

SH. 1 OF 1	DRG. NO.	90000-91-888-2
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TABLE 1:— ANNUNCIATION DETAIL

SR.NO.	ANNUNCIATION
A)	SELECTOR SWITCH AND ANNUNCIATION FOR FIRE TANK COMPARTMENT 1 OR 2 OR BOTH UNDER MAINTENANCE/OPERATION IN FAP AT CONTROL ROOM WITH THE LIMIT SWITCH PROVIDED ON GV-12 & GV-13.
B)	COMMON FAULT TRIP INDICATION FOR ALL PUMPS/MCC (AC/DC TRIP, TEMP., RELAY, MCP) ETC. IS PROVIDED AT MCC.
C)	SELECTOR SWITCHES FOR REMOTE/LOCAL, AUTO/MANUAL, PUMP1/PUMP 2 FOR TANK FILLING IS PROVIDED IN MCC.
D)	ANNUNCIATION OF BOTH COMPARTMENTS (1 & 2) OF TANK FOR HIGH HIGH LEVEL, LOW LOW LEVEL, LOW LEVEL, PUMP RUNNING (1&2), PUMPS (1&2) FAIL TO START IS PROVIDED IN FAP AT CONTROL ROOM.
E)	PUSH BUTTONS FOR TEST/ACCEPT/RESET & LAMP TEST IS PROVIDED FOR IN FAP AT CONTROL ROOM ANNUNCIATION PURPOSES.
F)	LOCAL PUSH BUTTONS STATION FOR PUMP START – STOP (TANK FILLING AND BOOSTER PUMPS) IS PROVIDED IN MCC.

NOTES ::

1. THE LEVEE SWITCH SETTINGS FOR SEQUENTIAL STARTING OF PUMPS ARE INDICATIVE ONLY AND CAN BE ADJUSTED AT SITE.
2. ALL PUMPS HAVE AUTO, AS-WELL-AS MANUAL START/STOP FACILITY.
3. MINOR MODIFICATIONS MAY BE DONE TO SUIT SITE CONDITION.
4. TANK FILLING PUMPS WILL BE LOCATED AT EL. 1332.75M IN POWER HOUSE
5. PRESSURE GAUGES WILL BE PROVIDED WITH ISOLATING VALVE INCLUDING A TEST CONNECTION OF SCREWED TYPE M20X1.5MM.

REFERENCE DRAWING :

1. SCHEMATIC DIAGRAM (P&ID) FOR BOOSTER PUMP HOUSE : 2-38316-00005
2. FLOW DIAGRAM FOR FIRE FIGHTING SYSTEM : 1-383-16-00015

TABLE-3 LEVEL/FLOW SWITCH SCHEDULE FOR MAIN/STANDBY TANK FILLING PUMP

No.	PUMP TAG. No.	START SIGNAL		PUMP RUNNING TAG. No.	PUMP FAIL TO START TAG. No.	STOP SIGNAL	
		LEVEL SWITCH TAG. No.	LEVEL SWITCH ANNUNCIATION			LEVEL SWITCH TAG. No.	LEVEL SWITCH ANNUNCIATION
1.	TP-M-01	LS-1-3	LSL 1-3	FS-TP-01	FS-TP-01	LS-1-2	LSH 1-2
		LS-2-3	LSL 2-3			LS-2-2	LSH 2-2
		LS-1-4	LSL 1-4	FS-TP-02	FS-TP-02	LS-1-2	LSH 1-2
2.	TP-M-02	LS-2-4	LSL 2-4			LS-2-2	LSH 2-2

