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Technical Specifications (In-Cash Procurement)

TC-DS CPP Detailed Design Assessment - Technical Specification

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1 Purpose

This document provides the Technical Specification for the Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment Contract.

The Contractor shall review the Detailed Design Deliverables produced by another contractor (the Design & Fabrication or D&F Contractor) during the execution of the Detailed Design of the TC-DS CPP. The Contractor shall review the Detailed Design Deliverables to ensure that the Detailed Design complies with the technical, quality and nuclear safety requirements specified in the IO technical specifications and the applicable codes and standards.

This Technical Specification is to be read together with the General Management Specification for Service and Supply (GM3S) [1].

In case of conflicting requirements, the content of this Technical Specification takes priority over the GM3S Specification.

2 Acronyms & Definitions

The following terms and acronyms are used in this document.

Term	Description
Award Package	The set of documents issued by the IO to the D&F Contractor as input for the Detailed Design
Comments Sheet	The Contractor shall list all their review comments on Comments Sheets. There is nominally one Comment Sheet per document; however multiple similar documents may be reviewed using one Comment Sheet with agreement of the IO.
Contract	The TC-DS CPP Detailed Design Assessment (this contract)
Contract Deliverables	The Deliverables to be submitted by the Contractor under this Contract
Contractor	The contractor performing the Detailed Design Assessment Contract (this contract)
DDL	Deliverable Date List - the list and schedule of Detailed Design Deliverables to be submitted by the D&F Contractor for review by the Contractor.
Detailed Design Deliverables	The Deliverables produced by the D&F Contractor to be submitted to the Contractor for review under this Contract
D&F Contractor	The contractor performing the TC-DS CPP Design & Fabrication Contract
GM3S	General Management Specification for Service and Supply
IO	ITER Organization
PIA	Protective Important Activity
TC-DS CPP	Tokamak Complex Detritiation System Central Processing Plant

For a complete list of ITER abbreviations see: ITER_D_2MU6W5 - ITER Abbreviations.

3 Background

3.1 Introduction to the TC-DS Central Processing Plant

ITER is a nuclear facility, identified in France by the number INB-174 (Installation Nucléaire de Base). ITER will operate with tritium (an isotope of hydrogen), a radioactive gas. The TC-DS CPP is a gaseous effluent treatment system that removes tritium from gases before they are safely released to the atmosphere. The TC-DS CPP contributes to the two ITER nuclear safety principles as follows:

- Confine radioactive material
- Limit radioactive doses to workers and public

The TC-DS CPP shall perform key nuclear safety functions in normal and accident conditions. It is classified as a Protection Important Component (PIC) and consequently needs to comply with French nuclear regulations (the French Order of 7th February 2012) [2] which establishes the general rules for licenced nuclear installations in France.

A description of the TC-DS CPP is provided in the Overview Description [5].

3.2 Contract overview

The IO has selected the D&F Contractor to perform the Detailed Design of the TC-DS CPP. The IO has issued a set of technical specifications (the 'Award Package') to the D&F Contractor as the input documentation for the Detailed Design.

With this Detailed Design Assessment Contract (referred to as the Contract), the IO intends to select a Contractor to work together with the IO team in a collaborative and integrated way to review the Detailed Design performed by the D&F Contractor (and its subcontractors) to ensure it meets all the technical, quality and nuclear safety requirements that have been specified by the IO.

In performing the activities under this Contract, the Contractor shall augment the IO capacity to review the Detailed Design Deliverables. The Contractor shall also act as a technical advisor to the IO, supporting the IO in safeguarding its technical, quality, and nuclear safety interests during the execution of the Detailed Design, with the IO retaining overall responsibility for the design and for surveillance of implementation of the nuclear safety requirements.

In addition to reviewing compliance of the Detailed Design Deliverables against the specified requirements, the Contractor shall:

- Provide independent technical judgement based on its engineering expertise and experience with similar complex and nuclear-regulated installations.
- Support early identification of technical, safety, quality, integration, and design-maturity risks.
- Act as an early-warning function to the IO by proactively highlighting issues, omissions, ambiguities, or inconsistencies that could adversely impact safety, performance, schedule, cost, constructability, operability, or future phases of the project.

The Contractor shall perform its activities in a collaborative manner with the IO, while remaining independent from the D&F Contractor.

