



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal to VEERAKUMAR AGENCIES

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

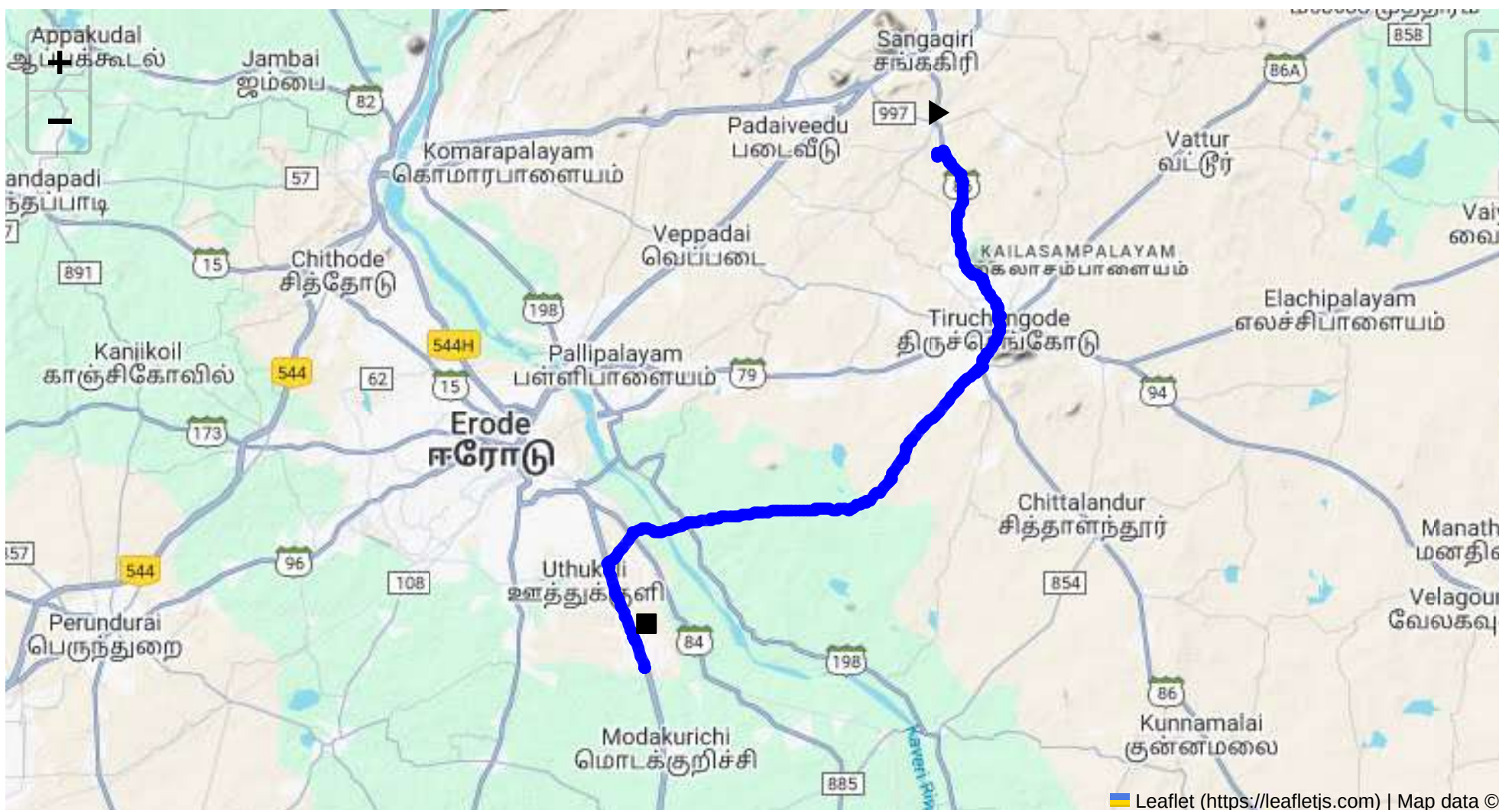
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 31.52 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.1 hours
Start: (11.4381, 77.8734)
End: (11.263236, 77.770917)



Welcome to the Journey Risk Management Study

Route Safety Analysis

1. Overview of the Route Map

The route from CVQF+23W, Sangagiri, Tamil Nadu to 1107, Erode - Muthur Rd, Nanjaiuthukuli, Erode, Tamil Nadu spans approximately 31.52 kilometers. The main roads used may include portions of NH544 and

local roads connecting these points. The journey typically involves both urban and semi-urban stretches, likely incorporating a mix of highways and local roads.

2. Typical Weather Conditions and Potential Hazards

- **Weather Conditions:** Generally hot and dry climate, with the monsoon season bringing heavy rains from June to September.
- **Weather-related Hazards:** Potential for reduced visibility during monsoons due to heavy rain and waterlogging in low-lying areas.

