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| ONR Technical Assessment Guide  Safety leadership |



ONR Technical Assessment Guide (TAG)

Safety leadership

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| 1.3 | Minor update to include additional WENRA Reference Levels. |

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# Introduction

1. ONR has established its Safety Assessment Principles (SAPs) [1] which apply to the assessment by ONR specialist inspectors of safety cases for nuclear facilities that may be operated by potential licensees, existing licensees, or other duty-holders. The principles presented in the SAPs are supported by a suite of guides to further assist ONR’s inspectors in their technical assessment work in support of making regulatory judgements and decisions. This technical assessment guide (TAG) is one of these guides.
2. The role of leadership in securing good safety outcomes is well established. Investigations into accidents and disasters across all major hazard industries have consistently found the actions or inactions of leaders to be contributory factors. In the nuclear industry, poor safety leadership behaviours were found to be key contributing factors to the nuclear accidents at Three Mile Island, Chernobyl, Davis Besse, and Fukushima Daiichi. Conversely, at Fukushima Daini, a sister plant to Fukushima Daiichi approximately ten miles to the south, it was the effective safety leadership behaviours of the site superintendent Naohiro Masuda that enabled the plant to survive the earthquake and tsunami without a meltdown or an explosion [2].
3. This TAG draws together **safety leadership behaviours** from sources of relevant good practice into a single document aligned to a theoretically informed model of safety leadership, to advise and inform ONR staff in the exercise of their regulatory judgment as to the adequacy of safety leadership. This document also provides guidance on the role of senior leadership in setting safety standards and goals, the management system arrangements for encouraging effective safety leadership behaviours and discouraging poor safety leadership behaviours, and the assessment of safety leadership.

# Purpose and scope

1. The purpose of this TAG is to aid leadership and management for safety (LMfS) specialist inspectors in their technical assessment work It can be used in conjunction with ONR guidance document, TD-HOC-GD-001: ‘Examining Culture in Organisations: Guidance on Using Qualitative Methods in Organisational Research’ [3], as an a priori framework when undertaking template analysis. It can be used by site inspectors alongside the technical inspection guidance (TIG), NS-INSP-GD-070: ‘Safety Culture Guide for Inspectors’ [4], to provide further guidance on safety culture trait   
   LA.2: ‘Leader behaviour’. It can also be used alongside the TAG,   
   NS-TAST-GD-104: ‘The Corporate Governance of Safety’ [5], to provide comprehensive insights into a board’s effectiveness.
2. The scope of this guidance is leadership as it relates to nuclear safety, radiation protection and radioactive waste management. The scope also extends to conventional hazards associated with a nuclear facility where they have a direct effect on nuclear safety or radioactive waste management. The use of the word ‘safety’ within the document should therefore be interpreted accordingly.

# Relationship to Licence Conditions and other relevant legislation

1. Whilst leadership is not codified in law, several acts of parliament contain provisions that an offence is committed if a leader of an organisation acts, or fails to act, in a way which results in a health and safety offence being committed. Other acts of parliament contain provisions for corporate liability in respect of the death of an organisation’s employee or member of the public arising from failings by that organisation’s leadership.

## Health and Safety at Work etc. Act 1974

1. If a health and safety offence is committed with the consent or connivance of or is attributable to any neglect on the part of, any director, manager, secretary or other similar officer of the organisation, then that person (as well as the organisation) can be prosecuted under section 37 of the Health and Safety at Work etc Act 1974 [6]. Recent case law has confirmed that directors cannot avoid a charge of neglect under section 37 by arranging their organisation's business to leave them ignorant of circumstances which would trigger their obligation to address health and safety breaches.

## Company Directors Disqualification Act 1986

1. The Company Directors Disqualification Act 1986 [7], section 2(1), empowers the court to disqualify an individual convicted of an offence in connection with the management of a company. This includes health and safety offences. This power is exercised at the discretion of the court; it requires no additional investigation or evidence.

## [Corporate Manslaughter and Corporate Homicide Act 2007](https://www.hse.gov.uk/corpmanslaughter/index.htm)

1. Under the [Corporate Manslaughter and Corporate Homicide Act 2007](https://www.hse.gov.uk/corpmanslaughter/index.htm) [8] an offence will be committed where failings by an organisation's senior management are a substantial element in any gross breach of the duty of care owed to the organisation's employees or members of the public, which results in death. The offence is concerned with corporate liability and does not apply to directors or other individuals who have a senior role in the company or organisation. However, existing health and safety offences and gross negligence manslaughter will continue to apply to individuals. Prosecutions against individuals will continue to be taken where there is sufficient evidence, and it is in the public interest to do so.

