Package Number	TBA
Package Name	Chemical Distribution Skid
Scope of Work (* To be confirmed)	The SUPPLIER shall provide 1-off Chemical Distribution Skid divided into 2 cabinets, one for the MEG injection and one for other chemicals. Each cabinet will be divided further into panels for each service.

MEG cabinet	Lean MEG High Dose
	Lean MEG Low Dose
	Lean MEG AML
Chemical cabinet	Chemical 1 - Scale Inhibitor
	Chemical 2 - Contingency

The Chemical Distribution Skid will be installed on the geostationary turret side.
The Chemical Distribution Skid will allow chemicals to be routed from one common line through the utility swivel into multiple paths through the umbilical.
Design life shall be 25 years with regular maintenance.

The following chemicals shall be routed route through the skids.

Service	Qty
Lean MEG High Dose	9+12
Lean MEG Low Dose	3+5
Lean MEG AML	2+2
Chemical 1 - Scale Inhibitor	2+2
Chemical 2 - Contingency	2+2

(note that 9+12 shall be read as 9 phase 1 lines + future 12 lines)

The Chemical Distribution skid shall be able to handle flows as described below

Cabinet Tag	Panel Tag	Service	Design Conditions		Operating Conditions		Total Flow @ panel inlet	Number of lines at distribution panel outlet (+ future)
			Pressure (barg)	Temp. (°C)	Pressure (barg)	Temp. (°C)		
38-XX-8100	38-CMP-8100	Lean MEG High Dose	419	90	372	Amb.	10.8 m3/hr	9 lines (+12)
	38-CMP-8200	Lean MEG Low Dose	419	90	372	Amb.	3 m3/hr	3 lines (+5)
	38-CMP-8100	Lean MEG AML	419	90	372	Amb.	3 m3/hr	2 lines (+2)
42-XX-8100	14-CMP-8100	Chemical 1 - Scale Inhibitor	419	90	372	Amb.	60 L/h	2 lines (+2)
	16-CMP-8100	Chemical 2 - Contingency	419	90	372	Amb.	3 m3/hr	2 lines (+2)

Cabinet Tag	Panel Tag	Service	Number of lines to each drill centre	Flow rate to each drill centre	Min. ID of each line [mm]	Materials Compatibility
38-XX-8100	38-CMP-8100	Lean MEG High Dose	3	10.8 m3/hr	19.05	MEG and MeOH
	38-CMP-8200	Lean MEG Low Dose	1	2.0 m3/hr		MEG and MeOH, synthetic/organic acids
	38-CMP-8100	Lean MEG AML	1	1.0 m3/hr		MEG and MeOH, synthetic/organic acids
42-XX-8100	14-CMP-8100	Chemical 1 - Scale Inhibitor	1	60 L/hr		MEG and MeOH, synthetic/organic acids
	16-CMP-8100	Chemical 2 - Contingency	1	2.0 m3/hr		MEG and MeOH, synthetic/organic acids

Notes:

1. Additional 10% margin to be considered on all flow rates.
2. Chemical/MEG utility paths to maintain solids content to cleanliness of SAE AS 4059 Class 8B-F.
3. Properties of lean MEG (85 wt% MEG, 15% water): density range: 1050 – 1150 kg/m3 @ 20°C, viscosity at 10°C: 20cP.
4. Properties of Scale Inhibitor density range: 1050 – 1150 kg/m3 @ 20°C, viscosity at 10°C: 20cP.
5. AML (annulus management line) shall be bi-directional to support well annulus pressure bleed operation where annulus fluid (NaBr solution) flows to the FPSO from susbea.
6. Minimum tubing size is 3/4".

