JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to ARCHANA INDANE GAS SERVICE

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

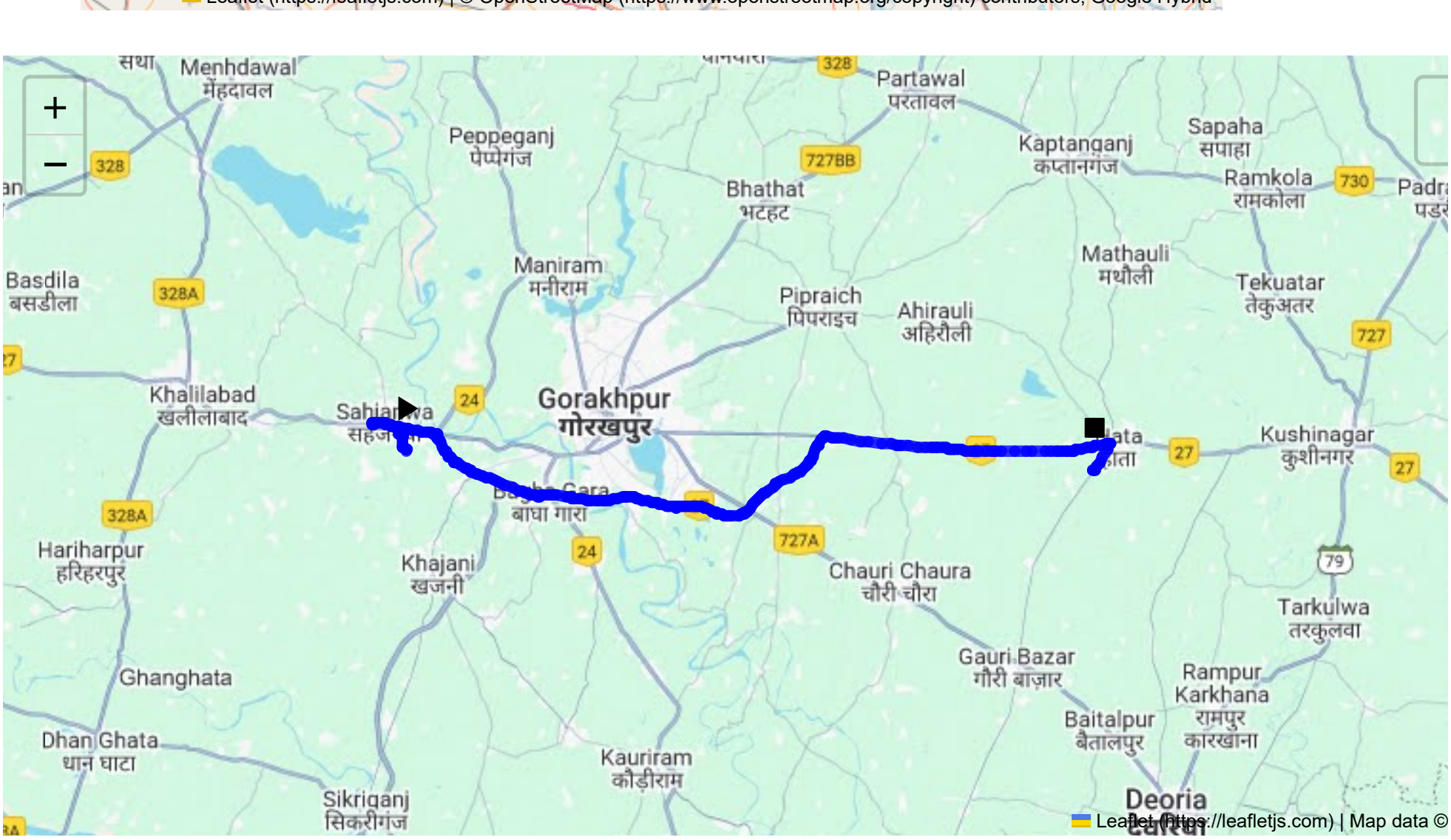
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 64.23 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.6 hours
Start: (26.735959, 83.229398)
End: (26.724043, 83.72513)

Welcome to the Journey Risk Management Study

Sure, here's a comprehensive route safety analysis from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to PPFG+J3 Mishra Dhadha, in Uttar Pradesh, India:

1. **Overview of the Route Map**:
    - The route spans approximately 64.23 kilometers, originating from the GIDA Industrial Area Phase 1 in Sahjanwa, extending primarily via NH27 before connecting locally towards Mishra Dhadha.

- The journey predominantly runs along major highways and arterial roads.

