



# Asset Integrity Process Safety(AIPS) in Operations

Standard

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| Revision | Section | Amendment                                              |
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| Rev. 1   | 2.16    | Updated to include reference to Emergency Preparedness |
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**TABLE OF CONTENTS**

|           |                                                             |           |
|-----------|-------------------------------------------------------------|-----------|
| <b>1.</b> | <b>ABOUT THIS STANDARD .....</b>                            | <b>1</b>  |
| <b>2.</b> | <b>OPERATE AND MAINTAIN BUSINESS RULES .....</b>            | <b>5</b>  |
| 2.1.      | Leadership, Roles and Accountabilities .....                | 5         |
| 2.2.      | Competency .....                                            | 5         |
| 2.3.      | Hazard and Risk Management .....                            | 6         |
| 2.4.      | Documentation .....                                         | 6         |
| 2.5.      | Legislation, Standards and Company Specifications .....     | 7         |
| 2.6.      | Management of Safety Critical Equipment .....               | 8         |
| 2.7.      | Maintenance and Inspection .....                            | 9         |
| 2.8.      | ISSOW and Permit to Work .....                              | 10        |
| 2.9.      | Operating Procedures .....                                  | 10        |
| 2.10.     | Process and Operational Status Monitoring .....             | 11        |
| 2.11.     | Operational Handover .....                                  | 11        |
| 2.12.     | Management of Operational Interfaces .....                  | 12        |
| 2.13.     | Operational Readiness and Process Start Up .....            | 12        |
| 2.14.     | Management of Change .....                                  | 13        |
| 2.15.     | Contractors and Suppliers .....                             | 14        |
| 2.16.     | Emergency Preparedness .....                                | 14        |
| 2.17.     | Incident Investigation, Reporting and Lessons Learned ..... | 14        |
| 2.18.     | Monitor, Review and Audit .....                             | 15        |
| <b>3.</b> | <b>REFERENCE DOCUMENTS .....</b>                            | <b>16</b> |
| <b>4.</b> | <b>ABBREVIATIONS AND DEFINITIONS.....</b>                   | <b>17</b> |

**LIST OF TABLES**

**No table of figures entries found.**

**LIST OF FIGURES**

|                                |   |
|--------------------------------|---|
| Figure 1: AIPS Framework ..... | 4 |
|--------------------------------|---|

**TABLE OF APPENDICES**

**No table of contents entries found.**

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## 1. About This Standard

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### Purpose

This Standard defines and documents the key principles and business rules for Asset Integrity and Process Safety(AIPS) in the Operate stage.

### Scope

This standard is applicable to all INPEX Australia owned and operated facilities. It applies to all persons and entities working for or on behalf of the Company, in situations where the Company has legal responsibility to a regulator for activities carried out on its behalf as the title, permit or license holder, or as a signatory to any document or plan supplied to a legislative body.

This Standard applies to the resourcing and planning of AIPS related activities and the provision of assurance that AIPS hazards have been identified and risks have been reduced to levels that are tolerable and ALARP.

The INPEX Value Assurance System (IVAS) Australia Standard[1] is the Company's governing process for exploring, assessing and maturing development opportunities and projects. This document forms the AIPS requirements for the Operate Stage, for earlier project stages see the Asset Integrity Process Safety(AIPS) in Projects Standard[2].

### Background

Within INPEX Australia the term AIPS is commonly used to describe both Asset Integrity and Process Safety respectively, these terms being used synonymously within the Company and in industry.

AIPS is established through identification of hazards, evaluation of risk, implementation of controls and assurance that controls have been implemented and remain effective.

AIPS requirements primarily reflect the need to ensure that facilities, their systems, and hardware are designed, constructed, and maintained to ensure they are safe, functional, and reliable.

AIPS requirements are the means of ensuring that the people, systems, processes, and resources which deliver AIPS are in place, fit for purpose and measurable over the whole lifecycle of an asset. This definition implies that AIPS does not only relate to the physical condition of facilities, but also to elements involving people, activities or business processes, the failure of which may lead to a MAE.

The AIPS requirements outlined in this document are aligned with the expectations of the INPEX Corporate Process Safety Management Standard. These corporate requirements have been mapped into the Business Management System: Health, Safety and Environment Overview via the Company Process Safety Management Roadmap.

## Policies and Governance

HSE Framework elements reference other BMS standards and their respective requirements. AIPS is ultimately dependent on the content in these referenced standards and their owners to ensure relevant requirements are implemented and complied with.

The AIPS Framework in Figure 1 on page 4. reflects IVAS stages relative to the key phases of AIPS.

