

# Land transportation safety recommended practice

OGP Report No. 365 (Issue 2) Revised September 2014

The International Association of Oil & Gas Producers



# **Publications**

#### **Global experience**

The International Association of Oil & Gas Producers has access to a wealth of technical knowledge and experience with its members operating around the world in many different terrains. We collate and distil this valuable knowledge for the industry to use as guidelines for good practice by individual members.

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#### **Revision history**

Version	Date	Amendments
1	April 2005	First issued
1.1	July 2011	Full revision
1.2	November 2012	Minor update to section 3
2	October 2014	Improvements throughout. In particular: The word 'should' is now used instead of 'shall' to indicate recommended practice. Additional guidance was added in <b>2.4</b> (now called 'Distracted driving'). Additional guidance was added in <b>2.5</b> (now called 'Journey management'). Recommended maximum duty hours was changed from 16 hours to 14 hours.

# Acknowledgements

This recommended practice was produced for Members of the International Association of Oil & Gas Producers by the Land Transportation Safety Task Force.

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International Association of Oil & Gas Producers

# 1. Introduction

# Background

Driving-related incidents are commonly the single largest cause of fatalities in OGP member company operations. It is an E&P industry expectation that all companies operating land transport, or providing services involving land transportation, have in place a management system which includes land transport operations and is based on a full assessment of the risks and measures to address such risks.

An effectively implemented management system with due focus on land transport will yield many benefits, including improved driving safety performance with a consequential reduction in the number and severity of incidents leading to a reduction in injuries and fatalities.

## Purpose

The main objective of this document is to help reduce, and ultimately eliminate, the number of serious road traffic incidents and fatalities by providing guidance on how to implement land transport safety elements in a management system which is consistent with the OGP Report No. 210, *Guidelines for the Development and Application of Health, Safety and Environmental Management Systems.* See **2.9** (Road safety management system).

Shortly before the time of publication of this update to Report No. 365, Report No. 210 was updated to Report No. 510, *Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry.* 

These guidelines have been developed to be sufficiently generic and adaptable to different companies and their cultures worldwide, and to gain acceptance of their workforces. They are applicable to all parts of the E&P industry including operators, contractors and subcontractors, and provide information on elements that can be utilized by the communities in which the OGP member companies operate.

The recommended practices in section 2 are based on current experience and practices that have proven effective in reducing the number of serious incidents. More detailed guidance and processes can be found in Appendix 1 (Land transport safety elements of a management system).

This report supports OGP Report No. 459, *Life-Saving Rules*, that can be used in the oil and gas industry to mitigate risk and reduce fatalities. The Rules focus on modifying worker and supervisor behaviours in the workplace by raising awareness of the activities that are most likely to result in fatalities and simple actions individuals can take to protect themselves and others.

# Scope

It is strongly recommended that the guidance provided be applied to all land transport activities in the E&P industry. This includes:

- all company and contractor† vehicles and drivers operating on company roads and premises
- all company and contractor vehicles and drivers operating on public roads and in public areas on company business, and
- all transport activities including personnel and freight movements, and mobile plant (drilling trucks, seismic vibrator trucks, etc.) activities.
- *† Contractor includes all subcontracted activities.*

# 2. OGP land transportation safety recommended practices

OGP member companies are committed to the goals of significantly reducing road traffic injuries and fatalities, and achieving world-class road safety performance. They believe that this can be advanced by the implementation of the recommended practices that follow.

These practices are also applicable when member companies utilize processes for pre-qualification of land transportation service providers and other contractors and subcontractors. Demonstration of performance delivery against these practices is of critical importance in the management of contractors and subcontractors during pre-qualification and on-going assessment.

Further guidance and examples of good practices can be found on the OGP Land Transportation Safety website. http://www.ogp.org.uk.

This section may recommend practices supplemental to the requirements of local legislation. Nothing herein is intended to replace, amend, supersede or otherwise depart from such requirements. In the event of any conflict or contradiction between the provisions of this document and local legislation, applicable laws prevail.

# Application

Exceptions to applying these recommended practices to land transport activities in the E&P industry may be appropriate for activities that are assessed to be of low HSE risk and where the effort and cost to implementing controls would generally be disproportionate for any risk reduction. Any such exceptions should be based on a documented risk assessment undertaken by personnel with appropriate knowledge and experience, and approved by senior line management. Any variations to this document may be found on the Land Transport Safety website.

