JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to ALOK INDANE GRAMIN VITRAK

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

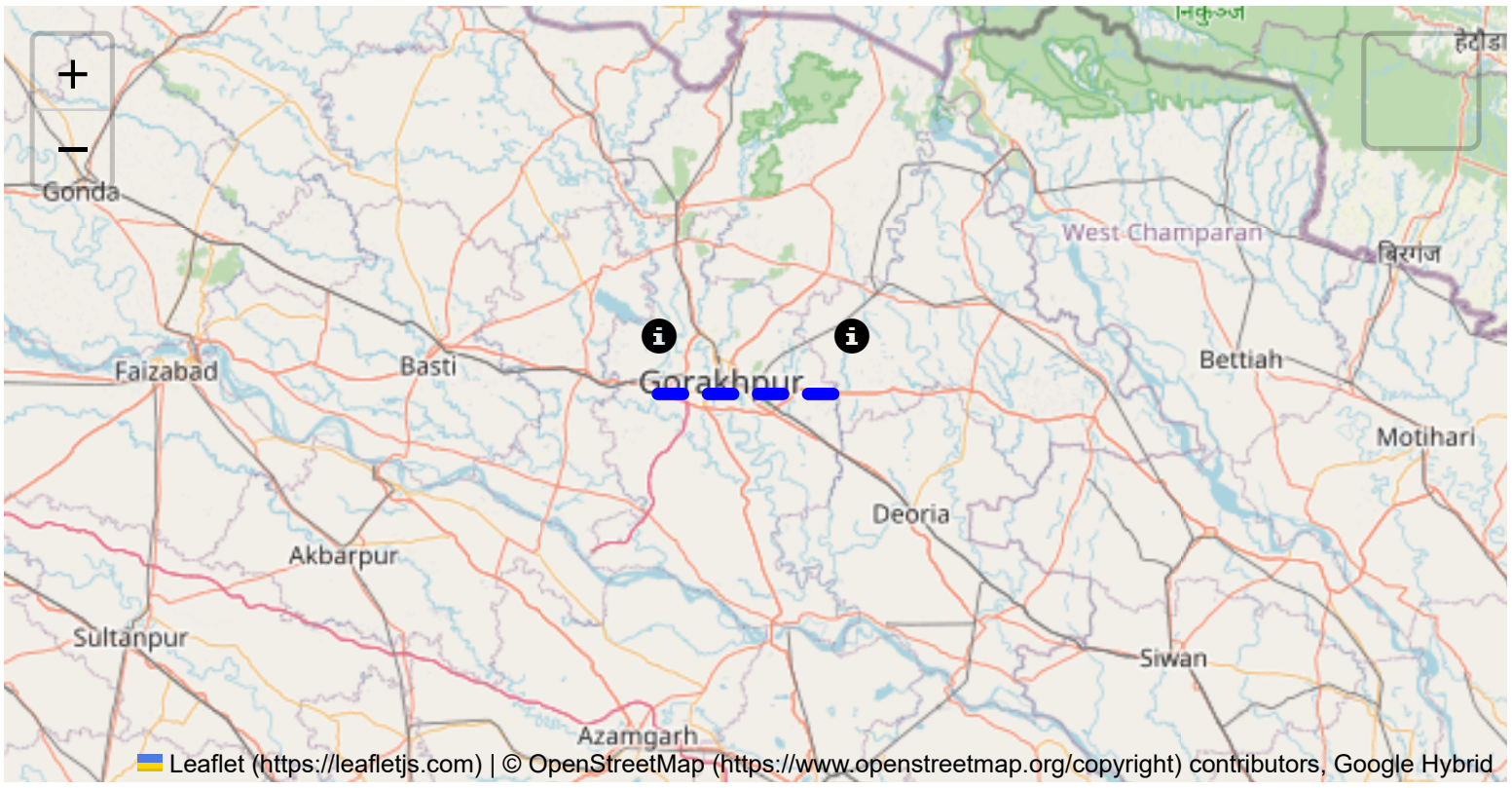
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 53.33 km
Estimated Duration: 1.1 hours
Adjusted Duration (Heavy Vehicle): 1.4 hours
Start: (26.735959, 83.229398)
End: (26.736549, 83.651991)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from the GIDA Industrial Area in Sahjanwa to Upaspur primarily follows major highways and involves traversing various urban and rural settings. The path involves NH27, a significant highway facilitating regional traffic. This approximately 53.33-kilometer journey includes highway segments and rural roads.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The region generally experiences warm weather with temperatures peaking in summer. The monsoon season (June to September) may present challenges, such as heavy rainfall leading to waterlogged roads and decreased visibility. Winter fog (December to January) can also pose a risk, making it crucial to be cautious during early mornings and late evenings.