### Policy

The application of the AIPS framework within INPEX Australia supports the objectives of the Company Corporate Health and Safety Policy[3].

### Governance

INPEX Australia is governed by the Company's Business Management System (BMS). It provides a management framework for business requirements, business processes and documents (BMS Content) used to ensure that the Company can fulfil all tasks required to achieve its objectives within defined and approved boundaries.

Compliance with this Company Standard is mandatory for all activities worldwide related to INPEX operated projects and facilities within Australia and its coastal waters.

Whilst this Standard is mandatory, deviations and dispensations may be granted in exceptional cases in accordance with the BMS Governance Standard[4]. Any proposal to deviate from this Standard shall be justified and submitted to the HSE Process Safety Manager for endorsement and approval by the Vice President HSEQ.

In all instances, legally required National codes and standards of the country where the relevant rules are applicable or relevant equipment is to be operated, shall be complied with together with any other applicable legal requirements. Where Company Standards are more stringent, then these specific more stringent requirements shall take precedence. Where Company Standards appear to be less stringent, then the applicable legal requirements shall be followed and brought to the attention of the HSE Process Safety Manager.

### Regulatory Context

Applicable Australian legislation that regulates the management of major hazard facilities differs depending on whether a facility is located onshore or offshore. However, the identification and management of Health, Safety and Environmental risks through implementation and maintenance of appropriate Control Measures is a consistent requirement. The AIPS framework is incorporated into the Company BMS:HSE Framework to support this objective.

