


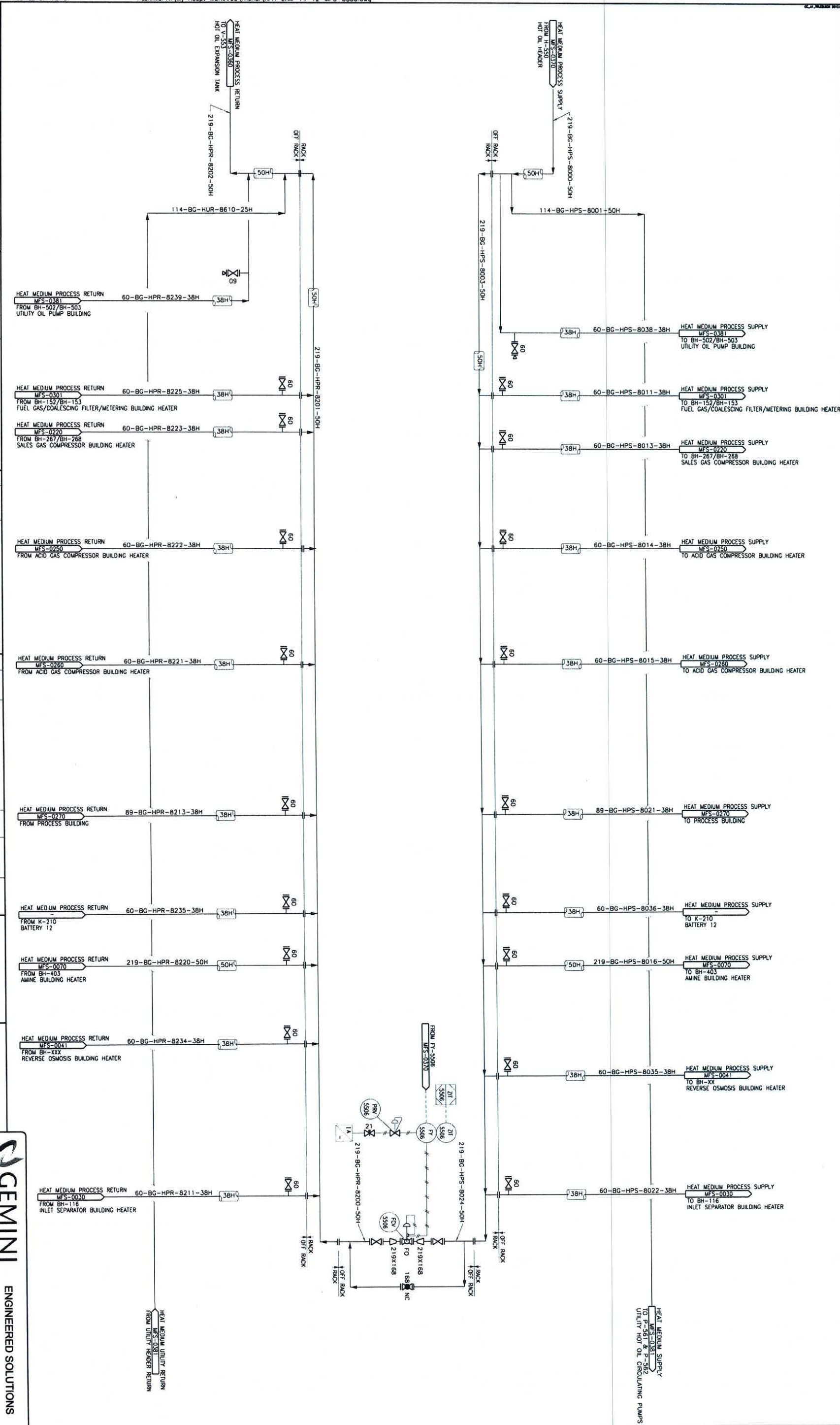


- | NO. | REFERENCE | DRAWING | NO. | PROJECT DESCRIPTION | REV | DATE | REVISIONS | DRAWN | CHK | APPD |
|-----|-----------|---------|-----|--------------------------------------|-----|----------|-------------------|-------|-----|------|
| | | | 1 | 61303A101 ZUMA GAS PLANT # 4 | A | 13.10.10 | ISSUED FOR REVIEW | BW | | |
| | | | 4 | 15.07.08 AS-BUILT PER FIELD MARK-UPS | | | | MC | | |
| | | | 3 | 14.09.26 ISSUED FOR CONSTRUCTION | | | | RLC | | |
| | | | 2 | 14.09.25 ISSUED FOR INFORMATION | | | | RLC | | |
| | | | 1 | 14.06.06 RE-ISSUED FOR CONSTRUCTION | | | | JC | | |
| | | | 0 | 14.04.11 ISSUED FOR CONSTRUCTION | | | | TRW | | |
| | | | C | 14.01.31 ISSUED FOR HAZOP | | | | TRW | | |
| | | | B | 13.12.13 RE-ISSUED FOR REVIEW | | | | TRW | | |

 GEMINI ENGINEERED SOLUTIONS	
ZMA GAS PLANT No. 4 LSD 14-12-116-6 W6M HOT OIL HEATER MECHANICAL FLOW SHEET	
PROJECT No:	14-12-116-6 W6M
SURFACE LOCATION:	14-12-116-6 W6M
DRAWING No:	REV.
APR-ZMA-14-12-WFS-0370	1-4

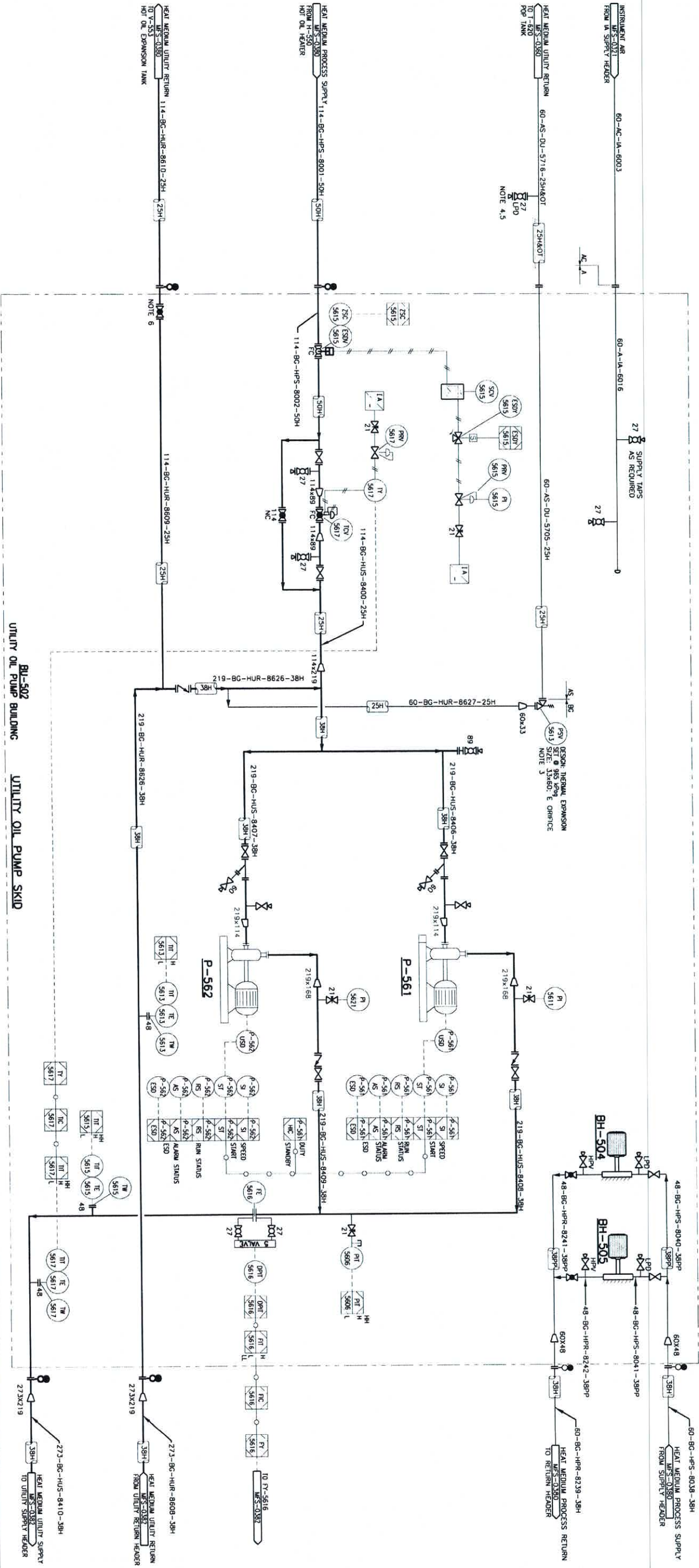
NOTES:

NOTES:



P-561/P-562
UTILITY HOT OIL CIRCULATING PUMP
MAKE/MODEL: GOMUS/3186AH
CAPACITY: 300 m³/hr
DIFFERENTIAL PRESSURE: 403.8 kPa
POWER: 60HP(44.7kW)
SUPPLY: 3/60Hz/460
SPEED:VFD

BH-504/BH-505
BUILDING HEATERS



BU-502
UTILITY OIL PUMP BUILDING
UTILITY OIL PUMP SKID

- NOTES:
- 1) NO BLOCK & BYPASS VALVES FOR PSV AS PER CLIENT'S PREFERENCE.
 - 2) LPO TO BE LOCATED NEAR GRADE & MUST BE ATTENDED OPERATION.
 - 3) AN OPERATIONAL SAFETY PROCEDURE MUST BE FOLLOWED WHICH WILL BE APACHE'S RESPONSIBILITY TO ENFORCE REGARDING PROPER USE OF PPE.
 - 4) GLOBE VALVE TO BE ADJUSTED TO ENSURE FLOW RATE IS WITHIN THE DESIGN FLOW RATE RANGE.
 - 5) HEAT MEDIUM PUMP TO BE CAPABLE OF COLD START.

DRAWING NO.	REFERENCE DRAWING	No.	PROJ. No.	PROJECT DESCRIPTION	REV.	DATE	REVISIONS	DRAWN	CHK.	APPRO.
		1	G13038.101	ZAMA GAS PLANT 4	A	13.07.23	ISSUED FOR REVIEW	KDM		
		2	15.07.09	AS-BUILT PER FIELD MARK-UPS	MC					
		1	14.06.06	RE-ISSUED FOR CONSTRUCTION	JC					
		0	14.04.11	ISSUED FOR CONSTRUCTION	TNW					
		C	14.01.31	ISSUED FOR HAZOP	TNW					
		B	13.12.13	RE-ISSUED FOR REVIEW	TNW					
		A	13.07.23	ISSUED FOR REVIEW	KDM					

