



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE

| نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |
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| D02  | 0001  | MR       | IN   | 120     | PEDCO     | GCS       | BK    |

شماره صفحه: ۱ از ۲۱

طرح نگهداشت و افزایش تولید ۲۷ مخزن

PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE

نگهداشت و افزایش تولید میدان نفتی بینک

|      |           |                         |               |             |                |                 |
|------|-----------|-------------------------|---------------|-------------|----------------|-----------------|
|      |           |                         |               |             |                |                 |
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IDC: Inter-Discipline Check  
 IFC: Issued For Comment  
 IFA: Issued For Approval  
 AFD: Approved For Design  
 AFC: Approved For Construction  
 AFP: Approved For Purchase  
 AFQ: Approved For Quotation  
 IFI: Issued For Information  
 AB-R: As-Built for CLIENT Review  
 AB-A: As-Built -Approved



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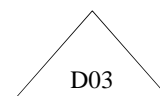
## 1.0 INTRODUCTION

Binak oilfield in Bushehr province is a part of the southern oilfields of Iran, is located 20 km northwest of Genaveh city.

With the aim of increasing production of oil from Binak oilfield, an EPC/EPD Project has been defined by NIOC/NISOC and awarded to Petro Iran Development Company (PEDCO). Also PEDCO (as General Contractor) has assigned the EPC-packages of the Project to "Hirgan Energy - Design and Inspection" JV.



As a part of the Project, a New Gas Compressor Station (adjacent to existing Binak GCS) shall be constructed to gather of 15 MMSCFD (approx.) associated gases and compress & transfer them to Siahmakan GIS.

### GENERAL DEFINITION



The following terms shall be used in this document.

|                              |  |
|------------------------------|--|
| CLIENT:                      | National Iranian South Oilfields Company (NISOC)   |
| PROJECT:                     | Binak Oilfield Development – Surface Facilities; New Gas Compressor Station  |
| EPD/EPC CONTRACTOR (GC):     | Petro Iran Development Company (PEDCO)   |
| EPC CONTRACTOR:              | Joint Venture of : Hirgan Energy – Design & Inspection (D&I) Companies   |
| VENDOR:                      | The firm or person who will fabricate the equipment or material.   |
| SUB VENDOR:                  | The firm or person who will have a direct contract with the Vendor or another Subvendor to perform a part or parts of the Work |
| EXECUTOR:                    | Executor is the party which carries out all or part of construction and/or commissioning for the project.                      |
| THIRD PARTY INSPECTOR (TPI): | The firm appointed by EPD/EPC CONTRACTOR (GC) and approved by CLIENT (in writing) for the inspection of goods.                 |
| SHALL:                       | Is used where a provision is mandatory.  |
| SHOULD:                      | Is used where a provision is advisory only.  |
| WILL:                        | Is normally used in connection with the action by CLIENT rather than by an EPC/EPD CONTRACTOR or VENDOR.                       |

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## 2.0 GENERAL

) This document presents the item material requisitions for Contractor's use as appropriate.

This material requisition covers the requirements for the design, manufacturing, testing and supply of control system, console, Furniture as listed in item 4.0 "SUBJECT OF THE SUPPLY"

All equipment/devices/items shall conform to this requisition and all specifications which have been mentioned in attachment 1 of this material requisition.

## 3.0 REFERENCE / ATTACHED DOCUMENTS

- a. Specified documents in attachment 1 shall be considered as a part of this material Requisition.
- b. All codes and standards which have been referenced in above mentioned specs shall be considered.
- c. In case of any conflict between the contents of this document or any discrepancy between this document and other project documents or reference standards, this issue must be reported to the CLIENT. The final decision in this situation will be made by CLIENT.
- d. Deviations

Any exceptions/clarifications to codes/standards and specifications listed in attachment 1 must be clearly stated in a separate dedicated section of the proposal in the format submitted in attachment 3.

The proposed deviations/comments list shall include as minimum:



- Ñ Reference for the involved specification, chapter and paragraph.
- Ñ Technical justification for the non-compliance.
- Ñ Detailed description of the proposed alternative.

If no exceptions or clarifications exist, either for the complete referenced document or an individual paragraph, the supplier shall be considered to be in full compliance with the relevant document.

The supplier may propose materials of equivalent or better quality compared to those indicated in the equipment data sheet. Even these cases shall be duly included/technically supported in the deviations/clarifications list.

## 4.0 SUBJECT OF THE SUPPLY

The supplier shall supply control system, console, Furniture, printers, LCD, network switch and related cable /connections required for communication between systems (DCS/ESD/F&G/UCPs and accessories). The scope of supply is detailed at para. 5. The supplier shall include in the supply, all other equipment/devices/items not listed in the following, but necessary for a good

|  |  |           |           |         |      |          |       |   |      |
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design and a safe operation, taking into account process data and installation conditions such as area classification and climatic conditions.

