Guidelines for offshore oil and gas installations that are not permanently attended
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GUIDELINES FOR OFFSHORE OIL AND GAS INSTALLATIONS THAT ARE NOT PERMANENTLY ATTENDED

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FOREWORD

These guidelines have been developed to assist operating companies with achieving safe and efficient design and operation of those installations that are not permanently attended by personnel (NPAI). They aim to provide all those involved in designing and operating such installations with guidance on how to optimise the commercial aspects of operating consistent with maintaining safe and environmentally acceptable practice through encouraging the use of risk based decision making and provision of knowledge and experience.

These guidelines are particularly intended for operations managers and support personnel, integrity engineers, maintenance managers, designers of new builds and those involved in the transition of permanently attended installations (PAI) to NPAI status (and vice versa).

Although instigated by, and produced for, the UK offshore industry, guidance provided herein should be applicable to similar operations throughout the world. It may also be useful to those involved in other types of unstaffed industrial facilities.

This publication has been compiled for guidance only and while every reasonable care has been taken to ensure the accuracy and relevance of its contents, the Energy Institute (EI), its sponsoring companies, the document author and the steering group members listed in the Acknowledgements who have contributed to its preparation, cannot accept any responsibility for any action taken, or not taken, on the basis of this information. The EI shall not be liable to any person for any loss or damage which may arise from the use of any of the information contained in any of its publications.

This publication may be reviewed from time to time and it would be of considerable assistance for any future revision if users would send comments or suggestions for improvements to:

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1 INTRODUCTION

1.1 GENERAL

Throughout these guidelines the term not permanently attended installation (NPAI) is used to refer to offshore installations that are not permanently attended installations (PAI) (i.e. a PAI by definition is attended for 365 days every year).

The commonly used term normally unattended installation (NUI) is not used in these guidelines unless in relation to a quotation from a regulation or other reference source. The reason being that there is no clear regulatory or industry-accepted definition for a NUI and as a result operating companies use the term to describe installations with all types of attendance levels from a few days per year up to levels significantly above 50%. Whereas, the term ‘normally unattended’ implies by the use of the word ‘normal’ an installation attendance of less than half of the year.

The term NPAI therefore covers the wide range of attendance models that are currently, or could be, employed by operating companies. The definition NPAI covers the continuum of attendance models from one to 364 days per year including for the following visit types:

- No planned off-shift (e.g. overnight) stays:
  - infrequent visits (e.g. a visit every one or two months);
  - regular visits (e.g. a visit every week), and
  - frequent visits (e.g. daily visits for weeks, months or many months).
- Planned off-shift (e.g. overnight) stays:
  - short duration, infrequent (e.g. three to four days every one or two months);
  - extended duration, infrequent (e.g. two weeks twice a year), and
  - extended duration, regular (e.g. four weeks out of every five).

Avoiding the use of the term NUI removes confusion over the degree of occupation required to qualify it as normally unattended.

There is an abundance of documentation and guidance surrounding offshore design and operations for PAIs, but little guidance focused specifically on NPAIs. These guidelines seek to rectify this situation.

These guidelines examine the lifecycle of an NPAI from design or transition from PAI status, through the operational phase to decommissioning, or transition back to PAI status, or for re-use. Figure 1 shows the principal areas where guidance is provided i.e. the various lifecycle paths for NPAIs, namely:

- new-build design, installation and commissioning;
- transition into NPAI operations from PAI operations;
- NPAI operations;
- combined operations with mobile installations;
- transition from NPAI operations into PAI operations;
- transition from NPAI operations into a re-use application, and
- transition from NPAI operations into removal and decommissioning.
The guidelines have been compiled to assist the design and operation of NPAIs by providing a thorough understanding of issues (many of which compete with each other) that have an influence or impact on design and operation of NPAIs, such as:

- staffing demand versus the ability to deliver productive hours on the installation;
- benefit of safety systems versus the risk exposure associated with maintaining them;
- simplification/minimisation whilst providing adequate welfare provision;
- safety management;
- environmental aspects;
- reliability/availability;
- maintenance strategies;
- asset integrity;
- changing production profiles, and
- legislative compliance.

The guidelines also encourage a lifecycle risk based solution and build on the knowledge and experience of a broad range of input sources so as to provide details on the different approaches being taken at each of the NPAI lifecycle phases.

Following the guidelines should enable designers of new builds and operating companies for existing or transitioning installations to determine the optimum operating regime and position their NPAI along the continuum shown in Figure 2.
A NPAI is any installation that is not permanently attended i.e. less than 365 days per year

Avoiding the term ‘NUI’ removes the confusion over the degree of occupation required to qualify as normally unattended

Figure 2 NPAI Continuum

As a general rule, the higher an installation is on the NPAI continuum the greater the justification for enhanced safety systems becomes.

Examples are given in these guidelines to illustrate how a particular subject area has been or is being addressed by operating companies or designers. It should be stressed however, that no inference should be taken as to whether the examples provided reflect good or best practice; the examples are purely illustrative of current practice.

1.2 SCOPE

The scope of these guidelines is to provide a framework that should help designers and NPAI operating companies maximise the returns on investment whilst maintaining a safe, environmentally responsible and legally compliant operation. It has been developed for fixed installations located on the United Kingdom Continental Shelf (UKCS), installations which therefore must comply with UK legislative requirements.

The guidance provided focuses on subject areas that are pertinent to NPAIs. It does not examine in detail issues that are common with PAIs, such as:
– reservoirs;
– wells and well monitoring;
– subsea completions;
– pipelines, and
– common operations such as lifting, marine and aviation.
1.3 APPLICATION

These guidelines contain no mandatory sections and provide guidance only. Where there is a specific requirement to achieve legislative compliance, this is noted.

All stages of the NPAI lifecycle are covered; as such the information and processes described are relevant to all NPAIs currently operating on the UKCS and should give valuable direction to those NPAIs being designed and operated outside UK waters.

The guidance provided is specifically aimed at assisting:

- Designers of new installations that will be operated as NPAIs or may be transformed to NPAI status after a period of operating as PAIs.
- Existing NPAI (new or transformed) operating companies, or those that have acquired an existing NPAI.
- Project personnel planning a combined or connected operation with an NPAI to ensure suitable and sufficient effort is made to integrate the physical structures and safety management systems (SMS) of the NPAI operating company and the third party.
- Those involved with the transition of an installation from NPAI status to PAI status, re-use or decommissioning.