

**BP Gulf of Mexico
Deepwater Development**

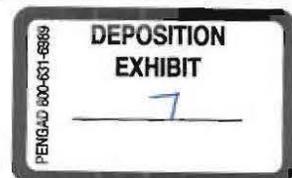
**Atlantis Subsea Project
System Handover Procedure**

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REVISION HISTORY

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1. GENERAL

- 1.1 This document describes the procedure for the handover of Atlantis Subsea works from one custodian to the next from Fabrication through Commissioning to final Handover to Operations, and will be implemented at the Subsea Fabrication and Commissioning Sites and during offshore startup activities. It meets the intent and is consistent with BP's Guidance on Certification (GoC) program (Ref. BP Intranet – <http://goc.bpweb.bp.com>), and provides a disciplined system for documenting mechanical completion, pre-commissioning and commissioning, as well as the related certifications of operational acceptance and Technical Integrity.
- 1.2 The Handover process will be administered, as much as possible, using electronic communication, documents and electronic routing of documents. Any process that cannot be performed electronically will be completed using hard-copy documents and communication.
 - 1.2.1 The Logs described below, as well as all applicable forms and certificate blanks will be accessible from a network SharePoint web site, located at https://wss2.bp.com/EP7/Atlantis_SSH. The SharePoint site also contains provisions for communication between Handover process participants, and for scheduling of important events. Guidance on the navigation of the SharePoint Site shall be provided on an as-needed / as-approved basis.
 - 1.2.2 In-process MOC's, Site Queries, and Handover documents will be routed via e-mail, and stored on the BP Atlantis network on 'bp1hous011\group\gom_dw\atlantis\ss-handover'. Completed documents will be available on the SharePoint site.

2. PRINCIPAL DOCUMENTS

- 2.1 Handover Log tracking tool, Exhibit 1 – a readily visible high-level summary for tracking the Handover process and the status of testing, installation and commissioning of the Subsea systems.
 - 2.1.1 Lists the operating systems ("SH-1"s), their related sub-systems ("MC-1"s) and major components that make up the Subsea project.
 - 2.1.2 Organized by Campaign, showing department / company accountability through succeeding changes of custody and functional interfaces.
 - 2.1.3 Tracks the accountable representative's acceptance of custody, including appropriate documentation and certifications, at the following milestones:
 - 2.1.1 Completion of FAT (Factory Acceptance Tests) and final fabrication walk down;
 - 2.1.2 Completion of SIT (Site Integration Testing) and / or other On-Shore testing where applicable;
 - 2.1.3 Completion of Pre-installation and / or "Deck Testing" where applicable;

- 2.1.4 Transfer of custody to Installation Contractor as applicable;
- 2.1.5 Acceptance of Deployment, including any Subsea IAT (Installation Acceptance Testing), resolution of all Priority 1 IWL items (explained below), and with MC-1 signed off where applicable;
- 2.1.6 Completion of Commissioning, to include resolution of all Priority 2 Incomplete Work List (IWL) items;
- 2.1.7 Readiness for Final TCCC (Turnover of Care, Custody & Control) to Operations, with SH 1 signed off, verifying that the system is safe and Ready for Startup.
- 2.1.4 The Handover Coordinator shall be accountable for keeping and maintaining the Handover Log
- 2.1.5 The Log will be web-based or on a public drive
- 2.1.6 Accountable BP representatives, project leads and management will have write permissions to electronically sign acceptance blocks.
- 2.2 Incomplete Work List (IWL), Exhibit 2 - The IWL is a formal composite punchlist for each component sub-system (MC-1) or operating system (SH-1). It merges in one list all open issues and punchlist items remaining after installation, and is updated during successive testing, commissioning and final acceptance of that system. The IWL will be included in the handover documentation.
 - 2.2.1 Immediately following the final installation of the component system, and before the system is energized or handed over for Commissioning, a meeting will be held to initiate the IWL and determine disposition of listed items, if any:
 - 2.2.1.1 Priority 1 - All items that must be completed prior to commissioning or energizing of the system, including documentation and other QA instruments certifying mechanical completion and Technical Integrity. All Priority 1 items must be closed out and signed off by BP QA before the "MC-1 Signed / Priority 1 IWL Complete" column of the Handover Log is signed off.
 - 2.2.1.2 Priority 2 - All IWL items that must be done during Commissioning, plus certificates and commissioning documentation as necessary to authenticate successful completion of commissioning. These must be completed and approved prior to Handover to Operations.
 - 2.2.1.3 Priority 3 - Items to be completed after system handover to Operations
 - 2.2.2 The IWL will include the following:
 - 2.2.2.1 Open punch list items transferred from vendors,
 - 2.2.2.2 Open items transferred from the Fabrication Contractor's punch list
 - 2.2.2.3 Open Site Queries, NCRs (Non-Conformance Reports), HAZIDs, MOCs (Management of Change), any other quality or PSM (Process Safety Management) discrepancies, or any other pending changes to scope
 - 2.2.2.4 Deficiencies noted during the final Installation inspection and testing,

