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FACIL:50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
AUTH.NAME AUTHOR AFFILIATION
WHITE,L.D. Rochester Gas & Electric Corp.
RECIP.NAME RECIPIENT AFFILIATION
Office of Nuclear Reactor Regulation
CRUTCHFIELD,D. Operating Reactors Branch 5

SUBJECT: Forwards nonproprietary version of RELAP-EM blowdown input for facility. Proprietary info not enclosed reflects ENC proprietary analytical models & techniques or ENC fuel data. Blowdown sys nodalization is in XN-NF-77-58.

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LEON D. WHITE, JR.
VICE PRESIDENT

TELEPHONE
AREA CODE 716 546-2700

May 30, 1980

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: SEP Topic III-12, "Environmental Qualification: Containment Environment"
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

As you requested during a recent telephone conversation, enclosed is a copy of the non-proprietary version of the RELAP4-EM blowdown input for the R. E. Ginna reactor. The proprietary information removed from the input listing reflects ENC proprietary analytical models and techniques, or proprietary ENC fuel data.

The corresponding blowdown system nodalization is found on page 16 of Topical Report XN-NF-77-58, December 1977.

Very truly yours,

L. D. White, Jr.

Attachment

xc: C. Tinkler

A035
1/1

8006040 338

```
=R E GINNA  0.4 DECLG  BON

010001  -2  9  4  14  48  2   0   61  2   9.  0  4  44  20  6   6   1   1
010001   0  9  4  14  48  2   0   61  2   9   0  4  44  20  6   6   1   1

010002  1550.4  1.

020000  AP 2  AP 26  AP 46  JW 29  JW 50  JW 52  JW 53  ML 42  SR 37

030010  10  20  1  0  .01    .0001  .048
030020  10  20  1  0  .0005  .00005 .1
030030  10  20  1  0  .001   .0001  1.
030030  10  20  2  0  .001   .0001  1.
030040  10  40  2  0  .0025  .0001  30.

040010  1  1  0  0  25.  0.
040010  1  1  0  0  0.   0.
040020  2  1  0  0  .05  0.
040030  3  1  0  0  100. 0.
040040  4  1  0  0  .05  0.
040050  5  1  0  0  .05  0.
```

040060	6	1	0	0	.05	0.
040070	7	-4	13	0	700.	0.
040080	8	-4	25	0	700.	0.
040090	9	-6	42	0	.1	0.
040100	10	-6	44	0	.1	0.
040110	11	4	46	0	20.7	25.0
040120	1	12	0	0	0.	0.
040130	12	4	46	0	20.7	2.
040140	13	4	46	0	20.7	20.

050011	1	0	2257.32	603.9	-1.	294.1	5.28	5.28	0	80.92	.5	252.979
050021	0	0	2267.69	603.9	-1.	634.7	14.719	14.719	0		.5	241.682
050031	0	0	2253.16721	603.9	-1.	102.2	3.967	3.967	0	4.507	2.417	245.625
050041	0	0	2254.543	603.9	-1.	130.9	6.76	6.76	0	26.18	.5	248.591
050051	0	0	2245.46	593.9	-1.	142.96	14.875	14.875	0	9.611	.06458	255.351
050061	0	0	2234.69	576.	-1.	142.96	14.875	14.875	0	9.611	.06458	270.226
050071	0	0	2228.49	561.9	-1.	142.96	14.875	14.875	0	9.611	.06458	270.226
050081	0	0	2227.49	550.8	-1.	142.96	14.875	14.875	0	9.611	.06458	255.351
050091	0	0	2229.1253	545.	-1.	130.9	6.76	6.76	0	26.18	.5	248.591
050101	0	0	2222.43	545.	-1.	74.19	12.592	12.592	0	5.241	2.583	237.000

