5 Release Location Assumptions

The release scenarios can occur in one of the four yard locations, (1) Hialeah Yard, (2) Bowden Yard, (3) Port Everglades or (4) Port of Miami, or along any of the three proposed routes between these yards. This section provides descriptions of the assumptions for the release locations applied to each route.

5.1 Hialeah Yard Releases

The Hialeah Yard is located in Hialeah, Florida, approximately ten miles northwest of Miami. The Hialeah Yard represents the starting point for all three proposed routes and is the location where all LNG ISO containers will be loaded into the well cars. The Hialeah Yard contains two release scenario classifications: (1) ISO container lifting, and (2) yard movement. The lifting operations have been modeled as a fixed location release and as a release anywhere along the intermodal ramp track, while the yard movement scenario follows a path which terminates at the approximate FECR yard boundaries. The spur track connecting to the neighboring LNG facility to the north was also considered. The QRA transitioned to mainline accident analysis outside of these boundaries. Further, the layout of the Hialeah yard, which is enclosed on the east side by an approximately 10 ft high wall, will reduce the likelihood that flammable vapor clouds will expand beyond the property in that direction.[53] Thus, the route of the train was modeled for the primary north-south track on the west side of the property. PHAST Risk modeled the release sources for the route at 75-feet intervals along the path.

Two route representations were applied for the Hialeah Yard to demonstrate the range of risk results applicable to lifting and train movement for the intermodal facilities and rail yards. The first route assumption is depicted in the aerial image of the Hialeah Yard in Figure 31. This model represents all lifting activities as occurring at a single point on the intermodal ramp and train movement located only on the western-most track in the yard. As will be shown in the results section, these assumptions lead to the maximum calculated distance to IR risk thresholds for lifting operations but only negligibly affect the distance to the thresholds for train movement. The second route assumption is depicted in the aerial image in Figure 32. This second model represents lifting along the entire eastern intermodal ramp track and train movements down the eastern track, the circular turnaround at the south end of the facility, and the western-most track. The effects of these assumed routes on the calculated risk will be discussed in the Results section.

[53] Note that the integral equation-based models in PHAST Risk are not suitable for modeling the barrier effects of walls on flammable vapor cloud dispersion; thus, the north-south track was used as the primary rail yard route.