



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO PADY AUTO FEED CARE CENTRE

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

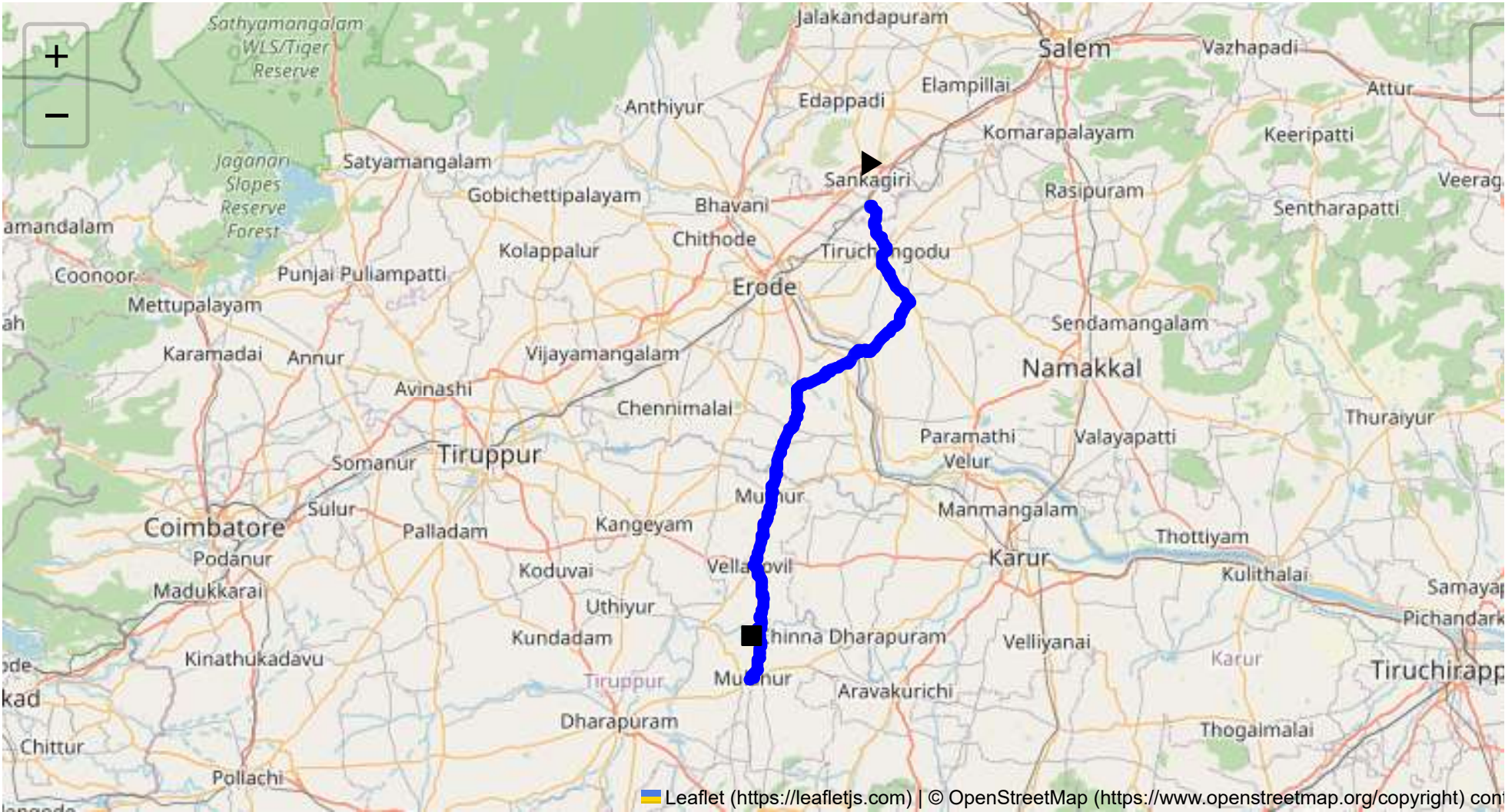
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 89.35 km
Estimated Duration: 2.1 hours
Adjusted Duration (Heavy Vehicle): 2.6 hours
Start: (11.4381, 77.8734)
End: (10.791572, 77.704955)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
2	Turn	11.43961, 77.87341	15 KM/Hr	0.08 km
3	Turn	11.44029, 77.87544	15 KM/Hr	0.28 km
4	Turn	11.39983, 77.88377	15 KM/Hr	5.06 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
5	Turn	11.39671, 77.88878	15 KM/Hr	5.83 km
0	Roundabout	11.38395, 77.89480	15 KM/Hr	7.43 km
6	Turn	11.37868, 77.89498	15 KM/Hr	7.91 km
7	Turn	11.30872, 77.92908	15 KM/Hr	17.43 km
8	Turn	11.24205, 77.87370	15 KM/Hr	27.13 km
9	Turn	11.23998, 77.87353	15 KM/Hr	27.49 km
10	Turn	11.24053, 77.86902	15 KM/Hr	27.92 km
11	Turn	11.24155, 77.86877	15 KM/Hr	28.08 km
12	Turn	11.24237, 77.86834	15 KM/Hr	28.22 km
13	Blind Spot	11.24384, 77.86689	10 KM/Hr	28.45 km
14	Turn	11.24100, 77.86026	15 KM/Hr	29.22 km
15	Turn	11.24197, 77.85898	15 KM/Hr	29.43 km
16	Turn	11.21418, 77.81780	15 KM/Hr	34.92 km
17	Turn	11.21426, 77.81461	15 KM/Hr	35.32 km
18	Turn	11.20921, 77.81149	15 KM/Hr	36.03 km
19	Blind Spot	11.18861, 77.77108	10 KM/Hr	41.06 km
20	Turn	11.16417, 77.77367	15 KM/Hr	43.82 km
21	Turn	11.16321, 77.77438	15 KM/Hr	43.95 km
22	Turn	11.13693, 77.76539	15 KM/Hr	47.00 km
1	Roundabout	11.04637, 77.73761	15 KM/Hr	57.88 km
23	Turn	11.04551, 77.73643	15 KM/Hr	57.98 km
24	Turn	10.99047, 77.72519	15 KM/Hr	64.29 km
25	Turn	10.98954, 77.72377	15 KM/Hr	64.53 km
26	Turn	10.96629, 77.71688	15 KM/Hr	67.04 km
27	Turn	10.95845, 77.71655	15 KM/Hr	68.09 km
28	Blind Spot	10.94597, 77.71319	10 KM/Hr	69.63 km
29	Turn	10.94571, 77.71574	15 KM/Hr	69.89 km
30	Turn	10.92858, 77.72273	15 KM/Hr	71.95 km
31	Turn	10.92251, 77.72391	15 KM/Hr	72.67 km
32	Turn	10.86296, 77.72154	15 KM/Hr	79.42 km
33	Turn	10.86169, 77.71783	15 KM/Hr	79.86 km
34	Turn	10.86082, 77.71711	15 KM/Hr	80.03 km
35	Turn	10.85670, 77.71757	15 KM/Hr	80.47 km
36	Turn	10.85582, 77.71824	15 KM/Hr	80.62 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
37	Turn	10.85510, 77.72018	15 KM/Hr	80.79 km
38	Turn	10.85424, 77.72080	15 KM/Hr	80.96 km
39	Turn	10.80309, 77.71469	15 KM/Hr	86.81 km
40	Turn	10.80289, 77.71371	15 KM/Hr	86.94 km
41	Turn	10.80040, 77.71182	15 KM/Hr	87.26 km
42	Turn	10.79654, 77.71111	15 KM/Hr	87.74 km
43	Turn	10.79642, 77.71008	15 KM/Hr	87.87 km
44	Turn	10.79520, 77.70932	15 KM/Hr	88.22 km

