



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO ADITYA INDANE GAS SE

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

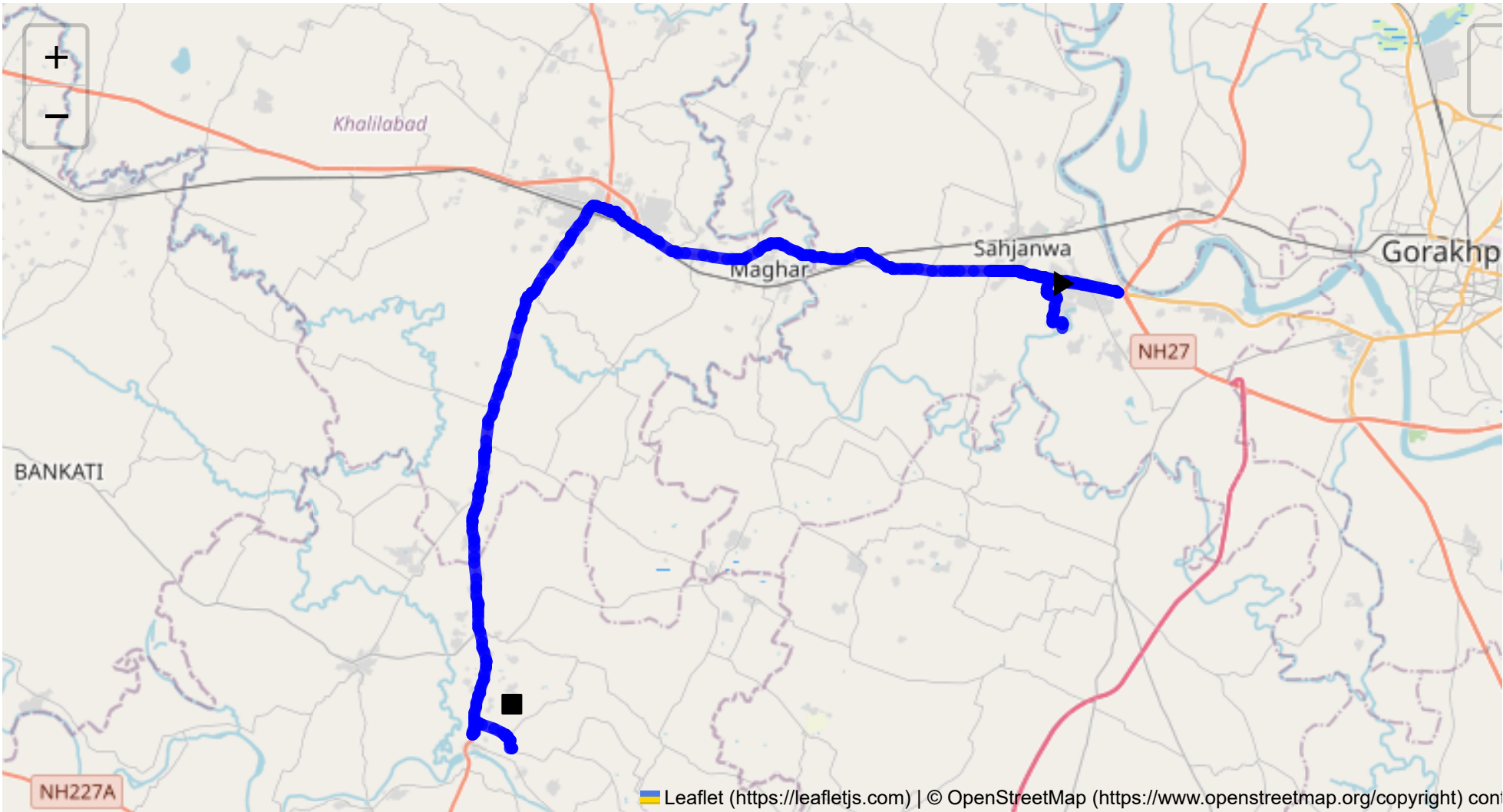
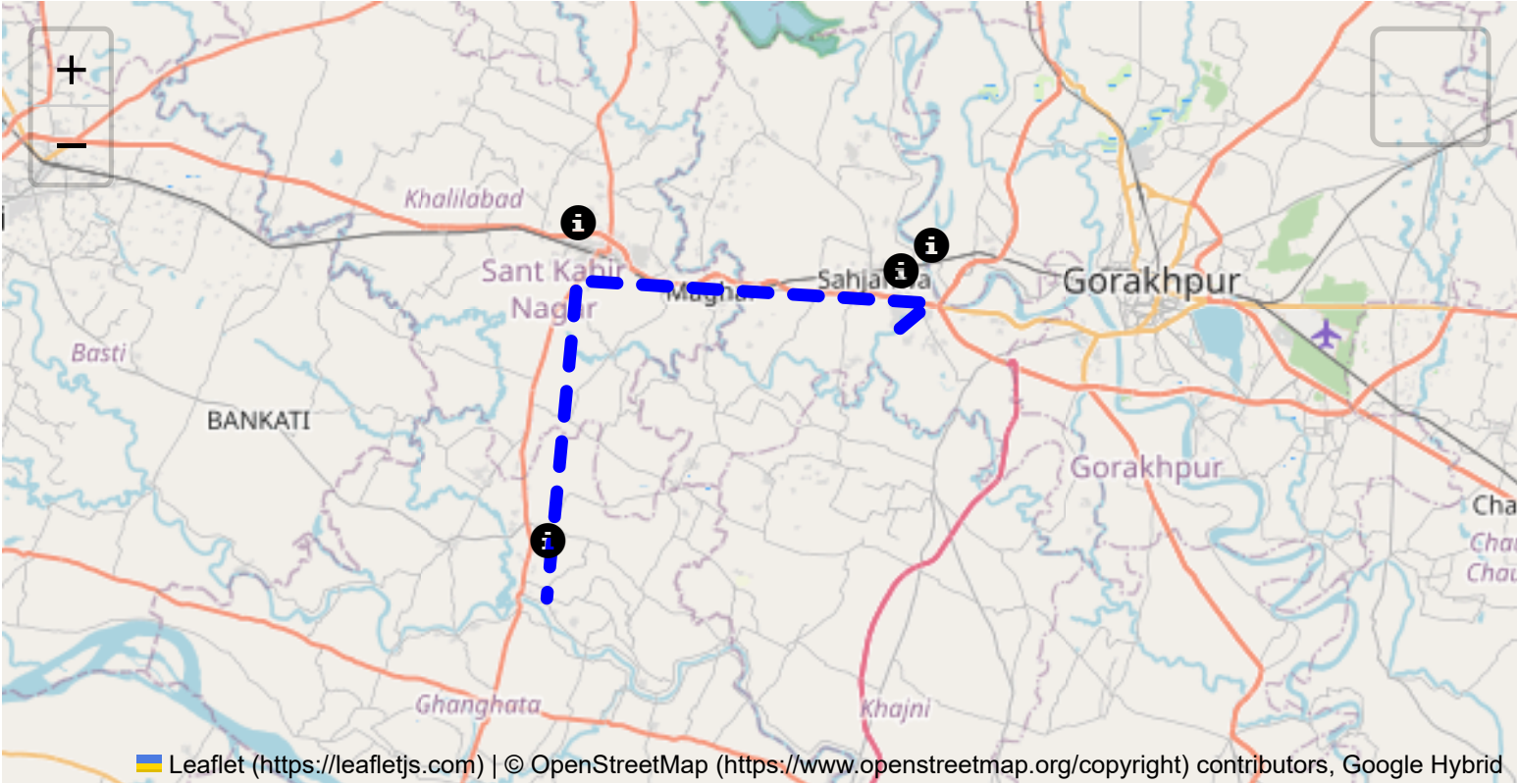
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 49.46 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.6 hours
Start: (26.735959, 83.229398)
End: (26.60508, 83.037531)

