



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO PRASANA FUELS

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

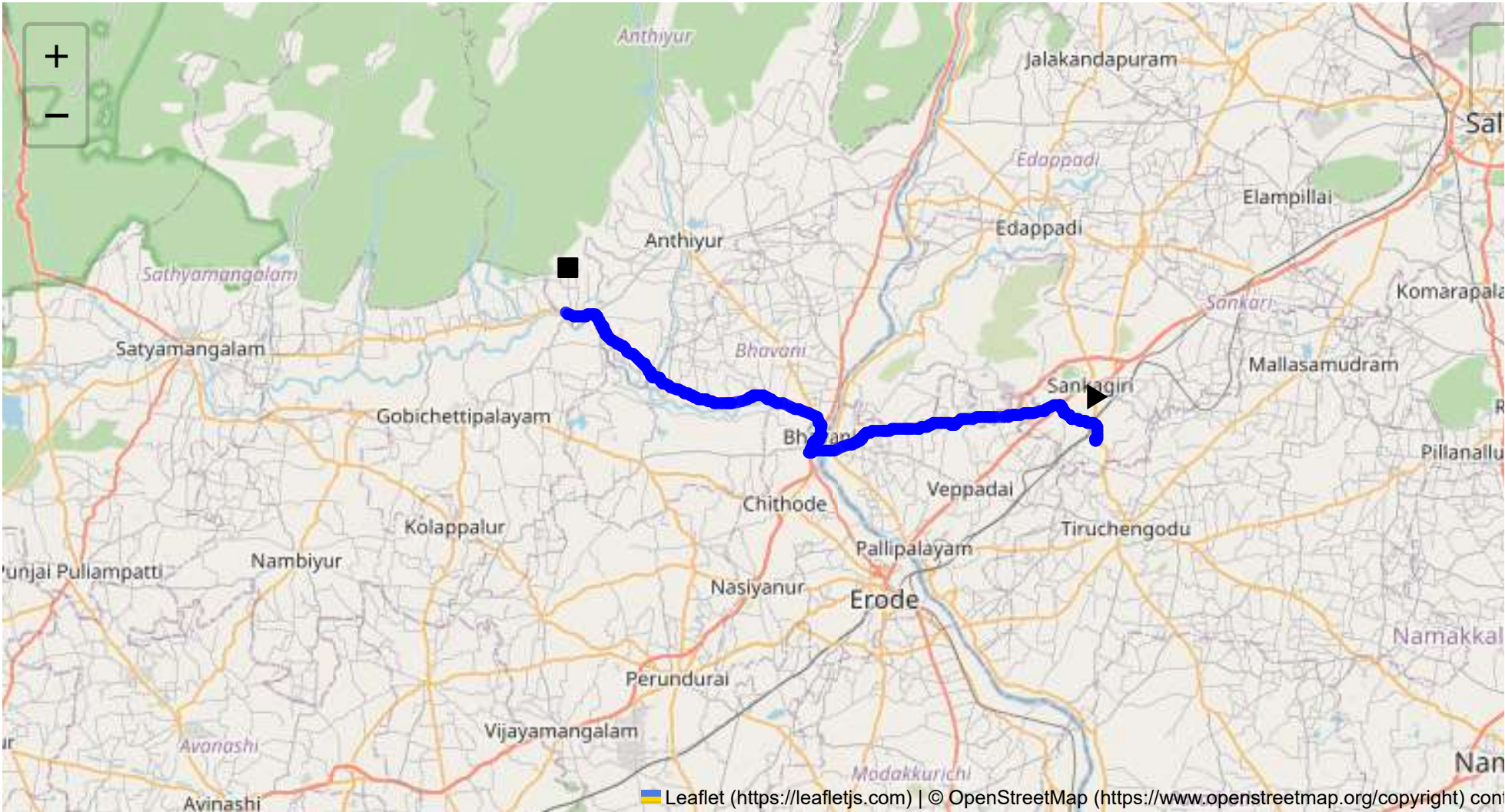
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 50.59 km
Estimated Duration: 1.1 hours
Adjusted Duration (Heavy Vehicle): 1.4 hours
Start: (11.4381, 77.8734)
End: (11.526017, 77.505464)



