OIL INDIA LIMITED

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AMENDMENT NO. 4 TO TENDER NO. CDG9950P19 FOR INTEGRITY ASSESSMENT OF PIPELINE METAL AND COATING OF THE CRUDE OIL & GAS PIPELINES IN OIL FIELDS OF OIL INDIA LIMITED IN ASSAM, INDIA BY ECDA, ICDA & SCCDA.

This Amendment to Tender No. CDG9950P19 is issued to notify that, **Part-2: Bid Evaluation Criteria (BEC) & Part-3; Section-II (Scope of Work/Terms of Reference/Technical Specifications)** of the original tender stands replaced with the **Revised Bid Evaluation Criteria & Revised Scope of Work/Terms of Reference/Technical Specifications** under "Attachment to Amendment No.4 to Tender No. CDG9950P19" attached herewith.

All other terms & conditions of the original tender shall remain unchanged.

Sd/-
(B. Brahma)
Manager – Contracts
For Chief General Manager – Contracts

PART–2
REVISED BID EVALUATION CRITERIA (BEC)

1.0 VITAL CRITERIA FOR BID ACCEPTANCE: The bid shall conform generally to the specifications and terms and conditions given in the Bid Documents. Bidders are advised not to take any exception/deviation to the Bid Documents. Exceptions/Deviations, if any, should be brought out during the **Pre-Bid Conference** as scheduled against this Tender. After processing such suggestions, Company may communicate the changes, if any, through an addendum to the tender document in this regard to the prospective bidders who purchased the tender document. Still, if any exceptions/deviations are maintained in the bid, such conditional/nonconforming bids shall not be considered, but shall be rejected outright.

2.0 GENERAL CONFORMITY: Bids will be rejected in case material and services offered do not conform to the required parameters stipulated in the technical specifications. Notwithstanding the general conformity of the bid to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and will not be considered for evaluation. All the documents related to BEC shall be submitted along with the Technical Bid.

3.0 Bids are invited under **SINGLE STAGE-TWO BID SYSTEM** i.e. the bidders must submit the "Techno-commercial" and "Priced" Bids in electronic form through online OIL's e-Tender portal accordingly as per the stipulated Bid Closing Date and time stipulated in the e-Tender. The Technical Bid is to be submitted as per Scope of Work & Technical Specifications of the tender and the Commercial Bid as per the Price Bid Format.

TECHNO-COMMERCIAL BID

A. Technical Criteria:

1.0 Bidders must meet the following experience criteria failing which their bid/offer shall be rejected:

1.0.1 The Bidder must have experience of executing SIMILAR WORK in previous 7 (seven) years to be reckoned from the original bid closing date; and

1.0.2 The bidder must have experience of "SIMILAR WORK" of total 218.6 Km pipeline consisting of ECDA or SCCDA and ICDA cumulatively in previous 7 (seven) years to be reckoned from the original bid closing date and out of the total experience of 218.6 Km pipeline, ECDA or SCCDA should be for minimum 50 Km length of pipeline and ICDA should be for the rest 168.6 km pipeline or vice versa.

Notes to Clause A 1.0 above:

a. "**SIMILAR WORK**" mentioned above means "successfully executed job/ work of direct assessment of integrity or Corrosion Assessment of pipeline through ECDA or SCCDA and ICDA for **Cross Country Pipeline*** for Hydrocarbon Companies". Such Hydrocarbon Company shall be Public Sector Enterprises of Govt. of India or of State Govt. of any Indian State or National/International Company working continuously for a minimum of 15(fifteen) years in the field of hydrocarbon

exploration and production and/or petroleum refining and/or petroleum marketing.

Cross country pipeline definition is as per OISD 141 and OISD 226.

b. If the prospective bidder has executed contract in which SIMILAR work is a component, then such experience will also be taken into consideration provided that the bidder submits the breakup (value / quantity) of SIMILAR work executed and certified by the end user.

c. If the prospective bidder is executing SIMILAR work which is still running and the contract value / quantity executed prior to original bid closing date is equal to or more than the minimum prescribed value in the BEC, such experience will also be taken into consideration provided that the bidder has submitted satisfactory work execution certificate issued by end user.

d. In case the start date of the requisite experience is beyond the prescribed 7 (seven) years reckoned from the original bid closing date but completion is within the prescribed 7 (seven) years reckoned from the original bid closing date, then such experience will also be taken into consideration provided that the bidder has submitted a certificate issued by a practicing Chartered /Cost Accountant Firm (with Membership Number & Firm Registration Number) indicating the contract value / quantity executed under SIMILAR work within the prescribed period of 7 (seven) years reckoned from the original bid closing date.

e. For proof of requisite experience, the following documents/ photocopies must be submitted along with the bid:

i) Purchase order/Work order/Contract document; and
ii) Job Completion Certificate/ Work Execution Certificate

The above documents should show the following:

- Gross value of the job done and
- Nature of Job done,
- Time period covering the duration as per NIT.

f. SIMILAR work executed by a bidder for its own organization / subsidiary cannot be considered as experience for the purpose of meeting BEC.

g. ELIGIBILITY CRITERIA IN CASE BIDS ARE SUBMITTED ON THE BASIS OF EXPERIENCE OF THE PARENT/SUBSIDIARY COMPANY/BRANCH OFFICE:

Offers of those bidders who themselves do not meet the experience criteria as stipulated in Clause Nos. A.1.0 can also be considered provided the Bidder is a subsidiary company/branch office of the parent company **[supporting company**] in which the parent company has 100% stake **or** parent company can also be considered on the strength of its 100% subsidiary**/**branch office **[supporting company]**. However, the parent/subsidiary company /branch office of the Bidder should meet on its own the experience as stipulated in the BEC and should not rely for meeting the experience criteria on its sister subsidiary/co-subsidiary company or through any other arrangement like Technical Collaboration agreement. In that case as the subsidiary company is

dependent upon the experience of the parent company or vice-versa with a view to ensure commitment and involvement of the parent/subsidiary company/branch office for successful execution of the contract, the participating bidder should enclose an Agreement (as per format enclosed as **Appendix-I**) between the parent and the subsidiary company/branch office or vice-versa and Parent/Subsidiary Guarantee (as per format enclosed as **Appendix-II**) from the parent/subsidiary company /branch office to OIL for fulfilling the obligation under the Agreement, along with the Technical bid.

In both the situations mentioned above, following conditions are required to be fulfilled/documents to be submitted:

(i) Undertaking by the supporting company to provide a Performance Security (as per format and instructions enclosed at **Appendix-IV**), equivalent to 50% of the value of the Performance Security which is to be submitted by the bidding company, in case the supported bidding company is the successful bidder. In cases where foreign based supporting company does not have Permanent Establishment in India, the bidding company can furnish Performance Security for an amount which is sum of Performance Security amount to be submitted by the bidder and Performance Security amount required to be submitted by the supporting company. In such case bidding company shall furnish an undertaking that their foreign based supporting company is not having any Permanent Establishment in India in terms of Income Tax Act of India.

(ii) Undertaking from the supporting company to the effect that in addition to invoking the Performance Security submitted by the contractor, the Performance Security provided by supporting company shall be invoked by OIL due to non-performance of the contractor.

Note: In case Supporting company fails to submit Performance Bank Guarantee as per (i) above, Bid Security submitted by the bidder shall be forfeited.

B. Financial Criteria:

1.0 Annual Financial Turnover of the bidder during any of preceding 3 financial / accounting years from the original bid closing date should be at least **Rs.9.4 Crores** (or USD 1.3 million).

2.0 Net worth of the bidder must be Positive for the preceding financial / accounting year.

Notes to Clause B:

a. For proof of Annual Turnover & Net worth, any one of the following documents must be submitted along with the bid:

(i) Audited Balance Sheet along with Profit & Loss account.

Or

(ii) A certificate issued by a practicing Chartered / Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in **Annexure-B**.

b. In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidders have to provide documentary evidence for the same.

c. Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that 'the balance sheet/Financial Statements for the financial year _____ (as the case may be) has actually not been audited so far' as per format prescribed in **Annexure-ZZ**.

d. In case the Audited Balance sheet and Profit Loss Account submitted along with the bid are in currencies other than INR or US$, the bidder shall have to convert the figures in equivalent INR or US$ considering the prevailing conversion rate on the date on which the Audited Balance Sheet and Profit & Loss Account is signed. A CA Certificate is to be submitted by the bidder regarding converted figures in equivalent INR or US$. Else, the Audited Balance Sheet and Profit & Loss Account shall be evaluated by considering the BC selling rate declared by State Bank of India (on the date on which the Audited Balance Sheet and Profit & Loss Account is signed) for conversion to INR.

e. In case the bidder is a subsidiary company/branch office (should be a 100% subsidiary of the parent/ultimate parent/holding company) who does not meet financial criteria by itself and submits bid based on the financial strength of its parent/ultimate parent/holding company, then following documents need to be submitted along with the technical bid.

(i) Audited Balance Sheet and Profit Loss Account of the parent/ ultimate parent/ holding company.

(ii) Corporate Guarantee (as per format enclosed as **Appendix-III**) on parent/ultimate parent/holding company's letter head signed by an authorized official undertaking that they would financially support their 100% subsidiary company/branch office for executing the project/job in case the same is awarded to them, and

(iii) The bidder is a 100% subsidiary company/branch office of the parent/ultimate/holding parent company.

(iv) Documents proving that Net worth of the parent/ultimate parent company is positive for the accounting year preceding the bid closing date.

C. Commercial Criteria:

1.0 Bid Security for an amount of Rs. 36,57,000.00 or US$ 51,000.00 in Original shall be furnished as a part of the Techno-commercial Bid and shall reach OIL's CGM-

Contract's office at Duliajan on or before 12.45 Hrs (IST) on the bid closing date. A scanned copy of the bid security shall however be uploaded in OIL's E-Procurement portal along with the Techno-commercial Bid. The amount of Bid Security shall be as specified in the Forwarding Letter of the Bid Document. Bid without proper & valid Bid Security will be rejected.

2.0 The Integrity Pact must be uploaded in OIL's E-Procurement portal along with the Technical Bid digitally signed by the same signatory who digitally signed the Bid i.e. who is duly authorized to sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit the Integrity Pact, their bid will be rejected.

