MISSAN OIL COMPANY

REQUISITIONS LIST

CLOSING DATE 10/10/2012

ALL PARTICIPANTS IN ENQUIRIES THAT WILL BE RE- ANNOUNCED SHOULD FOLLOW -UP OUR REQUISITIONS LISTS AND CLOSING DATE ON OUR WEB SITE INSTEAD OF NOTIFICATION BY FAX OR E-MAIL AND SUBMIT EITHER RENEWED OFFERS OR LETTERS BY WHICH EXTENDING THE VALIDITY OF THEIR PAYMENT FOR PARTICIPATION SHOULD BE DONE ONE DAY BEFORE CLOSING DATE . SINCE CLOSING DATE IS DEDICATED FOR RECEIVING OFFER (S) ONLY FOR TECHNICAL SPECIFICATION PLEASE VISIT OUR WEB SITE (www.moc.oil.gov.iq) OTHERWISE, FEEL FREE TO CONTACT US AT (moc_cd@moc.oil.gov.iq)

ANN-NO. -47-

SER	ENQ.REF.	SPEC	NO. OF ITEMS	NOTE	MATER NATU
1	58.12.4131	FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS	1		Re-annou
2	11.12.4135	Scanner and measuring the radioactivity	1		Re-annou
3	58.12.4138	P .D Flow meters For Test Separaters	2		

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

ITEM	DES	UNIT	QTY
		SET	ONE

1.1 SCOPE OF SUPPLY

FOUR DIGITAL FLARE GAS FLOW METERS (TWO FOR LOW PRESS. FLARE AND TWO FOR HIGH PRESS. FLARE) MEETS THE SPECIFIED ACCURACY RATING AND IS DESIGNED FOR HIGH PERFORMANCE FLARE GAS APPLICATION .

THE FLOW METER MUST BE HAVE TWO CHANNELS OF MEASUREMENT FOR EXTENDED PRECISION ON ONE PIPE OR MONITORING OF TWO SEPARATE PIPES WITH SAME ELECTRONIC UNIT .

THE FLARE GAS FLOW METER MUST BE DESIGNED TO SOLVE A VARIETY OF DIFFICULT PROBLEMS SUCH AS PULSATING PRESSURE , UNSTEADY FLOW , VERY LOWEST FLOW RATE AND VARYING GAS COMPOSITION AND TEMPERATURE .

THE FLOW METER MUST BE COMPLETED WITH PRESSURE AND TEMPERATURE TRANSMITTERS SMART HART TYPE .

THE SCOPE OF SUPPLY SHOULD INCLUDE SYSTEM DESIGN , MANUFACTURE , ASSEMBLY , DOCUMENTATION , INSPECTION , TESTING , START-UP AND COMMISSIONING

SPARE PARTS AND PACKING FOR SHIPMENT .

1.2- PROCESS DATA

FLUID : NATURAL GAS.

FLOW RATE: MIN 1.5 MMSCF/D - MAX 20 MMSCF/D.

NORMAL FLOW RATE :- (2.5 - 10) MMSCF/D .

HEADER SIZE : 8˝X 150 RF

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

	METER SIZE : AS MANUFACTURER DESIGN NO. OF FLOW METER : FOUR (TWO FOR LOW PRESS. & TWO FOR HIGH PRESS.) OPERATING PRESS. : 0.2 PSIG- 7 PSIG FOR LOW PRESSURE FLARE 7 PSIG- 42 PSIG FOR HIGH PRESSURE FLARE MIN . FLOW SENSING PRESS . = 0 PSIG . POWER SUPPLY : 200 - 240 AC 12 - 24 VDC AREA CLASSIFICATION : FLAME PROOF **1.3- INSTRUMENTATION :** TRANSMITTERS TO BE SMART TYPE , HART WITH LOCAL INDICATORS ALL INSTRUMENTS SHOULD BE FLAME PROOF ENCLOSURE **1.4-CODE AND STANDARDS** - AMERICAN PETREUM INSTITUTE (API) . - AMERICAN SOCIETY FOR TESTING MATERIAL (ASTM) . - AMERICAN SOCITY OF MECHANICAL ENGINEERS (ASME) . - MANUFACTURERS STANDARDIZATION SOCIETY - STANDARD PRACTICE (MSS - SP) **1.5-GAS COMPOSITION** THE GAS COMPOSITION FOR NOOR AND AMMARA DEGASSING STATIONS IS SHOWN		

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

IN THE TWO TABLES BELOW :-

S.O.C

RESEARCH AND QUALITY CONTROL DEPARTMENT
GAS ANALYSIS SECTION
CHROMATOGRAPHIC GAS ANALYSIS

SOURCE OF SAMPLE : NATURAL GAS FROM NOOR DEGASSING STATION .
WELLS ON STREAM : NOOR - 1,2 .
FORMATION : MISHRIF
DATE OF SAMPLING : 21.5.2009
DATE OF ANALYSIS : 21.5.2009

