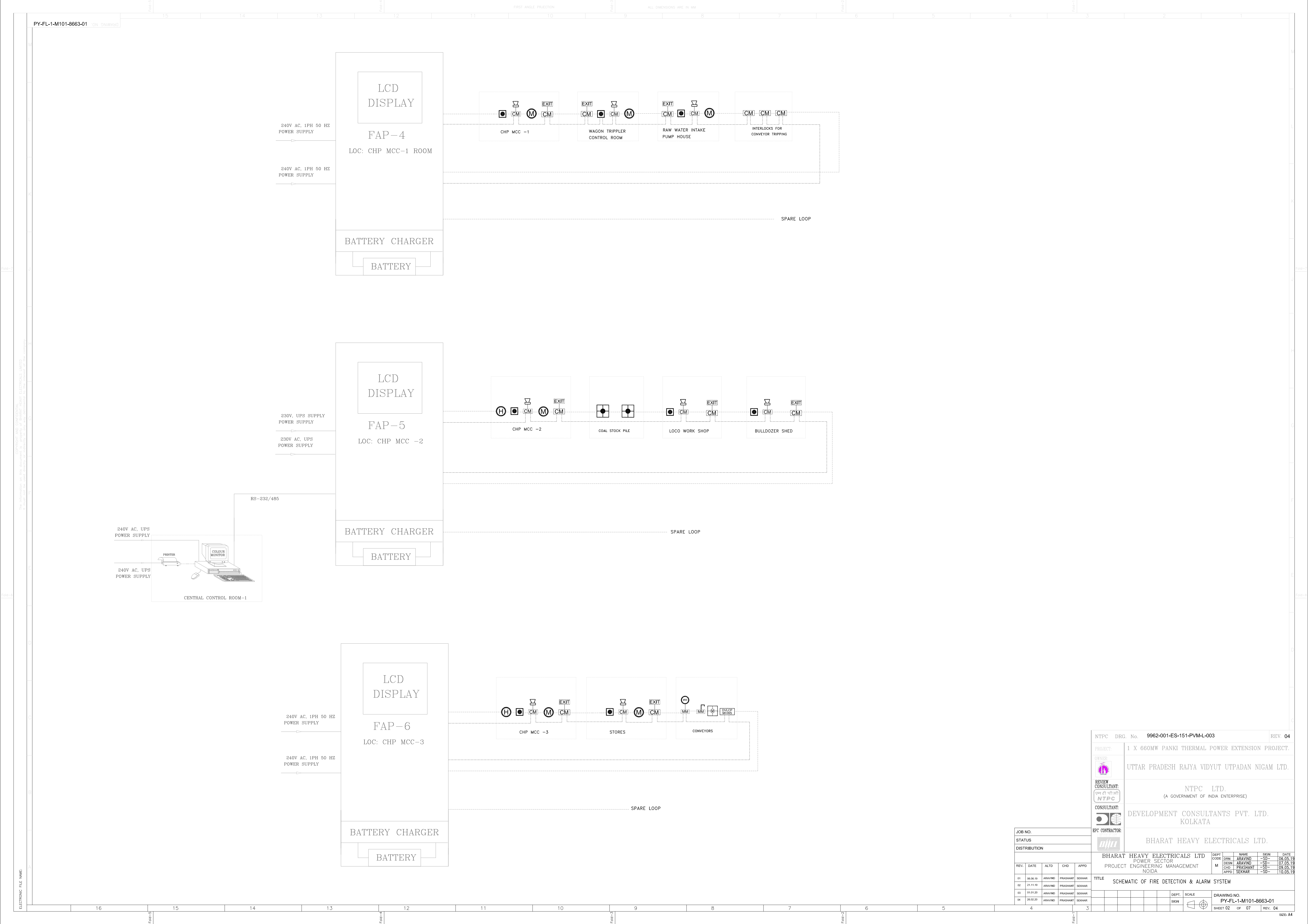




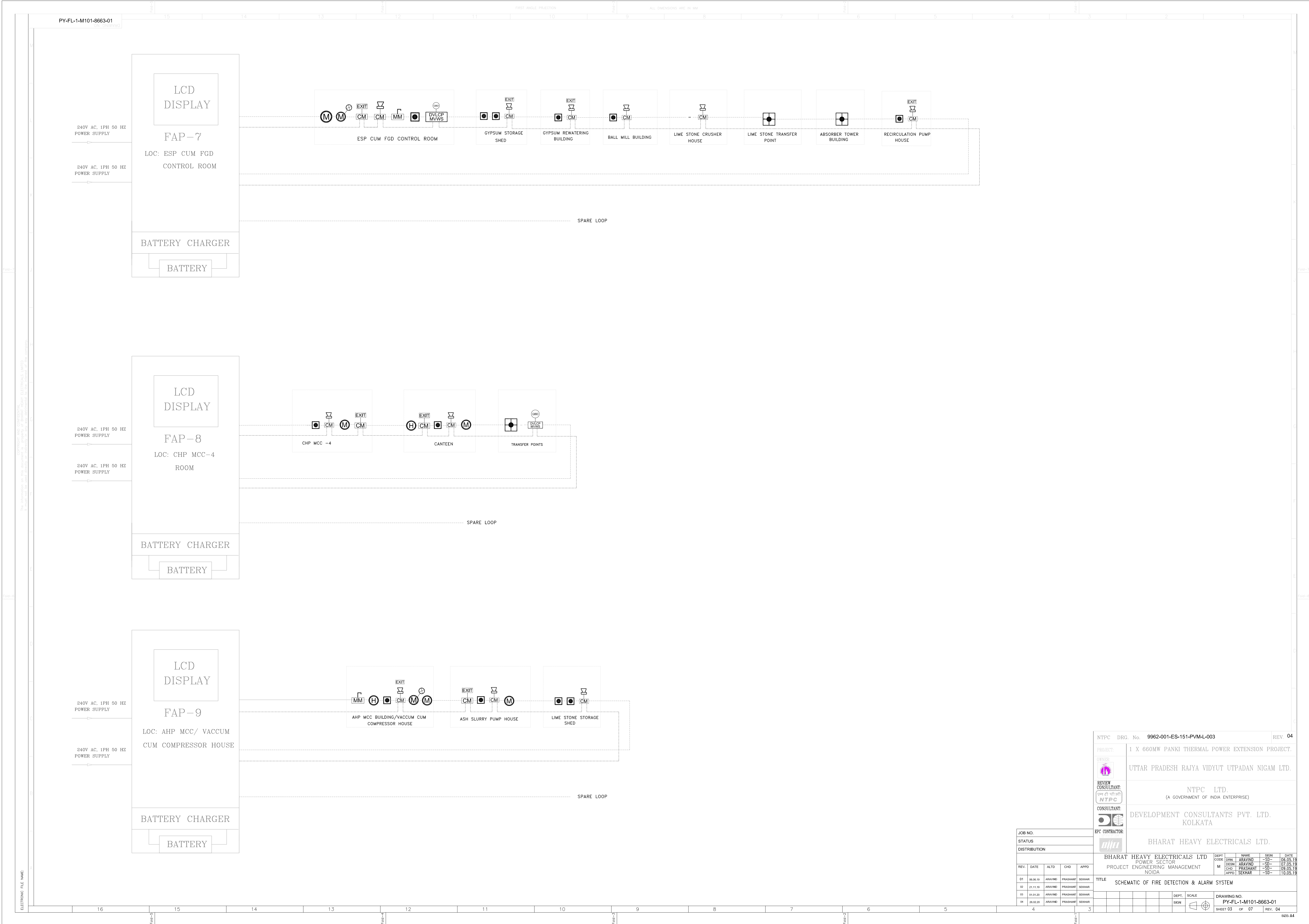
NTPC	DRG. No.	9962-001-ES-151-PVM-L-003	REV 04
PROJECT:	1 X 660MW PANKI THERMAL POWER EXTENSION PROJECT.		
OWNER:	UTTAR PRADESH RAJYA VIDYUT UTPADAN NIGAM LTD.		
REVIEW CONSULTANT:	NTPC LTD. (A GOVERNMENT OF INDIA ENTERPRISE)		
CONSULTANT:	DEVELOPMENT CONSULTANTS PVT. LTD. KOLKATA		
EPC CONTRACTOR:	BHARAT HEAVY ELECTRICALS LTD.		

JOB NO.				DEPT	SCALE	DRAWING NO.
STATUS				DEPT	SCALE	PY-FL-1-M101-8663-01
DISTRIBUTION				DEPT	SCALE	
REV.	DATE	ALTD	CHD	APPD	DEPT	SCALE
01	06.06.19	ARAVIND	PRASHANT	SEKHAR	DEPT	SCALE
02	21.11.19	ARAVIND	PRASHANT	SEKHAR	DEPT	SCALE
03	01.01.20	ARAVIND	PRASHANT	SEKHAR	DEPT	SCALE
04	26.02.20	ARAVIND	PRASHANT	SEKHAR	DEPT	SCALE
TITLE						SHEET 01 OF 07