The Contract shall be organised into the following main activities:

Activity 1: Project Set-up

The Contractor needs to become familiar with and understand the scope and technical requirements specified in the Award Package to efficiently and effectively perform the review of the Detailed Design Deliverables. The Contractor shall review the Award Package documents and prepare a Clarifications List to identify any potential gaps, unclear requirements, discrepancies or errors in the Award Package to be discussed and resolved with the IO team.

Further details of this activity are given in Section 5.1.

Activity 2: Detailed Design Assessment

The Contractor shall support the IO to review and assess the Detailed Design Deliverables provided by the D&F Contractor listed in Appendix 1. To give an indication of the schedule for submission of the Detailed Design Deliverables for review, the preliminary schedule for the Detailed Design by the D&F Contractor is provided in Appendix 2.

The Contractor shall perform a detailed assessment of the Detailed Design Deliverables to confirm compliance with the technical, quality and nuclear safety requirements. The work will mostly be performed remotely, however the Contractor shall budget for the Project Manager and two of the engineering leads to attend the IO (located in St Paul Lez Durance, France) once every two months for meetings.

The Contractor shall organise for a suitably qualified and experienced team to be available to review the Detailed Design Deliverables within the allotted time frame. The review performed by the Contractor shall cover the following disciplines:

- Process
- Structural
- Mechanical
- Piping
- Plant layout and 3D design
- Electrical
- I&C
- Quality assurance and control
- Qualification of equipment
- Nuclear Safety

Further details of the required skills and experience are given in Section 6.

3.3 Deliverables review process

At the start of the Contract, the IO will provide the Contractor with a **Deliverable Date List (DDL)**. The DDL provides the list of Detailed Design Deliverables that will be submitted to the Contractor for review, and the timing for submission of the Deliverables. The DDL will be updated and submitted to the Contractor every month. The Contractor shall use the DDL as the basis for organising and mobilising its team to be available to review the documents within the allotted time.

The review of the Detailed Design Deliverables will be performed according to the following process:

1. The D&F Contractor will submit the Detailed Design Deliverables to the IO according to the DDL with a minimum of 2 weeks' notice.
2. The IO will perform a preliminary quality screening of the submitted Deliverables. Deliverables that do not pass this preliminary screening will be rejected and will not be sent to the Contractor for review.
3. The IO will send an Instruction to Proceed transmittal to the Contractor by email to start the review of the Detailed Design Deliverables that passed the preliminary screening. The Contractor will access the documents on the IO document management system (IDM).
4. After receiving the Instruction to Proceed, the Contractor shall review the Detailed Design Deliverables and provide comments in Comment Sheets (provided by the IO on Sharepoint) to the IO within **7 working days** unless otherwise agreed with the IO. The Contractor will upload a copy of the completed Comment Sheet to IDM for invoicing purposes.
5. The IO will consolidate the comments and will transmit them to the D&F Contractor.

The Contractor will perform a maximum of two reviews of each of the documents. In the second review, the Contractor is to confirm only the correct implementation of its comments.

4 Duration & Work Location

The duration of the Contract is 24 months. This is based on the expected duration of the detailed design performed by the D&F Contractor.

5 Scope of Work

The Contractor shall perform the Activities and provide the Deliverables described below.

5.1 Activity 1: Project Set-up

The purpose of Activity 1 is for the Contractor to ensure that its organisation is familiar with the Award Package and is well set up for the review of the Detailed Design Deliverables.

Activity 1 includes the Tasks described below.

5.1.1 Task 1.1: Clarifications List

To efficiently and effectively perform the review of the Detailed Design Deliverables, the Contractor first needs to become familiar with and understand the scope and technical requirements specified in the IO Award Package. At the beginning of the Contract the Contractor shall review and become familiar with the Award Package documents listed in Appendix 3 and shall prepare a Clarifications List (Contract Deliverable CD-1.1).

The Clarifications List shall cover the following aspects:

- **General Clarifications**: The Contractor shall identify potential gaps, unclear requirements, inconsistencies or errors in the Award Package.
- **Technical Issues**: Based on its technical experience and expertise the Contractor shall identify potential technical issues in the IO design or specifications.
- **Risks**: The Contractor shall identify any potential risks for the IO within the Award Package (for example if technical requirements are not feasible).
- **Others**: any other topic that the Contractor wants to bring to the IO attention.

The Contractor shall organise Clarification Sessions with the IO to discuss and clarify the points identified in the Clarifications List.