3.0 Bidder must accept and comply with the following clauses as given in the Bid Document in toto failing which bid will be rejected –

i) Performance Guarantee Clause
ii) Force Majeure Clause
iii) Tax Liabilities Clause
iv) Arbitration Clause
v) Acceptance of Jurisdiction and Applicable Law
vi) Liquidated damage and penalty clause
vii) Safety, Environment & Labour Law
viii) Termination Clause
ix) Integrity Pact

4.0 The Bids and all uploaded documents must be digitally signed using Class 3 digital certificate with Organisations name [e-commerce application (Certificate with personal verification and Organization name)] as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India [except copies of the documents required in physical form] should invariably be submitted in the 'Technical Attachment Tab' through OIL's e-bidding portal, before the scheduled date and time for the tender closing. **All the documents uploaded shall be digitally signed by the authorized signatory of the bidder.**

D. Procedure for Qualification: Deleted

E. Price Bids:

Bidders who have qualified techno-commercially as per BEC Criteria A, B & C and that conforms to the terms and conditions of the Tender will be considered as responsive and will be considered for further evaluation.

F. Commercial Bid Evaluation Criteria:

1.0 Bidder shall offer firm prices. Price quoted by the successful bidder must remain firm during the execution of the contract and not subject to variation on any account. Bids with adjustable price terms will be rejected.

2.0 Bids should be valid for 180 days, bids with shorter validity will be rejected as being non-responsive.

3.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any

discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

4.0 The quantities shown against each item in the "Price Bid Format" shall be considered for the purpose of Bid Evaluation. It is, however, to be clearly understood that the assumptions made in respect of the quantities for various operations are only for the purpose of evaluation of the bid and the Contractor will be paid on the basis of the actual number of days/parameter, as the case may be.

5.0 Price Bids will be evaluated on overall lowest cost basis (L-1 offer) i.e. considering total quoted price for all items of SOQ inclusive of all liabilities including statutory liabilities including GST as per Price Bid Format.

6.0 To ascertain the inter-se-ranking, the comparison of the responsive bids will be made subject to loading for any deviation. Commercial Bids shall be evaluated taking into account the rates quoted in the PRICE BID FORMAT as per Proforma-B.

7.0 The bidders are advised not to offer any discount/rebate separately and to offer their prices in the Price Bid Format after considering discount/rebate, if any.

8.0 Conditional and unsolicited discount will not be considered in evaluation. However, if such bidder happens to be the lowest recommended bidder, unsolicited discount without any condition will be considered for computing the contract price.

9.0 In case of identical overall lowest offered rate by more than 1 (one) bidder, the selection will be made by draw of lot between the parties offering the same overall lowest price.

10.0 For conversion of foreign currency into Indian currency for evaluation of Bids, B.C. selling (Market) rate declared by State Bank of India, CAG Branch, Kolkata, one day prior to the date of priced bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceeds 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.

G. GENERAL:

1.0 In case bidder takes exception to any clause of bid document not covered under BEC, then the Company has the discretion to load or reject the offer on account of such exception if the bidder does not withdraw/modify the deviation when/as advised by company. The loading so done by the Company will be final and binding on the bidders.

2.0 To ascertain the substantial responsiveness of the Bid the Company reserves the right to ask the bidder for clarification in respect of clauses covered under BEC also and such clarifications fulfilling the BEC clauses in toto must be received on or before the deadline given by the Company, failing which the offer will be summarily rejected.

3.0 If any of the clauses in the BEC contradict with other clauses of the Bid Document elsewhere, then the clauses in the BEC shall prevail.

4.0 **COMPLIANCE OF THE COMPETITION ACT, 2002:** The bidder shall strictly comply with the provisions of the Competition Act, 2002, more particularly, Section-3 of the Act. Any violation the provisions of the Act shall attract penal action under the Act.

5.0 **PURCHASE PREFERENCE CLAUSE:**

5.1 Purchase Preference to Micro and Small Enterprises:

5.1.1 Purchase Preference to Micro and Small Enterprises registered with District Industry Centres or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME.

5.1.2 In case participating MSEs quote price within price band of L1+15%, such MSE shall be considered for award of contract by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE.

5.1.3 In case of more than one such MSE qualifying for 15% purchase preference, the contract shall be awarded to lowest eligible MSE amongst the MSEs qualifying for 15% purchase preference.

5.1.4 In case any part of the work is sub-contracted to a Micro or Small Enterprise as per contract conditions then the contractor shall provide complete details (i.e. name of the subcontractor, value of sub-contacted work, copy of valid registration certificate etc.) of the sub-contractor to OIL.

5.1.5 **DOCUMENTATION REQUIRED TO BE SUBMITTED BY MSEs**:

Copy of valid Registration Certificate, if bidder is a Micro or Small Enterprises (MSE) registered with District Industry Centres or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME. The Registration Certificate should clearly indicate the monetary limit, if any and the items for which bidder are registered with any of the aforesaid agencies. In case bidding MSE is owned by Schedule Caste or Schedule Tribe entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ST entrepreneur should also be enclosed.

5.2 Purchase preference Policy (linked with Local Content) (PP-LC):

5.2.1Purchase preference policy-linked with Local Content (PP - LC) notified vide letter no. O-27011/44/2015-ONG-II/FP dated 25.04.2017 of MoP&NG shall be applicable in this tender (***Annexure-XII enclosed***).

5.2.2 Bidders seeking benefits, under Purchase Preference Policy (linked with Local Content) (PP-LC) shall have to comply with all the provisions specified at clause No. 37.0 of ITB and shall have to submit all undertakings/documents applicable for this policy.

5.2.3 Where both MSE and PPLC bidder(s) are entitled to Purchase Preference and neither of them is L-1, eligible MSE(s) (in order of ranking among MSEs) shall get preference over eligible PPLC bidder(s) to match their rates with that of L-1 bidder for award of contract. However, if eligible MSE(s) decline(s) to match down the price, then the eligible PPLC bidder(s) in order of ranking among themselves shall be given the opportunity to match down its price to the price of L-1 bidder for award of contract.

5.2.4 Where MSE is already L-1 in the tender evaluation, contract for L-1 portion shall be straightway awarded to MSE, without considering any Purchase Preference for PPLC bidder.

5.2.5 In case L-1 bidder is a PP-LC bidder, purchase preference shall be resorted to MSE bidder as per 'PPP for MSE-Order 2012'.

5.2.6 For Purchase Preference (under MSE as well as under PP-LC), original L1 Price/Rates will be considered as base for calculating L1+15% for MSE bidders and L1+10% for PP-LC Bidders.

6.0 COMPLIANCE WITH THE REQUIREMENTS OF BID EVALUATION CRITERIA (BEC) AND ALL OTHER TENDER CONDITIONS:

6.1 Advice to bidders for avoiding rejection of their offers: OIL has to finalise its purchase within a limited time schedule. Therefore, it may not be feasible for OIL to seek clarifications in respect of incomplete offers.

Prospective bidders are advised to ensure that their bids are complete in all respects and conform to OIL's terms, conditions and bid evaluation criteria of the tender. Bids not complying with OIL's requirement may be rejected without seeking any clarification.

6.2 Submission of 'BEC-Compliance matrix' duly filled-in, to re-confirm compliance with tender requirements:

Bidders should submit the '**BEC-Compliance matrix'** (as enclosed with the bid document) duly filled-in, so as to re-confirm compliance with each of the requirements of BEC and other important conditions of the tender. Each such confirmation should be clearly stated in the 'Bid Matrix' indicating "Confirmed" or "Not Confirmed", as applicable. Further, against each such confirmation, bidders should also indicate the reference/location (page No. /Annexure etc.) of the respective detail(s)/document(s) enclosed in the bid, so as to easily locate the same in bid document.

Bidders are advised to ensure submission of the 'Bid.

END OF PART-2

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Part-3
SECTION-II
REVISED SCOPE OF WORK/TERMS OF REFERENCE/TECHNICAL SPECIFICATIONS

1.0 Oil India Limited (OIL), a Government of India "NAVARATNA" Category Enterprise, engaged in the business of Exploration, Production & Transportation of Crude Oil and Natural Gas and Production of LPG.

The Company owns and operates pipelines of various sizes in the oil and gas fields in the districts of Dibrugarh, Tinsukia and Charideo in the state of Assam India. The pipelines are used for transportation of crude oil from field production installation to tank farm and the gas pipelines are used for distribution of natural gas from the production installations and work at different operating pressure.

The pipelines covered under this scope of work are detailed in Clause 3.0 of this Section.

2.0 OBJECTIVE:

OIL is undertaking Assessment of integrity of the oil and gas field pipelines as detailed below:

2.1 Integrity assessment of pipeline metal by Non-Intrusive and Non-Destructive means by the following methods:

- External corrosion direct assessment (ECDA) for assessing External corrosion threat.
- Internal corrosion direct assessment (ICDA) for assessing Internal corrosion threat.
- Stress corrosion cracking direct assessment (SCCDA) for assessing Stress corrosion cracking threat.

This work includes carrying out turnkey DA for pipeline sections to allow integrity revalidation without the use of in-line tools and/or hydro-testing. The Contractor shall carry out External Corrosion Direct Assessment (ECDA), Stress Corrosion Cracking Direct Assessment (SCCDA) and Internal Corrosion Direct Assessment (ICDA) as per NACE International Standard Practice for External Corrosion Direct Assessment (SP-0502-2010), for assessing Stress Corrosion Cracking Direct Assessment via NACE International Standard Practice SP-0204-2008 recommended practice on Stress Corrosion Cracking, latest edition and Internal Corrosion Direct Assessment (ICDA) using NACE International Standard Practice SP0208-2008 for Liquid Petroleum, SP0110-2010 for Wet Gas, and latest SP0116-2016 for Multiphase pipelines.

2.2 From the above stated integrity assessment the following information shall emerge:

i. Areas under threat and Root Cause Analysis for all threats for EACH pipeline

ii. Determination of remaining strength of defect spots as per ASME 31G, Modified 31G and Effective Area Method RStreng (ASME B31.8S) for all threats for EACH pipeline

iii. Categorization of defects in pipeline metal on the basis of severity (Probability of Failure – (PoF) and Expected Repair Factor-(ERF) with reference to ASME codes

2.3 Assessment of integrity of pipeline coating as part of ECDA by utilising below mentioned techniques under Step 2 of ECDA:

i. Current Attenuation Test (CAT)
ii. Close Interval Potential Surveys (CIPS)
iii. Direct Current Voltage Gradient(DCVG)/Alternating Current Voltage Gradient (ACVG) method
iv. Pipeline Current Mapping (PCM)
v. Coating resistance test
vi. Soil resistivity survey
vii. Soil chemical property survey including Terrain Modelling
viii. Any other necessary relevant data.