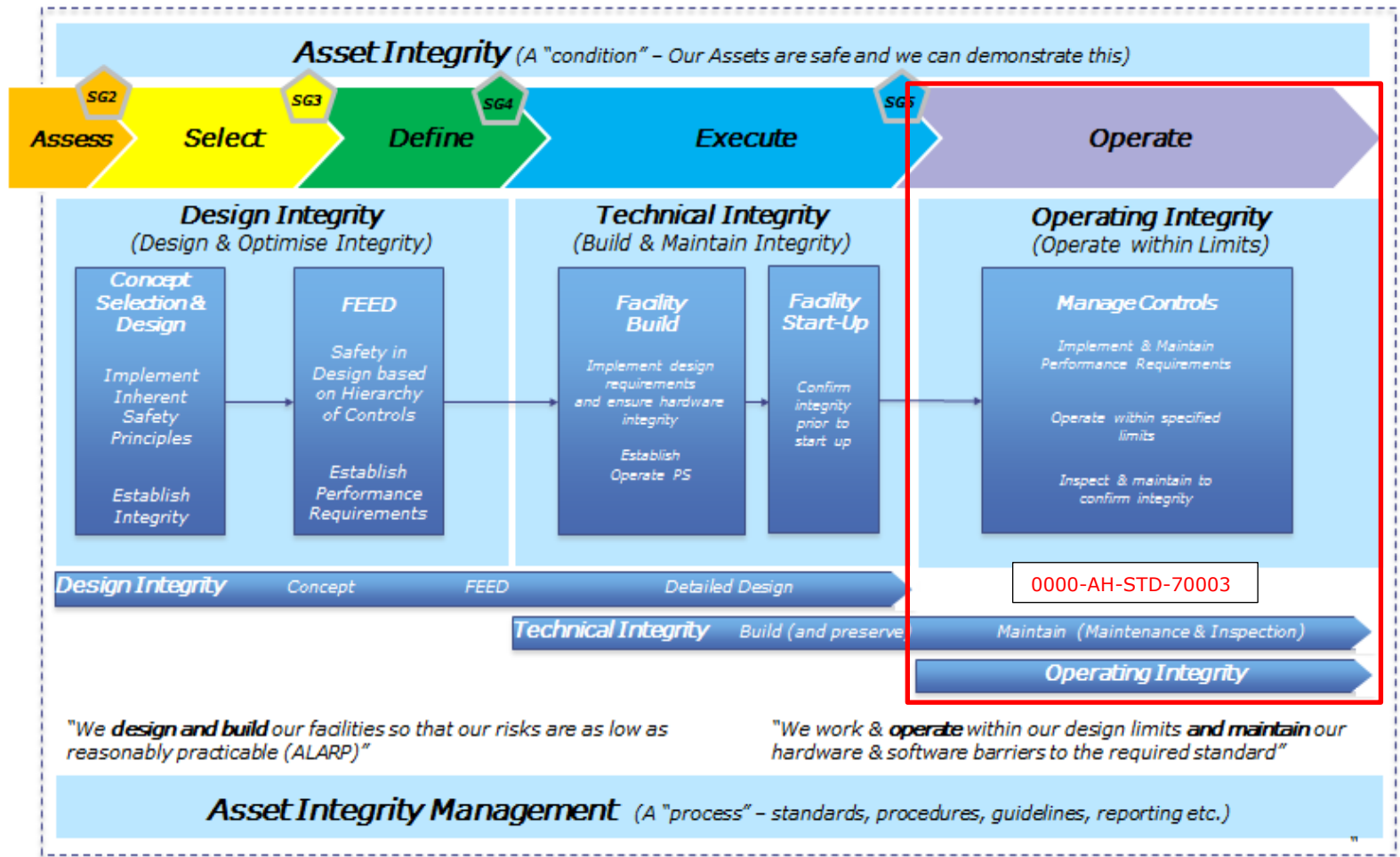


Figure 1: AIPS Framework

## 2. Operate and Maintain Business Rules

### 2.1. Leadership, Roles and Accountabilities

**Business Principle** *It is the responsibility of leadership to implement AIPS requirements in the operate stage. Leadership must establish AIPS performance targets and provide the necessary resources to achieve them.*

- Business Rules**
- a) Operations shall comply with the Leadership and Culture Standard [5].
  - b) Operations management shall credibly demonstrate commitment and personal accountability for AIPS, promote an open and trusting environment, and understand how their behaviours impact others. Commitment shall be demonstrated through active and visible participation, including on-site visits.
  - c) AIPS accountabilities and responsibilities shall be clearly defined at all levels of the organisation.
  - d) AIPS Performance shall be evaluated through clearly identified process safety performance indicators and the results communicated to Company management and all levels of the workforce.

### 2.2. Competency

**Business Principle** *AIPS is reliant on having competent and well trained people, carefully selected and appropriately screened. Operations shall ensure that all personnel have the necessary competencies to apply the AIPS framework requirements.*

- Business Rules**
- a) Operations shall comply with the Competency Assurance and Management Standard [6].
  - b) AIPS competency requirements shall be established for all positions responsible for delivering AIPS, with critical competencies identified, and appropriate training and experience opportunities developed and maintained.
  - c) There shall be implemented processes for systematically identifying, recording and maintaining AIPS related competencies.
  - d) Competency training plans shall cover risk management processes for AIPS to emphasise the link between hazards and control measures and, where practicable, clearly identify the activities that ensure control measures are suitable and function effectively.

## 2.3. Hazard and Risk Management

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|                           |                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Business Principle</b> | <i>Comprehensive hazard identification and risk assessment is a fundamental requirement of AIPS Management. Effective risk management reduces safety, environmental and production risks through systematic identification, assessment and mitigation of potential hazards to existing/future operations whilst maintaining asset availability.</i> |
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| <b>Business Rules</b> | <ul style="list-style-type: none"><li>a) A structured process shall be applied to identify hazards and to ensure that all AIPS risks associated with the Company's operations are systematically assessed. Operations shall comply with the HSE Hazard and Risk Management Standards[7]</li><li>b) Hazards shall be identified and risk reduction measures implemented to demonstrate that risk levels are both tolerable and ALARP.</li><li>c) A process shall be in place for systematic early identification of new or significantly updated technology introduced to Company facilities, its value, risk of implementation and mitigations to manage risk to an acceptable level.</li><li>d) Processes shall be implemented to determine if there are any additional, reasonably practicable measures that can be implemented to further reduce risks to as low as reasonably practicable.</li><li>e) Risk reduction measures shall be implemented unless the sacrifice (in terms of cost, time, and resources) associated with their implementation is grossly disproportionate to the risk reduction (benefit) achieved.</li></ul> |
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## 2.4. Documentation

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|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Business Principle</b> | <i>Accurate records and information are essential to identify, assess and manage AIPS risk. The Company shall ensure that the information required to support safe and reliable operation is identified, available and up-to-date</i> |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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**Business Rules**

- a) Operations shall comply with the Document Management Standard.[8]
- b) There shall be a suitable data management system capable of demonstrating that key data, information, documents and drawings are suitably stored, revised, approved and issued for use.
- c) A register shall be established and maintained that identifies AIPS critical documents, detailing the requirements for review and endorsement.
- d) All information considered to be integrity critical shall be appropriately secured and protected by a management of change process.

