21E-05 | 5.19E-03 | 1.16E-03 | 7.36E-03 |
| CO-57 | | 8.50E-04 | 3.30E-05 | 1.40E-03 | 3.80E-04 | 2.67E-03 |
| CO-58 | | 1.58E-01 | 6.21E-03 | 3.65E-01 | 4.58E-02 | 5.67E-01 |
| CO-60 | | 5.39E-02 | 9.57E-03 | 9.60E-02 | 4.90E-02 | 2.08E-01 |
| NI-65 | | 5.50E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.50E-06 |
| ZN-65 | | 2.88E-04 | 0.00E+00 | 2.91E-04 | 7.55E-05 | 6.54E-04 |
| SE-75 | | 0.00E+00 | 2.33E-05 | 0.00E+00 | 0.00E+00 | 2.33E-05 |
| BR-82 | | 2.39E-05 | 1.42E-05 | 2.57E-05 | 5.15E-05 | 1.15E-04 |
| RB-88 | | 2.90E-03 | 2.09E-05 | 6.38E-04 | 1.15E-04 | 3.67E-03 |
| RB-89 | | 3.66E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-03 |
| SR-89 | | 1.11E-05 | 0.00E+00 | 2.06E-05 | 3.72E-05 | 6.89E-05 |
| SR-91 | | 5.79E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.79E-05 |
| SR-92 | | 1.31E-04 | 5.96E-05 | 1.13E-04 | 1.11E-04 | 4.15E-04 |
| Y-91M | | 4.91E-05 | 0.00E+00 | 0.00E+00 | 2.95E-06 | 4.95E-05 |
| ZR-95 | | 3.08E-03 | 6.21E-04 | 6.22E-03 | 2.40E-03 | 1.23E-02 |
| ZR-97 | | 4.16E-05 | 0.00E+00 | 2.84E-05 | 0.00E+00 | 7.00E-05 |
| NB-95 | | 5.87E-03 | 1.22E-03 | 1.04E-02 | 4.91E-03 | 2.24E-02 |
| NB-97 | | 4.72E-04 | 2.01E-04 | 1.87E-04 | 2.99E-04 | 1.16E-03 |
| MO-99 | | 4.13E-05 | 0.00E+00 | 2.21E-05 | 0.00E+00 | 6.35E-05 |
| TC-99M | | 2.36E-04 | 6.99E-05 | 1.52E-04 | 8.39E-04 | 1.30E-03 |
| RU-103 | | 3.53E-04 | 0.00E+00 | 4.22E-04 | 1.01E-04 | 8.75E-04 |
| RU-106 | | 1.04E-03 | 2.03E-04 | 4.01E-04 | 5.42E-04 | 2.18E-03 |
| AG-110M | | 1.64E-03 | 6.61E-04 | 3.07E-03 | 4.06E-03 | 9.42E-03 |
| I-131 | | 1.36E-02 | 8.87E-04 | 7.47E-03 | 1.21E-02 | 3.41E-02 |
| I-132 | | 9.56E-04 | 5.22E-06 | 2.58E-04 | 1.26E-03 | 2.48E-03 |
| I-133 | | 5.31E-03 | 4.48E-04 | 3.34E-03 | 1.80E-02 | 2.71E-02 |
| I-134 | | 2.98E-04 | 0.00E+00 | 0.00E+00 | 2.06E-04 | 5.06E-04 |
| I-135 | | 1.72E-03 | 1.33E-04 | 1.04E-03 | 7.90E-03 | 1.08E-02 |
| SB-122 | | 2.05E-05 | 1.38E-06 | 3.32E-03 | 4.13E-05 | 3.39E-03 |
| SB-124 | | 1.94E-03 | 4.11E-03 | 1.11E-02 | 3.59E-04 | 1.75E-02 |
| SB-125 | | 8.33E-02 | 2.41E-02 | 7.60E-02 | 1.52E-02 | 1.49E-01 |
| SN-113 | | 2.05E-03 | 2.91E-04 | 1.81E-03 | 6.94E-04 | 4.84E-03 |
| TE-132 | | 7.17E-05 | 2.14E-06 | 2.42E-04 | 2.09E-06 | 3.18E-04 |
| TE-134 | | 1.55E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-05 |
| CS-134 | | 2.36E-02 | 6.11E-04 | 1.26E-03 | 3.97E-03 | 2.94E-02 |
| CS-136 | | 6.94E-03 | 0.00E+00 | 1.52E-05 | 0.00E+00 | 6.96E-03 |
| CS-137 | | 2.49E-02 | 8.73E-04 | 2.08E-03 | 5.57E-03 | 3.34E-02 |
| CS-138 | | 1.93E-02 | 1.85E-05 | 2.36E-05 | 2.00E-05 | 1.94E-02 |
| BA-139 | | 1.03E-03 | 0.00E+00 | 2.93E-05 | 0.00E+00 | 1.06E-03 |
| BA-140 | | 0.00E+00 | 9.71E-06 | 8.37E-05 | 0.00E+00 | 9.34E-05 |
| LA-140 | | 5.10E-04 | 1.76E-04 | 5.71E-04 | 7.63E-05 | 1.33E-03 |
| CE-141 | | 4.32E-05 | 2.83E-06 | 8.81E-05 | 0.00E+00 | 1.34E-04 |
| CE-144 | | 6.99E-04 | 1.48E-04 | 3.76E-04 | 1.96E-04 | 1.42E-03 |
| W-187 | | 0.00E+00 | 0.00E+00 | 1.50E-04 | 0.00E+00 | 1.50E-04 |
| BI-214 | | 2.22E-06 | 3.49E-05 | 0.00E+00 | 0.00E+00 | 3.71E-05 |
| PB-214 | | 3.72E-05 | 1.97E-04 | 3.20E-07 | 4.07E-05 | 2.75E-04 |
| NP-239 | | 5.66E-05 | 4.93E-05 | 7.26E-05 | 0.00E+00 | 1.78E-04 |
| SB-126 | | 0.00E+00 | 0.00E+00 | 4.12E-04 | 0.00E+00 | 4.12E-04 |
| AR-41 | | 2.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-06 |
| KR-85 | | 0.00E+00 | 3.91E-04 | 5.01E-04 | 0.00E+00 | 8.93E-04 |
| KR-85M | | 1.03E-04 | 0.00E+00 | 3.83E-06 | 0.00E+00 | 1.07E-04 |
| KR-87 | | 9.72E-05 | 0.00E+00 | 0.00E+00 | 3.35E-03 | 3.45E-03 |
| KR-88 | | 2.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-04 |
| XE-131M | | 1.21E-02 | 4.46E-05 | 0.00E+00 | 5.93E-05 | 1.22E-02 |
| XE-133 | | 6.31E-02 | 1.99E-02 | 5.78E-02 | 8.18E-02 | 2.23E-01 |
| XE-133M | | 1.18E-03 | 2.61E-04 | 1.99E-04 | 1.36E-03 | 3.00E-03 |
| XE-135 | | 7.42E-03 | 1.32E-03 | 4.48E-03 | 5.33E-03 | 1.86E-02 |
| XE-135M | | 1.86E-04 | 8.24E-06 | 1.25E-04 | 1.21E-03 | 1.53E-03 |

MCGUIRE UNIT 1 LIQUID RELEASE 001-365 89 02/21/90

SKIN MAXIMUM DOSE- 7.90D-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

| | | |
|---|---|---|
| CO | 60 | 79.47 % |
| SB | 125 | 5.88 % |
| CS | 137 | 6.09 % |

BONE MAXIMUM DOSE- 1.81D-01 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

| | | |
|---|---|---|
| CS | 134 | 37.27 % |
| CS | 137 | 60.14 % |

LIVER MAXIMUM DOSE- 2.71D-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | | |
|---|---|---|
| H | 3 | 6.03 % |
| CS | 134 | 47.75 % |
| CS | 137 | 41.78 % |