Welcome to the Journey Risk Management Study

Route Overview

The route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to J24Q+22 Tighra via Zero Point in Kaalesar and Baniabari in Gauspur covers approximately 49.46 kilometers. The journey typically takes around 1.5 hours for heavy vehicles transporting hazardous materials, contingent upon traffic and road conditions. The route traverses through a mix of industrial, rural, and semi-urban areas.

Weather Conditions

- **Typical Weather:** The region experiences a subtropical climate with hot summers (March to June) and cool winters (November to February). The monsoon season (July to September) brings heavy rainfall.
- **Potential Hazards:** During monsoon, flooding and waterlogging on roads are common, potentially leading to hydroplaning or vehicle immobilization. In summer, heat can cause fatigue for drivers and stress on vehicles.

Traffic Patterns

- **Peak Hours:** Morning (8:00-10:00 AM) and evening (5:00-7:00 PM) are typically congested, particularly near industrial zones and urban areas.
- **Congestion-Prone Areas:** Traffic bottlenecks are likely near Zero Point in Kaalesar and market areas along the route. Agricultural machinery can add to traffic congestion in rural areas.

Road Quality and Infrastructure

- **Road Quality:** Generally includes single-lane roads with some dual-lane segments. In rural areas, roads may be poorly maintained, with potholes and uneven surfaces.
- **Infrastructure:** Limited signage, absence of roadside barriers in certain segments, and few dedicated rest stops for trucks.

Alternative Routes

- **Suggested Alternatives:** For emergencies, bypasses through smaller villages are available but may not be suitable for large vehicles due to narrow pathways. Using the national highways where possible might provide more reliable thoroughfares.

Local Regulations

- **Hazardous Material Transport:** Strict adherence is required to guidelines set by the local transportation authority. Restrictions might apply in densely populated areas, and travel might be prohibited during certain hours.

Historical Incidents

- **Incidents:** Records indicate occasional accidents involving heavy vehicles, often due to speed, road conditions, or weather. No major hazardous material spills have been reported recently, but incidents can result in road closures.

Environmental Considerations

- **Sensitive Areas:** There are agricultural fields near the route that could be impacted by accidents involving contamination. Wildlife crossings may occur, particularly near river belts.

Communication Coverage

- Potential Dead Zones:** Communication networks are generally reliable near urban centers. However, rural stretches might experience weak signals or dead zones, particularly near Kaalesar.

Emergency Response Times

- Response Estimates:** Emergency response can vary widely. Near major towns, expect a 30-45 minute response, but significantly longer in rural stretches where access is difficult.

Overall Risk Assessment

This route possesses moderate risk for heavy vehicles carrying hazardous materials. Challenges include fluctuating weather conditions, weak infrastructure, and occasional communication dead spots. However, with appropriate precautions—such as careful weather monitoring, following local regulations, and having emergency procedures in place—the route can be navigated safely.

Summary

The journey from Sahjanwa to Tighara requires careful planning due to variable road conditions, potential traffic congestion, and environmental sensitivities. Drivers are advised to remain vigilant, aware of changing weather conditions, and ensure compliance with local transport regulations for hazardous materials. Emergency plans should be pre-established, and alternative routes considered in advance, with clear communication with dispatch and local authorities.

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	1.30 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	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
10	Turn	High	26.75381, 83.20466	15 KM/Hr	4.30 km
0	U-Turn	High	26.7471208, 83.2490873	10 KM/Hr	8.76 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
11	Blind Spot	Blind Spot	26.74712, 83.24909	10 KM/Hr	8.76 km
12	Turn	High	26.74703, 83.24907	15 KM/Hr	8.80 km
13	Turn	Medium	26.76249, 83.08902	30 KM/Hr	25.31 km
14	Turn	Medium	26.76571, 83.08355	30 KM/Hr	25.97 km
15	Turn	Medium	26.76902, 83.07734	30 KM/Hr	26.68 km
16	Turn	Medium	26.77176, 83.07436	30 KM/Hr	27.11 km
17	Turn	High	26.77296, 83.06947	15 KM/Hr	27.56 km
18	Turn	High	26.77304, 83.06947	15 KM/Hr	27.64 km
19	Turn	Medium	26.77383, 83.06611	30 KM/Hr	27.98 km
20	Blind Spot	Blind Spot	26.60939, 83.02446	10 KM/Hr	47.34 km
21	Turn	High	26.61299, 83.02663	15 KM/Hr	47.81 km
22	Blind Spot	Blind Spot	26.60761, 83.03720	10 KM/Hr	49.06 km
23	Blind Spot	Blind Spot	26.60757, 83.03711	10 KM/Hr	49.07 km
24	Turn	High	26.60527, 83.03833	15 KM/Hr	49.28 km
25	Turn	High	26.60485, 83.03798	15 KM/Hr	49.39 km

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: U-Turn
Risk Level: High
Speed Limit: 10 KM/Hr
Distance from Start: 8.76 km
Coordinates: 26.7471208, 83.2490873



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 8.76 km
Coordinates: 26.74712, 83.24909



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.80 km

Coordinates: 26.74703, 83.24907



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 25.31 km

Coordinates: 26.76249, 83.08902



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 25.97 km
Coordinates: 26.76571, 83.08355



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 26.68 km
Coordinates: 26.76902, 83.07734



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 27.11 km
Coordinates: 26.77176, 83.07436



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 27.56 km
Coordinates: 26.77296, 83.06947



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 27.64 km
Coordinates: 26.77304, 83.06947



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 27.98 km
Coordinates: 26.77383, 83.06611



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 47.34 km

Coordinates: 26.60939, 83.02446

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