

外部委託業者の募集

References: IO/26/OT/10034847/JPK

"Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment "

(トカマク複合施設トリチウム除去システムの中央制御プラント(TC-DS CPP)の詳細設計と検証)

IO 締め切り 2026 年 4 月 30 日(木)

○はじめに

本事前情報通知 (PIN) は、作業契約の入札授与および実行につながる公開入札調達プロセスの最初のステップです。

○背景

ITER は平和利用の核融合発電の科学的小および技術的な実現可能性の実証を目的とした、国際共同研究開発プロジェクトです。ITER 機構の 7 つのメンバーは、;欧州連合 (EURATOM が代表)、日本、中華人民共和国、インド、大韓民国、ロシア連邦、および米国です。

ITER の敷地はフランス南東部のブーシュデュロヌ地区にあり、ITER 本社 (HQ) もあるフランス CEA サン・ポール・レ・デュランス に近いところに位置しています。詳細については、ITER のウェブサイト <http://www.iter.org> を参照して下さい。

○作業範囲

本入札手続きは、トカマク複合施設トリチウム除去システム中央処理プラント (TC-DS CPP) 詳細設計評価に関するサービス契約を締結することを目的としています。

本契約の範囲および目的は、以下の 2 つの明確なタスクから構成されています。そこには、原子力安全に関する安全重要クラス1 (SIC-1またはSIC-2)、耐震クラス、遠隔操作 (RH) クラス、真空クラス、トリチウムクラス、設計コード、製造コードなどが含まれています。

- タスク1：プロジェクト立ち上げ
- タスク2：詳細設計評価

契約者は、詳細設計が IOの技術仕様書ならびに適用される関連規格・基準に定められた技術要件、品質要件および原子力安全要件に適合していることを確認するため、詳細設計成果物をレビューします。

形式的な適合性の確認に加え、契約者は、技術仕様書に詳細が記載されているとおり、技術、安全、品質、統合および設計成熟度に関するリスクを早期に特定することを含む、独立したエンジニアリング評価を ITER 機構に提供することが求められています。

TC-DS CPP は、認可を受けた原子力施設 (INB-174) における重要保護機器 (PIC) として分類されています。設計評価作業には、技術仕様書に詳述されているとおり、適用される原子力安全要件およびフランス

の原子力関連規制への適合性の確認が含まれます。

本契約期間中の作業量は、詳細設計成果物の提出スケジュールに応じて変動することが想定されています。入札者は、技術仕様書で定義されたレビュー対応期間を満たすため、適切な資格および経験を有する多分野の要員を短期間で動員できる体制を確保する必要があります。

本サービス契約における品質クラスは QC2です。

作業はオフサイトで実施されます。

IO は、IO 契約責任者（CRO）が業務開始指示（ITP）を発行した場合にのみ、本サービスを正式に開始します。

○調達プロセスと目的

目的は、競争入札プロセスを通じて供給契約を落札することです。

この入札のために選択された調達手続きは公開入札手続きと呼ばれます。

オープン入札手順は、次の4つの主要なステップで構成されています。

➤ **ステップ1-事前情報通知（PIN）**

事前情報通知は公開入札プロセスの第一段階です。IO は、関心のある候補企業に対し、以下の概略日程に示された期日までに担当調達担当官に添付の関心表明フォームで以下の情報を提出し、競争プロセスへの関心を示すよう正式に要請します。

特に注意:

関心のある候補企業は、IO Ariba の電子調達ツール「IPROC」に登録してください（まだ登録していない場合）。手順については、

<https://www.iter.org/fr/proc/overview>

を参照してください。

Ariba (IPROC) に登録する際には、お取引先様に最低1名の担当者の登録をお願いします。この連絡担当者は、提案依頼書の発行通知を受け取り、必要と思われる場合は入札書類を同僚に転送することができます。

➤ **ステップ2-入札への招待**

PINの発行から14作業日以内に、関心を示した入札者に対して入札への招待（IIT）が送付されます。この段階では、PINを確認した関心のある入札者が入札書類を入手し、入札指示に従って提案書を準備・提出することができます。

