



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO GEETANJALI INDANE GR

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

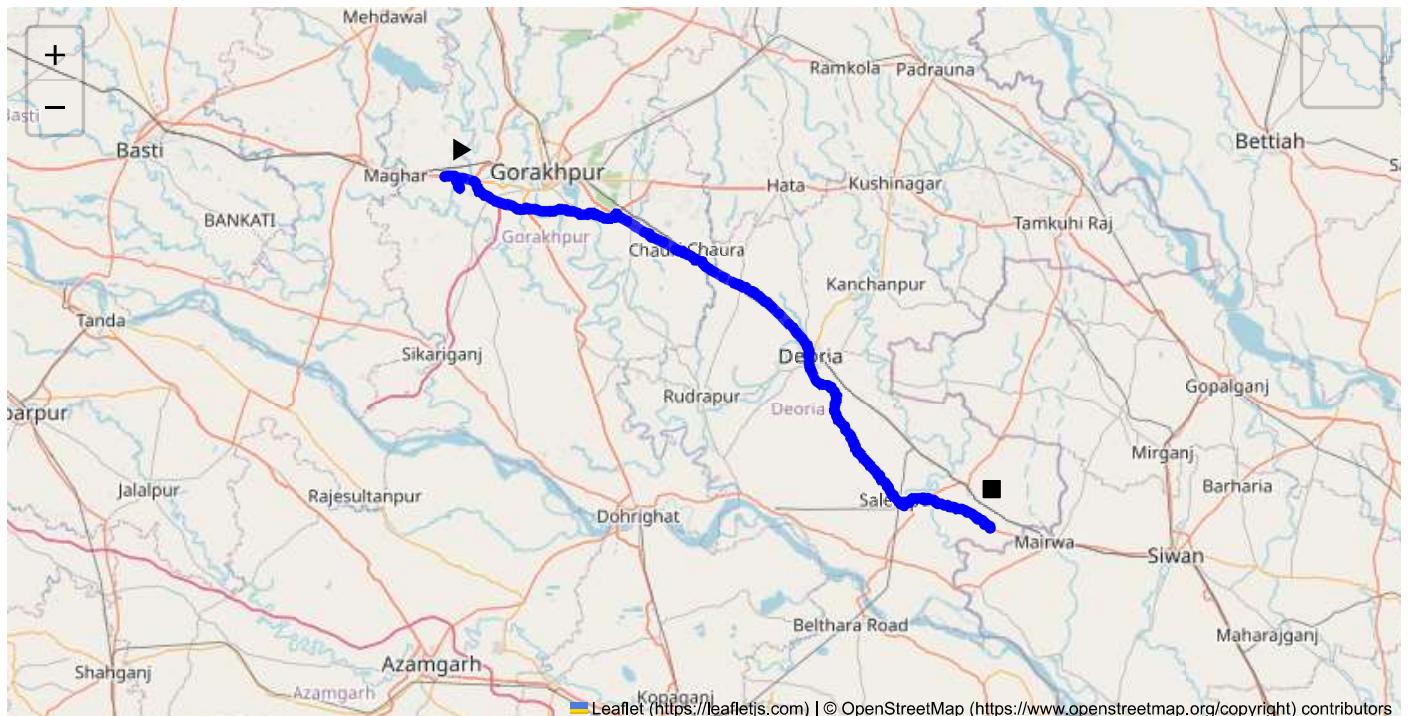
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 116.63 km
Estimated Duration: 2.7 hours
Adjusted Duration (Heavy Vehicle): 3.3 hours
Start: (26.735959, 83.229398)
End: (26.256752, 84.065322)

Welcome to the Journey Risk Management Study

Route Safety Analysis Report

1. Overview of the Route Map

The route covers approximately 116.63 kilometers from the GIDA Industrial Area in Sahjanwa to Sohanpur Bazar in Balua, primarily via state highways and local roads. The journey involves navigating through both urban and semi-urban areas, with varying traffic densities and road conditions.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The region experiences monsoons from June to September, which can lead to flooding and waterlogged roads, causing potential delays and hazards. In summer months, high temperatures can affect vehicle performance, while fog is a concern during winter mornings (December to February), potentially reducing visibility.

3. Analysis of Traffic Patterns

Traffic congestion is common in urban areas near the starting point, especially during morning (8:00-10:00 AM) and evening peak hours (5:00-7:00 PM). Major intersections and market areas are prone to delays. The stretch near Gorakhpur can experience significant traffic due to urban density.

4. Assessment of Road Quality and Infrastructure

Road conditions vary considerably along the route. Sections of local roads may be narrow and in poor condition, while major highways are generally well-maintained. Potholes and uneven surfaces are frequent in rural segments, increasing wear on heavy vehicles.

5. Suggestions for Alternative Routes for Emergencies

In the event of roadblocks or severe congestion, rerouting through NH27 provides an alternative, albeit longer, passage. It offers a better-maintained highway infrastructure and avoids some congestion-prone local roads.

6. Summary of Local Regulations

Local regulations restrict heavy vehicle movement in key urban areas during peak hours to reduce congestion. Additionally, special permits are required for transporting hazardous materials, and specified rest stops must be used.

7. Overview of Historical Incidents

Past incidents include minor road accidents due to narrow rural roads and a reported case of hazardous material spillage near Gorakhpur, emphasizing the need for careful monitoring and adherence to safety protocols.

8. Environmental Considerations

The route passes through agricultural lands and near water bodies where environmental damage from spills could be significant. Efforts must be made to minimize noise and emissions near populated or ecologically sensitive areas.

9. Analysis of Communication Coverage

Mobile network coverage is generally reliable in urban and semi-urban stretches, but there may be dead zones in remote rural areas. Drivers should be equipped with alternate communication tools like satellite phones for these segments.