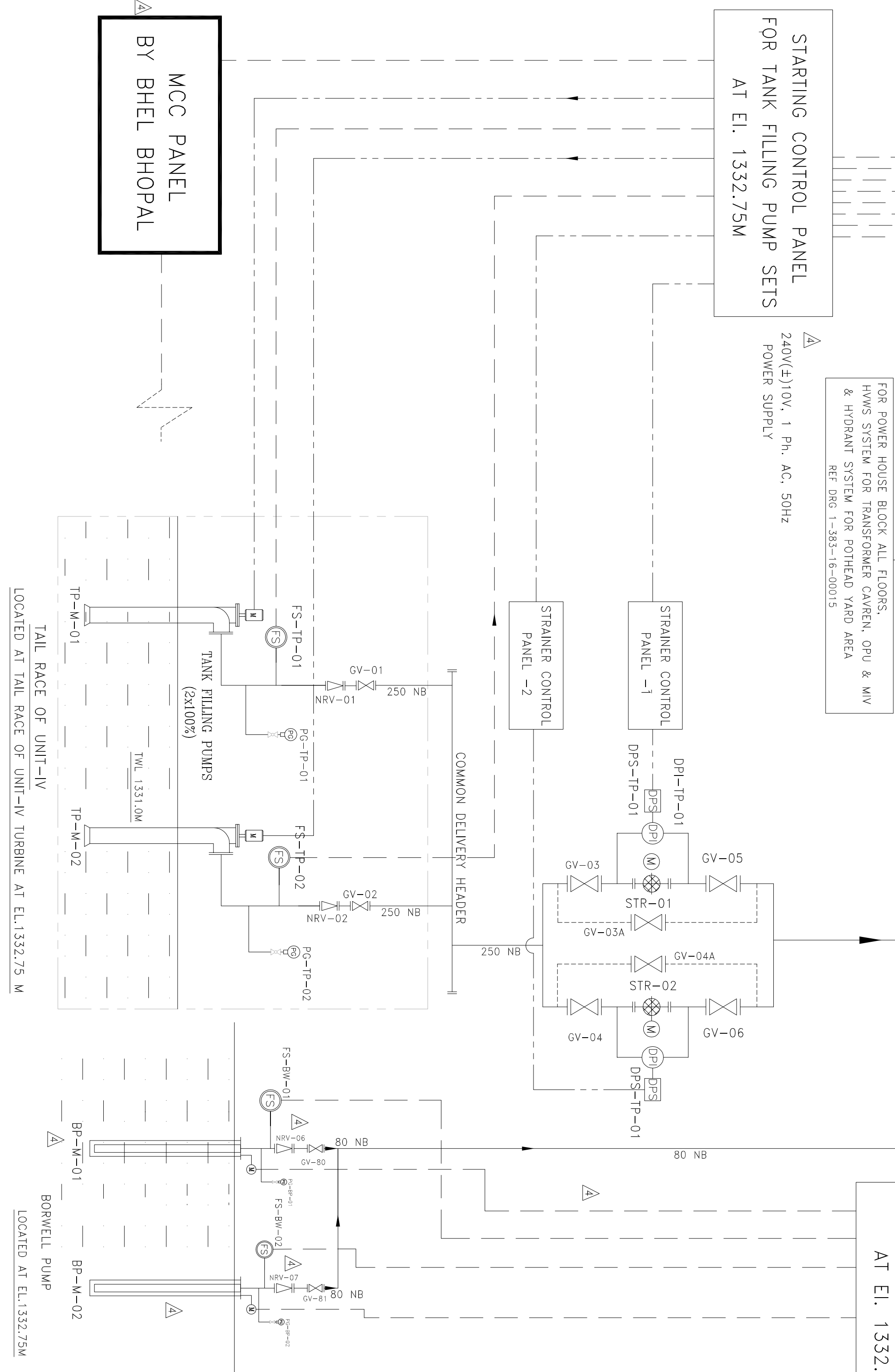
SCHEDULE

TABLE 2:— INSTRUMENTS

** THE START SIGNAL SHALL BE GIVEN WITH TIME DELAY OF 30 SEC AFTER GETTING SIGNAL "PUMP FAIL TO START" FROM FLOW SWITCH TS-TP-02.
 *** THE START SIGNAL SHALL BE GIVEN WITH TIME DELAY OF 30 SEC AFTER GETTING SIGNAL "PUMP FAIL TO START" FROM FLOW SWITCH TS-BP-01.

* THE LEVELS SHALL BE FROM THE BOTTOM OF OVER HEAD TANK FOUNDATION.

