

NOTES

- LOADING ARMS SHALL HAVE ELECTRICAL TRACING IN PLACE OF STEAM TRACING.
- PIPELINES SHALL HAVE STEAM TRACING IN PLACE OF STEAM TRACING.
- FOR SYMBOL & LEGENDS REFER SHEET 01.
- BITUMEN STORAGE TANK SANKS ARE INSULATED WITH 50 MM THICKNESS WITH LRB.
- MOVS PROVIDED AT TANK BODY VALVE.
- RADAR TYPE LEVEL TRANSMITTER (NON CONTACT TYPE).
- SAMPUNG SLOT DIP HATCH . 5. WATER DRAW OFF VALVE.
- 2 NUMBERS OF EARTHING BOSS PROVIDED FOR EACH TANK.
- GIVEN TANK CAPACITY IS NET WORKING CAPACITY OF TANK.
- VIBRATING TYPE LEVEL SWITCH FOR AUTOMATIC OVER FILL PREVENTION SYSTEM.
- TANK INLET AND OUTLET NOZZLES HAVING BELLOWES TO AVOID TANK OR PIPE FAILURE.
- REFER VENDOR DOCUMENT NO : FMOPC - IOCL (BR) -BBLF - PFD - 01 FOR DETAILED NETWORK FOR STEAM SUPPLY MANIFOLDS , TANKS & PUMPS IN MARKETING TERMINAL
- ECCENTRIC REDUCER.
- STORAGE TANK IS INTERMITTENT SERVICE.
- TANK SIDE INDICATOR SHALL BE LOCATED AT GROUND LEVEL.
- TANK BOTTOM IS SLOPED FOR EASE OF MAINTENANCE.
- 3 NOS OF VENT WITH BIRD SCREEN & PROVIDED FOR EACH TANKS.
- WHENEVER DISSIMILAR MATERIALS ARE TO BE CONNECTED BY MEANS OF GASKETED FLANGE JOINTS , INSULATING GASKET KIT SHALL BE USED.
- ELECTRICAL HEAT TRACING IS PROVIDED FOR ALL LINES EXCEPT RECEIPT INLET LINES.
- BITUMEN VG40 AND VG30 RECEIPT PIPE LINE ARE STEAM TRACED.
- ALL MOVS ARE REMOTELY OPERATED FROM CONTROL ROOM AND AS WELL AS FROM OUTSIDE THE DYKE WALL THROUGH LCP.
- CONDENSATE TRAPS ARE PROVIDED AT LOW POINT OF STEAM SUPPLY LINE WITH THE INTERVAL OF EVERY 30M.
- REFER P & D LEGEND INSTRUMENT SYMBOLS (P 020785-G-21068-P201-SH.1) FOR DETAILED REPRESENTATION OF ALL MOV , AND SDV.
- EXISTING TANK FARM AREA TANK NO. 102E/102F/101J/101K DISPATCH LINE HOV REPLACE WITH NEW MOV.
- HIGH PRESSURE INSTRUMENT AIR AUTO FLUSHING CONNECTION . AUTO FLUSHING SYSTEM SHALL BE CONTROLLED BY BATCH CONTROLLERS.