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	11.44893, 77.87413	15 KM/Hr	1.37 km
4	Turn	11.45350, 77.85700	15 KM/Hr	3.34 km
5	Turn	11.46046, 77.85037	15 KM/Hr	4.37 km
6	Turn	11.46303, 77.84945	15 KM/Hr	4.73 km
7	Turn	11.45542, 77.81725	15 KM/Hr	8.39 km
8	Blind Spot	11.45634, 77.81673	10 KM/Hr	8.52 km
9	Blind Spot	11.44530, 77.72783	10 KM/Hr	18.68 km
10	Turn	11.43001, 77.67575	15 KM/Hr	24.90 km
11	Turn	11.43782, 77.67821	15 KM/Hr	25.87 km
12	Turn	11.43865, 77.68226	15 KM/Hr	26.22 km
13	Turn	11.43965, 77.68224	15 KM/Hr	26.40 km
14	Turn	11.44101, 77.68186	15 KM/Hr	26.60 km
15	Turn	11.44291, 77.68256	15 KM/Hr	26.82 km
16	Turn	11.44853, 77.68331	15 KM/Hr	27.47 km
17	Turn	11.45408, 77.68022	15 KM/Hr	28.09 km
18	Turn	11.48208, 77.56626	15 KM/Hr	41.59 km
19	Turn	11.48537, 77.56460	15 KM/Hr	41.98 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	clinic	Harshitha Clinic	11.4313207, 77.674718	Driver's Side
11	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	Driver's Side
12	clinic	G.K Clinic	11.4297244, 77.6749715	Driver's Side
13	hospital	Maha Hospital	11.4372003, 77.6781345	Opposite Side
14	hospital	Jothikumar Hospital	11.43687, 77.678407	Opposite Side
15	hospital	Sutha Hospital	11.4365526, 77.6796472	Opposite Side
16	hospital	SKMH Hospital	11.4379787, 77.6780268	Driver's Side

	type	name	coordinates	side_of_road
17	clinic	Sri Dharshan Diabetes Care	11.437649, 77.6778126	Driver's Side
18	clinic	Velavan Homoeo Clinic	11.4367087, 77.6761472	Driver's Side
19	hospital	Kavin Hospital	11.4399114, 77.6838194	Opposite Side
20	clinic	Thangam Acupuncture	11.4418816, 77.6832318	Opposite Side
21	hospital	Sumangali Hospital	11.4427668, 77.6827131	Opposite Side
22	hospital	Annusiya Hospital	11.4432777, 77.6813562	Driver's Side
23	hospital	Kandasamy Hospital	11.4450062, 77.6832304	Opposite Side
24	hospital	Ashok Krishna Hospital	11.4483344, 77.6856579	Opposite Side
25	hospital	Senthil Hospital	11.4475854, 77.6844482	Opposite Side
26	hospital	S.N.A. Siddha Hospital	11.44704, 77.682877	Driver's Side
27	hospital	Shri Mani Hospital	11.44771, 77.6838471	Opposite Side
28	clinic	Sri Hari Clinic	11.4483503, 77.6850963	Opposite Side
29	hospital	Sri Saravana Hospital	11.4506202, 77.6829676	Opposite Side
30	hospital	Immiaditya Hospital	11.4501276, 77.6836088	Opposite Side
31	hospital	Government Hospital	11.45112, 77.682149	Opposite Side
32	hospital	Vijay Hospital	11.45091, 77.682019	Opposite Side
33	hospital	Anbe Sivam Hospital	11.4508139, 77.6854947	Opposite Side
34	clinic	Kalyani Nursing Home	11.452097, 77.6808974	Driver's Side
35	hospital	Government Hospital	11.4519113, 77.6819742	Opposite Side
36	hospital	Ragav Hospital	11.475895, 77.581045	Opposite Side
37	hospital	Sriram Child and Maternity Hospital	11.4739074, 77.5783099	Driver's Side
38	hospital	NM Hospital	11.4765419, 77.5801178	Opposite Side
39	hospital	Dr. Kandhasamy Hospital	11.4750159, 77.5798168	Opposite Side
40	hospital	SPK Hospital	11.47498, 77.5798076	Opposite Side
41	clinic	Krithik Clinic	11.4756073, 77.5780846	Opposite Side
42	hospital	Vmk Hospital	11.4791501, 77.5724052	Opposite Side
43	hospital	Subi Hospital	11.5070348, 77.5375885	Driver's Side
44	hospital	Government Hospital	11.5218505, 77.5285238	Opposite Side
45	hospital	Kariyamanikam Hospital	11.5229297, 77.5134812	Driver's Side
46	hospital	Bala Hospital	11.522996, 77.512794	Driver's Side
47	hospital	Nalam General & Diabetes Care Hospital	11.523399, 77.51107	Driver's 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

