



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to GORAKHPUR TRADING

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

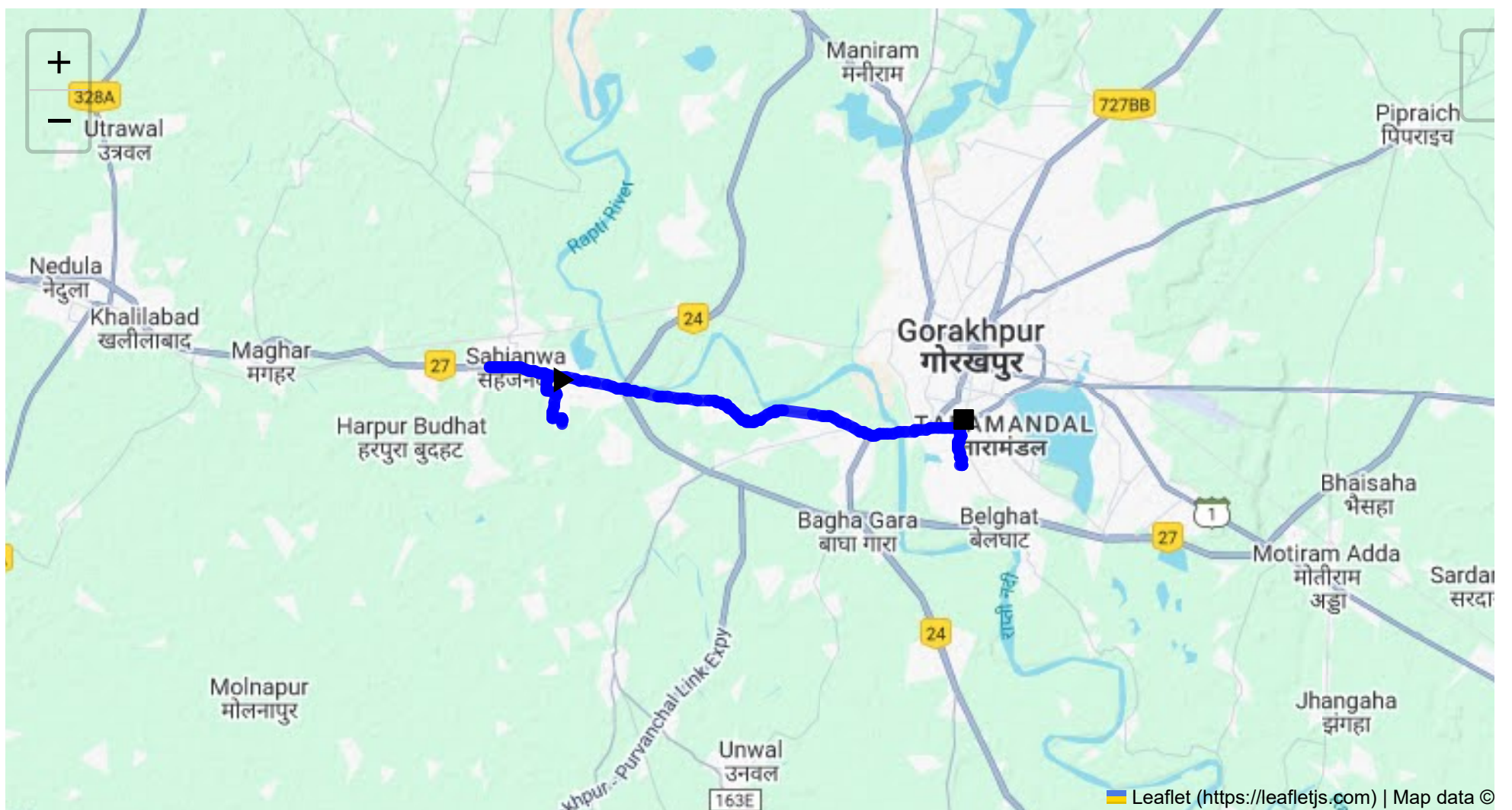
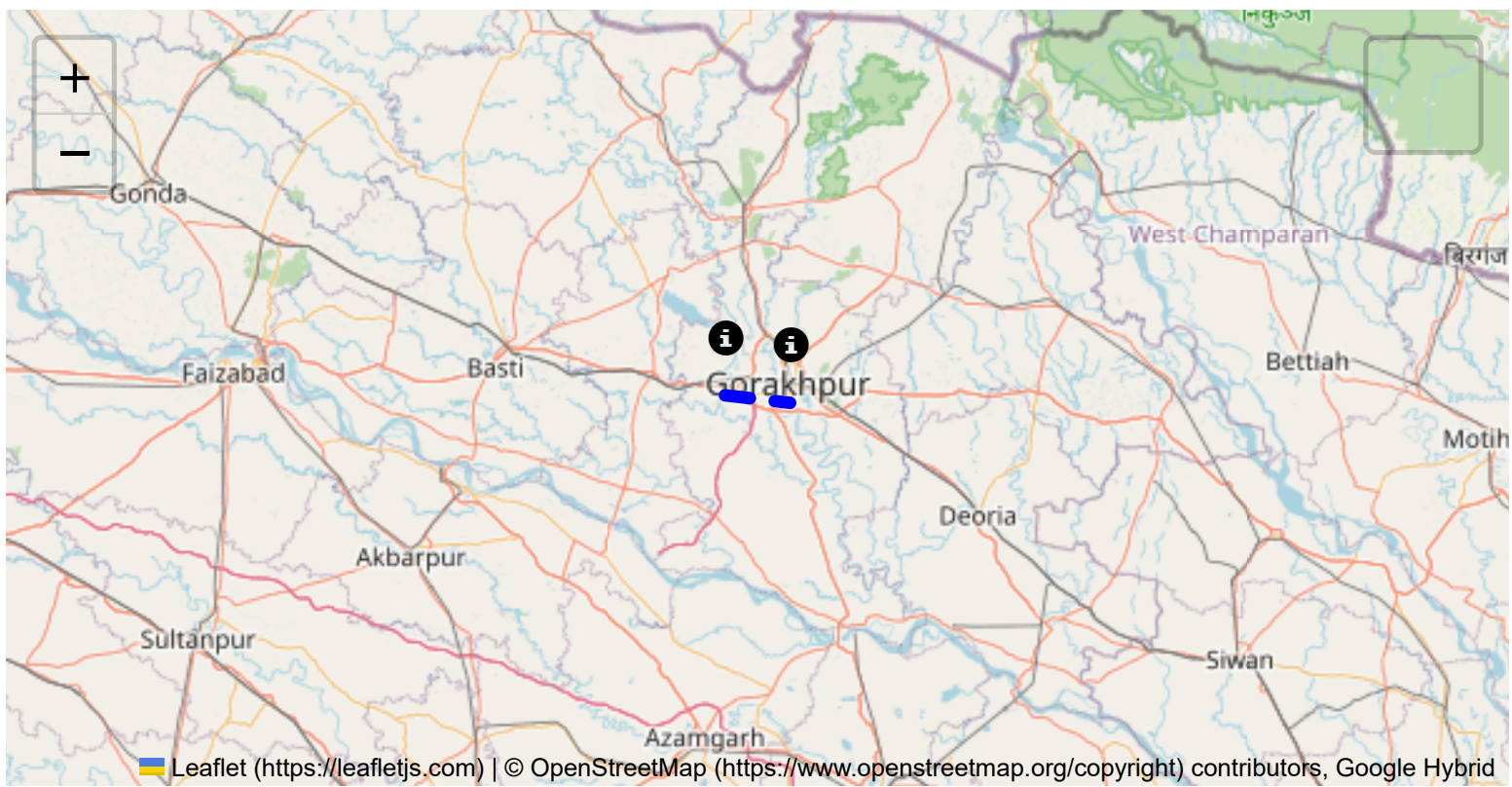
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 22.73 km
Estimated Duration: 0.7 hours
Adjusted Duration (Heavy Vehicle): 0.9 hours
Start: (26.735959, 83.229398)
End: (26.723276, 83.369413)