The following components shall be provided and specified in the bid:

- Cabinets (shall be made of AISI 316L)
- Actuated isolation valves
- Flowmeters (shall all be Coriolis type)
- Pressure indicator transmitters
- Remote adjustable chemical injection valves (only for chemical lines)
- Flow indicators (shall all be Variable Area Flow Meter type)
- Pressure indicators
- Non-return valves
- Internal tubings / pipes (material for all interface fittings and tubing inside the distribution cabinet shall be UNS S31354 (6Mo). Material selection to be confirmed based on the chemical properties.)
- Tubing valves
- Junction boxes and internal cabling as needed

The complete assembly shall be subject for design verification by DNV in accordance with this specification. Equipment has been identified as Equipment Category I as per DNVGL OS-E201. Fabrication and testing shall be witnessed by DNVGL and a final certificate of conformity with this specification shall be issued by DNVGL.

DNVGL scope of work shall be:

- Design approval documented by design verification report or type approval certificate.
- Pre-production meeting (If required by DNVGL).
- Survey during fabrication.
- Witness final functional and pressure tests, as applicable.
- Review fabrication record.
- Certificate of Conformity.
- Product certificate.
- EX Certification.
- IP Rate Certification.

The Supplier is responsible for establishing contact during start-up of the project and to fulfil requirements / obligations with DNVGL.

All relevant documentation shall be sent to DNVGL and SUPPLIER for review and approval.

SUPPLIER shall deliver Certificate of Compliance for the whole scope of supply.

	The SUPPLIER's Work includes completion of the CDS and all the associated services and supplies including, but not limited to: a) Project Management, Engineering Management, Project Control, Document Control, Quality Assurance and any other services required for the quality and timely execution of the Work. Including certification and compliance activities as required by ICP and Class b) Engineering services needed to undertake agreed scope of work such as GA drawings, assembly drawings, calculations, specifications, design basis, design briefs, analysis, shop drawings, temporary support drawings etc. c) Procurement, Prefabrication, Assembly & testing of CDS and CDS equipment forming part of the agreed scope of work. f) Storage of all procured items until required. Provide suitable secure and climate-controlled warehousing and storage facilities, warehouse staff, and handling in SUPPLIER's yard for receipt, storage and retrieval of all supplied Items. g) Provide departmentally independent quality control inspectors to verify the quality of all materials, and prefabrication/fabrication work. h) Mechanical completion and pre-commissioning of all items and equipment part of the scope of work. SUPPLIER to provide all services and consumables for the work. i) Preservation and preparation for loadout of agreed scope of work. j) Provide all final documentation, design documentation (MRB), vendor documentation, construction and completions dossiers, operating & maintenance manuals. The SUPPLIER's Scope of Work further includes the provision of: a) Office, assembly and construction facilities, management, labor, plant, tools, equipment and consumable supplies. b) Services not directly described in contract or this document, but which form a natural part of the agreed scope of work. I.e 3rd party coordination, participation in meeting with Client, etc. The Work shall be carried out in accordance with DNV Class requirements, ICP-Verification Scheme and Project Standards. It shall be understood that anything not mentioned in the Specifications but required by Classification Society (CS) or Regulatory Bodies listed herein shall be provided by SUPPLIER. All materials shall be new and unused. Estimated contract award: Q4 2021 Estimated delivery: Q3 2022 FCA factory

BAROSSA PROJECT

Project Registration

Santos is committed to ensuring Australian Industry the opportunity to participate in the Barossa Project. Expressions of Interest are invited from SUPPLIERs and suppliers with the relevant capability and capacity to undertake the scope of work.

This is a request for specific expressions of interest. SUPPLIERs and suppliers will be considered for prequalification and tender if suitably qualified against this package.

Note that an important part of the project registration process is to register an Expression of Interest at the correct Scope level.

Scope level definition:

Full scope: Able to produce / supply all the package.
Partial scope: Able to produce / supply one or more of the sub-packages.

All registrations are to be completed via ICN Gateway *BarossaOffshore.icn.org.au*. Please contact the ICNNT if registration assistance is required. Contact details: (08) 8922 9422 or *resources@icnnt.org.au*.

Project Website: Santos Australia