このツールに登録されている企業のみが入札に招待されます。

➤ ステップ3-入札評価プロセス

入札者の提案は、ITER機構の公正で専門的な技術評価委員会によって評価されます。入札者は、技術範囲に従い、入札への招待（IIT）に記載された特定の評価基準に基づいて作業を実施できることを示す技術的な適合性の詳細を提供する必要があります。

➤ ステップ4-落札

認定は、入札への招待（IIT）に記載されている、コストに見合った最適な価格または技術的に準拠した最低価格に基づいて行われます。

○概略日程

概略日程は以下の通りです：

マイルストーン	暫定日程
事前指示書（PIN）の発行	2026年4月15日
関心表明フォームの提出	2026年4月30日
入札への招待（IIT）の発行	2026年5月7日
明確化のための質問（もしあれば）と回答締め切り	2026年6月11日
入札提出	2026年6月18日
入札評価及び契約授与	2026年7月
契約調印	2026年7/8月

○契約期間と実行

ITER機構は2026年の7/8月旬に契約を授与します。予想される契約期間は、2年（24月）とします。

○経験

入札者は、技術仕様書（別紙Ⅱ）に詳述されているとおり、複雑な産業施設に関する独立した設計レビューおよび評価の経験を有していることを示す必要があります。特に、原子力規制下にある、またはそれと同等の安全クリティカルな環境における経験が望ましく、多分野にわたるエンジニアリングおよび原子力安全の観点を含むことが求められます。

ITERでの使用言語は英語で、流ちょうなプロレベルが求められます（口頭および文書）。

○候補

参加は、個人またはグループ/コンソーシアムに参加するすべての法人に開放されます。法人とは、法的権利及び義務を有し、ITER加盟国内に設立された個人、企業又は機構をいいます。ITER加盟国

は欧州連合(EURATOM メンバー)、日本、中華人民共和国、インド共和国、大韓民国、ロシア連邦、アメリカ合衆国です。

法人は、単独で、またはコンソーシアムパートナーとして、同じ契約の複数の申請または入札に参加することはできません。共同事業体は、恒久的な、法的に確立されたグループ又は特定の入札手続のために非公式に構成されたグループとすることができます。

コンソーシアムのすべての構成員(すなわち、リーダーと他のすべてのメンバー)は、ITER 機構に対して連帯して責任を負います。

コンソーシアムとして許可されるために、その点で含まれる法人はコンソーシアムの各メンバーをまとめる権限をもつリーダーをもたなければなりません。このリーダーはコンソーシアムの各目メンバーのために責任を負わなければなりません。

指名されたコンソーシアムのリーダーは、入札段階で、コンソーシアムのメンバーの構成を説明する予定です。その後、候補者の構成は、いかなる変更も ITER 機構に通知することなく変更してはなりません。かかる認可の証拠は、すべてのコンソーシアムメンバーの法的に授権された署名者が署名した委任状の形式で、しかるべき時期に IO に提出しなければなりません。

どのコンソーシアムメンバーも IPROC に登録する必要があります。

【※ 詳しくは添付の英語版技術仕様書「**Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment**」をご参照ください。】

ITER 公式ウェブ <http://www.iter.org/org/team/adm/proc/overview> からアクセスが可能です。

「核融合エネルギー研究開発部門」の HP : <http://www.fusion.qst.go.jp/ITER/index.html>
では ITER 機構からの各募集 (IO 職員募集、IO 外部委託、IO エキスパート募集) を逐次更新しています。ぜひご確認ください。

ITER 国際核融合エネルギー機構からの外部委託 に関心ある企業及び研究機関の募集について

<ITER 機構から参加極へのレター>

以下に、外部委託の概要と要求事項が示されています。参加極には、提案された業務に要求される能力を有し、入札すべきと考える企業及び研究機関の連絡先の情報を ITER 機構へ伝えることが求められています。このため、本研究・業務に関心を持たれる企業及び研究機関におかれましては、応募書類の提出要領にしたがって連絡先情報をご提出下さい。

PRIOR INDICATIVE NOTICE (PIN)

OPEN TENDER SUMMARY

IO/26/OT/10034847/JPK

For

Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment

Annexes

Annex I– Expression of Interest Form

Annex II – Technical Specifications

Abstract

The purpose of this summary is to provide prior notification of the IO's intention to launch a competitive Open Tender process in the coming weeks. This summary provides some basic information about the ITER Organisation, the technical scope for this tender, and details of the tender process for the services related to reviewing the Detailed Design Deliverables.

