“SPEED Management”--A Strategic Tool for Safe Road Journey at Kuwait Oil Company, Kuwait

Ali H. Al-Failakawi
Team Leader HSE (S&EK)
Kuwait Oil Company, Kuwait

Bala Siva Srikanth Adivi CSP, CMIOSH
Senior Safety Engineer HSE (S&EK)
Kuwait Oil Company, Kuwait

Introduction

Demands on the Oil & Gas industry are driving continual improvement in Health, Safety & Environment (HSE) performance, which in turn the business performance of an organization. The use of vehicles for people/ material transportation is a fundamental business requirement in today’s industry operations. The combination of moving people and material on roads also introduces significant risks, hazards, and safety challenges to our industry and the communities in which we operate.

Like Industrial incidents, Motor Vehicle Accidents also severely affect the company’s HSE Performances. Road traffic fatalities, injuries and trauma constitute serious social problems, bringing adverse effects on the quality of life, which is not only an organizational concern but also an important national issue.

This paper describes one successful approach of dealing road safety issues that has been implemented by one of the biggest on-shore Oil & Gas organizations in the Middle Eastern region. Much emphasis was placed on understanding the Middle Eastern Social Culture, understanding the organizational culture besides the State Regulations and then designing and implementing the program to suit the norms and requirements, which has brought significant positive results over the years.

Necessity

Kuwait Oil Company (KOC) is a major subsidiary of the Kuwait Petroleum Corporation and is giant Oil and Gas Organization with its activities spread across the State of Kuwait with
thousands of employees (consisting of both company & contractor employees). Kuwait Oil Company is a. KOC’s responsibilities include the exploration, drilling, and production of oil and gas within the State of Kuwait. The challenge for safe driving is affected with adverse weather conditions and behavioral aspects of other road users. KOC recognizes the importance of safe driving in the conduct of business activities and operations.

Motor Vehicle Accidents (MVA) continue to be one of the major HSE challenges in KOC. The challenge of improved road safety multiplied with dynamic scenario of fast pace of growth, new projects, changing people in Company & Contractors, HSE culture, behavior and priorities along with increased number of vehicle movements within company premises, enhances the speed related issues.

KOC strongly believes that road related incidents are preventable / avoidable, and each issue / problem pertaining to road can be addressed systematically and methodical manner for suitable remedy.

Motor Vehicle Accident Frequency rate is a high priority performance indicator for KOC. Handling motor vehicle accidents and deriving a follow up measure to minimize these incidents is always a big challenge to Kuwait Oil Company. On daily basis, employees & contractors who are doing business with KOC had to travel long distances to meet the operational requirements. On yearly basis KOC employees are driving about 206 Million Kilometers and about 589 Million Kilometers are being driven by Contractor employees by utilizing/driving 3531 no of vehicles and 63001 no. of vehicles driven by KOC employees and contractor employees respectively. Besides these figures, the following figures (in Table 1) of vehicles in South & East Kuwait Directorate (the biggest directorate in our organization) clearly shows why ‘driving’ is considered as one of the major challenges.

<table>
<thead>
<tr>
<th>Burgan Area</th>
<th>2013 (April -Dec,13)</th>
<th>2014 (Jan-Nov, 14)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>463,013</td>
<td>1,126,243</td>
<td>1,589,256</td>
</tr>
<tr>
<td>Magwa Area</td>
<td>2013 (April -Dec,13)</td>
<td>2014 (Jan-Nov, 14)</td>
<td>Total</td>
</tr>
<tr>
<td>Entry</td>
<td>805,057</td>
<td>1,183,536</td>
<td>1,988,593</td>
</tr>
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</table>

Table 1 – Number of vehicles crossing the South & East Kuwait Directorate Area

With an objective to enhance road safety measures on all roads within KOC controlled areas and to minimize Motor Vehicle Accidents, a strategic road safety plan having focal centers on People, Roads & Systems has been formulated to identify, evaluate and recommend remedial measures to reduce or eliminate the traffic related problems. The KOC Leadership with systematic tracking of the entire process translates these to various programs with strong support and commitment.
**Magic Bullet – ‘SPEED’**

To ensure systematic implementation of control measures to achieve desired objectives and results, an innovative concept/tool i.e. “SPEED” addressing all those effecting the aspect of driving was conceptualized and implemented.