T. BODY MAXIMUM DOSE- 2.04D-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | | |
|---|---|---|
| H | 3 | 11.31 % |
| CS | 134 | 51.02 % |
| CS | 137 | 34.79 % |

THYROID MAXIMUM DOSE- 7.41D-02 MREM CRITICAL AGE- INFANT CRITICAL PATHWAY- DRINKING

| | | |
|---|---|---|
| H | 3 | 40.28 % |
| I | 131 | 58.38 % |

KIDNEY MAXIMUM DOSE- 1.04D-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | | |
|---|---|---|
| H | 3 | 15.62 % |
| CO | 60 | 5.11 % |
| CS | 134 | 39.45 % |
| CS | 137 | 37.08 % |

LUNG MAXIMUM DOSE- 5.77D-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- DRINKING

| | | |
|---|---|---|
| H | 3 | 53.34 % |
| CS | 134 | 21.42 % |
| CS | 137 | 21.32 % |

GI-LLI MAXIMUM DOSE- 2.09D-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | | |
|---|---|---|
| H | 3 | 11.05 % |
| CO | 60 | 5.40 % |
| NB | 95 | 73.32 % |

SET TO NEW PAGE AND PRESS RETURN

MCGUIRE NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/21/90

II. AIRBORNE RELEASES — YEAR : 1989

| | UNITS | 1ST QTR | 2ND QTR | 3RD QTR | 4TH QTR | TOTAL |
|---|---|---|---|---|---|---|
| 1. TOTAL NOBLE GASES | CURIES | 1.73E+02 | 1.01E+02 | 3.06E+02 | 1.40E+02 | 7.20E+02 |
| 2. TOTAL HALOGENS | CURIES | 4.26E-03 | 1.83E-04 | 6.95E-04 | 7.48E-04 | 5.88E-03 |
| 3. TOTAL PARTICULATE GROSS BETA-GAMMA | CURIES | 2.61E-05 | 3.56E-04 | 5.78E-05 | 4.25E-05 | 4.83E-04 |
| 4. TOTAL TRITIUM | CURIES | 3.15E+00 | 5.72E+00 | 1.11E+01 | 6.63E+00 | 2.66E+01 |
| 5. TOTAL PARTICULATE GROSS ALPHA ACTIVITY | CURIES | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6. MAXIMUM NOBLE GAS RELEASE RATE | UCI/[illegible] | 1.60E+03 | 1.60E+03 | 1.60E+03 | 1.60E+03 | 1.60E+03 |
| 7. RADIONUCLIDES RELEASED | [illegible] | | | | | |
| PARTICULATES | | | | | | |
| NA-24 | | 0.00E+00 | 4.54E-09 | 0.00E+00 | 4.65E-09 | 9.19E-09 |
| CL-38 | | 2.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.28E-08 |
| K-40 | | 4.82E-08 | 1.17E-08 | 1.75E-06 | 2.23E-08 | 1.83E-06 |
| CR-51 | | 5.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.28E-08 |
| MN-54 | | 5.85E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.85E-09 |
| FE-59 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-08 | 2.50E-08 |
| CO-58 | | 1.60E-06 | 0.00E+00 | 2.07E-05 | 0.00E+00 | 2.23E-05 |
| CO-60 | | 1.27E-05 | 4.46E-05 | 1.04E-05 | 6.18E-06 | 7.39E-05 |
| BR-82 | | 7.30E-08 | 2.32E-08 | 1.34E-08 | 4.13E-08 | 1.51E-07 |
| RB-88 | | 1.15E-05 | 2.93E-04 | 1.81E-05 | 2.34E-05 | 3.46E-04 |
| RB-89 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.50E-06 | 1.50E-06 |
| SR-92 | | 0.00E+00 | 0.00E+00 | 1.87E-08 | 0.00E+00 | 1.87E-08 |
| Y-92 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-08 | 2.20E-08 |
| NB-95 | | 8.01E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.01E-09 |
| NB-97 | | 0.00E+00 | 0.00E+00 | 1.03E-09 | 1.00E-09 | 2.03E-09 |
| TC-99M | | 0.00E+00 | 0.00E+00 | 1.42E-09 | 2.43E-08 | 2.57E-08 |
| RU-103 | | 0.00E+00 | 0.00E+00 | 3.58E-10 | 0.00E+00 | 3.58E-10 |
| SB-124 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-09 | 1.20E-09 |
| TE-132 | | 0.00E+00 | 0.00E+00 | 2.00E-09 | 6.81E-09 | 8.81E-09 |
| CS-134 | | 0.00E+00 | 2.77E-06 | 7.56E-07 | 9.48E-07 | 4.47E-06 |
| CS-137 | | 0.00E+00 | 1.49E-05 | 9.20E-07 | 5.12E-08 | 1.59E-05 |
| CS-138 | | 7.62E-08 | 9.56E-07 | 4.27E-06 | 9.22E-06 | 1.45E-05 |
| BA-139 | | 0.00E+00 | 2.93E-08 | 1.66E-07 | 1.08E-06 | 1.27E-06 |
| BI-214 | | 1.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.93E-08 |
| PB-214 | | 1.43E-08 | 2.16E-07 | 7.14E-07 | 1.41E-09 | 9.46E-07 |
| HALOGENS | | | | | | |
| I-131 | | 2.91E-03 | 7.67E-05 | 3.51E-04 | 2.94E-04 | 3.64E-03 |
| I-132 | | 6.37E-05 | 9.06E-08 | 4.56E-05 | 7.16E-06 | 1.17E-04 |
| I-133 | | 1.19E-03 | 1.06E-04 | 2.93E-04 | 4.24E-04 | 2.01E-03 |
| I-134 | | 3.08E-06 | 0.00E+00 | 4.95E-07 | 4.43E-06 | 8.00E-06 |
| I-135 | | 9.00E-05 | 1.08E-07 | 4.68E-06 | 1.38E-05 | 1.09E-04 |
| GASES | | | | | | |
| AR-41 | | 9.97E-01 | 1.73E+00 | 2.99E+00 | 9.68E-01 | 6.69E+00 |
| KR-85 | | 4.21E+00 | 6.28E-01 | 5.68E-01 | 9.65E-01 | 6.37E+00 |
| KR-85M | | 9.33E-01 | 6.78E-01 | 1.15E+00 | 4.58E-01 | 3.22E+00 |
| KR-87 | | 1.62E-01 | 1.11E-01 | 2.25E-01 | 1.10E-01 | 6.08E-01 |
| KR-88 | | 9.95E-01 | 6.96E-01 | 1.29E+00 | 5.46E-01 | 3.52E+00 |
| XE-131M | | 4.36E-01 | 8.73E-02 | 1.56E+00 | 5.34E-01 | 2.61E+00 |
| XE-133 | | 1.50E+02 | 8.40E+01 | 2.75E+02 | 1.27E+02 | 6.36E+02 |
| XE-133M | | 2.55E+00 | 1.73E+00 | 3.73E+00 | 2.03E+00 | 1.01E+01 |
| XE-135 | | 1.26E+01 | 1.11E+01 | 1.89E+01 | 7.17E+00 | 4.98E+01 |
| XE-135M | | 5.20E-03 | 6.69E-04 | 1.50E-02 | 7.05E-02 | 9.13E-02 |
| XE-138 | | 0.00E+00 | 0.00E+00 | 2.86E-01 | 4.73E-02 | 3.33E-01 |

MCGUIRE UNIT 1 GAS DOSE 001-365 89 RELEASE WEIGHTED MET REPORT SUMMARY 02/21/90
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 9.47E-01 MILLIRADS
GAMMA AIR DOSE = 5.03E-01 MILLIRADS