5.1.2 Task 1.2: Design Assessment Methodology & Checklists

The Contractor's review of the Detailed Design Deliverables shall be commensurate with the type, maturity, safety relevance and criticality of each Deliverable. The review activities shall include, as applicable, the following areas of assessment:

a) Formal Compliance Review

Verification that the Deliverable addresses and implements the applicable contractual requirements, codes, standards, and IO specifications.

The review will focus on the following areas:

Technical Review

- Identify gaps or non-compliances against the IO technical requirements
- Identify inconsistencies in the documents

Nuclear Safety Review

- Confirm that the nuclear safety requirements (Key Safety Requirements or KSRs listed in Section 4 of ref. [6]) are correctly propagated into the Detailed Design Deliverables
- Confirm compliance with requirements for Protection Important Activities, including:
    - Correct identification of PIAs
    - Traceability between requirements in deliverables and the KSRs
    - Records of technical controls

Quality Assurance Review

- Confirm that the quality requirements are correctly propagated into the detailed design Deliverables.

b) Technical Consistency and Coherence Review

Assessment of the internal consistency of the Deliverable and its compatibility with related documents, design assumptions, interfaces, and boundary conditions.

c) Engineering Judgement Review

Application of professional engineering judgement to identify potential weaknesses, impractical solutions, constructability or operability concerns, and latent risks, even where strict non-compliance cannot be demonstrated.

The Contractor shall define the appropriate level of review depending on the Deliverable type (e.g. specifications, calculations, drawings, models, qualification plans) in a Review Matrix (Deliverable CD-1.2a). The Review Matrix shall be used as a reference for performing and evaluating the design and shall:

- Categorise Deliverables by type (e.g. specifications, calculations, drawings, models, qualification documents)
- Define the applicable review depth (formal compliance, technical consistency and coherence, engineering judgement)
- Identify any Deliverable types requiring enhanced scrutiny due to safety or integration relevance.

In addition, the Contractor shall provide Review Checklists (Contract Deliverable CD-1.2b) that will form the basis for the points to be checked during the technical review. The checklists will cover the following areas:

- Process and mechanical datasheets
- Process calculations
- P&IDs
- Equipment specifications
- Structural analysis reports
- 3D model reviews
- Piping isometrics
- Equipment Qualification Plans
- I&C specifications
- Electrical specifications, drawings & calculations

5.1.3 Task 1.3: Quality Plan

The Contractor shall provide a Quality Plan (Contract Deliverable CD-1.3) covering the aspects described in Section 8.2 of the GM3S [1] at the start of the Contract.

The Quality Plan shall also include a Contract Management Plan describing how the Contractor team is set up and organised to successfully and efficiently perform the scope of work. The Contract Management Plan shall cover the aspects described in Section 6.1.3 of the GM3S [1].

The Contract Management Plan shall describe the arrangements for management and handling of export controlled documents (see Section 7.8).

5.1.4 Task 1.4: Execution Strategy

The Contractor shall provide an Execution Strategy (Contract Deliverable CD-1.4) at the start of the Contract to describe how the Contractor will perform its role under the Contract. This Contract

Deliverable shall define the principles governing the Contractor's review activities and shall be approved by the IO prior to commencement of detailed reviews, and shall describe:

1. The Contractor's approach to acting as a technical advisor and early warning function for the IO.
2. How risks, integration issues and design maturity concerns will be identified and recorded.
3. How collaboration with the IO will be organised whilst maintaining independence from the D&F Contractor.
4. How the communications and information flow will be organised within the Contractor's team.
5. How the Contractor will ensure that document review comments from different reviewers (i.e. from different engineering disciplines) will result in a set of comments that are clear and consistent, ensuring no duplication or contradictions.
6. How the Contractor will ensure that the deliverables review is performed on holistic basis, (i.e. instead of reviewing single deliverables in isolation, the Detailed Design Deliverables shall be assessed in the context of the overall design)
7. How the correct propagation of IO requirements (and sub-requirements) into the D&F Contractor technical documentation will be monitored.
8. How the Contractor will actively manage the variable workload and potentially short notification time to mobilise its team to ensure reviewers of the relevant disciplines are available to promptly review the documents within the allotted time. (Note the DDL will be updated monthly; the Contractor shall plan the mobilization of its resources accordingly on a rolling basis, with particular focus on the planning over the next 8 weeks.)
9. How the Contractor will ensure that the reviewers are suitably qualified and experienced.

