

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to R K T Trading Co

Objective of the JRM Report

This JRM report is designed to ensure compliance with the Central Motor Vehicle Rules, 1989 (CMVR), AIS 140 standards, and the Road Transport Safety Policy (RTSP). It provides a comprehensive risk assessment for the transportation of hazardous materials along specified routes. By integrating these legal frameworks, the report offers a broad strategy for identifying and mitigating route-specific risks.

Regulatory Compliance

The report complies with the Central Motor Vehicles (Eleventh Amendment) Rules, 2022, mandating safe transportation practices for N2 and N3 category vehicles carrying hazardous materials. These rules require detailed route assessments, especially regarding road conditions, speed limits, and risk areas, to ensure safety compliance.

Risk Management Strategy

This report categorizes transportation routes into high-risk and medium-risk areas, with a focus on factors such as sharp turns, accident-prone regions, and elevation changes. The goal is to provide actionable

recommendations to minimize these risks, including speed regulations, driver warnings for hazardous zones, and the option of alternate routes.

Compliance with the Road Transport Safety Policy (RTSP)

The report integrates RTSP provisions, including mandatory driving hours, rest periods, and nighttime driving restrictions. It ensures that drivers follow official guidelines, such as taking prescribed rest breaks and avoiding dangerous road conditions like poor visibility, heavy crowds, or high-traffic areas during peak hours.

Emergency Preparedness and Response

The report highlights the significance of predetermined emergency stops for refueling, rest, and overnight stays. It includes protocols for safe responses to road hazards, alternative routes, and rerouting processes if roads are closed or severe weather arises. This aligns with the RTSP emphasis on driver safety and rapid emergency response.

Environmental Considerations

The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental impacts during transport.

Journey Risk Mitigation

The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety norms.

Compliance with Government Directives

This report fully adheres to governmental directives regarding hazardous material transportation, implementing mandatory speed limits, nighttime driving restrictions, and comprehensive driver briefings and real-time alerts about route-related risks.



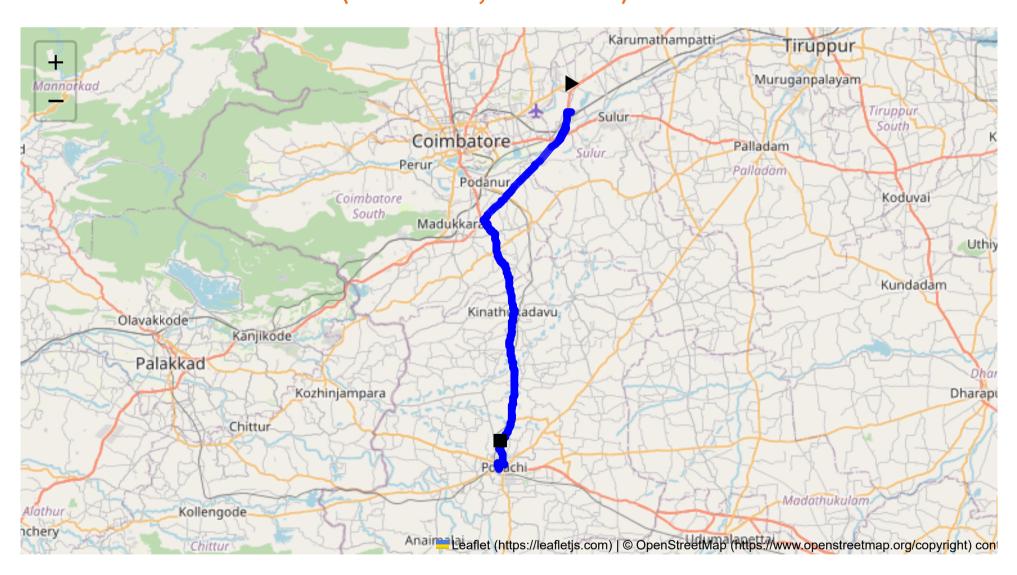
Route Summary:

Total Distance: 48.36 km

Estimated Duration: 1.1 hours

Adjusted Duration (Heavy Vehicle): 1.3 hours

Start: (11.0315, 77.0797) End: (10.657159, 77.003525)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Athappagoundenpudur, Coimbatore to Mani Iyer Street, Pollachi covers approximately 48.36 kilometers and passes through several key points in Pollachi: Venkatasa Colony, Palaghat area, and Raja Mill Rd near Vinayagar Kovil. This route primarily utilizes regional roads and some municipal streets, which can influence driving conditions.