2.4 Categorization of faults in pipeline coating on the basis of severity.

2.5 From the above integrity assessment (as per clause 2.1 and 2.3) of pipeline metal and pipeline coating, prepare and submit a rehabilitation plan to OIL.

2.6 Establish a programme for re-examination (ECCDA) of the pipelines and effectiveness of the Direct Assessment (DA) program.

2.7 Hence, the integrity assessment data of the pipelines and coating are required simultaneously in a single consolidated report.

3.0 GENERAL INFORMATION OF PIPELINES: Refer Annexures - I, II, III

4.0 DETAILED SCOPE OF WORK

The bidder shall submit a brief of the methodology to be adopted for doing direct assessment (DA) by ECDA, ICDA and SCCDA along with the bid. Bidder shall perform all the above activities as per applicable NACE standards and all required tool, tackles, consumable, manpower and experts required to complete the job in all respect shall be in the scope of bidder. Surveys for assessment of coating condition shall also be part of the ECDA but coating condition shall have to be assessed for complete joint length of each pipeline. It is to be understood that the pipelines are not covered by cathodic protection and coating data and soil data such as resistance, chemical properties etc. are not available with the COMPANY. Hence the bidder shall submit a brief of methodology to be adopted for assessment of coating condition and soil data also. Methodology for ICDA applicable for liquid petroleum, wet gas and multiphase pipelines need to be provided, with

a brief on how the following details would be provided for each region of each pipeline:

- Liquid accumulation location and amount
- Solid accumulation locations and amount
- Corrosion rates.

The methodology shall include how the regions and sub regions are to be selected.

Similarly, methodology for SCCDA for low pH and high pH SCC needs to be included along with procedures for measurements.

The CONTRACTOR shall submit a detailed work plan with time line for each phase of work involvement.

All the above surveys including *Procedure Qualification Test (PQT)* shall be carried out strictly as per applicable NACE standards & ASME B 31.8S. However, a brief of the modalities to be adopted by the CONTRACTOR for the above study but not limited to are given in clause no 4.2 to 4.5 of this section.

4.1 Procedure Qualification Test (PQT):

4.1.1 The CONTRACTOR shall undertake complete Procedure Qualification Test (PQT) as stated below immediately on completion of mobilisation which is 45 days from issue of LOA as defined in clause no 2.0 of part 3 Section-I (GCC) of this NIT. The PQT shall establish the methodology submitted to the COMPANY as per clause 4.0 of this section for ECDA, ICDA and SCCDA.

4.1.2 Pipelines to be taken for the PQT shall be as follows:

1(one) no Crude Oil Pipeline and 1(one) no Gas Pipeline shall be selected by the CONTRACTOR in consultation with the COMPANY for the PQT from the pipelines listed in Annexure I and Annexure II.

4.1.3 The Procedure Qualification shall comprise of the following:

ECDA and SCCDA of any of the 2(two) pipelines and ICDA of both the Crude Oil and Gas Pipeline.

The PQT shall be for the following 4(four) steps for each DA i.e. ECDA, ICDA and SCCDA:

i) Pre-Assessment
ii) Indirect inspection
iii) Direct inspection
iv) Post Assessment

The PQT shall be completed in all respect including submission of report to the COMPANY within 60 days from the date of completion of mobilisation.

4.1.4 The PQT shall be considered successful when complete report of all the 4(four) aforesaid steps of all the three direct assessment methods i.e. ECDA, ICDA and SCCDA certified by NACE Level-3/Level-4 specialists is submitted by the CONTRACTOR within the stipulated date and time and the COMPANY accepts the report.

4.1.5 The CONTRACTOR shall be allowed to proceed with further work under the contract only on successful completion of the PQT. In case the CONTRACTOR is not able to complete the PQT within the stipulated time the contract shall be liable to be terminated at the discretion of the COMPANY without any compensation to the CONTRACTOR whatsoever.

4.2 Modalities of External Corrosion Direct Assessment

4.2.1 ECDA shall be done strictly as per guideline given in NACE std; SP 0502-2008 and NACE TM0497-2012. The year of edition of the NACE Standard is indicative only and the latest edition shall be applicable.

Brief of the steps involved in ECDA are:

i) Pre-Assessment
ii) Indirect inspection
iii) Direct inspection
iv) Post Assessment

4.2.2 Pre-Assessment:

The objectives of pre-assessment step are to determine feasibility of ECDA, selection of indirect inspection tools and identification of ECDA region. Pre-assessment steps include but not limited to following activities:

i) Collection, integration and analysis of pipeline data.
ii) Defining of ECDA region and selection of indirect inspection tools.
iii) Assessment of ECDA feasibility for each High Consequence Areas (HCA) segment.
iv) Selection of at least three (or more, if necessary) appropriate and complementary indirect inspection tools for each segment.
v) Identification of ECDA regions and providing explanation of criteria and characteristics that each region meets.
vi) Identification of the regions into which each HCA segment falls.
vii) Providing Differential GPS (DGPS) coordinates with an accuracy of < 50cms defining where all region segments begin and end.
viii) Preparation and submission of pre-assessment report.
ix) Site visits by Contractor's SME (Subject Matter Expert) for ECDA for reviewing historic information, site visits, samples, interviewing etc.

4.2.3 INDIRECT INSPECTIONS:

The objective of the Indirect Inspection Process is to locate and define the severity of coating faults and areas where external corrosion may have occurred or

may be occurring. Three or more indirect inspection tools are to be used over the entire length of each ECDA region of the pipelines to provide improved detection reliability under the wide variety of condition that may be encountered along a pipeline.

Indirect inspection includes but not limited to following activities:

i) Carrying out of at least three indirect inspections along the entire length of each ECDA region using available technology. Techniques to be performed would include CAT, Close Interval Potential Surveys (CIPS), ACVG/DCVG, Pipeline Current Mapping (PCM), Soil Resistivity (SR), pH, AC Interference, Coating resistance.

ii) Alignment and comparisons of results to identify areas where coating defects and high probability of corrosive activity would occur, based on the indirect survey results. Categorization of indications & prioritization of these locations.

iii) Analysis of results and preparation for "Direct Examination" dig sheets for dig location, expected damage etc.

Minimum specifications for carrying out the above ground surveys needs to be as follows:

4.2.3.1 Pipeline Profile:

Contractor has to create a pipeline profile for each line. Contractor shall use tools like Pipeline Current Mapper/Pipeline locator/ any other instruments to identify the centre line of all pipelines to be surveyed and depth of each pipeline and shall plot the same in a digital map with landmark locations for easy identification with GPS co-ordinates. Sub-meter GPS accuracy shall be required for mapping these lines. Profile should be collected based on below thresholds:

i) Depth of Cover (DoC) of pipeline to be recorded continuously at intervals not longer than 2m where DoC is < 3m, and no longer than a 3 m interval where DoC is > 3 m.

ii) Dual frequency, DGPS/GNSS (Global Navigation Satellite System) with a precision < 0.5 m horizontal and < 1.0 m vertical, needs to be collected continuously at a rate of 1 position per second during recording of all depth of cover measurements.

iii) Pipe cover accuracy needs to be in as per below range for 80% of the time:

+/- 2.5% to 3-meter depth
+/- 5.0% to 9-meter depth

iv) Pipeline position accuracy needs to be +/- 10cm based on DGPS and locator accuracy.

4.2.3.2 Coating Inspection:

All the CP and Coating related IDi surveys such as CIPS, DCVG and ACVG shall be recording waveforms with measurements at intervals not longer than 2 m where DoC is < 3m and no longer than 3m where DoC is > 3m. The GPS precision shall be <0.5m horizontal and <1.0m vertical for each survey reading. Following would be the requirements for each of the surveys wherever performed within the program (wherever applicable):

4.2.3.2.A DCVG:

It is to be noted that due to multiple pipelines running in close proximity in pipeline routes DCVG will be a very important component of ECDA for ascertaining condition of pipeline coating and DCVG may have to be carried out for each pipeline from end to end under the scope of Direct Assessment in this contract. It is also to be noted that condition of coating of the pipeline(s) have not been surveyed since construction.

Main objective of DCVG/CAT survey is to:

a. Identify the pipeline sections where coating is good and bad.

b. Pinpoint and identify the coating defects in the pipeline sections in terms of degree of deterioration of coating as MINOR, MODERATE and SEVERE.

c. Classify the defects as Anodic and Cathodic.

Therefore, DCVG survey is to be carried out on the entire route of pipeline(s) including all features and crossings etc. such as water bodies (canal, rivers, and ponds), roads, railways, other pipelines etc. in all kind of terrain and soil.

A minimum of one complete interruption cycle needs to be recorded at each interval; a waveform needs to be recorded for each cycle, and be proven to be suitable for assessment of:

- DCVG Potential while CP sources are On and Instant off,
- Confirmation of interrupter synchronization,
- Confirmation of switching spike avoidance,
- Confirmation of soil / surface contact resistance,
- Confirmation of AC interference,
- The DCVG waveform must be time stamped to with clock signal from GPS to ensure alignment of surveyor position during recording of each PSP at each interval of the inspection.
- In case, CIPS is conducted concurrently then the same time stamp shall be applied to both CIPS and DCVG waveform and recorded/ reported value.

4.2.3.2.B ACVG:

ACVG will only be performed where >50mA and < 1,000mA of survey current can be confirmed by the Contractor on the target pipeline segment.

- ACVG measurement shall be recorded concurrently with DoC and AC current level; consideration for effect of DoC and current level must be incorporated into the priority ranking, and value needs to be reported for each measurement.
- Continuous data from the pipeline locator and ACVG volt meter needs to be recorded at 10 m interval; a waveform needs to be recorded for each measurement and be proven to be suitable for assessment of:
  i. ACVG potential,
  ii. confirmation of soil / surface contact resistance,
  iii. confirmation of AC or DC interference,
  iv. confirmation of AC current level and DoC

4.2.3.2.C Closed Interval Potential Survey (CIPS):

For polarized (On & Instant Off CP CIPS) - A minimum of one complete interruption cycle needs to be recorded at 10 m interval; a waveform needs to be recorded for each cycle, and be proven to be suitable for assessment of:

- On and Instant off PSP,
- Confirmation of interrupter synchronization,
- Confirmation of IR drop,
- Confirmation of switching spike avoidance,
- Confirmation of soil / surface contact resistance,
- Confirmation of AC interference,
- Confirmation of temporal influences, such as DC traction, telluric, tidal and other
- The CP CIPS waveform must be time stamped to with clock signal from GPS to ensure alignment of surveyor position during recording of each PSP at each interval of the inspection.