SCHEDULE OF TANKS

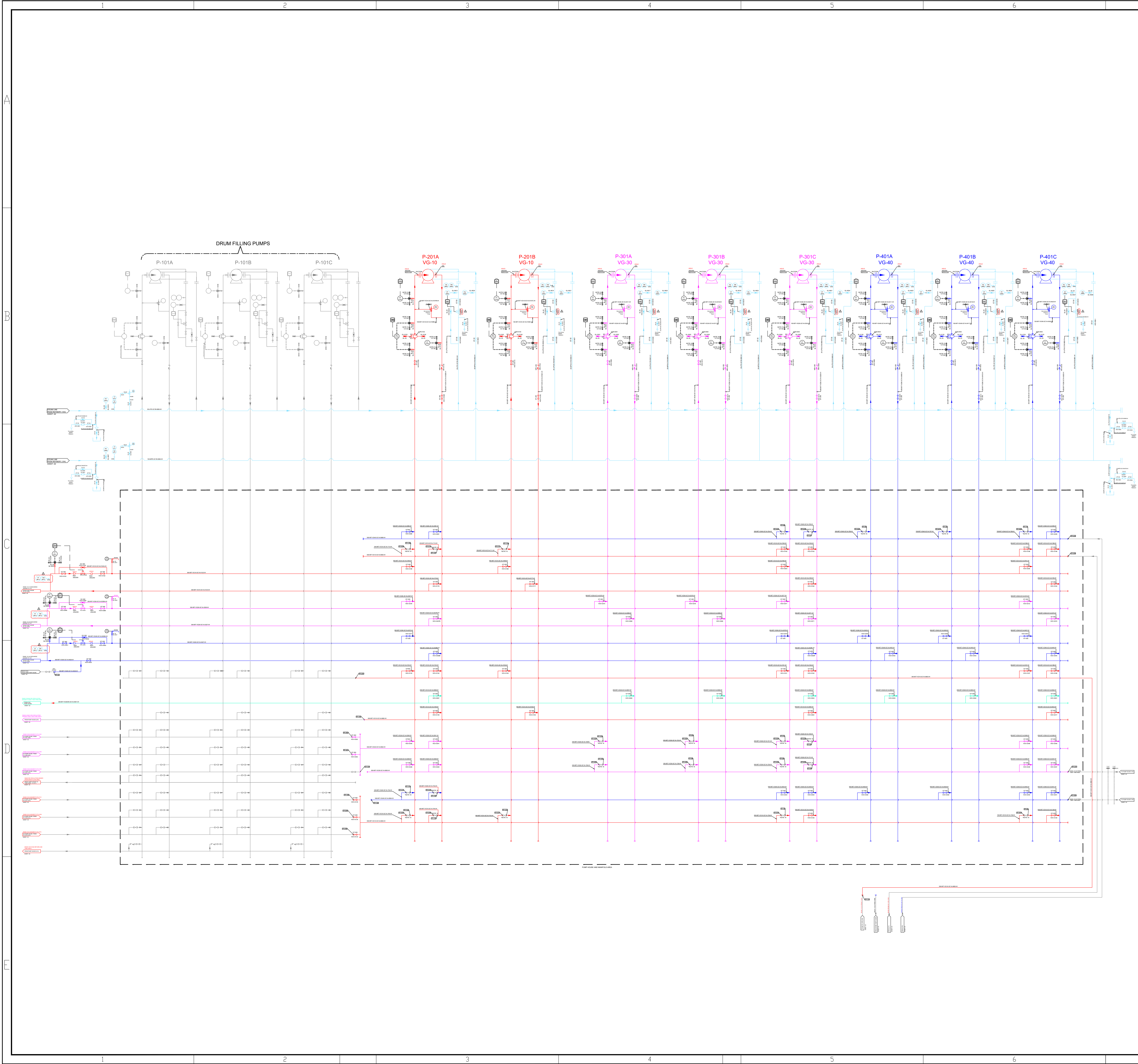
TAG NO.	SERVICE	DIAMETER (M)	HEIGHT/LENGTH (M)	NOMINAL CAPACITY (KL)
TANK-1	VG30	30.0M	18.5M	12200
TANK-2	VG40	30.0M	18.5M	12200