# Implementation

Member companies will annually report the degree of implementation of these recommended practices for their own company and contractor activities, as part of the annual OGP safety statistics reporting efforts.

# 2.1 Seatbelts

Occupants of any vehicle should use seatbelts at all times.

All vehicles should be fitted with seat belts for each occupant.

Belts for all occupants should be of the 3-point configuration, incorporating automatic retraction and deceleration activated emergency locking mechanisms, often referred to as 'inertia reels'. It is recommended that belts incorporate pre-tensioners wherever possible. The implementation of properly rated 4-point configurations should be implemented for lateral seating positions where this seating position is considered to be imperative, e.g. ambulance attendants.

In vehicles equipped with sleeper berths, if the berth is to be used while the vehicle is in motion, some form of approved restraint should be provided and used at all times the vehicle is in motion.

Where it is impossible to implement the above seatbelt requirements for buses or coaches, the minimum requirements should be that seat belts are fitted for the driver (3 point). Front seats and seats with an open space in front (such as a seat adjacent to a doorway) should not be occupied unless seatbelts are fitted.

Personal vehicles used on company business should be consistent with the above specifications.

Vehicles that are not capable of more than 16 kph (10 mph) may be exempted based on a risk assessment and determination of the exposure to be ALARP (As Low As Reasonably Practicable).

Use of spot-hire vehicles (e.g. taxis) not properly fitted with seat belts for all passengers should be avoided.

### 2.2 Driver training and qualification

Drivers should be appropriately licensed, trained, and have the functional capacity to operate the vehicle.

All drivers should have in their possession a valid driving/operator's licence (issued by a relevant public authority) for the class of vehicle being operated, and where applicable, the cargo.

All employees who regularly drive on company business should complete safe-driving instruction in line with the content listed below. Additional training for high-risk environments and for specialized vehicles should also be taken.

A pre-hire screening process should be in place to select prospective drivers with driving records that reflect safe driving behaviours.

Good safe-driving instruction should include the following:

- review of company policies and standards related to driving
- driver behaviour
- safe driving techniques
- journey management techniques
- alertness and fatigue management
- dealing with distractions
- effects of medication and substance abuse
- vehicle restraint systems and safety equipment
- pre-trip checks and proper seating position
- local driving hazards (including personal security), regulations and culture
- commentary driving, and
- assessment of driving skill and behaviour.

The need for refresher training and assessment should be based on drivers' performance and risk exposure, with a refresher recommended at least every three years following the initial training.

# 2.3 In-vehicle monitoring systems

Company-owned, contracted or leased vehicles should be fitted with an in-vehicle monitoring system (IVMS) that produces journey data to be analysed and fed back to the drivers.

The installation of IVMS in personal vehicles and vehicles provided on an allowance is encouraged for use when on company business.

A risk-based methodology may be followed to set the pace of introducing IVMS. Exemption from using IVMS may be justified for some specific (groups of) vehicles where the effort required is shown to be disproportionate to the risk reduction achievable. Both pace of implementation and possible exemption, should be evaluated based on the current situation, and be documented.

Minimum journey data recorded by such systems should record against a driver identification number or key, the speed, harsh acceleration, harsh deceleration, kilometres or miles driven and driver hours.

A data management system should be implemented to ensure data from IVMS is properly analysed and fed back to drivers and supervisors. This data management system should include the following:

- procedures to ensure monitors are installed and working properly, with alarms set to levels commensurate with local driving conditions
- recent data from the monitors is downloaded, analysed, and communicated, and
- data from the monitors is used to provide individual driver performance feedback for improvement and skills development.

More detailed guidance on the selection and implementation of IVMS can be found in guidance document 365-12, *Implementing an in-vehicle monitoring program:* A guide for the oil and gas extraction industry'.

### 2.4 Distracted driving

Drivers should neither initiate nor answer nor be engaged in a mobile telephone call while driving a vehicle. (This includes text messaging and the use of hands-free devices.)

Mobile telephones may be left on during a trip to alert the driver of any incoming calls. The driver should safely leave the road and bring the vehicle to a complete and safe stop, in a safe parking area, before initiating or answering a call.

To minimize distraction of drivers, this also applies to the use of and interaction with:

- radios used for two-way communication including communication with base stations
- computers, notepads, or equivalent devices
- GPS devices
- MP3, or equivalent devices
- any network enabled devices.

The exception to this is for the use of two-way radios or 'Citizen Band' (CB) radios as part of radiocontrolled traffic management, convoy management or for use during emergency situations. Radio use in these circumstances should be kept to the minimum necessary to communicate and control the hazards and risks of the journey being undertaken.

## 2.5 Journey management

Managers at every level should question the need for journeys, always searching to eliminate the journey or find an alternative means of achieving the journey objective. Procedures should be put in place to safely and successfully manage the vehicular movement of people, product and equipment.

Rail, ferry, or air travel should be considered whenever a risk assessment shows that the risk is lower than driving. Where driving is unavoidable, alternatives such as combining trips or the use of buses and using approved transportation contractors, especially for 'hotshot' trips (unplanned/non-routine transportation of equipment or personnel), should always be explored.

Where the journey is necessary, all risks should be assessed and a journey or trip management plan effected if the risk assessment warrants.

Consideration should be given for establishing minimal or a standardized base level of expectations for local/in-field travel in low-risk conditions. Implementation of full journey management procedures would be expected when conditions elevate the risk.

A journey (or trip) management plan should include consideration for the following points:

- a journey manager (supervisor) is appointed, who is not a participant in the journey
- formal pre-trip briefings are held and documented. This should include a discussion between driver(s) and journey manager of routes, stops, hazards, loads, safe speeds, elimination/avoidance of distractions, the requirement for the driver to report completion of the journey, and contingency plans for en-route emergencies, etc.
- a timeline should be developed for the whole journey, so that the driver does feel it is required to break the speed limit at any time nor miss any rest breaks
- the route to be travelled is clearly defined and mapped
- establish a communications protocol, included consideration for mobile communication "dead spots"
- potential driving hazards, especially dangerous intersections, are identified in advance, taking into consideration the terrain, time of day, weather, known dangerous routes, speed limits, holidays (especially those which involve fasting or alcohol), etc.
- appropriate vehicles are assigned to the journey taking into account the hazards identified including any special considerations for the journey (terrain, weather, high risk crossings, road conditions, etc.)
- only qualified drivers are assigned with current certification for the type of vehicles to be used
- drivers are physically and mentally fit, giving particular attention to past hours worked, past amounts of sleep, time of the day, position in the natural alertness cycle, food intake, etc.
- vehicles are inspected using an appropriate checklist before the journey begins
- assess the desirability of using personal vehicle or rentals their appropriateness, condition and insurance
- rest stops are scheduled
- the use of convoys where two or more vehicles are proceeding to the same location at the same time. Convoy procedures should be developed and implemented for this situation
- all trips during the hours of darkness or during times of reduced visibility should be systematically reviewed for risk and be subject to formal management approval before they begin

- assessment of risk should consider the risk of blowing snow, dust, smoke, fog, heavy rains, tornadoes, cyclones/hurricanes, extremes in temperature, security risks, and local driving practices
- an estimate of the expected arrival time at the destination is made. Necessary action should be taken to initiate a contingency plan in the event that the traveller does not arrive at the set time
- the driver(s) clearly understand his/her responsibility to report completion of the trip to the journey manager.

In order to help make vehicles more visible to pedestrians and other users of the roadways, vehicles should operate with their lights illuminated at all times. This includes headlights, side marker lights and taillights to ensure vehicles are visible from all directions. This is where permitted by local law and unless specific risks (e.g. personal security) establish that such practice presents unacceptable risk.

The reversing of vehicles should be avoided whenever possible. A guide should be used when reversing vehicles that are without 360-degree visibility. Proper hand signals should be established prior to vehicle movement. The driver should obey signals from the designated guide only, while a signal to stop should be obeyed from anyone.

When parking, every effort should be made to park the vehicle in a manner that allows the first move when leaving the parking space to be forward, and with the park brake set.

In journey planning, the driving, duty and rest hours identified in **2.7** (Driver fitness and alertness) should be applied.

Consideration should be made to avoid the use of two-wheeled and three-wheeled means of conveyance as well as 'quads' due to their inherent stability issues and lack of driver/passenger protection systems.

# 2.6 Driving under the influence of alcohol, drugs, narcotics or medications

Drivers should not operate a vehicle while under the influence of alcohol, drugs, narcotics or medication that could impair the operator's ability to safely operate the vehicle (consistent with local regulations and in line with Report No. 445, Substance misuse – A guide for managers and supervisors in the oil and gas industry.

# 2.7 Driver fitness and alertness

All persons employed as drivers and persons regularly driving on company business should be medically assessed with a minimum follow-up every five years (unless age or medical condition dictates otherwise) to ensure that they have the functional capacity to operate a vehicle safely.

Drivers should not operate vehicles unless appropriately rested and alert. In particular:

- drivers should be screened for sleep disorders such as sleep apnoea
- a process should be in place to check prior to each journey whether the driver is fit to drive (as part of the journey management plan briefing)
- drivers should advise management when they have a disability or condition that could prevent them from driving safely
- drivers should have the right to refuse to drive when they feel that they are not fully rested or alert

- drivers should have the right to pull over at a safe location when they feel sleepy; a 15 minute nap should be allowed, and
- drivers should be informed on how to identify driver fatigue and alertness problems, and means of dealing with them.

The	limitations r	elating to o	driving and	duty	hours in	Table 1	should	be imple	emented:
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CONDITION	RECOMMENDED PRACTICE
Maximum driving time between breaks and minimum break time	4.5 hours followed by a 30 minute break. However it is strongly recommended to have 15 minute breaks every two (2) hours, or more frequent breaks during periods of circadian lows
Maximum duty hours within a rolling 24-hour period	14 hours (i.e., employee cannot drive after 14 duty hours). This should include driving, loading, unloading, waiting, rest breaks, and any other work (including air travel)
Maximum driving hours within a rolling 24-hour period	Ten (10) hours total excluding commuting time. Eleven (11) hours including any commuting time
Maximum duty hours in a rolling 7 day and 14 day period	14-day period: 120 hours, subject to an 80 hour / 7 day maximum, and an average of 60 hours per week over an extended period
Off-duty period in a rolling 7-day period	Minimum of a continuous 24-hour break prior to driving again; a 36-hour break is further recommended wherever practicable

Table 1: Driving and duty hours limitations

# 2.8 Vehicle specification and upfitting

Vehicles should be fit-for-purpose based on an assessment of usage, and be maintained in safe working order in line with manufacturers' specifications and local legal requirements. Any vehicle that does not meet these specifications should be removed from service and repaired or replaced.

Vehicles should have the steering wheel on the appropriate side of the vehicle for the country being operated in.

Where a risk assessment demonstrates that the risk of rollover due to terrain, vehicle type, or work conditions is higher than normal, a properly engineered rollover protection device should be installed (internally or externally).

Loose items that might cause injury in the event of an incident should not be carried in the passenger compartment of any vehicle. All items transported should be firmly secured in such a way that they will not become a hazard in a crash – this includes laptops, luggage, field equipment, fire extinguishers, wheel jacks, etc. Any vehicle with non-segregated storage should be equipped with a cargo net or equivalent to separate the storage area from the passenger area.

All loads transported should be securely fastened in keeping with local and regional regulation at a minimum, and should not exceed the manufacturer's specifications or the legal load limitations for the vehicle.

Careful consideration should be taken when selecting and before fitting any vehicle with a 'bull-bar' or other protruding fitments even if provided or fitted by the vehicle manufacturer, unless a documented risk study justifies otherwise to avoid increased hazard to pedestrians, or compromise of vehicle safety features due to design or installation.

The use of retread tyres should be restricted, and not permitted on wheels of the steering axle(s) or buses.

More detailed specification for the following vehicle types can be found in guidance document 365-14, *Wehicle specifications and upfitting*:

- all vehicles
- heavy vehicles
- buses and coaches
- off-road and Emergency Response Vehicles (ERVs)
- auxiliary safety equipment.

### 2.9 Road safety management system

Company and contractor management systems should include requirements for managing land transport safety and the effective implementation of *Land transportation safety recommended practice*. These should include:

- Leadership and commitment: management setting clear expectations that the recommended practices are met, making resources available to meet them, and setting a good example themselves
- **Policy and strategic objectives:** management communicating a clear policy statement expressing the commitment to continuously improve road safety through implementation of the above recommended practices, and setting strategic objectives for the aspired improvements
- Organization, resources and documentation: an overall management structure for land transport operations should be documented and communicated. It should clearly identify the people with responsibility for managing land transport safety, and their competencies. Adequate competent resources should be made available in a timely manner to fulfill the land transport strategic objectives
- Evaluation and risk management: all hazards related to land transport should be identified, documented and risk assessed. Risk reduction measures, including those based on Land transportation safety recommended practice should be put in place.
- **Planning:** land transport operations should be planned in line with the policy, strategic objectives and *Land transportation safety recommended practice*. The risks introduced by changes in planned activities and deviations from policies, procedures and recommended practices should be assessed periodically, eliminated or mitigated, and approved by management. Procedures should be maintained to identify foreseeable emergencies, and response plans developed for such situations.
- **Implementation and monitoring:** monitoring systems should be in place to ensure that the management system is effective, that *Land transportation safety recommended practice* is followed, and that a system is in place for managing exceptions. Corrective action should be initiated in the event of non-compliance. Records should be kept to demonstrate the extent of compliance.
- Audit and review: an audit programme should be implemented to verify effective implementation of the management system elements related to land transport, and Land transportation safety recommended practice. Senior management should carry out an annual review of audit findings and their close out and assess the need for changes to the requirements for managing land transport safety. Guidance on the land transport safety elements for an HSE management system is provided in Appendix 1.

# 3. Reference list

### 1. Seat Belts specification/implementation

"Seat belt campaign toolkit manual" (May 2004), The Federation Internationale De L'Automobile (FIA) Foundation.

# 2. Driver training and qualifications

- "Specialised Driver Training: Elevating Defensive Driving From a Simple Awareness to a Proactive, Crash Free Reality", D. Meade and D. Tate, SPE 86832, 7th SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, Calgary, Alberta, March 2004.
- "Building a Global Driving Programme that Delivers Superior Results" D. Tate, SPE 86750 7th SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, Calgary, Alberta, March 2004.

# 3. Effectiveness of IVMS

- "Making In-Vehicle Monitoring Systems Work", D. Nijen-Twilhaar, I.van Schagen and B. Kassar, SPE 61089, 5th SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, Stavanger, Norway, June 2000.
- "Driver Monitors: Improving Transportation Safety and Enhancing Performance Through Behavioural Change", T. Ballard, A. Melton and I. Sealy, SPE 86834, 7th SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, Calgary, Alberta, March 2004.

# 4. Use of mobile telephones

- "The Mobile Phone Report", March 2002, Transport Research Laboratory (TRL) and Direct Line Motor Insurance.
- "The Mobile Phone Simulator Study" (2004), Swedish National Road and Transport Research Institute (VTI).
- "The Risk of Using a Mobile Phone While Driving" (2002), The Royal Society for the Prevention of Accidents (RoSPA).

# 5. Driver/duty hours and fatigue

"Drivers Guide to Fatigue" (2003), Awake Limited. "Arrive Alive", Loughborough Research Centre.

### 6. Hazard assessment

"Reducing Vehicular Incidents with a Road Hazard analysis", D. Tate, N. Campbell, Seventh SPE International Conference on Health Safety and Environment in Oil and Gas Exploration and Production held in Calgary, Alberta, Canada, 29-31 March 2004.

### 7. Other relevant documents

Examples of good practices and documents providing further clarification and guidance can be found on the OGP website.

- 365-1, Road hazard assessment.
- 365-2, Journey management.
- 365-3, Driver fitness for duty test.
- 365-4, Road/vehicle accident checklist.
- 365-5, Common land transport incident KPIs for Motor Vehicle (rashes (MVC).
- 365-6, Questionnaire/checklist assessment for the implementation of report 365.
- 365-7, *Variations for off-road operations*.
- 365-8, Driver trainer recommended approach and profile.
- 365-9, Driver qualification process.
- 365-10, Journey management process.
- 365-11, Commentary drive assessment.
- 365-12, Implementing an in-vehicle monitoring program A guide for the oil and gas extraction industry.
- 365-13, FAQs (This document was integrated into the OGP Land Transportation Safety website.
- 365-14, Vehicle specification and upfitting.
- 365-15, Bus and coach safety.
- 365-16, Emergency Response Vehicles.
- 365-17, Mobile Construction Equipment.

These documents are regularly reviewed and updated and are therefore not included in this document.

# Appendix 1 — Land transport safety elements of a management system

Many guidance documents can serve to assist in the development of HSE Management Systems. The main objective is to ensure that activities are planned, carried out, controlled and directed so that risks from all activities, including land transportation, are minimized. For the guidance in this appendix, the structure of OGP Report No. 210, *Guidelines for the Development and Application of Health, Safety and Environmental Management Systems* was used.

Report No. 210 was recently updated to Report No. 510, *Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry.* 

The following sections of this appendix will assist the responsible managers in developing the elements of a management system that have the most significant impact on land transport safety.

# 1. Leadership and commitment

#### Visible demonstration of leadership and commitment

Senior management should demonstrate their commitment to managing land transport operations in a safe, healthy and environmentally responsible manner. Leadership and commitment is demonstrated visibly when management at all levels:

- set a good example in terms of their own attitude and driving performance
- allocates the necessary resources to land transportation and related logistic issues
- puts land transport safety matters high on the agenda of meetings, including board meetings
- communicates clearly that land transport safety standards are an important company requirement
- provides appropriate training and assessment for all drivers involved in land transport operations
- encourages safety promotions and employee and contractors' suggestions for measures to improve safety performance, and commends safe practice
- sets plans and targets, and measure vehicle safety performance of all employees, and
- insists that transport contractor operations meet all requirements. There should be a clear definition of delegated responsibility for land transport to nominated individual managers down through the management structure.

# 2. Policy and strategic objectives

#### **Policy Statement**

The senior management should make clear in a policy statement their commitment and expectations of good HSE management. All vehicle owners and operators should formulate local land transportation HSE policies identical to, or compatible with the corporate HSE policy to improve the safety of land transport operations.

To operate in a safe, efficient and effective manner so as to reduce incidents, eliminate fatalities and operate in an environmentally sensitive and responsible way, the policy statement should include some or all of the following features. It should:

- be publicly available in appropriate local languages and in a bold, easy to read format
- demonstrate the organization's commitment to strive continuously for improvement in land transport safety performance by minimizing risk
- give a clear, concise and motivating message that land transport safety is as important as other business objectives and that transport incidents are avoidable
- promote openness and the participation of all individuals in improving safety performance
- highlight the importance and relevance of an effective organization to manage transport operations and indicate that line managers are responsible for land transport safety at all organizational levels
- make a commitment to meet all legislative requirements and apply responsible standards and procedures where national regulations do not exist
- challenge the requirement for land transport and consider alternatives, with the aim of minimizing exposure to the driving environment, and
- undertake all transport operations with proper regard for the environment and to strive to reduce the consumption of fuel, emissions and discharges.

The Land Transport Safety Policy Statement should be:

- provided to each employee by their line manager and the implications of the policy fully explained in practical terms
- displayed on notice boards, transport staff offices, drivers' meeting rooms and other prominent locations
- given to contractors as part of any tender documentation
- included in driver's handbook
- discussed and explained on training courses, and
- regularly reviewed by management on its intent, scope and adequacy.

#### Strategic objectives

The Land Transport Safety Policy Statement provides the starting point for establishing strategic land transport objectives.

Such objectives should aim to:

- reduce the number of incidents and fatalities
- minimize the number of journeys and personnel exposure
- minimize the distance driven
- establish driver selection, testing and training programmes
- establish and support safe land transport working procedures and practices and to strive for an incident-free activity
- ensure that the company will employ only transport assets, facilities and equipment which conform to acceptable standards and that they are maintained in a safe, secure and operational condition, and
- specify the need to develop an emergency response capability in cooperation with authorities and emergency services.

# 3. Organization, resources and documentation

#### Organization

An overall management structure for land transportation and its relation to the implementation of the transport policy within the organization should be in place and made widely available. It should clearly identify those people who have an active responsibility for land transport management, and should state what those responsibilities are. All employees who make use of, or are affected by, land transportation should continually be made aware of their individual responsibilities.

The structure should describe the relationship between:

- different operations
- operating units and supporting services
- operators, contractors and sub-contractors, and
- partners in joint ventures.

Land transport safety is a line management responsibility with safety advisers/trainers, etc., assisting line management in the development, implementation and maintenance of the programme.

The following are general but fundamental points concerning land transport organization:

- management representatives should be assigned responsibility, authority and accountability for coordinating implementation and maintenance of the land transport elements of the management system
- all employees involved in land transport should be made aware of their individual role, accountabilities and responsibilities
- management should ensure that personnel performing specific assigned HSE critical activities and tasks are competent
- management should ensure and increase competence through the identification of training needs and the provision of appropriate training for its personnel, both drivers and supervisors
- management should ensure that its contractors operate a land transport management system. Contractors should be visited and supported at regular intervals during the contract period to assist them with the integration of land transport elements into their management system. Joint reviews at regular intervals should occur to ensure that land transport management objectives are achieved, and
- management should maintain procedures to ensure that its employees and those of its contractors, partners and others involved with land transport at all levels are aware of the requirements for managing land transport. The focus of communication should be on bridging local language and cultural understanding.

