**ALTERNATIVE POPULATION DATA PREPARATION FOR NRC-RADTRAN**

If the WebTRAGIS generated \*.kml file gives zero or unreasonably high values for population density for rural, suburban, and urban links, the population density data can be extracted from the “RouteDensityByState.csv” file. This file provides population density (#people/sq.mile) data by state for rural, suburban, and urban areas along with respective area distances (miles).

Please note that the current WebTRAGIS population density is based on 2010 Census data. A population multiplication factor based on each state population growth rate from the year 2010 to 2024 can be generated and used to adjust the year 2010 population density values from the “RouteDensityByState.csv” file to account for the current year, like 2024, then by proper conversion to #people/sq.km. This regenerated population density (#people/sq.km) by state for rural, suburban, and urban areas can be manually filled into NRC-RADTRAN GUI’s Link tab for the respective fields. Please see Appendix D of NUREG-2266 for additional information on parameter value sources and usage for NRC-RADTRAN.