

Low Perception of Risk: Why It Happens and Why It's Dangerous

Understanding and Mitigating Risk in
Major Hazard Operations

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Introduction - The Challenge of Risk Perception

- Vopak Terminal Durban operates with inherent major hazards.
- Robust safety measures are in place.
- However, a low perception of risk among stakeholders can undermine these efforts.

Why Low Perception of Risk Happens - Psychological Factors

The Normalcy Bias

- Underestimating disaster likelihood because it hasn't happened before.
- Leads to complacency and reduced urgency regarding safety.

Familiarity Breeds Complacency

- Routine exposure to hazards without incident desensitizes individuals.
- Example: Personnel near storage tanks may perceive lower risk due to absence of past events.

Why Low Perception of Risk Happens Misinterpretations & Gaps

- Misinterpretation of Tolerable if ALARP
 - Tolerable might be misinterpreted as acceptable.
 - Leads to belief that current measures are sufficient without continuous improvement.
- Lack of Understanding of Worst-Case Scenarios
 - Complex nature and far-reaching consequences of major hazard events (e.g., vapor cloud explosions) may not be fully appreciated.
 - "Out of sight, out of mind" for risks beyond immediate operational areas.
- Over-reliance on Safety Systems
 - A belief that technology alone can prevent all incidents may reduce vigilance.
 - Dangerous without a proactive human element.

Implications of Low Risk Perception

- Reduced Vigilance: Personnel become less diligent, leading to human error.
- Delayed Response: Low urgency delays critical responses during emergencies, exacerbating consequences.
- Inadequate Preparedness: Individuals and communities may not be ready for off-site impacts.
- Erosion of Safety Culture: Leads to a reactive rather than proactive approach to safety over time.

Strategies to Enhance Risk Perception - Communication & Awareness

Continuous Communication and Awareness

- Regular Drills with Realistic Scenarios: Simulate worst-case scenarios, including off-site impacts.
- Visual Aids and Case Studies: Use visual representations and examples like Buncefield to illustrate severity.
- Transparent Risk Communication: Clearly communicate risk assessment results (intolerable, ALARP) to all stakeholders.
- Tailored Information: Provide relevant information for specific roles and locations (e.g., loading gantries and ignition risks).

Strategies to Enhance Risk Perception - Emphasizing Human Factor

Emphasizing Human Factor in Safety

- Reinforce Individual Responsibility: Highlight the criticality of individual adherence to safety protocols.
- Behavioral Safety Programs: Focus on reinforcing safe behaviors and addressing at-risk behaviors through observation and feedback.
- Near-Miss Reporting and Learning: Promote reporting and investigation of near-misses to prevent future incidents; emphasize that small deviations can have major consequences.

Strategies to Enhance Risk Perception - Engaging with the Community

Engaging with the Community

- **Community Awareness Programs:** Inform neighbors about hazards, emergency procedures, and evacuation plans.
- **Joint Emergency Drills:** Collaborate with local government and emergency services for exercises involving community participation.
- **Feedback Mechanisms:** Establish channels for community concerns and questions, fostering shared responsibility.

Strategies to Enhance Risk Perception - Leadership & Commitment

Leadership and Management Commitment

- **Visible Leadership:** Management should visibly champion safety and participate in discussions.
- **Resource Allocation:** Ensure adequate financial, human, and technological resources for safety.
- **Performance Indicators:** Track and communicate proactive safety measures and training completion beyond just incident rates.

Conclusion

Vopak Terminal Durban faces inherent major hazards.

Bridging the gap between perceived and actual risk is crucial for a safer environment.

This is achieved through:

- Continuous, transparent, and targeted risk communication.
- Reinforcing individual responsibility.
- Fostering a strong safety culture

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Thank you



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