) The vendor's supply shall include:

D02

| No. | Item                        | Description  | Total QTY. |
|-----|-----------------------------|--|------------|
| 1   | DCS                         | Control System for signals in New Gas Compressor Station including system and marshaling panels as per project specification and I/O list.         | 1          |
| 2   | OWS                         | DCS Operator Workstation with Double 32" LED/LCD Monitor & Required accessories including required HMI softwares and Software Licenses             | 2          |
| 3   | DCS EWS                     | DCS Engineering Workstation including required softwares and software licenses   | 1          |
| 4   | LSD                         | Large Screen Display with suitable wall mounted bracket  | 1          |
| 5   | Wall mounted Network Panels | Network Cabinets including redundant network switches and all required accessories and LAN cabling   | 1          |
| 6   | Serial Cables               | Serial cables and required accessories between DCS and other systems and subsystems (ESD, F&G, Compressor UCP, ...)                                | 1          |
| 7   | PRINTER(1)                  | Black & White Laser Printers (one for DCS OWS and one for Engineering Workstations)  | 2          |
| 8   | PRINTER(2)                  | Color Printer for Process Graphic  | 1          |
| 9   | LAPTOP                      | DCS/ESD maintenance Laptop as per project Specification including required softwares and Software Licenses   | 1          |
| 10  | Furniture                   | Required Furniture (Desk and Chairs) for Workstations and Printers ( as per BK-GCS-PEDCO-120-IN-PY-0001 Control Room Layout & Arrangement Drawing) | 1          |

The grade of shop assembly of the equipment/devices/items supplied shall be at maximum extent to facilitate site erection and pre-commissioning activities.

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## 5.0 LIMITS OF SUPPLY



### 5.1 THE VENDOR'S SCOPE OF ENGINEERING

Scope of Engineering services includes all items specified in documents, mentioned in "LIST OF REFERENCE / APPLICABLE DOCUMENTS included in Attachment 1, but not limited to the followings:

- ✎ Design, Engineering and Documentation Drawings, documentation and certification in accordance with section 8.0 of this requisition
- ✎ Project management including coordination with all Package Suppliers/Vendors and other subsystems Vendors.
- ✎ Systems' hardware engineering studies including:
  - System sizing
  - System architecture specification
  - Consoles and system cabinets design and arrangement
  - Etc.
- ✎ Systems' software engineering including :
  - DCS functional design specifications
  - I/O segregation and assignment
  - Control strategy and typical I/O loop specification
  - DCS communication interface database definition
  - Specification of communication interfaces with other subsystems including coordination with subsystems' Vendors
  - Standard, graphic displays and report definition
  - Etc
- ✎ Marshaling cabinets' engineering studies
- ✎ Distribution cabinets' engineering studies
- ✎ DCS Marshaling / Distribution cabinets' hardware and software factory acceptance tests according to project documents (Specification For Control System)
- ✎ System integration tests according to project documents (Specification For Control System)
- ✎ On site erection supervision, pre-commissioning, commissioning and start up assistance.
- ✎ DCS Engineer daily assistance (on site).
- ✎ DCS hardware technician daily assistance (on site).
- ✎ Training for DCS system shall be according to project documents (Specification For Control System)
- ✎ Transportation to Site (including insurance)
- ✎ Packing, marking, preparation for shipment, and delivery

### 5.2 THE VENDOR'S SCOPE OF SUPPLY:

Scope of supply includes all items specified in documents, mentioned in "LIST OF REFERENCE / APPLICABLE DOCUMENTS included in Attachment 1, but not limited to the followings:

|  |   |           |           |         |      |          |       |   |                     |
|--|---|-----------|-----------|---------|------|----------|-------|---|---------------------|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |           |         |      |          |       |  |                     |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       |   | شماره صفحه: ۸ از ۲۱ |
|  | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه  |                     |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |                     |



- ⌘ DCS System, power distribute and marshaling Cabinets contain all required hardware, CPUs, Power supply , redundancy modules, I/Os, relays and barriers , communication devices, internal wiring and interconnections, terminations, fan, heater, hydrostat... and all required accessories required for control and monitoring of the plant as per Doc.no. BK-GNRAL-PEDCO-000-IN-SP-0002 and all other referenced documents.
- ⌘ Networking devices and accessories and interconnections as per BK-GCS-PEDCO-120-IN-BD-0001 and all other referenced documents.
- ⌘ All PC and Laptop required to be provided as operator/engineering work stations as per Doc.no. BK-GNRAL-PEDCO-000-IN-SP-0002 and all other referenced documents.
- ⌘ Licensed software as minimum in accordance with Doc.no. BK-GNRAL-PEDCO-000-IN-SP-0002 and all other referenced documents
- ⌘ Furniture to place common control room devices, large screen display, telecom devices and ... as per Doc.no. BK-GCS-PEDCO-120-IN-PY-0001 and all other referenced documents

### 5.3 SCOPE OF RESPONSIBILITY:

The supplier shall assume overall responsibility for the design, manufacture, assembly, test and performance of all equipment/devices/items supplied as indicated in this requisition. This shall include, but not be limited to:

- ⌘ Resolve engineering issues relating to equipment within the scope of supply
- ⌘ Provide complete engineering of control system including detailed engineering, documentation, specifications, data sheet, Drawings,... for all the components
- ⌘ Provide complete engineering of Interface documents for instrumentation and control of the package including all termination, signal list and communication ports
- ⌘ Provide detailed design and documentation of all equipment and components within the scope of supply in accordance with attachment 2 of this document.
- ⌘ Provide all necessary information documents in order to allow the contractor to erect, install and verify the proposed equipment
- ⌘ Implement a quality assurance plan
- ⌘ The quality plan applied to the scope of supply shall include:
  - QA/QC organization and procedures that shall be submitted for approval
  - Plan for HOLD points in the production process proposed to PURCHASER for witness or approval particular activities
  - Production schedule indicating main quality manufacturing processes, inspection and tests according to project documents (Specification For Control System)
  - Qualification of all personnel performing tests to be reviewed by the inspector



|  |  |           |           |         |      |          |       |   |                      |
|--|--|-----------|-----------|---------|------|----------|-------|---|----------------------|
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| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |           |           |         |      |          |       |   | شماره صفحه : ۹ از ۲۱ |
|  | پروژه  | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه  |                      |
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- Supplier shall also provide the description of the following quality activities:
- Sub suppliers products quality
- Quality check and identification of the materials and equipment entering in their manufacturing shop.