	TYPE OF INSTRUMENT	QTY.
1	FLOW SWITCH	02
2	PRESSURE GAUGE	02
3	LEVEL SWITCH	08
4	LEVEL GAUGE	02
5	DIFFEREN. PRESSURE SWITCH	02
6	LIMIT SWITCHES	02



S.No.	SYMBOL	DESCRIPTION
1		TANK FILLING LINE
2		BOOSTER LINE
3		CI GATE VALVE
4		CI NON RETURN VALVE
5		CONCENTRIC REDUCER
6		ECCENTRIC REDUCER
7		BLIND FLANGE
8		FLOW METER
9		FLOW SWITCH
10		PRESSURE SWITCH
11		PRESSURE GAUGE
12		DIFFERENTIAL PRESSURE SWITCH
13		DIFFERENTIAL PRESSURE INDIACTOR
14		MOTOR
15		CONTROL CABLE
16		POWER CABLE
17		LEVEL SWITCH (LS)
18		ONLINE FILTER
19		LIMIT SWITCH
20		LEVEL SWITCH NO. LEVEL SWITCH ANNUNCIATION NO. LEVEL INDICATION (H= HIGH, HH= HIGH HIGH, L= LOW, LL= LOW LOW)
21		TANK FILLING PUMP
22		BORE WELL

INVENTORY NO	SIGN. AND DATE	REF. DRG. NO.	COMPUTER FILE NAME	THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DEPRIMENTAL TO THE INTEREST OF THE COMPANY
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REV.	DATE	ALTERED
		CHD/APPD
ZONE		

REV.	DATE	ALTERED	AVIRAL
04	22.07.15	CHD/APPD K GUNJAN	
ZONE		REVISED AS PER MOM WITH NHPC	


REV.	DATE	ALTERED	AVIAL
03	03.06.15	CHD/APPD K GUNJAN	
ZONE		REVISED AS PER NHPC COMMENTS	

REV. DATE	ALTERED AMIT	
02 25.02.15	CHD/APPD K GUNJAN	
ZONE	REVISED AS PER NHPC COMMENTS	

REV. DATE	ALTERED AMT	
01 19.12.14	CHD/APPD K GUNJAN	2
REASON DATE	REVISED AS PER NHPC COMMENTS	

DEPT. EXD CODE	UNTO. DIMS. OR q/m/y	SCALE N.T.S	WE
450			

APRD.	CUMAR CUNJAN	—SD—	07/06/14
IGHT (KG)	REF. TO ASSY. ORG.	ITEM NO.	NO.OF ITEMS
N.A.	N.A.	N.A.	N.A.
CARD CODE	NAFC PBT1-F1S04-F3003	REV.	
NA	BHE DIE NO. 2-38316-00006		04
SHT. NO	01	NO. OF SHT.	01

	BHEL HEAVY ELECTRICALS. LTD.			
	HYDERABAD			
	NAME	SIGN.	DATE	NO. OF VAR.
	RANITA J	—Sd—	05/06/14	
	AMIT KUMAR	—Sd—	06/06/14	N.A.
APD KUMAR GUJAN	—Sd—	07/06/14		

PROJECT: PARBATI HEP STAGE – II (4 X 200 MW),
HIMACHAL, PRADESH, INDIA.

CUSTOMER:



नर्मदा नहर प्रायोजन लिमिटेड
(ORIENT SENSITIVE PVT. LIMITED)
NHPCL Limited
(A GOVT. OF INDIA ENTERPRISE)

ਯਾਜ਼ ਪੀ.ਸੀ. ਲਿਮਿਟਡ
(ਪ੍ਰਾਈਵੇਟ ਲਿਮਿਟਡ ਕੰਪਨੀ)
NHPC Limited
(A Govt. of India Enterprise)

SCHEMATIC DIAGRAM (P&I) FOR TANK FILLING PUMP HOUSE

CARD NO.		
CODE	BHEL DRG NO.	04
NA	SHT. NO	NO. OF SH.
	01	01