NOTE:

a) It is to be noted that the pipelines are not covered by cathodic protection. Arrangement of temporary power source and temporary cathodic protection with DC power source, ground bed along with current interrupter and TLP for CAT, CIPS, DCVG, ACVG shall be arranged by the Contractor at their own cost. The arrangements shall be designed for maximum possible coverage of pipeline length so as to reduce time required for completing coating survey of each pipeline.

b) Foreign pipelines owned by OIL without CP system and without electrical isolation are be connected to the subject pipelines. Locations of such connections will be provided by OIL. Contractor shall have to manage the indirect inspection technique considering the interconnected pipeline network. Operations of the Company shall not be hampered in any way during the course of inspection.

c) The Contractor shall submit procedures for all the surveys to the COMPANY for approval prior to undertaking the survey.

4.2.3.2.D Identification and Verification of Coating Defect:

Coating defect verification shall be generally part of ECDA DEx, but as assessment of coating condition is part of the Scope of Work and shall be an important factor in the rehabilitation programme to be submitted by the Contractor all the coating defects categorised as SEVERE shall be verified by the Contractor within the Scope of Work.

i. After completion of the survey and analysis of the report, size and location of the defects are to be marked as "Severe", "Moderate" & "Minor" for each region.

ii. The report, drawings, sketches prepared with GPS coordinates prepared by the Contractor based on the coating survey and submitted to the COMPANY shall be used for defect verification.

iii. In case the defect is not verified based on the data collected and drawings prepared during coating survey, the pipeline stretch shall be resurveyed by the vendor/Contractor without any cost implication to the COMPANY. Probable reasons for the error shall be analysed before resurvey is taken-up.

iv. Accuracy of identification of defects shall be 80% so as to allow the contractor for Continuation of the survey. In case of mismatch of the reported defects and dig verification found more than 20% for a particular pipeline segment, the contractor has to resurvey the entire segment without any extra cost to the COMPANY.

v. Engineer In- Charge (EIC) will witness the defects with respect to the defects reported in the survey and accordingly the report will be jointly signed by the contractor and Engineer-In-Charge (EIC). The defect area of the coating shall be photographed with proper numbering of the defects before and after carrying out coating repairs. Copy of the same shall be a part of the final report.

vi. Pipeline chainage shall start from Isolation valve of PIG Launcher and end at isolation valve of PIG receiver. The data collected during survey shall be plotted in editable soft form in addition to the hard copy of the data.

vii. Other pipeline operators/facility owners shall be informed suitably by the COMPANY, if verification/excavation is to be carried out on the COMPANY's pipeline running parallel in the common RoU or the area is within the premises of other than the COMPANY.

viii. Identified site shall be accessed by the Contractor as per the drawings prepared and excavation shall be done by the COMPANY to facilitate subsequent repair work. Dimensions of the excavated pit shall be determined by the Contractor.

ix. Exposed pipeline shall be inspected carefully to check the size of the defect and coating resistance shall be measured. If defect is identified as per the

drawings prepared, the same shall be photographed taking nearby area in the coverage. Multiple photographs can be taken as per site condition.

x. The same location for coating defect verification may coincide with either or all DEx of ECDA, ICDA and SCCDA. In any case the pits shall be subsequently backfilled by the COMPANY after completion of defect verification and/or examination.

4.2.3.3 Soil data for each pipeline route shall be collected by the Contractor as briefed below:

4.2.3.3.A Soil Resistivity Survey:

i. Soil Resistivity Survey shall be carried out in as part of direct Assessment of ECDA of the pipelines. Soil Resistivity shall be done at an interval of 250m & in the depth of 1m, 2m & 3m respectively by Wenner Four Pin method to be carried out in the following sections of OIL's ROW/ROU.

ii. The contractor shall deploy only qualified supervisory personnel who are well conversant/experienced and authorized for this type of work.

iii. **Equipment, Calibration & adjustment:**

- The equipment used shall be of reputed make and shall be in good working condition and the same shall be certified by EIC/Authorized representative for use.

- Earth Resistance Tester used for the survey should have valid up to date calibration certificate from reputed calibration agency.

iv. **Reports:**

- Submission of the final report shall be in the form of 4 sets of hard copy in a bound form along with 4 sets of soft copied in pen drives of CDs.

- The final submitted report shall consist of:

  - Presentation of Soil Resistivity Data in the depth of 1m, 2m & 3m as well as average value of above three readings with respect to ROW/ROU chainage at every 250m interval in tabular form.

  - Graphical representation of soil resistivity value in the depth of 1m,2m,3m & also the average of above three soil resistivity value with respect to pipeline chainage in every 250m interval.

v. **Man, Material and Safety:**

- All men, material, equipment, tools & tackles required for carrying out the job, transportation to worksite, boarding and lodging is in the scope of contractor.
- The Contractor shall be wholly responsible for safety and protection of all their personnel & equipment deployed at sites.

- Any damage done knowingly or unknowingly to Pipeline / cables/ other underground facilities of the COMPANY or other owner shall be made good by the Contractor without any cost and time implications to the COMPANY.

4.2.3.3.B Soil Chemical Analysis:

i. Sample Analysis:

The soil sample collected should be tested for the following as per NACE SP 0502-2010:

- **Type Classification**: Classify the Soil Type.
- **Moisture Content**: Determine the moisture content of the soil.
- **Sulphide Ion Concentration in water**: Commonly applied standard Laboratory test methods are acceptable.
- **Soil Conductivity**: See ASTM G57. Other commonly applied standard Laboratory test methods are acceptable.
- **Soil pH**: See ASTM G51. Other commonly applied standard Laboratory test methods are acceptable.
- **Chloride Ion Concentration in water**: See ASTM D512. Other commonly applied standard Laboratory test methods are acceptable.
- **Sulphate Ion Concentration in water**: See ASTM D516. Other commonly applied standard Laboratory test methods are acceptable.

ii. pH Testing:

- If a liquid is present beneath the coating, take a sample using syringe or cotton swab.
- Test the pH of the liquid using hydrion paper or its equivalent. Carefully slice the coating to a length to allow the test paper to be slipped behind the coating. Press the coating against the pH paper for a few seconds and the remove the pH paper. Note and record the colour of the paper in relation to the chart provided with the paper.

iii. MIC Analysis:

- MIC analysis should be performed on corrosion products when MIC is suspected.

iv. The Bidder/CONTRACTOR shall submit with the bid documents, the name and contact details of accredited Soil Testing Laboratory in which the above mentioned analysis will be performed.

4.2.3.4 Documentation and Reporting:

i. The viewable raw logs for each of the above ground IDi surveys shall be recorded and provided to the COMPANY to confirm the true readings gathered from the pipeline.

ii. The IDi results shall be integrated with chainage as the reference and also be provided in an electronic format for each of the techniques that can easily be loaded to any computer. Software for seeing the document of integrated or individual survey shall be supplied by the Contractor to the COMPANY.

iii. **Software provided to OIL:** The IDi results of ECDA/ SCCDA shall include as a minimum:

- Sorting, layering, analysing and reporting of IDi raw logs all integrated as per the chainages in the pipeline. Authentic raw logs of each survey should be visible.
- Anomaly matrix to be included which could be customized based on each pipeline's analysis and result in immediate re-classification and re-prioritization of indications from IDi surveys.
- Provide output reports in Google Earth (KMZ files), MS Excel or PDF format for the data ranges required

4.2.4 DIRECT EXAMINATION

The Direct Examination step will include analysis of pre-assessment data and indirect inspections data to select site for excavations and evaluation of pipe surface and coating. Site lengths would be approximately one pipe length of approximately 14 (12+2) meters.

Direct inspection includes but not limited to following activities:

i. Prioritization of indications found during the indirect inspections for which a Priority List for Direct Examination shall be prepared from the information/data gathered in the previous steps.

ii. Excavations & data collection at areas where corrosion activity is most likely.

iii. Excavation and measurement of coating resistance where resistance is indicated to be least. These indications would be excavated and a detailed visual examination of the coating damage, corrosive environment and coating resistance shall be performed and documented as well as ND examination of pipe wall thickness at these locations shall be carried out.

iv. NDE will be performed at these locations to measure pit or corrosion damage using a grid pattern for mechanical integrity calculations. Dye and/or Magnetic Particle testing would be performed on long seam welds and girth welds for crack detection.

If corrosion or cracking is identified mechanical integrity analysis will be done as latest edition of ASME B31 G/31 G modified/ B 31.8 to calculate remaining strength of the pipeline

If corrosion & coating damage is identified, then measurements of coating damage & corrosion defect and their root cause analysis shall be done.

On a per DEx site basis, an engineering schematic shall be generated displaying correlation of IDi indications, disbonded coating areas, location of anomalies along with applicable pass/ fail criteria based on pressure burst calculations as per ASME B31G etc. Each of the anomalies that have failed the pressure burst calculations shall also be represented in a graphical format. Defect locations of each pipeline shall be mentioned in the drawing.

Direct examination shall be carried out as per NACE SP0502-2010.

4.2.5 POST-ASSESSMENT

The purpose of the Post-Assessment is to assess the overall effectiveness of the ECDA process and to define reassessment interval.

Post-Assessment includes but not limited to following activities:

i. Root cause analysis
ii. Remaining life calculation.
iii. Complete information on pipeline coating.
iv. Defining of re-assessment interval of ECDA. Overall effectiveness of the ECDA process.
v. The Post-Assessment will also provide evidence and justification for various mitigation requirements in order to increase the reassessment interval and remaining life. Recommendation for mitigation/ suitable remedial measure for both pipe metal and coating.
vi. Integration of all previous steps & report submission.

4.3 MODALITIES OF INTERNAL CORROSION DIRECT ASSESSMENT (ICDA)

4.3.1 ICDA shall be done strictly as per guide line given in NACE std; SP 0206-2006 (DG-ICDA) for the dry gas pipelines, NACE Std: SP 0110-2010 (WG-ICDA) for wet gas pipeline; NACE Std: SP 0208-2008 (LP-ICDA) for the crude oil pipelines and NACE Std: SP0116- 2016 (MP-ICDA) for multiphase pipelines or where LP-ICDA is not applicable. Considering flow conditions in pipelines NACE std. The year of edition of the NACE Standard is indicative only and the latest edition shall be applicable.