- ~ Calibration of test instruments and equipment
- ~ Provide detailed specifications and data sheets for primary measure elements for complete package control and automat control and isolation valves.
- ~ The supplier shall take the full responsibility for the whole package control/protection system and shall be responsible for SAT and Commissioning of the package



#### 5.4 SPARE PARTS

Following items shall be considered (supplied) and included in the bid documentation:

- ~ Spare parts for commissioning and start-up; a qualified and complete list based on PROJECT SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1)
- ~ Spare parts for two years operation; a qualified and complete list based on PROJECT SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1)
- ~ Special Tools (as option; to be recommended by Vendor)
- ~ Capital spare parts (as option to be recommended by Vendor)

#### 5.5 OTHER ITEMS

- ~ Special tools required for installation and maintenance (a qualified and complete list has to be included in the bid documentation)
- ~ Noise acoustic protection and relevant ancillaries in order to match with max. noise level requirements (if necessary)
- ~ Spreader bars for lifting of the panels (if necessary)
- ~ Name plate
- ~ Earthing plate
- ~ Painting of all cabinet in accordance with "Specification for Control Panels and System Cabinets Doc. No. BK-GNRAL-PEDCO-000-IN-SP-0011"
- ~ Preparation for shipment
- ~ Packing for sea freight transportation
- ~ Shop inspections and testing as per specification
- ~ Free access to manufacturing plants for the PURCHASER's inspectors
- ~ Certificates or declarations of conformance (as required) Daily rate for erection supervision (separate price)
- ~ Daily rate for commissioning and start-up supervision (separate price)

|  |   |           |           |         |      |          |       |   |      |
|--|---|-----------|-----------|---------|------|----------|-------|---|------|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |           |         |      |          |       |  |      |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       | شماره صفحه : ۱۰ از ۲۱   |      |
|  | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |   | نسخه |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |      |

- Ռ Training for customer's personnel
- Ռ All required meeting at Vendor shop/office including but not limited to:
  - KOM
  - Technical/Clarification meeting
  - Pre-Inspection Meeting

## 6.0 INSPECTION AND TESTS

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The equipment shall be inspected and tested in accordance with the Inspection & Test plan ( ITP ) issued by the vendor and approved by the Client and EPC/EPD CONTRACTOR (GC) before the award of the order . The Inspection & Test plan (ITP) shall be at least according to the Commodity Procurement and Manufacturing Inspection Instruction (Docs .Nos. ICE-EID-MI-SP01-Rev01), Inspection Level of Commodity and Equipment (Docs .Nos. ICE-EID-MI-SP02-Rev01) and Data Sheets. The vendor shall in any case conduct all the tests required by contractual documents, specifications, codes and standards, manufacturer standard quality system and keep the relevant documentation. All required manufacturing and function test/inspection also Factory Acceptance Test /Site Acceptance Test and Quality Assurance requirements shall be considered in vendor responsibility as per project specification.

All required manufacturing and function test/inspection also Factory acceptance test /Site acceptance test and Quality Assurance Requirements shall be considered in vendor responsibility as per project specification.

## 7.0 VENDOR DOCUMENTATION REQUIREMENTS & SCHEDULE

- ՝ Vendor document shall be according to attachment 2 of this document.
- ՝ All documents, preliminary or final, are to be stamped and signed by the supplier.
- ՝ Failure in dispatch of the required documents shall cause the supply to be considered as unfulfilled.
- ՝ PURCHASER's approval does not relieve vendor, in any way, from his obligation to fulfill the requirements of the purchase order documents.
- ՝ All vendor drawings and documents shall be in English language.

All drawings and documents are to be identified as per clause 1 **“GENERAL DEFINITION”**

|  |   |           |           |         |      |          |       |   |                       |
|--|---|-----------|-----------|---------|------|----------|-------|---|-----------------------|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |           |         |      |          |       |  |                       |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       |   | شماره صفحه : ۱۱ از ۲۱ |
|  | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه  |                       |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |                       |

## 8.0 VENDOR RESPONSIBILITY

VENDOR shall be responsible for the design, engineering, co-ordination, supply, delivery, testing, final check-out and satisfactory operation of the equipment/devices/items. The engineering coordination also includes responsibility for handing and expediting drawings.

Preparation of complete final book, Training courses and assistance during Pre-Commissioning/Commissioning/Startup are also in VENDOR responsibility as per project specification.

Also VENDOR shall be responsible for ensuring that all relevant information and documentation is passed on the sub-suppliers.

## 9.0 GUARANTEE AND WARRANTY

VENDOR shall be fully responsible for the manufacture in respect of proper design, quality, workmanship and operation of all the equipment, accessories etc. including supplied by sub-contractors/VENDORS. This includes both hardware and software. Guarantee conditions and warranty period shall be as stated in the commercial section documents.

It shall be obligatory on the part of VENDOR to modify and/or replace any hardware and modify the operating, application and diagnostic software free of cost, in case any malfunction is revealed even during on-line operation after taking over, within the warranty period.



