

CARE Cards

Critical Activity and Response to Emergencies



The CARE Card Outline

CARE = Critical Activities and Response to Emergencies

■ **What are CARE Cards ?**

- CARE cards are designed to provide a listing of key Safety Critical Activities / Elements for accountable persons in both the control and recovery aspects of an identified Major Accident Hazard (MAH) event

■ **How do they work ?**

- The cards provide a quick reference and guidance on both the control and recovery requirements against the identified MAH event to ensure its ALARP status
- They provide key and concise information in the event of the MAH event being realised

■ **Why are they needed ?**

- To assist in the education process of MAH event management
- To provide the user with a “fist point” action list on both the control and recovery requirements of that particular MAH referenced back to the detailed support procedures, plans and instructions

■ **Who is involved ?**

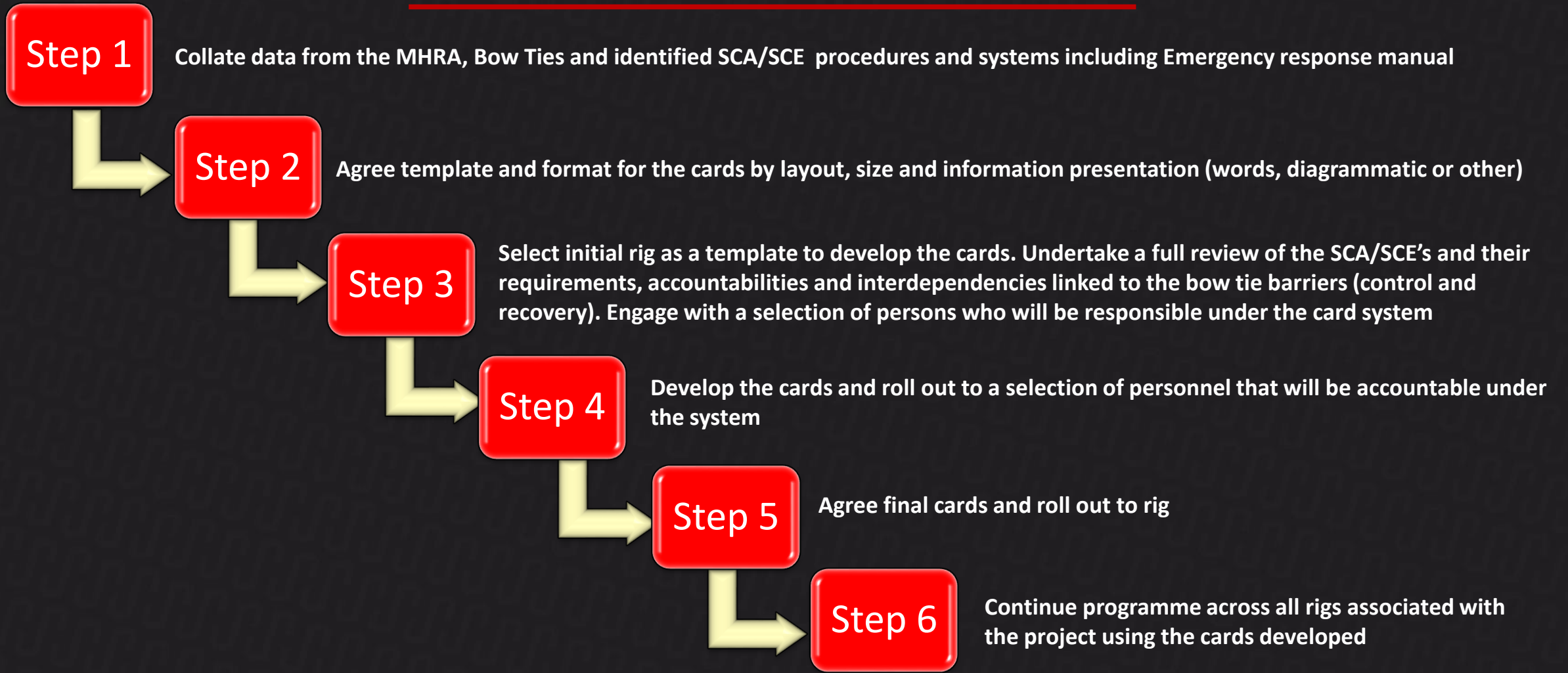
- All personnel with accountabilities under the MAH BowTies are involved in the process which is supported by a suite of dedicated training modules and referenced back into job descriptions and competency listings

