



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO NO 1 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

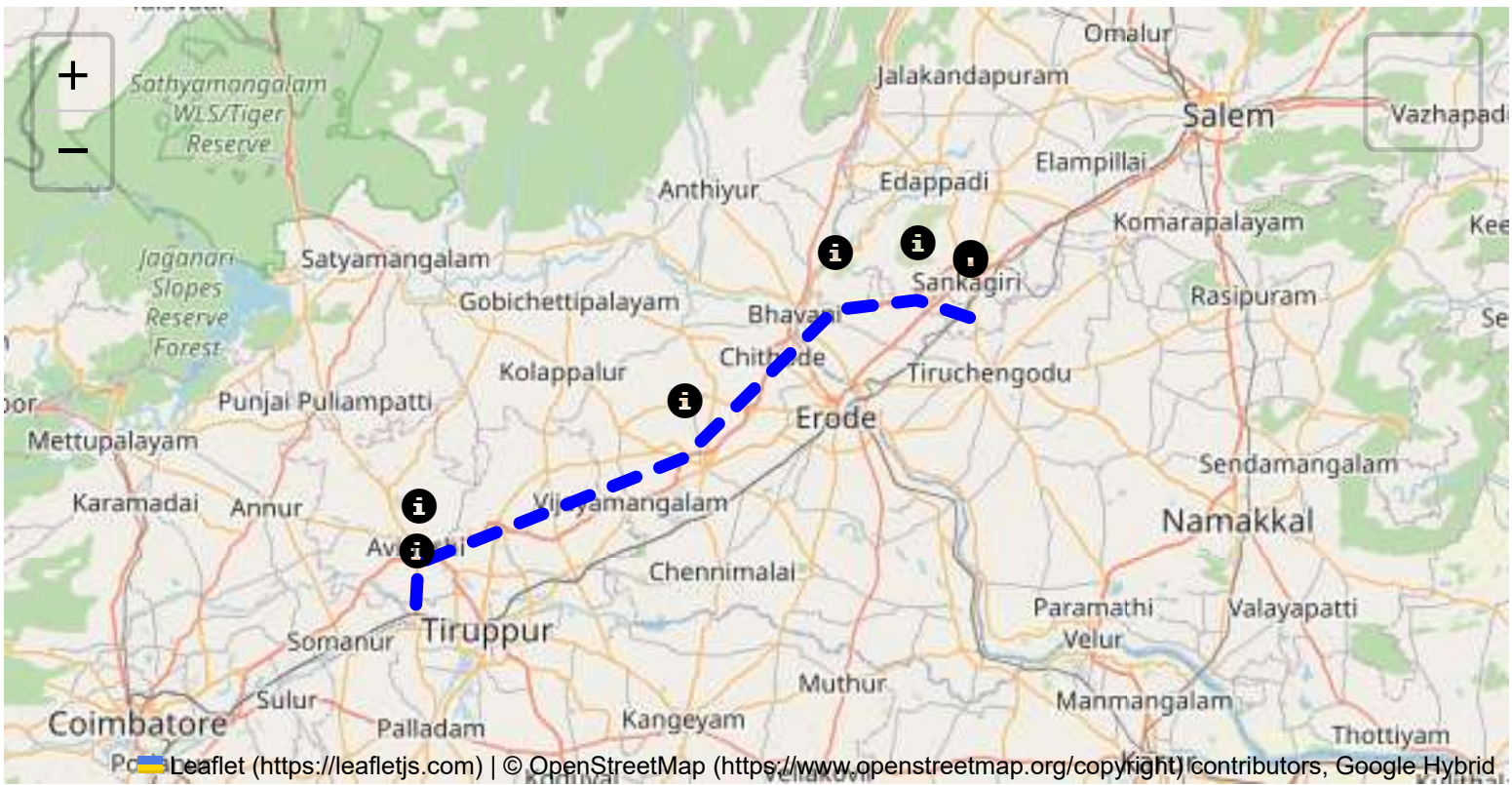
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