Emergency Services

	type	name	coordinates	side_of_road
0	hospital	Tiruchengode, Goverment Hospital	11.3903328, 77.8920627	Driver's Side
1	hospital	SPM Medical Centre,Tiruchengode	11.3881331, 77.8931963	Opposite Side
2	clinic	Kongu Nursing Home	11.3783065, 77.8961134	Driver's Side
3	hospital	T.C.A Hospital Tiruchengode	11.3791885, 77.8965774	Driver's Side
4	hospital	Soorya Multispecialty Hospital	11.3786429, 77.8931912	Opposite Side
6	hospital	Tiruchengode Government Hospital	11.37645, 77.89426	Opposite Side
7	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	Opposite Side
8	police	கரட்டுப்பாளையம் காவல் நிலையம்	11.357586, 77.8922539	Driver's Side
9	hospital	Government Hospital, Elumathur	11.18533, 77.772496	Driver's Side
10	hospital	Malar Hospital, Muthur	11.0438049, 77.7361156	Opposite Side
13	hospital	SIBI Hospital, Vellakoil	10.9569141, 77.7160216	Driver's Side
14	hospital	KG Hospital, Vellakoil	10.9511, 77.714116	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
5	restaurant	Lijo	11.3805115, 77.8946385	Opposite Side
11	fuel	Indian Oil	11.0445808, 77.7345458	Opposite Side
12	fuel	Indian Oil	11.0427213, 77.7366296	Driver's Side

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Sangagiri to Annanagar, Mulanur, covers approximately 89.35 kilometers, passing through Puthur, Thondikaradu, Sullipalayam, Elumathur, and Muthur. This route takes typically about 2 hours for heavy vehicles, mainly regional roads and a mix of state highways, which provides a fairly direct path between these locations.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu generally experiences hot to very hot temperatures, particularly from March to June. However, the monsoon season from June to September can lead to heavy rainfall, which could cause localized flooding and slippery road conditions. Fog may be an issue during the early mornings in the winter months, impacting visibility.

3. Analysis of Traffic Patterns

Traffic patterns indicate moderate to heavy traffic along the Sankagiri - Tiruchengode Road, especially during school hours and early evenings. There may be significant congestion in urban areas like Tiruchengode and during weekend rushes due to local markets.

