

PROPERTY & PLANT TESTING & COMMISSIONING CLAUSE

1. It is hereby noted and agreed that this (Re)insurance does not cover destruction of or damage to property in course of construction or erection, dismantling, revamp or undergoing testing or commissioning including mechanical performance testing and any business interruption resulting therefrom.
2. Acceptance of property hereon is subject to satisfactory completion of the following:
 - 2.1. Mechanical Completion.
 - 2.2. Testing and Commissioning.
 - 2.3. Performance Testing conforming to 100% Contract Design Criteria having been maintained by the entire plant in a stable and controlled manner for a continuous period of a minimum of 72 hours duration.
 - 2.4. Official acceptance by the Insured following formal hand over without reservation or waiver of guarantee conditions.
 - 2.5. Any deficiencies identified during the testing, commissioning and start-up that may affect the mechanical integrity, process safety or reliability of the plant, having been declared to (Re)Insurers prior to attachment.
3. NOTWITHSTANDING the above, attachment of property and plant hereon to be agreed by (Re)Insurers. It is further noted and agreed that terms and conditions to be reviewed, if required by (Re)Insurers.
4. It is further noted and agreed that the above provisions do not apply to normal routine maintenance activities, scheduled turnarounds and / or minor works (as defined in the policy).

Additionally, (Re)Insurers request completion of the attached information request template "INFORMATION TO SUPPORT THE TRANSFER OF ONSHORE OIL, GAS & PETROCHEMICAL ASSETS FROM CONSTRUCTION TO OPERATIONAL INSURANCE".

LMA5197A
27 January 2014

INFORMATION TO SUPPORT THE TRANSFER OF ONSHORE OIL, GAS & PETROCHEMICAL ASSETS FROM CONSTRUCTION TO OPERATIONAL INSURANCE

Purpose

The purpose of the following information request template is to facilitate the transfer of a newly constructed Onshore Oil, Gas & Petrochemical asset from a construction policy to an operational policy.

The information provided is intended to:

- Support paragraphs 2.1 to 2.5 of the Testing & Commissioning Clause.
- Help define items of critical importance to (Re)Insurers for the initial safe operation of an asset following start-up.
- Help (Re)Insurers understand the risks to be transferred thus allowing an informed judgement to be made.
- Be of mutual benefit to the Insured, Broker and (Re)Insurers by clarifying expectations for the transfer to operational cover.

Any issues identified within this information request template are not necessarily a barrier to transfer but more likely can form the basis for discussion between the Insured and (Re)Insurers.

This information request template is not intended to replace any other information which may be provided within the Insured's/Broker's submission.

Process

It is intended that this information request template will be completed by persons knowledgeable in the specific topic areas. By definition, therefore, completion of the template may require coordination between a number of different departments.

It is expected that the template will be completed for each and every applicable endorsement to a policy.

The completed template should be submitted to (Re)Insurers shortly before the anticipated operational policy inception date. The intent is that the information contained herein reflects the status of the asset as close to inception as possible whilst allowing a reasonable time for the information to be reviewed by (Re)Insurers.

Operational Insured's Name

Project Name

Proposed Date of Inception of
Operational Cover

Endorsement Reference Number

Date Information Completed

Please provide attachments where necessary to support the following information requests.

0 Overview

0.1 Provide details of the full scope of assets to be transferred to the operational policy under this endorsement.

0.2 Provide details of the start-up plan including a schedule with the order and approximate dates in which units will be/were started up.
Include details of any units which will be started up and subsequently idled.

0.3 Provide details of any restrictions on the ability to demonstrate 100% Contract Design Criteria (e.g. feedstock availability).

1 Mechanical Completion *

** A contractual milestone and can be the point of transfer of care, custody and control from the (EPC) Contractor to the Owner. Normally prior to this only 'cold testing' has been completed (i.e. non energised/pressurised systems but would include flushing and cleaning, hydrostatic and pneumatic testing and 'bumping' of electric motors). Some of these activities are typically called pre-commissioning.*

1.1 Was a certificate of Mechanical Completion issued to the Owner?

YES NO

1.2 Provide details of any significant quality related issues with materials or equipment (e.g. major fabrication defects, material non-conformity) which could affect the mechanical integrity of the plant and provide a summary of what has been done to rectify these faults.

2 Testing & Commissioning *

* This is normally regarded as 'hot testing' and comprises:

- Commissioning - including all dynamic and energised checking and test work such as starting up of machinery and function testing.
 - Start-Up - milestone at which hydrocarbon feedstock is introduced with subsequent ramp-up to operating conditions, optimisation and troubleshooting.
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2.1 Have there been any insurance claims to the Construction policy?

If yes, provide details below.

YES NO

2.2 Have there been any significant incidents, not necessarily resulting in an insurance claim, during the project?

Examples would include a significant Loss of Primary Containment (LOPC), fire, explosion, machinery breakdown, dropped load or equipment damage.

If yes, provide details below.

YES NO

2.3 Are there any significant remaining construction works taking place on the plant that could present a risk to the plant when handed over to Operations i.e. simultaneous construction and operation (SIMOPS)?

If yes, provide details below.

YES NO

2.4 Provides details of the current status of Safety Critical Equipment as per the definitions below and the following table.

(i) **Tested** - all such systems have been tested against a predefined performance standard. This should include the full loop from detection device (e.g. sensor) to final element (e.g. isolation valve). In the case of fire protection systems, this should include a full 'wet test'. In the case of mechanical relief devices, this is taken to mean the items have been bench tested and certified as per the original design specification.