3. Analysis of Traffic Patterns

Traffic volumes peak during morning hours (8:00-10:00 AM) and evening hours (5:00-7:00 PM). Congestion is notably near urban centers and junctions, particularly at intersections with local roads and NH27. Plan departures to avoid these peak times for smoother transit.

4. Assessment of Road Quality and Infrastructure

NH27 is a relatively well-maintained highway, with sections undergoing periodic maintenance. However, rural roads linking the main highway to final destinations may exhibit poorer conditions, with potential potholes and uneven surfaces, requiring cautious driving.

5. Suggestions for Alternative Routes for Emergencies

In case of road closures or emergencies, alternative routes may involve using SH1 or other state highways. Diversion through smaller local roads should be approached with caution due to variable conditions.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Local regulations mandate that vehicles carrying hazardous materials display proper signage and comply with specific transport timings, often restricting travel through dense urban areas during peak hours. Ensure all documentation is current and readily available during transit.

7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

Records indicate occasional occurrences of incidents due to vehicle malfunction or adverse conditions. Incidents are more frequently recorded during monsoon seasons, emphasizing the necessity for regular vehicle maintenance and monitoring of road conditions.

8. Environmental Considerations and Sensitive Areas

The route traverses agricultural and rural zones, with potential exposure to environmental sensitivities, requiring careful handling of hazardous materials to prevent spills or leaks. There are also nearby rivers and water bodies which should be protected from contamination.

9. Analysis of Communication Coverage

Network coverage along NH27 is generally reliable; however, rural segments may experience occasional dead zones. It is advisable to carry communication equipment that can function in low-signal conditions, such as satellite phones.

10. Estimated Emergency Response Times

Emergency response times will vary, with more urban areas providing faster responses (approximately 20-30 minutes) compared to rural areas where it may extend to 45 minutes or longer. Familiarize yourself with local emergency contact numbers and services.

11. An Overall Summary of Risk Assessment

Assessing the route reveals significant risks primarily related to weather conditions and road quality in rural areas. Adequate planning to avoid peak congestion times, coupled with diligent navigation of monsoon and fog conditions, will mitigate these risks. Ensuring proper vehicle maintenance and adherence to regulations, particularly regarding hazardous materials, is crucial to minimizing potential hazards.

By staying informed and prepared, drivers can navigate this route safely, ensuring efficient and incident-free transportation of goods.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.07 km
2	Turn	High	26.73697, 83.22939	15 KM/Hr	0.11 km
3	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
4	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.48 km
5	Turn	Medium	26.74524, 83.22746	30 KM/Hr	1.30 km
6	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.32 km
7	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
8	Turn	Medium	26.74661, 83.22388	30 KM/Hr	1.70 km
9	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
10	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
11	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
12	Turn	Medium	26.74656, 83.25154	30 KM/Hr	9.05 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
13	Turn	Medium	26.74644, 83.25150	30 KM/Hr	9.07 km
14	Turn	Medium	26.74306, 83.25344	30 KM/Hr	9.49 km
15	Turn	Medium	26.74300, 83.25343	30 KM/Hr	9.50 km
16	Turn	Medium	26.74526, 83.53161	30 KM/Hr	41.18 km
17	Blind Spot	Blind Spot	26.73612, 83.65179	10 KM/Hr	53.11 km
18	Turn	Medium	26.73618, 83.65175	30 KM/Hr	53.19 km
19	Turn	Medium	26.73626, 83.65141	30 KM/Hr	53.21 km
20	Turn	High	26.73630, 83.65136	15 KM/Hr	53.23 km
21	Turn	High	26.73661, 83.65145	15 KM/Hr	53.25 km

Emergency Locations

Found: 2 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.38 km
1	hospital	RG Hospital	26.7372178, 83.5824469	30 km/h	Medium	46.29 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: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.05 km