TOTAL BODY DOSE = 3.14E-01 MILLIREM

| | |
|---|---|
| KR 88 | 13.40% |
| XE133 | 44.57% |
| XE135 | 23.24% |
| AR 41 | 15.40% |

TOTAL SKIN DOSE = 7.74E-01 MILLIREM

| | |
|---|---|
| KR 88 | 7.49% |
| XE133 | 51.01% |
| XE135 | 24.99% |
| AR 41 | 10.00% |

MCGUIRE UNIT 1 GAS DOSE 001-365 89 RELEASE WEIGHTED MET REPORT SUMMARY 02/21/90
SPECIAL LOCATION
AT 0.50 MILES NSW

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 84.28%

MAXIMUM ORGAN DOSE = 1.77E-01 MILLIREM
H 3 18.38%
I 131 79.02%

UNIT 2

UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/21/90

I. LIQUID RELEASES — YEAR : 1989

| | UNITS | 1ST QTR | 2ND QTR | 3RD QTR | 4TH QTR | TOTAL |
|---|---|---|---|---|---|---|
| A. GROSS RADIOACTIVITY | | | | | | |
| A. TOTAL RELEASE | CURIES | 4.61E-01 | 6.63E-02 | 7.61E-01 | 2.54E-01 | 1.54E+00 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 5.87E-10 | 7.61E-11 | 9.45E-10 | 2.56E-10 | 4.46E-10 |
| C. MAXIMUM CONCENTRATION RELEASED | UCI/ML | 9.85E-09 | 1.35E-09 | 1.87E-08 | 7.05E-09 | 1.87E-08 |
| 2. TRITTIUM | | | | | | |
| A. TOTAL RELEASE | CURIES | 8.99E+01 | 7.60E+01 | 1.25E+02 | 1.32E+02 | 4.23E+02 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 1.15E-07 | 8.72E-08 | 1.55E-07 | 1.34E-07 | 1.22E-07 |
| 3. DISSOLVED NOBLE GASES | | | | | | |
| A. TOTAL RELEASE | CURIES | 8.44E-02 | 2.19E-02 | 6.31E-02 | 9.31E-02 | 2.63E-01 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 1.08E-10 | 2.51E-11 | 7.84E-11 | 9.39E-11 | 7.60E-11 |
| 4. GROSS ALPHA ACTIVITY | | | | | | |
| A. TOTAL RELEASE | CURIES | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| B. AVERAGE CONCENTRATION RELEASED | UCI/ML | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL | LITERS | 1.32E+07 | 1.08E+07 | 2.44E+06 | 1.12E+06 | 2.75E+07 |
| 6. VOLUME OF DILUTION WATER | LITERS | 7.85E+11 | 8.72E+11 | 8.05E+11 | 9.92E+11 | 3.45E+12 |
| 7. RADIONUCLIDES RELEASED | CURIES | | | | | |
| BE-7 | | 4.46E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.46E-05 |
| F-18 | | 8.41E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.41E-03 |
| NA-24 | | 2.68E-04 | 5.43E-05 | 3.81E-04 | 8.62E-05 | 7.89E-04 |
| K-40 | | 7.91E-04 | 3.10E-04 | 6.56E-05 | 5.11E-05 | 1.22E-03 |
| CR-51 | | 1.11E-02 | 3.87E-03 | 9.10E-02 | 1.34E-02 | 1.19E-01 |
| MN-54 | | 1.03E-02 | 1.67E-03 | 1.76E-02 | 8.37E-03 | 9.80E-02 |
| FE-55 | | 6.80E-02 | 9.45E-03 | 5.23E-02 | 5.68E-02 | 1.87E-01 |
| FE-59 | | 9.86E-04 | 1.21E-05 | 5.19E-03 | 1.16E-03 | 7.36E-03 |
| CO-57 | | 8.50E-04 | 3.30E-05 | 1.40E-03 | 3.80E-04 | 2.67E-03 |
| CO-58 | | 1.50E-01 | 6.21E-03 | 3.65E-01 | 4.58E-02 | 5.67E-01 |
| CO-60 | | 5.39E-02 | 9.57E-03 | 9.60E-02 | 4.90E-02 | 2.08E-01 |
| NI-65 | | 5.50E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.50E-06 |
| ZN-65 | | 2.88E-04 | 0.00E+00 | 2.91E-04 | 7.55E-05 | 6.54E-04 |
| SE-75 | | 0.00E+00 | 2.33E-05 | 0.00E+00 | 0.00E+00 | 2.33E-05 |
| BR-82 | | 2.39E-05 | 1.42E-05 | 2.57E-05 | 5.15E-05 | 1.15E-04 |
| RB-88 | | 2.90E-03 | 2.09E-05 | 6.39E-04 | 1.15E-04 | 3.67E-03 |
| RB-89 | | 3.66E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.66E-03 |
| SR-89 | | 1.11E-05 | 0.00E+00 | 2.06E-05 | 3.72E-05 | 6.89E-05 |
| SR-91 | | 5.79E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.79E-05 |
| SR-92 | | 1.31E-04 | 5.96E-05 | 1.13E-04 | 1.11E-04 | 4.15E-04 |
| Y-91M | | 4.31E-05 | 0.00E+00 | 0.00E+00 | 2.35E-06 | 4.55E-05 |
| ZR-95 | | 3.00E-03 | 6.21E-04 | 6.22E-03 | 2.40E-03 | 1.23E-02 |
| ZR-97 | | 4.16E-05 | 0.00E+00 | 2.84E-05 | 0.00E+00 | 7.00E-05 |
| NB-95 | | 5.87E-03 | 1.22E-03 | 1.04E-02 | 4.91E-03 | 2.24E-02 |
| NB-97 | | 4.72E-04 | 2.01E-04 | 1.87E-04 | 2.99E-04 | 1.16E-03 |
| MO-99 | | 4.13E-05 | 0.00E+00 | 2.21E-05 | 0.00E+00 | 6.35E-05 |
| TC-99M | | 2.36E-04 | 6.99E-05 | 1.52E-04 | 8.39E-04 | 1.30E-03 |
| RU-103 | | 3.53E-04 | 0.00E+00 | 4.22E-04 | 1.01E-04 | 8.75E-04 |
| RU-106 | | 1.04E-03 | 2.03E-04 | 4.01E-04 | 5.42E-04 | 2.18E-03 |
| AG-110M | | 1.64E-03 | 6.61E-04 | 3.07E-03 | 4.06E-03 | 9.42E-03 |
| I-131 | | 1.36E-02 | 8.87E-04 | 7.47E-03 | 1.21E-02 | 3.41E-02 |
| I-132 | | 9.56E-04 | 5.22E-06 | 2.58E-04 | 1.26E-03 | 2.48E-03 |
| I-133 | | 5.31E-03 | 4.48E-04 | 3.34E-03 | 1.80E-02 | 2.71E-02 |
| I-134 | | 2.98E-04 | 0.00E+00 | 0.00E+00 | 2.08E-04 | 5.06E-04 |
| I-135 | | 1.72E-03 | 1.33E-04 | 1.04E-03 | 7.90E-03 | 1.08E-02 |
| SB-122 | | 2.05E-05 | 1.38E-06 | 3.32E-03 | 4.13E-05 | 3.39E-03 |
| SB-124 | | 1.94E-03 | 4.11E-03 | 1.11E-02 | 3.59E-04 | 1.75E-02 |
| SB-125 | | 3.33E-02 | 2.41E-02 | 7.60E-02 | 1.52E-02 | 1.49E-01 |
| SN-113 | | 2.05E-03 | 2.91E-04 | 1.81E-03 | 6.94E-04 | 4.84E-03 |
| TE-132 | | 7.17E-05 | 2.14E-06 | 2.42E-04 | 2.09E-06 | 3.18E-04 |
| TE-134 | | 1.55E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.55E-05 |
| CS-134 | | 2.36E-02 | 6.11E-04 | 1.26E-03 | 3.97E-03 | 2.94E-02 |
| CS-136 | | 6.94E-03 | 0.00E+00 | 1.52E-05 | 0.00E+00 | 6.96E-03 |
| CS-137 | | 2.49E-02 | 8.73E-04 | 2.08E-03 | 5.57E-03 | 3.34E-02 |
| CS-138 | | 1.93E-02 | 1.85E-05 | 2.36E-05 | 2.00E-05 | 1.94E-02 |
| BA-139 | | 1.03E-03 | 0.00E+00 | 2.93E-05 | 0.00E+00 | 1.06E-03 |
| BA-140 | | 0.00E+00 | 9.71E-06 | 8.37E-05 | 0.00E+00 | 9.34E-05 |
| LA-140 | | 5.10E-04 | 1.76E-04 | 5.71E-04 | 7.63E-05 | 1.33E-03 |
| CE-141 | | 4.32E-05 | 2.83E-06 | 8.81E-05 | 0.00E+00 | 1.34E-04 |
| CE-144 | | 6.99E-04 | 1.48E-04 | 3.76E-04 | 1.96E-04 | 1.42E-03 |
| W-187 | | 0.00E+00 | 0.00E+00 | 1.50E-04 | 0.00E+00 | 1.50E-04 |
| BI-214 | | 2.22E-06 | 3.49E-05 | 0.00E+00 | 0.00E+00 | 3.71E-05 |
| PB-214 | | 3.72E-05 | 1.97E-04 | 3.20E-07 | 4.07E-05 | 2.73E-04 |
| NP-239 | | 5.66E-05 | 4.93E-05 | 7.26E-05 | 0.00E+00 | 1.78E-04 |
| SB-126 | | 0.00E+00 | 0.00E+00 | 4.12E-04 | 0.00E+00 | 4.12E-04 |
| AR-41 | | 2.51E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.51E-06 |
| KR-85 | | 0.00E+00 | 3.91E-04 | 5.01E-04 | 0.00E+00 | 8.93E-04 |
| KR-85M | | 1.03E-04 | 0.00E+00 | 3.83E-06 | 0.00E+00 | 1.07E-04 |
| KR-87 | | 9.72E-05 | 0.00E+00 | 0.00E+00 | 3.35E-03 | 3.45E-03 |
| KR-88 | | 2.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.64E-04 |
| XE-131M | | 1.21E-02 | 4.46E-05 | 0.00E+00 | 5.93E-05 | 1.22E-02 |
| XE-133 | | 6.31E-02 | 1.99E-02 | 5.78E-02 | 8.18E-02 | 2.23E-01 |
| XE-133M | | 1.18E-03 | 2.61E-04 | 1.99E-04 | 1.36E-03 | 3.00E-03 |
| XE-135 | | 7.42E-03 | 1.92E-03 | 4.48E-03 | 5.33E-03 | 1.86E-02 |
| XE-135M | | 1.86E-04 | 8.24E-06 | 1.25E-04 | 1.21E-03 | 1.53E-03 |