Brief of the steps involved in ICDA are:

- Pre-Assessment
- Indirect inspection
- Detailed examinations
- Post Assessment

4.3.2 PRE-ASSESSMENT:

The objectives of pre-assessment step are to determine feasibility of ICDA & identification of ICDA region.

Pre-assessment steps include but not limited to following activities:

i) Collection, integration & analysis of pipeline data.

ii) Assessment of ICDA feasibility Identification of ICDA regions. The results for in-direct inspections performed during the ECDA program will also be utilized in the pre-assessment during ICDA. The pre-assessment will also analyse physical and chemical properties of fluid / chromatography of gas transported through the pipelines to calculate potentiality for internal corrosion along with estimated corrosion rates based on these chemical properties. Complete elevation profile survey of each pipeline shall be done along with survey of soil data (for ECDA) so as to use the profile data in indirect inspection.

iii) *Physical and chemical properties of fluid / chromatography of gas shall be provided by the Company from the test report available. The data to be provided is detailed in Annexures: IV-A, IV-B and IV-C. Any additional data required and verification test necessary, if any, for proper execution of the job under the contract, shall be arranged by the Contractor at no extra cost to the Company.*

iv) Site visits by Contractor's SME (Subject Matter Expert) for ICDA for reviewing historic information, site visits, samples, interviewing, advanced lab testing for liquid, solids, water chemistry, MIC etc.

4.3.3 INDIRECT INSPECTIONS:

The objective of the indirect inspection is to use flow modelling along with corrosion rate modelling results to predict the locations most likely to have suffered internal corrosion within each ICDA region and sub-region.

In ICDA, the indirect inspection step consists of multiphase flow modelling identifying those factors which influence internal corrosion such as non-steady flow, temperature and pressure gradients, wettability, which influence solids deposition, liquid hold-up and other related parameters. The corrosion, solids and/or liquid hold-up prediction shall be modelled as specified in NACE SP0206- 2006, SP0110-2010, SP0208- 2008, SP0116- 2016 (TG 426).

The indirect inspection of ICDA shall include but not limited to following activities for each pipeline:

i. Performing multiphase flow calculations using collected data to determine critical inclination angle of liquid hold up and solid hold up.
ii. Flow modelling calculation.
iii. Inclination profile calculation
iv. Producing pipeline inclination profile
v. Calculation of pressure, temperature, pH change for each sub region within the pipeline
vi. Liquid Hold locations and amounts
vii. Solid Hold up locations and amounts
viii. Superficial critical gas and liquid velocities
ix. Hydrocarbon and water dew point
x. Assessment if erosion or corrosion due to Oxygen

xi. MIC analysis including DNA genetics
xii. Corrosion rates for each of the different operating scenarios for each pipeline and cumulative corrosion rates and the subsequent cumulative % metal loss over the life of the pipeline.
xiii. Identifying sites where internal corrosion may be present by integrating the flow and corrosion modelling calculation results with the pipeline inclination profile.
xiv. Site selection- general as well as specific.
~~xv. Comparisons of data and analysis wherein the WG-ICDA or MP-ICDA criteria for % metal loss must be met even when applying DG-ICDA or LP-ICDA~~

4.3.4 DETAILED EXAMINATION:

The objective of ICDA detailed examinations are to determine whether internal corrosion exist at location selected in the previous step and to use the findings to assess the overall condition of the ICDA region.

The detailed examination step focuses examination efforts on locations and features most likely to experience internal corrosion. Summary Table shall be prepared from the findings of previous steps and the final assessment sites should be selected as per NACE SP 0110-2010.

The detailed examinations to be performed shall include Guided Wave Ultrasonic Testing and Automated Corrosion Mapping. The LRUT technique may be used to extend the NDE results of the dig verification by screening piping outside the extent of this dig for metal loss indications. The AUT technique shall be utilized for non-destructive measurement and visualisation of the internal surface of the piping at these locations.

4.3.5 POST-ASSESSMENT:

The purpose of the Post-Assessment is to assess the overall effectiveness of the ICDA process and to define reassessment interval.

Effectiveness of ICDA process shall be determined by the correlation between detected corrosion & the predicted location.

Post-Assessment includes but not limited to following activities:

i. Defining of re-assessment interval of ICDA.
ii. Defining remaining life of the pipeline
iii. Providing Root Cause analysis
iv. Overall effectiveness of the ICDA process.
v. Recommendation for mitigation/suitable remedial measure if any Integration of all previous steps & report submission.

4.4 MODALITIES OF STRESS CORROSION DIRECT ASSESSMENT (SCCDA):

4.4.1 SCCDA shall be done strictly as per guidelines given in NACE Std; SP0204-2008. The year of edition of the NACE Standard is indicative only and the latest edition shall be applicable.

Brief of the steps involved in SCCDA are:

- Pre-Assessment
- Indirect inspection
- Direct inspection
- Post Assessment

4.4.2 PRE-ASSESSMENT:

The objective of the Pre-Assessment step is to collect and analyse historic and current data to prioritize potentially susceptible segments of pipelines for high and low pH SCC.

A pipeline segment is considered to be susceptible to SCC if following factors are met.

- The operating stress exceeds 60% of the SMYS.
- The operating temperature has historically exceeded 38 °C (100 °F).
- The segment is less than or equal to 32 km (20 mi) downstream from a compressor station.
- The age of the pipeline is greater than or equal to 10 years.
- The coating type is other than fusion-bonded epoxy (FBE).

Pre-assessment steps include but not limited to following activities:

i. Collection, integration & analysis of pipeline data.
ii. Prioritizations of susceptible segments.
iii. Selection of dig sites for susceptible segments in case wanting to go direct to Direct Examination.
iv. Site visits by Contractor's SME (Subject Matter Expert) for SCCDA for reviewing historic information, site visits, samples, interviewing etc.

4.4.3 INDIRECT INSPECTIONS:

The objectives of the Indirect Inspection steps are to conduct measurement to supplement the data obtained in pre-assessment. If additional information/data is needed to prioritize susceptible segment & select site for direct examination, then techniques to be used for measurement shall include CIPS/ DCVG/ PCM/ AC Interference and Terrain Modelling.

In the case of SCCDA, typical information includes aboveground surveys, coating fault surveys, locations of dent and bend found by surveys. Indirect step will also consist of the SCC predictive models as cited in the non-mandatory Appendix A of the NACE Standard SP0204-2008. Through these predictive models a correlation can be made with soil/ terrain conditions and their susceptibility for different coating types.

4.4.4 DIRECT EXAMINATION:

The objectives of the Direct Examination Step are:

i. To examine the pipe at locations chosen after the pre-assessment step and the indirect examination.
ii. To assess the presence, extent, type, and severity of SCC at the individual dig sites.
iii. Identify low or high pH SCC.
iv. Identification of SCC Colonies.

Direct inspection includes but not limited to following activities:

i. Based on prioritization of indications found during the indirect inspections the Priority List for Direct Examination shall be prepared. Prioritization shall be done as per guidelines in NACE SP0204-2008.
ii. Excavation and data collection at the field sites and it shall be done as per given in NACE SP0204-2008.
iii. Analysis and documentation of the type of cracking if SCC is detected.
iv. Evaluation and documentation of the severity of cracking if SCC is detected.

4.4.5 POST-ASSESSMENT:

The purpose of the Post-Assessment is to assess the overall effectiveness of the SCCDA process and to define reassessment interval.

Post-Assessment includes but not limited to following activities:

i. Remaining life calculation.
ii. Defining of reassessment interval of SCCDA. Overall effectiveness of the SCCDA process.
iii. Root Cause Analysis.
iv. Recommendation for mitigation/suitable remedial measure if any.
v. Integration of all previous steps and report submission.

4.5 NON DESTRUCTIVE EVALUATION (NDE):

The Direct Examination (DEx) processes shall predict areas where defects could form in future as well as areas where defects have already formed and/or are propagating. Therefore, Direct examination parts of ECDA, ICDA and SCCDA shall focus on locations and features most likely to experience defects and measurement of defect dimensions. Hence excavation and subsequent inspection, sufficient to identify and characterize defect features in the pipe, shall be used.

The direct examinations to be performed shall include NDE techniques such as Guided Wave Ultrasonic Testing, Automated Corrosion Mapping, Long Range Ultrasonic Testing, Radiography, Magnetic particle Inspection as required from case to case. Justification for using each NDE technique shall have to be provided by the Contractor to the COMPANY.

The test sequence shall consist of a set up procedure followed by data collection. The data collected shall be checked to ensure they are satisfactory and thereafter the data shall be verified.

5.0 RESOURCE MOBILIZATION FOR THE JOB:

5.1 RESPONSIBILITY OF THE COMPANY:

5.1.1 The Company shall make pipelines available to the Contractor as per work plan submitted by the Contractor.

5.1.2 The Company shall deploy Engineer/competent person with the Contractor's team for facilitating work in the RoW/RoU.

5.1.3 Excavation upto pipe surface, backfilling and recoating and coating repair after direct assessment shall be done by the COMPANY by engaging a Contractor from the oil field area as a supporting Contractor. The CONTRACTOR shall suitably liaise with the supporting Contractor for such work.

5.2 CONTRACTOR'S OBLIGATION:

Apart from The Company's obligation mentioned in the clause no. 5.1 above, all other obligations/ responsibility are with the Contractor to complete the entire job as per terms and conditions of tender document. This will include but not limited to the following:

5.2.1 The Contractor shall arrange for power supply required by him for carrying out all works under the Contract.

5.2.2 The Contractor Shall associate personnel of the COMPANY in every step of data analysis either at the worksite or the Contractor's premises in India or abroad as specified in clause 25.0 of Section-III Special Conditions of Contract.

5.2.3 The Contractor shall specify in the bid document the models and softwares which will be used in data analysis and flow modelling. Preferable softwares are OLGA and Pipe Ladder. If the Contractor specifies any other software track record of the software for a minimum of 50(fifty) km length of pipeline shall be provided. On completion of the contract the latest versions of the softwares shall be provided to the COMPANY in laptop computer of compatible configuration free of cost and the COMPANY's personnel shall be trained to run the softwares.

5.2.4 Deployment of adequate Manpower: All manpower (Key personnel/ Subject Matter Experts (SME), technical, non-technical skilled, unskilled/labour) required for the above job shall be in the scope of the CONTRACTOR and the CONTRACTOR shall deploy sufficient number of manpower at the site.

5.2.5 The SMEs of the CONTRACTOR must be NACE certified Internal Corrosion Specialist, CP Specialist, Corrosion Specialist with proven Direct Assessment experience for all three (3) DA's and all four (4) steps.

