



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### Salem Terminal TO RENUGADEVI OIL MERCHANT

#### 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.

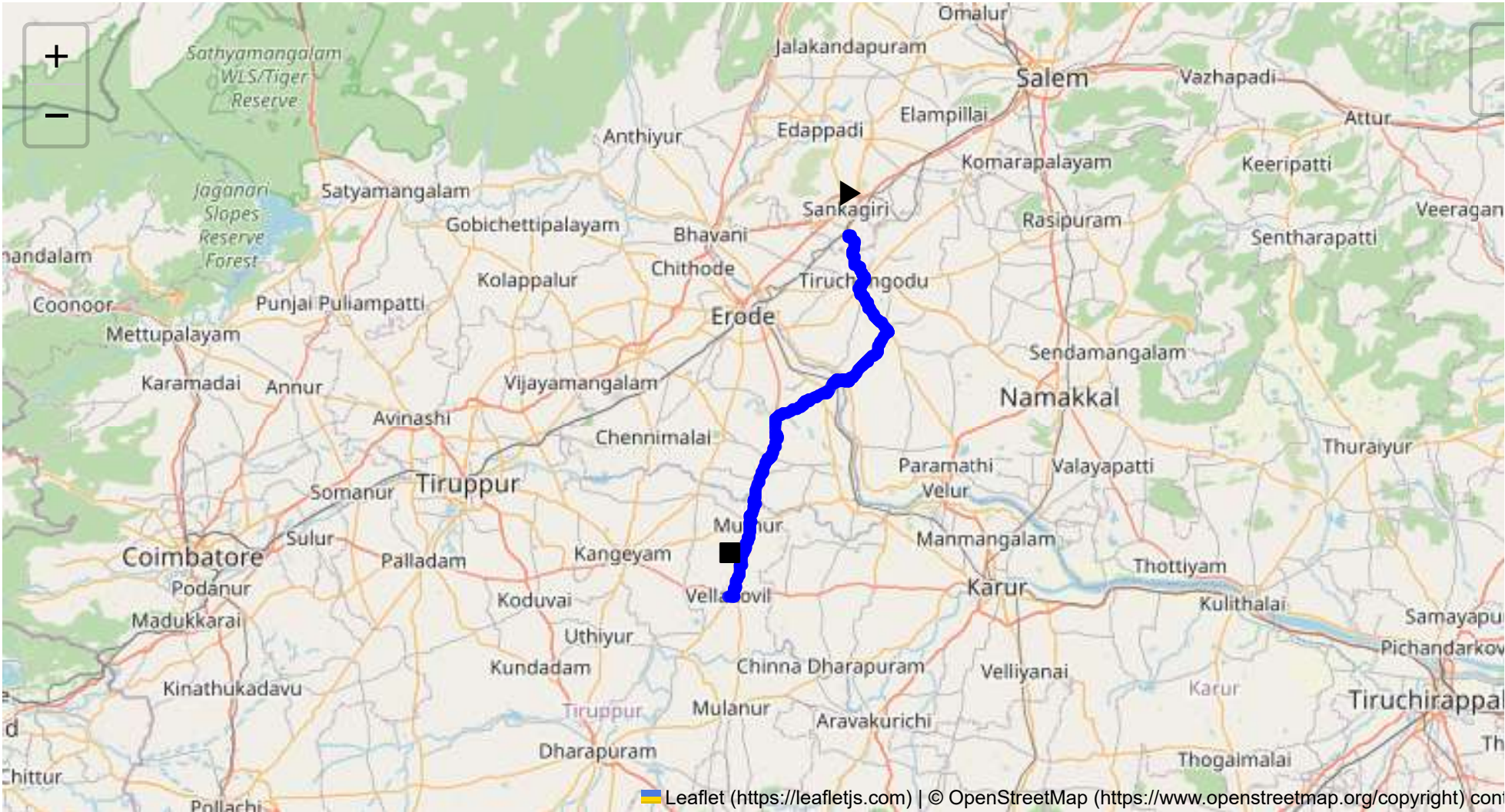
## **Compliance with Government Directives**

