



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO R S PETROLEUM

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

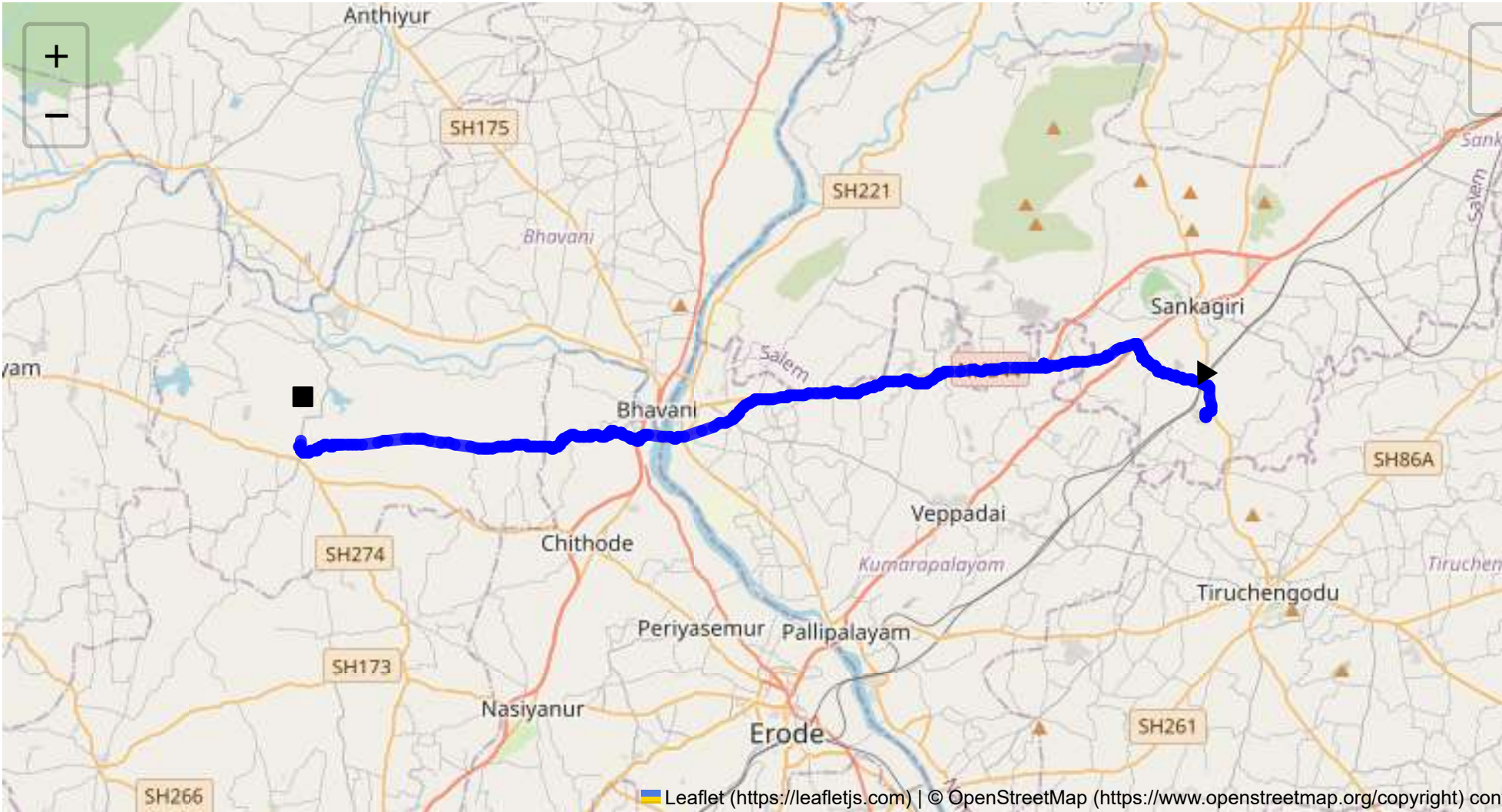
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 38.74 km
Estimated Duration: 0.9 hours
Adjusted Duration (Heavy Vehicle): 1.1 hours
Start: (11.4381, 77.8734)
End: (11.430561, 77.558509)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
0	Turn	11.43811, 77.87348	15 KM/Hr	0.00 km
1	Turn	11.43961, 77.87341	15 KM/Hr	0.14 km
2	Turn	11.44029, 77.87544	15 KM/Hr	0.32 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
3	Turn	11.45350, 77.85700	15 KM/Hr	3.35 km
4	Turn	11.46303, 77.84945	15 KM/Hr	4.74 km
5	Turn	11.45542, 77.81725	15 KM/Hr	8.39 km
6	Turn	11.45631, 77.81668	15 KM/Hr	8.53 km
7	Turn	11.45516, 77.81348	15 KM/Hr	9.08 km
8	Blind Spot	11.44530, 77.72783	10 KM/Hr	18.69 km
9	Turn	11.43001, 77.67575	15 KM/Hr	24.91 km
10	Turn	11.43278, 77.67024	15 KM/Hr	25.62 km
11	Turn	11.43346, 77.66700	15 KM/Hr	26.01 km
12	Turn	11.42640, 77.55909	15 KM/Hr	38.20 km