5.2 Activity 2: Detailed Design Assessment

5.2.1 Task 2.1: Deliverables Review

The Contractor shall review the Detailed Design Deliverables produced by the D&F Contractor and shall provide review comments to the IO within 7 working days (unless otherwise agreed with the IO).

At the start of the Contract, the IO shall provide to the Contractor the Deliverables Date List (DDL), which is the list of the Deliverables to be reviewed and the submission schedule. The DDL will be updated and provided to the Contractor every month.

To provide the Contractor with information to be able to prepare for an offer for this Contract, the preliminary dates for the execution of the detailed design are given in Appendix 2.

The Contractor shall organize its team to assess the Deliverables and provide critical and constructive review comments. The Contractor's review will focus on the following areas:

The Contractor's review of the Detailed Design Deliverables shall be commensurate with the type, maturity, safety relevance, and criticality of each Deliverable, covering the aspects of Formal Compliance Review, Technical Consistency and Coherence Review and Engineering Judgement Review described in Section 5.2.1.

The Contractor shall provide comments using Comment Review Sheets (Contract Deliverables CD-2.1) using the template in ref. [8]. In general, one Comment Review Sheet shall be provided per Deliverable, however for Deliverables issued in batches (such as isometrics, cable diagrams), a single Comment Review Sheet may be used for multiple Deliverables.

The Contractor shall provide a monthly record of the Detailed Design Deliverables received and the Comment Review Sheets submitted in the Monthly Reports (see Section 5.2.3).

5.2.2 Task 2.2: Detailed Design Reviews

The Contractor shall attend and participate in the Detailed Design Reviews.

The detailed design work by the D&F Contractor is organised into the following nine Work Packages:

1. WP1 Column Units
2. WP2 Reactor Skid
3. WP3 Blower Skid
4. WP4 Valve Skid
5. WP5 Interconnecting piping, structure and cabling
6. WP6 Electrical and I&C
7. WP7 Miscellaneous
8. WP8 Molecular Sieve Skid
9. WP9 Post-Cooler Skid

Each of the Work Packages shall undergo a Detailed Design Review (DDR). The DDRs shall be led by the D&F Contractor according to the Work Instruction ref.[7], and shall be attended by the IO and the Contractor. The Contractor shall attend remotely (via Teams) and shall ensure that its lead engineers are available for the review.

The DDRs shall include 60% 3D model reviews. These reviews will assess the 3D layout for compliance with the design requirements as well as installability and constructability, commissioning, operability, maintainability, Inspectability and human factors aspects.

The Contractor shall provide comments in the Review Outcome Report (Contract Deliverables CD-2.2a to CD-2.2j) described in ref. [7] (one report per DDR) within 10 working days of the DDR.

The preliminary schedule for the DDRs is given in Appendix 2. This schedule will be updated at the start of the Contract.

5.2.3 Task 2.3 Interface and Integration

As part of the Detailed Design Assessment the Contractor shall perform interface and integration assessments across disciplines, systems and Work Packages.

The Contractor shall:

- Identify critical technical interfaces (e.g. Process–I&C; Piping–Structural, Layout–Maintenance, Safety classification–Qualification etc.)
- Verify consistency of assumptions, loads, functional requirements, boundary conditions, and responsibilities across interfacing Deliverables.
- Identify interface gaps, conflicts, or ambiguities that may not be evident from review of individual documents in isolation.
- Highlight integration related risks and propose mitigation actions or clarification needs to the IO.

Interface and integration issues shall be clearly identified in the review comments and where appropriate elevated as technical risks to the Technical Risk Register (see Task 2.4).

5.2.4 Task 2.4 – Technical Risk Register

The Contractor shall establish and maintain a Technical Risk Register (Contract Deliverable CD-2.4) for the duration of the Contract.

The Technical Risk Register shall:

- Identify design related risks arising from the Detailed Design Deliverables, including risks related to safety, integration, qualification, constructability, operability, maintainability, and design maturity.

- Indicate the affected systems or Deliverables, potential consequences, and the perceived severity.
- Be updated on a rolling basis as the design evolves and reviews are performed.

The Technical Risk Register shall be summarised and updated as part of the Monthly Reports and discussed with the IO as required.