- 2.2.2.5 Deficiencies noted during Commissioning,
 - 2.2.2.6 Completion Certificates will always be listed,
 - 2.2.2.7 QA/QC documentation will always be listed, and
 - 2.2.2.8 Red lines will always be listed.
- 2.2.3 Once listed on the IWL, no item will be removed from the list. Signed off items may be sorted to the bottom of the list for easier visibility of Open items.

2.3. Integrity Certification Documentation

- 2.3.1. Forms certifying that all work has been completed in conformance with the appropriate agency, industry and project specifications and standards, which shall be executed by the responsible group as work is completed. (These can be either GoC forms or equivalents already in use.)
- 2.3.2. Upon completion of the work, BP Representative or QA shall verify that said forms have been properly completed, and then convey them to the Handover Coordinator for inclusion in the System Handover Packages.
- 2.3.3. Generally, an MC-1 certificate is completed following installation of a sub-system or a combination of subcomponents, including any associated Installation Acceptance Tests (IATs). The MC-1 certifies readiness for Commissioning.
- 2.3.4. An SH-1 certificate is completed following Commissioning of a discrete operational system (or a safely isolated partial system), and certifies that it is safe and Ready for Start-up.
- 2.3.5. The Turnover of Care, Custody and Control (TCCC) letter formally transfers custody of the complete operating system to Operations, and also includes a subsequent signoff to be completed when all remaining post-Start-up IWL items have been cleared.

3. **HANDOVER PACKAGE ASSEMBLY**

- 3.1. Assembly of the documentation and certificates for the Handover Package normally commences following Factory Acceptance Testing (FAT), and continues through completion of Commissioning.
- 3.2. Fabrication Handover Package - Once the FAT and final walk down have been completed at the fabrication site, the responsible BP Site Manager or Team Lead shall convey the following items to the Handover Coordinator and the appropriate Subsea Installation Lead:
 - 3.2.1. A drawing index for the works being released,
 - 3.2.2. An index of red line drawings (if any),
 - 3.2.3. A copy of the red line drawings (if any),
 - 3.2.4. The final Fabrication punchlist, showing all open items, and especially highlighting any open Priority 1 or 2 IWL items,
 - 3.2.5. Completed certification forms (GoC or equivalent),
 - 3.2.6. A copy of, or file path to, all QA Documentation and Summaries
 - 3.2.7. Other instruments as may be indicated by BP