3. Traffic Patterns and Congestion-prone Areas

- **Peak Hours:** Typically, peak hours are from 8 AM to 10 AM and 5 PM to 8 PM.
- **Congestion:** Expect congestion near urban centers and major intersections, especially near Erode city limits and NH544 intersection points.

4. Road Quality and Infrastructure

- **Road Conditions:** NH544 generally offers good quality, well-maintained roads. Local roads may have varying conditions with some potholes or narrow passages.
- **Infrastructure:** Adequate signage and lighting on main roads; poorly lit or marked roads in more rural areas.

5. Suggestions for Alternative Routes

In case of emergencies, alternative routes can be taken via smaller connecting roads such as SH79 and other regional roads. Local knowledge or real-time navigation aids can help identify less crowded paths.

6. Local Regulations Affecting Hazardous Material Transport

Strict regulations govern the transportation of hazardous materials, requiring permits and adherence to specific routes designated by local authorities. Night-time restrictions may apply in certain areas.

7. Historical Incidents Involving Heavy Vehicles or Hazardous Materials

While specific historical incident data for this exact route may not be readily available, general trends indicate accidents involving heavy vehicles often occur in congested areas or due to poor weather conditions. Regularly updated safety records are maintained by regional transport authorities.

8. Environmental Considerations and Sensitive Areas

- **Sensitive Areas:** Proximity to agricultural land and areas of ecological importance to be considered when transporting hazardous materials.
- **Precautions:** Avoid spillage or leakage into local water bodies and ensure compliance with environmental regulations.

9. Communication Coverage, Notable Dead Zones

The route is likely to have good coverage near urban centers and less reliable reception in more remote stretches. Known dead zones might include rural regions between major towns.

10. Estimated Emergency Response Times

Emergency response times can vary. Near Erode, response can be as swift as 15-30 minutes, but it might extend to 45-60 minutes in more rural areas, depending on the resources available and road conditions.

11. Overall Summary of Risk Assessment

- Risk Level:** Moderate to high due to varied road conditions, potential congestion, and significant weather impacts during monsoon season.
- Main Concerns:** Weather conditions, congestion during peak hours, road quality in rural stretches, and compliance with local hazardous material regulations.
- Mitigation Measures:** Timely journey planning, real-time navigation for avoiding congested areas, compliance with safety and environmental regulations, and maintaining contact with local emergency services.

Truck drivers should remain vigilant, particularly during adverse weather and in congested areas, and ensure all regulatory and safety measures are strictly observed.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	11.38395, 77.89480	15 KM/Hr
1	Turn	High	11.43811, 77.87348	15 KM/Hr
2	Turn	Medium	11.43956, 77.87340	30 KM/Hr
3	Turn	Medium	11.43971, 77.87348	30 KM/Hr
4	Blind Spot	Blind Spot	11.44029, 77.87544	10 KM/Hr
5	Turn	High	11.37868, 77.89498	15 KM/Hr
6	Turn	High	11.37850, 77.89453	15 KM/Hr
7	Turn	High	11.36604, 77.88887	15 KM/Hr
8	Turn	High	11.29899, 77.75806	15 KM/Hr
9	Turn	High	11.26338, 77.77118	15 KM/Hr
10	Turn	High	11.26326, 77.77100	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Tiruchengode, Goverment Hospital	11.3903328, 77.8920627	30 km/h	Medium
1	hospital	SPM Medical Centre,Tiruchengode	11.3881331, 77.8931963	30 km/h	Medium
5	hospital	T.C.A Hospital Tiruchengode	11.3791885, 77.8965774	30 km/h	Medium
6	hospital	Soorya Multispecialty Hospital	11.3786429, 77.8931912	30 km/h	Medium
7	clinic	Kongu Nursing Home	11.3783065, 77.8961134	30 km/h	Medium
8	hospital	Tiruchengode Government Hospital	11.37645, 77.89426	30 km/h	Medium
9	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	30 km/h	Medium
10	hospital	Tirukumaran Hospitals	11.3782118, 77.8914933	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
2	school	அரசு ஆண்கள் மேல்நிலைப் பள்ளி	11.3850439, 77.8948279	30 km/h	Medium
3	school	அரசு பெண்கள் மேல்நிலைப் பள்ளி	11.3844247, 77.8949053	30 km/h	Medium
4	marketplace	திருச்செங்கோடு தினசரி காய்கறி சந்தை	11.3833608, 77.8970145	30 km/h	Medium
11	school	KSR Educational institution	11.3772013, 77.8908807	30 km/h	Medium
12	school	MDV School	11.3719843, 77.8915244	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.38395, 77.89480



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.44029, 77.87544



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.37868, 77.89498



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.37850, 77.89453



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.36604, 77.88887



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.29899, 77.75806



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.26338, 77.77118



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.26326, 77.77100