LEGENDS

APPROVED FOR CONSTRUCTION

Rev.	D	M	Y	Modifications	Drawn	Checked	Validated	Approved
2	03.06.2026			APPROVED FOR CONSTRUCTION	SNL	RND	RND	KNS
1	18.09.2025			APPROVED FOR CONSTRUCTION	SNL	RND	RND	KNS
0	07.04.2025			APPROVED FOR CONSTRUCTION	SNL	RND	RND	KNS
G	04.02.2025			ISSUED FOR APPROVAL	CHP	AHR	SSA	RDU
F	26.11.2024			ISSUED FOR APPROVAL	CHP	AHR	SSA	RDU
E	09.10.2024			ISSUED FOR APPROVAL	CHP	AHR	SSA	RDU
D	14.03.2024			ISSUED FOR APPROVAL	PDJ	SDD	SSA	RDU
C	15.12.2023			ISSUED FOR APPROVAL	SRS	SDD	SSA	RDU
B	27.11.2023			ISSUED FOR APPROVAL	TSG	SDD	SSA	RDU
A	29.05.2023			ISSUED FOR APPROVAL	RSH	AHR	JSA	RDU

OWNER / CLIENT	INDIAN OIL CORPORATION LIMITED Indian Oil Bhawan, G-9, Ali Yavar Jung Marg, Bandra East, Mumbai- 400051
PROJECT	EPCM FOR BITUMEN HANDLING FACILITY,MATHURA
SUBJECT	P&ID PRODUCT PIPELINE (TANK FARM AREA)
TRACTEBEL Engineering pvt. Ltd.	Size Scale Sheet Rev. A1 NTS 2 OF 6 2 Project No. Discipline Code System Code Serial No. P.020785 G 21068 P201



NOTES

- LOADING ARMS SHALL HAVE ELECTRICAL TRACING IN PLACE OF STEAM TRACING.
- PIPELINES SHALL HAVE STEAM TRACING IN PLACE OF STEAM TRACING.
- FOR SYMBOL & LEGENDS REFER SHEET 01.
- TANK TRUCK FILLING OF PRODUCT IS FULLY AUTOMATED.
- TANK TRUCK LOADING LINE IS PROVIDED WITH BATCH CONTROLLER & LOADING AUTOMATION SYSTEM.
- CORIOLIS TYPE FLOW METER.
- ELECTRICAL HEAT TRACING PROVIDED FOR ALL LINES.
- LOADING ARM IS A PART OF AUTOMATION PACKAGE TENDER.
- DELETED.
- DELETED.
- REFER P & ID LEGENDS - INSTRUMENT SYMBOLS FOR DETAILED REPRESENTATION OF MOVES.
- VALVES IN THE BLEED RING ARE UNDER INSTRUMENTATION SCOPE.
- CARD READER SHALL BE INSTALLED ON EACH LOADING BAY NEAR BATCH CONTROLLER PANEL.
- CATCHMENT POT IS PROVIDED.
- DELETED.
- HIGH PRESSURE INSTRUMENT AIR AUTO FLUSHING CONNECTION . AUTO FLUSHING SYSTEM SHALL BE CONTROLLED BY BATCH CONTROLLERS.
- INTEGRAL DBB TYPE VALVE.
- DELETED.
- * EXISTING VALVE SHALL BE RETAINED IN PUMP MANIFOLD AREA.

SCHEDULE OF PUMPS


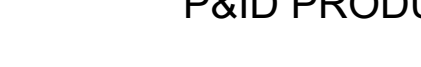
TAG NO.	SERVICE	FLOW (m³/h)	HEAD (m)
P-101B	VG10	350	75
P-101C	VG10	350	75
P-301A	VG30	350	75
P-301B	VG30	350	75
P-301C	VG30	350	75
P-401A	VG40	350	75
P-401B	VG40	350	75
P-401C	VG40	350	75