SKIN MAXIMUM DOSE- 7.90D-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

| | |
|---|---|
| CO 60 | 79.47 % |
| SB 125 | 5.88 % |
| CS 137 | 6.09 % |

BONE MAXIMUM DOSE- 1.81D-01 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

| | |
|---|---|
| CS 134 | 37.27 % |
| CS 137 | 60.14 % |

LIVER MAXIMUM DOSE- 2.71D-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 6.03 % |
| CS 134 | 47.75 % |
| CS 137 | 41.78 % |

T. BODY MAXIMUM DOSE- 2.04D-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 11.31 % |
| CS 134 | 51.02 % |
| CS 137 | 34.79 % |

THYROID MAXIMUM DOSE- 7.41D-02 MREM CRITICAL AGE- INFANT CRITICAL PATHWAY- DRINKING

| | |
|---|---|
| H 3 | 40.28 % |
| I 131 | 58.38 % |

KIDNEY MAXIMUM DOSE- 1.04D-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 15.62 % |
| CO 60 | 5.11 % |
| CS 134 | 39.45 % |
| CS 137 | 37.08 % |

LUNG MAXIMUM DOSE- 5.77D-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- DRINKING

| | |
|---|---|
| H 3 | 53.34 % |
| CS 134 | 21.42 % |
| CS 137 | 21.32 % |

GI-LLI MAXIMUM DOSE- 2.09D-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 11.05 % |
| CO 60 | 5.40 % |
| NB 95 | 73.32 % |