1 Introduction

This Prior Indicative Notice (PIN) is the first step of an Open Tender (OT) Procurement Process leading to the award and execution of a Contract.

The purpose of this document is to provide a basic summary of the technical content in terms of the scope of work and the tendering process.

2 Background

The ITER project is an international research and development project jointly funded by its seven Members being, the European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER is being constructed in Europe at St. Paul–Lez-Durance in southern France, which is also the location of the headquarters (HQ) of the ITER Organization (IO).

For a complete description of the ITER Project, covering both organizational and technical aspects of the Project, visit www.iter.org.

3 Scope of Work

The present tender process aims to establish a Service Contract related to Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment

The scope and purpose of this contract have two distinct Tasks:

- Task 1: Project Set up
- Task 2: Detailed Design Assessment

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.

In addition to formal compliance verification, the Contractor is expected to provide an independent engineering assessment to the ITER Organization, including early identification of technical, safety, quality, integration, and design-maturity risks, as further detailed in the Technical Specifications.

The TC-DS CPP is classified as a Protection Important Component (PIC) within a licensed nuclear installation (INB-174). The design assessment activities include verification of compliance with applicable nuclear safety requirements and French nuclear regulations, as detailed in the Technical Specifications.

The workload is expected to vary over the contract duration in line with the Detailed Design Deliverables schedule. Tenderers shall ensure that suitably qualified multidisciplinary resources can be mobilised on short notice to meet review response times defined in the Technical Specifications

The Quality class under this Service contract is QC2.

The work shall be performed off-site.

The IO shall commit the service only when the IO Contract Responsible Officer (CRO) issues an Instruction to Proceed (“ITP”).

4 Procurement Process & Objective

The objective is to award a Service Contract through a competitive bidding process.

The Procurement Procedure selected for this tender is called the **Open Tender** procedure.

The Open Tender procedure is comprised of the following four main steps:

➤ Step 1- Prior Information Notice (PIN)

The Prior Information Notice is the first stage of the Open Tender process. The IO formally invites interested Suppliers to indicate their interest in the competitive process by returning to the Procurement officer in charge the attached “Expression of Interest and PIN Acknowledgement” by the date indicated under the procurement timetable.

Special attention:

Interested tenderers are kindly requested to register in the IO Ariba e-procurement tool called “IPROC”. You can find all links to proceed along with instruction going to: <https://www.iter.org/fr/proc/overview>.

When registering in Ariba (IPROC), suppliers are kindly requested to nominate at least one contact person. This contact person will be receiving the notification of publication of the Request for Proposal and will then be able to forward the tender documents to colleagues if deemed necessary.

➤ Step 2 - Invitation to Tender

After at least 15 working days of the publication of the PIN, normally the Request for Proposals (RFP) will be published on our digital tool “Iproc”. This stage allows interested bidders who have indicated their interest to the Procurement Officer in charge AND who have registered in IPROC to receive the notification that the RFP is published. They will then prepare and submit their proposals in accordance with the tender instructions detailed in the RFP.

Only companies registered in this tool will be invited to the tender.

➤ Step 3 – Tender Evaluation Process

Tenderers' proposals will be evaluated by an impartial evaluation committee of the IO. Tenderers must provide details demonstrating their technical compliance to perform the work in line with the technical scope and in accordance with the particular criteria listed in the RFP.

➤ Step 4 – Contract Award

A Service contract will be awarded on the basis of the Best Value For Money methodology according to the evaluation criteria and methodology described in the RFP.

Procurement Timetable

The tentative timetable is as follows:

Milestone	Date
Publication of the Prior Indicative Notice (PIN)	15 April 2026
Submission of expression of interest form	30 April 2026
Invitation to Tender (ITT) advertisement	7 May 2026
Clarification Questions (if any) and Answers	11 June 2026

Tender Submission	18 June 2026
Tender Evaluation & Contract Award	July 2026
Contract Signature	July/August 2026

5 Quality Assurance Requirements

Prior to the commencement of any work under this Contract, a “Quality Plan” shall be produced by the Supplier and submitted to the IO for approval, describing how they will implement the ITER Procurement Quality Requirements.

