



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO PRINCE INDANE SERVIC

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

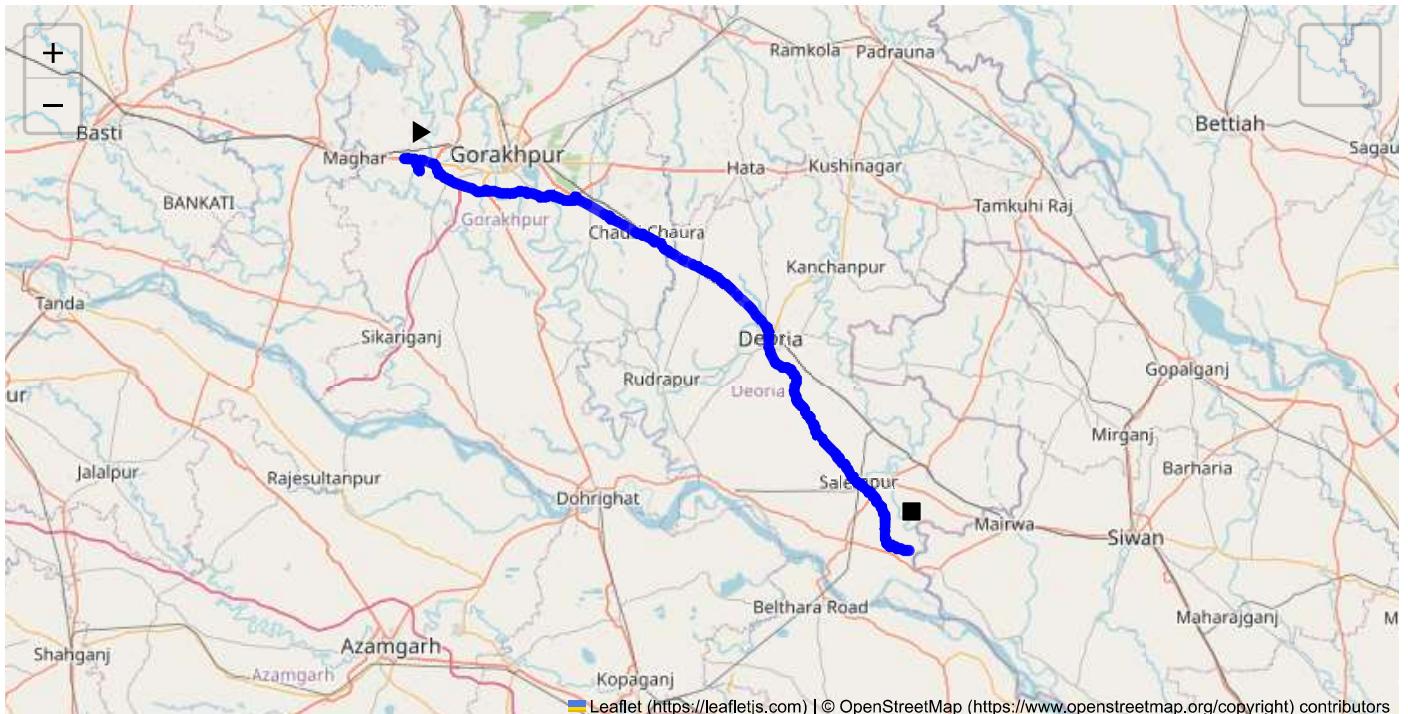
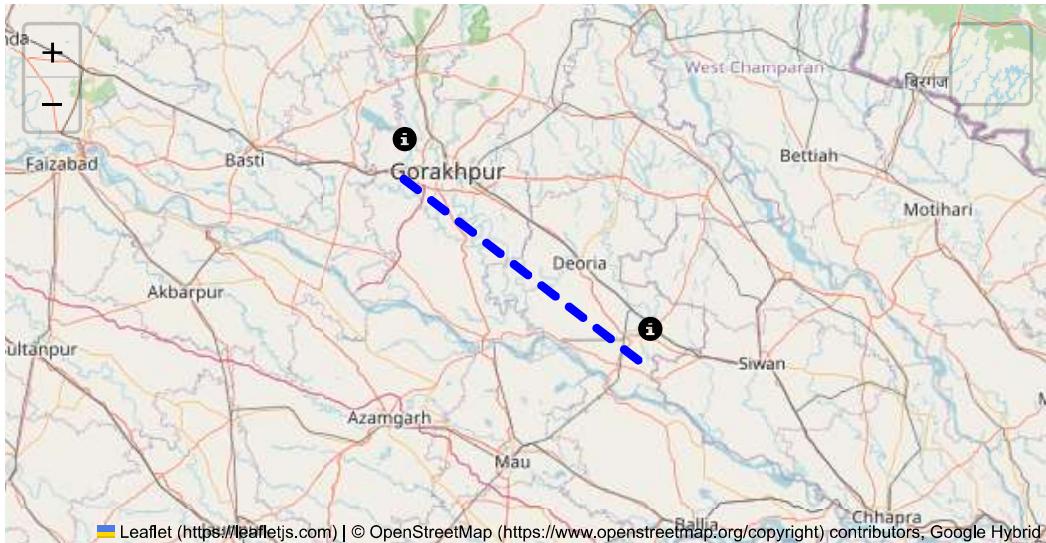
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 115.28 km
Estimated Duration: 2.7 hours
Adjusted Duration (Heavy Vehicle): 3.4 hours
Start: (26.735959, 83.229398)
End: (26.19935, 84.00023)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1, Sahjanwa, to Ropan Chhapara spans approximately 115.28 kilometers. The journey primarily takes you through highways and rural roads, with a mix of urban, semi-

urban, and rural landscapes. Major highways and intersections need careful navigation, especially when carrying hazardous materials.

