



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO NAURANGIA INDANE GRA

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

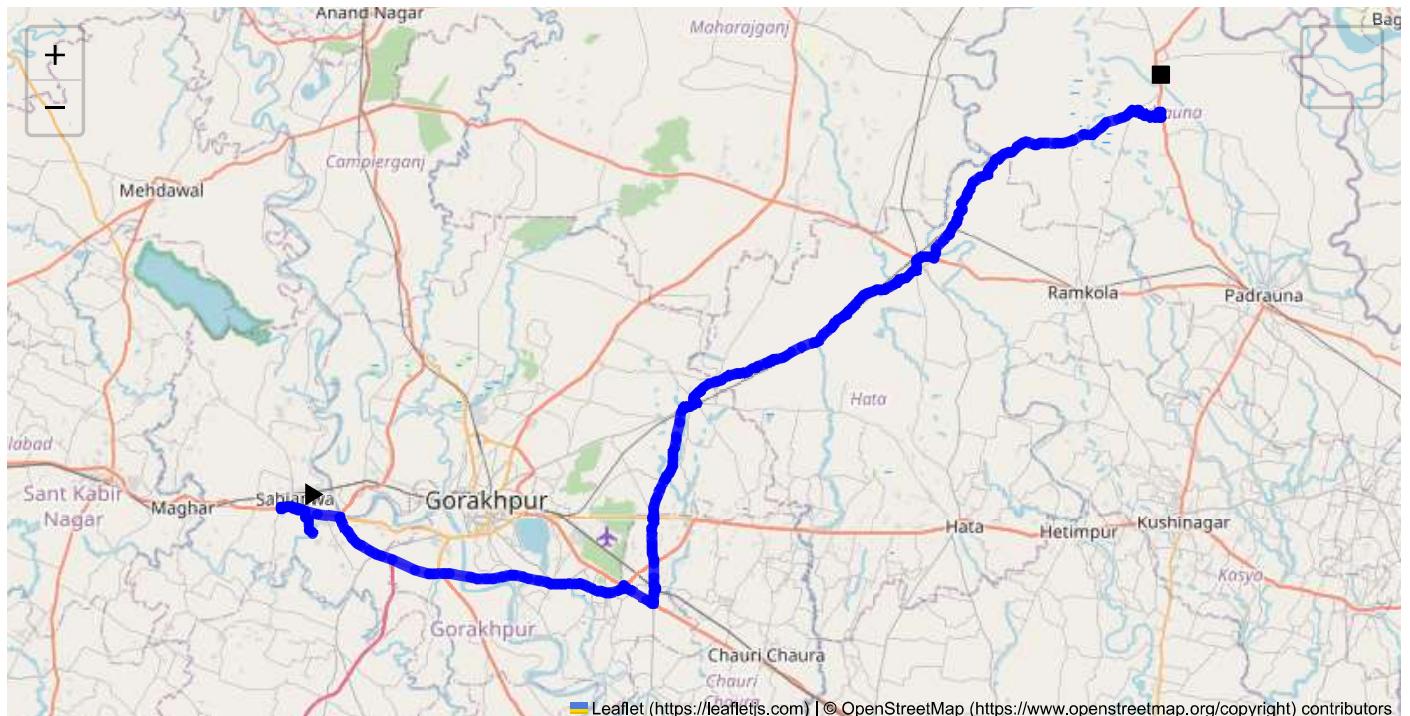
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 101.45 km
Estimated Duration: 2.5 hours
Adjusted Duration (Heavy Vehicle): 3.1 hours
Start: (26.735959, 83.229398)
End: (27.031118, 83.897335)

Welcome to the Journey Risk Management Study

Route Overview

The route from GIDA Industrial Area Phase 1 to Sirsia Kalan via Motiram Adda encompasses approximately 101.45 kilometers through rural and semi-urban regions in Uttar Pradesh. Beginning in an industrial area,

the journey transitions through various small towns and rural landscapes, before reaching Sirsia Kalan. The route features a number of smaller highways and rural roads.

Weather Conditions

Typical weather conditions in Uttar Pradesh can vary significantly. During the monsoon season (June to September), expect heavy rainfall which can lead to flooding and poor road conditions. Winter months (December to February) may cause fog, especially early in the morning and late at night, reducing visibility.