“SPEED -Management” is an effective tool to improve road safety measures through proactive initiatives with clear objective to achieve our goal of journey to zero motor vehicle incidents. The plan of SPEED-management implementation within company-controlled premises has been prepared based on following five strategically important areas of road safety:

- **Surveillance**: Fleet controls, prevailing driving practices, etc.
- **Policies**: Suitable, appropriate, setting accountable
- **Engineering**: Best in class approach towards infrastructure and solutions,
- **Enforcement**: Regulations, Rules and continuous action
- **Driver awareness**: Programs such as driving simulator, education, training, campaigns, driving authorization, etc.

**Exhibit 1--“SPEED” Driving Wheel**

*Why Focus on SPEED?*

In order to successfully promote, design and implement a SPEED management programme, it is important to understand the role of speed in road traffic crashes, and the relationship between speed and the severity of those crashes. Such information is important in persuading the ‘risk takers’ (defaulters), Contractors & other stakeholders to support a speed management programme.

**Objectives of SPEED Management**

Speed management has a variety of objectives, such as improving:
✓ Road safety, by reducing MVAs, injuries and thereby fatalities on the roads.
✓ The environment, by reducing adverse impacts
✓ Enhanced employees’ (including contractor’s) confidence & morale
✓ Improved quality of life
✓ Increased productivity

Each one of areas of SPEED are explained below with more information and clarity.

A) **Surveillance** in terms of road safety point of view, is the monitoring of the behavior, activities, or other changing information, of people for the purpose of evaluating the prevailing driving practices, analyzing / identifying the factors causing changes & recommending suitable remedial measures.

Following major surveillance actions are initiated:

✓ Lead by Example - Compulsory installation of Speed Monitoring Devices(SMD’s) in Middle and Top Management employees vehicles
✓ SMD’s for KOC & Contractor’s vehicles – voluntary installation as well as compulsory installation in Mass Transportation vehicles of Contractor’s vehicles.
✓ Installation of the following Speed Monitoring Cameras at strategic locations within KOC premises:
  • Mobile Speed Monitoring Cameras
  • Fixed Speed Monitoring Cameras
  • Point to Point (P2P) Speed Monitoring Cameras
  • Camouflage Speed Monitoring Cameras
✓ Authorize CAEs (Circular Appointed Employees – Middle and Top Management employees) for surprise monitoring of over-speeding and issuing necessary infringement.
✓ Close monitoring & follow-ups of recommendations/ action items pertaining to road improvement program.

B) **Safe Driving Policy** is a critical initiative in the effort to elevate road safety issues to a position of high priority on the organizational agenda. It provides the basis for working towards attaining the vision of a safe traffic environment within the company-controlled premises and beyond.

Company has framed “Safe Driving Policy” by addressing the basic questions & demonstrating proactive initiatives to ensure Compliance. All activities are planned in accordance to the policy objectives & expectations. In addition to above, the following additional procedures & guidelines have been framed ensuring reinforcement to policy statement:

✓ Exclusive element on “Journey Management” in KOC HSE Management System
✓ Transport Policy/Procedure
✓ Standardizing the Vehicles for use with high safety features and selection through a task force of multi-disciplinary members
C) **Engineering** aspect of the speed management programme is very important & vital to ensure road safety, which includes road modification, enhancement, setting speed-limits, signs, signals and etc.