- 3.3. Transport, Installation and Pre-Commissioning - As the system progresses from Fabrication on through Installation, appropriate additional (normally summary) certifications shall be transmitted to the Handover Coordinator and the Subsea Installation Lead. The Installation Lead shall also insure that they are added to the Handover Package to be transmitted to the appropriate Commissioning Lead:
 - 3.3.1. Preservation checklists, if any
 - 3.3.2. Pre- or post-transportation testing, if any
 - 3.3.3. Pre- or post-installation testing, if any
 - 3.3.4. Updates and additions to any of the Fabrication Handover Package contents above
 - 3.3.5. Incomplete Work List (IWL), noting as well that all Priority 1 items (if any) have been resolved and accepted by BP QA
 - 3.3.6. Certificate of Mechanical Completion, MC-1
- 3.4. Commissioning – as Commissioning is completed, the Subsea Commissioning Lead shall convey appropriate handover documentation to the Handover coordinator for inclusion in the final System Handover Package, including:
 - 3.4.1. Updated drawing index for the operational system being released,
 - 3.4.2. Updated index of red line drawings
 - 3.4.3. Copy of the final hook-up red-lines
 - 3.4.4. Final Commissioning Incomplete Work List (IWL) showing that all Priority 1 and 2 items have been resolved and accepted
 - 3.4.5. Any additional completed certification forms (GoC or equivalent),
 - 3.4.6. Any additional QA / QC checklists and documentation, or file path thereto
 - 3.4.7. Forms MC-1(may be multiple)
 - 3.4.8. Other instruments as may be indicated by BP
 - 3.4.9. System Handover Certificate, SH1
- 3.5. Transfer of Care, Custody and Control (TCCC) - A TCCC with the assembled System Handover Package shall be submitted by the Subsea Group to BP Atlantis Operations for approval and acceptance. Said Package shall at a minimum include the accumulated certificates and documents above, plus:
 - 3.5.1. TCCC Form per Exhibit 2
 - 3.5.2. Copy of the Handover Over Log relevant to the subject system
 - 3.5.3. Detailed Indices of box contents or electronic files to be transmitted directly to BP Atlantis Operations
 - 3.5.4. Site Query and NCR Logs relevant to the subject system
 - 3.5.5. Other instruments as may be indicated by BP.
4. **FINAL DISPOSITION OF REMAINING PROJECT DOCUMENTS** Project documents not included in the Handover Packages shall be disposed of as follows:

- 4.1. Hardcopy documentation shall be organized and filed in boxes as provided by BP. Electronic files shall be indexed and transmitted on CDs. The following documentation shall be included in one or both forms:
 - 4.1.1. All Engineering Work, including vendor data,
 - 4.1.2. All Fabrication Site records and data (including Indices for documentation transmitted directly from the Fabrication Site to BP),
 - 4.1.3. All QC test and inspection records,
 - 4.1.4. All FAT, SIT and IAT records.
 - 4.1.5. Commissioning records,
 - 4.1.6. Contractors shall be accountable for all subcontractor and vendor QC documentation as per contract requirements, and
 - 4.1.7. Other appropriate documentation as indicated by BP.
 - 4.1.8. The destination for this documentation is (TBD).

- 4.2. Original red lines shall be sent to Engineering to be incorporated in the final as-built drawings.

Exhibit 1

Handover Log Shown is for Example only—Will be updated as needed to be consistent with Project Phase.