5.2.5 Task 2.5: Monthly Reports

The Contractor shall provide in the first week of each month a Monthly Report (Contract Deliverable CD-3.1 to CD-3.24). The Monthly Reports shall include:

- A record of Detailed Design Deliverables received from the IO for review to the Contractor each month, and the dates they were received.
- A record of the Comments Review Sheets submitted to the IO, and the dates they were submitted.
- A summary of the number of each Deliverable Type (see Section 7.3) reviewed in each month.
- A forecast of the planned work in the coming month.

In addition to tracking review volumes and response times, the Contractor shall monitor and report indicators of review effectiveness.

The indicators shall be proposed by the Contractor and may include, for example:

- Recurrence of similar issues across Deliverables.
- Proportion of review comments accepted or incorporated by the D&F Contractor.
- Trends indicating improvement or degradation in design quality over time.

These indicators shall be summarised in the Monthly Reports and used to support continuous improvement of the review process.

The Monthly Reports shall include sufficient information shall be provided for IO to calculate earn value management metrics (SPI and CPI) for the contract.

6 Skills and Experience Required

The table below summarises the main roles and expertise required for the Contract. The Contractor shall organise a team capable of meeting these requirements, with lead engineers identified for each discipline. One person may perform more than one role if they have the required knowledge and expertise. Expertise in other areas such as RAMI (reliability, availability, maintainability and inspectability) analysis and human factors is also required.

Table 1 – Roles, skills and experience

Roles	**Scope** (Note 1)	**Skills / experience required**
Project Manager	Lead and coordinate the Contractor's team; ensure alignment with IO objectives, schedule, and budget; act as single point of contact with IO.	Proven experience managing multi-disciplinary engineering reviews for large industrial facilities; strong leadership and communication skills.
Engineering Manager (EM)	Coordinate and supervise all discipline leads; ensure technical consistency, completeness and quality of technical review comments.	Broad technical background, ability to arbitrate between disciplines and ensure alignment with project requirements.
Quality Lead	Ensure that review activities, recommendations and deliverables comply with applicable QA rules, standards, and project procedures.	Thorough knowledge of ISO 9001, relevant design codes (ASME, Eurocodes); nuclear QA standards; ability to implement efficient review & comment control.
Process Lead	Review PFDs, P&IDs, mass/energy balances, and operating philosophy. Check compliance with functional and safety requirements.	Deep understanding of process design for complex installations; ability to identify operability and safety issues early.
Mechanical Lead	Review design of mechanical equipment (vessels, pumps, handling systems, etc.) for compliance with codes and performance requirements.	Knowledge of mechanical codes/standards (ASME VIII); experience with equipment including: vessels, high temperature components, blowers, pumps etc.
Piping Lead	Review layout, routing, supports and stress analysis; verify compliance with process and mechanical interfaces.	Knowledge of ASME B31.3, familiarity with 3D design tools and stress & flexibility analysis of piping and pipe supports design.
Structural Lead	Check structural calculations, layouts, and details for compliance with load cases, seismic and nuclear building rules (i.e. Skids anchored to EPs).	Expertise in steel structures including pipe supports & racks, equipment skid frames and platforms; good knowledge of Eurocodes and seismic design of structures.
Electrical Lead	Review power distribution, grounding, lighting, and cable routing for compliance with applicable standards and project interfaces. Review main electrical equipment.	Knowledge of low voltage systems; knowledge of installation constraints in nuclear facilities.
I&C Lead	Evaluate architecture, I&C diagrams, system requirements specifications,	Strong knowledge of PLC/DCS platforms, IEC 61513 for nuclear

Roles	Scope (Note 1)	Skills / experience required
	functional specifications, control logic; instrumentation specifications and hook-ups; ensure integration with process and electrical designs.	functions, IEC 61508 for SIL rated functions classification and nuclear I&C practices, instrumentation specification and selection, I&C networks.
Plant Layout Engineer	Review the 3D Model, Equipment Skid designs, piping isometrics	Demonstrated experience in developing plant layouts in congested environments, ensuring requirements for installability, operability and maintainability implemented in the design
Nuclear Safety Engineering	Support IO in ensuring that Protection Important Activities are correctly identified, managed, and documented throughout the D&F Contract to meet INB Order requirements.	Demonstrated experience in nuclear safety analyses and regulatory compliance; strong understanding of safety classification.
Qualification Engineering	Review that equipment qualification activities are correctly planned, specified. Review the Qualification strategy and perform a risk assessment.	Experience with qualification programs for safety-classified equipment and qualification testing (such as seismic testing).

Note 1: For a complete list of Detailed Design Deliverables see Appendix 1.