10. Estimated Emergency Response Times

Emergency response is quicker near urban centers, approximately 15-30 minutes near Gorakhpur, but can extend to an hour or more in remote sections. Drivers should familiarize themselves with local emergency contacts before departure.

12. Overall Summary of Risk Assessment

This route presents moderate to high risk due to varying road conditions, potential weather issues, and significant traffic congestion in urban areas. Key considerations include ensuring weather updates, adhering to local regulations, using alternative routes if necessary, and maintaining clear communication. Frequent assessment of vehicle maintenance and driver readiness to handle emergencies is vital for mitigating risks along this journey.

For the safest travel, planning and flexibility in the schedule are crucial, as is ensuring compliance with all safety and regulatory guidelines for hazardous material transportation.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
3	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
4	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
5	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
6	Turn	High	26.74654, 83.22390	15 KM/Hr	1.63 km
7	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.15 km
8	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.21 km
9	Turn	High	26.75377, 83.20465	15 KM/Hr	4.26 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.12 km
10	Turn	Medium	26.69741, 83.47552	30 KM/Hr	33.23 km
11	Blind Spot	Blind Spot	26.69857, 83.47481	10 KM/Hr	33.39 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.39 km
12	Turn	Medium	26.63752, 83.59723	30 KM/Hr	47.37 km
13	Turn	Medium	26.63761, 83.59795	30 KM/Hr	47.43 km
14	Turn	Medium	26.29409, 83.92225	30 KM/Hr	100.09 km
15	Turn	Medium	26.29365, 83.92376	30 KM/Hr	100.34 km
16	Turn	High	26.28964, 83.92949	15 KM/Hr	101.13 km
17	Turn	Medium	26.29770, 83.96024	30 KM/Hr	104.49 km
18	Turn	Medium	26.29598, 83.96354	30 KM/Hr	104.96 km
19	Turn	Medium	26.29648, 83.97616	30 KM/Hr	106.11 km
20	Blind Spot	Blind Spot	26.25728, 84.06589	10 KM/Hr	116.41 km

Emergency Locations

Found: 5 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.96 km
3	hospital	Mahadeva Hospital and Maternity Home	26.4993, 83.7754301	30 km/h	Medium	71.41 km
2	hospital	DWH Deoria	26.4955581, 83.7819431	30 km/h	Medium	71.88 km
4	hospital	Government Hospital, Khukhundoo	26.3985008, 83.8418815	30 km/h	Medium	85.71 km
6	hospital	Government Hospital Raghunathpur	26.2673956, 84.050619	30 km/h	Medium	114.52 km

Crowded Spots

Found: 1 college(s), 1 school(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
1	college	BRD PG college	26.5161416, 83.7720277	30 km/h	Medium	69.24 km
5	school	SKP SAINIK PUBLIC SCHOOL	26.3237671, 83.8958075	30 km/h	Medium	95.69 km

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.15 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.21 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.26 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 8.12 km
Coordinates: 26.74681, 83.25111



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 33.23 km
Coordinates: 26.69741, 83.47552



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 33.39 km**Coordinates:** 26.69857, 83.47481

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Risk Type: U-Turn**Risk Level:** High**Speed Limit:** 10 KM/Hr**Distance from Start:** 33.39 km**Coordinates:** 26.698439, 83.4747268



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 47.37 km**Coordinates:** 26.63752, 83.59723

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 47.43 km**Coordinates:** 26.63761, 83.59795



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 100.09 km

Coordinates: 26.29409, 83.92225



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 100.34 km

Coordinates: 26.29365, 83.92376



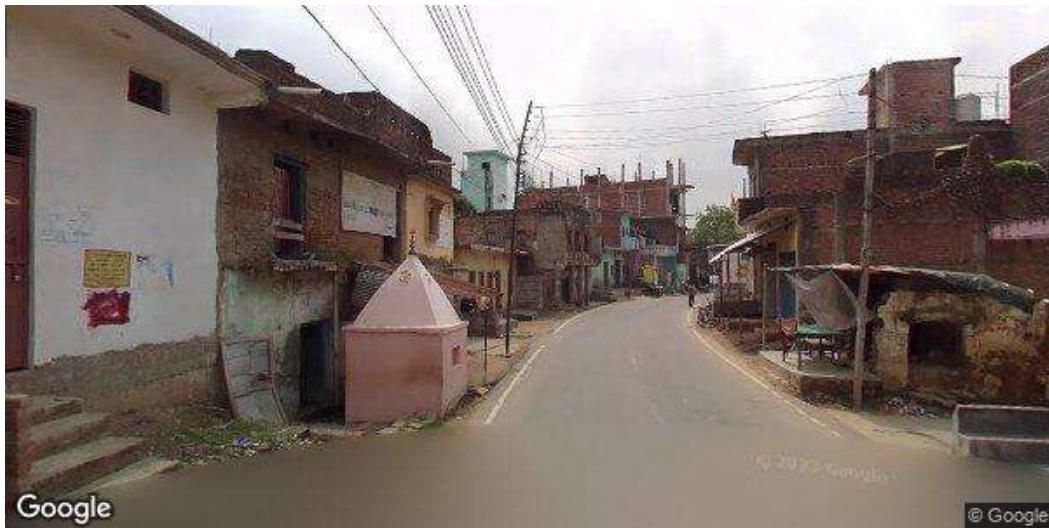
Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 101.13 km

Coordinates: 26.28964, 83.92949



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 104.49 km

Coordinates: 26.29770, 83.96024



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 104.96 km

Coordinates: 26.29598, 83.96354



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 106.11 km

Coordinates: 26.29648, 83.97616

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