



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO SHREE AARUSH INDANE

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

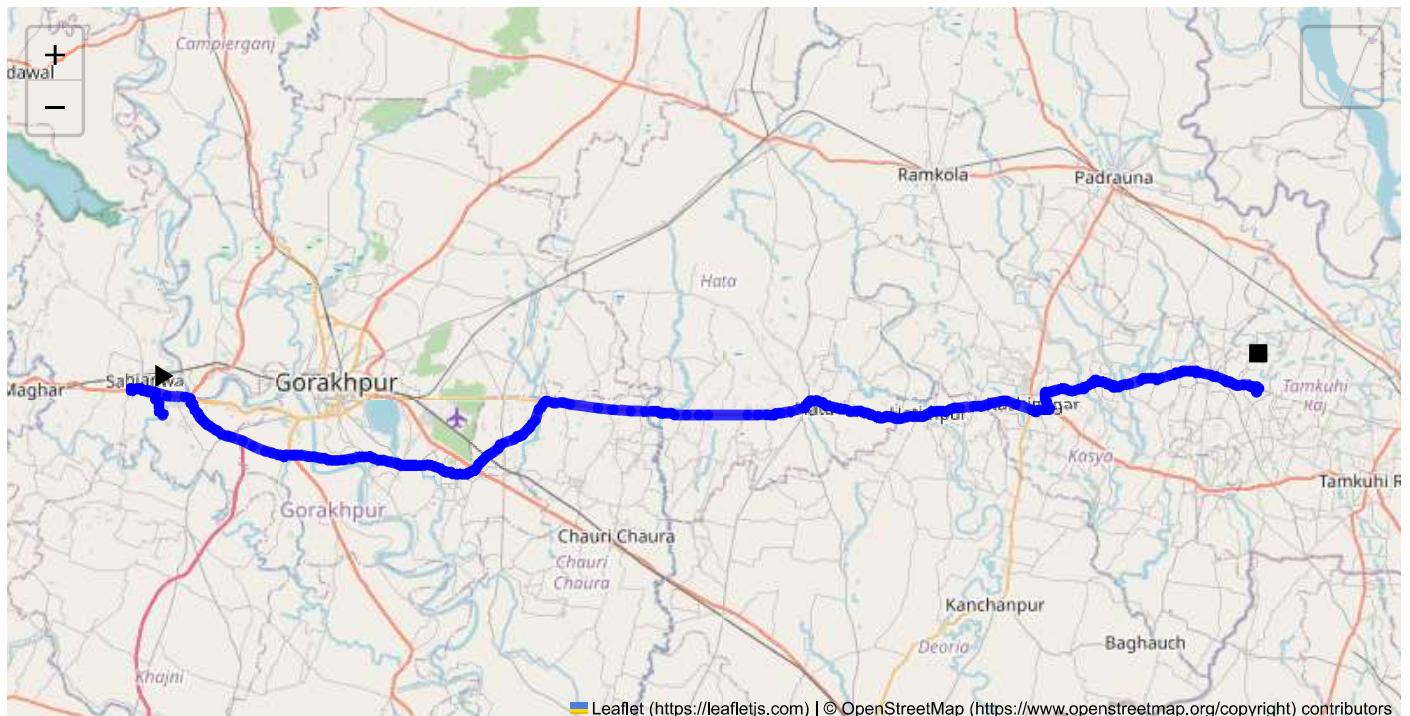
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 100.69 km
Estimated Duration: 2.1 hours
Adjusted Duration (Heavy Vehicle): 2.7 hours
Start: (26.735959, 83.229398)
End: (26.751531, 84.091914)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to Q32R+JMH, Gurwalia covers approximately 100.69 kilometers. The journey typically follows major highways and local roads, passing

through urban and rural areas. This part of Uttar Pradesh consists of a mix of industrial, agricultural, and residential zones.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Uttar Pradesh experiences a humid subtropical climate. Weather conditions can vary significantly:

- **Summer (March to June):** High temperatures can lead to road surface melting and engine overheating.
- **Monsoon (July to September):** Heavy rain can cause flooding and waterlogging, particularly in low-lying sections.
- **Winter (December to February):** Fog can reduce visibility, especially in the early mornings and evenings.

3. Traffic Patterns

- **Peak Hours:** Typically, 8:00 AM - 10:00 AM and 5:00 PM - 7:00 PM.
- **Congestion-Prone Areas:** Industrial areas near Sahjanwa tend to experience congestion, as do market areas within towns along the route.

4. Assessment of Road Quality and Infrastructure

- **Highway Conditions:** National highways are generally in good condition but can have occasional construction zones.
- **Local Roads:** These can vary in quality, with potential potholes and narrower lanes. Be cautious of sharp turns and livestock on rural roads.

