|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | | |
| **MTO FOR RADIO**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | | |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| D02 | Nov. 2022 | FI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| D01 | Jan. 2022 | IFI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| D00 | Dec. 2021 | IFI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **CLIENT Approval** |
| **Class:3** | | **CLIENT Doc. Number:** **F8Z-709097** | | | | |
| **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** | | | | | |

**REVISION RECORD SHEET**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |  | **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |
| **1** | X | X | X |  |  | **51** |  |  |  |  |  |
| **2** | X | X | X |  |  | **52** |  |  |  |  |  |
| **3** | X |  |  |  |  | **53** |  |  |  |  |  |
| **4** | X |  |  |  |  | **54** |  |  |  |  |  |
| **5** | X | X |  |  |  | **55** |  |  |  |  |  |
| **6** |  |  |  |  |  | **56** |  |  |  |  |  |
| **7** |  |  |  |  |  | **57** |  |  |  |  |  |
| **8** |  |  |  |  |  | **58** |  |  |  |  |  |
| **9** |  |  |  |  |  | **59** |  |  |  |  |  |
| **10** |  |  |  |  |  | **60** |  |  |  |  |  |
| **11** |  |  |  |  |  | **61** |  |  |  |  |  |
| **12** |  |  |  |  |  | **62** |  |  |  |  |  |
| **13** |  |  |  |  |  | **63** |  |  |  |  |  |
| **14** |  |  |  |  |  | **64** |  |  |  |  |  |
| **15** |  |  |  |  |  | **65** |  |  |  |  |  |
| **16** |  |  |  |  |  | **66** |  |  |  |  |  |
| **17** |  |  |  |  |  | **67** |  |  |  |  |  |
| **18** |  |  |  |  |  | **68** |  |  |  |  |  |
| **19** |  |  |  |  |  | **69** |  |  |  |  |  |
| **20** |  |  |  |  |  | **70** |  |  |  |  |  |
| **21** |  |  |  |  |  | **71** |  |  |  |  |  |
| **22** |  |  |  |  |  | **72** |  |  |  |  |  |
| **23** |  |  |  |  |  | **73** |  |  |  |  |  |
| **24** |  |  |  |  |  | **74** |  |  |  |  |  |
| **25** |  |  |  |  |  | **75** |  |  |  |  |  |
| **26** |  |  |  |  |  | **76** |  |  |  |  |  |
| **27** |  |  |  |  |  | **77** |  |  |  |  |  |
| **28** |  |  |  |  |  | **78** |  |  |  |  |  |
| **29** |  |  |  |  |  | **79** |  |  |  |  |  |
| **30** |  |  |  |  |  | **80** |  |  |  |  |  |
| **31** |  |  |  |  |  | **81** |  |  |  |  |  |
| **32** |  |  |  |  |  | **82** |  |  |  |  |  |
| **33** |  |  |  |  |  | **83** |  |  |  |  |  |
| **34** |  |  |  |  |  | **84** |  |  |  |  |  |
| **35** |  |  |  |  |  | **85** |  |  |  |  |  |
| **36** |  |  |  |  |  | **86** |  |  |  |  |  |
| **37** |  |  |  |  |  | **87** |  |  |  |  |  |
| **38** |  |  |  |  |  | **88** |  |  |  |  |  |
| **39** |  |  |  |  |  | **89** |  |  |  |  |  |
| **40** |  |  |  |  |  | **90** |  |  |  |  |  |
| **41** |  |  |  |  |  | **91** |  |  |  |  |  |
| **42** |  |  |  |  |  | **92** |  |  |  |  |  |
| **43** |  |  |  |  |  | **93** |  |  |  |  |  |
| **44** |  |  |  |  |  | **94** |  |  |  |  |  |
| **45** |  |  |  |  |  | **95** |  |  |  |  |  |
| **46** |  |  |  |  |  | **96** |  |  |  |  |  |
| **47** |  |  |  |  |  | **97** |  |  |  |  |  |
| **48** |  |  |  |  |  | **98** |  |  |  |  |  |
| **49** |  |  |  |  |  | **99** |  |  |  |  |  |
| **50** |  |  |  |  |  | **100** |  |  |  |  |  |

**CONTENTS**

[1.0 INTRODUCTION 4](#_Toc89958877)

[2.0 Scope 5](#_Toc89958878)

[3.0 MATERIAL TAKE OFF FOR VHF RADIO AND TOWER 5](#_Toc89958879)

1. **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 CLIENT (NISOC) |
| PROJECT: | Binak Oilfield Development – Surface Fcilities; 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. |
| 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 COMPANY (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. |

1. **Scope**

This document covers minimum necessary requirements for the design, selection, manufacture,   
inspection, testing and delivery of **VHF Radio packages and Tower**.

It shall be used in conjunction with data/requisition sheets for present document subject.

1. **MATERIAL TAKE OFF FOR VHF RADIO AND TOWER**

|  |  |  |  |
| --- | --- | --- | --- |
| **VHF RADIO SYSTEM MTO** | | | |
| ITEM | **DESCRIPTION** | **QTY** | **Remark** |
|
| 1 | Radio Handheld , VHF (136 - 174 MHz) With Accessories as mentioned in data sheet such as antenna , leather carrying case,.. , suitable for EX area , IS Type | **6** |  |
| 2 | Vehicular VHF Radio ,VHF (136 - 174 MHz) With Accessories (Microphone,..) and accessories for installation at car | 4 |  |
| 2.1 | Antenna for Vehicular Radio With Accessories | 4 |  |
| 3 | Battery For Handheld  Battery Cell: NiMH  Reusability: Rechargeable  Battery Capacity: 1450 Milliamp Hours | 6 |  |
| 4 | Charger For Handheld (Minimum 6 BAY)  Compatible Chemistries :Ni-CD / Ni-MH / Li-Ion / Li-Polymer  Power Supply Input: 100V - 240V AC / 50 Hz - 60 Hz / 2.2A (max) | 1 |  |
| 5 | **Telecom Radio Tower , 50 Meter** , 4 Legs , Self-support, with foundation , earth , lightening system , warning light , required accessories that mentioned in data sheet | 1 |  |

Note;

* The Radio Base station in Binak site is exist from Motorola Manufacture.
* The required Model for radio handset and mobile radio shall be compatible with main exist base system.
* The detail installation of telecom tower shall be submitted before PO by vendor To review and approval of owner.
* The Exist Telecom tower in binak site shall be removed and all its equipment shall be moved to new tower.
* The required 2 years spare part list have been mentioned in MR For radio system .