## 2.5. Legislation, Standards and Company Specifications

**Business Principle**

*Compliance with legislation and applicable codes and standards are a fundamental requirement for the design and construction and maintenance of facilities. Facilities shall ensure that all applicable legislation and regulatory requirements are identified, understood and complied with.*

**Business Rules**

- a) Regulatory Approvals shall be coordinated in accordance with a Regulatory Compliance Management Plan. A Regulatory Approvals and Commitment Register shall be established and maintained to identify and track approvals and commitments.
- b) A list of design, build and operate standards shall be maintained which integrates legislative requirements, industry standards and the organisations practices into a clear set of requirements to be used in the design, construction and maintenance of the facilities.
- c) Where appropriate, design and construction standards and practices shall exceed legislative requirements. Additional requirements shall be developed where prescriptive legislation is found inappropriate for the facility or system being developed.
- d) Standards and specifications shall take into consideration and specify appropriate measures to establish and maintain AIPS over the lifecycle of the facilities.
- e) Approved standards and specifications shall be available, reviewed and updated to account for changes to legislation, industry standards, industry good practices and findings from previous incidents.
- f) A process shall be implemented to review the impact of any changes to approved standards and practices on existing equipment and facilities.

- g) All standards and specifications shall be assigned to specified individuals who shall be responsible for the maintenance and updating of the document.

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## 2.6. Management of Safety Critical Equipment

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|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Business Principle</b> | <i>An essential requirement for AIPS is that safety critical equipment are in service and operating correctly. Management must ensure that safety critical equipment and devices are identified and appropriately managed, so that they are in service and functioning correctly.</i> |
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| <b>Business Rules</b> | <ul style="list-style-type: none"><li>a) Company SCEs shall be uniquely identified on an asset register or equivalent system which provides up-to-date asset lists and equipment records, including location and equipment specification data. The asset register shall provide the basis for the planning of SCE testing, inspection and maintenance.</li><li>b) "Line of sight" from identification of SCEs through to implementation and monitoring of assurance tasks shall be demonstrated.</li><li>c) SCE testing, inspection and maintenance strategies and plans shall be in place. The Company shall ensure that procedures and plans are proportionate to the risk associated with failure of SCEs.</li><li>d) SCE testing, inspection and maintenance plans shall be reviewed and endorsed by specified individuals.</li><li>e) Adequate numbers of competent personnel shall be available to carry out the testing, inspection and maintenance plans to ensure SCEs meet their required performance standard criteria.</li><li>f) Findings and recommendations from the SCE testing, inspection and maintenance plans shall be appropriately prioritised and closed out.</li><li>g) There shall be procedures to ensure that temporary disarming, degradation or deactivation of critical alarm, control, shutdown, security and emergency response equipment is risk assessed, managed and recorded.</li><li>h) Contingency measures shall be in place in the event of failure or degradation of an SCE.</li></ul> |
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- i) Assurance shall be conducted to ensure SCEs continue to meet their required performance criteria
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## 2.7. Maintenance and Inspection

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| <b>Business Principle</b> | <i>Maintaining the integrity of plant and equipment is an essential requirement for AIPS. Management must ensure that the necessary inspection and maintenance requirements are identified and carried out to reduce the likelihood of a significant incident as a result of failed plant or equipment.</i> |
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|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Business Rules</b> | <ul style="list-style-type: none"><li>a) Equipment shall be uniquely identified on an asset register which provides up-to-date asset lists and equipment records, including location and equipment specification data. The asset register shall provide a basis for inspection and maintenance planning.</li><li>b) Inspection and maintenance plans shall be risk based and address AIPS through the lifetime of facilities.</li><li>c) Feasible plans and schedules shall be developed for execution of asset inspection and maintenance.</li><li>d) Inspection and maintenance strategies and plans shall be endorsed by specified named and competent individuals.</li><li>e) There shall be procedures to ensure that asset inspection and maintenance plans are reviewed regularly commensurate with risk, using findings from the plans, industry experience and incidents to identify and address issues and opportunities for improvement.</li><li>f) Adequate numbers of trained and competent personnel shall be available to execute inspection and maintenance plans.</li><li>g) There shall be procedures to ensure that findings and recommendations from inspection and maintenance activities are appropriately prioritised and closed out.</li><li>h) Deviations and deferrals from approved inspection and maintenance plans considered integrity critical shall be reviewed and endorsed by specified individuals.</li><li>i) Progress of integrity critical maintenance activities against plan shall be regularly reported to senior management.</li></ul> |
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## 2.8. ISSOW and Permit to Work

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|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business Principle | <i>The execution of maintenance and inspection, if not appropriately managed, can significantly increase the levels of process safety risk. Management must ensure that effective work control, permit to work and task risk management arrangements are in place, and followed, to control the risks arising from work activities.</i>                                                                                                                                                                                                                                                 |
| Business Rules     | <ul style="list-style-type: none"><li>a) Planned work shall include systematic risk assessment of activities in accordance with the HSE Hazard and Risk Management Standard[7] to identify where ISSOW processes are required to ensure appropriate control measures are in place to manage potentially hazardous activities.</li><li>b) Inspection and maintenance activities shall be performed in accordance with the Permit to Work Standard[9].</li><li>c) Process/mechanical and electrical isolations shall be managed in accordance with the Isolations Standard[10].</li></ul> |