SET TO NEW PAGE AND PRESS RETURN

MCGUIRE NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/21/90

II. AIRBORNE RELEASES — YEAR : 1989

| | UNITS | 1ST QTR | 2ND QTR | 3RD QTR | 4TH QTR | TOTAL |
|---|---|---|---|---|---|---|
| 1. TOTAL NOBLE GASES | CURIES | 1.73E+02 | 1.01E+02 | 3.06E+02 | 1.40E+02 | 7.20E+02 |
| 2. TOTAL HALOGENS | CURIES | 4.26E-03 | 1.83E-04 | 6.95E-04 | 7.43E-04 | 5.88E-03 |
| 3. TOTAL PARTICULATE GROSS BETA-GAMMA | CURIES | 2.61E-05 | 3.56E-04 | 5.78E-05 | 4.25E-05 | 4.83E-04 |
| 4. TOTAL TRITIUM | CURIES | 3.15E+00 | 5.72E+00 | 1.11E+01 | 6.63E+00 | 2.66E+01 |
| 5. TOTAL PARTICULATE GROSS ALPHA ACTIVITY | CURIES | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6. MAXIMUM NOBLE GAS RELEASE RATE | UCI/SEC | 1.60E+03 | 1.60E+03 | 1.60E+03 | 1.60E+03 | 1.60E+03 |
| 7. RADIONUCLIDES RELEASED | CURIES | | | | | |
| PARTICULATES | | | | | | |
| NA-24 | | 0.00E+00 | 4.54E-09 | 0.00E+00 | 4.65E-09 | 9.19E-09 |
| CL-38 | | 2.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.28E-08 |
| K-40 | | 4.82E-08 | 1.17E-08 | 1.75E-06 | 2.23E-08 | 1.83E-06 |
| CR-51 | | 5.28E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.28E-08 |
| MN-54 | | 5.85E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.85E-09 |
| FE-59 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.50E-08 | 2.50E-08 |
| CO-58 | | 1.60E-06 | 0.00E+00 | 2.07E-05 | 0.00E+00 | 2.23E-05 |
| CO-60 | | 1.27E-05 | 4.46E-05 | 1.04E-05 | 6.18E-06 | 7.39E-05 |
| BR-82 | | 7.30E-08 | 2.32E-08 | 1.34E-08 | 4.13E-08 | 1.51E-07 |
| RB-88 | | 1.15E-05 | 2.93E-04 | 1.81E-05 | 2.34E-05 | 3.46E-04 |
| RB-89 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.50E-06 | 1.50E-06 |
| SR-92 | | 0.00E+00 | 0.00E+00 | 1.87E-08 | 0.00E+00 | 1.87E-08 |
| Y-92 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.20E-08 | 2.20E-08 |
| NB-95 | | 8.01E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.01E-09 |
| NB-97 | | 0.00E+00 | 0.00E+00 | 1.03E-09 | 1.00E-09 | 2.03E-09 |
| TC-99M | | 0.00E+00 | 0.00E+00 | 1.42E-09 | 2.43E-08 | 2.57E-08 |
| RU-103 | | 0.00E+00 | 0.00E+00 | 3.58E-10 | 0.00E+00 | 3.58E-10 |
| SB-124 | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.20E-09 | 1.20E-09 |
| TE-132 | | 0.00E+00 | 0.00E+00 | 2.00E-09 | 6.81E-09 | 8.81E-09 |
| CS-134 | | 0.00E+00 | 2.77E-06 | 7.56E-07 | 9.48E-07 | 4.47E-06 |
| CS-137 | | 0.00E+00 | 1.49E-05 | 9.20E-07 | 5.12E-08 | 1.59E-05 |
| CS-138 | | 7.62E-08 | 9.56E-07 | 4.27E-06 | 9.22E-06 | 1.45E-05 |
| BA-139 | | 0.00E+00 | 2.93E-08 | 1.66E-07 | 1.08E-06 | 1.27E-06 |
| BI-214 | | 1.93E-08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.93E-08 |
| PB-214 | | 1.43E-08 | 2.16E-07 | 7.14E-07 | 1.41E-09 | 9.46E-07 |
| HALOGENS | | | | | | |
| I-131 | | 2.91E-03 | 7.67E-05 | 3.51E-04 | 2.94E-04 | 3.64E-03 |
| I-132 | | 6.37E-05 | 9.06E-08 | 4.56E-05 | 7.16E-06 | 1.17E-04 |
| I-133 | | 1.19E-03 | 1.06E-04 | 2.93E-04 | 4.24E-04 | 2.01E-03 |
| I-134 | | 3.08E-06 | 0.00E+00 | 4.95E-07 | 4.43E-06 | 8.00E-06 |
| I-135 | | 9.00E-05 | 1.08E-07 | 4.68E-06 | 1.38E-05 | 1.09E-04 |
| GASES | | | | | | |
| AR-41 | | 9.97E-01 | 1.73E+00 | 2.99E+00 | 9.68E-01 | 6.69E+00 |
| KR-85 | | 4.21E+00 | 6.28E-01 | 5.68E-01 | 9.65E-01 | 6.37E+00 |
| KR-85M | | 9.33E-01 | 6.78E-01 | 1.15E+00 | 4.58E-01 | 3.22E+00 |
| KR-87 | | 1.62E-01 | 1.11E-01 | 2.25E-01 | 1.10E-01 | 6.08E-01 |
| KR-88 | | 9.95E-01 | 6.96E-01 | 1.29E+00 | 5.46E-01 | 3.52E+00 |
| XE-131M | | 4.36E-01 | 8.73E-02 | 1.56E+00 | 5.34E-01 | 2.61E+00 |
| XE-133 | | 1.50E+02 | 8.40E+01 | 2.75E+02 | 1.27E+02 | 6.36E+02 |
| XE-133M | | 2.55E+00 | 1.73E+00 | 3.73E+00 | 2.05E+00 | 1.01E+01 |
| XE-135 | | 1.26E+01 | 1.11E+01 | 1.89E+01 | 7.17E+00 | 4.98E+01 |
| XE-135M | | 5.20E-03 | 6.69E-04 | 1.50E-02 | 7.05E-02 | 9.13E-02 |
| XE-138 | | 0.00E+00 | 0.00E+00 | 2.86E-01 | 4.73E-02 | 3.33E-01 |

MCGUIRE UNIT 2 GAS DOSE 001-365 89 RELEASE WEIGHTED MET REPORT SUMMARY 02/21/90
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 9.47E-01 MILLIRADS
GAMMA AIR DOSE = 5.03E-01 MILLIRADS