6 Contract Duration and Execution

The ITER Organisation shall award the Service Contract around the end of July/August 2026. The estimated contract duration shall be 2 years (24 months).

7 Cost Range

This scope of work is identified at Cost Range B, which is above 300,000 - 2,000,000 EUR.

8 Experience

The tenderer shall demonstrate experience in independent design review and assessment of complex industrial facilities, preferably in nuclear-regulated or equivalent safety-critical environments, covering multi-disciplinary engineering and nuclear safety aspects, as detailed in the Technical Specifications. (Annex II).

The working language of ITER is English, and a fluent professional level is required (spoken and written).

9 Candidature

Participation is open to all legal entities participating either individually or in a grouping/consortium. A legal entity is an individual, company, or organization that has legal rights and obligations and is established within an ITER Member State, being, the European Union (represented by EURATOM), Japan, the People’s Republic of China, India, the Republic of Korea, the Russian Federation and the USA.

Legal entities cannot participate individually or as a consortium partner in more than one application or tender of the same contract. A consortium may be a permanent, legally established grouping, or a grouping which has been constituted informally for a specific tender procedure. All members of a consortium (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization.

In order for a consortium to be acceptable, the individual legal entities included therein shall have nominated a consortium leader with authority to bind each member of the consortium, and this leader shall be authorised to incur liabilities and receive instructions for and on behalf of each member of the consortium.

It is expected that the designated consortium leader will explain the composition of the consortium members in its offer. Following this, the Candidate’s composition must not be modified without notifying the ITER Organization of any change. Evidence of any such authorisation to represent and bind each consortium member shall be submitted to the IO in due course in the form of a power of attorney signed by legally authorised signatories of all the consortium members.

Any consortium member shall be registered in IPROC.

10 Sub-contracting Rules

All sub-contractors who will be taken on by the Contractor shall be declared together with the tender submission. Each sub-contractor will be required to complete and sign forms including technical and administrative information which shall be submitted to the IO by the tenderer as part of its tender.

The IO reserves the right to approve any sub-contractor which was not notified in the tender and request a copy of the sub-contracting agreement between the tenderer and its sub-contractor(s).

Sub-contracting is allowed but it is limited to one level and its cumulated volume is limited to 40% of the total Contract value.



china eu india japan korea russia usa

Route de Vinon-sur-Verdon - CS 90 046 - 13067 St Paul Lez Durance Cedex - France

15 April 2026

To: Domestic Agencies (DAs)

IO Tender Reference: IO/26/OT/10034847/JPK

Title: Tokamak Complex Detritiation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment

Subject: Prior Indicative Notice (PIN)

Dear colleagues,

The ITER Organization intends to launch an Open Tender process in the coming weeks as indicated above and in accordance with the details in the attached Prior Indicative Notice (PIN). In this regard, and to provide some introductory information about the forthcoming tender, we kindly request the attached PIN to be published on your DA website with immediate effect for a period of **15** working days.

china The advance notification is to alert companies, institutions, or other eligible entities to the forthcoming tender, and provide information to promote healthy competition, allowing interested parties time to decide whether to participate in the tender or not.

eu

india

japan Please could you kindly acknowledge receipt of this e-mail and confirm once the PIN is published on your website.

korea

russia

usa

Yours sincerely

JunHyung PARK
Procurement Officer
Procurement Division



IDM UID FOSQ04
VERSION CREATED ON / VERSION / STATUS 03 Apr 2026 / 1.1 / Approved
EXTERNAL REFERENCE / VERSION

Technical Specifications (In-Cash Procurement)