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## 2.9. Operating Procedures

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|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business Principle | <i>It is essential that activities and associated risk controls are executed as defined in operational procedures. Each step of execution of activities should lead to the desired result and intervention should happen in a timely manner when required.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Business Rules     | <ul style="list-style-type: none"><li>a) Approved operating manuals and procedures (including temporary operating procedures) shall be identified, available, accurate, up-to-date, understood and implemented, commensurate with the operational risk, and include human factors considerations.</li><li>b) Operating manuals shall be readily accessible and designed to maximise usability and minimise the likelihood of error and non-compliance.</li><li>c) Operating procedures shall be regularly reviewed and updated; these reviews shall involve supervisors and personnel who are required to use them.</li><li>d) Operating procedures shall be reviewed and endorsed by specified individuals.</li></ul> |

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## 2.10. Process and Operational Status Monitoring

**Business Principle** *Process and operational status monitoring is essential to assure the continued integrity of the organisation's operations. Management must ensure that the process and operational status monitoring, requirements are defined, understood and carried out.*

- Business Rules**
- a) Safe design and safe operating limits shall be clearly identified and endorsed by specified individuals.
  - b) Process plant/systems shall be operated within safe operating limits.
  - c) Operators shall be provided with appropriate monitoring of key process parameters against operating limits.
  - d) Alarm settings shall alert operators that key process parameters are approaching safe operating limits.
  - e) Trip functions shall offer adequate protection against exceeding safe design limits for key process parameters.
  - f) Permanent changes to Alarm limits/trip points shall be formally endorsed through a Management of Change process.
  - g) Temporary changes to alarm limits/trip points shall be time limited and formally endorsed by specified individuals .
  - h) Excursions beyond safe operating and design limits shall be identified, investigated, and reported to relevant Technical Authorities and specified levels of management.
  - i) Safe operating limit excursion trends shall be reviewed by specified levels of management.
  - j) Safe Operating and design limit documentation shall be controlled, kept up to date and reflect current plant configuration.

## 2.11. Operational Handover

**Business Principle** *Operational handover is essential to ensure the continued integrity of the organisation's operations. Management must ensure that the handover requirements are defined, understood and carried out.*

- Business Rules**
- a) Handover arrangements between production and maintenance shifts, work groups, job positions etc. shall be defined, understood, implemented and regularly reviewed commensurate with risk to ensure asset AIPS related information is communicated.

- b) Handover arrangements will incorporate the status of SCE/ECE's (overrides / bypass in place, maintenance etc.); and Excursions / deviations from SOLs.

## 2.12. Management of Operational Interfaces

**Business Principle** *Operational interfaces with third parties, who provide or receive services, utilities, or products may impact the organisation's operations. Management must ensure that operational interfaces with third parties are identified, assessed and appropriately managed.*

- Business Rules**
- a) Operational interfaces with third parties shall be identified, documented and risk assessed.
  - b) Management arrangements shall be established proportionate to the risk associated with failure of the operational interface.

## 2.13. Operational Readiness and Process Start Up

**Business Principle** *The commissioning and start-up of new, modified or existing plant and equipment is a high risk operation. Management must ensure that there is a systematic process to verify that plant and equipment is in a safe condition, and that personnel are appropriately prepared, before start-up or return to normal operation.*

- Business Rules**
- a) There shall be a systematic process for checking operational readiness and the integrity of systems before they are brought into service.
  - b) The checking process shall address:
    - New or modified plant and equipment;
    - Return from maintenance; and
    - Restart following system or full plant trip or planned shutdown.
  - c) There shall be defined criteria for operational readiness reviews which are regularly reviewed and updated.
  - d) The criteria shall cover:
    - Hardware;
    - Process system integrity;
    - Control system and software; and
    - Human and organisational factors, operating procedures, and documentation.

- e) System checks shall be carried out and documented by competent personnel. There shall be defined criteria for categorising and handling identified issues and outstanding work items.
- f) Completed system checks shall be reviewed, approved and accepted by specified levels of management appropriate to the magnitude of the risk.
- g) Commissioning and start-up procedures shall have defined stages, hold/check points and progression criteria.