5.2.6 The Contractor's team shall comprise of the following SMEs

i. **Programme Manager/Site Manager**:
Programme Manager shall be the overall incharge of Contractor's DA team. He shall be responsible for preparing the detailed workplan, obtaining approval of the workplan from the Company, coordinate and execute the DA programme as per Scope of Work alongwith the team members and communicating with the Company on day to day basis. Programme Manager to be at site at all time. He must have proven experience carrying out DA of at least 30 pipelines as a DA team member and shall have complete understanding of the job.

ii. **DA Engineer/ DA Manager**:

Minimum qualification requirements for this position are given below:

- DA Engineer shall possess a Bachelor's Degree in any Engineering discipline with accreditation. A minimum of eight (8) years relevant experience in all segments of Pipeline Integrity Management. Must have specific experience in External Corrosion Direct Assessment (ECDA), Stress Corrosion Cracking Direct Assessment (SCCDA), Internal Corrosion and Direct Assessment (ICDA), pipeline inspection and assessment techniques.
- Shall be either a Professional Member of the Institute of Corrosion (UK) or a NACE International (USA) Certificated Corrosion specialist.
- *Must have participated in Direct Assessment of at least 10 different pipelines totalling atleast 40 km pipeline lengths cumulative of ECDA, ICDA & SCCDA program.*
- *Must have inspected at least 20 Direct Examination sites (each site to be at least a joint length) in at least 10 different pipelines of Direct Assessment work as stated in the preceding para.*
- Must be able to supervise and be responsible for all site operations during all stages of ICDA along with quality control and management as per NACE SP0208-2008 standards.
- Must be able to supervise and be responsible for all site operations during the 4 stages of ECDA and SCCDA along with quality control and management as per NACE SP0502-2010 & SP0204-2008 standards.
- Shall have the experience of soil sample collection and soil property analysis.
- Must be able to perform engineering assessment calculations and be responsible for ensuring accuracy of the final inspection engineering reports and interpretive content.
- Shall be at Site at all the time when DA work is in progress and to liaise fully with the Engineer in charge.

If one DA engineer does not have all the experience mentioned above on all technique, contractor may deploy additional engineers for

each technique who are sufficiently qualified in that particular technique.

iii. **GIS/GPS Manager**:

- Shall have adequate qualification in the relevant discipline and shall have at least 2 years of experience in the field of GIS / GPS application and collecting GPS coordinates.
- Shall have thorough knowledge of various aspects of GIS / GPS system, tools and equipment.
- Shall be in charge of manual GPS mapping and supervise all activities related to it.
- Shall be employed full time at Site during manual GPS mapping activities.

iv. **CP Engineer:**

NACE qualified CP Engineer with sufficient experience to be deployed. CP Engineer shall possess a Bachelor's Degree in any Engineering discipline and possesses NACE Level 2 certification.

v. **Corrosion Engineer:**

NACE qualified CP Engineer with sufficient experience to be deployed. CP Engineer shall possess a Bachelor's Degree in any Engineering discipline and possesses NACE Level 2 certification.

vi. **Process/ Flow Modulation Engineer:**

The Engineer shall possess a Bachelor's Degree in any Engineering discipline with accreditation. A minimum of five (5) years relevant experience. Must have specific experience in flow analysis of atleast 10 nos. of hydrocarbon pipelines (liquid, wet gas, dry gas) using atleast 2 nos. of Softwares based on Teevens Model (Eg- enpICDA™), Nyborg Model (Eg- Olga System), Srinivasan Model (Eg- Predict Pipe) or any other software based on Models mentioned in LP-ICDA NACE SP0208-2008 and WG-ICDA NACE 0110-2010.

vii. **Mechanical integrity engineer:**

The Engineer shall possess a Bachelor's Degree in any Engineering discipline with accreditation. A minimum of five (5) years relevant experience. Must have specific experience in integrity analysis of atleast 10 nos. of hydrocarbon pipelines as per ASME B31G or Modified B31G and RSTRENG.

viii. **NDT experts** having ASNT level-2 certification along with equipment & their calibration certificate.

ix. The Contactor shall have a **NDT & corrosion expert with NACE level-3 certification** for validating the results of ECDA, ICDA, SCCDA. The Expert(s) shall also certify the reports and mitigation/rehabilitation plans submitted by the contractor to the Company.

5.2.7 The Technicians and Helpers shall be deployed by the Contractor with the SME as necessary.

5.2.8 The name and credentials of the SMEs shall be submitted by the bidder along with the bid. In case any SME is hired by the Bidder, the agreement of hire between the Bidder and the SMEs shall be valid throughout the contract period and the agreement shall be submitted along with the bid. The SMEs shall be deployed by the Contractor exactly as per list submitted with the bid and replacements shall not be allowed by the Company. However, in extraordinary situation when a SME is no more able to continue with the work, the Contractor shall replace the SME by an expert having exactly the same credentials. Such replacement shall be approved by the Company who shall have the discretionary power in this regard.

The following shall be considered as extraordinary situation:

- SME become invalided due to unsound health or serious injury.
- Death of SME.
- Involvement in criminal offence.

5.2.9 All the tools, tackles, consumables required to complete the above work i.e. ECDA, ICDA, SCCDA and NDE shall be in the scope of the Contractor and their mobilization and demobilization after completion of work shall be in the scope of the Contractor. Lodging, food and transportation of the Contractor's representative shall be in the scope of the Contractor.

5.2.10 Responsibility for Accurate Reporting: Any omission or deficiency in reporting of defects hereof, the contractor shall remedy such omission or deficiency by reanalysis of the appropriate inspection data or otherwise to the full satisfaction of the Company at no extra cost to the company. In the event of failure of the Contractor to 'remedy' such omission or deficiency, the performance guarantee shall be invoked without prejudice to the right of the company to seek any other recourse under law.

6.0 PROCEDURE OF WORK: The Contractor shall submit work procedure for direct assessment covered under scope of work before commencing the job for approval of the COMPANY.

7.0 SCHEDULE OF RATES (SOR):

The bidders shall quote exactly as par table for quotation given in Section V-Schedule of Rates. Rates must be mandatorily quoted for each item and percentage weightage of each item shall be specified. However, the percentage weightage specified by the Bidder shall not exceed the percentage weightage specified by the company in SOR.

8.0 DOCUMENTS & REPORTS:

8.1 Preparation and submission of report of various assessments carried out in hard copy as well as in soft copy in proper Storage Drive (03 copies each). All the report shall be GIS package/platforms compatible.

8.2 Report shall consist of but not limited to following:

i. Approved work procedure.
ii. Detail of data collected during pre-assessment for different kind of study.
iii. Detail of indirect inspection, direct inspection, flow modulation etc. carried out.
iv. Reports for each of the threats at the end of each of the steps (that is Pre Assessment, Indirect Inspection, Direct Examination and Post Assessment) shall be submitted by contractor for each pipeline.
v. Detail of different survey carried out along with their analysis & findings/observations.
vi. Detail of faults of pipe metal and pipe coating along with photograph.
vii. Root cause analysis of the defects for both pipeline metal and coating.
viii. Detail of recommendations for Repair Report (RRR) for both pipe metal and coating and Rehabilitation plan for each pipeline
ix. Re-assessment interval.
x. The remaining life of pipeline & fitness for purpose shall be calculated based on the guidelines of standard ASME B31G (latest edition).

8.3 The report submitted by the Contractor shall be certified by a NACE Level-4 certified specialist(s) for ECDA and ICDA.

8.4 The Contractor shall submit draft reports progressively for each step of each assessment i.e. ECDA, ICDA and SCCDA for review by the COMPANY. Draft of the final report shall be submitted for final review, discussion with the Contractor and correction if any.

8.5 The final report shall be submitted in 3 sets of both soft format and hard format. The final report shall be explained to the COMPANY vide power point presentation which may require more than 1 (one) session spread over days in venues/places to be decided by the COMPANY to which the Contractor shall not have any objection.

ANNEXURE-I

Gas Pipelines Considered Under Category-3

	RICH GAS NETWORK (UPSTREAM OF LPG PLANT				
Sl. No.	***Name of Pipeline***	***Length (km)***	***Size (mm)***	***Year of Completion***	***Remarks***
	From Shalmari area to Duliajan (NHK 16 Manifold)				
1	Dehing Bridge-OCS 1	1.5	300	1986	Partly replaced from OCS 1 to South Bank road in 2006
2	OCS1-Tingkhong (Main P/L RoW)	20	300	1991	Pigging not done. Pigging planned.

3	Tingkhong (Main P/L RoW)-Salmari OCS	3.5	250	1992	Pigging not done.
4	GCS 1 - OCS 1	1	250	1992	Partly replaced in 2012. Pigging done in July 2017
5	Tinghkong T/Ali - AGCL line	2.5	250	1992	Pigging not done.
	From Barekuri-Makum area to Duliajan (NHK 16 Manifold)				
6	CGGS - Kathalguri (via NHK#308)	18	400	1982	Pigging not done.
7	Nagajan OCS - Hapjan OCS	6	200	1991	Pigging not done.
8	Kathalguri-Langkasi OCS	5	250	1985	Pigging not done.
9	Madhuting (NHK28)-OCS7	1	250	1980	Pigging not done.
10	GCS 4-Madhuting (NHK 28)	4	200	1980	Pigging not done.
11	GCS 4-OCS 4	1	250	1978	Pigging not done.
	From Kusijan-Jorajan area to Duliajan NHK16 Manifold				
12	Duliajan-Bhadoi Panchali (Rupaibam)	12.5	400	1990	Pigging not done.
13	Bhadoi Panch ali (Rupaibam)- Jorajan Forest Gate			1996	Pigging not done.
14	Jorajan Forest Gate-Jorajan Savitri Tinali	3	250	1991	Pigging not done. Pigging planned.
15	Ushapur Tin ali-Jaipur OCS	9	250	1985	Pigging not done.
16	Jorajan OCS-Jorajan T/Ali	0.7	200	1984	Pigging not done.
	From Kathaloni - Dikom area to LPG Offtake Point:				
17	a) LPG Offtake-Hatiali Scrapper trap	22	400	2000	Pigging not done. Pigging taken up.
18	Loop line of (a) LPG Offtake- Lengrai Scraper Trap.	17	300		First Pigging carried out in January 2018.
19	Hatiali S/Trap- Dikom	6	250	1994	Pigging not done.
20	Bhekulajan T/Ali - Bhekulajan EPS	1.5	150	1996	Pigging not done.
21	Bhekulajan T/Ali - Bhekulajan EPS	1.5	200	2000	Pigging not done.
22	Bhekulajan EPS - Benegenabari	3.5	200	2000	Pigging not done.
23	Hatiali S/Trap - Hatiali FGGS	1	200	2001	Pigging not done.
24	Hatiali S/Trap - Hatiali EPS	2	100	1998	Pigging not done.
25	Kathaloni - Wilton Grantt	6	200	1995	Pigging not done.