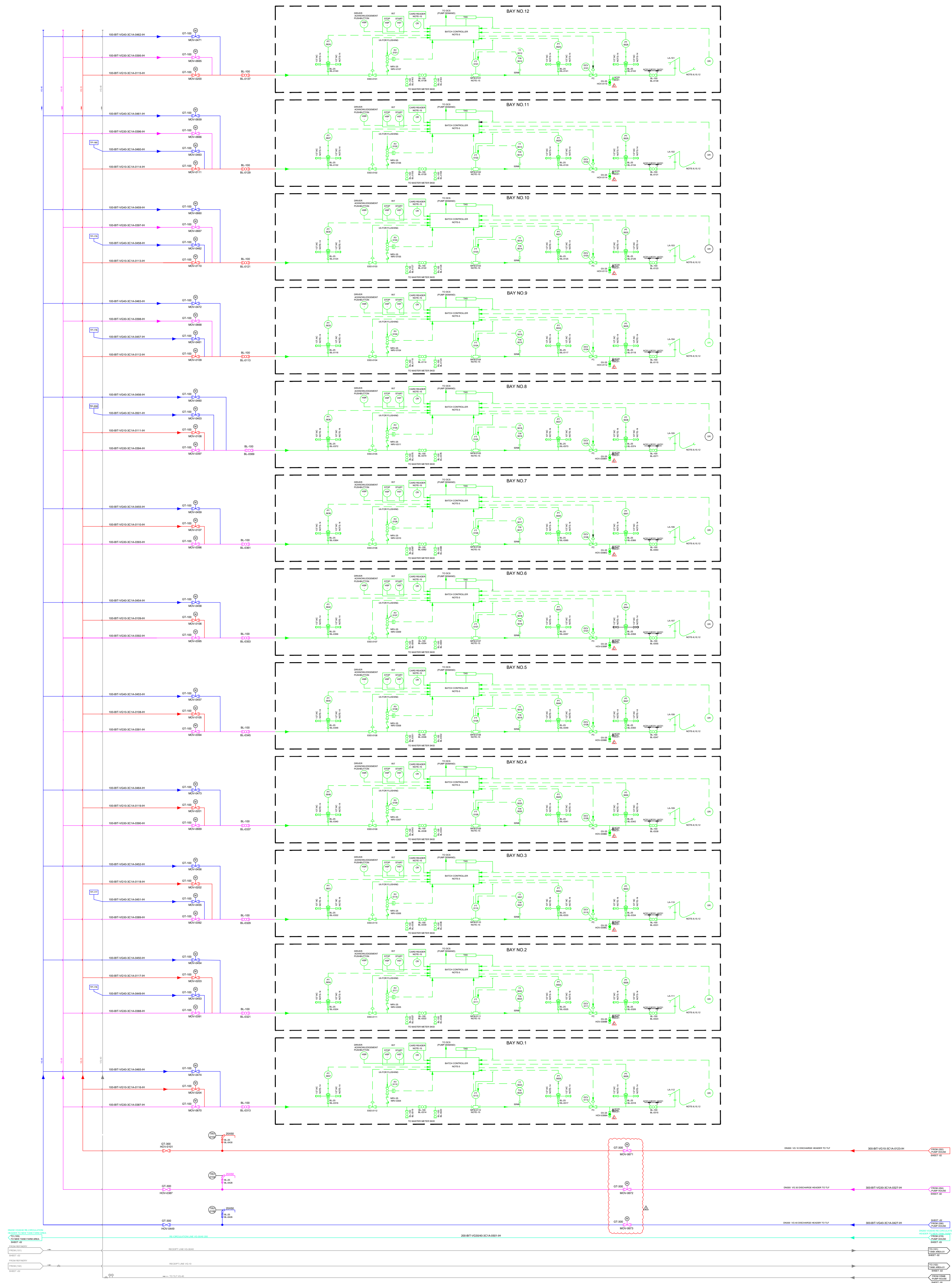
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Rev.	D M Y	Modifications	Drawn	Checked	Validated	Approved

LOA NO. HCC/246/ ENGG- 07/ PT-21/ 2022- 23/ LOA Dated 21. 10. 2022

OWNER / CLIENT	<div>INDIAN OIL CORPORATION LIMITED Indian Oil Bhawan, G-9, Ali Yavar Jung Marg, Bandra East, Mumbai- 400051</div>				
PROJECT	EPCM FOR BITUMEN HANDLING FACILITY, MATHURA				
SUBJECT	P&ID PRODUCT PIPELINE (PUMP HOUSE AREA)				
<div> TRACTEBEL Engineering pvt. Ltd.</div>	Size	Scale	Sheet		Rev.
	A1	NTS	3	OF 6	2
	Project No.	Discipline Code		System Code	Serial No.
	P.020785	G	21068	P201	



