JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to ANANDNAGAR INDANE GAS SERVICE

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

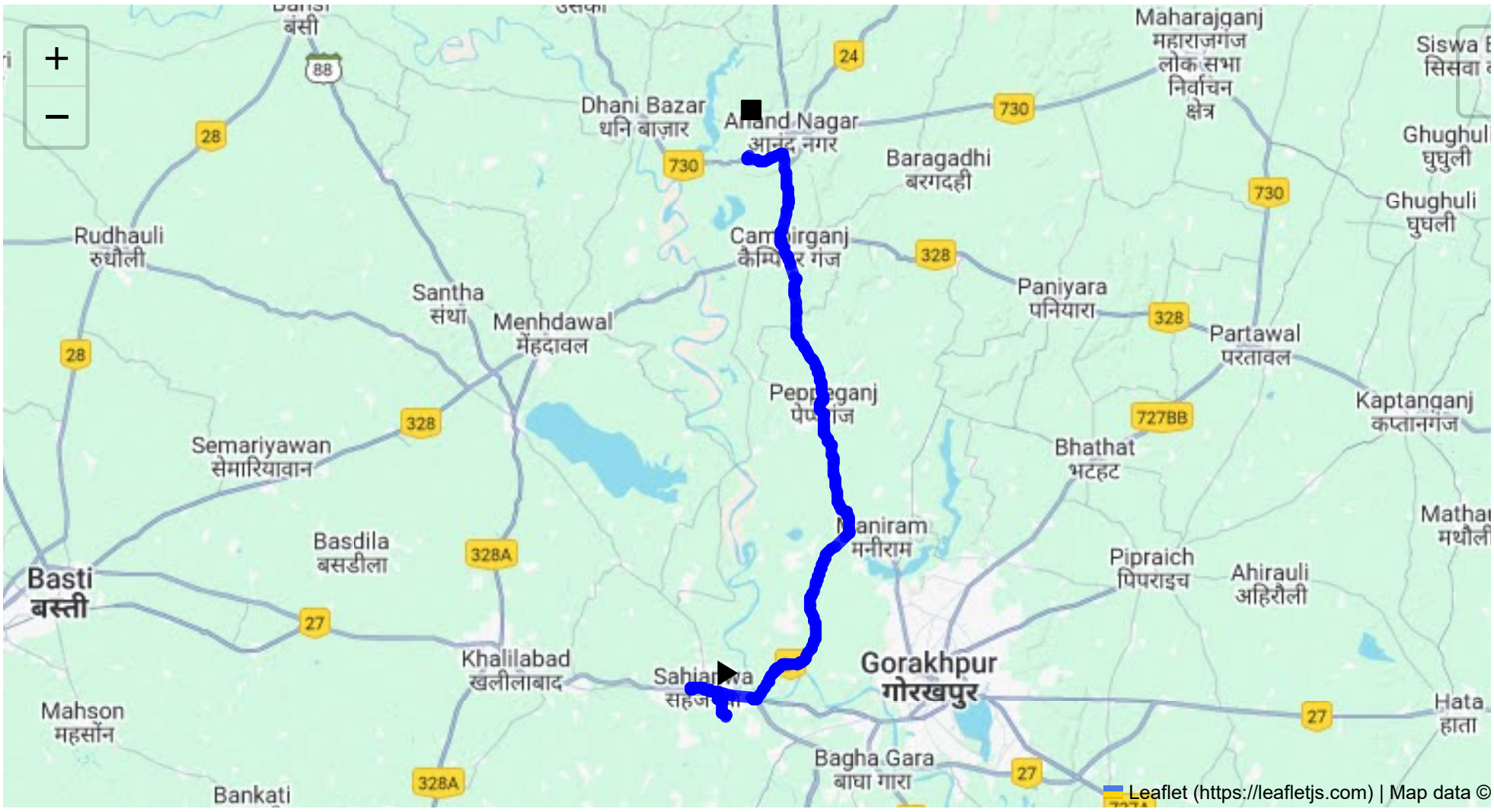
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 54.48 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.6 hours
Start: (26.735959, 83.229398)
End: (27.08803, 83.24643)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1, Sahjanwa to Sidhwari in Uttar Pradesh is approximately 54.48 kilometers, typically traversing via NH27 and local roads. This route passes through a mix of industrial, rural, and semi-urban areas.