STAGE NO.	1st	2nd	3rd
Gas pressure (Kg/Cm^2)	10	4.6	AT
Gas Temperature C°	40	40	40
Components (Gas Vol. %)			
Nitrogen	0.81	0.16	
Carbon Dioxide	6.21	7.09	
Hydrogen Sulphide	0.08	0.1	
Methane	65.4	47.5	
Ethane	14.44	23.4	
Propane	7.96	13	

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i - Butane	0.96	1.68	
n - Butane	2.57	4.42	
i - Pentane	0.55	0.99	
n -Pentane	0.58	1.03	
Hexanes	0.43	0.66	
Heptanes	0.01	0.01	
Octanes	-	Tract	
Total	100	100	
Gas Sp.Gr.Calculated@15.6/15.6 C°	0.8523	1.01	
Gas M.Wt Calculated	24.68	29.3	
Density LBS/SCF	0.0649	0.08	

Notes : 1. The concentrations of Hydrogen Sulphide were measured in Laboratory so it not represent the actual value .

2.Trace means < 0.01 Vol. % .

3. The sample of 3rd stage not content enough gas for analysis .

S.O.C

RESEARCH AND QUALITY CONTROL DEPARTMENT
GAS ANALYSIS SECTION

CHROMATOGRAPHIC GAS ANALYSIS

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

SOURCE OF SAMPLE : NATURAL GAS FROM AMARA - DEGASSING STATION .
WELLS ON STREAM : AM - 3 .

FORMATION : MISHRIF

DATE OF SAMPLING : 11.05.2011
DATE OF ANALYSIS : 11.05.2011

STAGE NO.	1st stage
Gas pressure (Kg/Cm^2)	12
Gas Temperature C°	38
Components (Gas Vol. %)	
Nitrogen	0.99
Carbon Dioxide	2.57
Hydrogen Sulphide	1.12
Methane	69.16
Ethane	14.05
Propane	7.1
i - Butane	0.9
n - Butane	2.27
i - Pentane	0.57
n -Pentane	0.91
Hexanes	0.42
Heptanes	0.17

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

Octanes	0.07
Nonanes	Trace
Total	100
Gas Sp.Gr.Calculated@15.6/15.6 C°	0.8131
Gas M.Wt Calculated	23.55
Density LBS/SCF	0.0619

Notes : 1. The concentrations of Hydrogen Sulphide were measured in Laboratory so it not represent the actual value .

2.Trace means < 0.01 Vol. % .

1.6 - AMBIENT CONDITION

- AMBIENT TEMP . (OUTDOORS): MIN (-5)C ; MAX (60)C ;

- RELATIVE HUMIDITY : MIN (20%) , MAX (95%) .

THE FLOW METERS SHOULD BE SUITABLE TO OPERATE IN OPEN AIR WHERE SITE ENVIRONMENTAL CONDITIONS ARE CHARACTERIZED BY SAND STORM .

ATMO. PRESSURE : 1020 M bar

RAIN INTERVAL : NOVEMBER TO END OF MARCH

SNOW : NOT TO BE SEEN .

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	WIND VELOCITY : 140 Km/hr . DESIGN WIND VELOCITY : 160 Km/hr . NOTES : 1. SUPPLIER IS REQUESTED TO SUBMIT OFFER WITH FULL TECHNICAL DETAILS 2. ALL NECESSARY DOCUMENT SHOULD BE PROVIDED . 3. THE COUNTRY OF ORIGIN , DELIVERY PERIOD , THE VALIDITY , THE NUMBER AND THE DATE OF OFFER SHOULD BE MENTIONED . 4.ALL EQUIPMENT SHOULD BE H_2S RESISTAREE ACC. TO NACE . 5. THE GOODS TO BE SUPPLIED TO MOC WAREHOUSE (CIP MISSAN). 6. THE MANUFACTURER SHOULD SUBMIT ORIGIN CERTIFICATE APPROVED BY COMMERCE & INDUSTRY CHAMBER OF THE COUNTRY OF ORIGIN & COMMERCIAL INVOICES , ORIGIN CERTIFICATE SHOULD AUTHENTICATED & STAMPED BY IRAQI COUNCIL **ORIGIN OF MATERIALS :** USA , GERMANY , ITALY , FRANCE , UK , JAPAN , SWEDEN & HOLLAND		

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FLARE GAS FLOW METER FOR NOOR & AMMARA DEG.STATIONS .

استمارة الترجيح

ITEM		
1	80 %	المواصفات الفنية
2	10 %	المنشأ
3	5 %	المدة المتعلقة بتنفيذ العقد
4	5 %	الأعمال المنجزة ضمن الاختصاص