26	Kathaloni - Wilton Grantt (loop line)	6	200	2001	Pigging not done.
27	Kathaloni - Tengakhat OCS	6.5	200	2001	Low Pressure line. Pigging not done.
28	Tengakhat OCS - Tengkhat Jn	0.7	200	2001	Pigging not done.
	From OCS 8-OCS 2 area to Duliajan NHK16 manifold				
29	Duliajan(NHK 16) -OCS 6	9	300	1985	Pigging not done.
30	OCS 2 - OCS 8	2	200	1975	Pigging not done.
31	OCS 8- GCS 8	1	250	1982	Pigging not done.
32	GCS 2 - OCS 2	0.8	250	2002	Pigging not done.
33	LPG offtake - NHK 16 field header	1.5	400	2000	Pigging not done.
34	LPG offtake - NHK 16(loop line)	1.5	400	2000	Pigging not done.
35	LPG offtake -OCS 5	0.5	150	1986	Pigging not done.
	B LEAN GAS NETWORK (DOWNSTREAM OF LPG PLANT)				
36	LPG Offtake-Kathalguri NEEPCO offtake	16	400	1994	Pigging not done.
37	Madhuban (NHK50) - NHK 21 W/Inj Stn	2.5	250	1994	Pigging not done.
38	GCS7-Madhuting (NHK28)	1.5	250	1994	Pigging not done.
	From NEEPCO offtake to to Digboi				
39	Jorajan (Savitri T/Ali) - Digboi offtake	20	250	1991	Pigging not done.
	C. OTHERS (ISOLATED LINE)				
40	LPG Offtake-Tingri Gas Grid	4.5	150	1996	Pigging not done.
41	Moran OCS/GCS - MRN Power House	6	100	1995	Pigging not done.
	D. GAS LIFT NETWORK				
42	OCS 5 - OCS 6-OCS 2 - OCS 8 area	14	100	1980	
43	Jaipur area	5	100	1986	
44	Ushapur area	5	100	1986	
45	Nagajan - Jorajan	12	100	1984	
46	Kathalguri-Langkasi area	14	100	1982	
47	Shalmari area	10	100	1995	Under Replacement.
48	Kathaloni - Wilton Grantt - Hatiali	16	100	1997	
49	OCS 1 area	5	100	1980	

50	Hapjan-Makum Area		16	100	1994	
51	Moran area		12	100	1986	
		Total (in km) =		**338.2**		

ANNEXURE-II

Crude Oil Delivery Pipelines Considered Under Category-3

Sl. No.	Pipeline Description	Size mm (inches) NB	Length (Km, approx)	Remarks	Year of Commissioning and Present Status
A	Bhogpara to Dikom	150 (6")	15	Piggable line. Pigging carried out on a regular basis.	1998 and in operation
B	Dikom to ITF	200 (8")	9.5	Piggable line. Pigging carried out on a regular basis. 1 no. Crude Oil Injection point in between at Hatiali at Chainage 6km (approx).	1995 and in operation
C	Kathaloni to ITF	200 (8")	6.5	Piggable line. Pigging carried out on a regular basis	1997 and in operation
D	Well#6 (OCS 8,2,6) to CTF	200 (8")	10	Non Piggable line. One no. injection point at Well#6 (Chainage=7.5km approx). Considered as same Line.	above 25 years and in operation
E	OCS 1 to CTF (via Well#6)	200 (8")			
F	Jaipur to Ushapur	100/200 (4"/8")	7.5	Non Piggable line	1981 and in operation
G	Shalmari to Moran CTF	200 (8")	22	Non Piggable line. One no. injection point may come up at Chainage 3km (approx) by the time the DA Contract is placed.	1993 and in operation
H	CTF to ITF	250 (10")	24	Non Piggable line. a. Upto Chainage 2.4 km (approx)- Line is not in operation. b. Two nos. injection points in between for Crude Oil of NKF (Chainage: 2.4 km) and Balijan (Chainage: 8.8km approx).	**Line in operation. Above 15 years. Considered for DA**
I	Kathalguri OCS to Nagajan Tiniali	100/150 (4"/6")	3	Non Piggable line	Data Not Available. Line in operation. Hence considered in Category-3
J		150 (6")	1.5	Non Piggable line	

	Hatiali EPS to Hatiali Scraper Trap				Data Not Available. Line in operation. Hence considered in Category-3
	Total (in km)=		**99**		

ANNEXURE-III

List of Pipelines in Same Route		
Crude Oil Delivery Pipeline (Refer Sl. No.)	**Gas Pipeline (Refer Sl. No.)**	**Remarks**
-----	6 and 10	Partly same route.
-----	6 and 9	Partly same route.
-----	6, 36 and 37	Same route.
-----	17 and 18	Same route.
-----	20 and 21	Same route.
J	23 and 24	Same route.
-----	25,26,27 and 28	Same route.
-----	33 and 34	Same route.
H	17 and 18	Same route.
D/E	1	Same route.
G	3	Same route.
C	27	Same route.
F	43 and 44	Same route.
Note- Sl. No. 42 to 51 may have partly common route with few of the pipelines.		

ANNEXURE-IV A

Parameters tested for CRUDE OIL SAMPLE	
Sl. No.	**Parameters**
1	Water content,% (v/v)
2	Oil content,% (v/v)
3	Density at 15^{0}C. gm/cm3
4	API gravity @ 60 ^{o}F
5	Wax content,% (w/w)
6	Asphaltene content, % (w/w)
7	Resin content, % (w/w)
8	Pour point , ^{o}C
9	pH
10	Salinity, ppm

11	Carbonate, ppm
12	Bicarbonate, ppm
Distillation Characteristics (as per IP24/84)	
13	Initial boiling point ,^{o}C
Temp.^{o}C	**% Recovery**
75	---
100	---
125	---
150	---
175	---
180	---
200	---
225	---
250	---
275	---
300	---
14	Class of crude
15	Residue after distillation,% (v/v)
16	Evaporation loss, % (v/v)
17	Density at 15^{0}c. gm/cm3. Residue
18	Density at 15^{0}c. gm/cm3. Distillate.
19	Scotch setting point of residue, ^{o}C
20	Correlation Index
21	Characterisation Factor
22	Rheology of the Raw Crude

ANNEXURE-IV B

Parameters tested for Condensate sample	
Sl. No.	**Parameters**
1	Colour (visual)
2	Sample volume , ml
3	Density at 15 ^{o}C (gm/cc) ,as per (IP -160).
4	API gravity at 60 ^{o}F, (as per IP - 160).
5	Water content, % (v/v), as per IP - 358

6	Oil Content, (% v/v)		
7	Specific gravity at 60 °F		
8	Distillation Characteristics		
8a	Initial boiling point, °C		
8b	v/v % Distilled at °C	%,v/v	Recovery % v/v
		5%	
		10%	
		15%	
		20%	
		30%	
		40%	
		50%	
		60%	
		70%	
		80%	
		85%	
		90%	
		95%	
8c	Final boiling point °C.		
8d	Distillate Recovered, % (v/v)		
8e	Residue, % (v/v)		
8f	Loss, %		

ANNEXURE-IV C

Parameters tested for Gas Sample		
Sl. No.	**Components**	**Composition% (v/v)**
1	Methane	
2	Ethane	
3	Propane	
4	i-Butane	
5	n-Butane	
6	i-Pentane	
7	n-Pentane	
8	Hexane	
9	Heptane	

10	Octane	
11	Nonane	
12	Decane	
13	Nitrogen	
14	Carbon dioxide	
15	Gas Gravity	
16	Gross Calorific value (Kcal/SCUM)	
17	Net Calorific value (Kcal/SCUM)	
18	Total sulphur (on demand)	

END OF SECTION-II

Appendix–I

FORMAT OF AGREEMENT BETWEEN BIDDER AND THEIR PARENT COMPANY / *100% SUBSIDIARY COMPANY/BRANCH OFFICE (As the case may be)*

(IN CASE OF INDIAN BIDDER TO BE EXECUTED ON STAMP PAPER OF REQUISITE VALUE AND NOTORISED)

This agreement made this ___ day of ____ month ____ year by and between M/s. _____ (Fill in the Bidder's full name, constitution and registered office address) hereinafter referred to as bidder on the first part and M/s. _____ (Fill in full name, constitution and registered office address of Parent Company/Subsidiary Company, as the case may be) hereinafter referred to as "Parent Company/ Subsidiary Company/Branch Office (Delete whichever not applicable)" of the other part:

WHEREAS

M/s. Oil India Limited (hereinafter referred to as OIL) has invited offers vide their Tender No. _____ for _____ and M/s _____(Bidder) intends to bid against the said tender and desires to have technical support of M/s. _____ [Parent Company/ Subsidiary Company/Branch Office-(Delete whichever not applicable)] and whereas Parent Company/ Subsidiary Company/Branch Office (Delete whichever not applicable) represents that they have gone through and understood the requirements of subject tender and are capable and committed to provide the services as required by the bidder for successful execution of the contract, if awarded to the bidder.

Now, it is hereby agreed to by and between the parties as follows:

1. M/s._____(Bidder) will submit an offer to OIL for the full scope of work as envisaged in the tender document as a main bidder and liaise with OIL directly for any clarifications etc. in this context.

2. M/s. _____ (Parent Company/ Subsidiary Company /Branch Office (Delete whichever not applicable) undertakes to provide technical support and expertise, expert manpower and procurement assistance and project management to support the bidder to discharge its obligations as per the Scope of work of the tender / Contract for which offer has been made by the Parent Company/Subsidiary Company/Branch Office (Delete whichever not applicable) and accepted by the bidder.

3. This agreement will remain valid till validity of bidder's offer to OIL including extension if any and till satisfactory performance of the contract in the event the contract is awarded by OIL to the bidder.

4. It is further agreed that for the performance of work during contract period bidder and Parent Company/Subsidiary Company/Branch Office (Delete whichever not applicable) shall be jointly and severally responsible to OIL for satisfactory execution of the contract.