## 2.14. Management of Change

**Business Principle** *Any form of change in design standards, specifications, procedures, facilities, operations or organisations if not appropriately managed, can significantly increase the levels risk to the integrity of the facilities. Management of Change looks to ensure that any potential impact from change is fully understood, and that any potential threats associated with change are appropriately mitigated.*

- Business Rules**
- a) Processes shall be in place which identify, assess and manage both temporary and permanent changes. The process shall comply with the Management of Change Standard[16].
  - b) At a minimum the Company shall apply management of change processes to:
    - Assets or equipment (incl software or control systems)
    - Basis of Design (BoD)
    - Philosophies and specifications
    - Project organisation and personnel
  - c) Management of change processes shall consider impacts to:
    - Asset integrity and process safety
    - Facility performance and effectiveness
    - Business/production interruption
    - Third party assets
  - d) Management of change processes shall address:
    - Compliance with legislation and approved standards
    - Acquisition and retention of regulatory permits
    - Documenting change, including reason/technical basis
    - Communication of change and associated risks
  - e) Changes shall be approved by specified named and competent individuals commensurate with risk associated with the proposed change.
  - f) All changes described above shall be maintained in a suitable register and managed to close out.

## 2.15. Contractors and Suppliers

**Business Principle** *All contractors, subcontractors and vendors doing work on the Company's behalf can impact operations and its reputation. Management of all contractors, subcontractors and vendors shall ensure they conduct themselves in a manner that is consistent and compatible with the Company's policies and AIPS requirements*

**Business Rules** a) There shall be a process to ensure that contractors, subcontractors and vendors are evaluated and selected against criteria that include an assessment of competencies and capabilities to competently perform work and meet the Company's Asset Integrity objectives and requirements. Refer to Vendor Management Standard [13] and Quality Management Standard [14].

## 2.16. Emergency Preparedness

**Business Principle** *The consequences of an incident can be significantly reduced if the organisation is appropriately prepared to handle potential emergency situations. Management must ensure that, in the event of an incident, the organisation is appropriately prepared for all necessary actions which may be required for the protection of: personnel; the environment; assets (including equipment); organisation's reputation and livelihood.*

**Business Rules** a) Processes shall be in place to identify, prepare and respond to emergency situations. The processes shall comply with the Emergency and Crisis Management Standard [15].

## 2.17. Incident Investigation, Reporting and Lessons Learned

**Business Principle** *Appropriate and effective investigation and reporting of incidents affecting AIPS are necessary to protect the integrity of Company facilities. Information management systems shall be in place to protect against reoccurring incidents that impact AIPS. The Company shall ensure that incidents are reported and information used to take corrective action*

**Business Rules** b) A process shall be in place for reporting, investigating, assessing and documenting incidents and near misses

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relating to AIPS. Refer to Event Reporting and Investigation Standard [17].

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## 2.18. Monitor, Review and Audit

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|                    |                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Business Principle | <i>The Company shall ensure that there is both routine review and independent audit of compliance with AIPS requirements.</i> |
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|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business Rules | <ul style="list-style-type: none"><li>a) AIPS assurance activities shall be carried out in accordance with Company Assurance Standard[17].</li><li>b) Operations shall establish and conduct monitoring and review tasks to ensure that AIPS risks are identified, and control measures are established, implemented and effective.</li><li>c) A program of independent review and audit shall be established to confirm that AIPS risks are appropriately managed.</li><li>d) AIPS assurance activities shall be planned and scheduled per an agreed assurance strategy approved by senior management.</li><li>e) AIPS assurance activities shall be conducted at the appropriate levels of assurance with adherence for the need for reviews to be conducted independently of Operations management.</li><li>f) Independent verification, by a suitably competent individual/body, shall be performed to confirm that SCEs meet performance standard requirements.</li><li>g) AIPS assurance activities will be conducted according to a risk based approach with due consideration of specific facility risk, key performance indicators and results of other assurance activities.</li></ul> |
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### 3. Reference Documents

| Ref. | Document No.      | Document Title                                         |
|------|-------------------|--------------------------------------------------------|
| 1    | 0000-A0-STD-60032 | INPEX Value Assurance System (IVAS) Australia Standard |
| 2    | 0000-AH-STD-70002 | Asset Integrity Process Safety in Projects Standard    |
| 3    | 0000-AH-POL-70000 | Company Corporate Health and Safety Policy             |
| 4    | 0000-A0-STD-60015 | Business Management Systems Governance Standard        |
| 5    | 0000-AN-STD-60025 | Leadership and Culture Standard                        |
| 6    | 0000-AN-STD-60011 | Competency, Assurance and Management Standard          |
| 7    | 0000-AH-STD-60003 | HSE Hazard and Risk Management Standard                |
| 8    | 0000-A9-STD-60013 | Document Management Standard                           |
| 9    | 0000-AH-STD-60023 | Permit to Work Standard                                |
| 10   | 0000-AH-STD-60026 | Isolations Standard                                    |
| 11   | 0000-A0-STD-60027 | Management of Change Standard                          |
| 12   | 0000-A0-STD-60027 | Management of Change Standard                          |
| 13   | 0000-A0-STD-60029 | Vendor Management Standard                             |
| 14   | 0000-AQ-STD-60001 | Quality Management Standard                            |
| 15   | 0000-AH-STD-60051 | Emergency and Crisis Management Standard               |
| 16   | 0000-AH-STD-60050 | Event Reporting and Investigation Standard             |
| 17   | 0000-A0-STD-60031 | Assurance Standard                                     |