TC-DS CPP Detailed Design Assessment - Technical Specification

TC-DS CPP Detailed Design Assessment - Technical Specification

Table of Contents

1	PURPOSE	3
2	ACRONYMS & DEFINITIONS	3
3	BACKGROUND	4
3.1	Introduction to the TC-DS Central Processing Plant.....	4
3.2	Contract overview	4
3.3	Deliverables review process	5
4	DURATION & WORK LOCATION	6
5	SCOPE OF WORK.....	6
5.1	Activity 1: Project Set-up.....	6
5.1.1	Task 1.1: Clarifications List	6
5.1.2	Task 1.2: Design Assessment Methodology & Checklists.....	6
5.1.3	Task 1.3: Quality Plan	7
5.1.4	Task 1.4: Execution Strategy	8
5.2	Activity 2: Detailed Design Assessment.....	8
5.2.1	Task 2.1: Deliverables Review	8
5.2.2	Task 2.2: Detailed Design Reviews	9
5.2.3	Task 2.3 Interface and Integration	9
5.2.4	Task 2.4 – Technical Risk Register	10
5.2.5	Task 2.3: Monthly Reports	10
6	SKILLS AND EXPERIENCE REQUIRED	10
7	GENERAL CONTRACT REQUIREMENTS.....	12
7.1	General.....	12
7.2	Submission of Contract Deliverables.....	12
7.3	Contract Control.....	12
7.4	KOM.....	12
7.5	Data and Documentation Management.....	12
7.6	Information Protection.....	13
7.7	Subcontracting	13
7.8	Export Control	13
8	DETAILED DESIGN DELIVERABLE TYPES	13
8.1	Meetings and Work Locations.....	13
9	ROLES AND RESPONSIBILITIES.....	13
10	DELIVERABLES AND DUE DATES	14
11	DELIVERABLES ACCEPTANCE CRITERIA	14

12	OHS, ENVIRONMENTAL & NUCLEAR SAFETY REQUIREMENTS	14
12.1	General OHS requirements	14
12.2	Environmental Requirements	14
12.3	Nuclear Safety	15
13	QUALITY ASSURANCE REQUIREMENTS.....	15
13.1	Deviation Requests.....	15
13.2	Non-conformities	15
14	ADDITIONAL REQUIREMENTS FOR WORKING AT THE ITER SITE	15
15	REFERENCES	15
16	APPENDIX 1 – LIST OF DETAILED DESIGN DELIVERABLES	17
17	APPENDIX 2 - DETAILED DESIGN SCHEDULE (PRELIMINARY)	18
18	APPENDIX 3 – AWARD PACKAGE DOCUMENTS (IO SPECIFICATIONS TO D&F CONTRACTOR)	19

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 applicable.

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	8WLRK	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	<u>8QZ44C</u>	1.6
TC-DS CPP - Project Deliverables List	<u>8TYLBM</u>	1.6
TC-DS CPP - Project Management & Quality Requirements	<u>8TZFX6</u>	1.2
TC-DS CPP - Nuclear Safety Requirements	<u>8TZH38</u>	1.1
TC-DS CPP - Equipment Qualification Requirements	<u>8U3CYH</u>	1.1
TC-DS CPP - List of Terms & Definitions	<u>8U7CKL</u>	2.0
TC-DS CPP - Management of Change Work Instruction	<u>8U7L97</u>	1.0
TC-DS CPP - List of Applicable & Reference Documents	<u>8UY84X</u>	2.0
TC-DS CPP - Detailed Design Review Instruction Note	<u>8UYLRE</u>	1.1
TC-DS CPP - List of Major Changes	<u>E7J6QM</u>	1.0
Volume II	IDM Number	Version
32DT10.20.30 Process Basis of Design	<u>A4J7M5</u>	2.1
32DT10.20 Column Pump Specification	<u>8WLBFG</u>	1.2
32DT30 Post-Cooler Specification	<u>8WVJAP</u>	2.0
32DT10.20.30 Plant Performance Requirements	<u>8T3QA7</u>	2.0
32DT10.20.30 Overview Description	<u>8WLRAK</u>	1.2
32DT10.20.30 Process Control Description	<u>9NR2XM</u>	2.0
32DT10.20 Stream Tables - SB-DS	<u>8WLSPG</u>	2.3
32DT10.20 Stream Tables - SES	<u>BXFHEZ</u>	1.0
32DT30 Stream Tables - N-DS	<u>BXSWMN</u>	2.0
32DT10.20.30.ST Pressure and Temperature analysis	<u>AB433H</u>	2.4
32DT10.20.30.ST Process Flow Diagrams (PFDs)	<u>9PLRE4</u>	2.0
Tritium Plant Section P&ID Symbology	<u>4WPVBE</u>	2.1
32DT10.20.30.ST Piping & Instrumentation Diagrams (P&IDs)	<u>9PMU4U</u>	1.4
32DT10.20.30.ST.80 Battery Limit Schedule	<u>8WLV9X</u>	2.2
32DT10.20.30 Utilities Databook	<u>8WLR8J</u>	2.2
32DT10.20.30.ST Process Equipment List	<u>A8QLSD</u>	1.3
32DT10.20 - Datasheet - Blower (SB-DS)	<u>8WLYKZ</u>	2.0
32DT10.20 - Datasheet - Blower (SES)	<u>DWZRNZ</u>	1.0
32DT30 - Datasheet - Blower (N-DS)	<u>9RBXEB</u>	2.0
32DTST - Datasheet - Blower (ST-VS)	<u>CVBCZU</u>	1.1
32DT10.20 - Datasheet - Catalytic Reactor (SB-DS)	<u>8WM34X</u>	2.0
32DT30 - Datasheet - Catalytic Reactor (N-DS)	<u>9RSDPJ</u>	2.0
32DT10.20 - Datasheet - Gas Heater (SB-DS)	<u>8WM3YV</u>	2.0
32DT30 - Datasheet - Gas Heater (N-DS)	<u>9UV2LT</u>	2.0
32DT10.20 - Datasheet - FEED HEPA Filter (SB-DS)	<u>8WM4FW</u>	2.0
32DT10.20 - Datasheet - FEED HEPA Filter (SES)	<u>E7UTV5</u>	1.0
32DT30 - Datasheet - FEED HEPA Filter (N-DS)	<u>A4HP3K</u>	2.0
32DT10.20 - Datasheet - Recuperator	<u>8WM4JG</u>	2.0
32DT30 - Datasheet - Recuperator (N-DS)	<u>A4J57B</u>	2.1