4. Assessment of Road Quality and Infrastructure

The road quality varies across the route: while some segments are well-maintained, particularly the main highways, others in rural areas may have potholes or lack clear demarcation. Signage can be sparse, and street lighting is inconsistent, potentially leading to challenges in nighttime navigation.

5. Suggestions for Alternative Routes for Emergencies

For emergencies, a viable alternative could be to divert through larger nearby towns like Erode, which offers more robust infrastructure and medical facilities. However, this could significantly increase travel time.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transportation of hazardous materials requires specific permits in Tamil Nadu. There are designated lanes and times during which heavy vehicles carrying such materials are allowed to operate. Drivers must ensure all safety protocols and regulations are strictly followed, including proper labeling and documentation.

7. Overview of Historical Incidents

Historically, there have been sporadic incidents involving heavy vehicles in this region, mostly attributed to mechanical failures or driver negligence. There are no significant records of major hazardous material spills in the recent past, but minor accidents are relatively common due to variable traffic conditions and road quality.

8. Environmental Considerations and Sensitive Areas

The route passes near agricultural land, and there may be restrictions on the discharge of materials. Special care should be taken to avoid contamination. Additionally, any wildlife areas, though minimal, should be protected by maintaining speed limits and avoiding unnecessary stops.

9. Analysis of Communication Coverage

Most of this route has satisfactory mobile network coverage, except for remote areas, especially between Sullipalayam and Elumathur, where there may be occasional dead zones. Drivers should ensure that their communication devices are well-charged and have offline maps available.

10. Estimated Emergency Response Times

Response times for emergencies can vary significantly but generally range from 30 to 60 minutes in more remote sections of the route, due to the limited access to nearby emergency services, which tend to be concentrated in larger towns like Tiruchengode.

11. Overall Summary of Risk Assessment

Overall, this route presents medium-level risk factors primarily due to variable road conditions, heavy regional traffic, and weather-related challenges during the monsoon season. The key to mitigating these risks is preparedness: understanding traffic patterns, ensuring vehicle maintenance, and adhering to safety protocols for transporting hazardous materials. Regular communication with dispatch and planned communication checkpoints can further aid in managing unforeseen challenges along the route.

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: 5.06 km

Coordinates: 11.39983, 77.88377



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 5.83 km

Coordinates: 11.39671, 77.88878



Risk Type: Roundabout

Speed Limit: 15 KM/Hr

Distance from Start: 7.43 km

Coordinates: 11.38395, 77.89480



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 7.91 km

Coordinates: 11.37868, 77.89498



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 17.43 km

Coordinates: 11.30872, 77.92908



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 27.13 km

Coordinates: 11.24205, 77.87370



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 27.49 km

Coordinates: 11.23998, 77.87353



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 27.92 km

Coordinates: 11.24053, 77.86902



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 28.08 km

Coordinates: 11.24155, 77.86877



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 28.22 km

Coordinates: 11.24237, 77.86834



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 28.45 km

Coordinates: 11.24384, 77.86689



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 29.22 km

Coordinates: 11.24100, 77.86026



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 29.43 km

Coordinates: 11.24197, 77.85898



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 34.92 km

Coordinates: 11.21418, 77.81780



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 35.32 km

Coordinates: 11.21426, 77.81461



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 36.03 km

Coordinates: 11.20921, 77.81149



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 41.06 km
Coordinates: 11.18861, 77.77108



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 43.82 km
Coordinates: 11.16417, 77.77367



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 43.95 km
Coordinates: 11.16321, 77.77438



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 47.00 km

Coordinates: 11.13693, 77.76539



Risk Type: Roundabout

Speed Limit: 15 KM/Hr

Distance from Start: 57.88 km

Coordinates: 11.04637, 77.73761



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 57.98 km

Coordinates: 11.04551, 77.73643



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 64.29 km

Coordinates: 10.99047, 77.72519



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 64.53 km

Coordinates: 10.98954, 77.72377



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 67.04 km

Coordinates: 10.96629, 77.71688



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 68.09 km

Coordinates: 10.95845, 77.71655



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 69.63 km
Coordinates: 10.94597, 77.71319



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 69.89 km
Coordinates: 10.94571, 77.71574



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 71.95 km
Coordinates: 10.92858, 77.72273



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 72.67 km

Coordinates: 10.92251, 77.72391



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 79.42 km

Coordinates: 10.86296, 77.72154



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 79.86 km
Coordinates: 10.86169, 77.71783



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 80.03 km
Coordinates: 10.86082, 77.71711



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 80.47 km
Coordinates: 10.85670, 77.71757



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 80.62 km

Coordinates: 10.85582, 77.71824



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 80.79 km

Coordinates: 10.85510, 77.72018



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 80.96 km

Coordinates: 10.85424, 77.72080



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 86.81 km

Coordinates: 10.80309, 77.71469



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 86.94 km

Coordinates: 10.80289, 77.71371



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 87.26 km

Coordinates: 10.80040, 77.71182



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 87.74 km

Coordinates: 10.79654, 77.71111



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 87.87 km

Coordinates: 10.79642, 77.71008



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 88.22 km

Coordinates: 10.79520, 77.70932

[Download Interactive Map](#)