TOTAL BODY DOSE = 3.14E-01 MILLIREM

| | |
|---|---|
| KR 88 | 13.40% |
| XE133 | 44.57% |
| XE135 | 23.24% |
| AR 41 | 15.40% |

TOTAL SKIN DOSE = 7.74E-01 MILLIREM

| | |
|---|---|
| KR 88 | 7.49% |
| XE133 | 51.01% |
| XE135 | 24.99% |
| AR 41 | 10.00% |

MCGUIRE UNIT 2 GAS DOSE 001-365 89 RELEASE WEIGHTED MET REPORT SUMMARY 02/21/90
SPECIAL LOCATION
AT 0.50 MILES NSW

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 84.28%

MAXIMUM ORGAN DOSE = 1.77E-01 MILLIREM
H 3 18.38%
I 131 79.02%

METEROLOGICAL SURVEY

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL A — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 002.17 | 00.06 | 00.48 | 00.70 | 00.30 | 00.11 | 00.11 | 00.14 | 00.13 | 00.11 | 00.03 |
| 22.5 -NNE- | 005.42 | 00.03 | 01.03 | 01.34 | 01.07 | 00.57 | 00.47 | 00.46 | 00.26 | 00.17 | 00.02 |
| 45.0 -NE- | 002.04 | 00.02 | 00.30 | 00.51 | 00.48 | 00.45 | 00.19 | 00.09 | 00.00 | 00.00 | 00.00 |
| 67.5 -ENE- | 000.86 | 00.02 | 00.13 | 00.29 | 00.23 | 00.14 | 00.05 | 00.00 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.24 | 00.03 | 00.13 | 00.07 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.30 | 00.02 | 00.18 | 00.09 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.38 | 00.06 | 00.22 | 00.09 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 000.24 | 00.10 | 00.10 | 00.03 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 000.41 | 00.02 | 00.05 | 00.14 | 00.11 | 00.06 | 00.00 | 00.01 | 00.00 | 00.00 | 00.02 |
| 202.5 -SSW- | 000.60 | 00.11 | 00.07 | 00.21 | 00.17 | 00.03 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 000.33 | 00.09 | 00.09 | 00.05 | 00.07 | 00.02 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 000.09 | 00.06 | 00.02 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 270.0 -W- | 000.11 | 00.06 | 00.00 | 00.05 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 000.14 | 00.03 | 00.06 | 00.02 | 00.02 | 00.00 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 |
| 315.0 -NW- | 000.24 | 00.02 | 00.06 | 00.01 | 00.07 | 00.01 | 00.03 | 00.01 | 00.02 | 00.01 | 00.00 |
| 337.5 -NNW- | 000.60 | 00.02 | 00.08 | 00.03 | 00.02 | 00.11 | 00.15 | 00.07 | 00.07 | 00.05 | 00.00 |
| CALM | 00.00 | | | | | | | | | | |
| TOTAL | 014.17 | 000.75 | 003.00 | 003.64 | 002.56 | 001.52 | 001.02 | 000.79 | 000.48 | 000.34 | 000.07 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL B — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 22.5 -NNE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 45.0 -NE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 67.5 -ENE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 202.5 -SSW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 270.0 -W- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 315.0 -NW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 337.5 -NNW- | 000.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| CALM | 00.00 | | | | | | | | | | |
| TOTAL | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 | 000.00 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL C — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 000.85 | 00.03 | 00.32 | 00.17 | 00.10 | 00.08 | 00.07 | 00.06 | 00.02 | 00.00 | 00.00 |
| 22.5 -NNE- | 002.08 | 00.06 | 00.46 | 00.32 | 00.19 | 00.24 | 00.31 | 00.17 | 00.30 | 00.02 | 00.01 |
| 45.0 -NE- | 001.30 | 00.00 | 00.26 | 00.37 | 00.25 | 00.14 | 00.09 | 00.17 | 00.02 | 00.00 | 00.00 |
| 67.5 -ENE- | 000.40 | 00.00 | 00.08 | 00.14 | 00.11 | 00.05 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.13 | 00.01 | 00.08 | 00.03 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.18 | 00.03 | 00.15 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.28 | 00.00 | 00.26 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 000.17 | 00.01 | 00.13 | 00.03 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 001.02 | 00.01 | 00.27 | 00.42 | 00.18 | 00.11 | 00.03 | 00.00 | 00.00 | 00.00 | 00.00 |
| 202.5 -SSW- | 001.27 | 00.00 | 00.24 | 00.41 | 00.50 | 00.11 | 00.08 | 00.03 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 000.63 | 00.01 | 00.16 | 00.11 | 00.15 | 00.13 | 00.02 | 00.05 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 000.34 | 00.01 | 00.07 | 00.11 | 00.08 | 00.02 | 00.01 | 00.03 | 00.01 | 00.00 | 00.00 |
| 270.0 -W- | 000.20 | 00.02 | 00.02 | 00.08 | 00.05 | 00.00 | 00.02 | 00.01 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 000.31 | 00.00 | 00.03 | 00.13 | 00.02 | 00.03 | 00.06 | 00.02 | 00.00 | 00.02 | 00.00 |
| 315.0 -NW- | 000.25 | 00.00 | 00.01 | 00.08 | 00.03 | 00.07 | 00.02 | 00.01 | 00.01 | 00.02 | 00.00 |
| 337.5 -NNW- | 000.26 | 00.00 | 00.05 | 00.05 | 00.02 | 00.06 | 00.06 | 00.02 | 00.00 | 00.00 | 00.00 |
| CALM | 00.00 | | | | | | | | | | |
| TOTAL | 009.67 | 000.19 | 002.49 | 002.47 | 001.69 | 001.04 | 000.79 | 000.57 | 000.36 | 000.06 | 000.01 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL D — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 001.78 | 00.15 | 00.47 | 00.38 | 00.18 | 00.29 | 00.21 | 00.09 | 00.00 | 00.01 | 00.00 |
| 22.5 -NNE- | 004.47 | 00.10 | 00.74 | 00.84 | 01.13 | 00.79 | 00.43 | 00.34 | 00.09 | 00.01 | 00.00 |
| 45.0 -NE- | 005.07 | 00.05 | 00.56 | 01.46 | 01.51 | 00.86 | 00.43 | 00.15 | 00.03 | 00.00 | 00.02 |
| 67.5 -ENE- | 002.18 | 00.06 | 00.48 | 00.80 | 00.54 | 00.26 | 00.02 | 00.00 | 00.00 | 00.00 | 00.02 |
| 90.0 -E- | 001.04 | 00.03 | 00.48 | 00.45 | 00.08 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.47 | 00.03 | 00.38 | 00.06 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.76 | 00.14 | 00.55 | 00.07 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 001.00 | 00.14 | 00.61 | 00.17 | 00.06 | 00.00 | 00.00 | 00.01 | 00.00 | 00.00 | 00.01 |
| 180.0 -S- | 002.58 | 00.19 | 00.83 | 00.72 | 00.53 | 00.19 | 00.08 | 00.01 | 00.01 | 00.01 | 00.01 |
| 202.5 -SSW- | 005.16 | 00.30 | 01.14 | 01.44 | 01.19 | 00.56 | 00.41 | 00.08 | 00.02 | 00.00 | 00.02 |
| 225.0 -SW- | 004.38 | 00.35 | 01.22 | 01.23 | 00.88 | 00.34 | 00.25 | 00.02 | 00.06 | 00.03 | 00.00 |
| 247.5 -WSW- | 001.92 | 00.25 | 00.65 | 00.58 | 00.29 | 00.09 | 00.01 | 00.03 | 00.01 | 00.01 | 00.00 |
| 270.0 -W- | 001.12 | 00.19 | 00.33 | 00.38 | 00.13 | 00.03 | 00.03 | 00.02 | 00.00 | 00.01 | 00.00 |
| 292.5 -WNW- | 000.93 | 00.16 | 00.21 | 00.16 | 00.08 | 00.15 | 00.03 | 00.06 | 00.02 | 00.03 | 00.03 |
| 315.0 -NW- | 001.43 | 00.14 | 00.21 | 00.18 | 00.23 | 00.32 | 00.14 | 00.13 | 00.08 | 00.00 | 00.00 |
| 337.5 -NNW- | 001.06 | 00.05 | 00.17 | 00.22 | 00.19 | 00.19 | 00.18 | 00.05 | 00.00 | 00.01 | 00.00 |
| CALM | 00.00 | | | | | | | | | | |
| TOTAL | 035.35 | 002.33 | 009.03 | 009.14 | 007.02 | 004.07 | 002.22 | 000.99 | 000.32 | 000.12 | 000.11 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL E — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 000.83 | 00.07 | 00.33 | 00.31 | 00.09 | 00.01 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 |
| 22.5 -NNE- | 000.86 | 00.05 | 00.33 | 00.18 | 00.16 | 00.08 | 00.03 | 00.02 | 00.00 | 00.00 | 00.01 |
| 45.0 -NE- | 001.35 | 00.06 | 00.21 | 00.64 | 00.26 | 00.10 | 00.05 | 00.01 | 00.01 | 00.00 | 00.01 |
| 67.5 -ENE- | 000.76 | 00.05 | 00.19 | 00.26 | 00.21 | 00.01 | 00.03 | 00.01 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.69 | 00.09 | 00.45 | 00.13 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.49 | 00.08 | 00.37 | 00.03 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.01 |
| 135.0 -SE- | 000.46 | 00.15 | 00.29 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.01 |
| 157.5 -SSE- | 000.69 | 00.25 | 00.37 | 00.06 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 002.41 | 00.38 | 00.82 | 00.54 | 00.39 | 00.18 | 00.08 | 00.01 | 00.00 | 00.01 | 00.00 |
| 202.5 -SSW- | 004.55 | 00.40 | 01.53 | 01.56 | 00.76 | 00.23 | 00.06 | 00.01 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 002.47 | 00.50 | 00.90 | 00.61 | 00.29 | 00.11 | 00.05 | 00.01 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 001.14 | 00.40 | 00.53 | 00.15 | 00.06 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 270.0 -W- | 000.78 | 00.38 | 00.25 | 00.13 | 00.00 | 00.01 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 001.11 | 00.33 | 00.22 | 00.26 | 00.18 | 00.05 | 00.01 | 00.00 | 00.05 | 00.01 | 00.00 |
| 315.0 -NW- | 001.18 | 00.24 | 00.38 | 00.32 | 00.16 | 00.06 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 |
| 337.5 -NNW- | 000.58 | 00.13 | 00.17 | 00.17 | 00.08 | 00.00 | 00.02 | 00.01 | 00.00 | 00.00 | 00.00 |
| CALM | 00.00 | | | | | | | | | | |
| TOTAL | 020.35 | 003.56 | 007.34 | 005.36 | 002.67 | 000.84 | 000.37 | 000.09 | 000.06 | 000.02 | 000.04 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL F — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 000.28 | 00.13 | 00.06 | 00.07 | 00.01 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 22.5 -NNE- | 000.22 | 00.08 | 00.10 | 00.02 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 45.0 -NE- | 000.18 | 00.08 | 00.07 | 00.01 | 00.00 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 67.5 -ENE- | 000.13 | 00.08 | 00.05 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.13 | 00.07 | 00.06 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.13 | 00.11 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.18 | 00.15 | 00.03 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 000.32 | 00.26 | 00.06 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 000.94 | 00.46 | 00.27 | 00.19 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 202.5 -SSW- | 002.32 | 00.49 | 01.21 | 00.59 | 00.03 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 001.31 | 00.45 | 00.72 | 00.13 | 00.00 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 000.60 | 00.34 | 00.23 | 00.02 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 270.0 -W- | 000.54 | 00.33 | 00.19 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 000.55 | 00.35 | 00.16 | 00.02 | 00.01 | 00.00 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 |
| 315.0 -NW- | 000.40 | 00.24 | 00.15 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 337.5 -NNW- | 000.36 | 00.24 | 00.11 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| CALM | 00.03 | | | | | | | | | | |
| TOTAL | 008.59 | 003.86 | 003.49 | 001.09 | 000.10 | 000.03 | 000.02 | 000.00 | 000.00 | 000.00 | 000.00 |