Potential Weather-Related Hazards:

- Heavy rains leading to flooding and slick road conditions.
- Fog causing reduced visibility.
- Potential heat stress during peak summer months (April to June).

Traffic Patterns

- **Peak Hours:** Morning (8 AM - 10 AM) and Evening (5 PM - 7 PM) commutes can be congested, particularly near Sahjanwa and other larger towns.
- **Congestion-Prone Areas:** Sahjanwa, Motiram Adda, and marketplaces in smaller towns can experience slow-moving traffic.
- Heavy vehicles might face restrictions during peak hours in urban areas to alleviate congestion.

Road Quality and Infrastructure

- **Primary Roads:** Generally well-maintained, but road quality can vary, with some stretches potentially having potholes or uneven surfaces.
- **Smaller Roads:** Narrow, with limited shoulder space, and sometimes poorly maintained, especially after monsoon damage.

Alternative Routes for Emergencies

- If the primary route is blocked, consider detouring through nearby major towns like Gorakhpur for better road conditions.
- Utilize state highways if local routes become impassable; ensure verification with local advisories.

Local Regulations on Hazardous Material Transport

- Transport of hazardous materials requires adherence to state and national regulations, including proper labeling, documentation, and, in some cases, specific permits.
- Night-time transport might be restricted in certain areas due to safety concerns.

Historical Incidents

- Historical data suggests occasional incidents involving heavy vehicles, primarily due to road conditions and weather effects. Accidents tend to occur at poorly marked intersections or during adverse weather conditions.

Environmental Considerations

- **Sensitive Areas:** The route spans agricultural lands which might use pesticides, necessitating caution in case of chemical transport.
- **Water Bodies:** Avoid contamination by ensuring secure containment of hazardous materials.

Communication Coverage

- **Coverage:** Generally good near larger towns and along major roads, but can be spotty in more rural segments.
- **Potential Dead Zones:** Rural areas with fewer cell towers; advisable to use a satellite phone if constant communication is necessary.

Emergency Response Times

- **Urban Areas (e.g., Sahjanwa):** Approximately 30-45 minutes.
- **Rural Areas:** Could be significantly longer, potentially 60-90 minutes, due to distance and road quality.

Overall Summary

- **Primary Risks:** Poor weather conditions, road quality, and congestion.
- **Emergency Prep:** Know alternative routes and ensure communication devices are efficient.
- **Regulatory Compliance:** Ensure full compliance with transportation and hazardous material regulations.
- **Safety Precautions:** Equip vehicles with necessary safety gear, particularly for environmental protection and emergency handling.

