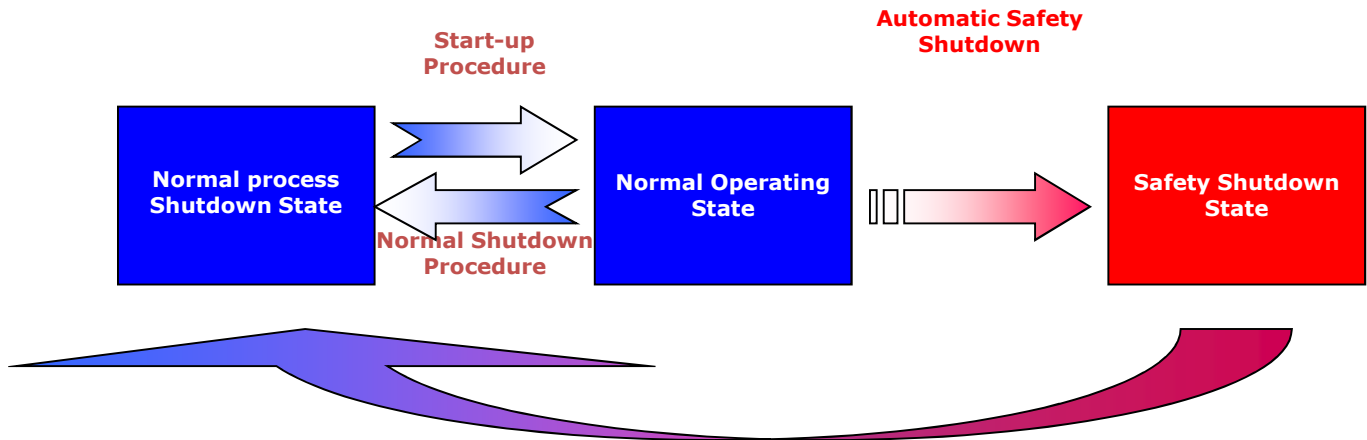


OPERGUID Methodology

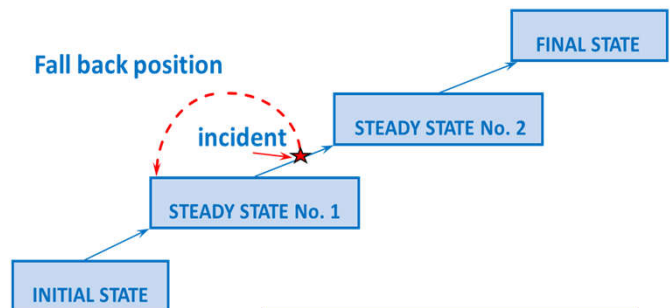
OPERGUID is a methodology developed by TOTAL for writing and implementing operating procedures. Its main objective is to increase the safety level of personnel and installations, by rationalizing operating procedures. It is based on the systematic description of progressive transitions, in secured sequential actions, from one steady state to another.

OPERGUID approach



The methodology has been developed to improve the management of complex operations. The main principle of OPERGUID is the Steady State.

The Steady State is a stable condition which in the course of any procedure (start-up, shutdown), define the necessary operating parameters to ensure the safety of the installation and its personnel.



OPERGUID
Methodology refreshing
course delivery

The methodology covers training to the methodology, procedures writing-up committee implementation, and validation process.

In addition to conventional format (electronic and hard copies), the procedures may be packaged into an interactive format.

Operating Manual - Book 4 - Pipelines		COMPANY Document Number 000-ML-S-30-1025-00000	
Document Type: MAN	System / Subsystem: -	Discipline: PUM	Rev Date: 27-Nov-15
CONTRACTOR Document Number: 00		Page: 1 of 6	

 TOTAL ESP BORNEO S.V.	 ML SOUTH	
	VENDOR DOC NO: - VENDOR REV NO: -	EQUIPMENT/MATERIAL: - P.O. No: 70001-05-0100-10 CHIRONGI 010 ARML II

Operating Manual - Book 4 - Pipelines Initial Start-Up of the Facilities						
Rev.	Status	Date	Revision Description	Requested by	Reviewed by	Approved by
02	APC	27-Nov-15	Approved for Construction	Mechanical	Facilities Accept	Yee Yung Chong
01	IFA	11-Aug-15	Issued for Approval	Facilities Accept	Standby Accept	Yee Yung Chong
00	IFR	07-May-15	Issued for Review	Standby Accept	Yee Yung Chong	Christian Oswald

Aramis is licensed by Total for OPERGUID implementation, workshop facilitation and training

Additional information is added to the procedure, whenever necessary (pictures, sketches, lists,...)

Sequential and hierarchical numbering of operations, sub-operations and actions

Symbols are used according to the type of action.

All procedures starts with an initial state and ends with a final state.

BN-MLS-30-TE82-004005 (1.1)		VALVES POSITION		DOCUMENT LEVEL: 4
MLJ1 GAS LAUNCHER				
See P&ID BN-01-C-02-C02-AA-0040				
Valve Number	Description	Position	Actor(s)	
SDV-0600	Production header shut-down valve	Closed	O+P	
Valve C6-18	Isolation Valve Downstream of SDV-0600	Open	O	
ESDV-0600	Export line to OPP emergency shut-down valve	Closed	O+P	
Valve C6-20	MLJ2 incoming line isolation valve	Closed	O	
ESDV-0601	Incoming line from MLJ2 emergency shut-down valve	Closed	O	

BN-MLS-30-TE82-004005 (1.1)		OPPERGUID™ PROCEDURE		DATE: 27/11/15
		MLJ1-OPP PIPELINE		REVISION: 02
		INITIAL START-UP		PAGE: 6
		Actions Page		DOCUMENT LEVEL: 2
NO	OPERATIONS / ACTIONS	ACTORS		
100	PIPELINE START-UP PREPARATIONS			
110	PRELIMINARY CHECKS			
	<input type="checkbox"/> Ensure all documents as stated as reference are available at the work place.	O		
	<input type="checkbox"/> Ensure permission to start-up the system has been given.	S		
	<input type="checkbox"/> Ensure that MLJ1 is ready to export production fluid to OPP.	O		
	<input type="checkbox"/> Ensure that OPP is ready to receive production fluid from MLJ1.	O		
	<input type="checkbox"/> Ensure methanol injection system has been started and is injecting methanol to MLJ1 production header.	O		
	<input type="checkbox"/> Ensure one of the wells (MLJ-106, MLJ-103 or MLJ-101) has been started and flowing to production header or Test Separator during black start.	O		
120	VALVE LINE-UP			
	<input type="checkbox"/> Refer to attached Valves Position Tables.	O/P		
200	PIPELINE START-UP			
	<input type="checkbox"/> Put PSL-0800A on Maintenance By-pass (if necessary).	P		
	<input type="checkbox"/> Reset SDV-0600 locally.	O		
	<input type="checkbox"/> Open SDV-0600 from CCR.	P		
	<input type="checkbox"/> Monitor increasing pressure on PG-0602.	O		
	Note: Pressurisation of 18" MLJ1-OPP pipeline may take few days.			
	<input type="checkbox"/> Reset ESDV-0600 locally.	O		
	<input type="checkbox"/> Open ESDV-0600 from CCR.	P		
	<input type="checkbox"/> As soon as PSL-302 has reset at 40 barg, remove by-pass and record it.	P		
	<input type="checkbox"/> Monitor pressure on PG-0602 until it reaches 50 barg.			
	<input type="checkbox"/> Start the gas treatment system as per Section 1.2 in BN-MLS-30-TE82-004001.			

FINAL STATE	
18" Pipeline is transferring production from MLJ1 to OPP.	