MCGUIRE METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-89 THRU 12-31-89

SUMMARY OF PASQUILL G — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-21-90

| WIND SECTOR | SECTOR TOTAL | WIND SPEED CLASS 1.0-3.2 .45-1.49 | 3.3-5.5 1.5-2.49 | 5.6-7.8 2.5-3.49 | 7.9-10.0 3.5-4.49 | 10.1-12.3 4.5-5.49 | 12.4-14.5 5.5-6.49 | 14.6-16.7 6.5-7.49 | 16.8-19.0 7.5-8.49 | 19.1-21.2 8.5-9.49 | >21.2 MPH >=9.5 M/S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 360.0 -N- | 000.55 | 00.45 | 00.10 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 22.5 -NNE- | 000.38 | 00.37 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 45.0 -NE- | 000.23 | 00.22 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 67.5 -ENE- | 000.30 | 00.30 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 90.0 -E- | 000.30 | 00.30 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 112.5 -ESE- | 000.42 | 00.40 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 135.0 -SE- | 000.58 | 00.58 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 157.5 -SSE- | 000.84 | 00.82 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 180.0 -S- | 001.79 | 01.50 | 00.27 | 00.02 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 202.5 -SSW- | 002.22 | 01.67 | 00.48 | 00.07 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 225.0 -SW- | 001.17 | 00.96 | 00.21 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 247.5 -WSW- | 000.78 | 00.74 | 00.03 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 270.0 -W- | 000.70 | 00.64 | 00.06 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 292.5 -WNW- | 000.47 | 00.38 | 00.07 | 00.00 | 00.00 | 00.01 | 00.01 | 00.00 | 00.00 | 00.00 | 00.00 |
| 315.0 -NW- | 000.48 | 00.41 | 00.07 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| 337.5 -NNW- | 000.46 | 00.37 | 00.09 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 |
| CALM | 00.02 | | | | | | | | | | |
| TOTAL | 011.67 | 010.11 | 001.44 | 000.10 | 000.00 | 000.01 | 000.01 | 000.00 | 000.00 | 000.00 | 000.00 |

SUPPLEMENTAL INFORMATION

MCGUIRE NUCLEAR STATION
EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
REPORT DATE: 02/26/90
PERIOD COVERED: START DAY = 001 STOP DAY = 365

I. REGULATORY LIMITS

A. NOBLE GASES - AIR DOSE
1. CALENDAR QUARTER - GAMMA DOSE = 5 MRAD
2. CALENDAR QUARTER - BETA DOSE = 10 MRAD
3. CALENDAR YEAR - GAMMA DOSE = 10 MRAD
4. CALENDAR YEAR - BETA DOSE = 20 MRAD

B. LIQUID EFFLUENTS - DOSE
1. CALENDAR QUARTER - TOTAL BODY DOSE = 1.5 MREM
2. CALENDAR QUARTER - ORGAN DOSE = 5 MREM
3. CALENDAR YEAR - TOTAL BODY DOSE = 3 MREM
4. CALENDAR YEAR - ORGAN DOSE = 10 MREM

C. IODINE - 131 AND 133, TRITIUM, PARTICULATES W/T 1/2 > 8 DAYS - ORGAN DOSE
1. CALENDAR QUARTER = 7.5 MREM
2. CALENDAR YEAR = 15 MREM

II. MAXIMUM PERMISSIBLE CONCENTRATIONS
A. GASEOUS EFFLUENTS - INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL
B. LIQUID EFFLUENTS - INFORMATION FOUND IN 10CFR20, APPENDIX B, TABLE II, COLUMN 2

III. AVERAGE ENERGY - NOT APPLICABLE

IV. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY
INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL

V. BATCH RELEASES

A. LIQUID EFFLUENT
1. 6.73E+02 = TOTAL NUMBER OF BATCH RELEASES
2. 3.42E+05 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 9.83E+03 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 5.08E+02 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 1.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.
6. 1.65E+06 = AVERAGE DILUTION WATER FLOW DURING RELEASES(GPM).

B. GASEOUS EFFLUENT
1. 2.87E+02 = TOTAL NUMBER OF BATCH RELEASES.
2. 1.06E+06 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 4.46E+04 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 3.69E+03 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 3.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.

VI. ABNORMAL RELEASES

A. LIQUID
1. NUMBER OF RELEASES 0
2. TOTAL ACTIVITY RELEASED(CURIES) 0

B. GASEOUS
1. NUMBER OF RELEASES 1
2. TOTAL ACTIVITY RELEASED(CURIES) 11.712

December 18, 1989

MEMORANDUM TO FILE

SUBJECT: Uncontrolled Gas Release

On 12-12-89 Maintenance personnel contacted Chemistry personnel to perform an alignment to do a hydro on Waste Gas (WG) Compressor A piping. In order to perform the hydro 1WG-30 (COMPRESSOR A RELIEF) would have to be gagged. Chemistry assumed that the valve would be torqued such that it would not open; however, Maintenance pulled the valve out of the system to install a blank flange. During the time that the valve was removed, waste gas was being released from WG Shutdown Tank A (pressure was <1.0 psig), which is aligned to collect inputs from the WG relief header. When the problem was discovered the valve was replaced and the gas leak secured.

SUPPLEMENTAL REPORT PAGE 2

MCGUIRE NUCLEAR STATION

Values represented by "0.00E+00" within the body of the semi-annual and/or annual report are below the minimum detectable limits of the McGuire counting systems. Typical MDA's for the McGuire counting system's are listed below:

| ISOTOPE | ENERGY (Kev) | AVERAGE MDA |
|---|---|---|
| Liquid | | |
| XE-133 | 80 | 6.0E-8 |
| CE-144 | 133 | 1.2E-7 |
| KR-88 | 196 | 1.7E-7 |
| XE-135 | 249 | 2.3E-8 |
| KR-87 | 402 | 2.5E-7 |
| CS-137 | 661 | 2.6E-7 |
| MO-99 | 778 | 4.3E-7 |
| MN-54 | 834 | 2.2E-8 |
| ZN-65 | 1115 | 4.0E-8 |
| CO-60 | 1332 | 4.4E-8 |
| Gas | | |
| XE-133 | 80 | 2.5E-8 |
| Kr-85m | 151 | 1.0E-8 |
| Xe-131M | 163 | 3.3E-7 |
| Kr-88 | 196 | 4.7E-8 |
| Xe-133m | 233 | 7.9E-8 |
| Xe-135 | 250 | 9.5E-9 |
| Xe-138 | 258 | 6.3E-6 |
| Kr-87 | 402 | 4.7E-8 |
| Kr-85 | 514 | 2.5E-6 |
| Xe-135M | 526 | 1.9E-6 |
| Ar-41 | 1293 | 3.6E-8 |

## MCGUIRE NUCLEAR STATION

The estimated percentage of error for both Liquid and Gaseous effluent release data at McGuire Nuclear Station has been determined to be ±31%. This number was derived by summing the following individual estimates of errors:

1) Flow rate determining devices = ±13%

2) Counting error = ±15%

3) Sample preparation error = ± 3%

MCGUIRE NUCLEAR STATION
RADIOACTIVE EFFLUENT RELEASES YEAR 1989
02/22/90
PERIOD COVERED: START DAY = 001
STOP DAY = 365

TYPE COVERED: MNSCCW

I. LIQUID RELEASES

| | UNITS | PERIOD COVERED | YEAR TO STOP |
|---|---|---|---|
| 1. GROSS RADIOACTIVITY | | | |
| A. TOTAL RELEASE | CURIES | 1.21E-02 | 1.21E-02 |
| 2. TRITIUM | | | |
| A. TOTAL RELEASE | CURIES | 1.22E+01 | 1.22E+01 |
| 3. DISSOLVED NOBLE GASES | | | |
| A. TOTAL RELEASE | CURIES | 0.00E+00 | 0.00E+00 |
| 4. ALPHA ACTIVITY | | | |
| A. TOTAL RELEASE | CURIES | 0.00E+00 | 0.00E+00 |