7 General Contract Requirements

7.1 General

For Contract Management requirements, Section 6.1 of the GM3S Specification [1] applies. The Contractor shall provide a Contract Management Plan as described in Section 5.1.3.

7.2 Submission of Contract Deliverables

The Contractor shall provide the Contract Deliverables in native file formats on the IO Sharepoint (access to the Sharepoint will be provided at the Kick Off Meeting).

The Contractor shall also upload copies of the Contract Deliverables to IDM for formal recording of submission of deliverables for invoicing purposes.

7.3 Contract Control

The requirements for contract control given in Section 6.1.4 of the GM3S Specification [1] apply.

7.4 KOM

A Kick of meetings (KOMs) shall be held within two weeks following the Contract signature.

7.5 Data and Documentation Management

The following sections of the GM3S Specification [1] apply for Data and Documentation Management:

- Section 6.2.2.1.4 Submission of Non-Conformance Reports
- Section 6.2.3 Contractor Document Record Keeping

7.6 Information Protection

Section 6.3 of the GM3S Specification [1] applies.

7.7 Subcontracting

Section 6.4 of the GM3S Specification [1] applies.

7.8 Export Control

Some of the IO Award Package documents and the Detailed Design Deliverables are classified as export controlled. The IO shall obtain an export control licence under which the Deliverables will be transmitted to the Contractor. In the event that any of the Contract Deliverables provided by the Contractor fall under export control regulations, the Contractor is responsible for obtaining the necessary export control licences from the relevant authorities.

The Contractor shall describe the arrangements for management and handling of export controlled documents in the Quality Plan / Contract Management Plan (see Section 5.1.3).

8 Detailed Design Deliverable Types

For contractual and invoicing purposes, the Detailed Design Deliverables are grouped into the following Types. The maximum number of Deliverables of each Type that will be submitted to the Contractor is shown in Table 2.

Table 2: Detailed Design Deliverable Types

Type	Document Type	Maximum Qty
1	Written documents: Reports, Specifications, Plans, Procedures	300 documents
2	Engineering Lists	60 lists
3	Diagrams & Drawings	1000 sheets
4	Calculations	60 documents
5	Datasheets	200 sheets

The list of Detailed Design Deliverables and their Types is given in Appendix 1. This list is preliminary and may evolve during the execution of the Detailed Design, with Deliverables being removed and new Deliverables being added.

Each time a new Deliverable is added, the IO and the Contractor shall agree the Type to assign to the Deliverable.

8.1 Meetings and Work Locations

The work will mostly be performed remotely however the Contractor shall budget for the Project Manager, the Engineering Manager and two of the Engineering Leads to attend the IO headquarters located in St Paul Lez Durance, France once every two months for meetings.

9 Roles and Responsibilities

Requirements for roles and responsibilities are given in Section 4.2 of the GM3S Specification ref. [1].

10 Deliverables and due dates

Details of the other Deliverables and due dates are given in the Table below.

Table 3: Contractor Deliverable List

No.	Deliverable description	Section	Due Date (T0 = KOM)
CD-1.1	Clarifications List	Section 5.1.1	T0 + 1 month
CD-1.2a	Review Matrix	Section 5.1.2	T0 + 1 month
CD-1.2b	Review Checklists	Section 5.1.2	T0 + 1 month
CD-1.3	Quality Plan	Section 5.1.3	T0 + 1 month
CD-1.4	Execution Strategy	Section 5.1.4	T0 + 1 month
CD-2.2a	Comments Review Sheets (multiple)	Section 5.2.1	See Section 5.2.1
CD-2. 2b	Review Outcome Report (WP1)	Section 5.2.2	T0 + 13 months
CD-2.2c	Review Outcome Report (WP2)	Section 5.2.2	T0 + 14 months
CD-2.2d	Review Outcome Report (WP3)	Section 5.2.2	T0 + 2 months
CD-2.2e	Review Outcome Report (WP4)	Section 5.2.2	T0 + 6 months
CD-2.2f	Review Outcome Report (WP5)	Section 5.2.2	T0 + 7 months
CD-2.2g	Review Outcome Report (WP6)	Section 5.2.2	T0 + 8 months
CD-2.2h	Review Outcome Report (WP7)	Section 5.2.2	T0 + 14 months
CD-2.2i	Review Outcome Report (WP8)	Section 5.2.2	T0 + 8 months
CD-2.2j	Review Outcome Report (WP9)	Section 5.2.2	T0 + 8 months
CD-2.3	Not used	-	-
CD-2.4	Technical Risk Register	5.2.4	
CD3.1 to CD3.24	Monthly Reports (24 in total)	Section 5.2.5	Monthly

11 Deliverables Acceptance Criteria

Deliverables shall be prepared in accordance with the criteria given in Section 5. Deliverables will be considered complete and acceptable once they have been reviewed and accepted by the IO. The IO will review the deliverables and provide comments to the Contractor within 2 weeks. One revision iteration is planned.

