

1 Failure Mode Effects Analysis (FMEA)

Cause	Cause Description	Likelihood	Controls	Causes Hazard			
				Hazard	Description	Severity	Risk
Actuator failure	The door opening mechanism fails to operate. The door remains shut.	4 Occasional		HAZ-3	Single door fails to open at a station.	1 Negligible	Acceptable
Button failure	The "Open" button or its associated electrical equipment fails.	2 Possible		HAZ-4	All doors fail to open at a station	2 Minor	Acceptable
Driver fails to press "Open"	The driver does not press the "Open" button after the train has stopped at the station.	3 Rare		HAZ-4	All doors fail to open at a station	2 Minor	Acceptable
Driver presses "Open"	The driver presses the button to open the doors when the train is not at a station.	3 Rare	Driver training, Emergency Switch, Open button protected, Passenger avoidance, Safety Interlock	HAZ-1	Train door open while train is under way.	3 Major	Review
				HAZ-2	Train door open when train stopped between stations.	2 Minor	Acceptable
Electrical Fault	An electrical fault powers the door motors, possibly causing unintended operation.	1 Unlikely	Emergency Switch, Passenger avoidance, Safety Interlock	HAZ-1	Train door open while train is under way.	3 Major	Acceptable
				HAZ-2	Train door open when train stopped between stations.	2 Minor	Acceptable
Interlock failure	The interlock mechanism fails, locking the door shut.	3 Rare		HAZ-3	Single door fails to open at a station.	1 Negligible	Acceptable

Table 1: 1. FMEA