5. However, the bidder shall have the overall responsibility of satisfactory execution of the contract awarded by OIL.

In witness whereof the parties hereto have executed this agreement on the date mentioned above.

For and on behalf of (Bidder)	For and on behalf of (Parent Company/Subsidiary Company (Delete whichever not applicable)
M/s. Witness: 1) 2)	M/s. Witness: 1) 2)

Appendix–II

PARENT COMPANY/ SUBSIDIARY COMPANY/BRANCH OFFICE GUARANTEE
(Delete whichever not applicable)

(IN CASE OF INDIAN BIDDER TO BE EXECUTED ON STAMP PAPER OF REQUISITE VALUE AND NOTORISED)

DEED OF GUARANTEE

THIS DEED OF GUARANTEE executed at ……. this …….. day of …….. by M/s …….. (mention complete name) a company duly organized and existing under the laws of …….. (insert jurisdiction/country), having its Registered Office at …….. hereinafter called "the Guarantor" which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assigns.

WHEREAS

M/s Oil India Limited, a company duly registered under the Companies Act 1956, having its Registered Office at Duliajan in the State of Assam, India, hereinafter called "OIL" which expression shall unless excluded by or repugnant to the context thereof, be deemed to include its successor and assigns, invited tender number …….. for …….. on …….

M/s …….. (mention complete name), a company duly organized and existing under the laws of …….. (insert jurisdiction/country), having its Registered Office at …….. (give complete address) hereinafter called "the Company" which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successor and permitted assigns, have, in response to the above mentioned tender invited by OIL, submitted their bid number …….. to OIL with one of the condition that the Company shall arrange a guarantee from its parent company guaranteeing due and satisfactory performance of the work covered under the said tender including any change therein as may be deemed appropriate by OIL at any stage.

The Guarantor represents that they have gone through and understood the requirement of the above said tender and are capable of and committed to provide technical and such other supports as may be required by the Company for successful execution of the same.

The Company and the Guarantor have entered into an agreement dated …….. as per which the Guarantor shall be providing technical and such other supports as may be necessary for performance of the work relating to the said tender.

Accordingly, at the request of the Company and in consideration of and as a requirement for OIL to enter into agreement(s) with the Company, the Guarantor hereby agrees to give this guarantee and undertakes as follows:

1. The Guarantor (Parent Company / ***100% Subsidiary Company /Branch Office (Delete whichever not applicable***) unconditionally agrees that in case of non-performance by the Company of any of its obligations in any respect,

the Guarantor shall, immediately on receipt of notice of demand by OIL, take up the job without any demur or objection, in continuation and without loss of time and without any cost to OIL and duly perform the obligations of the Company to the satisfaction of OIL.

2. The Guarantor agrees that the Guarantee herein contained shall remain valid and enforceable till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Company.

3. The Guarantor shall be jointly with the Company and also severally responsible for satisfactory performance of the contract entered between the Company and OIL.

4. The liability of the Guarantor, under the Guarantee, is limited to the 50% of the annualized contract price entered between the Company and OIL. This will, however, be in addition to the forfeiture of the Performance Guarantee furnished by the Company.

5. The Guarantor represents that this Guarantee has been issued after due observance of the appropriate laws in force in India. The Guarantor hereby undertakes that the Guarantor shall obtain and maintain in full force and effect all the governmental and other approvals and consents that are necessary and do all other acts and things necessary or desirable in connection therewith or for the due performance of the Guarantor's obligations hereunder.

6. The Guarantor also agrees that this Guarantee shall be governed and construed in accordance with the laws in force in India and subject to the exclusive jurisdiction of the courts of ……., India.

7. The Guarantor hereby declares and represents that this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.

8. The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

For & on behalf of (Parent Company/Subsidiary Company/Branch Office (Delete whichever not applicable))

M/s _____

Witness:
1. Signature _____
Full Name _____
Address _____

Signature _____
Name _____
Designation _____

Common seal of the Company_____

Witness:
2. Signature _____
Full Name _____
Address _____

Appendix-III

PARENT/ULTIMATE PARENT/HOLDING COMPANY'S CORPORATE GUARANTEE TOWARDS FINANCIAL STANDING

(Delete whichever not applicable)

(TO BE EXECUTED ON COMPANY'S LETTER HEAD)

DEED OF GUARANTEE

THIS DEED OF GUARANTEE executed at ..... this ..... day of ..... by M/s ..... (mention complete name) a company duly organized and existing under the laws of ..... (insert jurisdiction/country), having its Registered Office at ..... hereinafter called "the Guarantor" which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assigns.

WHEREAS

M/s. Oil India Limited (hereinafter referred to as OIL) has invited offers vide their Tender No. _____ for _____ and M/s _____(Bidder) intends to bid against the said tender and desires to have Financial support of M/s _____[Parent/Ultimate Parent/Holding Company(Delete whichever not applicable)] and whereas Parent/Ultimate Parent/Holding Company(Delete whichever not applicable) represents that they have gone through and understood the requirements of subject tender and are capable and committed to provide the Financial support as required by the bidder for qualifying and successful execution of the contract, if awarded to the bidder.

Now, it is hereby agreed by the Guarantor to give this Guarantee and undertakes as follows:

1. The Guarantor confirms that the Bidder is a 100% subsidiary of the Guarantor/Branch Office.

2. The Guarantor agrees and confirms to provide the Audited Annual Reports of any of the preceding 03(three) financial/accounting years reckoned from the original bid closing date.

3. The Guarantor have an annual financial turnover of minimum **Rs. 9.40 Crores (or 1.3 Million USD)** during any of the preceding 03(three) financial/accounting years reckoned from the original bid closing date.

4. **Net worth** of the Guarantor is positive for preceding financial/ accounting year.

5. The Guarantor undertakes to provide financial support to the Bidder for executing the project/job, in case the same is awarded to the Bidder.

6. The Guarantor represents that:

(a) this Guarantee herein contained shall remain valid and enforceable till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Bidder.

(b) the liability of the Guarantor, under the Guarantee, is limited to the 50% of the annualized contract price entered between the Bidder and OIL. This will, however, be in addition to the forfeiture of the Performance Guarantee furnished by the Bidder.

(c) this Guarantee has been issued after due observance of the appropriate laws in force in India.

(d) this Guarantee shall be governed and construed in accordance with the laws in force in India and subject to the exclusive jurisdiction of the courts of New Delhi, India.

(e) this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.

(f) the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

For and on behalf of	For and on behalf of
(Bidder)	(Parent/Ultimate Parent/Holding Company(Delete whichever not applicable)
Witness:	Witness:
1.	1.
2.	2.

Appendix-IV

FORM OF PERFORMANCE BANK GUARANTEE FOR ULTIMAT PARENT/SUPPORTING COMPANY

To
M/s OIL INDIA LIMITED (OIL)
CONTRACTS DEPARTMENT
DULIAJAN, ASSAM, INDIA, PIN-786602

WHEREAS _____ (Name and address of Contractor) (hereinafter called "Contractor", which expression shall, unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assignees) had undertaken, in pursuance of Contract No. _____ to execute ----------(Brief Description of the Work)(hereinafter called "the Contract").

Further, M/s _____ (Name of the "**Supporting Company/Ultimate Parent**") having its registered/head office at _____ is the "**Supporting Company/Ultimate Parent**" of M/s.....(Name of the Contractor with address) (hereinafter referred to as the "**Supporting Company/Ultimate Parent**", which expression shall, unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assignees). Based on the experience/technical strength of the **"Supporting Company"/ "Ultimate Parent"** (whichever is applicable), the CONTRACTOR has qualified for award of contract and has agreed to provide complete technical and other support to the CONTRACTOR for successful completion of the contract as mentioned above, entered between OIL and the CONTRACTOR and OIL having agreed that the **"Supporting Company/Ultimate Parent**", shall furnish to OIL a performance guarantee for Indian Rupees/US$ ..... towards providing complete technical and other support to the CONTRACTOR for successful completion of the contract as mentioned above,

AND WHEREAS we have agreed to give the **"Supporting Company/Ultimate Parent"**, such a Bank Guarantee; NOW THEREFORE we hereby affirm that we are Guarantors on behalf of the **"Supporting Company/Ultimate Parent"**, up to a total of (Amount of Guarantee in figures) _____ (in words _____), such amount being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of guarantee sum as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the Contractor / **Supporting Company/Ultimate Parent** before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or the work to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way cease us from any liability under this guarantee, and we hereby waive notice of such change, addition or modification.

This guarantee is valid until the _____day of _____.

The details of the Issuing Bank and Controlling Bank are as under:

A. Issuing Bank:

BANK FAX NO:

BANK EMAIL ID:

BANK TELEPHONE NO:

IFSC CODE OF THE BANK:

B. Controlling Office:

Address of the Controlling Office of the BG issuing Bank:
Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:

SIGNATURE AND SEAL OF THE GUARANTORS _____

Designation _____

Name of Bank _____

Address _____

Witness _____

Address _____

_____

Date: _____

Place: _____

Note:

The Bank Guarantee issuing bank branch shall ensure the following:

a. The Bank Guarantee issued by the bank shall be routed through SFMS platform as per the following details:

i) "MT 760/MT 760 COV" for issuance of bank guarantee.
ii) "MT 760/MT 767 COV" for amendment of bank guarantee.

The above message/intimation shall be sent through SFMS (indicating the Contract Number) by the BG issuing bank branch to Axis Bank, Duliajan Branch, IFS Code: UTIB0001129, Branch address: AXIS Bank Ltd., Duliajan Branch, Daily Bazar, Jyotinagar, Duliajan, District Dibrugarh, PIN: 786602.

b. Bank Guarantee issued by a Scheduled Bank in India at the request of some other Non-Scheduled Bank of India shall not be acceptable.

Annexure-ZZ of BEC

ON THE OFFICIAL PAD OF THE BIDDER TO BE EXECUTED BY THE AUTHORIZED SIGNATORY OF THE BIDDER

Certificate of Compliance of FINANCIAL CRITERIA:

Ref Clause No. B - Financial Criteria of the BRC/BEC – under Note No. C of the Tender

I ……..……. the authorized signatory(s) of ……. (Company or firm name with address) do hereby solemnly affirm and declare / undertake as under:

The balance sheet/Financial Statements for the financial year _____ (as the case may be) has actually not been audited as on the Original Bid Closing Date.

Place: …….

Date: ……. Signature of the authorized signatory

Note: Please note that any declaration having date after the Bid Closing Date will not be considered and will be rejected. This certificate is to be issued only considering the time required for preparation of Financial Statements i.e. if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date.