

| <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>                                                                                                                                                                                                       | <br>شرکت توسعه تروابران<br><br>HIRGAN ENERGY<br> |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                     |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|-----------|-----------|-------|--|--|------|-------|----------|------|---------|-----------|-----------|-------|-----|------|----|----|-----|-------|-----|----|---------------------|
| شماره پیمان:<br>053 – 073 – 9184                                                           | <table><tr><th colspan="8">PROCESS ELECTRICAL LOAD LIST</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>D04</td><td>0002</td><td>LI</td><td>PR</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table> | PROCESS ELECTRICAL LOAD LIST                                                                                                                                                                                                                                                                              |      |         |           |           |       |  |  | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه | D04 | 0002 | LI | PR | 120 | PEDCO | GCS | BK | شماره صفحه : 1 از 6 |
| PROCESS ELECTRICAL LOAD LIST                                                               |                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                           |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                     |
| نسخه                                                                                       | سریال                                                                                                                                                                                                                                                                                                                  | نوع مدرک                                                                                                                                                                                                                                                                                                  | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                     |
| D04                                                                                        | 0002                                                                                                                                                                                                                                                                                                                   | LI                                                                                                                                                                                                                                                                                                        | PR   | 120     | PEDCO     | GCS       | BK    |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                     |

## طرح نگهداشت و افزایش تولید 27 مخزن

## PROCESS ELECTRICAL LOAD LIST

### نگهداشت و افزایش تولید میدان نفتی بینک

| D04  | JUL.2023 | AFC                     | M.Aryafar    | M.Fakharian | A.M.Mohseni  |                 |
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| D00  | JAN.2022 | IFC                     | M.Aryafar    | M.Fakharian | M.Mehrshad   |                 |
| Rev. | Date     | Purpose of Issue/Status | Prepared by: | Checked by: | Approved by: | CLIENT Approval |

Class: 1

CLIENT Doc. Number: F0Z-708808

#### Status:

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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| <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><br>053-073-9184                                                           | PROCESS ELECTRICAL LOAD LIST                                                                                     |           |           |         |      |          |       | شماره صفحه: 2 از 6                                                                  |      |
|                                                                                            | پروژه                                                                                                            | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |                                                                                     | نسخه |
|                                                                                            | BK                                                                                                               | GCS       | PEDCO     | 120     | PR   | LI       | 0002  |                                                                                     | D04  |

### REVISION RECORD SHEET

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|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|---------|-----------|-----------|-------|--|--|------|-------|----------|------|---------|-----------|-----------|-------|-----|------|----|----|-----|-------|-----|----|--------------------|
| شماره پیمان:<br>053 – 073 – 9184                                                           | <table><tr><th colspan="8">PROCESS ELECTRICAL LOAD LIST</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>D04</td><td>0002</td><td>LI</td><td>PR</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table> | PROCESS ELECTRICAL LOAD LIST                                                        |      |         |           |           |       |  |  | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه | D04 | 0002 | LI | PR | 120 | PEDCO | GCS | BK | شماره صفحه: 3 از 6 |
| PROCESS ELECTRICAL LOAD LIST                                                               |                                                                                                                                                                                                                                                                                                                        |                                                                                     |      |         |           |           |       |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                    |
| نسخه                                                                                       | سریال                                                                                                                                                                                                                                                                                                                  | نوع مدرک                                                                            | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                    |
| D04                                                                                        | 0002                                                                                                                                                                                                                                                                                                                   | LI                                                                                  | PR   | 120     | PEDCO     | GCS       | BK    |  |  |      |       |          |      |         |           |           |       |     |      |    |    |     |       |     |    |                    |

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| شماره پیمان:<br>053 – 073 – 9184                                                           | PROCESS ELECTRICAL LOAD LIST                                                                                     |           |           |         |      |          |       | شماره صفحه: 4 از 6                                                                                                                                                                                |
|                                                                                            | پروژه                                                                                                            | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |                                                                                                                                                                                                   |
|                                                                                            | BK                                                                                                               | GCS       | PEDCO     | 120     | PR   | LI       | 0002  | D04                                                                                                                                                                                               |

## 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.

### 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:          | 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.                                                   |
| 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 EPC CONTRACTOR and approved by GC & 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, supplier or VENDOR. |
| MAY:                         | Is used where a provision is completely discretionary.                                                             |

## 2.0 SCOPE

The purpose of this document is to provide summary of process electrical loads for BINAK Gas Compressor Station”.

|                                                                                            |                                                                                                                  |           |            |         |      |          |       |                                                                                     |      |
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| شماره پیمان:<br><br>053 – 073 – 9184                                                       | PROCESS ELECTRICAL LOAD LIST                                                                                     |           |            |         |      |          |       | شماره صفحه : 5 از 6                                                                 |      |
|                                                                                            | پروژه                                                                                                            | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال |                                                                                     | نسخه |
|                                                                                            | BK                                                                                                               | GCS       | PEDCO      | 120     | PR   | LI       | 0002  |                                                                                     | D04  |

### 3.0 NORMATIVE REFERENCES

#### 3.1 THE PROJECT DOCUMENTS

- BK-GNRAL-PEDCO-000-PR-DC-0001 Process Design Criteria
- BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis Of Design
- BK-GCS-PEDCO-120-PR-UF-0001 Utility Flow Diagrams (UFD)
- BK-GCS-PEDCO-120-PR-PI-0002-0025 P&ID
- BK-GCS-PEDCO-120-PR-PF-0001 Process Flow Diagram (PFD)