The System shall be guaranteed against malfunction, partial or complete failure resulting from or attributed to the following:

- ) Sub-standard components and materials.
- ) Incorrectly rated components and materials.
- ) Sub-standard workmanship, including but not limited to sub-standard design, construction, alignment, and setting-up.
- ) Adjustments carried strictly in accordance with VENDOR's manuals or written instructions where those manuals of instructions are in error.

VENDOR shall assume full responsibility for his Sub-VENDORS of equipment and ancillaries supplied under this specification i.e. individual equipment warranties etc. are not to be signed over to the CONTRACTOR but will remain that of the equipment package VENDOR.

If poor performance occurs or defects are found during the warranty period, VENDOR shall make all necessary alternations, repairs and replacements, including shipment of parts and mobilization of assistance, free of charge.

The guarantee period shall be eighteen (18) months from the date of delivery or twelve (12) months from the date of installation, whichever occurs later. Anyway guarantee period shall not be less than twelve (12) months.

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|--|---|-----------|-----------|---------|------|----------|-------|---|------|
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| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       | شماره صفحه : ۱۲ از ۲۱   |      |
|  | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |   | نسخه |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |      |

Manufacturers shall also guarantee all equipment furnished against defects in design, materials, and workmanship and will bear the entire cost of correcting such defects which would develop during the specified warranty period.

The manufacturers/suppliers shall guarantee the supply of min. 20 years spare parts for the quoted equipment.

VENDOR is to provide a list of parts and state for each the replacement time and repair turnaround time under warranty.

## 10.0 DEVIATION



VENDOR's proposal shall be prepared in strict compliance with the requirements set forth in the relevant specifications of tender documents.

VENDOR shall include in his proposal the statement of compliance with the tender documents should VENDOR wish to submit exception to the requirements of tender documents. They shall be submitted for PURCHASER's approval.

## 11.0 PRICE BREAKDOWN

Breakdown price of following items shall be included in the proposal, as well as total price.

- 1) Material and Fabrication for each Section Separately
- 2) Pre-commissioning & commissioning spare parts (END-QC-SP-1)
- 3) 2 years operational spare parts (END-QC-SP-1)
- 4) Packing & transportation



|  |  |   |           |           |          |       |          |       |      |    |     |       |     |    |    |      |     |                       |
|--|--|---|-----------|-----------|----------|-------|----------|-------|------|----|-----|-------|-----|----|----|------|-----|-----------------------|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>  |  |           |           |          |       |          |       |      |    |     |       |     |    |    |      |     |                       |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | <p>PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE</p> <table><tr><td>پروژه</td><td>بسته کاری</td><td>صادرکننده</td><td>تسهیلات</td><td>رشته</td><td>نوع مدرک</td><td>سریال</td><td>نسخه</td></tr><tr><td>BK</td><td>GCS</td><td>PEDCO</td><td>120</td><td>IN</td><td>MR</td><td>0001</td><td>D02</td></tr></table> | پروژه   | بسته کاری | صادرکننده | تسهیلات  | رشته  | نوع مدرک | سریال | نسخه | BK | GCS | PEDCO | 120 | IN | MR | 0001 | D02 | شماره صفحه : ۱۳ از ۲۱ |
| پروژه  | بسته کاری  | صادرکننده   | تسهیلات   | رشته      | نوع مدرک | سریال | نسخه     |       |      |    |     |       |     |    |    |      |     |                       |
| BK   | GCS  | PEDCO   | 120       | IN        | MR       | 0001  | D02      |       |      |    |     |       |     |    |    |      |     |                       |

## ATTACHMENT 1

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### 11.1 LIST OF REFERENCE / APPLICABLE DOCUMENTS

| No.            | Document No.                | Document Title                                       | Rev. |
|----------------|-----------------------------|--|------|
| <b>Process</b> |                             |  |      |
| 1              | BK-GCS-PEDCO-120-PR-PH-0002 | Control Philosophy                                   | D02  |
| 2              | BK-GCS-PEDCO-120-PR-PI-0001 | Symbol & Legend For PFD and P&ID                     | D04  |
| 3              | BK-GCS-PEDCO-120-PR-PI-0002 | P&ID - Gas Compression Inlet Gas Pipeline (Binak)    | D07  |
| 4              | BK-GCS-PEDCO-120-PR-PI-0003 | P&ID - Gas Compression Inlet Gas Pipeline (Golkhari) | D07  |
| 5              | BK-GCS-PEDCO-120-PR-PI-0004 | P&ID - Slug Catcher System                           | D07  |
| 6              | BK-GCS-PEDCO-120-PR-PI-0005 | P&ID - Gas Compression Inlet Knock Out Drum          | D07  |
| 7              | BK-GCS-PEDCO-120-PR-PI-0006 | P&ID - 1st Stage Gas Compression Suction Drums       | D07  |
| 8              | BK-GCS-PEDCO-120-PR-PI-0007 | P&ID - 1st Stage Gas Compression Compressors         | D07  |
| 9              | BK-GCS-PEDCO-120-PR-PI-0008 | P&ID - 1st Stage Gas Compression Air Coolers         | D07  |
| 10             | BK-GCS-PEDCO-120-PR-PI-0009 | P&ID - 2nd Stage Gas Compression Suction Drums       | D07  |
| 11             | BK-GCS-PEDCO-120-PR-PI-0010 | P&ID - 2nd Stage Gas Compression Compressors         | D06  |
| 12             | BK-GCS-PEDCO-120-PR-PI-0011 | P&ID - 2nd Stage Gas Compression Air Coolers         | D07  |
| 13             | BK-GCS-PEDCO-120-PR-PI-0012 | P&ID - 2nd Stage Gas Compression Discharge Drum      | D07  |
| 14             | BK-GCS-PEDCO-120-PR-PI-0013 | P&ID - Gas Compression Dehydration Package           | D07  |
| 15             | BK-GCS-PEDCO-120-PR-PI-0014 | P&ID - Lean Glycol Storage Tank                      | D07  |
| 16             | BK-GCS-PEDCO-120-PR-PI-0015 | P&ID - Instrument & Plant Air System                 | D07  |
| 17             | BK-GCS-PEDCO-120-PR-PI-0016 | P&ID - Nitrogen Generation System                    | D07  |
| 18             | BK-GCS-PEDCO-120-PR-PI-0017 | P&ID - Close Drain System                            | D07  |
| 19             | BK-GCS-PEDCO-120-PR-PI-0018 | P&ID - Corrosion Inhibitor Package                   | D07  |
| 20             | BK-GCS-PEDCO-120-PR-PI-0019 | P&ID - Methanol Injection Package                    | D06  |
| 21             | BK-GCS-PEDCO-120-PR-PI-0020 | P&ID - LP Flare System                               | D07  |
| 22             | BK-GCS-PEDCO-120-PR-PI-0021 | P&ID - Oily Water Sewer                              | D05  |
| 23             | BK-GCS-PEDCO-120-PR-PI-0022 | P&ID - Fuel Gas System                               | D07  |