## 4. Abbreviations and Definitions

| Abbreviation/Term                           | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AIPS                                        | Asset Integrity Process Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ALARP<br>(As Low As Reasonably Practicable) | Risks are considered to be as low as reasonably practicable if the sacrifice (cost, time, resources) required to implement further risk reduction is grossly disproportionate to the benefits received.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Asset                                       | A single field development project, group of fields being jointly developed or operating facility.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Asset Integrity                             | The ability of an asset to perform its required function effectively and efficiently whilst safeguarding life and the environment.<br>(UK HSE KP 3 definition)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| AIPS Critical Documents                     | AIPS Critical documents include all documents generated (either by Company or Contractor) during the project lifecycle of a facility that are considered essential for establishing, maintaining and safeguarding the integrity of safety, environmental and production critical systems. These may include any document that: <ul style="list-style-type: none"> <li>• Defines the control measures or performance standards;</li> <li>• Defines processes or procedures which are in themselves control measures;</li> <li>• Defines safe operating limits; and</li> <li>• Supports the required safety cases.</li> </ul> |
| AIPS Management                             | The means of ensuring that the people, systems, processes and resources which deliver integrity are in use, fit for purpose and measurable over the whole lifecycle of the asset (and in compliance with the requirements of this standard).                                                                                                                                                                                                                                                                                                                                                                                |
| BMS                                         | Business Management System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Commissioning                               | The activities undertaken after pre-commissioning and prior to introduction of hydrocarbons to verify dynamically the functionality of equipment and to ensure that systems or facilities forming part of a system are in accordance with specified requirements to bring that system into operation.                                                                                                                                                                                                                                                                                                                       |
| The Company                                 | INPEX Operations Australia Pty Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Competency                                  | The consistent application of knowledge and skill to the standard of performance required in the workplace. It embodies the ability to transfer and apply skills and knowledge to new situations.                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Abbreviation/Term                  | Definition                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control Measure                    | Any system, procedure, process, device or other means of eliminating, preventing, reducing or mitigating risk of hazardous events at or near a facility.                                                                                                                                                                                                                               |
| Design Envelope                    | Defines the design limits and are the point at which the mechanical integrity of the system or equipment constraints could result in a loss of containment.                                                                                                                                                                                                                            |
| Design Integrity                   | How the asset appears on paper. It ensures that assets have been correctly specified to meet specific requirements and regulatory / Company codes and standards are met.                                                                                                                                                                                                               |
| Environment Critical Element (ECE) | Any part of a facility and its plant (including computer programs), the failure of which could cause or contribute substantially to a major environmental event, or the purpose of which is to prevent or limit the effect of a major environmental event.                                                                                                                             |
| Facility                           | A facility may be onshore or offshore and fixed or floating. The primary purpose of a facility is the recovery, processing, storage and offloading of hydrocarbons. The subsea trees, infrastructure and pipelines are also part of a facility. A licensed pipeline may be regarded as a separate facility. (In this standard facility also refers to Mobile Offshore Drilling Units). |
| FEED                               | Front End Engineering Design                                                                                                                                                                                                                                                                                                                                                           |
| Handover                           | The transfer of responsibility for a system or item of equipment from one party to another via a formal documented process.                                                                                                                                                                                                                                                            |
| Hazard                             | A physical situation with the potential to cause harm to people, damage to property, damage to the environment or damage to reputation.                                                                                                                                                                                                                                                |
| HAZID                              | Hazard Identification (Study)                                                                                                                                                                                                                                                                                                                                                          |
| HAZOP                              | Hazard and Operability (Study)                                                                                                                                                                                                                                                                                                                                                         |
| HSEQ-MS                            | Health, Safety, Environment and Quality Management System                                                                                                                                                                                                                                                                                                                              |
| ISSOW                              | Integrated Safe System of Work                                                                                                                                                                                                                                                                                                                                                         |
| IVAS                               | INPEX Value Assurance System<br>(NB. for the purpose of this Standard, reference to IVAS excludes the 'Identify/Explore' stage)                                                                                                                                                                                                                                                        |
| KPI                                | Key Performance Indicator                                                                                                                                                                                                                                                                                                                                                              |
| Leadership                         | TBC                                                                                                                                                                                                                                                                                                                                                                                    |