2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Seasons:** The area experiences three major seasons: summer (March-June), monsoon (July-September), and winter (October-February).
- **Weather Hazards:**
 - **Summer:** High temperatures reaching up to 40°C can affect vehicle performance.
 - **Monsoon:** Heavy rainfall can lead to waterlogging and reduced visibility, increasing the risk of hydroplaning and poor traction.
 - **Winter:** Fog and reduced visibility in the mornings are common, potentially causing delays and accidents.

3. Traffic Patterns and Congestion-Prone Areas

- **Peak Hours:** Morning (7-9 AM) and evening (5-8 PM) see increased traffic, particularly near urban centers.
- **Congestion Points:**
 - Entry and exit points of Gorakhpur could be congested.
 - Narrow rural roads may have slower traffic due to local activities like markets.

4. Assessment of Road Quality and Infrastructure

- **Road Quality:** Generally, highways are well-paved, but attention is needed in rural sections where roads may be narrower and poorly maintained.
- **Infrastructure:** Bridges and culverts are present; verify weight limits to ensure they accommodate heavy vehicles.

5. Suggestions for Alternative Routes for Emergencies

- **Detour Around Gorakhpur:** Use smaller bypass roads to navigate around city congestion.
- **Emergency Routes:** In case of roadblocks, detour through NH 27 or local rural roads with caution.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- **Permit Requirements:** Necessary permits must be obtained for transporting hazardous materials through Uttar Pradesh.
- **Time Restrictions:** Some urban areas may restrict heavy vehicle movement during peak hours.

7. Overview of Historical Incidents

- Historical data indicates occasional minor accidents involving heavy vehicles, though such incidents are less frequent.
- Prior incidents suggest adherence to speed limits and caution during adverse weather conditions help mitigate risks.

8. Environmental Considerations and Sensitive Areas

- Protected Areas:** Be cautious around water bodies and forested areas.
- Pollution Concerns:** Ensure no spillage and adhere to environmental regulations to prevent contamination of farmland and water sources.

9. Communication Coverage and Dead Zones

- Coverage:** Major highways have good coverage, but rural areas may have spotty network signals.
- Dead Zones:** Anticipated in deeper rural and forested regions. Keep alternative communication methods available.

10. Estimated Emergency Response Times

- Urban Areas:** 15–30 minutes.
- Rural Areas:** Could range from 30 to 60 minutes due to distance and accessibility issues.

12. Overall Summary of Risk Assessment

This route has a moderate risk level due to:

- Weather-related hazards during certain seasons.
- Variable road conditions in rural sections.
- Limited emergency response services in rural areas.

By adhering strictly to safety protocols, maintaining effective communication tools, and keeping informed of weather reports and traffic updates, drivers can mitigate many of these risks. Moreover, thorough preparation and understanding of local regulations will ensure compliance and enhance safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
3	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
4	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
5	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
6	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km
7	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
8	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.13 km
9	Turn	Medium	26.69741, 83.47552	30 KM/Hr	33.24 km
10	Blind Spot	Blind Spot	26.69857, 83.47481	10 KM/Hr	33.41 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.41 km
11	Turn	Medium	26.63752, 83.59723	30 KM/Hr	47.38 km
12	Turn	Medium	26.63761, 83.59795	30 KM/Hr	47.45 km
13	Turn	Medium	26.29409, 83.92225	30 KM/Hr	100.11 km
14	Turn	Medium	26.29365, 83.92376	30 KM/Hr	100.35 km
15	Turn	High	26.20976, 83.96525	15 KM/Hr	111.27 km
16	Blind Spot	Blind Spot	26.20499, 83.97258	10 KM/Hr	112.20 km
17	Turn	High	26.20615, 83.97302	15 KM/Hr	112.32 km

Emergency Locations

Found: 6 hospital(s)

	type	name		coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital		26.6957341, 83.4807387	30 km/h	Medium	33.97 km
2	hospital	Deoria Eye Hospital		26.5011867, 83.7750448	30 km/h	Medium	71.43 km
3	hospital	Aditya Hospital, Deoria		26.501938, 83.774963	30 km/h	Medium	71.43 km
5	hospital	K D Hospital, Deoria		26.4826171, 83.7821031	30 km/h	Medium	73.53 km

	type	name	coordinates	speed_limit	risk_level	Distance from Start
4	hospital	Sanjeevani Hospital, Deoria	26.4796329, 83.780432	30 km/h	Medium	73.99 km
6	hospital	Government Hospital,Khukhundoo	26.3985008, 83.8418815	30 km/h	Medium	85.73 km

Crowded Spots

Found: 1 college(s), 1 school(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
1	college	BRD PG college	26.5161416, 83.7720277	30 km/h	Medium	69.25 km
7	school	SKP SAINIK PUBLIC SCHOOL	26.3237671, 83.8958075	30 km/h	Medium	95.70 km

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.16 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.22 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.27 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.13 km

Coordinates: 26.74681, 83.25111



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.24 km

Coordinates: 26.69741, 83.47552



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 33.41 km
Coordinates: 26.69857, 83.47481



Risk Type: U-Turn
Risk Level: High
Speed Limit: 10 KM/Hr
Distance from Start: 33.41 km
Coordinates: 26.698439, 83.4747268



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 47.38 km**Coordinates:** 26.63752, 83.59723

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 47.45 km**Coordinates:** 26.63761, 83.59795



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 100.11 km

Coordinates: 26.29409, 83.92225



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 100.35 km

Coordinates: 26.29365, 83.92376



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 111.27 km

Coordinates: 26.20976, 83.96525



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 112.20 km

Coordinates: 26.20499, 83.97258

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