



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO RADHA RANI INDANE GA

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

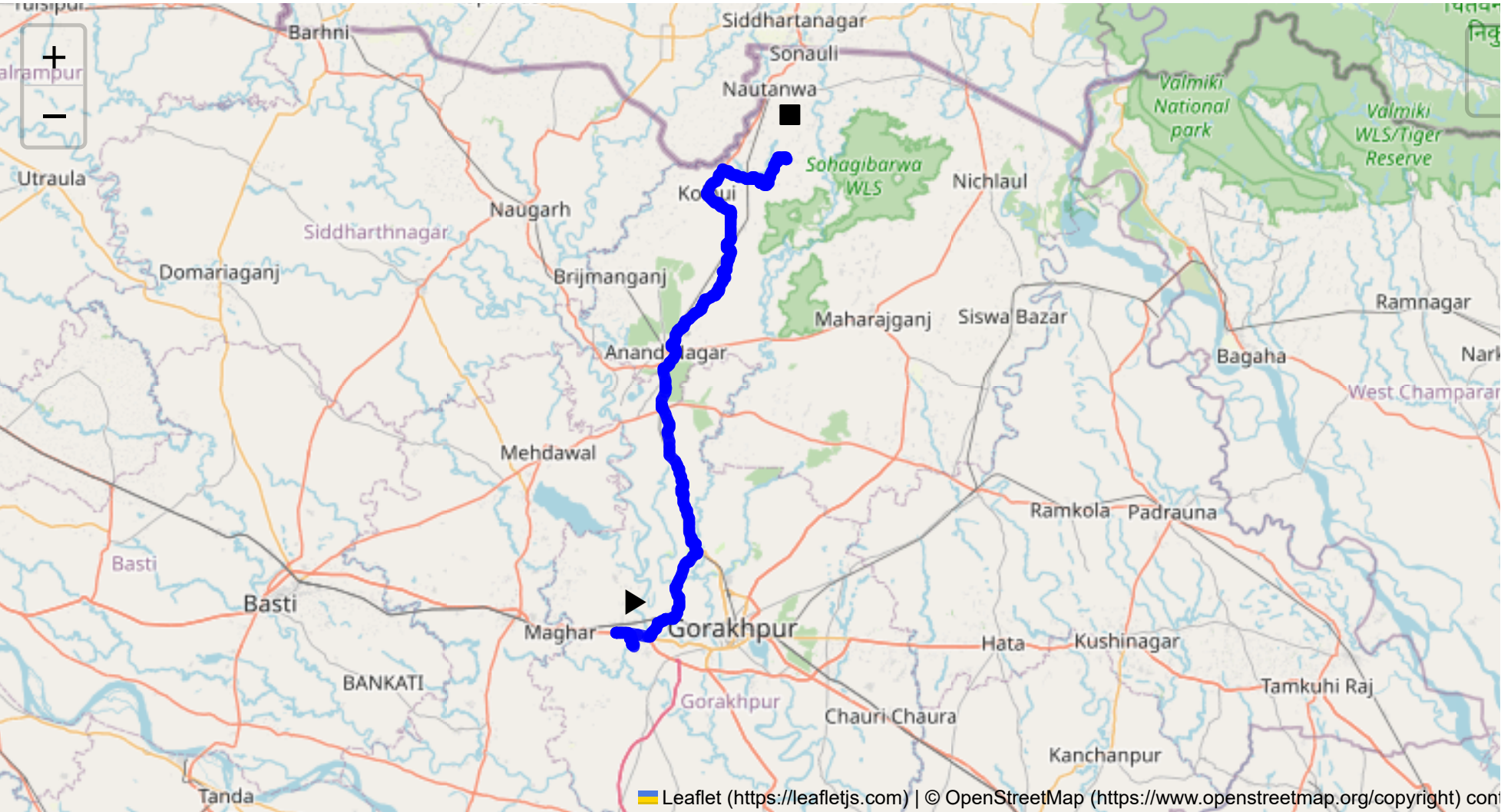
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 98.23 km
Estimated Duration: 2.5 hours
Adjusted Duration (Heavy Vehicle): 3.1 hours
Start: (26.735959, 83.229398)
End: (27.339432, 83.442587)

Welcome to the Journey Risk Management Study

Route Overview

The route begins at the GIDA Industrial Area Phase 1 in Sahjanwa, passes through Kaalesar at the 01 Zero Point, proceeds to Kolhui Bazar in Karu Ambla, and ends at Main Rd, Paisiya Urf Konghusari. Stretching over approximately 98.23 kilometers, the journey through Uttar Pradesh navigates both industrial and

rural locales, which affects driving conditions and safety considerations for vehicles transporting hazardous materials.