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: 70.57 km**  
**Estimated Duration: 1.7 hours**  
**Adjusted Duration (Heavy Vehicle): 2.1 hours**  
**Start: (11.4381, 77.8734)**  
**End: (10.946808, 77.70728)**



**Risk Spots**

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
2	Turn	11.43822, 77.87348	15 KM/Hr	0.01 km
3	Turn	11.43961, 77.87341	15 KM/Hr	0.14 km
4	Turn	11.44029, 77.87544	15 KM/Hr	0.31 km



	RiskSpotType	Coordinates	Speed Limit	Distance from Start
5	Turn	11.39671, 77.88878	15 KM/Hr	5.84 km
0	Roundabout	11.38395, 77.89480	15 KM/Hr	7.45 km
6	Turn	11.37868, 77.89498	15 KM/Hr	7.97 km
7	Turn	11.30859, 77.92918	15 KM/Hr	17.53 km
8	Turn	11.24000, 77.87363	15 KM/Hr	27.55 km
9	Turn	11.24053, 77.86902	15 KM/Hr	28.03 km
10	Turn	11.24155, 77.86877	15 KM/Hr	28.18 km
11	Turn	11.24237, 77.86834	15 KM/Hr	28.27 km
12	Blind Spot	11.24384, 77.86689	10 KM/Hr	28.50 km
13	Turn	11.24100, 77.86026	15 KM/Hr	29.28 km
14	Turn	11.24197, 77.85898	15 KM/Hr	29.48 km
15	Turn	11.20921, 77.81149	15 KM/Hr	36.10 km
16	Blind Spot	11.18861, 77.77108	10 KM/Hr	41.13 km
17	Turn	11.16417, 77.77367	15 KM/Hr	43.89 km
1	Roundabout	11.04637, 77.73761	15 KM/Hr	57.97 km
18	Turn	11.04515, 77.73621	15 KM/Hr	58.16 km
19	Turn	10.99047, 77.72519	15 KM/Hr	64.39 km
20	Turn	10.98974, 77.72388	15 KM/Hr	64.63 km
21	Turn	10.96629, 77.71688	15 KM/Hr	67.25 km
22	Turn	10.94590, 77.71319	15 KM/Hr	69.75 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	Driver's Side
7	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	Opposite Side
8	hospital	Tirukumaran Hospitals	11.3782118, 77.8914933	Opposite Side
9	police	கரட்டுப்பாளையம் காவல் நிலையம்	11.357586, 77.8922539	Driver's Side
10	hospital	Government Hospital, Elumathur	11.18533, 77.772496	Driver's Side

	type	name	coordinates	side_of_road
11	hospital	Malar Hospital, Muthur	11.0438049, 77.7361156	Opposite Side
14	hospital	SIBI Hospital, Vellakoil	10.9569141, 77.7160216	Driver's Side
15	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
12	fuel	Indian Oil	11.0445808, 77.7345458	Opposite Side
13	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 begins at Sangagiri, Tamil Nadu, and passes through Puthur, Thondikaradu, Sullipalayam, Elumathur, and Muthur before ending in Vellakoil. The journey spans approximately 70.57 kilometers, primarily consisting of state highways and local roads, characterized by a mix of rural landscapes and small urban settings.

### 2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu generally experiences a tropical climate, with hot summers and mild winters. The monsoon season typically lasts from June to September, bringing heavy rains that can cause flooding and poor road conditions, leading to potential delays or safety hazards. Additionally, the region occasionally faces cyclonic storms, especially from the Bay of Bengal, impacting road safety.

### 3. Analysis of Traffic Patterns

Traffic generally flows smoothly in rural stretches but can become congested in urban and semi-urban areas like Tiruchengode. Peak hours typically align with school timings (7:30 AM - 9:30 AM) and work hours (5:00 PM - 8:00 PM). The possibility of congestion increases around marketplaces and near schools.

