JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO RAMPRASAD INDANE GAS

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

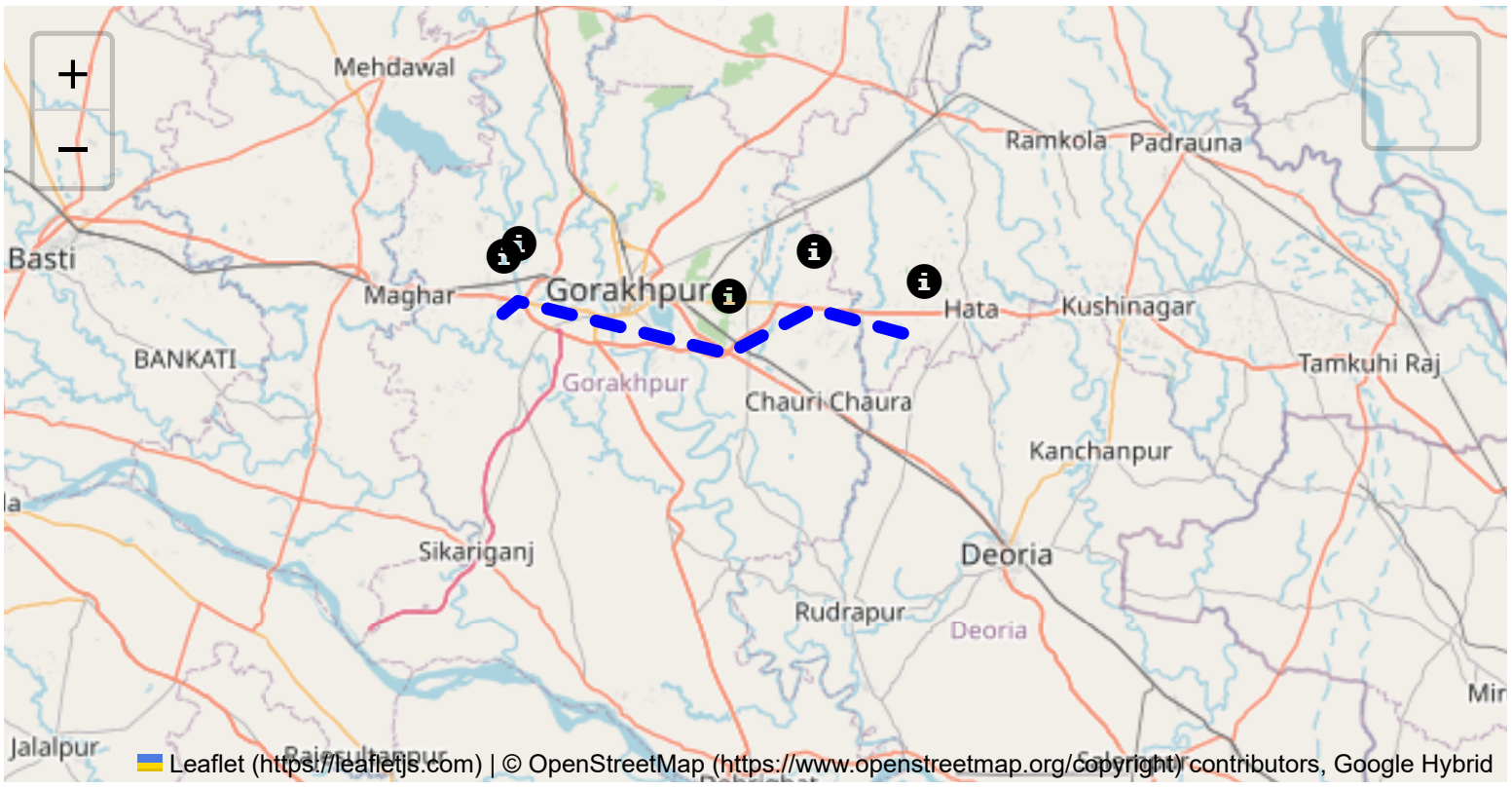
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 63.22 km
Estimated Duration: 1.4 hours
Adjusted Duration (Heavy Vehicle): 1.7 hours
Start: (26.735959, 83.229398)
End: (26.710382, 83.692403)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from P6PH+9Q GIDA Industrial Area Phase 1 to PM6R+5X Rampur Sohrauna via the specified waypoints covers approximately 63.22 kilometers. The journey typically follows state highways and rural roads, which connect industrial and semi-urban areas. The route passes through a mix of urbanized and rural landscapes.

2. Typical Weather Conditions and Hazards

The region experiences a tropical climate with distinctly hot summers, a monsoon season from July to September, and mild winters. The monsoon season can potentially lead to flooding and waterlogging on certain road segments, which increases the risk of accidents or delays. Dust storms in the pre-monsoon period may also affect visibility.

3. Traffic Patterns and Congestion

Traffic in this region is generally heavier during the morning and evening rush hours, typically from 8:00 to 10:00 AM and 5:00 to 7:00 PM. Congestion is more likely near market areas and urban centers, especially in the towns situated along the route, like Sahjanwa and Kaalesar. Commercial vehicles should avoid traveling during these times if possible to minimize delays.