The CARE Card Objectives

To provide responsible persons a card that contains concise information relating to what is deemed a SCA/SCE and their required responsibilities to ensure:

- The critical activity is understood and its place in the risk **control** or **recovery** of a MAH
- Requirements to ensure that this SCA/SCE remains functional, available and reliable are defined and clearly understood to ensure that risk **control** meets the expectation of the established bow tie barriers
- Established responsibilities and requirements for maintenance of SCA/SCE
- Established actions and needs under the emergency response system are linked where appropriate (**recovery**) and clearly stated by action and responsibility

The CARE Card Process



The CARE Card Deliverables

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■ **What will they look like?**

- Several formats can be used which are usually either in the form of:
 - T Cards
 - Rolla Disk
 - Booklets
- Key to the deliverable process is that they are easily understood, concise in their “First Point” guidance and easily accessible and carried

■ **How will they be delivered and accepted?**

- The cards will be a key part of the HSE Case and MHRA overall education process and as such will be issued upon specific training module completion by those with accountabilities under the MAH control and recovery barrier requirements
- Acceptance is via the training, job description and competency requirements programme of the Company

■ **Are they static or will they need updating?**

- The CARE cards are part of the Company HSE Case and MHRA Lifecycle Management process so as such will be reviewed and updated accordingly
- Promotions and job description changes will be subject to review and if applicable, CARE Cards revised to reflect new accountabilities under the BowTie barriers

CARE Card Example

CARE = Critical Activities and Response to Emergencies

■ **T Card Version 1**

- Basic T Card presentation which would be tailored to meet examples already in place for a Company such as PROMPT or START Cards
- Version 1 has the following structure
 - Front side threats and barriers from the BowTie
 - Rear will have recovery measures from the BowTie

■ **T Card Version 2**

- Version 2 is developed for those with accountabilities that are difficult to summarised just on a simple front/back T Card due to the listed threats and barriers
- These are typically for such personnel as:
 - OIM
 - ToolPusher
 - Barge Master
- All of the above in typically “Loss of Hydrocarbon Containment” events have multiple barriers and Emergency Response requirements. This version of the T Card would be a four sided presentation which gives the following structure:
 - Front side threats and barriers from the BowTie
 - Middle Sections would have the Bowtie with only their particular barriers and the ERP requirement flow diagram
 - Rear will have recovery key measures from the BowTie

The CARE Card (T Card Version 1 - Front)

Loss of Hydrocarbons - Shallow Gas
BowTie H-01 – CARE Card

Toolpusher

Critical Activities	Physical Barriers
Shallow Gas monitoring	Bubble Watch under the assigned well control procedures
Communications	Shallow gas procedures posted in Dog House Standing Instructions to Drillers Competence and Drills
Assurance of critical equipment functionality, availability and reliability	Function Testing before deployment Maintained Equipment Trained and competent Persons
Pre – well work	Consideration for pilot hole Survey information
Well Management	Effective Well Plan Shallow Gas procedures
Human Error assurance	Competence and Training Records and Drills

NOTES

1. Prior to operations approved Well plan to be in place and communicated to all relevant parties
2. Safety Critical equipment such as BOP, Choke, Manifold and Emergency Kill Lines to be certified, tested and available
3. Company procedures to be posted and Bowtie MAH Treats and Barriers communicated to all relevant parties as part of the work briefing prior to operations

Company Logo – MAH Event and BowTie Reference

Position of the accountable person and reference to the MAH event and its BowTie

This part of the T Card details the key Critical Activities in place to prevent, control, reduce or mitigate threat as applicable MAH Bowtie:

- **Critical Activity**
 - A summary of the barriers identified in the BowTie assessment aimed at providing a “first pass” key and integral step
- **Physical Barrier**
 - Summarised barriers within the confines of **Hazard Management Control**

Listing of key barrier support information or detailed documentation to be consulted