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| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |           |           |         |      |          |       | شماره صفحه : ۱۴ از ۲۱   |      |
|  | پروژه  | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |   | نسخه |
|  | BK   | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |      |

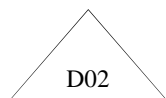
| No.        | Document No.                  | Document Title   | Rev. |
|------------|-------------------------------|--|------|
| 24         | BK-GCS-PEDCO-120-PR-PI-0023   | P&ID - Diesel Oil System   | D07  |
| 25         | BK-GCS-PEDCO-120-PR-PI-0024   | P&ID - Potable Water System  | D06  |
| 26         | BK-GCS-PEDCO-120-PR-PI-0025   | P&ID - Glycol Sump Drum  | D07  |
| Safety     |                               |  |      |
| 27         | BK-GCS-PEDCO-120-SA-PI-0001   | P&ID - Fire Water Network  | D04  |
| 28         | BK-GCS-PEDCO-120-SA-PI-0002   | P&ID - Total Flooding System For Extension of Existing Elect. Building | D02  |
| Instrument |                               |  |      |
| 29         | BK-GNRAL-PEDCO-000-IN-SP-0002 | Specification For Control System                                       | D04  |
| 30         | BK-GNRAL-PEDCO-000-IN-SP-0003 | Specification For ESD  | D05  |
| 31         | BK-GNRAL-PEDCO-000-IN-SP-0004 | Specification For Instrument and Control of Package Unit System (PU)   | D02  |
| 32         | BK-GNRAL-PEDCO-000-IN-SP-0010 | Specification For Instrument/F&G Cables                                | D02  |
| 33         | BK-GCS-PEDCO-120-IN-DC-0002   | Instrument & Control System Design Criteria                            | D02  |
| 34         | BK-GCS-PEDCO-120-IN-DT-0021   | Data Sheets For IRP Panel  | D00  |
| 35         | BK-GCS-PEDCO-120-IN-BD-0001   | Control/ESD/F&G System Block Diagram Configuration                     | D07  |
| 36         | BK-GCS-PEDCO-120-IN-DG-0005   | Control System Loop Diagram  | D01  |
| 37         | BK-GCS-PEDCO-120-IN-LD-0001   | Control System Logic Diagram   | D01  |
| 38         | BK-GCS-PEDCO-120-IN-PY-0001   | Control Room Layout & Arrangement Drawing                              | D03  |
| 39         | BK-GCS-PEDCO-120-IN-LI-0002   | I/O List For Control System  | D04  |
| 40         | BK-GCS-PEDCO-120-IN-LI-0005   | Panels & Junction Box List   | D03  |
| 41         | BK-GCS-PEDCO-120-IN-LI-0006   | Set Point & Alarm List   | D01  |
| 42         | BK-GCS-PEDCO-120-IN-LI-0007   | I&C Power Consumption Summary  | D03  |
| 43         | BK-GCS-PEDCO-120-IN-LI-0009   | Instrument /F&G Cable List   | D03  |
| 44         | BK-GCS-PEDCO-120-IN-DG-0008   | Instrument & F&G Junction Box Termination Diagram                      | D03  |
| 45         | BK-GCS-PEDCO-120-EL-DG-0011   | Wiring Diagram For Interposing Relay Panel (IRP)                       | D02  |
| 46         | BK-GCS-PEDCO-120-IN-DG-0001   | Instrument Earthing Typical Diagram                                    | D03  |
| General    |                               |  |      |
| 47         | ICE-EID-MI-SP01-Rev01         | دستورالعمل بازرسی، خرید و ساخت کالا                                    | D01  |