Welcome to the Journey Risk Management Study

Route Safety Analysis Report

1. Overview of the Route Map

The route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to 467A, Towards Patel Chowk, Prayagpuram Colony in Gorakhpur spans approximately 22.73 kilometers. It is a short drive primarily on

local roads with the possibility of traversing through densely populated urban areas, which can affect driving conditions, particularly for heavy vehicles carrying hazardous materials.

2. Typical Weather Conditions and Potential Hazards

Uttar Pradesh experiences a subtropical climate with three distinct seasons—summer, monsoon, and winter.

- **Summer (March to June):** High temperatures and potential heatwaves.
- **Monsoon (July to September):** Heavy rainfall can lead to flooding and poor road visibility. Waterlogging is a common issue in urban areas.
- **Winter (October to February):** Fog, particularly in the mornings, which can reduce visibility significantly.

Drivers should be prepared to handle slippery or flooded roads during the monsoon season and anticipate potential delays due to fog in the winter.

3. Traffic Patterns and Congestion

- **Peak Hours:** Typically morning hours (8-10 AM) and evening hours (5-8 PM) are peak times, with increased congestion in urban areas.
- **Congestion-Prone Areas:** Areas around commercial hubs and marketplaces are likely to experience heavy traffic, which can impede flow, especially for larger vehicles. The proximity to industrial zones could also increase the number of heavy vehicles on the road.

4. Road Quality and Infrastructure

The road quality ranges from good to moderate in certain stretches. Urban sections might have better-maintained roads, but potholes and uneven surfaces can be expected in less maintained rural stretches. Roadworks could also affect some segments.