32DT10.20 - Datasheet - Feed Cooler (SB-DS)	8WM5AL	2.0
32DT10.20 - Datasheet - Feed Cooler (SES)	E9JMPD	1.0
32DT30 - Datasheet - Feed Cooler (N-DS)	A4HUNL	2.0
32DT10.20 - Datasheet - Column Cooler	8WM6BB	2.1
32DT10.20 - Datasheet - Column Pump	8WM782	2.0
32DT10.20 - Datasheet - Scrubber Column	8WM92F	2.0
32DT10.20.30 - Datasheet - Control Valves	8WM96H	2.0
32DT30 - Datasheet - Post-Cooler	8WMFQQ	2.0
32DT10.20 Datasheet - DW pump	CXYFAC	1.0
32DT10.20 Datasheet - DW tank	D9U655	1.0
32DT30 - Datasheet - Molecular Sieve Bed	A4HX25	2.0
32DT30 - Datasheet - Dryer Separator	A4J5VJ	2.0
32DT30 - Datasheet - Dryer Blower	A4J6VR	2.0
32DT30 - Datasheet - Dryer Gas Heater	A4J2UA	2.0
32DT30 - Datasheet - Dryer Cooler	A4J39U	2.0
32DT30 - Datasheet - MS Cooler	A8QC8N	1.1
32DT30 - Datasheet - Dryer Drain Filter	DM2F2E	1.0
Hazop Study Report - 32.DT.10 SB-DS Module A1	7VQEVV	1.0
32DT10.20.30.ST.80 Line List	8WLQ27	2.2
32DT10.20.30.ST Valve List	8WLQAB	2.0
32DT10.20.30 In-Line and Miscellaneous Items List	8WLN6R	2.0
Tritium Plant Pipe Classes	RD3B5Y	8.0
32DT10.20.30.ST Specification for Equipment Skids	8WLKFN	1.4
32DT10.20.30 Gas Heater Specification	8WLLRZ	2.1
32DT10.20.30 Feed HEPA Filter Specification	8WLLSL	1.2
32DT10.20.30 Coolers Specification	8WLLWN	2.1
32DT10.20.30 Recuperator Specification	8WLLZ5	2.1
32DT10.20.30 Blower Specification	8WLA VH	2.2
32DT10.20.30.ST Specification for Valves	8WLN4Q	2.0
32DT10.20.30 Mechanical, Piping & Structural Basis of Design	8WLNZN	1.4
32DT10.20.30 General Mechanical, Piping & Structural Specification	8WLBCZ	1.4
32DT10.20.30 Fabrication Requirements	8WLN NZ	1.2
32DT10.20.30 Catalytic Reactor Specification	8WLIZM	1.3
32DT10.20 Scrubber Column Specification	8WLN TK	1.1
32DTST ST-VS Blower Specification	DMQE7E	1.0
32DT.10.20 DW Tank and Pump Specification	CWMBQ3	1.0
32DT30 Molecular Sieve Bed & Dryer Regeneration System Specification	CCMJCQ	1.1
32DT10.30.ST General Arrangement Layout Drawing Level L2	8UZSSD	2.0
32DT20.ST General Arrangement Layout Drawing Level L3	8UZY5H	2.0
32DT10 GA Drawing - Reactor Skid SB-DS_A1	APG5V6	1.0
32DT10 GA Drawing - Blower Skid SB-DS_A1 and SES_A	APGFZM	2.0
32DT30 GA Drawing - Blower Skid (N-DS)	8V2LFS	1.2
32DT10 GA Drawing - Blower Skid SB-DS_A2	CAKUKR	1.1