## Licence Condition 10: Training

1. Licence Condition (LC) 10 of the ‘Licence Condition Handbook’ [9] places a requirement on licensees to make and implement adequate arrangements for suitable training for all those on site who have responsibility for any operations which may affect safety. Leaders have an important role in establishing a safe working environment and ONR expects a licensee’s training arrangements to include the development of safety leadership, including safety leadership behaviours.

## Licence Condition 17: Management Systems

1. LC 17 places a requirement on licensees to establish and implement management systems which give due priority to safety. ONR expects a licensee’s management system to include arrangements which encourage effective safety leadership behaviours and discourage poor safety leadership behaviours.

# Relationship to SAPs, WENRA Reference Levels and IAEA Safety Standards

## Safety Assessment Principles

1. SAP MS.1 establishes that:

“Directors, managers and leaders at all levels should focus the organisation on achieving and sustaining high standards of safety and on delivering the characteristics of a high reliability organisation.” [1]

1. MS.1 acknowledges the role of leadership in achieving high levels of safety and establishing and sustaining a positive safety culture; it also lists several expected behaviours and activities of directors, managers, and leaders at all levels, as follows:

* Establishing the strategies, policies, plans, goals, and standards for safety and ensuring that they are delivered throughout the organisation.
* Providing direction, governance, and oversight to establish and foster a positive safety culture that underpins safe operation.
* Demonstrating a visible commitment to safety through their activities.
* Recognising and resolving conflict between safety and other goals   
  (e.g., production and commercial pressures).
* Ensuring that management of safety is participative, actively drawing on the knowledge and experience of all staff.
* Ensuring that any reward systems promote the identification and management of risk, encourage safe behaviour, and discourage unsafe behaviours or complacency.
* Understanding that apparent past success is no guarantee of future success and that fresh perspectives on ways to enhance safety should be sought and acted upon.
* Monitoring and regularly reviewing safety performance and culture.

1. The additional guidance outlined in this document is needed to provide inspectors with fuller details of the **safety leadership behaviours** which have been shown to positively affect safety outcomes.

## WENRA Safety Reference Levels for existing reactors

1. ONR considers the Western European Nuclear Regulators’ Association (WENRA) Safety Reference Levels for Existing Reactors [10] to be relevant good practice (RGP) for existing civil nuclear reactors (refer to section 4 of NS-TAST-GD-005 [11]). The 2020 edition contains several reference levels (RLs) which are relevant to the scope of this technical assessment guide, as follows:

* Leadership and management for safety shall be established, sustained, and balanced in the licensee organisation to effectively foster a strong safety culture and enhance safety performance (RL C1.1).
* The senior management shall ensure that the safety policy is implemented and that its objectives are fulfilled (RL C1.2).
* Leadership for safety shall be effective at all organisational levels within the licensee organisation (RL C2.1).
* The senior management shall ensure that the developed goals, strategies, plans, and objectives are consistent with the safety policy of the licensee organisation. Their collective impact on safety shall be understood and managed in such a way that safety is not compromised by other priorities (RL C2.2).
* The senior managers shall ensure that decisions made at all levels take into account the priorities and accountabilities for safety (RL C2.3).
* Managers at all levels shall develop competences for leadership for safety, demonstrate commitment to safety and foster a strong safety culture (RL C2.4).
* Managers at all levels shall promote values and expectations for safety by means of their decisions, statements, and actions (RL C2.5).
* Managers at all levels shall ensure that relevant professional knowledge, skills, and experience of individuals under their responsibility are used in making decisions (RL C2.6).
* Management, at all levels in the licensee organisation, shall consistently demonstrate, support, and promote attitudes and behaviours that result in an enduring and strong safety culture. This shall include ensuring that their actions discourage complacency, encourage an open reporting culture as well as a questioning and learning attitude with a readiness to challenge acts or conditions adverse to safety (RL C4.1).
* The management system shall include provisions to systematically develop, support, and promote desired and expected attitudes and behaviours that result in a strong safety culture (RL C4.2).
* The senior management shall ensure that self-assessments and independent assessments (by an external organisation or by an internal independent assessment unit) are conducted regularly regarding leadership for safety (RL C5.1).