050111	0	0	2223.21	545.	-1.	74.19	5.792	5.792	0	5.241	2.583	237.000
050121	0	0	2269.92	545.	-1.	192.	5.187	5.187	0	37.02	6.87	242.792
050131	0	0	2298.83	545.	-1.	31.95	2.292	2.292	0	4.125	2.292	245.687
050141	0	0	2298.50	545.	-1.	31.95	2.292	2.292	0	4.125	2.292	245.687
050151	0	0	2253.16721	603.9	-1.	102.2	3.967	3.967	0	4.587	2.417	245.625
050161	0	0	2254.543	603.9	-1.	130.9	6.76	6.76	0	26.18	.5	248.591
050171	0	0	2245.46	593.9	-1.	142.96	14.875	14.875	0	9.611	.06458	255.351
050181	0	0	2234.89	576.	-1.	142.96	14.875	14.875	0	9.611	.06458	270.226
050191	0	0	2228.49	561.9	-1.	142.96	14.875	14.875	0	9.611	.06458	270.226
050201	0	0	2227.49	550.8	-1.	142.96	14.875	14.875	0	9.611	.06458	255.351
050211	0	0	2229.1253	545.	-1.	130.9	6.76	6.76	0	26.18	.5	248.591
050221	0	0	2222.43	545.	-1.	74.19	12.592	12.592	0	5.241	2.583	237.000
050231	0	0	2223.21	545.	-1.	74.19	5.792	5.792	0	5.241	2.583	237.000
050241	0	0	2269.92	545.	-1.	192.	5.187	5.187	0	37.02	6.87	242.792
050251	0	0	2298.88	545.	-1.	21.30	2.292	2.292	0	4.125	2.292	245.087

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050261	0	0	2310.74	545.	-1.	21.30	2.292	2.292	0		2.292	245.687
050271	0	0	2298.59	545.	-1.	21.30	2.292	2.292	0	4.125	2.292	245.687
050281	0	0	2296.626	545.	-1.	209.29	9.174	9.174	0		1.62	243.805
050291	0	0	2298.8679	545.	-1.	446.12	17.222	17.222	0	25.32	.53	226.583
050291	0	0	2298.8679	545.	-1.	446.12	17.222	17.222	0	25.84	.53	226.583
050291	0	0	2298.9179	545.	-1.	446.12	17.222	17.222	0	25.84	.53	226.583
050301	0	0	2302.49	545.	-1.	221.71	2.698	2.698	0		.5	223.865
050311	0	0	2303.32111	545.	-1.	73.89	2.417	2.417	0		.5	221.468
050321	0	0	2299.065	545.	-1.	160.	3.267	3.267	0		.5	226.583
050331	0	0	2290.539	553.95	-1.	104.81	3.944	3.944	0	26.574	.03933	229.850
050341	0	0	2284.2809	576.8	-1.	104.81	3.944	3.944	0	26.574	.03933	233.794
050351	0	0	2277.8794	598.4	-1.	104.81	3.944	3.944	0	26.574	.03933	237.738
050361	0	0	2290.70436	558.95	-1.	.872	3.944	3.944	0	.221	.03933	229.850
050371	0	0	2284.53218	593.9	-1.	.872	3.944	3.944	0	.221	.03933	233.794
050381	0	0	2278.10906	625.18	-1.	.872	3.944	3.944	0	.221	.03933	237.738
050391	0	0	2286.5	545.	-1.	39.63	12.55	12.55	0	3.156	.03933	229.563
050401	1	0	2249.7	-1.	0.	800.	20.81	12.49	0	30.485	7.	254.617