Weather Conditions

Uttar Pradesh experiences a humid subtropical climate. The summers (April - June) are hot and can affect vehicle cooling systems, while monsoon seasons (July - September) bring heavy rain that could cause flooding and road slippage. Winters (December - February) are usually foggy, which can reduce visibility. Particularly, the monsoon can lead to waterlogging and weakening of road surfaces, posing a risk to heavy vehicles.

Traffic Patterns

Key congestion points are likely around Sahjanwa particularly during morning and evening peak hours (8:00-10:00 AM and 5:00-7:00 PM), due to workers commuting. In rural areas like Kolhui Bazar, there can still be local traffic peaks, primarily due to market activity, which usually happens midday. The entire route might experience lighter traffic volumes on weekends or late at night.

Road Quality and Infrastructure

The roads in urban areas around Sahjanwa and near major market areas are generally well-paved. However, rural stretches may be narrower with varying quality and occasional potholes. In some parts, signage may be limited, which can affect navigation, especially in poor visibility conditions typical of foggy winters.

Alternative Routes

In case of emergency or significant delays, an alternative route bypassing major congested areas involves using local roads from Karu Ambla towards Barhalganj, though this could extend the travel time and involve navigating through more rural regions with less infrastructure support.

Local Regulations on Hazardous Material Transport

Transporting hazardous materials requires adherence to Indian government regulations, including proper documentation, adherence to designated routes, and marked vehicles. Night-time travels with hazardous material might be restricted or require police escort, affecting planning.

Historical Incidents

There have been occasional incidents along this route involving heavy vehicles, primarily due to road conditions during monsoons or accidents in dense fog. Reports often cite inadequate warning systems and local driver behavior as contributing factors.

Environmental Considerations

The route crosses rural areas with some agricultural land; thus, spillage of hazardous materials could have significant environmental impacts. It's crucial to have spill kits on board and immediate response plans in

place. Streams and water bodies nearby can also be affected in case of incidents.

Communication Coverage

Telecommunication services vary along the route. While urban areas have robust coverage, rural stretches may experience spotty service, especially in more remote segments. This could be particularly problematic for emergency communications.

Emergency Response Times

Response times vary significantly; urban areas like Sahjanwa and near major towns could see emergency services within 30-60 minutes, whereas rural regions may experience delays of up to 90 minutes or more. It is essential to communicate route plans with emergency services beforehand for quicker responses.

Risk Assessment Summary

The primary risks along this route stem from seasonal weather conditions, road quality variabilities, and local traffic patterns. Transport of hazardous materials must be carefully planned to avoid congestion times and during adverse weather conditions. Regular maintenance checks on vehicles, ensuring robust emergency communication plans, and adherence to safety regulations are critical for minimizing incidents during transportation. Identifying and preemptively mitigating environmental risks is crucial, especially when traversing through sensitive landfill areas.