DO YOU WANT THE ISOTOPE LIST?(Y/N)
Y

5. RADIONUCLIDES

| | | |
|---|---|---|
| CO-58 | 1.30E-05 | 1.30E-05 |
| CO-60 | 6.18E-04 | 6.18E-04 |
| I-131 | 1.64E-04 | 1.64E-04 |
| CS-134 | 5.37E-03 | 5.37E-03 |
| CS-136 | 1.39E-04 | 1.39E-04 |
| CS-137 | 5.77E-03 | 5.77E-03 |
| TOTAL VOLUME DISCHARGED (GALS.) | 1.02E+08 | 1.02E+08 |

SUMMARY COMPLETE
THANK YOU

SKIN MAXIMUM DOSE- 8.24D-05 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

| | |
|---|---|
| CO 60 | 12.22 % |
| CS 134 | 33.50 % |
| CS 137 | 54.27 % |

BONE MAXIMUM DOSE- 1.68D-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

| | |
|---|---|
| CS 134 | 39.95 % |
| CS 137 | 60.04 % |

LIVER MAXIMUM DOSE- 2.36D-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | |
|---|---|
| CS 134 | 54.49 % |
| CS 137 | 44.40 % |

T. BODY MAXIMUM DOSE- 1.73D-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | |
|---|---|
| CS 134 | 59.88 % |
| CS 137 | 38.03 % |

THYROID MAXIMUM DOSE- 7.34D-04 MREM CRITICAL AGE- INFANT CRITICAL PATHWAY- DRINKING

| | |
|---|---|
| H 3 | 63.25 % |
| I 131 | 36.75 % |

KIDNEY MAXIMUM DOSE- 7.97D-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | |
|---|---|
| CS 134 | 51.57 % |
| CS 137 | 45.14 % |

LUNG MAXIMUM DOSE- 3.27D-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 7.77 % |
| CS 134 | 48.47 % |
| CS 137 | 43.50 % |

GI-LLI MAXIMUM DOSE- 8.05D-04 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

| | |
|---|---|
| H 3 | 44.58 % |
| CS 134 | 28.12 % |
| CS 137 | 25.03 % |

# FUEL CYCLE CALCULATIONS

1989 MCGUIRE FUEL CYCLE SUMMARY DAYS 001-365 02/23/90 AT 09:45

MAXIMUM TOTAL BODY NNE 0.50 MILES 1.04E+00 AGE : ADULT

MAXIMUM ORGAN E 0.50 MILES 6.37E-01 AGE : TEEN ORGAN : LIVER

McGUIRE NUCLEAR STATION
SOLID RADIOACTIVE WASTE SHIPPED TO A DISPOSAL FACILITY
REPORT PERIOD 07/01/89 THROUGH 12/31/89

| Types of Waste Shipped | Number of Shipments | Number Containers | Waste Class | Cont. Type | Burial Volume ($ft^3$) | Burial Volume ($m^3$) | Total Ci |
|---|---|---|---|---|---|---|---|
| Waste from Liquid Systems | | | | | | | |
| (A) Dewatered Secondary Resins | 3 | 3 | AU | STC | 1866.6 | 52.86 | 9.89E-3 |
| (B) Dewatered Bead Resins | 5 | 5 | 1AS 4B | HIC | 698.7 | 19.79 | 559.38 |
| (C) Evaporator Concentrates | 0 | 0 | N/A | N/A | 0 | 0 | 0 |
| (D) Dewatered Mechanical Filter | 1 | 3 | AS | HIC | 114.9 | 3.25 | 11.57 |
| (E) Dewatered Demineralizers | 0 | 0 | N/A | N/A | 0 | 0 | 0 |
| (F) Solidified (Cement) Oils, Acids, Sludges | 0 | 0 | N/A | N/A | 0 | 0 | 0 |
| Dry Solid Waste | | | | | | | |
| (A)Dry Active Waste (compacted) | 0 | 0 | N/A | N/A | 0 | 0 | 0 |
| (B) Dry Active Waste (non-compacted and brokered) | ---- | ---- | AU | STC | 532.5 | 15.08 | 18.15 |
| (C) Dry Active Waste (brokered) | ---- | ---- | AU | STC | 4398.4 | 186.10 | 12.01 |
| (D) Irradiated Components | 0 | 0 | N/A | N/A | 0 | 0 | 0 |
| TOTALS | 9* | 17* | ---- | ---- | 7611.1 | 277.08 | 601.12 |

* Does not include brokered totals

SUMMARY OF MAJOR RADIONUCLIDE COMPOSITION

| Type of Wastes | Radionuclide | % Abundance* |
|---|---|---|
| 1. Wastes from Liquid Systems | | |
| (A) Dewatered Secondary Resins | Co-58 | 2.30 |
| | Nb-95 | 1.10 |
| | Zr-95 | 0.80 |
| | Sb-125 | 1.10 |
| | Mn-54 | 1.00 |
| | Cs-134 | 33.40 |
| | Cs-137 | 47.40 |
| | Co-60 | 1.30 |
| | C-14 | 5.40 |
| | Sr-90 | 2.60 |
| | I-131 | 2.50 |
| (B) Dewatered Bead Resins | Co-60 | 28.10 |
| | Co-58 | 21.90 |
| | Co-57 | 0.20 |
| | Mn-54 | 4.60 |
| | Cs-134 | 8.30 |
| | Cs-137 | 14.60 |
| | Cn-51 | 0.14 |
| | Nb-95 | 0.09 |
| | Zr-95 | 0.05 |
| | Sb-125 | 0.84 |
| | Fe-59 | 0.03 |
| | Zn-65 | 0.02 |
| | Sn-113 | 0.08 |
| | Ce-144 | 0.02 |
| | C-14 | 0.12 |
| | Fe-55 | 8.35 |
| | Ni-63 | 12.48 |
| | Sb-122 | 0.02 |
| | Sr-90 | 0.05 |
| | Pu-241 | 0.009 |
| (C) Evaporator Concentrates | (None Shipped This Period) | |
| (D) Dewatered Mechanical Filters | C-14 | 0.20 |
| | Mn-54 | 2.55 |
| | Co-58 | 7.93 |
| | Co-60 | 34.92 |
| | Ce-144 | 0.15 |
| | Nb-95 | 1.80 |
| | Pu-241 | 0.08 |
| | Fe-55 | 46.79 |
| | Ni-63 | 5.10 |
| | ΣTRU | 0.02 |
| | Cs-137 | 0.46 |

SUMMARY OF MAJOR RADIONUCLIDE COMPOSITION

| | | |
|---|---|---|
| (E) Dewatered Demineralizers | (None Shipped This Period) | |
| (F) Solidified (Cement) Acids, Oils, | (None Shipped This Period) | |

2. Dry Solid Waste

| | | |
|---|---|---|
| (A) Dry Active Waste (compacted & non-compacted) | H-3 | 1.92 |
| | Cr-51 | 21.84 |
| | Mn-54 | 1.89 |
| | Co-58 | 46.34 |
| | Co-60 | 13.30 |
| | Nb-95 | 2.26 |
| | Fe-55 | 9.69 |
| | Ni-63 | 1.39 |
| | Zr-95 | 1.18 |
| | C-14 | 0.19 |
| (B) Irradiated Components | (None Shipped This Period) | |