The CARE Card (T Card Version 1 - Back)

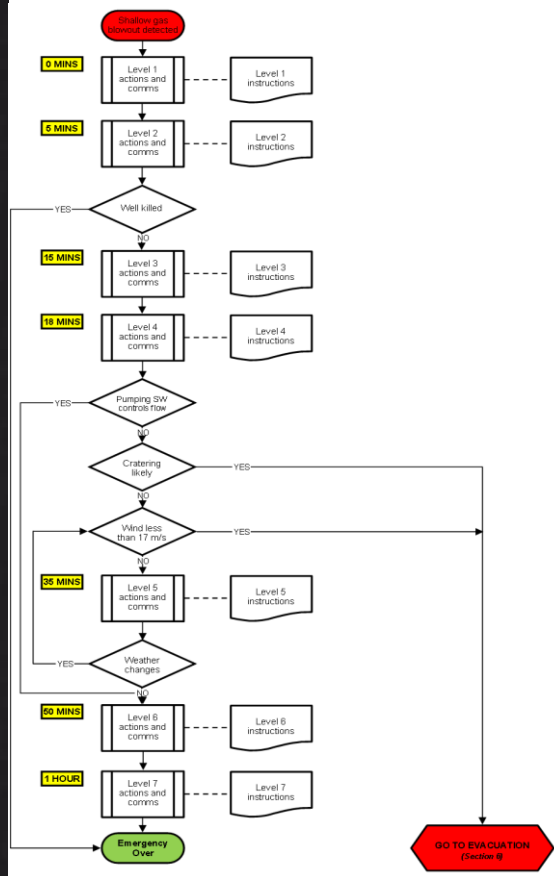
Loss of Hydrocarbons - Shallow Gas
BowTie H-01 – CARE Card

Toolpusher

Company Logo, reference number and Asset Name

Position of the accountable person and reference to the MAH event and its BowTie

ERP FLOWCHART



This part of the T Card details the ERP requirements:

- **Emergency**
 - As identified and recorded as credible in the BowTie and ERP
- **Action and timeline**
 - Time based actions required at appropriate response levels to the emergency under **Emergency Management Control**
- **Communication**
 - Requirements defined in the ERP for interactions and decision making linked to the Bowtie barriers for response and recovery under **Emergency Management Control**
- **EER**
 - Actions required in support of Escape , Evacuation and Rescue if deemed required due to escalating emergency under **Emergency Management Mitigation**
- **Recovery**
 - Actions required under the confines of **Recovery and stabilisation of the MAH event**

The CARE Card (T Card Version 2 - Front)

CARE CARD		
Position: Toolpusher		
MAH Event: Loss of Hydrocarbons – Bowtie H-01		
Critical Activities within Hazard Management		
<div style="display: flex; justify-content: space-around;"> SCA SCE </div>		
Threat	Barrier	Barrier Type
Failure to detect kick	Drilling procedures	Prevention
Failure to control kick	Drilling procedures	Reduction
Lost mud circulation	Drilling procedures	Reduction
	Choke and Kill system	Control
Insufficient mud hydrostatic pressure	Drilling procedures	Prevention
	Choke and Kill system	Control
Drilling equipment failure	Choke and Kill System	Control
	Replacement parts inventory	Prevention
Sour Gas corrosion	Drilling stopped if sour gas detected - Procedure	Detection and Control
Human Error	Drilling Procedures	Reduction
Kick while running casing	BOP and Shut in procedures	Prevention
	Casing Rams	Control
Dropped Object onto pressurised well	Replace well head cover	Prevention
Key reference to procedures or equipment tag numbers placed here		