## IAEA General Safety Requirements No. GSR Part 2: Leadership and Management for Safety

1. Since the publication of the 2014 edition of ONR’s SAPs [1], the IAEA has produced a substantial update to GSR Part 2 [12]. Requirement 2 codifies a requirement that:

“Managers shall demonstrate leadership for safety and commitment to safety”. [12]

1. This requirement is supported by lists of leadership behaviours and management actions that managers are expected to demonstrate or enact as follows:
2. The senior management of the organisation shall demonstrate leadership for safety by:

* Establishing, advocating, and adhering to an organisational approach to safety that stipulates that, as an overriding priority, issues relating to protection and safety receive the attention warranted by their significance.
* Acknowledging that safety encompasses interactions between people, technology, and the organization.
* Establishing behavioural expectations and fostering a strong safety culture.
* Establishing the acceptance of personal accountability in relation to safety on the part of all individuals in the organisation and establishing that decisions taken at all levels take account of the priorities and accountabilities for safety.

Managers at all levels in the organisation, taking into account their duties, shall ensure that their leadership includes:

* Setting goals for safety that are consistent with the organisation’s policy for safety, actively seeking information on safety performance within their area of responsibility and demonstrating commitment to improving safety performance.
* Development of individual and institutional values and expectations for safety throughout the organisation by means of their decisions, statements, and actions.
* Ensuring that their actions serve to encourage the reporting of safety related problems, to develop questioning and learning attitudes, and to correct acts or conditions that are adverse to safety.

Managers at all levels in the organisation:

* Shall encourage and support all individuals in achieving safety goals and performing their tasks safely.
* Shall engage all individuals in enhancing safety performance.
* Shall clearly communicate the basis for decisions relevant to safety.

1. Requirement 14 codifies a requirement that:

“Senior management shall regularly commission assessments of leadership for safety and of safety culture in its own organisation.” [12]

1. This requirement is supported by further guidance which establishes that both self and independent assessment should be undertaken, and that the results of such assessments be communicated at all levels in the organisation.

# Advice to inspectors

## The role of senior leadership in setting safety standards and goals

1. At the top of an organisation, effective leaders set and articulate clear standards and expectations. They understand what a safe operating environment looks like as they have taken action to expose themselves to, or develop experience of, operations with high standards of safety: they are hazard aware, not hazard blind. They have a strong intrinsic motivation to achieve higher levels of safety, are restless and never satisfied with the status quo. They set demanding goals to shift safety performance to achieve high standards of safety. Where current safety performance is low, leaders ensure goals are sufficiently incremental so that followers do not feel overwhelmed in achieving them.
2. ONR’s inspectors should consider how senior leaders:

* Set and articulate clear standards and expectations for safety.
* Develop their knowledge and understanding of high safety standards.
* Set demanding, but sufficiently incremental, safety goals.
* Provide adequate financial and human resources, and support.
* Monitor progress made in achieving safety goals.
* Act where safety goals are at risk of not being met.
* Check that safety goals, once met, have delivered the intended benefits.

## Safety Leadership Behaviours

1. The advice in this section brings together the safety leadership behaviours codified in ONR’s SAPs, WENRA’s Reference Levels, and the IAEA’s Safety Requirements. It also draws on high reliability leadership theory   
   (refer to Martinez-Córcoles, 2018 [13]) and lessons from high reliability organisations (refer to Weick and Sutcliffe, 2015 [14]). The advice is structured upon, and draws lessons from, the SAFER Leadership Model developed by Wong et al (2015) [15] which identifies five specific core behaviours of effective safety leadership.
2. An effective leader:

* **S**peaks on safety.
* **A**cts safely at work.
* **F**ocuses on maintaining safety standards.
* **E**ngages others in safety initiatives.
* **R**ecognises individuals who adhere to safety.

1. Each of the five dimensions of the model has empirical evidence supporting its positive influence on followers’ safety performance. Conversely, passive leadership (not enacting safety leadership behaviours) has been found to be associated with lower levels of safety consciousness, negative perceptions of safety climate and an increase in safety related events and injuries [16]. ONR therefore expects leaders to exhibit behaviours that are consistent with the SAFER Leadership Model.
2. ONR’s inspectors should consider both how **frequently** and how **consistently** leaders **at all levels** exhibit the following safety leadership behaviours:

## Speaking about safety at work

1. Communication is an important element of safety leadership as it is how a leader conveys the importance that they place on safety generally and nuclear safety as their over-riding priority specifically. Effective leaders go out on the plant/site and articulate the importance of why nuclear standards and processes are in place in a way which is meaningful for their followers. They genuinely believe that zero harm, error and loss is achievable, and they communicate their belief to their followers to convince them of this.
2. Effective leaders provide feedback to their followers on the rationale for decisions, particularly where there is a safety versus cost/programme tension. Providing feedback on performance is also important for safety, especially following a safety intervention. The frequent communication of safety as a priority and the provision of feedback on performance have been found to lead to improved safety outcomes.
3. Well-intended safety plans often have unrevealed vulnerabilities and people often harbour assumptions which may lead to them being over-confident in their decision-making. To counteract this, effective leaders talk to their followers about potential vulnerabilities in plans and ways to overcome them, and challenge assumptions by exploring the possible consequences of the actions their followers are planning to undertake.
4. Key behaviours:

* Communicates safety values, safety goals and safety expectations that are consistent with the organisation’s policy for safety.
* Communicates the basis for decisions relevant to safety.
* Provides feedback to followers on their safety performance.
* Discusses vulnerabilities in safety plans and ways to overcome them.
* Challenges assumptions about safety.

## Acting safely at work

1. Effective leaders are role-models. They strive to have flawless personal standards and exhibit behaviours that they want to see in their followers: they know that their behaviour towards safety establishes clear expectations for their followers of what behaviours are acceptable.
2. Leaders who speak about safety but then behave in a manner which does not reflect this will be perceived by their followers as having poor behavioural integrity. Conversely, leaders who have a high degree of behavioural integrity consider safety to be important to them; they do not neglect to correct inappropriate behaviours. This sends a clear message to followers and clarifies behavioural expectations. Effective leaders put safety first, even if doing so has significant cost/programme implications. The behavioural integrity of leaders has been found to improve safety citizenship behaviours such as increases in the reporting of mistakes or increases in interventions when unsafe conditions are observed or suspected.
3. At times mistakes and detected safety problems go unreported.   
   Effective leaders openly acknowledge their own fallibility, reporting their own failures and mistakes to encourage their followers to report mistakes and concerns of their own.
4. Key behaviours:

* Acts in accordance with the organisation’s policy for safety.
* Makes decisions that consider the importance placed upon safety.
* Resolves conflicts between safety and other goals.
* Corrects inappropriate safety behaviours.
* Acknowledges and reports own safety failures and mistakes.

## 

## Focusing on maintaining safety standards

1. Commitment and perseverance in upholding safety standards is an important element of safety leadership. Perceptions of a leader’s commitment to safety increases a follower’s willingness to participate in safety activities. Effective leaders demonstrate their commitment to safety by going out on the plant/site to monitor for non-compliances and adapt their leadership styles when responding. They use persuasion and influencing strategies, only adopting more direct styles when safety non-compliances are not resolved or where immediate intervention is necessary to maintain safety or compliance with the law.
2. Effective leaders acknowledge that they cannot deal with everything immediately, particularly in environments where low standards are prevalent. They recognise that their perceived inaction could set a new low standard, so they ensure that their followers understand that they are not ignoring low standards but are instead prioritising and targeting those with the most risk.
3. Continual monitoring clarifies which safety behaviours are acceptable and which are not, and keeps followers focused on safety. Effective leaders create a work environment where this is perceived as a positive act rather than threatening. Once a deviation from an accepted standard is detected, effective leaders empower their followers to self-correct and resolve safety problems for themselves, intervening only when necessary to maintain safety or compliance with the law. Effective leaders support their followers in achieving their safety outcomes.
4. Consistently maintaining a visible commitment to safety is challenging so effective leaders strive to keep themselves motivated in their commitment to safety by setting themselves personal safety goals.
5. Key behaviours:

* Proactively monitors followers’ performance to identify safety problems.
* Uses persuasion and influencing to promote safety compliance.
* Empowers followers to self-correct and resolve safety problems.
* Supports followers in achieving safety outcomes.
* Takes decisive action to address unresolved safety non-compliances, to maintain safety or compliance with the law.

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## Engaging others in safety initiatives

1. Effective leaders energise, encourage, and enthuse their followers.   
   They involve them in safety decisions, facilitate learning, demonstrate care, and create an environment where followers feel safe to raise safety concerns: these have been found to increase effective safety behaviours and reduce ineffective safety behaviours. A leader’s receptiveness to safety information has been found to increase a follower’s willingness to raise safety concerns.
2. Effective leaders engage their followers in safety orientated decisions and activities, regardless of rank or grade. They value a diverse range of views and encourage contributions from sceptics and those reluctant to speak out. They are comfortable with the status quo being challenged and encourage followers to express different views to those of managers. Effective leaders create a learning-friendly environment in which to engage their followers in learning activities.
3. Key behaviours:

* Involves followers in safety-oriented decisions and actions, regardless of rank or grade.
* Seeks out diverse views, giving due attention to sceptics and those reluctant to speak out.
* Encourages followers to participate in safety learning activities.
* Demonstrates care for the health and wellbeing of followers.
* Encourages the open reporting of safety concerns.