(ii) **Available** - all such systems are available to the process should a demand be placed upon them i.e. no impairment/override/bypass of individual systems.

(iii) **Deviations/Impairments** - record any individual systems which do not meet the Tested and/or Available criteria as outlined above. Details of any long term impairments should be provided here.

Safety Critical Equipment	100% Tested ⁽ⁱ⁾	100% Available ⁽ⁱⁱ⁾	Deviations/Impairments ⁽ⁱⁱⁱ⁾
Safety Instrumented Functions for example: <ul style="list-style-type: none"> • Emergency Shut Down (ESD), Isolation & Depressurisation systems • Reactor kill & dump systems • Safety trips & interlocks • Safety critical alarms • Safety critical analysers • Machinery protection systems (overspeed, vibration etc.) • Fired heater protection systems (fuel supply low pressure etc.) • Any safety instrumentation as part of a vendor supplied package 	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Mechanical Relief Devices for example: <ul style="list-style-type: none"> • Over Pressure Protection Devices • Vacuum Relief Devices • Thermal Relief Devices 	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Mechanical Interlocks	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Emergency Power Supply for example: <ul style="list-style-type: none"> • Uninterruptible Power Supply (UPS) • Emergency Diesel Generator(s) 	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Remotely Operable Emergency Isolation Valves (ROIVs)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Fire & Gas Detection systems for example: <ul style="list-style-type: none"> • Smoke detection in business critical buildings • Flammable gas detection in open plant & enclosures • Flame & heat detection in open plant & enclosures 	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Fire Protection systems for example: <ul style="list-style-type: none"> • Firewater storage, pumps & distribution • Hydrants, monitors & deluge systems • Foam & powder systems • Gaseous extinguishing systems 	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	

3 Performance Testing * conforming to 100% Contract Design Criteria ** having been maintained by the entire plant in a stable and controlled manner for a continuous period of a minimum of 72 hours duration.

** Performance Testing is demonstration of plant operation at 100% Contract Design Criteria for a minimum time period.*

*** Contract Design Criteria are the plant design specifications as stipulated in the project design basis.*

3.1 Provide daily production data from the start of operations to date for the plant and identify the 100% / 72hrs Performance Test within the data.

3.2 If it is not possible to achieve the 100% / 72hrs Performance Test, provide details as to the reasons why not and provide daily production data to indicate the maximum throughput achieved to date.

3.3 Are there any major equipment items which have not yet been subject to Performance Test but are to be attached under this endorsement?

This is not intended to cover installed spare equipment (e.g. pump A & B) but rather major equipment items which have not yet been utilised, for example, due to product grade runs.

If yes, provide details below.

YES NO

4 Official acceptance by the Insured following formal hand over without reservation or waiver of guarantee conditions.

4.1 Has the project been officially accepted by the Owner following formal handover without reservation or waiver of guarantee conditions?

If no, provide details below.

YES NO

5 Any deficiencies identified during testing, commissioning and start-up that may affect the Mechanical Integrity^{5.1}, Process Safety^{5.2} or Reliability^{5.3} of the plant.

5.1 Mechanical Integrity

5.1.1 Are there any equipment faults, warranty issues, fabrication defects, temporary modifications or punch list items remaining which could potentially affect the Mechanical Integrity of the plant?

If yes, provide details below.

YES NO

5.1.2 Provide a copy of the latest status of any punch list items which could potentially affect the Mechanical Integrity of the plant.

5.2 Process Safety

5.2.1 Was a formal Pre Start-up Safety Review (PSSR) completed for the project?

YES NO

Were the following items considered during the PSSR (or equivalent procedure) and their status deemed adequate by the Owner:

Status of all Process Hazard Analysis (PHA) (e.g. HAZOP) actions? YES NO

Availability of Start-Up, Shutdown & Emergency Operating Procedures? YES NO

Delivery of training to Operators and Maintenance technicians? YES NO

Availability of as-built P&IDs to Operational staff? YES NO

If no to any of the above, provide details below.

5.2.2 Is there a formal and documented Management of Change (MoC) procedure in place for the operational phase covering all permanent, temporary and emergency changes?

YES NO

5.2.3 Is there an operational procedure in place to manage and authorise the temporary override/bypass of Safety Instrumented Functions?

YES NO

5.2.4 Is there an operational procedure in place to manage and authorise the temporary impairment of fire protection systems and any other Safety Critical Equipment?

YES NO

5.2.5 Is the Operations organisation fully staffed versus the agreed headcount? Is additional management and technical resource available during start-up? Are overtime hours being monitored and controlled?

If no to any of the above, provide details below.

YES NO

5.2.6 Is the Emergency Response Team (ERT) fully staffed, equipped and trained? Is the ERT aware of current plant status and any special procedures necessary? Is free and uninhibited access to the plant possible?

If no to any of the above, provide details below.

YES NO

5.3 Reliability

5.3.1 Are there any current known recurring process or equipment (Mechanical, Electrical and Instrumentation) issues affecting the reliability of plant operation?

If yes, provide details below.

YES NO

5.3.2 Are major spares available for large unspared long delivery equipment items which could, if they failed, result in a significant Business Interruption impact (several months plant shutdown). Examples of these 'Insurance' spares are compressor or turbine shafts, large electric motors or large transformers.

If no, provide details below.

YES NO
