

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
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طرح نگهداشت و افزایش تولید ۲۷ مخزن

EMISSION AND EFFLUENT SUMMARY

نگهداشت و افزایش تولید میدان نفتی بینک

D03	OCT.2023	AFC	M.Aryafar	M.Fakharian	S.Faramarzpour	
D02	AUG.2023	IFA	M.Aryafar	M.Fakharian	M.Mehrshad	
D01	JAN.2023	IFA	M.Aryafar	M.Fakharian	M.Mehrshad	
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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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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.
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.

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2.0 SCOPE

This document defines emission and effluent list for Binak Compressor Station to process sour gas from Golkhari booster/cluster and Binak production unit with cumulative rate of 15 MMSCFD. The new compressors will be added "future" section of existing Binak compressor station plant. Excluding electrical power, which is supplied from existing facilities.

3.0 NORMATIVE REFERENCES

3.1 Local Codes and Standard

IPS-E-SF-860	Engineering Standard for Air Pollution Control
IPS-E-SF-880	Engineering Standard for Water Pollution Control
IPS-G-SF-130	General Standard for Disposal of Solid Waste
IPS-G-SF-860	General Standard for Air Pollution Control
IPS-G-SF-870	General Standard for Soil Pollution Control
IPS-G-SF-880	General Standard for Water Pollution Control
IPS-C-SF-550	Application Standard for Safety Boundary Limit

3.2 International Codes and Standards

Not Applicable.

3.3 The Project Documents

BK-GCS-PEDCO-120-PR-UF-0001	Utility Flow Diagrams (UFD)
BK-GNRAL-PEDCO-000-PR-DB-0001	Process Basis of Design

3.4 Environmental Data

Refer to "Process Basis of Design"; Doc. No. Process Basis of Design BK-00-HD-000-PR-DB-0001

3.5 Order of Precedence

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.

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4.0 ABBREVIATIONS

NISOC:	National Iranian South Oil Company
PFD:	Process Flow Diagram
P&ID:	Piping and Instrumentation Diagram
BFPD:	Barrel Fluid Per Day

5.0 EMISSION AND EFFLUENT LIST

Based on BINAK New Compressor Gas Station project, following emission list is expected with the project:

5.1 Emission from Flare Stack

Continues flaring is not applicable to BINAK New Compressor Gas Station project.

Expected continues flare flow gas (dehydration package gas effluent, only pilot fuel gas and flare stack purge gas): 170 kg/hr

Emergency flaring condition: 39824 kg/hr as unburnt hydrocarbon flow (fire scenario from station outlet), refer to duty specification for LP flare package for more detail (BK-GCS-PEDCO-120-PR-SP-0003).

5.2 Emission from Burn Pit

Continues flow to the burn pit is not applicable to BINAK New Compressor Gas Station project.

Only two intermittent flow send to existing burn pit: 3 m³/hr from close drain pump and 2 m³/hr from flare K.O. drum pump.

5.3 Surface Runoff from Possibly Contaminated Areas (Parts of Process)

Accidentally Oily Contaminated Water Sewer, which collect water, which may be polluted by hydrocarbon products (e.g. Rain and/or fire water in process, utility and paved areas). Refer to Drainage Philosophy (BK-GCS-PEDCO-120-PR-PH-0001) for more detail. Contaminated oily water is collected in SU-2202 which is transferred by gravity or road truck.

Maximum contaminated water flow rate is 6.7 m³/min as per maximum Rainfall intensity: 53 mm/h

For more detail contaminated water flow rate refer to "Calculation Note For Oily Contaminated Water Drainage Channels" (BK-GCS-PEDCO-120-CV-CN-0003)

It Preliminary composition is as follow:

- Oil, Hydrocarbons: 10 – 2000 mg/l

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- TSS (Total Suspended Solids): 1000 mg/l
- TDS (Total Dissolved Solid): < 100 mg/l
- pH: 6 – 8

5.4 Sanitary Sewage from Control Building

The sewer shall be directed by gravity to a Septic pit equipped with a pump for filling of water road-tankers, Refer to Drainage Philosophy (BK-GCS-PEDCO-120-PR-PH-0001) for more detail. Expected flow and composition:

Per operator working in the plant to be expected:

- Flow: 100 l/day
- BSB5: 40 g/day
- CSB: 80 g/day