



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Santhoshkumar Agencies

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

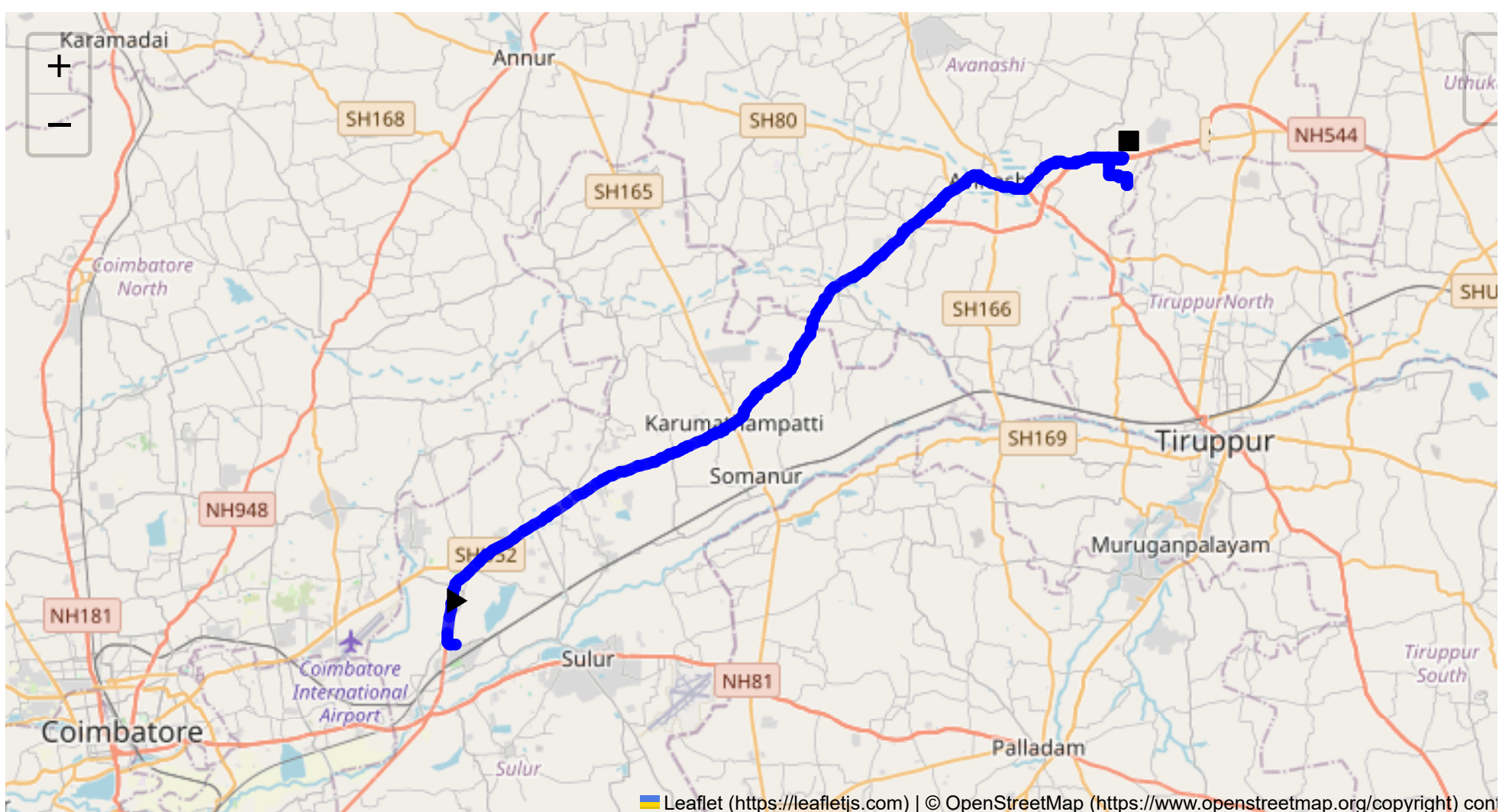
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 36.89 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.0 hours
Start: (11.0315, 77.0797)
End: (11.1894887, 77.3145327)



Welcome to the Journey Risk Management Study

Route Overview

The route from Athappagoundenpudur, Coimbatore, to Pachampalayam, Avinashi, via Seenivasa Puram spans approximately 36.89 kilometers. The travel typically involves multiple state and local highways, traversing semi-urban to rural landscapes predominantly characterized by agricultural and residential areas.

Weather Conditions

The region experiences a tropical climate with high humidity. Monsoon season from June to September can result in heavy rains, leading to waterlogging and reduced visibility. Consequently, drivers should anticipate slippery roads and potential flooding.

Traffic Patterns

Traffic congestion is typically observed during peak hours, particularly in the morning (7-10 AM) and evening (5-8 PM). Avinashi town can experience slow-moving traffic, with congestion-prone areas often near local markets and intersections.

Road Quality and Infrastructure

Road infrastructure varies, with certain sections being well-maintained highways and others less developed rural roads. Potholed roads and uneven surfaces may be encountered, especially post-monsoon. Urban areas might have adequate signage, but rural stretches could lack clear markings and streetlights.

Alternative Routes

In case of emergencies, alternative routes may include:

- Via NH544, connecting through other local feeder roads. It's essential to note the condition and suitability of these roads for heavy vehicles.
- Secondary state highways which bypass major towns to avoid congestion.