5. Suggestions for Alternative Routes

In case of emergencies or road closings:

- **Route A:** Alternate highway bypasses around major towns could be used.
- **Route B:** Rely on local roads parallel to major highways, using mapping tools to identify these paths for bypassing specific congestion points.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Uttar Pradesh has strict regulations regarding the transport of hazardous materials. Compliance with national guidelines is mandatory, including proper labeling, documentation, and permits. Night transportation of hazardous materials is generally discouraged.

7. Overview of Historical Incidents

Historical data indicates occasional incidents involving heavy vehicles in industrial areas. Most are linked to mechanical failures or driver error, rather than specific route hazards.

8. Environmental Considerations and Sensitive Areas

- Forests and Water Bodies:** Route includes proximity to natural reserves and rivers. Avoid spills to prevent contamination.
- Populated Areas:** Exercise caution in urban and village regions to minimize risk to residents.

9. Analysis of Communication Coverage

Mobile network coverage is generally reliable on highways and in urban areas. However, rural sections might experience dead zones due to sparse tower installations.

10. Estimated Emergency Response Times

- Urban Areas:** 20-30 minutes for emergency services to arrive.
- Rural Areas:** Response times can exceed an hour due to distance and road accessibility.

12. Overall Summary of Risk Assessment

This route presents moderate risk due to potential weather impacts, varying road conditions, and localized congestion. Plan travels considering peak traffic times and potential construction slowdowns. Ensure adherence to hazardous material transport regulations and remain communicative with regular updates to a central dispatch to mitigate any emerging risks.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
2	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
3	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
4	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
5	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km
6	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
7	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.79 km
8	Turn	High	26.73919, 83.92809	15 KM/Hr	81.41 km
9	Turn	Medium	26.74132, 83.92916	30 KM/Hr	81.71 km
10	Turn	High	26.75149, 83.92601	15 KM/Hr	82.89 km
11	Turn	Medium	26.75972, 83.96613	30 KM/Hr	87.04 km
12	Turn	Medium	26.76067, 84.01383	30 KM/Hr	91.96 km
13	Turn	Medium	26.76687, 84.03608	30 KM/Hr	94.34 km
14	Blind Spot	Blind Spot	26.75459, 84.09340	10 KM/Hr	100.19 km

Emergency Locations

Crowded Spots

Found: 1 school(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	school	Nav Jeevan Mission School	26.7533108, 83.9374379	30 km/h	Medium	83.90 km

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.16 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.22 km

Coordinates: 26.75353, 83.20457



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 4.27 km**Coordinates:** 26.75377, 83.20465

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Risk Type: Roundabout**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 8.79 km**Coordinates:** 26.74681, 83.25111



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 81.41 km**Coordinates:** 26.73919, 83.92809

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 81.71 km**Coordinates:** 26.74132, 83.92916



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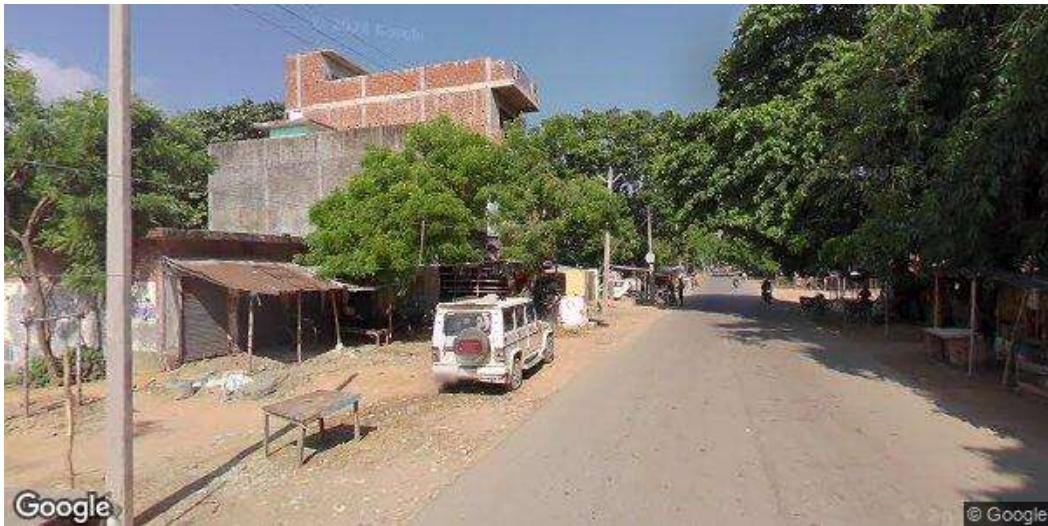
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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 82.89 km**Coordinates:** 26.75149, 83.92601

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 87.04 km**Coordinates:** 26.75972, 83.96613



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 91.96 km

Coordinates: 26.76067, 84.01383



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 94.34 km

Coordinates: 26.76687, 84.03608



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 100.19 km**Coordinates:** 26.75459, 84.09340

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