5/30/80 REE 5/22

```
050421 1 0 774.1        90.    0.  1750.  22.28  14.01  0  78.5    10.    238.417
050431 0 0 775.55105    90.   -1.  34.28  12.54  12.54  0  .416    .729   237.167
050441 1 0 774.7        90.    0.  1750.  22.28  14.01  0  78.5    10.    238.417
050451 0 0 775.41916    90.   -1.  26.77  13.15  13.15  0  .416    .729   237.167
050461 2 1 14.7         90.    0. 1.066E6 119.3  119.3  0                  210.
050461 2 0 14.7         90.    .1 1.066E6 119.3  0.0    0                  210.
050471 1 0 778.7        -1.    0.  4579.  67.48  24.77  0  9.0     .166   252.65
050481 1 0 778.7        -1.    0.  4579.  67.48  24.77  0  9.0     .166   252.65

060011  .8   3.
060021  1.   20.

080011  1  2  0  1      0.        1.267  256.401
080021  2  3  0  0      9444.44   4.587  246.833
080031  3  4  0  0      9444.44   4.587  249.592
080041  4  5  0  0      9444.44   9.611  255.351
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080051	5	6	0	0	9444.44	9.611	270.226
080061	6	7	0	0	9444.44	9.611	285.101
080071	7	8	0	0	9444.44	9.611	270.226
080081	8	9	0	0	9444.44	9.611	255.351
080091	9	10	0	0	9444.44	5.241	249.592
080101	10	11	0	0	9444.44	5.241	238.292
080111	11	12	-1	0	9444.44	2.621	242.792
080121	12	13	1	0	9444.44	2.621	246.833
080131	13	14	0	0	9444.44	4.125	246.833
080141	14	28	0	0	9444.44	4.125	246.833
080151	2	15	0	0	9444.44	4.587	246.833
080161	15	16	0	0	9444.44	4.587	249.592
080171	16	17	0	0	9444.44	9.611	255.351
080181	17	18	0	0	9444.44	9.611	270.226
080191	18	19	0	0	9444.44	9.611	285.101
080201	19	20	0	0	9444.44	9.611	270.226
080211	20	21	0	0	9444.44	9.611	255.351

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080221	21	22	0	0	9444.44	5.241	249.592
080231	22	23	0	0	9444.44	5.241	238.292
080241	23	24	-2	0	9444.44	2.621	242.792
080251	24	25	2	0	9444.44	2.621	246.833
080261	25	26	0	0	9444.44	4.125	246.833
080271	26	27	0	2	9444.44	4.125	246.833
080281	27	28	0	0	9444.44	4.125	246.833
080291	28	29	0	0	18888.88	22.71	243.805
080301	29	30	0	0	18888.88	25.84	226.583
080311	31	30	0	0	0.	10.	224.026
080311	31	30	0	0	0.	10.	223.885
080321	30	32	0	0	18888.88	10.	226.583
080331	32	33	0	0	17880.79	20.574	229.850
080341	33	34	0	0	17880.79	20.574	233.794
080351	34	35	0	0	17880.79	20.574	237.738

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080361	35	2	0	0	17880.79	26.574	241.682
080371	32	36	0	0	146.99	.221	229.850
080381	36	37	0	0	146.99	.221	233.794
080391	37	38	0	0	146.99	.221	237.738
080401	38	2	0	0	146.99	.221	241.682
080411	33	36	0	0	0.	2.565	231.822
080421	34	37	0	0	0.	2.565	235.767
080431	35	38	0	0	0.	2.565	239.711
080441	32	39	0	0	861.1	.519	229.800
080451	39	2	0	0	861.1	.207	242.133
080461	28	1	0	3	0.	.0184	252.979
080471	40	41	0	0	0.	.416	254.617
080481	41	3	0	0	0.	.418	246.833
080491	42	43	0	8	0.	.418	238.417
080501	43	13	0	0	0.	.418	247.979
080511	44	45	0	9	0.	.418	238.417

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```
080571  45  25   0    7      0.      .418   247.989
080531  26  46   0    4      0.     8.25    246.833
080531  26  46   0    4      0.     4.95    246.833
080531  26  46   0    4      0.     3.30    246.833
080531  26  46   0    4      0.     4.125   246.833

080541  46  27   0    5      0.     4.125   246.833

080551   0  14   3    0      0.     1.      245.687
080551   0  43   3    0      0.     1.      249.417

080561   0  27   3    0      0.     1.      245.687
080561   0  45   3    0      0.     1.      250.313

080571   0  47   1    0    869.44   1.      283.609

080581   0  47   2    0   -869.44   1.      310.901

080591   0  48   1    0    869.44   1.      283.609

080601   0  48   2    0   -869.44   1.      310.901

080611   0  46   4    0      0.     1.      250.

080012  .14   2.23  2.23  1   0   0   0   0.    0.   11   0
080022  2.52  .36   .72   2   0   0   0   0.    0.   11   0
080032  3.16  .68   .37   2   0   0   0   0.    0.   11   0
```

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080042	1.13	.28	.40	2	0	0	0	0.	0.	11	2
080052	1.55	0.	0.	2	0	1	0	0.	0.	11	3
080062	1.55	.25	.25	2	0	0	0	0.	0.	11	3
080072	1.55	0.	0.	2	0	1	0	0.	0.	11	3
080082	1.13	.40	.28	2	0	0	0	0.	0.	11	1
080092	1.42	.30	.60	2	0	0	0	0.	0.	11	0
080102	2.70	0.	0.	2	0	1	0	0.	0.	11	0
080112	1.42	0.	0.	2	0	0	0	0.	0.	11	0
080122	1.01	0.	0.	2	0	0	0	0.	0.	11	0
080132	1.88	0.	0.	2	0	1	0	0.	0.	11	0
080142	1.12	1.10	.90	2	0	0	0	0.	0.	11	0
080152	2.52	.36	.72	2	0	0	0	0.	0.	11	0
080162	3.16	.68	.37	2	0	0	0	0.	0.	11	0
080172	1.13	.28	.40	2	0	0	0	0.	0.	11	2
080182	1.55	0.	0.	2	0	1	0	0.	0.	11	3
080192	1.55	.25	.25	2	0	0	0	0.	0.	11	3