#### 3.2 ENVIRONMENTAL DATA

Refer to "Process Basis of Design; Doc. No. BK-GNRAL-PEDCO-000-PR-DB-0001".

|                                                                                            |                                                                                                                  |           |           |         |      |          |       |                                                                                     |      |
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| شماره پیمان:<br>053 - 073 - 9184                                                           | PROCESS ELECTRICAL LOAD LIST                                                                                     |           |           |         |      |          |       | شماره صفحه : 6 از 6                                                                 |      |
|                                                                                            | پروژه                                                                                                            | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال |                                                                                     | نسخه |
|                                                                                            | BK                                                                                                               | GCS       | PEDCO     | 120     | PR   | LI       | 0002  |                                                                                     | D04  |

#### 4.0 ELECTRICAL CONSUMPTION

| No. | ITEM No.                                 | SERVICE                                                                               | C / I   | Configuration | Emergency | N/S  | Efficiency | POWER (EACH)                           |
|-----|------------------------------------------|---------------------------------------------------------------------------------------|---------|---------------|-----------|------|------------|----------------------------------------|
|     |                                          |                                                                                       |         |               |           |      |            | BHP (kW)                               |
| 1   | AC-2101 A/B/C                            | 1 <sup>st</sup> Stage Air Coolers                                                     | C       | 2+1           | -         | 2N+S | -          | 8.5 (Each) (NOTE1)                     |
| 2   | AC-2102 A/B/C/                           | 2 <sup>nd</sup> Stage Air Coolers                                                     | C       | 2+1           | -         | 2N+S | -          | 19 (Each) (NOTE1)                      |
| 3   | C-2101 A/B/C<br>C-2102 A/B/C             | 1 <sup>st</sup> & 2 <sup>nd</sup> Stage Gas Compressor<br>Other Consumption + Package | C       | 2+1           | -         | 2N+S | -          | 484+448 (Each)                         |
| 4   | PK-C-2203 A/B                            | Instrument & Plant Air Package                                                        | C       | 1+1           | E         | N+S  | -          | 40 (NOTE1)                             |
| 5   | PK-Dr-2203 A/B                           | Air Dryer Package                                                                     | C       | 1+1           | -         | N    | -          | 2 (NOTE1)                              |
| 6   | PK-C-2204                                | Air compressor for N <sub>2</sub> Package                                             | C       | 1             | -         | N    | -          | 30 (NOTE1)                             |
| 7   | PK-2204                                  | Nitrogen Package                                                                      | C       | 1             | -         | N    | -          | 2 (NOTE1)                              |
| 8   | PK-2201                                  | LP Flare Package<br>(Including blower for smokeless Flare)                            | C       | 1             | -         | N    | -          | 22.5 (NOTE1)                           |
| 9   | IG-2201                                  | LP Flare Ignition Package                                                             | I       | 1             | E         | N    | -          | 2 (NOTE1)                              |
| 10  | PK-2207                                  | Corrosion Inhibitor Package                                                           | C       | 1             | -         | N    | -          | 2 (NOTE1)                              |
| 11  | PK-2208                                  | Methanol Injection Package                                                            | DELETED |               |           |      |            |                                        |
| 12  | PK-2101                                  | Dehydration Package                                                                   | C       | 1             | -         | N    | -          | 20 (NOTE1)                             |
| 13  | P-2203A/B                                | Sump Pump                                                                             | I       | 1+1           | E         | N+S  | %31        | 1                                      |
| 14  | P-2202 A/B                               | Closed Drain Pumps                                                                    | I       | 1+1           | E         | N+S  | %22        | 2.9                                    |
| 15  | P-2101A/B                                | Slug Pumps                                                                            | I       | 1+1           | E         | N+S  | %61        | 7                                      |
| 16  | P-2302 A/B                               | Fire Water Jockey Pumps                                                               | I       | 1+1           | -         | N+S  | %29        | Rated power =14.8<br>Motor Power =18.5 |
| 17  | P-2301 A                                 | Fire Water electric Pump                                                              | I       | 1             | -         | N    | %72        | Rated power =180.5<br>Motor Power =250 |
| 18  | P-2209                                   | Potable Water Pumps                                                                   | I       | 1             | -         | N    | %31        | 1                                      |
| 19  | P-2206                                   | Diesel Oil Pump                                                                       | I       | 1             | -         | N    | %52        | 1.5                                    |
| 20  | P-2201A/B                                | LP Flare K.O. Drum Pumps                                                              | I       | 1+1           | E         | N+S  | %15        | 0.6                                    |
| 21  | P-2103 A/B                               | Glycol Transfer Pumps                                                                 | I       | 1+1           | -         | N+S  | %31        | 1                                      |
| 22  | P-2102                                   | Glycol Manual Pump                                                                    | I       | 1             | -         | N    | %31        | 0.4                                    |
| 23  | P-2104                                   | Glycol Drain Pump                                                                     | I       | 1             | -         | N    | %22        | 0.8                                    |
| 24  | -                                        | MOV                                                                                   | I       | 2             | -         | N    | -          | 2(NOTE1)                               |
| 25  | Electrical tracing 1 <sup>st</sup> Stage | 1 <sup>st</sup> Stage Compressors                                                     | C       | 2+1           | %85       | 2N+S | -          | 0.227                                  |
| 26  | Electrical tracing 2 <sup>nd</sup> Stage | 2 <sup>nd</sup> Stage Compressors                                                     | C       | 2+1           | %85       | 2N+S | -          | 2.625                                  |

NOTE 1: Will be finalized by vendor.

C: Continues/ E: Emergency Load/ I: Intermittent/ N: Normal Load/ S: Standby