D02

| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>   |  |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
|--|--|---|------|---------|-----------|-----------|-------|--|--|------|-------|----------|------|---------|-----------|-----------|-------|-----|------|----|----|-----|-------|-----|----|-----------------------|
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | <table><tr><th colspan="8">PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE</th></tr><tr><th>نسخه</th><th>سریال</th><th>نوع مدرک</th><th>رشته</th><th>تسهیلات</th><th>صادرکننده</th><th>بسته کاری</th><th>پروژه</th></tr><tr><td>D02</td><td>0001</td><td>MR</td><td>IN</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table> | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |      |         |           |           |       |  |  | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه | D02 | 0001 | MR | IN | 120 | PEDCO | GCS | BK | شماره صفحه : ۱۵ از ۲۱ |
| PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |  |   |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| نسخه   | سریال  | نوع مدرک  | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| D02  | 0001   | MR  | IN   | 120     | PEDCO     | GCS       | BK    |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |

| No. | Document No.                  | Document Title  | Rev. |
|-----|-------------------------------|---|------|
| 48  | ICE-EID-MI-SP02-Rev01         | دستورالعمل انتخاب سطح بازرسی کالا و تجهیزات               | D01  |
| 49  | E&D-QC-SP-1                   | دستورالعمل تامین قطعات یدکی راه اندازی و راهبری دو سالانه | D00  |
| 50  | BK-GNRAL-PEDCO-000-QC-PR-0002 | QUALITY CONTROL PLAN (QCP)                                | D00  |
| 51  | BK-GNRAL-PEDCO-000-QC-PR-0022 | Specification For Final Data Book (FDB) Requirements      | D00  |
| 52  | BK-GNRAL-PEDCO-000-QC-PR-0045 | Packing, Marking, Transportation Procedure                | D00  |

**\*\*NOTE: THE LATEST REVISION OF PROJECT DOCUMENT IN ATTACHMENT 1 TO BE CONSIDERED AS REFERENCE BY VENDOR.**





|  |   |           |           |         |      |          |       |   |
|--|---|-----------|-----------|---------|------|----------|-------|---|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |           |         |      |          |       |  |
| شماره پیمان:   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       | شماره صفحه: ۱۶ از ۲۱  |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴   | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |   |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |

## ATTACHMENT 2



### 11.2 VENDOR DOCUMENTS MIN. REQUIREMENT

| Item No.    | Document  | With Bid        | TIME SCHEDULE       |                |                     |                   |
|-------------|---|-----------------|---------------------|----------------|---------------------|-------------------|
|             |   |                 | For Review          |                | Final Issue         |                   |
|             |   | Copies No./Type | Copies No./Type (1) | Solar days (2) | Copies No./Type (1) | Calendar days (3) |
| MANAGEMENT  |   |                 |                     |                |                     |                   |
| 001         | Vendor Document Index and Schedule  | 4N              | 6C+E                |                | 6C+E                |                   |
| 002         | Organization Brief  | 3N              | 6C+E                |                |                     |                   |
| 003         | Schedule Level 1, 2, 3 & 4 showing Engineering, Procurement, Fabrication, Inspection, Testing, and Delivery Plan. | 4N              | 6C+E                |                | 6C+E                |                   |
| 004         | Physically Progress Report (Every 2 Weeks)  |                 | 6C+E                |                |                     |                   |
| 005         | Project Organization Chart  | 3N              | 6C+E                |                |                     |                   |
| 006         | Reference List  | 3N              |                     |                |                     |                   |
| 007         | Vendor Catalogue  | 3N              |                     |                |                     |                   |
| QUALITY     |   |                 |                     |                |                     |                   |
| 008         | Quality Assurance Manual /Quality Management System Certificate (according to latest rev. of ISO)                 | 4N              |                     |                | 6C+E                |                   |
| 009         | Preliminary / Inspection and Test Plan  | 4N              |                     |                |                     |                   |
| 010-1       | Inspection and Test Plan  |                 | 6C+E                |                | 6C+E                |                   |
| 010-2       | Quality Control Plan  | 4N              |                     |                |                     |                   |
| HSE         |   |                 |                     |                |                     |                   |
| 011         | HSE Procedure   |                 | 6C+E                |                | 6C+E                |                   |
| ENGINEERING |   |                 |                     |                |                     |                   |
| 012         | Supplier Document Schedule  | 3N              | 6C+E                |                | 6C+E                |                   |
| 013         | Power Consumption List  | 3N              | 6C+E                |                | 6C+E                |                   |
| 014         | Detailed Devices Catalogues   | 3N              | 6C+E                |                | 6C+E                |                   |
| 015         | Equipment List And Cabinet Bill Of  |                 | 6C+E                |                | 6C+E                |                   |

D02

|  |   |           |           |         |      |          |       |   |      |
|--|---|-----------|-----------|---------|------|----------|-------|---|------|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |           |         |      |          |       |  |      |
| شماره پیمان:   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |           |           |         |      |          |       | شماره صفحه: ۱۷ از ۲۱  |      |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴   | پروژه   | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |   | نسخه |
|  | BK  | GCS       | PEDCO     | 120     | IN   | MR       | 0001  | D02   |      |