32DT20 GA Drawing - Blower Skid SB-DS_B1	CBALLB	1.1
32DT20 GA Drawing - Blower Skid SB-DS_B2 and SES_B	CGEBF2	1.2
32DT30 GA Drawing - Molecular Sieve Skid (N-DS)	A4J79T	1.1
32DT10 GA Drawing - Reactor Skid SB-DS_A2	CAKT39	1.1
32DT20 GA Drawing - Reactor Skid SB-DS_B1	CAKWSW	1.1
32DT20 GA Drawing - Reactor Skid SB-DS_B2	CC5GT4	1.1
32DT10 GA Drawing - Main_Valve_Skid_L2	CAKVFT	1.1
32DT10 GA Drawing - SB-DS_A2_Valve_Skid	CGP7EN	1.1
32DT20 GA Drawing - Valve_Skid_L3	DAD46B	1.1
32DT10 GA Drawing - Scrubber Column Skids – Train A	DJFC6N	1.0
32DT20 GA Drawing - Scrubber Column Skids – Train B	DJG37G	1.0
32DTST GA Drawing - ST-VS_A	DJG9WB	1.0
32DTST GA Drawing - ST-VS_B	DJGJTJ	1.0
32DT30 GA Drawing - Post Cooler Skid (N-DS)	DJGLFQ	1.0
32DT10.20 Equipment GA Drawings - Pulsation Dampener (SB-DS)	B7DG24	1.0
32DT10.20 Equipment GA Drawings - Reactor (SB-DS)	AT96P3	1.1
32DT10.20 Equipment GA Drawings - Scrubber Column (SB-DS)	AT974N	1.0
32DT10.20 Equipment GA Drawings - Demineralized Water Tank	DJG39F	1.0
32DT10 Equipment GA Drawings - Demineralized Water Tank - Train A skid	DJGP3M	1.0
32DT20 Equipment GA Drawings - Demineralized Water Tank - Train B skid	DJGQG8	1.0
32DT30 Equipment GA Drawings - Dryer Separator (N-DS)	8YG95H	1.0
32DT30 Equipment GA Drawings - Molecular Sieve Bed (N-DS)	8YFKNF	1.0
32DT30 Equipment GA Drawings - Reactor (N-DS)	APH95V	1.1
32DT10.20.30 3D Model - TC-DS CPP only	8M77DG	2.0
32DT10.20.30 3D Model - Complete room - Train B (level L3)	9BPMFG	2.0
32DT10.20.30 Environmental Conditions	44TXTR	2.3
32DT10.20.30 Requirements for FAT, SAT & OPT	8T3T83	1.3
TC-DS CPP - Instruments Specification	8U32KN	1.0
32DT10.20.30 Instrument & Control Cubicles Specification	8UT8G9	1.2
32DT10.20.30 Electrical Switchgear, Panels and Cabling Specification	8UTCK5	2.3
32DT10.20.30 Electrical, Control & Instrumentation System Technical Specification	A4J4KD	2.4
TC-DS CPP - Instrument Hook-up diagrams (Typicals)	8WM9GN	1.1
32DT10.20.30.ST Instrument List	AAYSJK	2.3
32DT10.20.30 Electrical Single Line Diagram	9RB2TQ	1.2
ITER_32DT90_SLD_4002 - Single line diagram 32DT90-BP-4002	CSRBMV	1.0
ITER_32DT90_SLD_4003 - Single line diagram 32DT90-BD-4003	CSRBPU	1.1
ITER_32DT90_SLD_4005 - Single line diagram 32DT90-CMC-4005	CSRBW8	1.0
ITER_32DT90_SLD_5002 - Single line diagram 32DT90-BP-5002	CSRMYV	1.0
ITER_32DT90_SLD_5003 - Single line diagram 32DT90-BP-5003	CSRPMQ	1.1
ITER_32DT90_SLD_7005 - Single line diagram 32DT90-CMC-7005	CSRTPQ	1.1