2. **Weather Conditions and Hazards**:
   - Typical weather in this area includes hot summers, monsoon rains from June to September, and mild winters.
   - Potential weather-related hazards include heavy rainfall during the monsoon leading to flooding and reduced visibility, and fog in the winter months affecting visibility.
3. **Traffic Patterns**:
   - Peak hours are usually around 8:00-10:00 AM and 5:00-8:00 PM, particularly congested in urban areas like Gorakhpur.
   - Areas around major intersections and near town entries/exits are prone to congestion.
4. **Road Quality and Infrastructure**:
   - National Highway 27 is a well-maintained road with good infrastructure, though potholes and wear could be present especially after monsoons.
   - Secondary roads may have narrower lanes and varying quality, so caution is advised.
5. **Alternative Routes for Emergencies**:
   - In case of critical congestion or accidents on NH27, local roads via Khalilabad could be considered for detours, with caution due to potentially poorer road conditions.
6. **Local Regulations on Hazardous Material Transport**:
   - Transporting hazardous materials requires compliance with the Motor Vehicles (Amendment) Act and adherence to prescribed routes dictated by local transport authorities.
   - Vehicles must have proper signage and documentation.
7. **Historical Incidents**:
   - Past incidents often relate to heavy vehicular accidents on NH27, usually due to over-speeding or poor weather conditions.
   - Precaution during adverse weather and adherence to traffic norms are critical to prevent incidents.
8. **Environmental Considerations and Sensitive Areas**:
   - Maintain caution in regions near water bodies or agricultural fields to prevent any spillage or leakage of hazardous materials.
   - Special care should be taken in ecologically sensitive zones, especially during flooding.
9. **Communication Coverage**:
   - The majority of the highway route has good communication coverage.
   - Potential dead zones exist in rural stretches; emergency communication systems should be checked before travel.
10. **Estimated Emergency Response Times**:

- Close to urban areas like Gorakhpur, emergency response (ambulance, police) is typically within 20-30 minutes.
- Rural stretches may experience longer response times, potentially 45 minutes to an hour.

11. **Overall Summary of Risk Assessment**:

- The route poses moderate risk primarily due to weather conditions and congestion in peak areas.
- Drivers should prepare for potential weather impacts and plan trips during off-peak hours when possible.
- Continuous monitoring of weather forecasts and traffic updates is recommended for immediate adjustments.
- Ensure all safety protocols for hazardous materials are strictly followed to mitigate risks of spillage or accidents.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.05 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	High	26.74654, 83.22390	15 KM/Hr	1.65 km
8	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
9	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
10	Turn	High	26.75381, 83.20466	15 KM/Hr	4.30 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.97 km
11	Turn	Medium	26.74656, 83.25154	30 KM/Hr	9.05 km
12	Turn	Medium	26.74644, 83.25150	30 KM/Hr	9.07 km
13	Turn	Medium	26.74306, 83.25344	30 KM/Hr	9.49 km
14	Turn	Medium	26.74300, 83.25343	30 KM/Hr	9.50 km
15	Turn	Medium	26.74526, 83.53161	30 KM/Hr	41.18 km
16	Turn	High	26.74095, 83.73588	15 KM/Hr	61.59 km
17	Turn	High	26.74083, 83.73599	15 KM/Hr	61.61 km
18	Turn	High	26.74077, 83.73593	15 KM/Hr	61.61 km
19	Turn	High	26.74055, 83.73597	15 KM/Hr	61.64 km
20	Blind Spot	Blind Spot	26.74089, 83.73798	10 KM/Hr	61.81 km
21	Turn	High	26.72386, 83.72687	15 KM/Hr	64.03 km

Emergency Locations

Found: 2 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.28 km
1	hospital	RG Hospital	26.7372178, 83.5824469	30 km/h	Medium	46.17 km

Crowded Spots

Route Photos of Risky Spots

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 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: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74681, 83.25111

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.05 km

Coordinates: 26.74656, 83.25154

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.07 km

Coordinates: 26.74644, 83.25150

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.49 km

Coordinates: 26.74306, 83.25344

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.50 km

Coordinates: 26.74300, 83.25343

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 41.18 km

Coordinates: 26.74526, 83.53161

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 61.59 km

Coordinates: 26.74095, 83.73588

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 61.61 km

Coordinates: 26.74083, 83.73599

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 61.61 km

Coordinates: 26.74077, 83.73593

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 61.64 km

Coordinates: 26.74055, 83.73597

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 61.81 km

Coordinates: 26.74089, 83.73798

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 64.03 km

Coordinates: 26.72386, 83.72687

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