Local Regulations on Hazardous Material Transport

Transporting hazardous materials is subject to strict regulations in Tamil Nadu. Ensure compliance with local traffic rules, special permits for hazardous cargo, and updated documentation. Transport during night hours may have different regulatory constraints.

Historical Incidents

There are instances of road accidents involving heavy vehicles on state highways. Most incidents were attributed to poor road conditions and vehicular malfunction. However, specific incidents involving hazardous materials have been minimal, indicating a reasonable level of safety compliance.

Environmental Considerations

Risks of contamination to local water bodies and agricultural land in the event of a spill require careful planning. Special care should be taken near populated areas and during crossing natural reserves.

Communication Coverage

While urban centers and towns generally have robust communication networks, rural stretches might experience dead zones. Drivers are advised to have alternate communication means, such as satellite phones or CB radios.

Emergency Response Times

Urban areas can expect emergency response teams within 15-30 minutes. However, response times in rural areas may extend to 45 minutes or more, depending on accessibility and road conditions.

Overall Risk Assessment

The route presents moderate risk primarily due to weather conditions, road infrastructure quality, and rural stretches with limited emergency responsiveness. Proper planning, adherence to regulations, and real-time navigation support can mitigate these risks for truck drivers transporting hazardous materials. Prior coordination with emergency services and ensuring constant communication availability is recommended to enhance safety.

Risk Assessment - Turns

| | Risk Type | Risk Level | Coordinates | Speed Limit |
|----|------------|------------|--------------------|-------------|
| 0 | Roundabout | High | 11.18824, 77.27908 | 15 KM/Hr |
| 1 | Roundabout | High | 11.19689, 77.29637 | 15 KM/Hr |
| 2 | Turn | High | 11.03211, 77.07640 | 15 KM/Hr |
| 3 | Turn | High | 11.17275, 77.23622 | 15 KM/Hr |
| 4 | Turn | High | 11.17294, 77.23619 | 15 KM/Hr |
| 5 | Turn | Medium | 11.17688, 77.24112 | 30 KM/Hr |
| 6 | Turn | High | 11.17689, 77.24118 | 15 KM/Hr |
| 7 | Turn | Medium | 11.17694, 77.24119 | 30 KM/Hr |
| 8 | Blind Spot | Blind Spot | 11.19877, 77.31257 | 10 KM/Hr |
| 9 | Blind Spot | Blind Spot | 11.19817, 77.31266 | 10 KM/Hr |
| 10 | Turn | High | 11.19835, 77.30832 | 15 KM/Hr |
| 11 | Turn | Medium | 11.19362, 77.30803 | 30 KM/Hr |
| 12 | Turn | Medium | 11.19353, 77.30810 | 30 KM/Hr |
| 13 | Blind Spot | Blind Spot | 11.19241, 77.30829 | 10 KM/Hr |
| 14 | Blind Spot | Blind Spot | 11.19175, 77.31406 | 10 KM/Hr |
| 15 | Turn | Medium | 11.19074, 77.31393 | 30 KM/Hr |
| 16 | Turn | Medium | 11.19019, 77.31449 | 30 KM/Hr |

| | | | | |
|----|------------|------------|--------------------|-------------|
| | Risk Type | Risk Level | Coordinates | Speed Limit |
| 17 | Blind Spot | Blind Spot | 11.18943, 77.31441 | 10 KM/Hr |

Emergency Locations

| | | | | | |
|---|----------|--|---------------------------|-------------|------------|
| | type | name | coordinates | speed_limit | risk_level |
| 0 | hospital | Royal Care Hospital, Coimbatore | 11.059106, 77.0893479 | 30 km/h | Medium |
| 4 | police | Karumathampatti Police Station | 11.1093464, 77.1802095 | 30 km/h | Medium |
| 7 | clinic | Chandar Nursing Home, Avinashi | 11.1892, 77.269751 | 30 km/h | Medium |
| 8 | hospital | Sri Avinashiappar Nursing Home, Avinashi | 11.18697, 77.270061 | 30 km/h | Medium |
| 9 | hospital | Manimegalai Hospital, Avinashi | 11.188067, 77.2763303 | 30 km/h | Medium |

Crowded Spots

| | | | | | |
|---|-------------|--|---------------------------|-------------|------------|
| | type | name | coordinates | speed_limit | risk_level |
| 1 | college | PSG Institute of Technology and Applied Research | 11.0677118, 77.0945744 | 30 km/h | Medium |
| 2 | school | GRD-CPF Matriculation Higher Secondary School | 11.0610217, 77.0933504 | 30 km/h | Medium |
| 3 | school | M. Nanjappa Chettiar Matriculation Hr. Sec. School | 11.0715394, 77.1039133 | 30 km/h | Medium |
| 5 | marketplace | Thekkalur Weekly market | 11.1537037, 77.2126685 | 30 km/h | Medium |
| 6 | marketplace | Thekalur weekly market | 11.1547211, 77.2140187 | 30 km/h | Medium |

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.18824, 77.27908



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.19689, 77.29637



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.03211, 77.07640



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.17275, 77.23622



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.17294, 77.23619



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.17688, 77.24112



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.17689, 77.24118



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.17694, 77.24119



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.19877, 77.31257



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.19817, 77.31266



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.19835, 77.30832



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.19241, 77.30829



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.19175, 77.31406



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.19019, 77.31449



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.18943, 77.31441
