Case Study

Maintenance and Reliability Management

# Woodside Energy Limited – Angel Project

Woodside Energy Limited (WEL) engaged K2 in 2005, to develop detailed work-scopes for the identification and implementation of the O&M requirements supported by detailed cost, time and resource (CTR) requirements. After the initial development work was completed, K2 was engaged to supply the services necessary to develop or assist with all of the requirements of the O&M scope for Angel.

The scope of work for this project included the following major areas:

### Asset Register

- Issue and control of TAGs for all functional locations
- Development of functional location hierarchy and classification
- Identification of all critical or maintainable items
- Sourcing all data necessary to allow maintenance personnel to maintain the facility
- Provide the above information formatted ready for upload into SAP PM
- Determine technical integrity status for all functional locations
- Develop hazardous area equipment register

### Maintenance

- Criticality and reliability analysis of all equipment
- Detailed Reliability Centred Maintenance (RCM) study for critical systems & equipment
- Write maintenance procedures for identified requirements appropriate for Not Normally Manned (NNM) status
- Identify spare parts and consumables requirements for preventive maintenance routines
- Produce maintenance plans for upload into SAP PM
- Production of Vendor Equipment Manuals (VEMs)

### Competency and Training

- Identify necessary position competencies
- Develop competency plan
- Manage training program

### Inspection (Corrosion Management)

- Identify all corrosion loops on the facility
- Risk Based Inspection (RBI) review of the facility
- Write inspection procedures and produce inspection isometrics for identified requirements
- Produce maintenance plan for upload into SAP PM

## Maintenance System (SAP PM)

- Upload all assets (Functional Locations)
- Either upload or link available asset data
- Configure maintenance plans and generate work orders
- Upload Bills of Materials (BOMs) to all assets

## Spare Parts

- Identify all spares (operations and insurance) required for the facility
- Review spares parts requirements to optimise spares holding levels
- Catalogue all spare parts directly into SAP MM
- Develop BOMs for all equipment with spares identified
- Develop and facilitate a project spares handover process

## Operations Procedures

- Source information for development of operations procedure manuals
- Produce system overviews for each procedure manual
- Identify procedure and isolation requirements for each procedure manual
- Write operations procedures for all facility systems
- Prepare valve check lists for all operational scenarios

## Ongoing Operations Support

- Provide engineering support during startup and initial steady state operations phase
- Provide offshore logistics and planning support during initial steady state operations

K2 was responsible for overall management of the O&M deliverables. This involved interfacing with the client as well as the many suppliers, design contractors and construction yards to ensure the deliverables were of the highest possible quality and were delivered in line with the project schedule.