| Item No.    | Document  | With Bid | TIME SCHEDULE       |                |                     |                   |
|-------------|---|----------|---------------------|----------------|---------------------|-------------------|
|             |   |          | For Review          |                | Final Issue         |                   |
|             |   |          | Copies No./Type (1) | Solar days (2) | Copies No./Type (1) | Calendar days (3) |
|             | Material  |          |                     |                |                     |                   |
| 016         | Control System Software Catalogue   | 3N       | 6C+E                |                | 6C+E                |                   |
| 017         | Electrical Panel/ESD Console Interconnection Wiring Diagram                               |          | 6C+E                |                | 6C+E                |                   |
| 018         | Software System - Specifications  |          | 6C+E                |                | 6C+E                |                   |
| 019         | Hardware System - Specifications  |          | 6C+E                |                | 6C+E                |                   |
| 020         | Loop Diagrams   |          | 6C+E                |                | 6C+E                |                   |
| 021         | I/O assignment  |          | 6C+E                |                | 6C+E                |                   |
| 022         | Graphic Pages printout  |          | 6C+E                |                | 6C+E                |                   |
| 023         | System Architecture and Network   | 3N       | 6C+E                |                | 6C+E                |                   |
| 024         | Cable Termination's/Connection Diagrams   |          | 6C+E                |                | 6C+E                |                   |
| 025         | Panel/ESD Console Layout  |          | 6C+E                |                | 6C+E                |                   |
| 026         | Power Distribution Diagram  |          | 6C+E                |                | 6C+E                |                   |
| 027         | System Software/logic printout  |          | 6C+E                |                | 6C+E                |                   |
| 028         | Furniture details and arrangement   |          | 6C+E                |                | 6C+E                |                   |
| 029         | Earthing Diagram  |          | 6C+E                |                | 6C+E                |                   |
| 030         | Control Room And Technical Arrangement  |          | 6C+E                |                | 6C+E                |                   |
| 031         | Reliability/Availability/FEMA Report  |          | 6C+E                |                | 6C+E                |                   |
| 032         | MODBUS Mapping List   |          | 6C+E                |                | 6C+E                |                   |
| PROCUREMENT |   |          |                     |                |                     |                   |
| 033         | List of Sub-Suppliers ( table giving: part of equipment, tag no., sub-supplier reference) | 4N       |                     |                | 6C+E                |                   |
| 034         | Unpriced copy of sub-orders   |          | 6C+E                |                |                     |                   |
| 035         | Packing Spec. / Shipping Schedule   | 3N       | 6C+E                |                | 6C+E                |                   |

|  |  |                  |                    |                |            |                |               |   |
|--|--|------------------|--------------------|----------------|------------|----------------|---------------|---|
| <br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تو اکم گاز در ایستگاه جمع آوری بینک</p> |                  |                    |                |            |                |               |  |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |                  |                    |                |            |                |               | شماره صفحه: ۱۸ از ۲۱  |
|  | پروژه<br>BK  | بسته کاری<br>GCS | صادرکننده<br>PEDCO | تسهیلات<br>120 | رشته<br>IN | نوع مدرک<br>MR | سریال<br>0001 |   |

| Item No.                        | Document  | With Bid | TIME SCHEDULE       |                |                     |                   |
|---------------------------------|---|----------|---------------------|----------------|---------------------|-------------------|
|                                 |   |          | For Review          |                | Final Issue         |                   |
|                                 |   |          | Copies No./Type (1) | Solar days (2) | Copies No./Type (1) | Calendar days (3) |
| 036                             | Weight List/ Shipping List  | 3N       | 6C+E                |                | 6C+E                |                   |
| 037                             | Mechanical & Performance Guarantees   | 3N       | 6C+E                |                | 6C+E                |                   |
| TESTING                         |   |          |                     |                |                     |                   |
| 038                             | Manufacturing, Test & Inspection Procedures   | 3N       | 6C+E                |                | 6C+E                |                   |
| 039                             | Performance & Functional Test Procedure   |          | 6C+E                |                | 6C+E                |                   |
| 040                             | Factory Acceptance Test (FAT) Procedure   |          | 6C+E                |                | 6C+E                |                   |
| 041                             | Site Acceptance Test (SAT) Procedure  |          | 6C+E                |                | 6C+E                |                   |
| RECORDS, REPORTS & CERTIFICATES |   |          |                     |                |                     |                   |
| 042                             | HAZARDOUS AREA CLASSIFICATION CERTIFICATES -<br>Testifying to suitability of electrical/electronic apparatus for use in the Hazardous Area Specified. |          |                     |                | 6C+E                |                   |
| 043                             | INGRESS PROTECTION CERTIFICATES -<br>Testifying to suitability of electrical/electronic apparatus for use in the Hazardous Area Specified.            |          |                     |                | 6C+E                |                   |
| 044                             | CONFORMITY/COMPLIANCE CERTIFICATES<br>Attesting conformance to type approval.   |          |                     |                | 6C+E                |                   |
| 045                             | MANUFACTURING RECORD BOOK INDEX (Standard index will be issued with the Purchase Order).  |          | 6C+E                |                | 6C+E                |                   |
| 046                             | Pre-FAT Report  |          |                     |                | 6C+E                |                   |
| 047                             | FAT Report  |          |                     |                | 6C+E                |                   |
| 048                             | Conformity Certificates (sub-supplier/equipment)  |          | 6C+E                |                | 6C+E                |                   |
| INSTALLATION                    |   |          |                     |                |                     |                   |
| 049                             | Sub-Assembly Documentation  |          | 6C+E                |                | 6C+E                |                   |