#### Resources

Management should ensure that adequate resources are made available in a timely manner to fulfill the strategic objectives set out in the company's land transport management plan.

#### **Documentation**

Documentation should be maintained to provide records of the critical aspects of land transportation management. Policies and responsibilities need to be established for the availability, maintenance and modification of such documents.

# 4. Evaluation and risk management of land transport

A thorough and comprehensive hazard identification and risk assessment of land transport operations should be performed at the earliest opportunity and at suitable intervals thereafter by experienced and suitably qualified personnel. This exercise should cover an assessment of all hazards that could occur within the land transport of personnel, goods or materials in every aspect of the planned operation.

Procedures should be systematically implemented to identify potential hazards and their consequences throughout the total life cycle where land transport is involved, that is:

- planning and sourcing of vehicles
- routine and non-routine operations
- incidents and potential emergency situations
- disposal of vehicles, and
- evaluation of local transport regulations.

#### **Recording of hazards**

The hazards information gained from the risk evaluation should be documented and incorporated into the management system, which should demonstrate that:

- all foreseeable hazards associated with land transport have been identified
- the likelihood and consequences of an incident have been assessed
- controls to mitigate significant risks are in place, and
- emergency response measures to mitigate incidents are in place.

#### **Risk reduction measures**

Procedures should be in place to select, evaluate and implement measures to reduce risks. Emphasis should be placed on preventative measures such as enhancing driver performance, security of vehicles and cargo, and proactive environmental protection wherever practicable. Mitigation measures should include steps to prevent escalation of any incidents that do occur through effective emergency response.

Effective risk reduction measures and follow-up require visible commitment of management and on-site transport supervisors, as well as the understanding and ownership of the measures by drivers.

# 5. Planning

All aspects of land transportation operations, vehicle selection and use should be planned in line with the policy and strategic objectives of the company.

The plans should especially address the introduction of any new or unusual techniques, types of transport and types of environment as well as training requirements.

A journey management system should be operated to ensure each journey is necessary, properly organized and supported.

#### **Management of change**

Any changes in the personnel, vehicles, processes and procedures of land transport in the company have the potential for adverse effects on health, safety and the environment. All changes should be considered in this light. Changes that may be critical to the management of safety of land transport should be reviewed prior to implementation.

#### **Contingency and emergency planning**

As part of emergency response arrangements, procedures should be in place to identify, reduce the risk and consequence of, respond to, and manage all foreseeable land transport emergencies. Roles and responsibilities of employees dealing with emergencies should be documented. Procedures should be established to test the effectiveness of emergency response plans by scenario drills and other suitable means. Plans should be revised at appropriate intervals as necessary in the light of the experience gained. Procedures should also be in place for the periodic assessment of the 'readiness for use' of emergency equipment. Where there is an interface with the public, emergency services procedures need to take cognizance of this and scenario drills need to test effectiveness of the interfaces.

# 6. Implementation and monitoring

There should be written procedures for all safety critical land transport activities. A monitoring system should be in place to ensure that the management system is effective, and that procedures are followed.

The land transport activity should be conducted in accordance with the plans and procedures which have been developed at the transport planning stage and be consistent with the company's Land Transport Safety Policy and related strategic objectives.

Procedures should be in place for both active and reactive monitoring.

#### **Active monitoring**

Active monitoring provides information on the extent to which land transport safety requirements are being complied with, and objectives and performance criteria are being met.

#### **Reactive monitoring**

Reactive monitoring provides information from the investigation of vehicle incidents (including near misses, ill-health of drivers, vehicle/asset/environmental damage and safety statistics) that have occurred and provides insight into the means to prevent similar incidents in the future.

#### Records

Records should be kept in order to demonstrate the extent of compliance with its land transport policy and to document the extent to which planned objectives and performance criteria have been met, including:

- reports of inspections, audits, reviews and follow-up actions
- investigation of incidents and follow-up actions
- maintenance reports
- training records, and
- security incidents.

#### **Corrective action**

There should be a clear assignment of responsibility for initiating corrective action in the event of noncompliance with specific land transport requirements of the management system. Situations of noncompliance may be identified by the monitoring programme, via communications from employees, contractors, customers, regulatory authorities, the general public or from incident investigations.

# 7. Audit and review

A system of planned and systematic audits of land transport operations together with management reviews of performance should be established and maintained as a integral part of the land transport operations.

The audit plan should identify specific areas to be audited, the frequency of those audits and the responsibilities for auditing specific activities/areas. Audit frequency should be determined by the degree of risk and the results of previous audits and inspections.