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080202	1.55	0.	0.	2	0	1	0	0.	0.	11	3	
080212	1.13	.40	.28	2	0	0	0	0.	0.	11	1	
080222	1.42	.30	.60	2	0	0	0	0.	0.	11	0	
080232	2.70	0.	0.	2	0	1	0	0.	0.	11	0	
080242	1.42	0.	0.	2	0	0	0	0.	0.	11	0	
080252	.70	0.	0.	2	0	0	0	0.	0.	11	0	
080262	1.25	0.	0.	2	0	0	0	0.	0.	11	0	
080272	1.25	0.	0.	2	0	0	0	0.	0.	11	0	
080282	.80	1.1	.9	2	0	0	0	0.	0.	11	0	
080292	.51	.4	.8	2	0	0	0	0.	0.	11	0	
080302	.36	.6	.3	2	0	0	0	0.	0.	11	0	
080312	.039	0.	0.	2	0	1	0	0.	0.	11	0	
080322	.055	.3	.3	2	0	0	0	0.	0.	11	0	
080332	.105	5.4	5.4	2	0	0	0	0.	0.	11	2	
080342	.148	3.36	3.36	2	0	0	0	0.	0.	11	3	

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080352	.148	3.36	3.36	2	0	0	0	0.	0.	11	3
080362	.168	6.9	6.9	2	0	0	0	0.	0.	11	1
080372	8.96	5.4	5.4	2	0	0	0	0.	0.	11	2
080382	17.85	3.32	3.32	2	0	0	0	0.	0.	11	3
080382	17.85	3.31	3.31	2	0	0	0	0.	0.	11	3
080392	17.85	3.32	3.32	2	0	0	0	0.	0.	11	3
080392	17.85	3.31	3.31	2	0	0	0	0.	0.	11	3
080402	9.02	6.9	6.9	2	0	0	0	0.	0.	11	1
080412	.4	10.	10.	2	0	-4	3	0.	0.	11	0
080422	.4	10.	10.	2	0	-4	3	0.	0.	11	0
080432	.4	10.	10.	2	0	-4	3	0.	0.	11	0
080442	2.02	1.501	1.501	2	0	0	0	0.	0.	11	0
080452	2.08	.365	.365	2	0	0	0	0.	0.	11	0
080462	5.78	1.8	1.8	2	0	0	0	0.	0.	11	0
080472	49.43	.95	.95	1	0	0	0	0.	0.	11	0
080482	51.59	.95	.95	2	0	0	3	0.	0.	11	0
080492	76.89	3.75	3.75	1	0	0	0	0.	0.	11	0
080502	77.69	3.75	3.75	2	0	0	3	0	0.	11	0

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080502	77.69	3.75	3.75	2	0	0	3	0.	0.	11	0	
080512	76.89	3.75	3.75	1	0	0	0	0.	0.	11	0	
080522	77.38	3.75	3.75	2	0	0	3	0.	0.	11	0	
080532	.625	1.	.45	2	0	0	0	0.	.6	11	0	
080532	.625	1.	.45	2	0	0	0	0.	1.	11	0	
080532	.625	1.	.45	2	0	0	0	0.	.4	11	0	
080542	.625	.45	1.	2	0	0	0	0.	.6	11	0	
080542	.625	.45	1.	2	0	0	0	0.	1.	11	0	
080542	.625	.45	1.	2	0	0	0	0.	.4	11	0	
080552	0.	0.	0.	2	-1	3	0	0.	0.	0	0	
080562	0.	0.	0.	2	-1	3	0	0.	0.	0	0	
080572	0.	0.	0.	2	0	1	0	0.	0.	0	0	
080582	0.	0.	0.	2	0	1	-2	0.	0.	0	0	
080592	0.	0.	0.	2	0	1	0	0.	0.	0	0	
080602	0.	0.	0.	2	0	1	-2	0.	0.	0	0	
080612	0.	0.	0.	2	-1	3	0	0.	0.	0	0	