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- FOR SYMBOL & LEGENDS REFER SHEET 01.
- TANK TRUCK FILLING OF PRODUCT IS FULLY AUTOMATED.
- TANK TRUCK LOADING LINE IS PROVIDED WITH BATCH CONTROLLER & LOADING AUTOMATION SYSTEM.
- CORIOLIS TYPE FLOW METER.
- STEAM HEAT TRACING PROVIDED FOR ALL LINES.
- LOADING ARM IS A PART OF AUTOMATION PACKAGE TENDER.
- EIGHT LOADING POINTS ARE PROVIDED FOR TRUCK LOADING OF BITUMEN VG30.
- NINE LOADING POINT ARE PROVIDED FOR TRUCK LOADING OF BITUMEN VG40.
- REFER P & ID LEGENDS - INSTRUMENT SYMBOLS FOR DETAILED REPRESENTATION OF MOV.
- VALVES IN THE BLEED RING ARE UNDER INSTRUMENTATION SCOPE.
- CARD READER SHALL BE INSTALLED ON EACH LOADING BAY NEAR BATCH CONTROLLER PANEL.
- CATCHMENT POT IS PROVIDED.
- DENSITY OUTPUT IS TAKEN FROM MASS FLOW METER.
- HIGH PRESSURE INSTRUMENT AIR AUTO FLUSHING CONNECTION . AUTO FLUSHING SYSTEM SHALL BE CONTROLLED BY BATCH CONTROLLERS.
- INTEGRAL DBB TYPE VALVE.
- EIGHT LOADING POINT ARE PROVIDED FOR TRUCK LOADING OF BITUMEN VG10.

