



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO KATSAHRA INDANE SERV

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

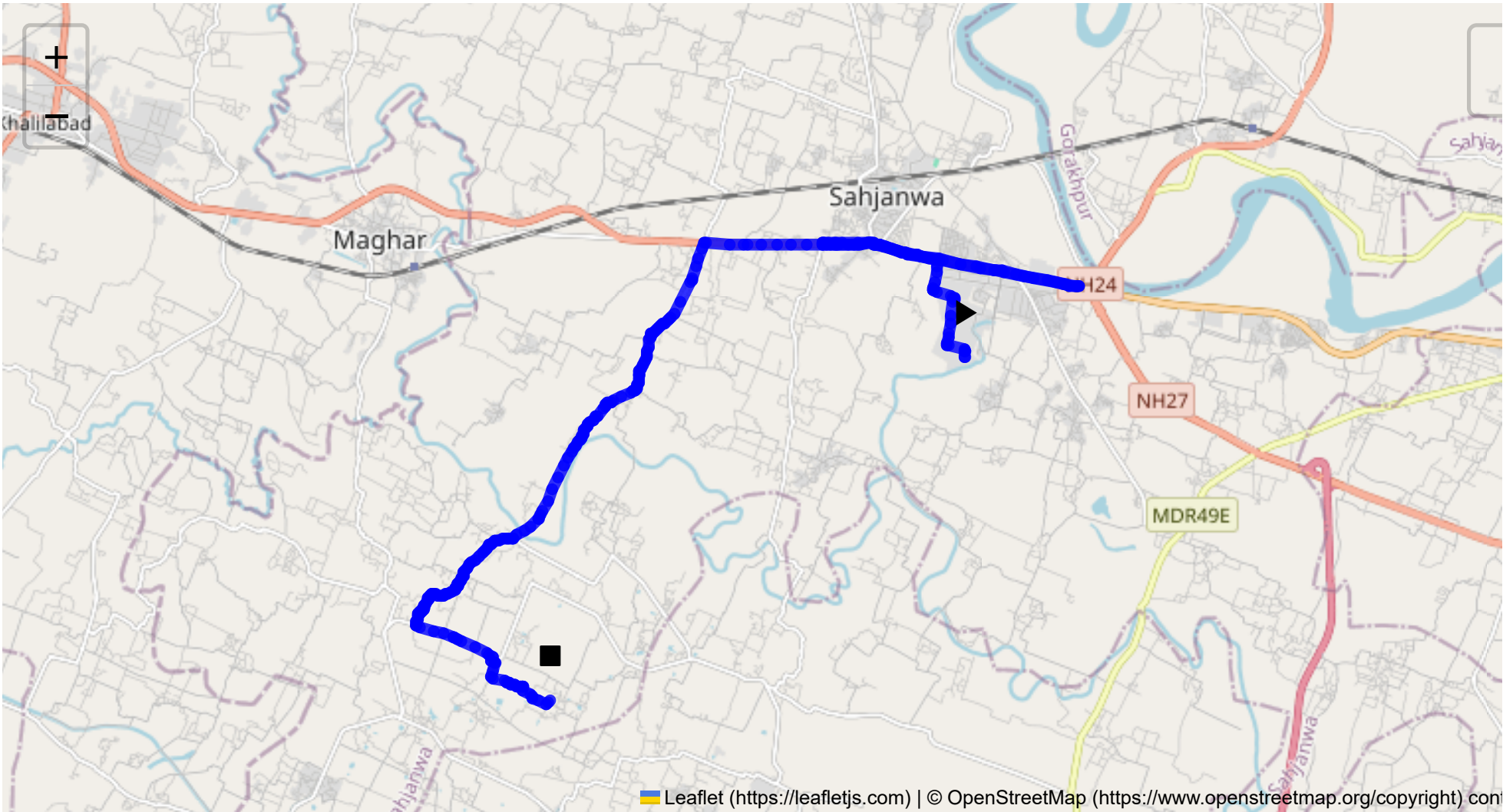
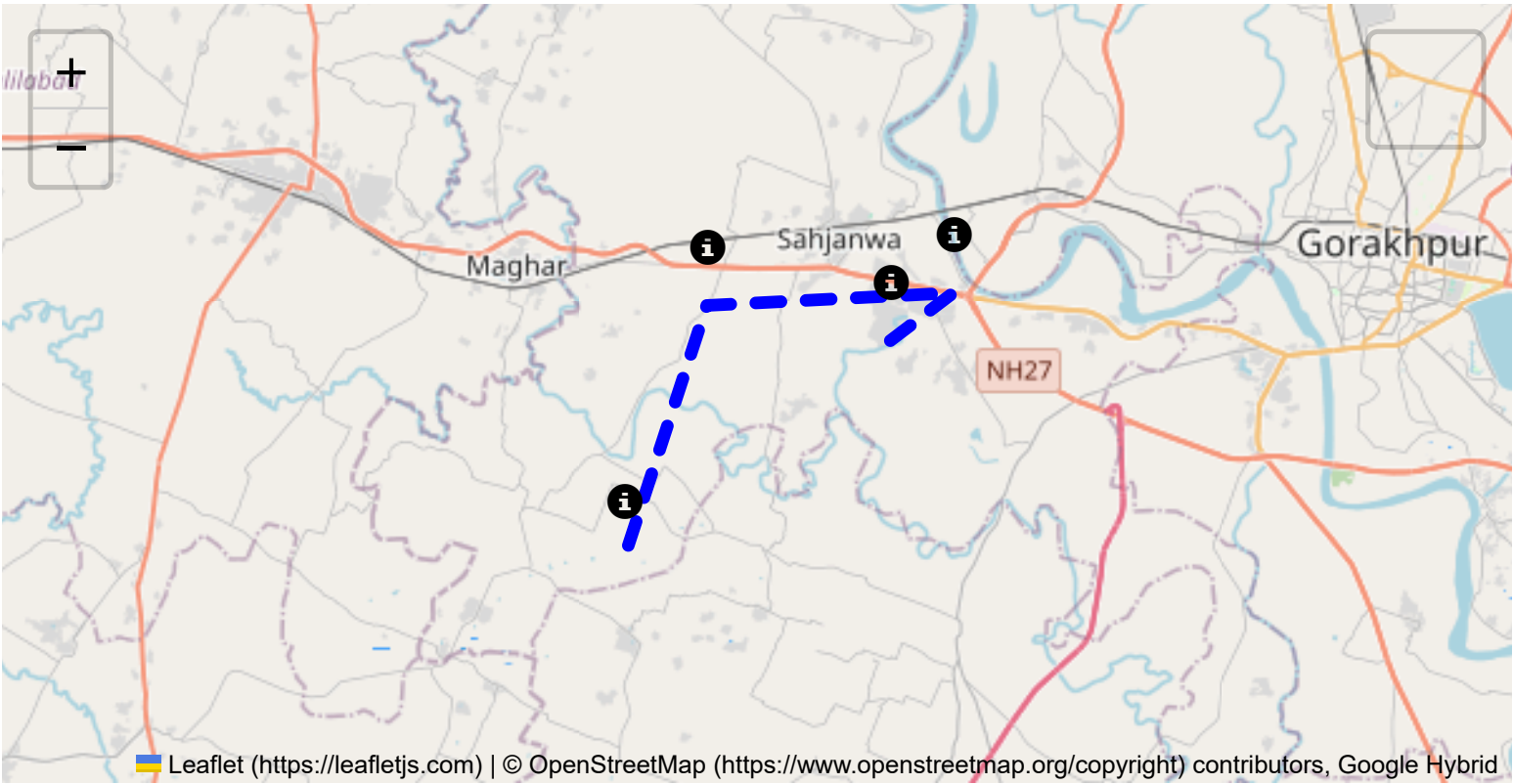
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 27.28 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.0 hours
Start: (26.735959, 83.229398)
End: (26.68272, 83.15692)