5. Alternative Routes for Emergencies

- **Via NH27:** Provides a more direct route, likely with fewer urban congestion points. This highway is better maintained and might have fewer stops.
- **Internal Roads Option:** Using smaller connector roads to bypass specific congested urban areas could be an option but should be used cautiously as they might not be designed for heavy vehicles.

6. Local Regulations for Hazardous Material Transport

Transporting hazardous materials is subject to strict regulations, including obtaining appropriate permits, ensuring properly marked vehicles, and adhering to specific route and timing guidelines to avoid peak traffic.

7. Historical Incidents

While specific historical data may not be readily available, general patterns indicate incidents often result from poor visibility conditions, road surface deterioration, and driver fatigue. Staying informed about local news and incidents is advised.

8. Environmental Considerations and Sensitive Areas

- Residential Areas:** Care should be taken when transporting through residential stretches to minimize noise and air pollution.
- Proximity to Schools/Hospitals:** Awareness of these sensitive zones is crucial when planning journeys with hazardous materials. Reduced speed and heightened caution are necessary.

9. Communication Coverage

Most of the route should have good communication coverage, but rural stretches might experience occasional dead zones. Drivers should ensure that communication devices are fully charged and have alternative contact methods.

10. Estimated Emergency Response Times

- Urban Sections:** Emergency services could respond within 15-20 minutes.
- Rural Sections:** Response times might extend to 30-45 minutes due to poorer infrastructure and road access.

11. Overall Summary of Risk Assessment

The route involves some risks typical of transporting hazardous materials in mixed urban-rural regions. Challenges include weather-induced visibility issues, traffic congestion, and varying road conditions. Constant vigilance, awareness of weather forecasts, alternative emergency routing, and compliance with regulations are essential for safety.

Overall, diligent planning, adherence to safety protocols, and situational awareness will mitigate most risks associated with this route.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73690, 83.22947	15 KM/Hr	0.07 km
3	Turn	High	26.73697, 83.22939	15 KM/Hr	0.11 km
4	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
5	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.48 km
6	Turn	Medium	26.74524, 83.22746	30 KM/Hr	1.30 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
7	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.32 km
8	Turn	Medium	26.74654, 83.22390	30 KM/Hr	1.69 km
9	Turn	Medium	26.74661, 83.22388	30 KM/Hr	1.70 km
10	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
11	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
12	Turn	High	26.75381, 83.20466	15 KM/Hr	4.30 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.97 km
1	U-Turn	High	26.7351051, 83.36905469999999	10 KM/Hr	21.21 km
13	Turn	High	26.73511, 83.36905	15 KM/Hr	21.21 km
14	Blind Spot	Blind Spot	26.73490, 83.36914	10 KM/Hr	21.25 km
15	Turn	High	26.73475, 83.36863	15 KM/Hr	21.29 km
16	Turn	High	26.73196, 83.36947	15 KM/Hr	21.63 km
17	Blind Spot	Blind Spot	26.72300, 83.36993	10 KM/Hr	22.66 km

Emergency Locations

Found: 9 hospital(s), 1 clinic(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
3	hospital	Amrawati Hospital	26.7372636, 83.3626921	30 km/h	Medium	20.54 km
2	hospital	Sangam Eye Hospital	26.7343271, 83.3640482	30 km/h	Medium	20.73 km
0	hospital	Sanjay Fracture Clinic and Maternity Centre	26.7342168, 83.3665873	30 km/h	Medium	20.98 km
1	hospital	The Pride Hospital	26.734908, 83.3669987	30 km/h	Medium	20.98 km
6	clinic	Apollo Clinic	26.738647, 83.367827	30 km/h	Medium	21.21 km
7	hospital	Spectra Eye Centre	26.7366834, 83.3682564	30 km/h	Medium	21.21 km
9	hospital	Aryan Hospital	26.7386077, 83.3733599	30 km/h	Medium	21.21 km

	type	name	coordinates	speed_limit	risk_level	Distance from Start
4	hospital	Jagdish Hospital	26.7348828, 83.3712637	30 km/h	Medium	21.25 km
5	hospital	Medispring Hospital & Research Centre	26.7327713, 83.3700866	30 km/h	Medium	21.50 km
8	hospital	Excel Ortho Care, Shri Hari Pathology	26.7310723, 83.3688339	30 km/h	Medium	21.72 km

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.23 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.30 km

Coordinates: 26.75381, 83.20466



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74681, 83.25111



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 21.21 km

Coordinates: 26.7351051, 83.36905469999999



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 21.21 km

Coordinates: 26.73511, 83.36905



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 21.25 km

Coordinates: 26.73490, 83.36914



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 21.29 km

Coordinates: 26.73475, 83.36863



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 21.63 km

Coordinates: 26.73196, 83.36947



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 22.66 km

Coordinates: 26.72300, 83.36993

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