BAY ALLOCATION TABLE	
BAY NO.	PRODUCT
1 & 4	VG30
2 TO 3	VG30/VG40
5 TO 8	VG10/VG30/VG40
9 TO 11	VG10/VG40
12	VG10

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Rev.	D	M	Y	Modifications	Drawn	Checked	Validated	Approved
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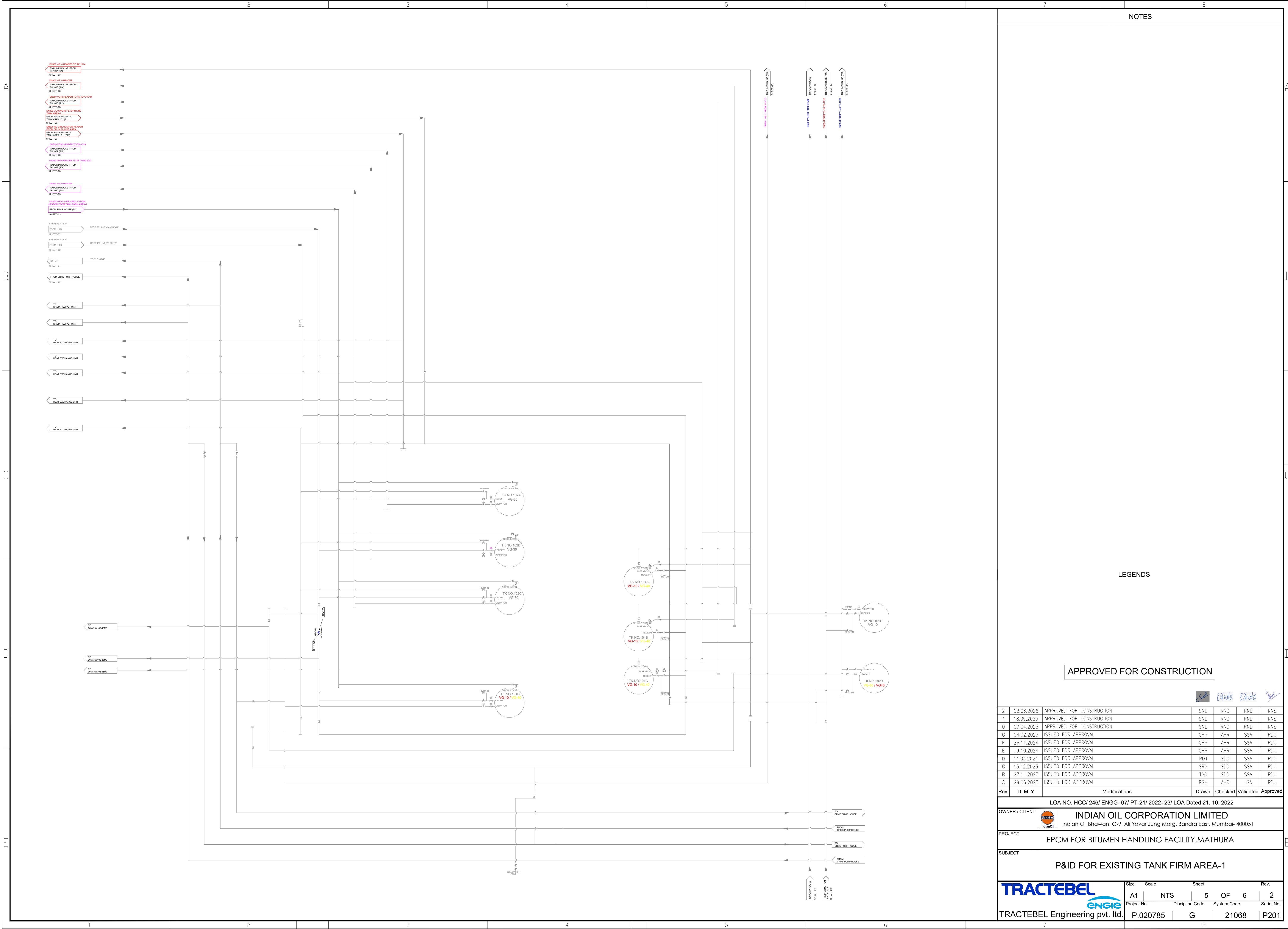
LOA NO. HCC/246/ ENGG- 07/ PT-21/ 2022- 23/ LOA Dated 21. 10. 2022

OWNER / CLIENT
INDIAN OIL CORPORATION LIMITED
Indian Oil Bhawan, G-9, Ali Yavar Jung Marg, Bandra East, Mumbai- 400051

PROJECT
EPCM FOR BITUMEN HANDLING FACILITY, MATHURA

SUBJECT
P&ID PRODUCT PIPELINE (TLF AREA)

TRACTEBEL		Size	Scale	Sheet	Rev.
TRACTEBEL Engineering pvt. Ltd.		A1	NTS	4 OF 6	2
Project No.		Discipline Code		System Code	
P.020785		G		21068	
				P201	