Atlantis Subsea Project Handover Log - Phase I										CAMPAIGN 1 FIRST OIL							IWL Priorities: 1 = Required for Commissioning, 2 = Required for Startup					
System / Sub-System / Equipment Component		FAT Completed			On-Shore SIT Complete			Pre-Installation Tests Complete			Installation Contractor Acceptance of Custody			MC-1 Signed / Deployment & IAT Accepted / Pri. 1 IWLs Done			Commissioning Complete / Pri. 2 IWLs Done / All Certs Complete / MoC / PSSR Complete			SH-1 Signed / TCCC Complete / Ready for Startup		
Responsibility / GOC Mgmt Cent / DESCRIPTION	DESIGNATION / System #	Actual Date	Certs (GoC or equiv.) Complete	BP Fab/Site Lead	Actual Date	Certs (GoC or equiv.) Complete	BP MC 1 Lead	Actual Date	Certs (GoC or equiv.) Complete	BP MC 1 Lead	Actual Date	Inst'n Contr/Rep	BP MC 1 Lead	Actual Date	Certs (GoC or equiv.) Complete	BP SH 1 Lead	Actual Date	Certs (GoC or equiv.) Complete	BP SH 1 Lead	Actual Date	BP SH 1 Lead	
Whitehead SH 1 # AT1-001	CONTROLS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		SH1; SC1, SP1				
Kirkham MC 1 # AT1-00101	Umbilicals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		MC1		N/A	N/A	N/A	N/A	N/A	
Umbilical (Hydraulic)	H2		IRN (IRC); MW 1, SF 1; SL 1;			IRC			IRC; SC 1					N/A	SC 1, SP 1	N/A	N/A	N/A	N/A	N/A	N/A	
Umbilical (Hydraulic)	H6		IRN (IRC); MW 1, SF 1; SL 1			IRC			IRC; SC 1					N/A	SC 1, SP 1	N/A	N/A	N/A	N/A	N/A	N/A	
Umbilical (Electrical)	E4		IRN (IRC); EE 1, EE 16			IRC			IRC; EE 1, EE 16					N/A	EE 1; EE 16; SP 1	N/A	N/A	N/A	N/A	N/A	N/A	
Berger / PQ Comm. SH 1 # AT1-002	CHCMICAL SKIDS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
MEOH Skid MC 1 # AT1-00201		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		MC1; SC1, SP1, J1			SH1; SC1, SP1		N/A	N/A	
Cl Skid MC 1 # AT1-00202		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		MC1; SC1, SP1, J1			SH1; SC1, SP1		N/A	N/A	
Hughes SH1 #AT101-111	WELL DC-111-F4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		MC-1 Per Well Handover Procedure			SH1; SC1, SP1			SH-1 Per Well Handover Procedure	
Well Tree	(tb0)		IRC; ???			IRC; ???			IRC; ???						???		N/A	N/A	N/A	N/A	N/A	
Jumper (Tree-Manifold)	11P		IRN (IRC); MW 1, SF 1; SL 1, AS 2			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		SL1			N/A	N/A	N/A	N/A	N/A
Jumper (Tree-Manifold)	11T		IRN (IRC); MW 1, SF 1; SL 1; AS 2			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		SL1			N/A	N/A	N/A	N/A	N/A
Flying Lead (Hydraulic)	H-5-11		IRN (IRC); MW 1, SF 1, SL 1			N/A			N/A						SC1			N/A	N/A	N/A	N/A	N/A
Flying Lead (Electrical)	E4-11-1		IRN (IRC); EE 1, EE 16			IRC			IRC; EE 1, EE 16						SC1			N/A	N/A	N/A	N/A	N/A
Flying Lead (Electrical)	E4-11-2		IRN (IRC); EE 1, EE 16			IRC			IRC; EE 1, EE 16						EE1; EE16			N/A	N/A	N/A	N/A	N/A

Exhibit 3

ATLANTIS TRANSFER OF CARE, CUSTODY AND CONTROL

TCCC #: _____
Date: _____

TCCC Package Description / SH1 List

The Atlantis SubSea group hereby transfers care, custody and control of the subject work to Atlantis Operations. The subject work is ready for start-up and operational. Any items remaining on the Incomplete Work List shall be completed by the SubSea Team prior to final project completion.

SubSea Delivery Manager Date: _____

SubSea Commissioning Manager Date: _____

OIM Date: _____

Operations Manager Date: _____

NOTICE OF COMPLETION

All outstanding work items for the subject project have been completed. The Atlantis SubSea group hereby completes the transfer of this work to Atlantis Operations.

SubSea Delivery Manager Date: _____

SubSea Commissioning Manager Date: _____

OIM Date: _____

Operations Manager Date: _____