Audit protocols should be established which ensure that adequate resources, personnel requirements and methodologies are in place for the audit, together with procedures for reporting audit findings and tracking the implementation status of audit recommendations.

# 8. Management review

Senior management should carry out a review of the land transport safety aspects of the management system at appropriate intervals to ensure its continuing suitability and effectiveness for the ongoing operations.

The review should include audit findings and the status of audit recommendations as well as reports from incident investigations. It should also consider the continuing suitability of land transport policy, any changes in recognizing hazards and assessing risks, and any changes to the system or procedures since the last review.

The management review should be recorded.

# Appendix 2 — Glossary

#### Bus or coach

Any motor vehicle assigned to the movement of personnel having 6 or more occupant seats. This definition has been determined so as to include field crew movement and personnel shuttles.

#### Company

An OGP member company and its contractors and sub-contractors.

#### Driver

A driver who undertakes any work related journey conducted on behalf of a company.

#### **Commentary drive**

A training technique whereby a qualified assessor seated in the passenger seat accompanies a driver. The driver conducts a typical journey and, while driving, explains what hazards he/ she sees or can anticipate in the road ahead, including unseen hazards, and what safe driving techniques they will or would utilize to eliminate or minimize the threat from such hazards. This gives the assessor the ability to better determine if the driver is employing the correct defensive driving techniques and proper seeing habits to identify and avoid driving hazards. At the end of drive the assessor provides feedback to the driver of the safe driving skills employed during the drive and coaches the driver on any areas of improvement in these skills.

#### **Gross Vehicle Weight (GVW)**

The maximum laden weight of any vehicle as recommended by the manufacturer, including loads, passengers of the vehicle and any trailer.

#### Hands-free device

A vehicle installation whereby a mobile phone is docked or wirelessly connected to fixed equipment wired to the vehicle, and where there is no cable/wireless connection between the equipment and the driver.

#### Heavy-duty, or heavy vehicle

Any motor vehicle having a kerb weight greater than 4000 kg or GVW greater than 7500 kg that is specifically designed to pull a trailer and/or carry cargo.

#### IVMS

An IVMS is a device that monitors certain data such as speed, acceleration, deceleration, kilometers driven and driver hours as a minimum, although many other parameters can be monitored. These data are collated against a particular driver for each journey they undertake due to the fact that the driver activates the IVMS device by either entering a driver ID into the monitor or using a driver ID key to plug into the monitor. At the end of a journey or a series of journeys these data can be downloaded to a computer by various means. The downloaded data output from the monitor provides a profile of an individual driver's actual driving performance on work related journeys. A supervisor can then use this data profile to coach the driver to reduce speed, reduce harsh braking, acceleration etc.

This coaching and improvement step is the Data Management System (DMS) element. It should be noted that IVMS with DMS is not a policing tool but is a means of developing shared understanding and common values (driving culture) regarding safe operation of a vehicle. IVMS is may also be referred to as a VDR (Vehicle Data Recorder).

#### Journey manager

This is a person who is not engaged in the journey. The journey manager oversees implementation of the defined journey management process, monitors progress and responds to deviations and/or emergencies.

#### Kerb (curb) weight

The unladed weight of the vehicle recorded at registration. Also known as the tare weight.

#### Light-duty, or light vehicle

Any motor vehicle having a kerb weight less than 4000 kg or GVW less than 7500 kg and having 8 passenger seats or less.

#### Owned, contracted or leased

In relation to vehicles of any type:

- owned means owned by the company
- contracted means owned by a contractor and temporarily assigned to company activities under a contract
- leased means vehicle leased by the company (not including personal lease option cars offered as part of an employee's benefit package) or rented for work activities on behalf of the company

#### **Rollover Protection Device (RPD)**

Is a mechanical structure that fits within the vehicle body and prevents the structural collapse of the roof of a vehicle and pillars supporting the roof in the event that a vehicle rolls over onto its roof. The RPD should be designed not to cause injury to vehicle occupants in the event of a rollover, or pedestrians outside the vehicle in event of a collision.

#### Safe driving

The application of proactive safe behaviours coupled with risk assessment and management skills by a driver in order to prevent any type of crash or other form of loss during the operation of a motor vehicle.

#### Upfitting

A process of adding specialized additions vehicles and/or the customization of the body or vehicle design to make the vehicles more useful, efficient and/or appropriate for their designated purpose.

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