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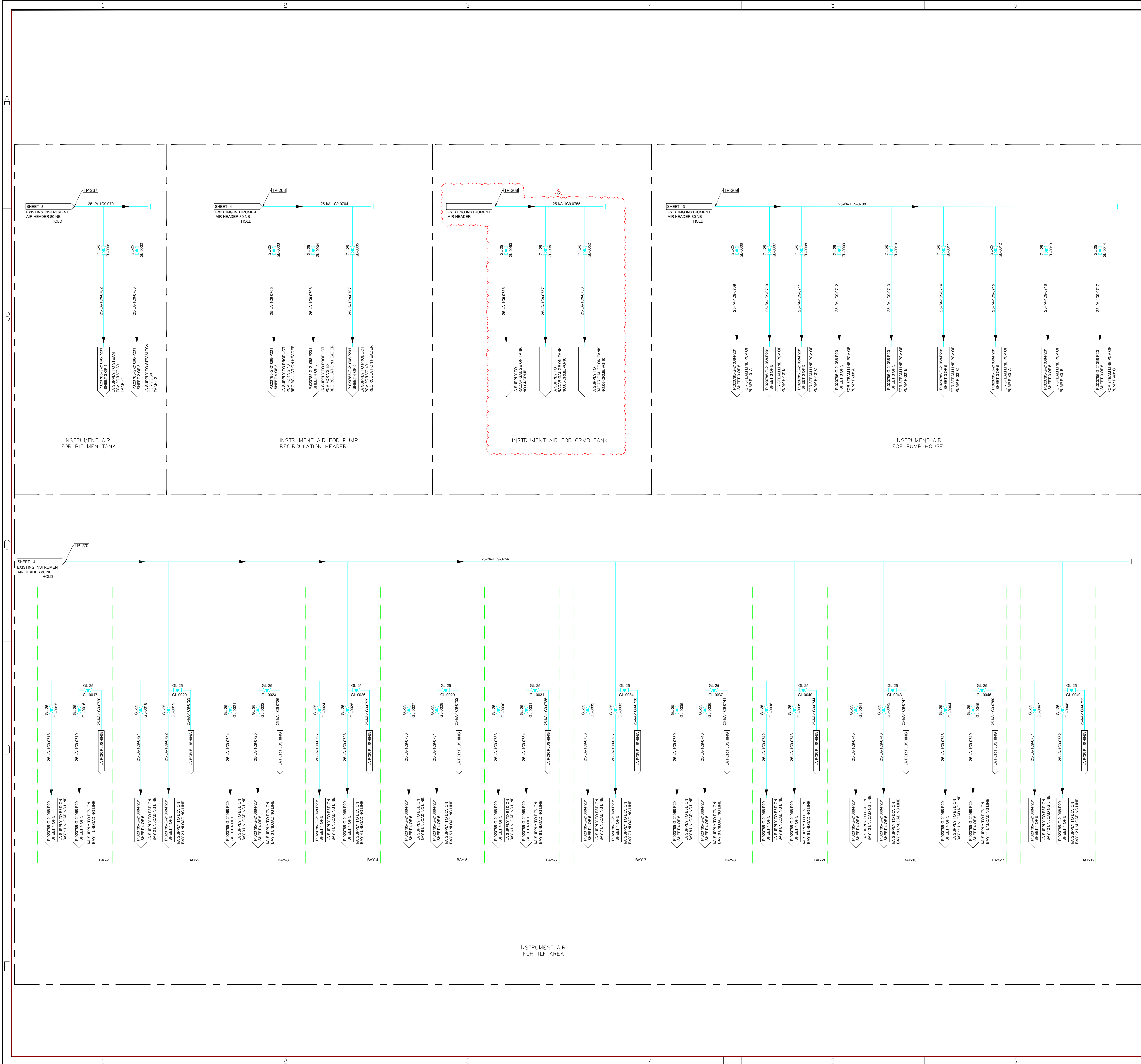
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PROJECT	EPCM FOR BITUMEN HANDLING FACILITY,MATHURA				
SUBJECT	P&ID FOR EXISTING TANK FIRM AREA-1				
TRACTEBEL	Size	Scale	Sheet	Rev.	
Project No.	A1	NTS	5 OF 6	2	
Discipline Code	P.020785	G	System Code	21068	Serial No.
TRACTEBEL Engineering pvt. Ltd.				P201	



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NOTES																			
1. FOR LEGEND & ABBREVIATION REFER DOCUMENT NO. P.020785-G-21068-P201.																			
2. AUTO DRAIN TRAP SHALL BE SUPPLIED BY INSTRUMENT AIR RECEIVER VENDOR.																			
3. LOCATION OF INSTRUMENT AIR TAPPING FOR VALVE MAY VARY AS PER SITE REQUIREMENT.																			