4. Road Quality and Infrastructure

The primary roadways are generally in reasonable condition, but some rural segments may suffer from poor maintenance, leading to potholes and uneven surfaces. Rural roads may also be narrow, making navigation challenging for large trucks, especially if they are carrying hazardous materials.

5. Suggestions for Alternative Routes

In case of emergencies or roadblocks, consider using the NH27, which runs parallel and could offer faster transit under specific conditions. However, local detours may be needed during peak congestion or significant roadworks.

6. Local Regulations for Hazardous Material Transport

Transport of hazardous materials requires compliance with local and national guidelines, including proper labeling and documentation. Operating hours for dangerous goods are often limited during peak traffic times in populated areas to minimize risk. Ensure that vehicles comply with the Central Motor Vehicles Rules (CMV) and any specific state regulations regarding hazardous materials.

7. Historical Incidents

While specific data on historical incidents might be limited, it's known that highways in Uttar Pradesh have witnessed accidents involving heavy vehicles, often due to road conditions or weather-related issues. It's crucial to maintain regular checks on vehicle fitness and driver alertness.

8. Environmental Considerations

There are a few environmentally sensitive areas along the route, including agricultural land and small water bodies. Care should be taken to prevent contamination due to spills, and adherence to established routes is crucial to minimize ecological impact.

9. Communication Coverage

Most of the route has decent mobile network coverage, but signal strength may weaken in more remote areas, especially in certain rural segments. It’s advisable for drivers to have backup communication methods or offline maps for navigation.

10. Estimated Emergency Response Times

Emergency response times can vary significantly, with urban centers responding faster (typically 15-30 minutes), while rural areas might experience delays of up to an hour. Emergency services are often better near larger towns.

12. Overall Summary of Risk Assessment

The route poses a moderate risk for transporting hazardous materials due to variable road conditions, traffic congestion, and weather-related challenges. Adequate preparation, alternative route planning, and strict adherence to safety protocols can mitigate these risks significantly. Enhanced driver training focusing on local conditions and emergency procedures is advisable to ensure safe passage.

In essence, careful planning and awareness of local conditions and infrastructure are key in managing the 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	0.05 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	1.28 km
7	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.31 km
8	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 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	8.90 km
12	Turn	Medium	26.74658, 83.25155	30 KM/Hr	9.05 km
13	Turn	Medium	26.74646, 83.25151	30 KM/Hr	9.07 km
14	Turn	Medium	26.74310, 83.25343	30 KM/Hr	9.48 km
15	Turn	Medium	26.74526, 83.53161	30 KM/Hr	41.17 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
16	Turn	High	26.74501, 83.53448	15 KM/Hr	41.39 km
17	Turn	High	26.74508, 83.53450	15 KM/Hr	41.47 km
18	Turn	High	26.73953, 83.58576	15 KM/Hr	46.59 km
19	Turn	High	26.73944, 83.58576	15 KM/Hr	46.61 km
20	Blind Spot	Blind Spot	26.73580, 83.69460	10 KM/Hr	57.35 km
21	Turn	High	26.73588, 83.69460	15 KM/Hr	57.45 km
22	Blind Spot	Blind Spot	26.73590, 83.69894	10 KM/Hr	57.84 km
1	U-Turn	High	26.7358961, 83.6989372	10 KM/Hr	57.84 km
23	Turn	High	26.73564, 83.69893	15 KM/Hr	57.90 km
24	Turn	High	26.73565, 83.68774	15 KM/Hr	58.77 km
25	Turn	High	26.70846, 83.68305	15 KM/Hr	62.19 km
26	Turn	Medium	26.70844, 83.68565	30 KM/Hr	62.46 km
27	Turn	Medium	26.70833, 83.68589	30 KM/Hr	62.48 km
28	Turn	Medium	26.71064, 83.69071	30 KM/Hr	63.00 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	RG Hospital	26.7372178, 83.5824469	30 km/h	Medium	46.11 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: 8.90 km

Coordinates: 26.74681, 83.25111

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.05 km

Coordinates: 26.74658, 83.25155

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.07 km

Coordinates: 26.74646, 83.25151

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.48 km

Coordinates: 26.74310, 83.25343

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 41.17 km

Coordinates: 26.74526, 83.53161

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 41.39 km

Coordinates: 26.74501, 83.53448

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 41.47 km

Coordinates: 26.74508, 83.53450

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 46.59 km

Coordinates: 26.73953, 83.58576

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 46.61 km

Coordinates: 26.73944, 83.58576

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 57.35 km

Coordinates: 26.73580, 83.69460

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 57.45 km

Coordinates: 26.73588, 83.69460

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 57.84 km

Coordinates: 26.73590, 83.69894

Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 57.84 km

Coordinates: 26.7358961, 83.6989372

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 57.90 km

Coordinates: 26.73564, 83.69893

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 58.77 km

Coordinates: 26.73565, 83.68774

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