Company Logo, reference number and Asset Name

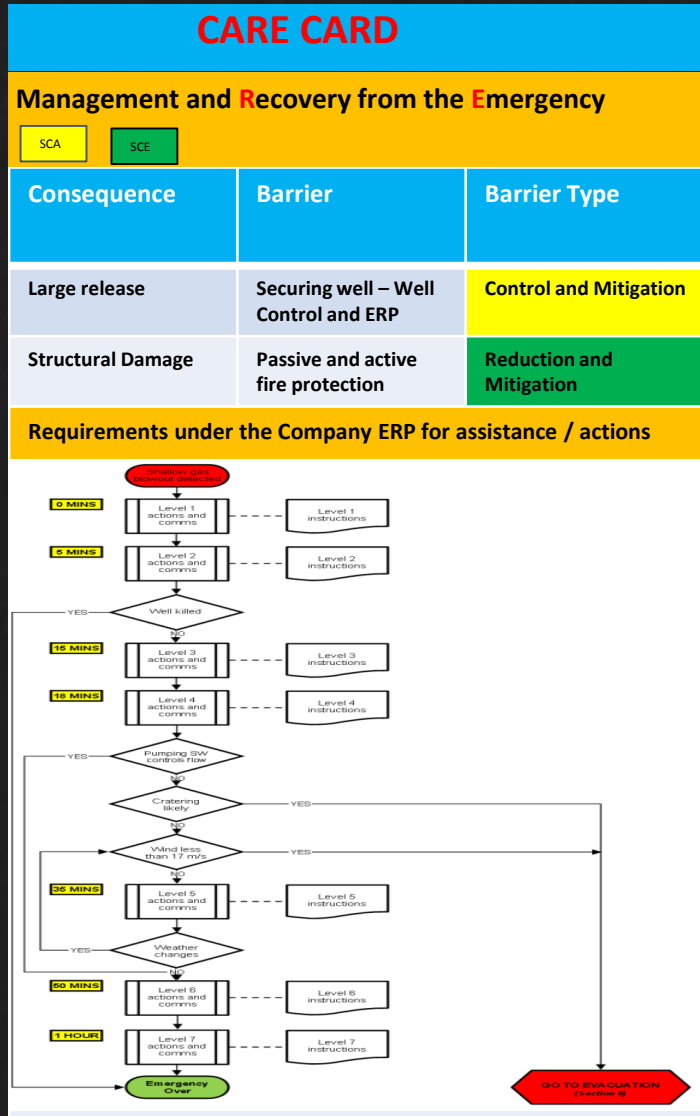
Position of the accountable person and reference to the MAH event and its BowTie

This part of the T Card details the applicable MAH Bowtie:

- **Threat**
 - As identified and recorded as credible in the BowTie workshop session and debated by attendees
- **Barrier**
 - Procedure, System, Human Interaction (competence/Training, etc) or Equipment each being rated for its effectiveness, ownership and classification as a Safety Critical Activity or Element within the confines of **Hazard Management Control**
- **Barrier Type**
 - As identified as a being either for Prevention, Detection, Control, Reduction, Mitigation or Elimination as part of the assessment process within the confines of **Hazard Management Control**

Listing of key barrier support information or detailed documentation to be consulted

The CARE Card (T Card Version 2 - Back)



Company Logo, reference number and Asset Name

This part of the T Card details the ERP to the MAH Event

- **Consequence**
 - As identified and recorded as credible in the BowTie workshop session and debated by attendees
- **Barrier**
 - Procedure, System, Human Interaction (competence/Training, etc) or Equipment each being rated for its effectiveness, ownership and classification as a Safety Critical Activity or Element within the confines of **Hazard Management Recovery**
- **Barrier Type**
 - As identified as a being either for Prevention, Detection, Control, Reduction, Mitigation or Elimination as part of the assessment process within the confines of **Hazard Management Recovery**

Listing of associated and integrated action requirements in the Company ERP

CARE Card Summary

CARE = **C**ritical **A**ctivities and **R**esponse to **E**mergencies

■ **Benefit**

- The main benefit of the introduction of the CARE card system is to provide:
 - A simple and effective tool to support the understanding of MAH events, importance of barriers in place, and, the impact once they are removed or downgraded
 - MAH accountabilities and the listing of SCA and SCE's
 - Key part in the requirement under the IADC HSE Cade Guidance and SHIDAC process to provide the education of the hazard process and workforce involvement
 - Focus on both Hazard Management and Emergency response and Recovery at an individual level

■ **Lifecycle Assistance**

- Assists in the ongoing education of the IADC Guidance on HSE Cases and MHRA's and the Company drive into Hazard Management

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