100000 0 0 0 0

5/30/80 R6E 14/22

```
090011  2  2   0  1  0  1189.  1.   90000.  252.  19100.  80000.   46.38 1202.   0.
090021  2  2   0  1  0  1189.  1.   90000.  252.  19100.  80000.   46.38 1202.   0.

091001 11  0.0  0.0 0.1 0.0 0.15 0.05 0.24 0.80 0.30 0.96 0.40 0.98
091002     0.60 0.97 0.80 0.90 0.90 0.80 0.96 0.50 1.00 0.0

092001  2   0.0  0.0   1.0   0.0

110010    -4   0    0.   0.   0.   0.
110020     3   0    0.   0.   0.   0.
110020     4   0    0.   0.   0.   0.
110030    -4   0    0.   0.   0.   0.
110040    -4   0    0.   0.   0.   0.
110050    -3   0    0.   0.   0.   0.
110050    -4   0    0.   0.   0.   0.
110060    -7   0    0.   0.   0.   0.
110070    -8   0    0.   0.   0.   0.
110080     9   0    0.   0.   0.   0.
110090    10   0    0.   0.   0.   0.

130101  4    6   0  -1 769.7 380.3  0. 864.44  .55 864.44 5.55 0.    1000. 0.

130201  4    5   0  -1 778.4 515.1  0. -864.44  .55 -864.44 5.55 0.   1000. 0.
```

```
130302                                    975.0  30.0  1160.0  20.0  1300.0  10.0
130303                                   1400.0   0.0
130301   7  11   1   -1  15.  60.    0.0   56.0   180.0  50.0   700.0  40.0

130401   2  13   0   1  80.   60.    0.    3600.  1.00.  3600.
130401   2  12   0   1  80.   60.    0.    3600.  100.   3600.

140000   3   1   301.98  0.      .617

140010  .271529  .271529  0.   0.
140020  .443747  .443747  0.   0.
140030  .271529  .271529  0.   0.
140040  .003631  .003631  0.   0.
140050  .005933  .005966  0.   0.
140060  .003631  .003631  0.   0.

141001  12  3     0.    0.      .2   -.064   .4   -.160   .6   -.321   .8   -.602
141002                1.   -.962   1.2  -1.564  1.4  -2.486  1.6  -3.890  1.8  -7.018
141003                2.   -8.020  200. -8.020
```

```
142001  -10    0.     -42.14   .139   -33.65   .278   -25.63   .417   -17.89
142002         .556   -11.08   .694   -5.28    .833   -1.49    .972   -.15
142003         1.00    0.00    2.00    8.50

143001  -11    1.0    3.35    250.    2.53    750.   1.22    1345.  0.
143002         1750.  -.07    2500.   -1.88   3000.  -2.57   3500.  -3.20
143003         4000.  -3.80    4500.   -4.36   5000.  -4.89

151000   4    140.00   13.5
151000   4    140.00   14.5

150393   90.   90.
150403   90.   90.
150413   90.   90.
150423   90.   90.
150433   90.   90.
150443   90.   90.

150011  0 1 1 0 2 2 0.    210.   168.1  0.     .5     0.     .5     0.  0.
150021  0 2 2 0 2 2 0.    1178.3 100.1  0.     .5     0.     .5     0.  0.
150031  0 3 3 0 2 2 0.    169.2  46.70  0.     2.417  0.     2.417  0.  0.
```

