6.2 Port of Miami Populations

The census data used to determine population density is based on residential populations. As Port of Miami is located on an island dedicated to the port operations, the census data was not applicable. In addition to general port operations, the Port of Miami contains seven cruise terminals, each of which processes thousands of passengers and crew members per year. As such, the population analysis also considered cruise ship passengers and crew, port operations personnel, and surrounding residential islands.

In 2015, the Port of Miami processed nearly 4.9 million cruise passengers,[57] equating to approximately 13,500 passengers per day. Based on Carnival cruise ship capacity information, crew numbers are on average 40% of the number of passengers,[58] therefore, it was assumed that there are approximately 19,000 passengers and crew present at the cruise terminals each day. The 19,000 people were conservatively assumed to be present for 24 hours, even though embarkation and disembarkation would not take an entire day. For example, the cruise operations may only lead to high population for a few hours a day. Thus, by assuming the maximum population is present for 24 hours per day, the potentially affected population is conservatively maximized to conservatively upper bound the risk. This population was allocated to the region labelled Area A in Figure 37.

During 2013 and 2014, Port of Miami had 349 full time employees;[59] this population was assigned to Area B as shown in Figure 37 in the QRA model. The population density for the residential areas, labelled Area C in Figure 37, was calculated from the census data as per the Port of Miami Lead Track section. The populations for the three areas are summarized in Table 36.

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[57] Port of Miami, *Cruise Facts*, http://www.miamidade.gov/portmiami/cruise-facts.asp.

[58] Carnival, *Cruise Ships*, http://www.carnival.com/cruise-ships.aspx.

[59] Miami-Dade Seaport Department, *Comprehensive Annual Financial Reports for the fiscal years ended September 30, 2014 and 2013*, http://www miamidade.gov/portmiami/library/reports/comprehensive-annual-financial-report-2014.pdf.