Emergency Services

	type	name	coordinates	side_of_road
1	hospital	Government Hospital	11.4525596, 77.7749426	Opposite Side
3	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	Opposite Side
4	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	Opposite Side
5	hospital	J.K.K. Trust Hospital	11.4445841, 77.7307962	Driver's Side
7	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	Driver's Side
9	hospital	Thanish Siddha Hospital	11.430003, 77.674964	Driver's Side
10	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	Opposite Side
11	clinic	G.K Clinic	11.4297244, 77.6749715	Driver's Side
12	clinic	Harshitha Clinic	11.4313207, 77.674718	Opposite Side
13	hospital	PST Mahaa Hospital	11.4312903, 77.6585751	Driver's Side
14	hospital	Government Hospital, Kavandapadi	11.43134, 77.558062	Opposite Side

Rest Stops

	type	name	coordinates	side_of_road
0	fuel	SLOA Bunk - Unit II	11.4543854, 77.8052665	Driver's Side
2	restaurant	Canteen	11.4478386, 77.7705441	Driver's Side
6	fuel	Reliance	11.4325168, 77.6912865	Opposite Side
8	fuel	Indian Oil	11.4321177, 77.6765153	Opposite Side

Welcome to the Journey Risk Management Study

Route Map Overview

The route from Sangagiri to Kavandapadi through Puthur, Padaiveedu, and Bhavani covers approximately 38.74 kilometers. It is primarily accessed via state and local roads with several turns and junctions through rural and semi-urban areas. The route is expected to provide connectivity mainly through two-lane roads.

Weather Conditions and Hazards

Typical weather in this region is tropical, characterized by hot summers, a monsoon season, and mild winters. Potential weather-related hazards include:

- **Monsoon Rains (June to September):** Can cause water-logging and reduced visibility. Roads may be slippery, increasing the risk of skidding.
- **High Temperatures (March to July):** May affect road conditions with surface melting or softening, leading to potential tire blowouts, especially with heavy vehicles.

Traffic Patterns and Peak Hours

The route likely experiences varying traffic conditions:

- **Morning Peak (7 AM - 9 AM) and Evening Peak (5 PM - 8 PM):** Increased congestion, particularly near towns like Bhavani.
- **Rural Segments:** Generally less congested but watch for slow-moving agricultural vehicles and pedestrian crossings.

Road Quality and Infrastructure

- **General Road Conditions:** Vary, with some sections potentially having uneven surfaces, potholes, and limited shoulders.
- **Signage and Lighting:** Adequate in populated areas but may be lacking in rural segments. Limited street lighting can pose visibility issues at night.

Alternative Routes for Emergencies

Possible alternatives involve traveling via NH44 and NH544, which are larger highways with better infrastructure. However, they may require longer distances.

Local Regulations on Hazardous Material Transport

- Transport of hazardous materials is subject to compliance with Indian transport laws, requiring proper documentation, vehicle markings, and potential route approvals.
- Restrictions may apply in densely populated areas or near sensitive installations.

Historical Incidents Involving Heavy Vehicles

- **Accidents:** Historical data suggest occurrences of accidents on rural roads due to narrow lanes and mixed traffic.
- **Hazardous Material Spills:** Limited data, but rural roads imply increased risk, particularly where road maintenance is minimal.

Environmental Considerations and Sensitive Areas

- The route crosses agricultural zones; spills or leaks could impact soil and water quality.
- Proximity to water bodies necessitates extra caution due to potential contamination threats.

Communication Coverage

- **Urban Areas:** Generally good mobile network coverage.
- **Rural Areas:** Potential dead zones, particularly outside major townships. It's advisable to verify with local telecom providers for the latest coverage data.

Emergency Response Times

- **Urban Segments (Bhavani):** Prompt response, approximately 15-30 minutes.
- **Rural Areas:** Extended response time, potentially 45 minutes to over an hour, influenced by road accessibility and distance from facilities.

Overall Summary of Risk Assessment

Traveling from Sangagiri to Kavandapadi via the specified route involves moderate risk due to rural road conditions and mixed traffic dynamics. Weather conditions, particularly during monsoon, further exacerbate these risks. While infrastructure is generally sufficient, emergency responsiveness remains a concern in remote sections. Careful planning, real-time traffic monitoring, and adherence to safety protocols for hazardous materials are essential to mitigate risks. Consideration of alternative routes and proactive coordination with local services for emergency scenarios is advised.

Route Photos of Risky Spots



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 0.32 km

Coordinates: 11.44029, 77.87544



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 3.35 km

Coordinates: 11.45350, 77.85700



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 4.74 km
Coordinates: 11.46303, 77.84945



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 8.39 km
Coordinates: 11.45542, 77.81725



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 8.53 km
Coordinates: 11.45631, 77.81668



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 9.08 km

Coordinates: 11.45516, 77.81348



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 18.69 km

Coordinates: 11.44530, 77.72783



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 24.91 km

Coordinates: 11.43001, 77.67575



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 25.62 km

Coordinates: 11.43278, 77.67024



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 26.01 km

Coordinates: 11.43346, 77.66700



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 38.20 km

Coordinates: 11.42640, 77.55909

[Download Interactive Map](#)