شماره صفحه : ۱۹ از ۲۱

PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE

|      |       |          |      |         |           |           |       |
|------|-------|----------|------|---------|-----------|-----------|-------|
| نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |
| D02  | 0001  | MR       | IN   | 120     | PEDCO     | GCS       | BK    |

| Item No.                           | Document   | With Bid        | TIME SCHEDULE       |                |                     |                       |
|------------------------------------|--|-----------------|---------------------|----------------|---------------------|-----------------------|
|                                    |  |                 | For Review          |                | Final Issue         |                       |
|                                    |  | Copies No./Type | Copies No./Type (1) | Solar days (2) | Copies No./Type (1) | Calendar days (3)     |
| 050                                | Sub-Assembly Drawings                            |                 | 6C+E                |                | 6C+E                |                       |
| 051                                | Erection/Installation Manual (if required)       |                 | 6C+E                |                | 6C+E                |                       |
| 052                                | Name Plate Documents                             |                 | 6C+E                |                | 6C+E                |                       |
| 053                                | Handling, Transportation & Storage Instructions  |                 | 6C+E                |                | 6C+E                |                       |
| 054                                | Unpacking & Inspection Instructions              |                 | 6C+E                |                |                     |                       |
| 055                                | Preliminary Packing List                         | 4N              |                     |                |                     |                       |
| 056                                | Packing List                                     |                 | 6C+E                |                | 6C+E                |                       |
| <b>OPERATION &amp; MAINTENANCE</b> |  |                 |                     |                |                     |                       |
| 057                                | Operating Instructions                           |                 | 6C+E                |                | 6C+E                |                       |
| 058                                | Maintenance Instructions                         |                 | 6C+E                |                | 6C+E                |                       |
| 059                                | Commissioning & Start-up Manual                  |                 | 6C+E                |                | 6C+E                |                       |
| 060                                | List of Spare Parts Commissioning & Start-up     | 4N              | 6C+E                |                | 6C+E                |                       |
| 061                                | List of Spare Parts 2 Years Operation            | 4N              | 6C+E                |                | 6C+E                |                       |
| 062                                | List of Special Tools                            | 4N              | 6C+E                |                | 6C+E                |                       |
| 063                                | Software Manual (incl. Troubleshooting)          |                 | 6C+E                |                | 6C+E                |                       |
| <b>OTHERS</b>                      |  |                 |                     |                |                     |                       |
| 064                                | Vendor Final Book                                |                 |                     |                | 6C+E                | 1 week after delivery |
| 065                                | All others documents will be listed in the order |                 | 6C+E                |                |                     |                       |

NOTES:(1) N= Number of document, C=Copy, E=Electronic Copy



(2) Starting from date of order placement

(3) Starting from reception of documentation without comments

(4) First issue of the document is subjected to the release of payment milestone as per purchase order

(5) Calendar days after reception of drive data

(6) Prior to testing

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|--|--|---|------|---------|-----------|-----------|-------|--|--|------|-------|----------|------|---------|-----------|-----------|-------|-----|------|----|----|-----|-------|-----|----|-----------------------|
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | <table><tr><th colspan="8">PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE</th></tr><tr><th>نسخه</th><th>سریال</th><th>نوع مدرک</th><th>رشته</th><th>تسهیلات</th><th>صادرکننده</th><th>بسته کاری</th><th>پروژه</th></tr><tr><td>D02</td><td>0001</td><td>MR</td><td>IN</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table> | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |      |         |           |           |       |  |  | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه | D02 | 0001 | MR | IN | 120 | PEDCO | GCS | BK | شماره صفحه : ۲۰ از ۲۱ |
| PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |  |   |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| نسخه   | سریال  | نوع مدرک  | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| D02  | 0001   | MR  | IN   | 120     | PEDCO     | GCS       | BK    |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |

### **ATTACHMENT 3**



#### **11.3 DEVIATIONS / EXCEPTIONS TO JOB SPECIFICATION**

Requisition No.:

Description:

Equipment No.:

| Item No. | Description of proposed exception | Recommended revision to job specification | Reason for proposed exception | Effect on base proposal if CONTRACTOR rejects exception |
|----------|-----------------------------------|---|-------------------------------|---|
|          |                                   |   |                               |   |

| <br>NISOC | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br><br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک   |  |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
|--|--|---|------|---------|-----------|-----------|-------|--|--|------|-------|----------|------|---------|-----------|-----------|-------|-----|------|----|----|-----|-------|-----|----|-----------------------|
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴   | <table><tr><th colspan="8">PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE</th></tr><tr><th>نسخه</th><th>سریال</th><th>نوع مدرک</th><th>رشته</th><th>تسهیلات</th><th>صادرکننده</th><th>بسته کاری</th><th>پروژه</th></tr><tr><td>D02</td><td>0001</td><td>MR</td><td>IN</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table> | PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE  |      |         |           |           |       |  |  | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه | D02 | 0001 | MR | IN | 120 | PEDCO | GCS | BK | شماره صفحه : ۲۱ از ۲۱ |
| PMR FOR CONTROL SYSTEM/ CONSOLE/ FURNITURE   |  |   |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| نسخه   | سریال  | نوع مدرک  | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |
| D02  | 0001   | MR  | IN   | 120     | PEDCO     | GCS       | BK    |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                       |

#### **ATTACHMENT 4**

#### **11.4 ALTERNATIVES TO JOB SPECIFICATION**

Requisition No.:

Description:

Equipment No.:

| Item No. | Job Specification No. & Paragraph No. | Requirements of Job Specification | Description of Proposed Alternative | Reason for Proposed Alternative |
|----------|---------------------------------------|-----------------------------------|-------------------------------------|---------------------------------|
|          |                                       |                                   |                                     |                                 |