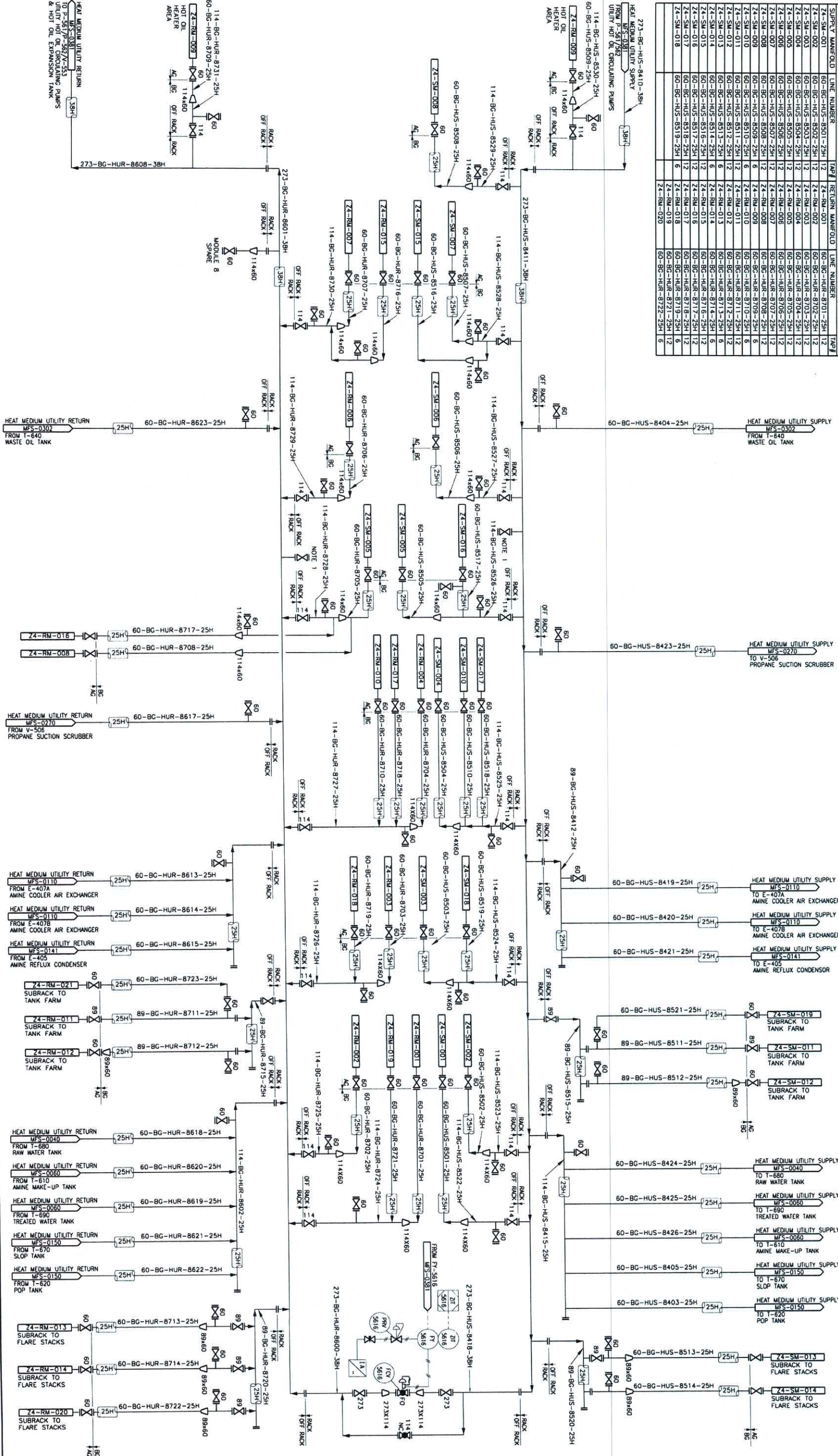
GEMINI ENGINEERED SOLUTIONS

ZAMA GAS PLANT No. 4
LSD 14-12-116-6 WGM
UTILITY OIL PUMPS
MECHANICAL FLOW SHEET

PROJECT No. G13038.101
SURFACE LOCATION: 14-12-116-6 WGM
DRAWING No. APA-ZAM-14-12-MFS-0381
REV. 1-2

TRACING MANIFOLDS

SUPPLY MANIFOLD	LINE NUMBER	RETURN MANIFOLD	LINE NUMBER
Z4-SM-001	60-BG-HUS-8501-25H	60-BG-HUR-8701-25H	12
Z4-SM-002	60-BG-HUS-8502-25H	60-BG-HUR-8702-25H	12
Z4-SM-003	60-BG-HUS-8503-25H	60-BG-HUR-8703-25H	12
Z4-SM-004	60-BG-HUS-8504-25H	60-BG-HUR-8704-25H	12
Z4-SM-005	60-BG-HUS-8505-25H	60-BG-HUR-8705-25H	12
Z4-SM-006	60-BG-HUS-8506-25H	60-BG-HUR-8706-25H	12
Z4-SM-007	60-BG-HUS-8507-25H	60-BG-HUR-8707-25H	12
Z4-SM-008	60-BG-HUS-8508-25H	60-BG-HUR-8708-25H	12
Z4-SM-009	60-BG-HUS-8509-25H	60-BG-HUR-8709-25H	12
Z4-SM-010	60-BG-HUS-8510-25H	60-BG-HUR-8710-25H	12
Z4-SM-011	60-BG-HUS-8511-25H	60-BG-HUR-8711-25H	12
Z4-SM-012	60-BG-HUS-8512-25H	60-BG-HUR-8712-25H	12
Z4-SM-013	60-BG-HUS-8513-25H	60-BG-HUR-8713-25H	12
Z4-SM-014	60-BG-HUS-8514-25H	60-BG-HUR-8714-25H	12
Z4-SM-015	60-BG-HUS-8515-25H	60-BG-HUR-8715-25H	12
Z4-SM-016	60-BG-HUS-8516-25H	60-BG-HUR-8716-25H	12
Z4-SM-017	60-BG-HUS-8517-25H	60-BG-HUR-8717-25H	12
Z4-SM-018	60-BG-HUS-8518-25H	60-BG-HUR-8718-25H	12
Z4-SM-019	60-BG-HUS-8519-25H	60-BG-HUR-8719-25H	12
Z4-SM-020	60-BG-HUS-8520-25H	60-BG-HUR-8720-25H	12



NOTES:
1) LINE STOPS IN THE EASTSIDE PAPERACK FIELD ROUTE TO SEND UTILITY HEAT MEDIUM TO K-210 IN BATTERY 12.

REVISIONS	REV.	DATE	DESCRIPTION	BY	CHK.	APPD.
1	A	13.10.10	ISSUED FOR REVIEW	JKM		
2	B	13.12.13	RE-ISSUED FOR REVIEW	TRW		
3	C	14.01.31	ISSUED FOR HAZOP	TRW		
4	D	14.04.11	ISSUED FOR CONSTRUCTION	JKM		
5	E	14.06.06	RE-ISSUED FOR CONSTRUCTION	JKM		
6	F	16.07.09	AS-BUILT PER FIELD MARK-UPS	JKM		

PROJECT INFORMATION	PROJECT NO.	PROJECT DESCRIPTION	DRAWING NO.
1	C13038.101	ZAMA GAS PLANT 4	14-12-116-6 W6M

APPROVALS	DESIGNED BY	CHECKED BY	APPROVED BY

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