ITER_32DT90_SLD_8005 - Single line diagram 32DT90-CMC-8005	<u>CSY6T4</u>	1.0
32DT10.20.30 I&C Architecture Drawing	<u>9RBVVM</u>	1.6
TC-DS CPP - I&C Cable List	<u>8WLGJM</u>	2.1
32DT10.20.30 Electrical Load List	<u>A4J52V</u>	2.1
32DT10.20.30 Electrical Cable List	<u>8WKV6C</u>	2.0
32DT10.20.30 EI&C Equipment List	<u>AAY5XC</u>	1.2
TC-DS CPP - Equipment Qualification List	<u>8WMAY3</u>	1.2
32DT10.20.30 List of already qualified components	<u>94AXGH</u>	1.5
32DT10.20.30 Equipment Handling and Installation Requirements	<u>8TNDRD</u>	1.2
TC-DS CPP - Equipment Maintenance Handling Drawings	<u>8YG8EU</u>	1.0
32DT10.20.30 Requirements for Maintenance, Inspection & Testing	<u>8T3U2E</u>	1.4
TC-DS CPP - IO initial 3D model review checklist	<u>997LH5</u>	2.0
TC-DS Piping Network P&IDs (32DT80)	<u>3ARMS6</u>	Z
TC-DS CPP Rooms - Photo pack	<u>9GU8UK</u>	2.1
32DT10.20.30 Cause and Effect Matrix	<u>97ZMUA</u>	2.0
32DT10.20.30 - HIRA report for PBS32 Tokamak Complex Detritiation System Core	<u>PNJQN3</u>	1.1
Maintenance and inspection plan for Detritiation System (DS)	<u>29D7GL</u>	2.1
TC-DS CPP - Plant Layout Design Checklist	<u>APS4GW</u>	1.0
TC-DS CPP - Tender Package 3D Model Description	<u>APT29W</u>	1.0
TC-DS CPP - 3D Model - Piping Bill of Materials	<u>B666VL</u>	2.0
System Load Specification for the Tokamak Complex Detritiation System Central Processing Plant	<u>PAT3TQ</u>	5.1
ITER_32DT90_CBD_002 - TC-DS Core LV Cabling Diagrams	<u>9PQHGH</u>	1.2
ITER_32DT90_CBD_001 - TC-DS Core I&C Cabling Diagrams	<u>9PJEBY</u>	1.1
TC-DS Core Installation Feasibility Study	<u>CXR846</u>	1.1
N-DS and ST-VS HAZOP report	<u>ADB3W4</u>	1.1
32DT10.20.30 Modularization & Pre-assembly Execution Plan - Example Template	<u>DCJGMW</u>	1.0

EXPRESSION OF INTEREST & PIN ACKNOWLEDGEMENT

To be returned by e-mail to: Junhyung.park@iter.org copy to Andrew.Brown@iter.org

Company Name: _____

TENDER No. **IO/26/OT/10034847/JPK**

DESIGNATION of SERVICES: **Tokamak Complex Detritation System Central Processing Plant (TC-DS CPP) Detailed Design Assessment**

OFFICER IN CHARGE: **JunHyung PARK – Procurement Division ITER Organization**

WE ACKNOWLEDGE HAVING READ THE PIN NOTICE FOR THE ABOVE MENTIONED TENDER

WE INTEND TO SUBMIT A TENDER

Are you registered in Iproc (only entities registered in iPROC will be invited to tender)?:

YES

Please indicate your registration number:

NO, but we shall register before the indicated tender launch date

Please list the users of ARIBA/IPROC that you wish to add as response team for this tender:

Name	E-mail
...	...

.....
Signature:

Contact person:

COMPANY STAMP

Position:

Tel:

E-mail

Date: