



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO SHGANESH INDANE GAS

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

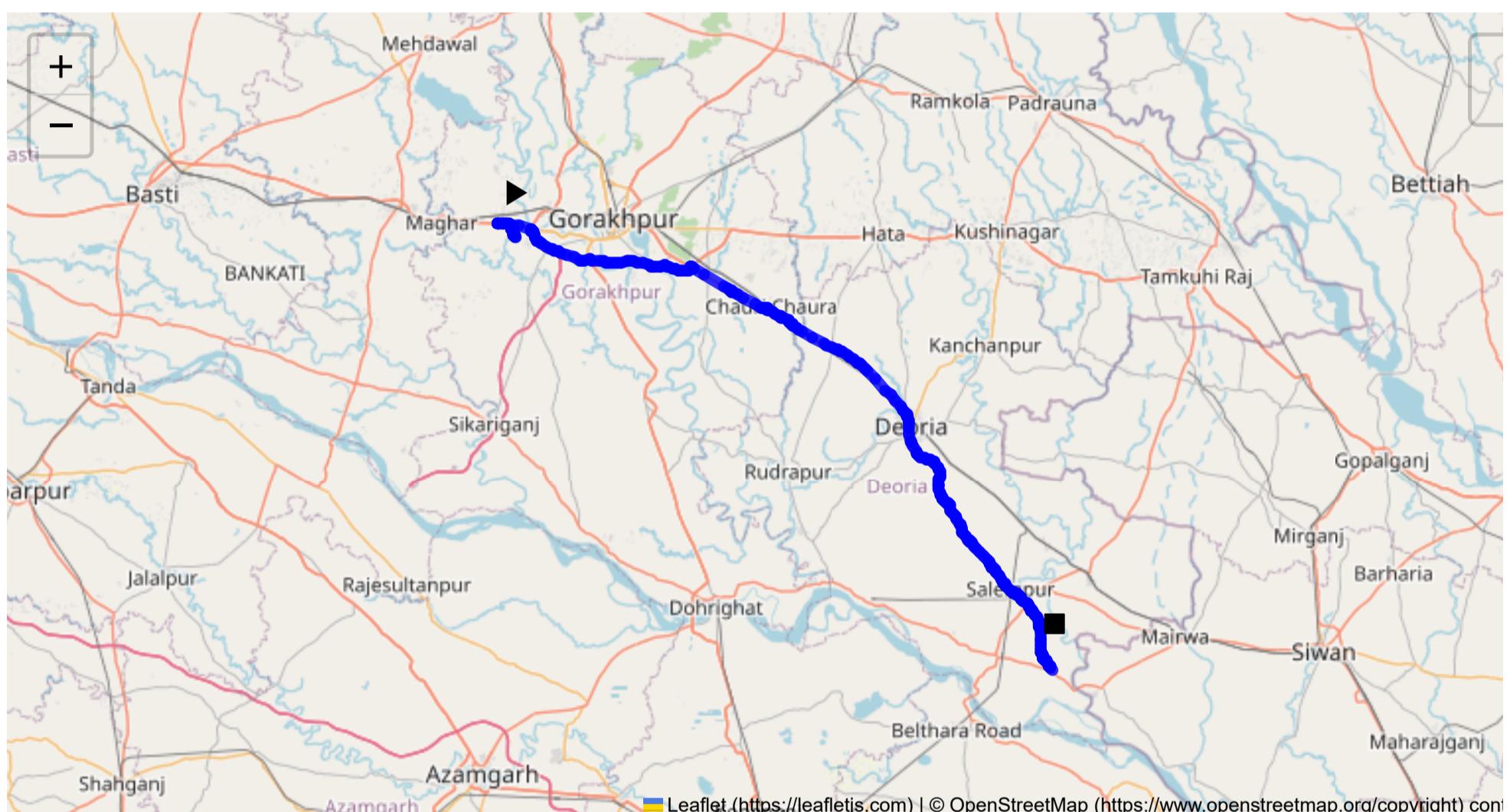
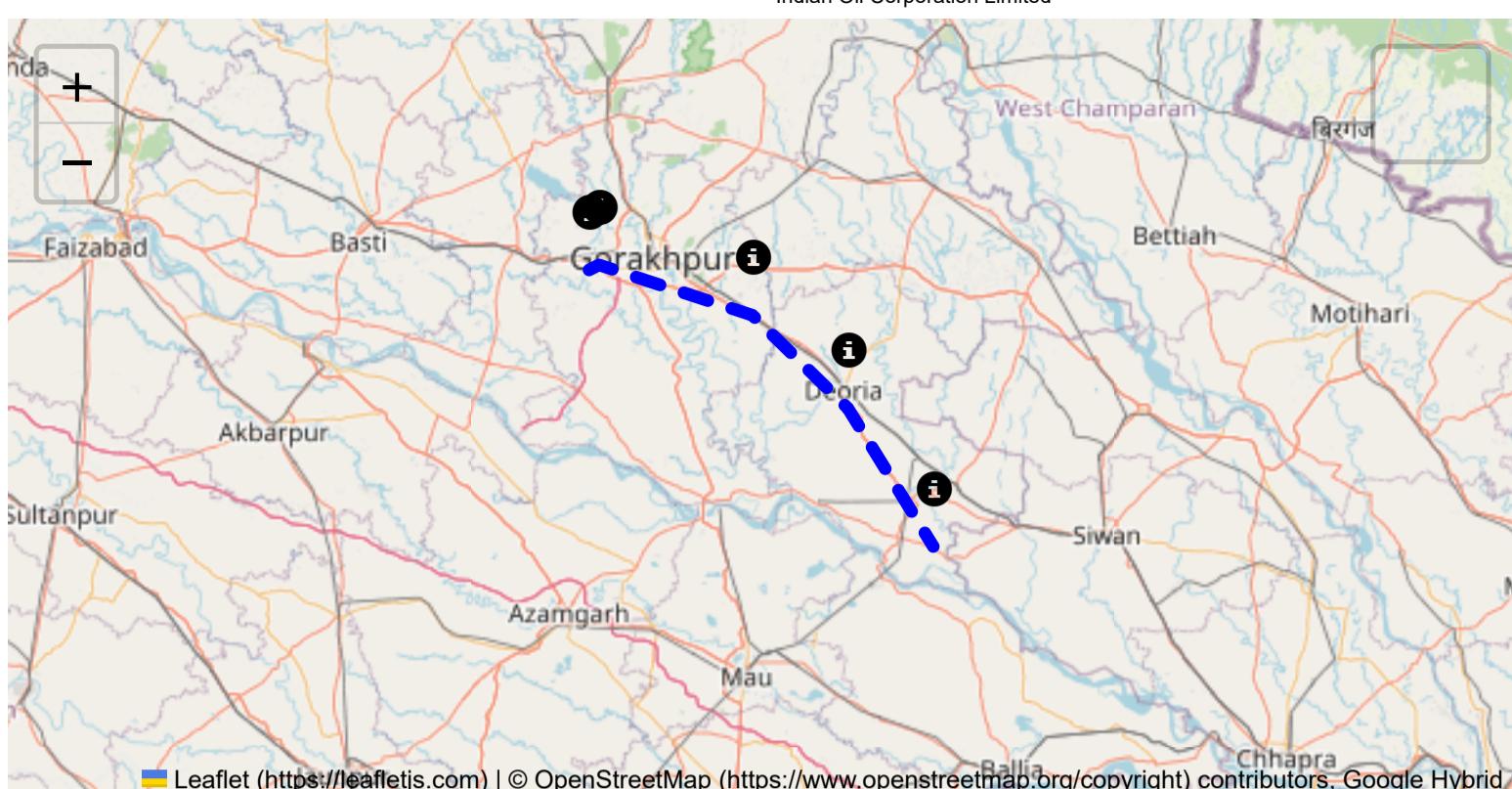
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 114.89 km
Estimated Duration: 2.7 hours
Adjusted Duration (Heavy Vehicle): 3.3 hours
Start: (26.735959, 83.229398)
End: (26.19621, 83.98056)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1, Sahjanwa to Lar via Zero Point in Kaalesar, Dumari Khurd, and Salempur covers approximately 114.89 kilometers. It traverses mainly through state highways and local roads. Key towns along the route include Kaalesar, Dumari Khurd, and Salempur, providing potential rest and refueling opportunities.