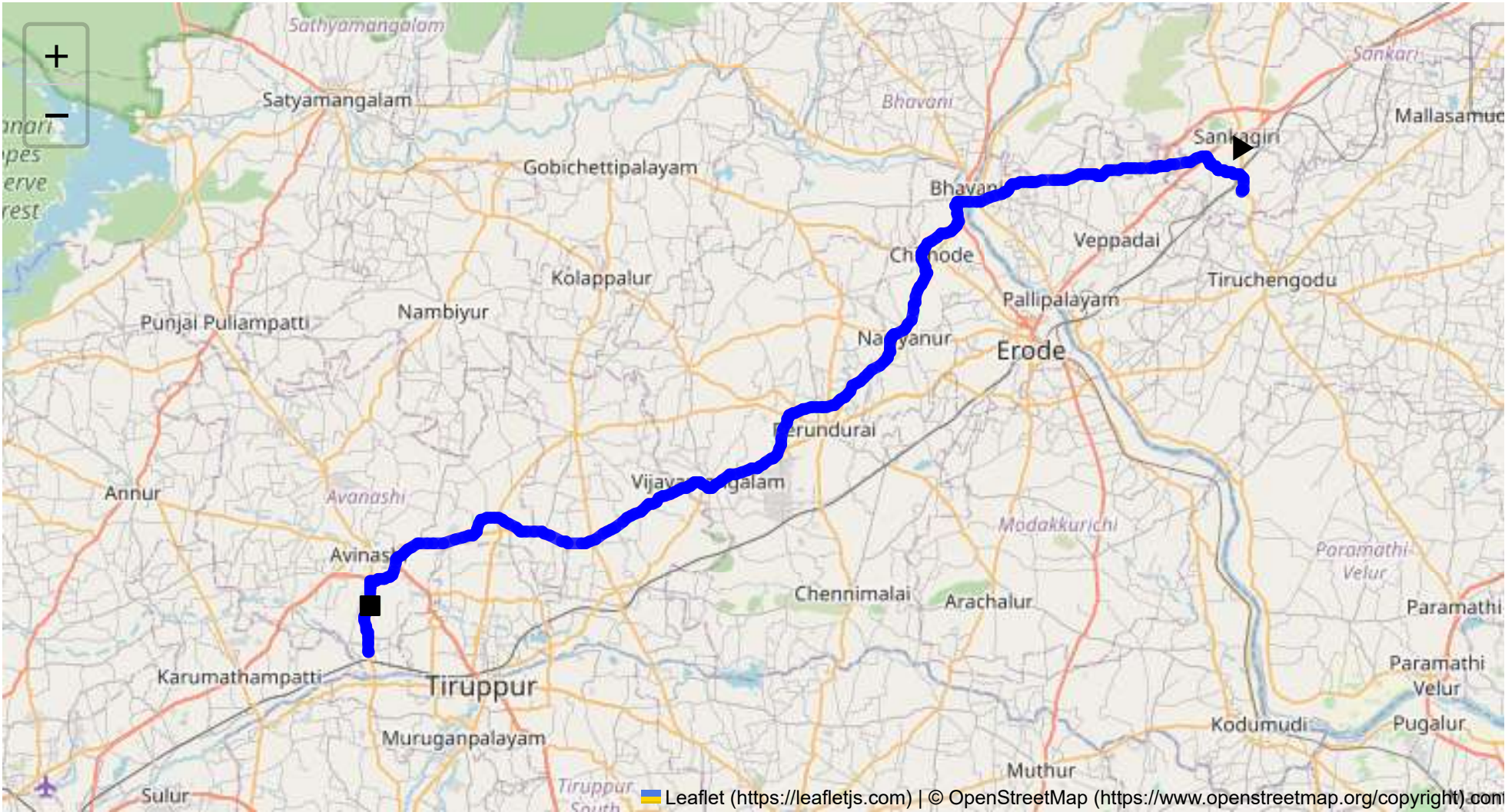
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 92.40 km
Estimated Duration: 1.7 hours
Adjusted Duration (Heavy Vehicle): 2.1 hours
Start: (11.4381, 77.8734)
End: (11.1254, 77.267197)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
1	Turn	11.43961, 77.87341	15 KM/Hr	0.08 km
2	Turn	11.44029, 77.87544	15 KM/Hr	0.28 km
3	Turn	11.44893, 77.87413	15 KM/Hr	1.29 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
4	Turn	11.45127, 77.86734	15 KM/Hr	2.15 km
5	Turn	11.45350, 77.85700	15 KM/Hr	3.29 km
6	Turn	11.45845, 77.85141	15 KM/Hr	4.11 km
7	Turn	11.46303, 77.84945	15 KM/Hr	4.65 km
8	Turn	11.45542, 77.81725	15 KM/Hr	8.36 km
9	Blind Spot	11.45634, 77.81673	10 KM/Hr	8.50 km
10	Blind Spot	11.44530, 77.72783	10 KM/Hr	18.62 km
11	Turn	11.43192, 77.67803	15 KM/Hr	24.43 km
0	Roundabout	11.17250, 77.26863	15 KM/Hr	86.65 km
12	Turn	11.16848, 77.26757	15 KM/Hr	87.15 km
13	Turn	11.14580, 77.26363	15 KM/Hr	89.71 km
14	Turn	11.14029, 77.26520	15 KM/Hr	90.29 km
15	Blind Spot	11.12510, 77.26688	10 KM/Hr	92.12 km