With the increased vehicular movements, addition of new projects, changing people in KOC & Contractors, road safety related issues have increased causing serious concern & challenge for KOC. In order to combat with the situation, series of joint road safety surveys were conducted along with of Road & Support Team. The pertinent traffic related issues were deliberated and suitable suggestions were put forward for implementation. Some of those are:

- Road widening
- Construction of new /dual carriage roads
- Managing existing physical road infrastructure with increased road safety
- Ensuring adequacy of road safety signs, signals and markings
- Reviewing existing speed-limits & modifications
- Provision of ‘speed-breakers’ in hazard prone areas,
- Constructing roundabouts at heavy traffic zones, etc.
- Installation of Solar Flashers at the intersections and solar lights at roundabouts.
- Setting a speed limit that reflects the appropriate speed and that is credible

Speed limits are the basis for helping people to drive at the desired & appropriate speed. To achieve that goal, it is important that the speed limits are credible, i.e. that they are considered logical in the light of the characteristics of the road and the road environment. Surveys were conducted & prevailing speed limits were reviewed for appropriateness. Please refer Exhibit No. 2, 3 &4 to witness one of the engineering measures implemented.
Exhibit 2--Engineering Measures

Exhibit 3--Engineering Measures
Exhibit 4--Engineering Measures

D) Enforcement is one of the important aspects of road safety. We strongly believe in the concept of ‘Self Enforcement’ or self-discipline, where drivers would voluntarily keep to the prescribed speed limits. Enforcement is based on the principle that people try to avoid a penalty, which is a disadvantage of not complying with the rules. Enforcement would only be needed for those few drivers who knowingly and deliberately exceeded the limits.

Enforcing speed limit is seriously considered at company level with an aim to send a strong message to other defaulters. Required traffic infringements are issued to the deliberate defaulters, both of company and Contractor’s. While enforcement should never be an objective in its own right, it continues to be necessary as an essential road safety activity that has a major impact on safety outcomes. The company also conducts periodical meetings with government authorities viz. Ministry of Interior, Ministry of Public works to ensure strategic enforcement and actions.

Some of the enforcements are as below:

- Penalty against Traffic Violations
- Defining speed limits at various roads,
- Ensuring KOC’s Standard / Procedure for Safe Roads / Road Closure & Driving Procedure
- Extending support to Govt. Enforcement Agency for provision / Installation of P2P cameras beyond KOC operational areas.
- Making sure people actually know the speed limit in force:
Good compliance with speed limits also requires that road users always and everywhere know what speed limit is in force. Clear information about this must, therefore, always is provided. This has been done in the usual way by consistent signing and marking on, or alongside the road. Moreover, we are addressing this issue through communication with respective controlling teams, conducting meeting with contractors’ personnel through monthly HSE meeting, training/awareness, etc.

Again, we are encouraging / persuading both KOC employees & Contractors’ as well to install ‘Speed Monitoring Device’ installed in their vehicles in order to ensure “self-monitoring” on speed. There is evidence of enhanced nos. who have volunteered for Speed Monitoring Devices’.

Similarly, effort has been made to ensure to Vehicle Preventive Maintenance Program has been achieved for both KOC & Contractor. As far as KOC is concerned, the maintenance of all vehicles follow the prescribed schedule & the same is being meticulously followed.

**E) Drivers’ Awareness** means dissemination/providing relevant information regarding road safety and the activities include education, training, publicity, etc. In order to strengthen Drivers’ Awareness, one of the elements of Speed Management, we have conducted series of Awareness Sessions / Defensive Driving Training / communication forums to disseminate the required information related to road safety, especially on speed.

One of the most important amongst those is the practice sessions on the **Driving Simulator** for KOC & Contractors’ employees, consecutively for last three years. The driving simulator was designed to cover various Defensive Driving aspects viz; scanning principles, how to avoid collisions, identification of driving hazards, driving in adverse and impaired conditions, and more. More than 975 nos. of participants had practiced( in our directorate) on this simulator gaining the important insight and experience in potentially hazardous situations.

Simillar actions are taken for creating defensive driving awareness amongst the students of high schools and universities regularly as corporate social responsibility.

In addition to all above, new system of Counselling (as initial reforming opportunity) and followed by Penalty process (if the individual continued to be defaulter) has been introduced recently. This works out to be effective, especially, amongst contractors’ drivers.