2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Summer (March-June):** High temperatures can lead to road surface deterioration and cause fatigue in drivers.
- **Monsoon (July-September):** Heavy rainfall could lead to waterlogging, reduced visibility, and slippery roads, increasing accident risk.
- **Winter (December-February):** Cold foggy conditions may reduce visibility, creating potential hazards, particularly during early mornings and late evenings.

3. Analysis of Traffic Patterns

- **Peak Hours:** Morning (7:00-9:00 AM) and Evening (5:00-7:00 PM) near Sahjanwa and Salempur are typically congested due to local workforce commute.
- **Congestion-Prone Areas:** Urban sections near the start and end points, particularly in busy market areas of Salempur and Dumari Khurd.

4. Assessment of Road Quality and Infrastructure

- **GIDA to Zero Point, Kaalesar:** Mostly good quality roads with divided highways.
- **Zero Point to Dumari Khurd:** Some sections have narrower roads with occasional potholes.
- **Dumari Khurd to Salempur:** Quality deteriorates slightly; watch for rural road patterns and slower local traffic.
- **Salempur to Lar:** Improving road conditions, but narrow lanes may challenge larger vehicles.

5. Suggestions for Alternative Routes for Emergencies

- **Option 1:** Divert through NH24 and NH28 for more consistent road conditions, albeit an increase in travel distance.
- **Option 2:** Local bypass routes around major town centers if original paths are obstructed.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Uttar Pradesh implements specific time windows for heavy vehicle travel in urban areas. Ensure all hazardous material documentation aligns with local regulatory bodies. Adherence to speed limits and specific road-use permissions is critical.