Emergency Services

	type	name	coordinates	side_of_road
2	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	Opposite Side
3	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	Opposite Side
4	hospital	J.K.K. Trust Hospital	11.4445841, 77.7307962	Driver's Side
6	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	Driver's Side
8	hospital	Thanish Siddha Hospital	11.430003, 77.674964	Opposite Side
9	clinic	Harshitha Clinic	11.4313207, 77.674718	Opposite Side
10	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	Opposite Side
11	clinic	G.K Clinic	11.4297244, 77.6749715	Opposite Side
13	clinic	Erode Cancer Centre	11.3732, 77.649152	Opposite Side
27	hospital	Irt Hospital	11.2803603, 77.5644118	Driver's Side
31	hospital	Gen Siddha Hospital	11.2375033, 77.5059797	Opposite Side
32	hospital	Vijayamangalm Government Hospital	11.2382827, 77.501687	Opposite Side
33	hospital	Dr. N Viswanathan Hospital	11.2412783, 77.5005502	Opposite Side
35	clinic	P.M. Clinic	11.2281078, 77.4647296	Opposite Side
39	hospital	Sri Renu Hospital	11.1990225, 77.4219937	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
0	fuel	SLOA Bunk - Unit II	11.4543854, 77.8052665	Driver's Side
1	restaurant	Canteen	11.4478386, 77.7705441	Driver's Side
5	fuel	Reliance	11.4325168, 77.6912865	Opposite Side
7	fuel	Indian Oil	11.4321177, 77.6765153	Opposite Side
12	fuel	KR Fuels - Auto LPG	11.4127737, 77.6747462	Driver's Side
14	hotel	Athithi cafe	11.3756993, 77.6516401	Driver's Side
15	restaurant	Athithi Cafe	11.3756705, 77.6516565	Driver's Side
16	restaurant	Canteen	11.3725755, 77.6466465	Opposite Side
17	restaurant	Kumki Restaurant	11.3523614, 77.644608	Driver's Side
18	parking	Kumki Restaurant	11.352414, 77.644492	Driver's Side
19	restaurant	Paradise Biriyani	11.3291744, 77.6297833	Driver's Side
20	hotel	Hotel Annachi	11.3020259, 77.600017	Opposite Side
21	hotel	Adayar Ananda Bhavan(a2b)	11.3018451, 77.599909	Opposite Side
22	restaurant	Ambur Star Biriyani	11.3017372, 77.5999546	Opposite Side
23	parking	NHAI parking	11.3030168, 77.6009269	Opposite Side
24	restaurant	Arukkaniammal Mess	11.2982771, 77.5967424	Opposite Side
25	fuel	HP	11.2909675, 77.5815262	Driver's Side
26	cafe	Backery and Cafe	11.2893987, 77.565338	Opposite Side
28	fuel	Reliance	11.2575595, 77.5511245	Driver's Side
29	fuel	Bharat Petroleum	11.255444, 77.5457729	Opposite Side
30	fuel	Auto LPG	11.2523222, 77.5400243	Opposite Side
34	fuel	HP Gas Station	11.239607, 77.4949754	Driver's Side
36	fuel	Indian Oil	11.2126458, 77.4417156	Opposite Side
37	restaurant	MDS restaurant	11.2058137, 77.4295619	Opposite Side
38	restaurant	Hotel Sree Anandha Bhavan	11.2058482, 77.4297017	Opposite Side
40	restaurant	Arya Bhavan	11.1991073, 77.4133915	Opposite Side
41	restaurant	Shri Sai Krishna	11.1993912, 77.3207179	Driver's Side
42	fuel	HP bunk	11.1946674, 77.2943298	Driver's Side