Coordinates: 26.74656, 83.25154

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.07 km

Coordinates: 26.74644, 83.25150

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.49 km

Coordinates: 26.74306, 83.25344

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.50 km

Coordinates: 26.74300, 83.25343

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 41.18 km

Coordinates: 26.74526, 83.53161

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 53.11 km

Coordinates: 26.73612, 83.65179

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 53.19 km

Coordinates: 26.73618, 83.65175

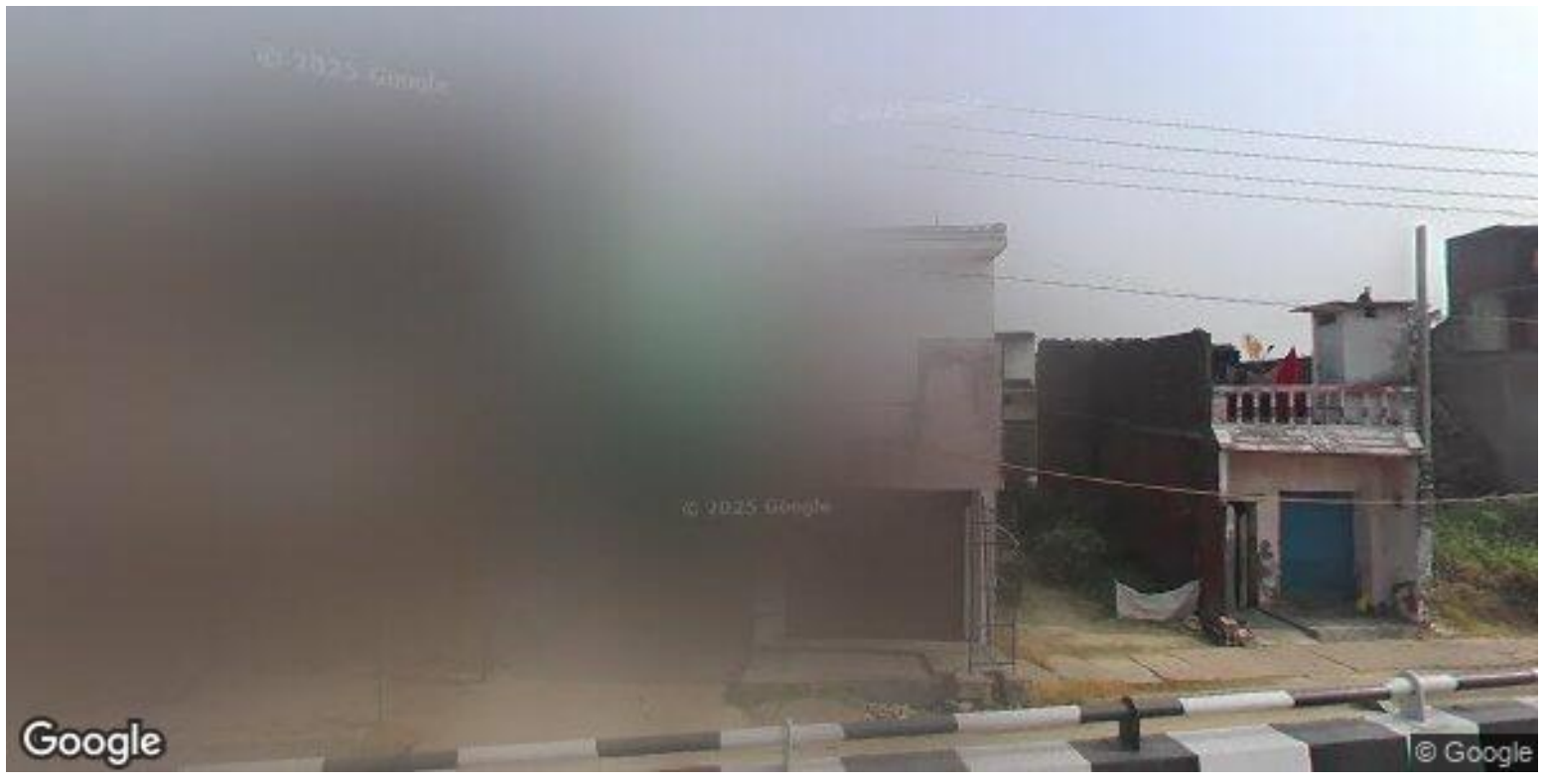
Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 53.21 km