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150041	0	4	4	0	2	2	0.	218.1	46.11	0.	4.93	0.	4.93	0.	0.	
150051	5	47	5	0	2	22	8855.	10036.5	40.7	.166	.0646	.166	.0646	14.9	14.	
150061	6	47	5	0	2	22	8855.	10036.5	40.7	.166	.0646	.166	.0646	29.8	29.	
150071	7	47	5	0	2	22	8855.	10036.5	40.7	.166	.0646	.166	.0646	29.8	29.	
150081	8	47	5	0	2	22	8855.	10036.5	40.7	.166	.0646	.166	.0646	14.9	14.	
150091	0	9	4	0	2	22	0.	218.1	46.11	0.	4.93	0.	4.93	0.	0.	
150101	0	10	6	0	2	22	0.	58.68	30.48	0.	2.583	0.	2.583	0.	0.	
150111	0	11	6	0	2	22	0.	58.68	30.48	0.	2.583	0.	2.583	0.	0.	
150121	0	12	7	0	2	22	0.	205.2	160.12	0.	1.292	0.	1.292	0.	0.	
150131	0	13	8	0	2	22	0.	55.77	12.29	0.	2.292	0.	2.292	0.	0.	
150141	0	14	8	0	2	22	0.	55.77	12.29	0.	2.292	0.	2.292	0.	0.	
150151	0	15	3	0	2	22	0.	169.2	48.76	0.	2.417	0.	2.417	0.	0.	
150161	0	16	4	0	2	22	0.	218.1	46.11	0.	4.93	0.	4.93	0.	0.	
150171	17	48	5	0	2	2	8855.	10036.5	40.7	.166	.0646	.166	.0646	14.9	14.	
150181	18	48	5	0	2	2	8855.	10036.5	40.7	.166	.0646	.166	.0646	29.8	29.	
150191	19	48	5	0	2	2	8855.	10036.5	40.7	.166	.0646	.166	.0646	29.8	29.	
150201	20	48	5	0	2	2	8855.	10036.5	40.7	.166	.0646	.166	.0646	14.9	14.	
150211	0	21	4	0	2	2	0.	218.1	46.11	0.	4.93	0.	4.93	0.	0.	
150221	0	22	6	0	2	2	0.	58.68	30.48	0.	2.583	0.	2.583	0.	0.	
150231	0	23	6	0	2	2	0.	58.68	30.48	0.	2.583	0.	2.583	0.	0.	
150241	0	24	7	0	2	2	0.	205.2	160.12	0.	1.292	0.	1.292	0.	0.	

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150251	0	25	8	0	2	2	0.	37.18	8.19	0.	2.292	0.	2.292	0.	0.
150261	0	26	8	0	2	2	0.	37.18	8.19	0.	2.292	0.	2.292	0.	0.
150271	0	27	8	0	2	2	0.	37.18	8.19	0.	2.292	0.	2.292	0.	0.
150281	0	28	9	0	2	2	0.	526.2	185.6	0.	1.62	0.	1.62	0.	0.
150291	0	29	10	0	2	2	0.	2036.	518.99	0.	.542	0.	.542	0.	0.
150301	0	30	11	0	2	2	0.	85.	40.	0.	.5	0.	.5	0.	0.
150311	0	31	12	0	2	2	0.	46.	29.	0.	.5	0.	.5	0.	0.
150321	0	32	13	0	2	2	0.	125.	40.	0.	.5	0.	.5	0.	0.
150331	0	33	14	0	2	2	0.	9404.9	83.077	0.	.03933	0.	.0446	11.83	11.8
150341	0	34	14	1	2	2	0.	9404.9	83.077	0.	.03933	0.	.0446	11.83	11.8
150351	0	35	14	1	2	2	0.	9404.9	83.077	0.	.03933	0.	.0446	11.83	11.8
150361	0	36	14	0	2	2	0.	78.37	.692	0.	.0401	0.	.0449	11.83	11.8
150371	0	37	14	1	2	2	0.	78.37	.692	0.	.0401	0.	.0449	11.83	11.8
150381	0	38	14	1	2	2	0.	78.37	.692	0.	.0401	0.	.0449	11.83	11.8
150391	46	0	15	0	-1	0	47726.	0.	23863.	0.	0.	0.	0.	0.	0.
150401	46	0	16	0	-1	0	12474.	0.	389.81	0.	0.	0.	0.	0.	0.
150411	46	0	17	0	-1	0	5400.	0.	112.5	0.	0.	0.	0.	0.	0.
150421	46	0	18	0	-1	0	9174.	0.	573.375	0.	0.	0.	0.	0.	0.
150431	46	0	19	0	-1	0	19358.	0.	567.625	0.	0.	0.	0.	0.	0.
150441	46	0	20	0	-1	0	7000.	0.	36.4565	0.	0.	0.	0.	0.	0.