## Recognising safety performance

1. Effective leaders pay particular attention to seeking out and congratulating followers who enact good practices. Providing recognition is a key leader responsibility which can be particularly impactful when given to followers who openly admit their own fallibility by reporting failures and mistakes of their own which would otherwise remain hidden. The types of accomplishment which merit recognition should remain constant over time: timely and consistent reward has been found to reinforce desired behaviours.
2. Well-designed incentive programmes for safety comprising of social praise, recognition, and non-monetary rewards have been found to enhance safety and reduce accidents: rewarding employees with non-monetary rewards such as additional break times was found to improve safety compliance; recognition in the form of feedback was found to have led to improvements in safety behaviours; rewarding high safety performers with challenging stretch assignments can be effective in increasing job engagement.
3. Reward has been found to be most effective when given for group and individual performance, and when given to all levels of the organisation and especially the front-line workers. Reward perceived to be distributed fairly and in accordance with transparent arrangements has been found to lead to greater employee engagement.
4. Key behaviours:

* Recognises safety accomplishments promptly after they occur.
* Recognises followers who freely report their own failures and mistakes.
* Provides non-monetary rewards to groups and individuals for high levels of safety performance.
* Rewards high safety performers with challenging stretch assignments.
* Distributes rewards fairly in accordance with transparent arrangements.

## Safety leadership arrangements

1. ONR expects a licensee’s management system to include arrangements which encourage effective safety leadership behaviours and discourage poor behaviours. ONR’s inspectors should look for evidence of:

* A safety policy which emphasises the importance that the organisation places on safety generally and nuclear safety as the over-riding priority specifically.
* A safety leadership behavioural framework that includes safety leadership behaviours broadly consistent with those outlined in this document.
* A safety leadership behavioural development programme which includes soft skills such as communicating safety, coaching, persuading and influencing, managing conflict, empowering others, providing support, and demonstrating care.
* The consideration of safety leadership behaviours in leadership selection and promotion decisions.
* Leadership decision-making processes which give due regard to safety.
* The consideration of safety behaviours in performance reviews.
* Work planning and work control processes such as pre-job briefs and post-job briefs which place expectations on leaders to challenge assumptions, and to discuss vulnerabilities in safety plans and ways to overcome them.
* Initiatives to get leaders out of the office and onto the plant spending a significantproportion of their time focusing upon safety.
* Training for leaders in undertaking field observations.
* Mechanisms for holding leaders to account who exhibit poor safety leadership behaviours.
* A ‘just culture’ supported by HR processes which satisfy demands for accountability whilst providing opportunities for learning and development.
* A transparent and fair reward and recognition policy.
* The periodic assessment of safety leadership.

## Assessment of safety leadership

1. ONR expects the effectiveness of **safety leadership** to be periodically assessed. Such assessment should include a combination of self-assessment and independent assessment. Typical leadership assessment methods which inspectors may encounter include:

* Psychometric tests such as the Myers-Briggs Type Indicator or the Multifactor Leadership Questionnaire.
* Performance review incorporating a 360-degree appraisal.
* Employee engagement surveys (often these probe perceptions of a respondents’ immediate supervisor).
* Safety climate surveys (often these probe perceptions of management safety commitment).
* Other commercial leadership diagnostic tools.

1. Several of these methods focus on leadership generally rather than safety leadership specifically and used alone they may not provide an adequate assessment of the effectiveness of safety leadership. That is not to suggest they do not provide useful insights: used alongside assessments of safety leadership these methods can provide for a comprehensive view of the effectiveness of an organisation’s leadership.
2. ONR’s inspectors should look for evidence that:

* The requirement to periodically assess **safety leadership** is written into the licensee’s arrangements and such arrangements provide for both self-assessment and independent assessment.
* A safety leadership behavioural framework comprising of behaviours broadly consistent with those outlined in this document is used as the basis for assessments.
* The views of a range of stakeholders are considered, including followers as they are most likely to be familiar with the effectiveness of the safety leadership behaviours of their leader.
* The assessment of safety leadership has a developmental focus; following an assessment, leaders are offered support such as additional training or coaching.
* The assessment methodologies are credible (for qualitative methods) and valid (for quantitative methods).