2. Weather Conditions and Potential Hazards

The region generally experiences a tropical climate with three main seasons: hot (March to May), monsoon (June to November), and cool (December to February). During the monsoon season, heavy rainfall can lead to waterlogging and reduced visibility, which might increase the risk of hydroplaning or accidents. Pre-monsoon winds can also pose challenges, especially for high-sided vehicles.

3. Traffic Patterns and Congestion

Traffic congestion is more likely in urban areas, particularly Pollachi. Peak hours typically occur between 8:00-10:00 AM and 6:00-8:00 PM due to local commutes. The vicinity around Gandhi Market and main roads leading into Pollachi could experience slow-moving traffic during these times.

4. Road Quality and Infrastructure

Road conditions vary along the route. Some regional roads may have patches of wear or potholes, and urban streets might be narrow or crowded, especially around market areas. Continuous construction and maintenance can also affect road quality.

5. Suggested Alternative Routes

In case of emergencies, an alternate route could involve bypassing the central part of Pollachi. Instead of taking local streets, drivers could use the peripheral roads to minimize downtime. Consulting local maps for bypass roads around town centers is advisable.

6. Local Regulations for Hazardous Material Transport

Transporting hazardous materials requires adherence to Indian transportation norms including specific permits. The presence of educational institutions, hospitals, and markets demands careful navigation due to higher pedestrian concentrations. Drivers should be aware of specific loading/unloading restrictions and zones where hazardous materials may not be transported.

7. Historical Incidents

While Pollachi is not widely known for frequent major incidents, areas with heavy market activity or poor road conditions may have higher instances of minor accidents involving heavy vehicles. Data on significant past incidents should be reviewed through local transport or police reports for a comprehensive understanding.

8. Environmental Considerations and Sensitive Areas

Pollachi and its surrounding areas include several eco-sensitive zones, including agricultural land and water bodies. Minimizing pollution and avoiding contamination of water sources when transporting hazardous materials is crucial.

9. Communication Coverage

The route generally has good communication coverage, especially in urban areas. However, there may be brief dead zones on regional roads between towns. Operators should ensure that their communications equipment is tested and functional.

10. Emergency Response Times

Response times can vary; urban areas in Pollachi might see faster fire, medical, and police response times compared to more rural segments. Expect delays in response in areas with poor road access or during peak congestion periods.