1. Overview of the Route Map

The route from Sangagiri to Erode via specified waypoints covers approximately 50.59 kilometers and typically takes around 1.14 hours for heavy vehicles carrying hazardous materials. It traverses several towns and rural areas, mainly following state highways and main roads.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu generally experiences tropical weather conditions. This area typically has hot and dry conditions most of the year, with high temperatures in the summer. The monsoon season, between June and September, can bring heavy rains which may lead to slippery roads, reduced visibility, and localized flooding. During the northeast monsoon (October to December), torrential downpours can occur, increasing risks of road damage and washouts.

3. Analysis of Traffic Patterns

Traffic congestion can be expected around major towns, such as Bhavani and Erode. Peak hours typically include morning (8:00 AM - 10:00 AM) and evening (5:00 PM - 8:00 PM) times on weekdays. Key congestion-prone areas are intersections with local markets or schools.

4. Assessment of Road Quality and Infrastructure

The road quality varies, with state highways generally in good condition but some connecting roads exhibiting potholes and uneven surfaces. Infrastructure such as signage and street lighting may be poor in rural segments, potentially requiring caution, especially at night.

5. Suggestions for Alternative Routes for Emergencies

In case of road blockages, alternate routes include:

- Taking the National Highway 544 (NH 544) directly towards Salem and then accessing Erode via NH 544 and NH 381A. While slightly longer, these roads are typically better maintained.

- Utilize local roads by rerouting through nearby towns such as Tiruchengode if access to major roads is disrupted.

6. Summary of Local Regulations Affecting Hazardous Material Transport

There are strict regulations concerning the transit of hazardous materials. Drivers must have appropriate permits, ensure proper labeling, and follow designated routes. Transport of such materials is restricted during certain hours in densely populated areas, typically during peak times.

7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

There have been occasional incidents involving heavy vehicles, primarily due to overloading or speed violations. Specific incidents involving hazardous materials are rare but have historically been attributed to human error or infrastructure failure.

8. Environmental Considerations and Sensitive Areas

The route traverses agricultural regions. There may be concerns about spillages affecting soil and water quality. Proximity to reservoirs or canals necessitates additional caution, particularly during the monsoon.

9. Analysis of Communication Coverage

Most of the route has good communication coverage with major telecom operators. However, there might be brief dead zones in the rural stretches between towns. GPS and mobile communication might be intermittent in these areas.

10. Estimated Emergency Response Times for Different Route Segments

- Urban areas like Erode and near major highways: Emergency response times typically range between 15-30 minutes.
- Rural areas and minor roads: Could experience longer response times, possibly up to an hour due to distance from emergency services and road conditions.

11. Overall Summary of Risk Assessment

While the route is generally safe with urban and rural stretches well-connected by state highways, risks include potential impact from adverse weather especially during monsoon seasons, moderate traffic congestion during peak hours, and variable road quality in rural areas. Adequate planning, driver training, compliance with regulations, and awareness of alternate routes are critical to mitigating risks, particularly for transporting hazardous materials. Emergency preparedness and communication are also key factors needing attention.

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: 1.37 km

Coordinates: 11.44893, 77.87413



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 3.34 km

Coordinates: 11.45350, 77.85700



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.37 km

Coordinates: 11.46046, 77.85037



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.73 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: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 8.52 km

Coordinates: 11.45634, 77.81673



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 18.68 km

Coordinates: 11.44530, 77.72783



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 24.90 km

Coordinates: 11.43001, 77.67575



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 25.87 km

Coordinates: 11.43782, 77.67821



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 26.22 km

Coordinates: 11.43865, 77.68226



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 26.40 km

Coordinates: 11.43965, 77.68224



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 26.60 km

Coordinates: 11.44101, 77.68186



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 26.82 km

Coordinates: 11.44291, 77.68256



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 27.47 km

Coordinates: 11.44853, 77.68331



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 28.09 km

Coordinates: 11.45408, 77.68022



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 41.59 km

Coordinates: 11.48208, 77.56626



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 41.98 km

Coordinates: 11.48537, 77.56460

[Download Interactive Map](#)