12 OHS, environmental & nuclear safety requirements

12.1 General OHS requirements

Occupational Health and Safety requirements are given in Section 5.1 of the GM3S Specification [1].

12.2 Environmental Requirements

Environmental requirements are given in Section 5.2 of the GM3S Specification [1].

12.3 Nuclear Safety

ITER is a Nuclear Facility, identified in France as Installation Nucléaire de Base (INB) 174.

The activities performed under this Task are not Protection Important Activities (PIA) as defined in ref. [2]. The related requirements for PIA are therefore not appliable.

13 Quality Assurance requirements

Requirements given in Section 8 of the GM3S Specification [1].

The Contractor shall have an ISO 9001 certified quality system or alternatively a QA Program approved by QARO. In addition, the quality management system shall comply with the IO quality requirements described in Ref. [3].

The work under this Contract is classified as Quality Class 2 as defined in ref. [4]. The main quality requirements are to ensure that qualified people perform the work, and that review comments are suitably reviewed to ensure clarity, quality and consistency before submitting to the IO. The Quality Plan (Section 5.1.3) shall describe how the Quality Class 2 requirements are met.

13.1 Deviation Requests

The requirements for management of Deviation Requests are given in Section 8.7.3 of the GM3S Specification [1].

13.2 Non-conformities

The requirements for management of non-conformities are given in Section 8.8 of the GM3S Specification [1].

14 Additional Requirements for working at the ITER site

Under this contract, for work in the ITER offices, the Contractor shall follow the requirements given in Section 13.2 of the GM3S Specification [1].

No work shall be performed on the ITER construction site under this contract.

15 References

The nominal list of applicable documents is given in Section 3 of the GM3S Specification [1]. The documents which are specifically applicable to this Contract are listed below.

Ref No. and Title	IDM Reference	Version
[1]. General Management Specification for Service and Supply	82MXQK	1.4
[2]. Order dated 7 February 2012 relating to the general technical regulations applicable to INB - EN	7M2YKF	1.7
[3]. Quality Requirements for IO Performers	22MFG4	6.4
[4]. Quality Classification Determination	24VQES	6.0
[5]. 32DT10.20.30 Overview Description	8WLRAK	1.2
[6]. TC-DS CPP - Nuclear Safety Requirements	8TZH38	1.1
[7]. TC-DS CPP - Detailed Design Review Instruction Note	8UYLRE	1.1
[8]. Tritium Plant Section Template – Review Comment Sheet	T7GFXZ	1.0

16 Appendix 1 – List of Detailed Design Deliverables

See attached in IDM.

17 Appendix 2 - Detailed Design Schedule (Preliminary)

See attached in IDM.

18 Appendix 3 – List of Award Package Documents (IO specifications to D&F Contractor)

Volume I	IDM Number	Version
TC-DS CPP - Works Specification	8QZ44C	1.6
TC-DS CPP - Project Deliverables List	8TYLBM	1.6
TC-DS CPP - Project Management & Quality Requirements	8TZFX6	1.2
TC-DS CPP - Nuclear Safety Requirements	8TZH38	1.1
TC-DS CPP - Equipment Qualification Requirements	8U3CYH	1.1
TC-DS CPP - List of Terms & Definitions	8U7CKL	2.0
TC-DS CPP - Management of Change Work Instruction	8U7L97	1.0
TC-DS CPP - List of Applicable & Reference Documents	8UY84X	2.0
TC-DS CPP - Detailed Design Review Instruction Note	8UYLRE	1.1
TC-DS CPP - List of Major Changes	E7J6QM	1.0
Volume II	**IDM Number**	**Version**
32DT10.20.30 Process Basis of Design	A4J7M5	2.1
32DT10.20 Column Pump Specification	8WLBFG	1.2
32DT30 Post-Cooler Specification	8WVJAP	2.0
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