# References

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| --- | --- |
| [1] | ONR, Safety Assessment Principles for Nuclear Facilities, Bootle: ONR, 2014. |
| [2] | R. Gulati, C. Casto and C. Krontiris, “How the other Fukushima plant survived,” *Harvard Business Review,* vol. 92, no. 7/8, pp. 111-115, 2014. |
| [3] | ONR, “TD-HOC-GD-001: Examining Culture in Organisations: Guidance on Using Qualitative Methods in Organisational Research”. |
| [4] | ONR, “NS-INSP-GD-070 - Safety Culture Guide for Inspectors”. |
| [5] | ONR, “NS-TAST-GD-104 - Corporate Governance for Safety”. |
| [6] | HM Government, “Health and Safety at Work etc. Act 1974,” 1974. [Online]. Available: https://www.legislation.gov.uk/ukpga/1974/37/contents. |
| [7] | HM Government, “Company Directors Disqualification Act 1986,” 1986. |
| [8] | HM Government, “Corporate Manslaughter and Corporate Homicide Act 2007,” 2007. |
| [9] | ONR, “Licence Condition Handbook,” [Online]. Available: https://www.onr.org.uk/media/gixbe2br/licence-condition-handbook.pdf. |
| [10] | WENRA, “WENRA Safety Reference Levels for Existing Reactors,” 2020. |
| [11] | ONR, “NS-TAST-GD-005 - ONR Guidance on the Demonstration of ALARP (2020/230789)”. |
| [12] | IAEA, “GSR Part 2 - Leadership and Management for Safety,” International Atomic Energy Agency (IAEA), Vienna, 2016. |
| [13] | M. Martínez‐Córcoles, “High reliability leadership: A conceptual framework,” *Journal of Contingencies and Crisis Management,* vol. 26, no. 2, pp. 237-246, 2018. |
| [14] | K. a. S. K. Weick, Managing the unexpected, 3rd Edition., New Jersey: John Wiley & Sons, Inc., 2015. |
| [15] | J. Wong, E. Kelloway and D. Makhan, The Wiley Blackwell Handbook of the Psychology of Occupational Safety and Workplace Health, 2015. |
| [16] | HSE, RR952: A review of the literature on effective leadership behaviours for safety, HSE, 2012. |
| [17] | ONR, “Safety Assessment Principles (SAPs) for Nuclear Facilities - 2014 Edition (Revision 1),” 2020. |

# Glossary and abbreviations

GSR General Safety Requirements

IAEA International Atomic Energy Agency

RL Reference Level

SAFER Speaks, Acts, Focuses, Engages, Recognises

SAP Safety Assessment Principle(s)

TAG Technical Assessment Guide(s)

WENRA Western European Nuclear Regulators’ Association

# Appendix 1 – The ‘SAFER’ leadership model

**Speaking about safety at work**

* Communicates safety values, safety goals and safety expectations that are consistent with the organisation’s policy for safety.
* Communicates the basis for decisions relevant to safety.
* Provides feedback to followers on their safety performance.
* Discusses vulnerabilities in safety plans and ways to overcome them.
* Challenges assumptions about safety.

**Acting safely at work**

* Acts in accordance with the organisation’s policy for safety.
* Makes decisions that consider the importance placed upon safety.
* Resolves conflicts between safety and other goals.
* Corrects inappropriate safety behaviours.
* Acknowledges and reports own safety failures and mistakes.

**Focusing on maintaining safety standards**

* Proactively monitors followers’ performance to identify safety problems.
* Uses persuasion and influencing to promote safety compliance.
* Empowers followers to self-correct and resolve safety problems.
* Supports followers in achieving safety outcomes.
* Takes decisive action to address unresolved safety non-compliances, to maintain safety or compliance with the law.

**Engaging others in safety initiatives**

* Involves followers in safety-orientated decisions and actions, regardless of rank or grade.
* Seeks out diverse views, giving due attention to sceptics and those reluctant to speak out.
* Encourages followers to participate in safety learning activities.
* Demonstrates care for the health and wellbeing of followers.
* Encourages the open reporting of safety concerns.

**Recognising safety performance**

* Recognises safety accomplishments promptly after they occur.
* Recognises followers who freely report their own failures and mistakes.
* Provides non-monetary rewards to groups and individuals for high levels of safety performance.
* Rewards high safety performers with challenging stretch assignments.
* Distributes rewards fairly in accordance with transparent arrangements.