### 4. Assessment of Road Quality and Infrastructure

The road quality varies along this route:

- **Sangagiri to Tiruchengode:** Generally well-maintained state highways with possible potholes during the rainy season.
- **Tiruchengode to Elumathur:** Local roads can be narrower and may not be in good condition.
- **Elumathur to Vellakoil:** The approach to Vellakoil has better infrastructure with state highways and adequate signage.

Bridge infrastructure should be noted for potential weight restrictions for heavy vehicles.

## 5. Suggestions for Alternative Routes for Emergencies

In case of blockage or emergencies, alternate routes utilizing state-highway deviations through nearby towns like Erode or Thiruchengode are recommended. These are better equipped to handle detours and offer parallel connectivity.

## 6. Summary of Local Regulations Affecting Hazardous Material Transport

Tamil Nadu follows national regulations on transporting hazardous materials, including mandatory labeling, emergency contact numbers on trucks, and adherence to designated routes. Checks by local authorities, especially at state border points, may also occur.

## 7. Overview of Historical Incidents

There have been isolated incidents of tanker rollovers and fuel spillage, primarily due to speeding or poor weather conditions. No significant incidents have been high-profile along this direct route in recent years.

## 8. Environmental Considerations and Sensitive Areas

The route passes through agricultural regions and small wildlife habitats, requiring cautious driving to avoid environmental impact. Minimize noise and emissions near sensitive areas like schools or animal crossings.

## 9. Analysis of Communication Coverage

Generally, there is good communication coverage throughout the route, though some rural stretches between Puthur and Sullipalayam might have sporadic coverage issues, particularly inside dense foliage areas or low-lying zones.

## 10. Estimated Emergency Response Times

Emergency response times can vary:

- **Urban centers:** Approximately 15-25 minutes (near Tiruchengode and Vellakoil).
- **Rural areas:** Up to 40 minutes due to accessibility issues and distance.

## 12. Overall Summary of Risk Assessment



Overall, the route is navigable with moderate risks associated with weather-related hazards and traffic congestion. Planning trips outside peak hours, ensuring adherence to road regulations, and remaining vigilant through rural stretches and during adverse weather conditions are crucial for safety. Regular vehicle maintenance checks and an updated emergency contact list enhance preparedness for any incidents.

## Route Photos of Risky Spots



**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 0.31 km

**Coordinates:** 11.44029, 77.87544



**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 5.84 km

**Coordinates:** 11.39671, 77.88878





**Risk Type:** Roundabout  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 7.45 km  
**Coordinates:** 11.38395, 77.89480



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 7.97 km  
**Coordinates:** 11.37868, 77.89498





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 17.53 km**

**Coordinates: 11.30859, 77.92918**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 27.55 km**

**Coordinates: 11.24000, 77.87363**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 28.03 km**

**Coordinates: 11.24053, 77.86902**





**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 28.18 km

**Coordinates:** 11.24155, 77.86877



**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 28.27 km

**Coordinates:** 11.24237, 77.86834





**Risk Type:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Distance from Start:** 28.50 km  
**Coordinates:** 11.24384, 77.86689



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 29.28 km  
**Coordinates:** 11.24100, 77.86026



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 29.48 km  
**Coordinates:** 11.24197, 77.85898





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 36.10 km**

**Coordinates: 11.20921, 77.81149**



**Risk Type: Blind Spot**

**Speed Limit: 10 KM/Hr**

**Distance from Start: 41.13 km**

**Coordinates: 11.18861, 77.77108**





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 43.89 km**

**Coordinates: 11.16417, 77.77367**



**Risk Type: Roundabout**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 57.97 km**

**Coordinates: 11.04637, 77.73761**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 58.16 km**

**Coordinates: 11.04515, 77.73621**





**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 64.39 km

**Coordinates:** 10.99047, 77.72519



**Risk Type:** Turn

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 64.63 km

**Coordinates:** 10.98974, 77.72388





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 67.25 km**

**Coordinates: 10.96629, 77.71688**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 69.75 km**

**Coordinates: 10.94590, 77.71319**

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[Download Interactive Map](#)