Given the current infrastructure and typical conditions, preparation is crucial for ensuring the safe, timely transport of goods along this route. Regular updates on road conditions and continuous monitoring of weather and traffic reports are recommended for all drivers.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.08 km
3	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
4	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
5	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
6	Turn	High	26.74654, 83.22390	15 KM/Hr	1.63 km
7	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.15 km
8	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.21 km
9	Turn	High	26.75377, 83.20465	15 KM/Hr	4.26 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.12 km
10	Turn	Medium	26.69652, 83.47508	30 KM/Hr	33.10 km
11	Turn	High	26.69741, 83.47552	15 KM/Hr	33.19 km
12	Blind Spot	Blind Spot	26.69857, 83.47481	10 KM/Hr	33.38 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.38 km
13	Blind Spot	Blind Spot	26.68622, 83.49880	10 KM/Hr	36.06 km
14	Turn	Medium	26.69511, 83.49893	30 KM/Hr	37.02 km
15	Turn	High	26.69722, 83.50035	15 KM/Hr	37.36 km
16	Turn	Medium	26.69873, 83.49920	30 KM/Hr	37.51 km
17	Blind Spot	Blind Spot	26.74662, 83.49914	10 KM/Hr	42.92 km
18	Blind Spot	Blind Spot	26.74659, 83.49782	10 KM/Hr	43.03 km
19	Turn	Medium	26.78350, 83.51397	30 KM/Hr	47.40 km
20	Turn	High	26.82411, 83.52193	15 KM/Hr	52.07 km
21	Blind Spot	Blind Spot	26.82741, 83.53262	10 KM/Hr	53.20 km
22	Turn	High	26.82760, 83.53150	15 KM/Hr	53.37 km
23	Turn	High	26.83147, 83.53004	15 KM/Hr	53.86 km
24	Turn	Medium	26.85247, 83.57721	30 KM/Hr	58.99 km
25	Turn	Medium	26.85675, 83.59150	30 KM/Hr	60.67 km
26	Turn	Medium	26.85810, 83.59303	30 KM/Hr	60.91 km
27	Turn	Medium	26.88053, 83.63827	30 KM/Hr	65.84 km
28	Turn	High	26.88071, 83.63931	15 KM/Hr	66.23 km
29	Turn	Medium	26.90785, 83.67813	30 KM/Hr	71.18 km
30	Turn	Medium	26.91254, 83.69143	30 KM/Hr	72.72 km
31	Turn	Medium	26.91446, 83.69312	30 KM/Hr	73.02 km
32	Turn	High	26.92141, 83.70571	15 KM/Hr	74.43 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
33	Turn	High	26.92858, 83.70590	15 KM/Hr	75.27 km
34	Turn	High	26.92985, 83.71941	15 KM/Hr	76.63 km
35	Turn	Medium	26.97854, 83.74937	30 KM/Hr	82.88 km
36	Turn	Medium	26.98347, 83.75148	30 KM/Hr	83.51 km
37	Turn	Medium	26.98769, 83.76131	30 KM/Hr	84.54 km
38	Turn	Medium	26.98811, 83.76189	30 KM/Hr	84.74 km
39	Turn	Medium	26.99805, 83.76788	30 KM/Hr	85.92 km
40	Turn	Medium	27.00258, 83.77501	30 KM/Hr	86.76 km
41	Turn	Medium	27.00413, 83.78206	30 KM/Hr	87.60 km
42	Turn	Medium	27.03285, 83.87591	30 KM/Hr	97.93 km
43	Blind Spot	Blind Spot	27.03347, 83.88122	10 KM/Hr	98.57 km
44	Turn	Medium	27.03153, 83.88393	30 KM/Hr	98.87 km
45	Turn	Medium	27.03117, 83.88410	30 KM/Hr	98.99 km
46	Turn	Medium	27.03050, 83.88548	30 KM/Hr	99.09 km
47	Turn	High	27.03024, 83.88564	15 KM/Hr	99.18 km
48	Turn	High	27.02884, 83.89410	15 KM/Hr	100.05 km
49	Blind Spot	Blind Spot	27.02902, 83.89913	10 KM/Hr	100.56 km
50	Turn	Medium	27.03186, 83.89811	30 KM/Hr	100.90 km
51	Blind Spot	Blind Spot	27.03222, 83.89751	10 KM/Hr	100.97 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.95 km

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 2.15 km
Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 4.21 km
Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.26 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.12 km

Coordinates: 26.74681, 83.25111



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.10 km

Coordinates: 26.69652, 83.47508



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 33.19 km

Coordinates: 26.69741, 83.47552



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 33.38 km
Coordinates: 26.69857, 83.47481



Risk Type: U-Turn
Risk Level: High
Speed Limit: 10 KM/Hr
Distance from Start: 33.38 km
Coordinates: 26.698439, 83.4747268



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 36.06 km**Coordinates:** 26.68622, 83.49880

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 37.02 km**Coordinates:** 26.69511, 83.49893



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 37.36 km**Coordinates:** 26.69722, 83.50035

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 37.51 km**Coordinates:** 26.69873, 83.49920



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 42.92 km

Coordinates: 26.74662, 83.49914



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 43.03 km

Coordinates: 26.74659, 83.49782



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 47.40 km

Coordinates: 26.78350, 83.51397



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 52.07 km

Coordinates: 26.82411, 83.52193



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 53.20 km

Coordinates: 26.82741, 83.53262



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.37 km

Coordinates: 26.82760, 83.53150



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 53.86 km**Coordinates:** 26.83147, 83.53004

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 71.18 km**Coordinates:** 26.90785, 83.67813



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 72.72 km

Coordinates: 26.91254, 83.69143



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 73.02 km

Coordinates: 26.91446, 83.69312



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 74.43 km

Coordinates: 26.92141, 83.70571



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 75.27 km

Coordinates: 26.92858, 83.70590



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 84.54 km

Coordinates: 26.98769, 83.76131



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 84.74 km

Coordinates: 26.98811, 83.76189



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 87.60 km

Coordinates: 27.00413, 83.78206

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