Coordinates: 26.73626, 83.65141



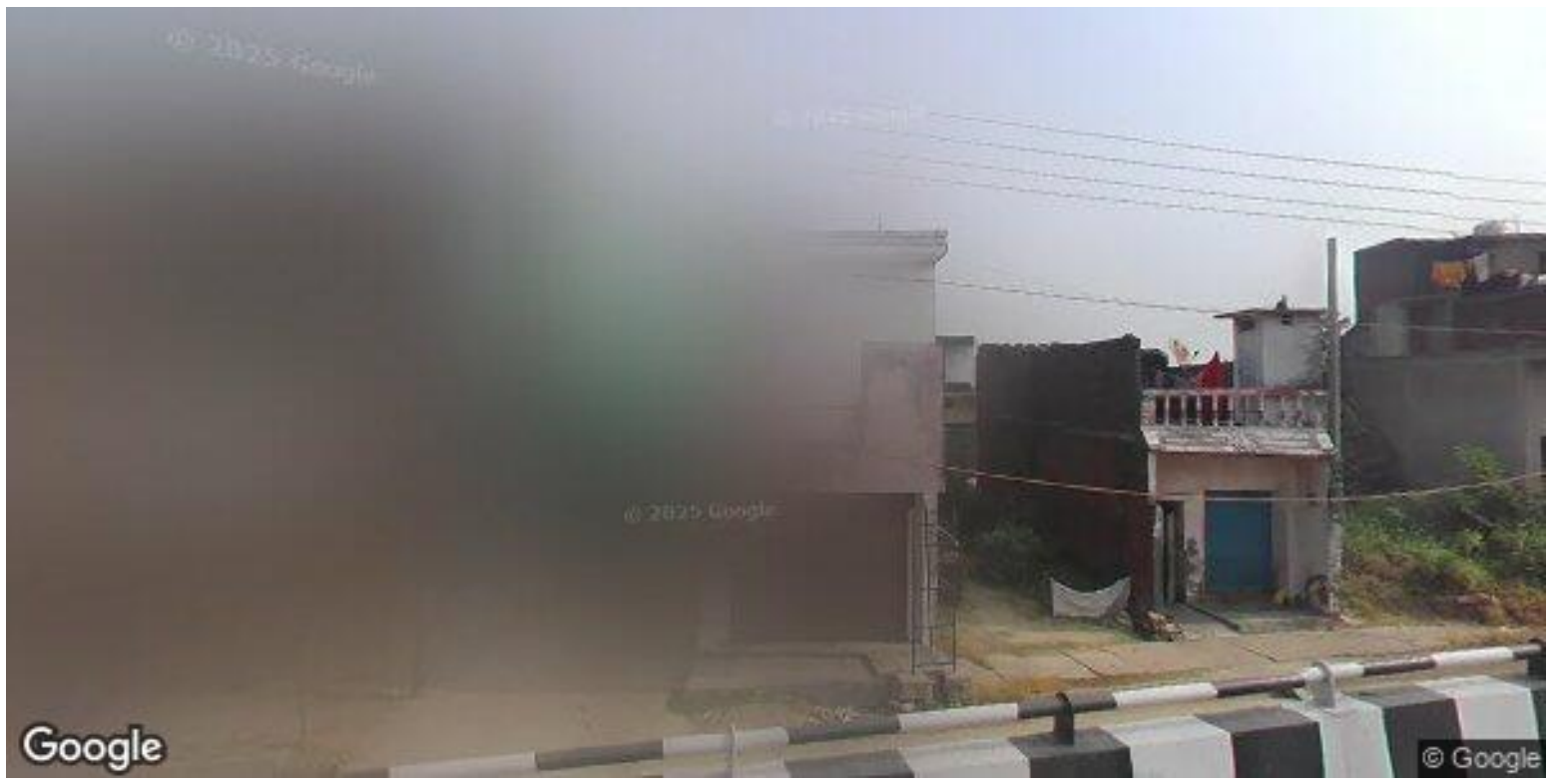
Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.23 km

Coordinates: 26.73630, 83.65136



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.25 km

Coordinates: 26.73661, 83.65145

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