160010	33	7	9	17	.0025	.271635
160020	34	7	9	17	.0025	.443920
160030	35	7	9	17	.0025	.271635
160040	36	7	9	17	.0025	.0035248
160050	37	7	9	17	.0025	.0057604
160060	38	7	9	17	.0025	.0035248

```
160015  2 0 0.      .8 .67                    .01092  0.  0.
160025  2 0 0.      .8 .67                    .01092  0.  0.
160035  2 0 442.6   .8 .67                    .01092  0.  0.
160045  2 0 0.      .8 .67                    .01092  0.  0.
160055  2 0 0.      .8 .67                    .01092  0.  0.
160065  2 0 4.12    .8 .67                    .01092  0.  0.

170101  1  1  3  .5  0.      .800       0.
170201  1  1  3  5   0.      .090       0.
170301  1  1  3  5   0.      .288       0.
170401  1  1  3  5   0.      .211       0.
170501  2  2  3  5   .03229  .004167    0.
170502  0     6  5            8.023-5    0.
170601  1  1  3  5   0.      .519       0.
170701  1  1  3  5   0.      .810       0.
170801  1  1  3  5   0.      .220       0.
170901  1  1  3  5   0.      .3527      0.
171001  1  1  3  5   0.      .255       0.
171101  1  1  3  5   0.      .471       0.
171201  1  1  3  5   0.      .630       0.
171301  1  1  3  5   0.      .320       0.
171401  2  3  1  6   0.      .01485     1.
171402  1     5  2            3.125E-4   0.
171403  0     2  8            .0025      0.
171501  1  1  6  19  0.      .5         0.
171601  1  1  4  5   0.      3.125-2    0.
171701  1  1  4  5   0.      2.083-2    0.
171801  1  1  4  5   0.      .0625      0.
171901  1  1  4  5   0.      2.9325-2   0.
172001  1  1  4  5   0.      5.21-3     0.
```

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180100	20						
180101			200.0	4.060	650.0	2.971	
180102	800.0	2.677	950.0	2.439	1100.0	2.242	
180103	1250.0	2.078	1400.0	1.940	1550.0	1.823	
180104	1700.0	1.724	1850.0	1.639	2000.0	1.568	
180105	2150.0	1.507	2300.0	1.457	2450.0	1.415	
180106	2600.0	1.382	3100.0	1.323	3600.0	1.333	
180107	4100.0	1.406	4600.0	1.538	5100.0	1.730	
180200	18						
180201	32.0	7.812	212.0	7.992	392.0	8.208	
180202	572.0	8.784	752.0	9.540	932.0	10.404	
180203	1112.0	11.268	1292.0	12.492	1472.0	13.176	
180204	1652.0	13.968	1832.0	14.796	2012.0	16.128	
180205	2192.0	17.784	2372.0	19.656	2552.0	21.780	
180206	2732.0	24.048	3092.0	28.908	3360.0	33.120	
180300	-3						
180301	0.0	9.000	200.0	9.000	1600.0	15.000	
180400	-2						
180401	0.0	25.000	2000.0	15.000			
180500	-5						
180501	0.0	0.100	330.0	0.118	900.0	0.275	
180502	1200.0	0.400	2500.0	0.400			
180600	-2						
180601	~~80.0~~	~~0.9~~	~~1000.0~~	~~0.9~~	90.0	0.9	1000.0 0.9

```
190100  16
190101     32.0 34.450      122.0 38.350      212.0 40.950
190102    392.0 43.550      752.0 46.800     2012.0 51.350
190103   2732.0 52.650     3092.0 56.550     3452.0 63.050
190104   3812.0 72.800     4352.0 89.700     4532.0 94.250
190105   4532.0 98.150     4892. 100.100     5144. 101.400
190106   8000. 101.400

190200   5
190201      0.0 28.392     1480.3 34.476     1675.0 85.176
190202   1787.5 34.476     3500.0 34.476

190300   -2
190301    200.0 60.000     2200.0 80.000

190400   -2
190401      0.0 60.000     2000.0 80.000

190500   -2
190501      0.0  0.000     2000.0  0.000

190600   -2
190601     90.0 32.0       1000.0 32.9


200100   -3
200101      0.0  3.79E-6   2400.0  5.93E-6   4800.0  8.08E-6

200200   -4
200201    100.0  3.20E-6   1550.0  3.20E-6   1800.0  2.81E-6
200202   3000.0  3.83E-6
```

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```
200300   -3
200301      0.0  9.00E-6  1600.0 10.90E-6  2000.0 12.00E-6

200400   -3
200401      0.0  6.30E-6  1100.0  8.50E-6  2000.0  9.00E-6

200500   -2
200501      0.0  0.0      2000.0  0.0

200600   -2
200601     90.0  1.2E-5   1000.0  1.2E-5


210101   -1   14     46    0.     37.      249065.
210101   -1   13     46    0.     37.      249065.
```

$$