

SRTP SAFETY ASSESSMENT PLAN

Category	Scope	No.	Safety Study	FEED	Detail Design SUBSEA	Detail Design FPSO Refit/Exp.	Detail Design FPSO Minor Mods	SR Project Doc No.	White Rose Project Reference Document No.
1 Concept Eval.	FPSO		Concept Safety Analysis for SRT Project	X				SR-HSE-RP-0003	
2 Ext. Study	FPSO		Quantitative Risk Assessment			X			WR-HSE-RP-0003
2 Ext. Study	FPSO		Temporary Refuge Integrity Analysis			X			WR-HSE-RP-0004
2 Ext. Study	FPSO		ALARP Study			X			WR-HSE-RP-0006
2 Ext. Study	FPSO		Escape, Evacuation & Rescue Analysis			X			WR-HSE-RP-0007
2 Ext. Study	FPSO		Safety Critical Element Review			X			WR-M-00-G-CL-00002-001
2 Ext. Study	FPSO		FPSO Material Handling Study			M			
2 Ext. Study	FPSO		FPSO Dropped Object and Swinging Load Study			X			
2 Ext. Study	FPSO		Fire Risk Analysis			X			WR-HSE-RP-0009
2 Ext. Study	FPSO		Accommodation Smoke/Gas Ingress Study			X			WR-HSE-RP-0011
2 Ext. Study	FPSO		Turbine Exhaust Plume Analysis	X				SR-HSE-RA-xxxx	WR-HSE-RP-0012, 0017
2 Ext. Study	FPSO		Natural Ventilation Study			X			WR-HSE-RP-0013
2 Ext. Study	FPSO		Contaminated Inert Gas Vent Dispersion	X				SR-HSE-RA-xxxx	WR-HSE-RP-0014
2 Ext. Study	FPSO		Gas Dispersion Analysis			X			WR-HSE-RP-0018
2 Ext. Study	SUBSEA		Iceberg Scour Risk for Subsea Facilities	U				SR-HSE-RA-xxxx	WR-HSE-RP-0022
2 Ext. Study	SUBSEA		Fishing Tackle Study on Subsea Installations		U				CA230100/402/DES/4/008
2 Ext. Study	SUBSEA		Trenching Cost Benefit Analysis		U				WR-HSE-RP-0042
2 Ext. Study	SUBSEA		Subsea Controls Reliability Review		X				
2 Ext. Study	TOPSIDES		Safety Integrity Level (SIL) Review of Process Changes	X		X		SR-HSE-RA-0005	WR-P-99-J-RP-00001-001
2 Ext. Study	TOPSIDES		Flare Radiation Study			B			WR-P-99-X-RP-00037-001
2 Ext. Study	TOPSIDES		Noise Assessment and Mitigation Study			M			WR-P-80-X-SY-00012-001
2 Ext. Study	TOPSIDES		Explosion and Blast Overpressure Analysis			X			WR-P-80-X-RP-00029-001
2 Ext. Study	TOPSIDES		Gas Accumulation and Dispersion Analysis			X			WR-P-99-X-RP-00036-001
2 Ext. Study	TURRET		Safety Integrity Level (SIL) Review			X			WR-T-91-J-RP-05001-001
3 HAZID	FPSO		Turret Reconnection HAZID			X			
3 HAZID	FPSO		Interface HAZID			X			WR-M-00-X-RP-00001-001
3 HAZID	SUBSEA		Subsea HAZID	X				SX-HSE-RA-0002	WR-M-00-X-RP-00001-001
3 HAZID	TOPSIDES		Topsides FEED HAZID	X				SR-P-99-X-RP-00001-001	WR-P-80-X-RP-00002-001
3 HAZID	TURRET		Turret FEED HAZID	X				SR-HSE-RA-0003	WR-T-91-X-RP-80013-001
4 HAZID	TURRET		Turret Construction Occupancy HAZID	X				SR-HSE-RA-0004	
4 HAZOP	FPSO		Interface AFD HAZOP			X			WR-M-00-X-RP-00006-001
4 HAZOP	FPSO		Interface AFC HAZOP			X			WR-M-00-X-RP-00009-001
4 HAZOP	SUBSEA		Subsea AFC HAZOP		X				WR-HSE-RP-0069
4 HAZOP	SUBSEA		Subsea AFD HAZOP	X				SR-HSE-RA-0001	WR-HSE-RP-0037
4 HAZOP	TOPSIDES		Topsides AFD HAZOP	X				SR-HSE-RA-xxxx	WR-P-99-X-RP-00003-001
4 HAZOP	TOPSIDES		Topsides AFC HAZOP			X			WR-P-99-X-RP-00004-001
4 HAZOP	TURRET		Turret AFD HAZOP	X				SR-HSE-RA-xxxx	WR-T-91-X-RP-80007-001
4 HAZOP	TURRET		Turret AFC HAZOP			X			WR-T-91-X-RP-80007-001
5 Engineering	TOPSIDES		Active Fire Protection Design Study			X			WR-P-80-X-RP-00016-001
5 Engineering	TOPSIDES		Passive Fire Protection Design Study			X			WR-P-80-X-RP-00016-001
5 Engineering	TOPSIDES		Fire and Gas Detection Design Study			J			Various
5 Engineering	TOPSIDES		Deluge System Hydraulic Analysis and Design			X			Various
5 Engineering	TOPSIDES		Relief, Venting and Blowdown Study (Flare System)			B			WR-P-48-B-RP-00001-001
5 Engineering	TOPSIDES		SAFE Charts as per API 14C			B			WR-P-30-B-SC-00002-001
5 Engineering	TOPSIDES		Process Safety Flow Systems (Sectionalization)			B			Various
5 Engineering	TOPSIDES		Process Equip. Isolation Philosophy			B			WR-P-80-X-PY-00005-001
5 Engineering	TOPSIDES		Shutdown Philosophy			B			WR-P-80-X-PY-00006-001
5 Engineering	TURRET		Active Fire Protection Design Study			X			WR-T-91-F-RP-02002-001
5 Engineering	TURRET		Fire and Gas Detection Design Study			J			
5 Engineering	TURRET		Lighting Study			E			

The risk assessments to be carried out for the Operations Minor Modifications during Detail Design will be identified after final selection of the modifications to be developed.

AFD = "Approved for Design"
AFC = "Approved for Construction"

Disciplines: B = Process
E = Electrical
J = Instruments
M = Mechanical
U = Subsea
X = Safety & Loss Control