| Abbreviation/Term               | Definition                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lifecycle (Asset)               | The total period during which the facility, or an asset within a facility, exists. It covers the time from initial design and construction through to decommissioning and abandonment.<br>(NB. Currently IVAS does not address facility abandonment.)                                                                                           |
| Major Accident Event (MAE)      | An event connected with a facility, including a natural event, having the potential to cause multiple fatalities of persons at or near the facility.                                                                                                                                                                                            |
| Major Environmental Event (MEE) | An event connected with a facility, either continuous or discrete, including a natural event, having the potential to cause widespread chronic or acute effects upon the environment, resulting in permanent impacts or impacts requiring long term recovery.                                                                                   |
| Major Production Event (MPE)    | An event connected with a facility, including a natural event, having the potential to cause financial losses in excess of AU\$100M (NPV).                                                                                                                                                                                                      |
| Management of Change (MoC)      | A process for identifying, evaluating and controlling modifications to facility design, operation, organisation or activities, prior to implementation, to make certain no new hazards are unknowingly introduced, that the risk of hazards to employees, the public or the environment are reduced to ALARP and that business risk is managed. |
| New Technology                  | Technology is defined as "new" when it introduces new technical uncertainties.<br>(NB. The technical uncertainties can be related to the technology maturity or application history)                                                                                                                                                            |
| Operating Integrity             | The safeguarding of Technical Integrity. It is concerned with disciplined operation of the asset and prevention of any degradation in integrity or performance.                                                                                                                                                                                 |
| Operating Window                | Operating windows identify the area of safe and efficient operation and this shall by definition be an area within the operating envelope.                                                                                                                                                                                                      |
| Performance Standard            | A statement of the performance required of a system, item of equipment, person or procedure (i.e. a Control Measure) which is used as a basis for managing the risk of a major accident event.                                                                                                                                                  |
| Safe Operating Limits(SOL)      | A critical operating parameter outside of the normal operating limits defining a threshold of abnormal process condition beyond which <u>immediate</u> predetermined actions are taken in order to avoid a hazardous event and return the process to a safe state                                                                               |

| Abbreviation/Term              | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety Critical Elements (SCE) | Any part of a facility and its plant (including computer programs), the failure of which could cause or contribute substantially to a major accident event, or a purpose of which is to prevent or limit the effect of a major accident event.                                                                                                                                                                                                                          |
| "Specified" Individuals        | "Specified" refers to the levels of management and technical authority defined in the Company Manual of Technical Authorities Standard and the Technical Authority Specification.                                                                                                                                                                                                                                                                                       |
| Start-Up                       | The activities that bring a system into operation following commissioning. The initial start-up procedure may require some variation to the normal start-up operating procedures.                                                                                                                                                                                                                                                                                       |
| Technical Authority (TA)       | <p>Technical Authorities are the designated authority for a technical discipline. They have the responsibility and accountability to establish, approve, and maintain technical requirements, standards, specifications, technical processes, and procedures, including technical endorsement of any deviations or changes to the above.</p> <p>Technical Authorities own the decision on what is acceptable in technical matters involving their area/ discipline.</p> |
| Technical Deviation            | A departure from a Company document/technical requirement                                                                                                                                                                                                                                                                                                                                                                                                               |
| Technical Integrity            | The realisation of Design Integrity that ensures specifications have been accurately communicated, and detailed design, procurement, fabrication, construction, installation and commissioning of the asset have been carried out in accordance with the design intent.                                                                                                                                                                                                 |
| Technical Query                | A clarification request to a Company document/ technical requirement, but which does not result in any deviation to those requirements.                                                                                                                                                                                                                                                                                                                                 |
| TQD                            | Technical Query and Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Document Endorsement and Approvals

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### Document Identification

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### Delegation of Authority

| From Name | To Name | Date and Time | Action |
|-----------|---------|---------------|--------|
|           |         |               |        |

| Name | Title |
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### Electronic Endorsement and Approval

Electronic approval of this document complies with the issued INPEX Electronic Approval Standard (0000-A9-STD-60011) and records evidence that the applicable person has either endorsed and/or approved the content contained within this document. The reviewers of this document are recorded in the CDS.

| Name       | Title                     | Date and Time  | Action   |
|------------|---------------------------|----------------|----------|
| Joe Vetter | Vice President Operations | 05/02/26 11:49 | Endorser |
| Valarie Ee | Vice President HSEQ       | 05/02/26 11:59 | Approver |