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins at CVQF+23W, Sangagiri, Tamil Nadu, and travels northwest through several towns including Puthur and Padaiveedu before heading north via the Perundurai Bypass. Finally, it progresses eastward towards Avinashi, ending at 47G8+8QM, Vanjipalayam. The route covers a diverse landscape with both urban and rural segments, spanning approximately 92.4 kilometers.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu generally experiences a tropical climate, with hot and humid conditions. The region receives monsoon rains between October and December. During this period, heavy rains can lead to reduced visibility and slippery road surfaces, increasing the risk of accidents. Additionally, some low-lying areas may face flooding, disrupting travel.

3. Analysis of Traffic Patterns

The route experiences moderate to heavy traffic, especially during weekdays. Peak congestion typically occurs:

- Morning: 8:00 AM - 10:00 AM
 - Evening: 5:00 PM - 7:00 PM
- Key congestion-prone areas include towns like Avinashi and near major intersections such as those near the Perundurai Bypass.

4. Assessment of Road Quality and Infrastructure

The main roads and bypasses are generally well-maintained, but certain rural sections may have potholes and uneven surfaces. Continuous roadworks in urban areas may cause intermittent disruptions.

5. Suggestions for Alternative Routes for Emergencies

In case of major roadblocks:

- From Sangagiri to Avinashi, using the NH544 Highway can serve as an effective alternative, although it may increase the travel distance slightly.
- Local roads connecting smaller towns can be considered when bypassing specific congestion points.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transport of hazardous materials in Tamil Nadu is subject to strict regulations, including required permits, operational hours, and designated routes. Vehicles must adhere to limits on noise and pollution, and drivers should be familiar with emergency procedures.

7. Overview of Historical Incidents

Historically, incidents involving heavy vehicles have been recorded in congested areas around major towns and highways. Accidents are commonly attributed to speeding and poor weather conditions.

8. Environmental Considerations and Sensitive Areas

Sensitive areas include agricultural zones near Puthur and Padaiveedu and water bodies near Avinashi. Drivers should take care not to contaminate these areas, especially during the transport of hazardous materials.

9. Analysis of Communication Coverage

Most of the route is well-served by mobile networks, providing adequate communication coverage. However, remote stretches, particularly between smaller villages, may experience temporary signal loss.

10. Estimated Emergency Response Times

- Urban areas: Approximately 15-30 minutes due to proximity to emergency services.
- Rural and remote areas: Up to 60 minutes, longer during adverse weather conditions.

12. Overall Summary of Risk Assessment

The route from Sangagiri to Vanjipalayam involves several challenges, including potential weather disruptions, traffic congestion, and road quality variations. The principal risks are associated with monsoon-related hazards and peak hour traffic jams in urban sections. While infrastructure is generally reliable, drivers should remain vigilant in rural stretches where road maintenance is less frequent. Contingency planning through alternative routes and effective communication strategies are crucial for safe transit of hazardous materials. Careful adherence to regulations and preparedness for environmental and infrastructural conditions will mitigate many of the identified risks.

Route Photos of Risky Spots



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 0.28 km
Coordinates: 11.44029, 77.87544



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 1.29 km
Coordinates: 11.44893, 77.87413



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 2.15 km
Coordinates: 11.45127, 77.86734



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 3.29 km

Coordinates: 11.45350, 77.85700



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.11 km

Coordinates: 11.45845, 77.85141



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.65 km

Coordinates: 11.46303, 77.84945



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 8.36 km

Coordinates: 11.45542, 77.81725



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 8.50 km

Coordinates: 11.45634, 77.81673



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 18.62 km

Coordinates: 11.44530, 77.72783



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 24.43 km

Coordinates: 11.43192, 77.67803



Risk Type: Roundabout
Speed Limit: 15 KM/Hr
Distance from Start: 86.65 km
Coordinates: 11.17250, 77.26863



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 87.15 km
Coordinates: 11.16848, 77.26757



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 89.71 km
Coordinates: 11.14580, 77.26363



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 90.29 km

Coordinates: 11.14029, 77.26520



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 92.12 km

Coordinates: 11.12510, 77.26688

[Download Interactive Map](#)