Overall, while manageable with proper planning and adherence to local conditions, this route does present challenges that necessitate vigilance and proactive risk management strategies for truck drivers transporting hazardous materials.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.08 km
2	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
3	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
4	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
5	Turn	High	26.74679, 83.22391	15 KM/Hr	1.64 km
6	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.13 km
7	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.19 km
8	Turn	High	26.75377, 83.20465	15 KM/Hr	4.25 km
9	Turn	High	26.74707, 83.25103	15 KM/Hr	8.87 km
0	Roundabout	High	26.86209, 83.31517	15 KM/Hr	24.77 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
10	Turn	Medium	26.86398, 83.31428	30 KM/Hr	24.95 km
11	Turn	Medium	26.91482, 83.29822	30 KM/Hr	30.80 km
12	Turn	Medium	26.92527, 83.29842	30 KM/Hr	32.21 km
13	Turn	Medium	26.93461, 83.29771	30 KM/Hr	33.28 km
14	Turn	Medium	27.01029, 83.27850	30 KM/Hr	42.25 km
15	Turn	Medium	27.08029, 83.27113	30 KM/Hr	50.34 km
16	Turn	Medium	27.08069, 83.27132	30 KM/Hr	50.46 km
17	Turn	Medium	27.11070, 83.28282	30 KM/Hr	54.56 km
18	Turn	Medium	27.17766, 83.34689	30 KM/Hr	64.78 km
19	Turn	Medium	27.19292, 83.35509	30 KM/Hr	66.67 km
20	Turn	Medium	27.20070, 83.35416	30 KM/Hr	67.59 km
21	Turn	Medium	27.20391, 83.35772	30 KM/Hr	67.99 km
22	Turn	Medium	27.22623, 83.36428	30 KM/Hr	70.66 km
23	Turn	Medium	27.22753, 83.36364	30 KM/Hr	70.85 km
24	Turn	Medium	27.23089, 83.35900	30 KM/Hr	71.39 km
25	Turn	Medium	27.23284, 83.35817	30 KM/Hr	71.64 km
26	Turn	Medium	27.27394, 83.36411	30 KM/Hr	76.56 km
27	Turn	Medium	27.28667, 83.34120	30 KM/Hr	79.20 km
28	Turn	High	27.29868, 83.33001	15 KM/Hr	81.05 km
29	Turn	High	27.32777, 83.35385	15 KM/Hr	85.03 km
30	Turn	High	27.31752, 83.39499	15 KM/Hr	89.44 km
31	Turn	High	27.31338, 83.40695	15 KM/Hr	90.69 km
32	Turn	Medium	27.31121, 83.40578	30 KM/Hr	91.02 km
33	Turn	High	27.31011, 83.40593	15 KM/Hr	91.19 km
34	Turn	High	27.30975, 83.40987	15 KM/Hr	91.55 km
35	Turn	High	27.30886, 83.40992	15 KM/Hr	91.66 km
36	Turn	Medium	27.30832, 83.41331	30 KM/Hr	92.02 km
37	Turn	Medium	27.31101, 83.41733	30 KM/Hr	92.38 km
38	Turn	Medium	27.31195, 83.41756	30 KM/Hr	92.60 km
39	Turn	High	27.31594, 83.41621	15 KM/Hr	93.08 km
40	Turn	Medium	27.31852, 83.41957	30 KM/Hr	93.42 km
41	Turn	Medium	27.32537, 83.42117	30 KM/Hr	94.13 km
42	Blind Spot	Blind Spot	27.34313, 83.43092	10 KM/Hr	96.49 km
43	Turn	Medium	27.34136, 83.43915	30 KM/Hr	97.42 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
44	Turn	High	27.34117, 83.44092	15 KM/Hr	97.59 km

Emergency Locations

Crowded Spots

Found: 1 school(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	school	Nav Jeevan Mission School	27.1125489, 83.2814738	30 km/h	Medium	54.70 km

Route Photos of Risky Spots



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 2.13 km
Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.19 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.25 km

Coordinates: 26.75377, 83.20465



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.87 km

Coordinates: 26.74707, 83.25103



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 24.77 km

Coordinates: 26.86209, 83.31517



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 24.95 km
Coordinates: 26.86398, 83.31428



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 30.80 km
Coordinates: 26.91482, 83.29822



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 32.21 km

Coordinates: 26.92527, 83.29842



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.28 km

Coordinates: 26.93461, 83.29771



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 50.34 km
Coordinates: 27.08029, 83.27113



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 50.46 km
Coordinates: 27.08069, 83.27132



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 54.56 km
Coordinates: 27.11070, 83.28282



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 64.78 km
Coordinates: 27.17766, 83.34689



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 66.67 km

Coordinates: 27.19292, 83.35509



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 67.59 km

Coordinates: 27.20070, 83.35416



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 67.99 km
Coordinates: 27.20391, 83.35772



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 70.66 km
Coordinates: 27.22623, 83.36428



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 70.85 km

Coordinates: 27.22753, 83.36364



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 71.39 km

Coordinates: 27.23089, 83.35900



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 71.64 km
Coordinates: 27.23284, 83.35817



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 76.56 km
Coordinates: 27.27394, 83.36411



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 79.20 km

Coordinates: 27.28667, 83.34120



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 81.05 km

Coordinates: 27.29868, 83.33001



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 92.02 km
Coordinates: 27.30832, 83.41331



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 92.38 km
Coordinates: 27.31101, 83.41733



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 92.60 km
Coordinates: 27.31195, 83.41756



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 93.08 km
Coordinates: 27.31594, 83.41621



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 93.42 km
Coordinates: 27.31852, 83.41957



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 94.13 km
Coordinates: 27.32537, 83.42117



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 96.49 km
Coordinates: 27.34313, 83.43092



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 97.42 km
Coordinates: 27.34136, 83.43915



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 97.59 km

Coordinates: 27.34117, 83.44092

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