11. Overall Summary of Risk Assessment

The route is generally manageable for the transport of heavy vehicles carrying hazardous material, provided specific precautions are taken. Risks include weather conditions, road quality, congestion, and environmental sensitivity. Drivers must remain vigilant, especially during peak traffic hours and in sensitive areas. Effective communication and awareness of emergency procedures can mitigate potential risks. For enhanced safety, periodic updates on traffic and weather conditions should be monitored, and contingency plans should be in place.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	10.66197, 77.00818	15 KM/Hr
1	Roundabout	High	10.66176, 77.00771	15 KM/Hr
2	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
3	Turn	Medium	11.00873, 77.07114	30 KM/Hr
4	Blind Spot	Blind Spot	10.91785, 76.98617	10 KM/Hr
5	Turn	Medium	10.66172, 77.00697	30 KM/Hr
6	Turn	Medium	10.66167, 77.00688	30 KM/Hr
7	Turn	Medium	10.66168, 77.00681	30 KM/Hr
8	Turn	Medium	10.66175, 77.00674	30 KM/Hr
9	Blind Spot	Blind Spot	10.66318, 77.00202	10 KM/Hr
10	Turn	High	10.66033, 77.00205	15 KM/Hr
11	Turn	High	10.66026, 77.00309	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
4	hospital	Ambal Malumichampatty, Coimbatore	10.90265, 76.997586	30 km/h	Medium
11	hospital	Sri Venkateswara Kinnathukadavu	10.8241085, 77.0191884	30 km/h	Medium
12	hospital	Government Hospital, Kinathukadavu	10.82107, 77.017406	30 km/h	Medium
13	hospital	The Pollachi Cardiac Center	10.6742907, 77.0081305	30 km/h	Medium
14	hospital	K.G.M. Hospital Paavhai Women's Cente, Pollachi	10.67023, 77.007418	30 km/h	Medium
15	hospital	Arathana Hospital	10.6682257, 77.0070174	30 km/h	Medium
16	clinic	Andavar Clinic and Nursing Home	10.6679726, 77.0081641	30 km/h	Medium
17	clinic	A.S.D. Nursing Home	10.6665361, 77.0084792	30 km/h	Medium
18	clinic	Neuro Poly Clinic, Pollachi	10.6662216, 77.0073506	30 km/h	Medium
19	hospital	Vasan Eye Care Hospital, Pollachi	10.6643938, 77.0057119	30 km/h	Medium
20	hospital	MRS Hospital & Fertility centre	10.6647489, 77.0050326	30 km/h	Medium
21	hospital	Thirumalai Hospital	10.6650579, 77.005872	30 km/h	Medium
22	clinic	Rc Poly Clinic, Pollachi	10.66442, 77.005669	30 km/h	Medium
23	hospital	Siva Meds Multispeciality Hospital	10.6633006, 77.0100774	30 km/h	Medium
24	clinic	Ram Poly Clinic	10.6627299, 77.0090626	30 km/h	Medium
25	clinic	Prabhu Poly Clinic	10.6627285, 77.0096353	30 km/h	Medium
26	hospital	Prabhu Hospital, Pc Pollachi	10.66269, 77.009684	30 km/h	Medium
27	hospital	Kowsalya Medical Centre, Pollachi	10.66299, 77.010025	30 km/h	Medium
28	hospital	Pills Hospital	10.66419, 77.010376	30 km/h	Medium
29	clinic	Sindhia Ortho Clinic	10.6634521, 77.0105284	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
30	hospital	Sakthi Hospital, Pollachi	10.6629552, 77.0106019	30 km/h	Medium
31	hospital	JP Hospital, Pollachi	10.66024, 77.0049	30 km/h	Medium
32	hospital	K.M. Hospitals	10.6625561, 77.003421	30 km/h	Medium
33	hospital	Avm Hospital- Pollachi	10.66242, 77.0030365	30 km/h	Medium
34	hospital	Mcv Memorial Ent Trust Hospital	10.6627918, 76.9995756	30 km/h	Medium
35	hospital	S.N. Hospital, Pollachi	10.659567, 77.0005675	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	school	Kadri Mills Higher Secondary School	11.0058181, 77.0664118	30 km/h	Medium
2	college	Karpagam Polytechnic College	10.9185202, 76.99131	30 km/h	Medium
3	college	Karpagam Academy of Higher Education	10.9175939, 76.9882369	30 km/h	Medium
5	college	DJ Academy of Design and Management	10.8740175, 77.0042594	30 km/h	Medium
6	college	Coimbature Marine College	10.8627423, 77.0107491	30 km/h	Medium
7	school	Sasi Creative School for Architecture	10.8613583, 77.0118878	30 km/h	Medium
8	school	Vivek Vidyalaya Matric Hr. Sec. School	10.8451346, 77.015443	30 km/h	Medium
9	school	Vivek Vidya Mandir	10.8448467, 77.01614	30 km/h	Medium
10	college	VSB College of Engineering Technical Campus=Coimbatore	10.8430943, 77.0180336	30 km/h	Medium



Risk Type: Roundabout
Risk Level: High
Speed Limit: 15 KM/Hr

Coordinates: 10.66197, 77.00818



Risk Type: Roundabout
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.66176, 77.00771



Risk Type: Blind Spot Risk Level: Blind Spot Speed Limit: 10 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.00873, 77.07114



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.91785, 76.98617



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.66172, 77.00697



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.66167, 77.00688



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr

Coordinates: 10.66168, 77.00681



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.66175, 77.00674



Risk Type: Blind Spot Risk Level: Blind Spot Speed Limit: 10 KM/Hr

Coordinates: 10.66318, 77.00202



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr

Coordinates: 10.66033, 77.00205



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr

Coordinates: 10.66026, 77.00309