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Advisory Committee on Reactor Safeguards

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POPULATION DISTRIBUTION

As you requested by telephone from Mr. Case a day or so ago, we have compiled immediately available information on population distributions around five reactor sites.

The attached Table 1 provides an indication of population densities at various distances from the reactor. The number of people specified in the right hand column represents the total population of all major civil divisions having geographical centers at the distances from the reactor indicated in the corresponding left hand column. The distances and population figures were obtained from the 1950 Population Census, Volume 1, Number of Inhabitants. We do not have data which would permit the reporting of this information in exactly the form requested. We do not have information at hand on the Hanford location.

We do include, for your information, table number 2. In this table we have listed in column number one the power level for the various reactors. In column number two there are cumulative, sum total, figures listed for the ratios of population in various civil divisions divided by the distance squared of the center of each respective division from the reactor. In such cases these ratios are taken for all of the people around a given reactor out to a distance in miles equal to the square root of power (thus for a 400 MW power reactor the people are listed out to a distance of 20 miles).

This is the information which we have readily available. If it is insufficient for your purpose, please let us know.

Enclosures:  
Table #1 (4 copies)  
Table #2 (4 copies)

DJR DJR DJR HER  
Distribution Director LK Beck

2/24/59

1714

7339

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TABLE 1POPULATION FIGURESPIQUA, Ohio

<u>Distance, r miles from reactor</u>	<u>Number of people in area</u>
0 - 2	18,882
3 - 5	2,980
6 - 10	28,377
11 - 15	39,611
16 - 20	45,227

PWR - Shippingport

0 - 1	408
2 - 3	10,543
3 - 5	1,801
6 - 10	145,142
11 - 15	98,377
16 - 20	118,720

YANKEE - Rowe, Mass.

0 - 3	199
4 - 5	1,295
6 - 10	4,070
11 - 15	41,739
16 - 20	61,858

RURAL COOP. - Elk River

0 - 1	1,399
2 - 5	1,599
6 - 10	6,636
11 - 15	22,876
16 - 20	22,144

GE - VEWR

0 - 2	5,865
3 - 9	8,531
10 - 14	16,895
15 - 20	249,464

TABLE 2

Total of Population Divided by Distance<sup>2</sup>

1. Actual Power Levels

<u>Reactor</u>	<u>Power (MW)</u>	<u>Total P/D<sup>2</sup></u>
MTR	40	8
V-Car.	60.5	322
Yankee	392	628
Consumers	245	708
OR Res	30	1,255
Commonwealth	626	1,362
WTR	20	1,560
RCPA	58	1,670
No. States	164	1,679
GEV BWR	60	2,193
SRE	20	2,876
EBWR	60	5,214
FWR	236	5,430
Pique	45.5	5,574
PRDC	300	7,261
Con. Ed.	585	8,005
NS Savannah	40 (Test in Camden)	128,760