2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Weather:** The region experiences hot summers and cool winters, with a monsoon season typically between late June and September.
- **Hazards:** Monsoons can lead to waterlogged roads and reduced visibility, impacting driving conditions. In winter, fog can be dense and prolonged, especially in the early morning and late evening.

3. Analysis of Traffic Patterns

- **Peak Hours:** Morning (8:00 AM - 10:00 AM) and evening (6:00 PM - 8:00 PM) are peak traffic times, particularly near city areas like Gorakhpur.
- **Congestion-Prone Areas:** Gorakhpur junctions and markets along NH27 can become congested, especially during festivals or local events.

4. Assessment of Road Quality and Infrastructure

- **Highways:** NH27 is generally well-maintained. However, potholes and uneven surfaces can be found, particularly following monsoon rains.
- **Local Roads:** Smaller roads leading to Sidhwari may have narrower lanes and less lighting, impacting safety during night travels.

5. Suggestions for Alternative Routes for Emergencies

- An alternative route could involve bypassing congested areas by taking state highways, though these may add travel time. Real-time navigation systems like Google Maps should be consulted for current conditions and detours.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- Truck operators must comply with local restrictions on the transport of hazardous materials, including adherence to designated transport corridors and stringent documentation.
- Time restrictions may apply, limiting the movement of heavy vehicles during peak hours in certain urban areas.

7. Overview of Historical Incidents

- Historical data indicates sporadic incidents involving heavy vehicles, often linked to poor road conditions during monsoons or fog-related accidents.
- No major hazardous material incidents have been recorded recently, but vigilance is still advised due to the route's mixed-use nature.

8. Environmental Considerations and Sensitive Areas

- Environmental regulations may apply near agricultural fields and water bodies.
- Sensitivity to rural community spaces is essential, and speed restrictions should be respected near populated areas to minimize noise and air pollution.

9. Analysis of Communication Coverage

- Mobile network coverage is generally reliable along NH27. However, intermittent coverage may occur in rural segments and forested areas off the main highway.
- Preparedness for these dead zones is essential, with alternative communication methods available if needed.

10. Estimated Emergency Response Times

- On average, emergency response times vary from 20-40 minutes in urban areas like Gorakhpur to over an hour in more remote segments near Sidhwari.
- Rapid access to local provider details and contact numbers is essential for quick assistance.

11. Overall Summary of Risk Assessment

The route from Sahjanwa to Sidhwari is reasonably well-established but requires careful navigation, especially during adverse weather conditions. Traffic congestion in urban areas and the variable quality of rural roads are notable concerns. Emergency responses are likely to be slower in rural areas, stressing the importance of cautious driving and proactive route management. Overall, with proper planning and awareness, risks can be effectively managed for a safe journey.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.05 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	1.28 km
6	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.31 km
7	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
8	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
9	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
10	Turn	High	26.75377, 83.20465	15 KM/Hr	4.28 km
11	Turn	Medium	26.74709, 83.24930	30 KM/Hr	8.79 km
12	Turn	Medium	26.74703, 83.25096	30 KM/Hr	8.97 km
13	Turn	Medium	26.74767, 83.25139	30 KM/Hr	9.04 km
14	Turn	High	26.74769, 83.25146	15 KM/Hr	9.06 km
0	Roundabout	High	26.86209, 83.31517	15 KM/Hr	24.86 km
15	Turn	High	27.02516, 83.27240	15 KM/Hr	44.14 km
16	Turn	High	27.02517, 83.27234	15 KM/Hr	44.18 km
17	Turn	Medium	27.03462, 83.26753	30 KM/Hr	45.32 km
18	Turn	High	27.08838, 83.26991	15 KM/Hr	51.39 km
19	Blind Spot	Blind Spot	27.08509, 83.24442	10 KM/Hr	54.02 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Gov. Hospital Campierganj, Gorakhapur	27.0232049, 83.2676768	30 km/h	Medium	44.20 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: 4.28 km

Coordinates: 26.75377, 83.20465

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 8.79 km

Coordinates: 26.74709, 83.24930

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74703, 83.25096

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.04 km

Coordinates: 26.74767, 83.25139

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 9.06 km

Coordinates: 26.74769, 83.25146

Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 24.86 km

Coordinates: 26.86209, 83.31517

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 51.39 km

Coordinates: 27.08838, 83.26991

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 54.02 km

Coordinates: 27.08509, 83.24442

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