Welcome to the Journey Risk Management Study

To provide a comprehensive analysis of the route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to M5M5+34V, Majhaura via 01 Zero Point, Kaalesar and P5VH+GVG, Bhati Rawot in Uttar Pradesh, India, the following points have been assessed:

1. Overview of the Route Map:

- The route spans approximately 27.28 kilometers, usually taking about 46 minutes under typical conditions. It primarily traverses rural regions with a mix of industrial and local roads.

2. Typical Weather Conditions and Potential Weather-related Hazards:

- The region experiences a subtropical climate. During monsoon season (June-September), heavy rainfall can lead to waterlogged roads and reduced visibility. The pre-summer months often see dusty conditions and heat waves, which may impact vehicle performance and driver endurance.

3. Analysis of Traffic Patterns:

- Peak congestion occurs during morning (8-10 AM) and evening (6-8 PM) as local work shifts begin and end. Industrial zones like GIDA often see heavy truck traffic, while rural stretches can experience slow-moving agricultural vehicles.

4. Assessment of Road Quality and Infrastructure:

- The roads range from well-paved near industrial areas to less maintained rural roads. Potholes and uneven surfaces can be prevalent, particularly after the monsoon season.

5. Suggestions for Alternative Routes for Emergencies:

- Alternative routes via NH24 and regional roads can be used if primary roads are impassable. These routes should be selected based on real-time traffic and weather alerts.

6. Summary of Local Regulations Affecting Hazardous Material Transport:

- Transport of hazardous materials requires compliance with Indian national safety standards. Timing restrictions may exist near densely populated areas, necessitating night-time travel for transporting certain types of materials.

7. Overview of Historical Incidents:

- There have been sporadic reports of accidents involving heavy vehicles on poorly lit rural roads, often due to driver fatigue or mechanical failures. No major hazardous material incidents have been noted in recent records.

8. Environmental Considerations and Sensitive Areas:

- The route passes through agricultural zones, where dust and emissions might impact crop health. Drivers should minimize stops and ensure vehicles are well-maintained to reduce emissions.

9. Analysis of Communication Coverage:

- Most of the route has adequate mobile network coverage. However, rural and remote stretches may experience weak signals or dead zones, impacting communication in emergencies.

10. Estimated Emergency Response Times:

- In industrial areas, emergency response times could be as quick as 15-20 minutes. However, in more remote areas, it may extend beyond 30-45 minutes due to accessibility issues and distance from service points.

11. Overall Summary of Risk Assessment:

- The route is generally considered safe under good weather and traffic conditions but presents moderate risks during peak traffic and adverse weather. Key risks involve road quality and

potential communication issues. Proper vehicle maintenance and adherence to regulations significantly mitigate these risks.

In conclusion, while the route entails typical hazards associated with rural and industrial transport, careful planning, continual monitoring of conditions, and adherence to safety protocols can ensure safe transit of hazardous materials. Emergency preparedness and alternative routes should be part of a comprehensive risk management strategy.

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	Medium	26.74654, 83.22390	30 KM/Hr	1.69 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
12	Blind Spot	Blind Spot	26.74712, 83.24909	10 KM/Hr	8.76 km
0	U-Turn	High	26.7471208, 83.2490873	10 KM/Hr	8.76 km
13	Turn	High	26.74703, 83.24907	15 KM/Hr	8.80 km
14	Turn	High	26.75384, 83.18402	15 KM/Hr	15.33 km
15	Turn	Medium	26.70079, 83.14108	30 KM/Hr	22.97 km
16	Turn	Medium	26.70048, 83.14108	30 KM/Hr	23.01 km
17	Turn	Medium	26.70044, 83.14106	30 KM/Hr	23.01 km
18	Turn	Medium	26.69926, 83.13672	30 KM/Hr	23.49 km
19	Turn	Medium	26.69724, 83.13520	30 KM/Hr	23.76 km
20	Turn	Medium	26.69679, 83.13507	30 KM/Hr	23.82 km
21	Blind Spot	Blind Spot	26.69441, 83.13380	10 KM/Hr	24.14 km
22	Turn	High	26.68959, 83.14724	15 KM/Hr	25.55 km
23	Blind Spot	Blind Spot	26.68878, 83.14693	10 KM/Hr	25.63 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
24	Turn	Medium	26.68857, 83.14760	30 KM/Hr	25.71 km
25	Turn	High	26.68849, 83.14765	15 KM/Hr	25.75 km
26	Turn	High	26.68638, 83.14692	15 KM/Hr	25.95 km
27	Turn	Medium	26.68565, 83.14979	30 KM/Hr	26.28 km
28	Turn	Medium	26.68542, 83.14992	30 KM/Hr	26.32 km
29	Turn	Medium	26.68508, 83.15115	30 KM/Hr	26.42 km
30	Turn	Medium	26.68485, 83.15142	30 KM/Hr	26.48 km
31	Turn	High	26.68490, 83.15253	15 KM/Hr	26.60 km
32	Turn	Medium	26.68477, 83.15256	30 KM/Hr	26.62 km
33	Turn	High	26.68421, 83.15234	15 KM/Hr	26.66 km
34	Turn	High	26.68329, 83.15426	15 KM/Hr	26.88 km
35	Turn	High	26.68309, 83.15430	15 KM/Hr	26.92 km
36	Turn	High	26.68202, 83.15663	15 KM/Hr	27.10 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: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 8.76 km
Coordinates: 26.74712, 83.24909



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: 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: High
Speed Limit: 15 KM/Hr
Distance from Start: 15.33 km
Coordinates: 26.75384, 83.18402

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