**Ensuring Sustainability:**
It is very important to any organization that such kind of innovative tool must continue to reap benefits with clear focus on its sustainability in diversified workforce, especially in our organization. We have brought series of methods and actions to ensure the program is moving ahead without any hurdles. Few of those actions are:
✓ Regular Inspections, Periodic Audits, Task force Review Committees
✓ Driving Simulations – practical sessions
✓ Enhanced road safety awareness & workshops
✓ Conducting SOCs / Reporting of road related hazardous conditions & near-miss
✓ Encouragement / Award schemes (Best Safe Drivers, CEO HSE awards, etc.)
✓ As a responsible organization towards community by doing large scale defensive driving campaigns for the public as well as schools promoting the concept of defensive driving.
✓ Collaborating with Govt. bodies and providing speed monitoring cameras on the public roads.

Benefits

With strong support from management and excellent employee involvement, this project has reaped significant results, which are briefly described as follows:

- **Management Benefits:**

  This project has achieved real and quantifiable benefits in terms of the following:

  ✓ Declined nos. of MVAs & traffic violations within our directorate (as well as across the organization) and thereby precious lives are saved. Please refer Exhibit No.5 & 6.
  ✓ Improved & safer roads
  ✓ Better compliance to Safe Driving Policy
  ✓ Safer driving reducing possible accidents and fatality
  ✓ Better discipline & compliance by Business Partners (Contractors) in operational area.
  ✓ Optimal management of resources and achieve conservation.
  ✓ Enhancement of Company’s HSE committed image and reputation
  ✓ Reduced absenteeism and sick leaves
  ✓ Enhanced productivity and profits year over year.
  ✓ Enhanced employee participatoin in various road safety initiatives

![Total No. of Speed Violations](image)

Exhibit 5--Declining Trend of Speed Violations
Number of Motor Vehicle Accidents in South & East Kuwait Directorate (S&EK)

<table>
<thead>
<tr>
<th>Year</th>
<th>Minor (Level 1)</th>
<th>Moderate (Level 2)</th>
<th>Major (Level 3)</th>
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<tbody>
<tr>
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<td>0</td>
<td>0</td>
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<tr>
<td>2012-13</td>
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<td>0</td>
</tr>
<tr>
<td>2014-15</td>
<td>4</td>
<td>1</td>
<td>0</td>
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</table>

Exhibit 6—Declining Trend of MVA’s (Motor Vehicle Incidents)

- Safety Benefits:
  - Enhanced driving behaviour of the employees.
  - Decreased At-risk driving behaviors
  - Voluntary installation of Speed Monitoring Devices by employees
  - Healthy competition among employees for “Best Driver of the year”
  - Reducing risk and protecting employees
  - Enhanced awareness of defensive driving techniques by employees
  - Enhanced employee morale and attitude
  - Enhanced employee participation in BBS (Behavior Based Safety) program related to Defensive Driving

Conclusion

Kuwait Oil Company, Kuwait is committed to reduce and eliminate fatalities and injuries due to motor vehicle accidents. SPEED Management is a very important tool for improving road safety. Though improving compliance with speed limits and reducing unsafe driving speed behaviours are not easy tasks, however the continual improvement shows that the we are moving in right direction.

Many drivers do not recognize the risks involved and often the perceived benefits of speeding outweigh the perceived problems that can result. However, with the relentless efforts rendered by the company, there are improvements in road upgrading / infrastructure / signages etc. and enhanced Road Safety. The special task-force team facilitates the activities and monitors the progress of road enhancement programme.

Company urge all employees including those of contractors, to join hands in bringing awareness among the people to preserve the human resources and pursuing the efforts to secure the safety of the personnel, with an objective of minimizing the number of road accidents.
The effect of above efforts is not limited to infrastructure improvement, but it has demonstrated with evidence on declining trend of traffic violations & MVAs upon implementation of above initiatives.