7. Overview of Historical Incidents

- **Historical Issues:** Incidents of overturned trucks due to speeding and overloading have been recorded near Sahjanwa and Salempur.
- Roadside mechanical issues leading to congestion have been common during monsoon due to waterlogging.

8. Environmental Considerations and Sensitive Areas

- Nearby Protected Areas:** Ensure no prohibited zones are traversed, especially in agricultural regions.
- Environmental Sensitivity:** Transporting hazardous materials near water bodies should be approached with caution to prevent contamination.

9. Analysis of Communication Coverage

- Potential Dead Zones:** Rural stretches between Dumari Khurd and Salempur may experience signal loss. Ensure alternate communication methods are available.

10. Estimated Emergency Response Times

- Urban Areas:** Emergency services are generally within 30 minutes.
- Rural Stretches:** Could take up to 1-2 hours depending on accessibility and weather conditions.

11. Overall Summary of Risk Assessment

- High-Risk Factors:** Monsoon weather, congested urban crossings, and limited emergency reach in rural zones.
- Mitigation:** Regular updates on weather forecasts, following designated hazardous material routes, constant communication checks, and prepared alternative routes enhance safety.
- Final Assessment:** With careful planning and adherence to guidelines, the route can be safely navigated by heavy vehicles transporting hazardous materials.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
4	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
5	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
6	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
7	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
8	Turn	High	26.74654, 83.22390	15 KM/Hr	1.63 km
9	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.15 km
10	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.21 km
11	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
12	Turn	Medium	26.69733, 83.47552	30 KM/Hr	33.22 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
13	Turn	Medium	26.69783, 83.47533	30 KM/Hr	33.28 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.37 km
14	Turn	High	26.69844, 83.47473	15 KM/Hr	33.37 km
15	Turn	High	26.69857, 83.47481	15 KM/Hr	33.41 km
2	U-Turn	High	26.6458564, 83.5827353	10 KM/Hr	45.68 km
16	Blind Spot	Blind Spot	26.64578, 83.58271	10 KM/Hr	45.68 km
17	Blind Spot	Blind Spot	26.64697, 83.57650	10 KM/Hr	46.21 km
3	U-Turn	High	26.6469671, 83.5764974	10 KM/Hr	46.21 km
18	Turn	Medium	26.63753, 83.59718	30 KM/Hr	48.64 km
19	Turn	Medium	26.44636, 83.82137	30 KM/Hr	80.91 km
20	Turn	Medium	26.29369, 83.92370	30 KM/Hr	101.64 km
21	Turn	Medium	26.21819, 83.96337	30 KM/Hr	111.42 km
22	Turn	Medium	26.21022, 83.96528	30 KM/Hr	112.46 km
23	Turn	High	26.20950, 83.96541	15 KM/Hr	112.55 km
24	Turn	Medium	26.20514, 83.97244	30 KM/Hr	113.31 km

Emergency Locations

Found: 4 hospital(s), 1 clinic(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.92 km
3	hospital	Deoria Eye Hospital	26.5011867, 83.7750448	30 km/h	Medium	72.68 km
2	hospital	DWH Deoria	26.4955581, 83.7819431	30 km/h	Medium	73.13 km
4	hospital	Mahadeva Hospital and Maternity Home	26.4993, 83.7754301	30 km/h	Medium	73.13 km
5	clinic	Savitri Nursing Home, Deoria	26.4716292, 83.7854545	30 km/h	Medium	75.59 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	70.81 km
6	school	SKP SAINIK PUBLIC SCHOOL	26.3237671, 83.8958075	30 km/h	Medium	97.24 km

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



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 33.22 km**Coordinates:** 26.69733, 83.47552

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 33.28 km**Coordinates:** 26.69783, 83.47533



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Risk Type: U-Turn**Risk Level: High****Speed Limit: 10 KM/Hr****Distance from Start: 33.37 km****Coordinates: 26.698439, 83.4747268**

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 33.37 km****Coordinates: 26.69844, 83.47473**



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 33.41 km****Coordinates: 26.69857, 83.47481**

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Risk Type: U-Turn**Risk Level: High****Speed Limit: 10 KM/Hr****Distance from Start: 45.68 km****Coordinates: 26.6458564, 83.5827353**



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 45.68 km

Coordinates: 26.64578, 83.58271



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 46.21 km

Coordinates: 26.64697, 83.57650



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 46.21 km

Coordinates: 26.6469671, 83.5764974



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 48.64 km

Coordinates: 26.63753, 83.59718



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 80.91 km

Coordinates: 26.44636, 83.82137



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 101.64 km

Coordinates: 26.29369, 83.92370



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 111.42 km**Coordinates:** 26.21819, 83.96337

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 112.46 km**Coordinates:** 26.21022, 83.96528



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 112.55 km****Coordinates: 26.20950, 83.96541**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 113.31 km****Coordinates: 26.20514, 83.97244**

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