SCHEMATIC OF FIRE DETECTION & ALARM SYSTEM						REV. 04



NTPC	DRG. No.	9962-001-ES-151-PVML-003	REV	04
PROJECT:	1 X 660MW PANKI THERMAL POWER EXTENSION PROJECT.			
OWNER:	UTTAR PRADESH RAJYA VIDYUT UTPADAN NIGAM LTD.			
REVIEW CONSULTANT:	NTPC LTD. (A GOVERNMENT OF INDIA ENTERPRISE)			
CONSULTANT:	DEVELOPMENT CONSULTANTS PVT. LTD. KOLKATA			
EPC CONTRACTOR:	BHARAT HEAVY ELECTRICALS LTD.			
JOB NO.	BHARAT HEAVY ELECTRICALS LTD			
STATUS	POWER SECTOR			
DISTRIBUTION	PROJECT ENGINEERING MANAGEMENT Noida			
REV.	DATE	ALTD	CHD	APPD
01	06.06.19	ARAVIND	PRASHANT	SEKHAR
02	21.11.19	ARAVIND	PRASHANT	SEKHAR
03	01.01.20	ARAVIND	PRASHANT	SEKHAR
04	26.02.20	ARAVIND	PRASHANT	SEKHAR
DEPT	SCALE	DRAWING NO.	SHEET 02 OF 07	
SEGN	SEGN	PY-FL-1-M101-8663-01	REV. 04	

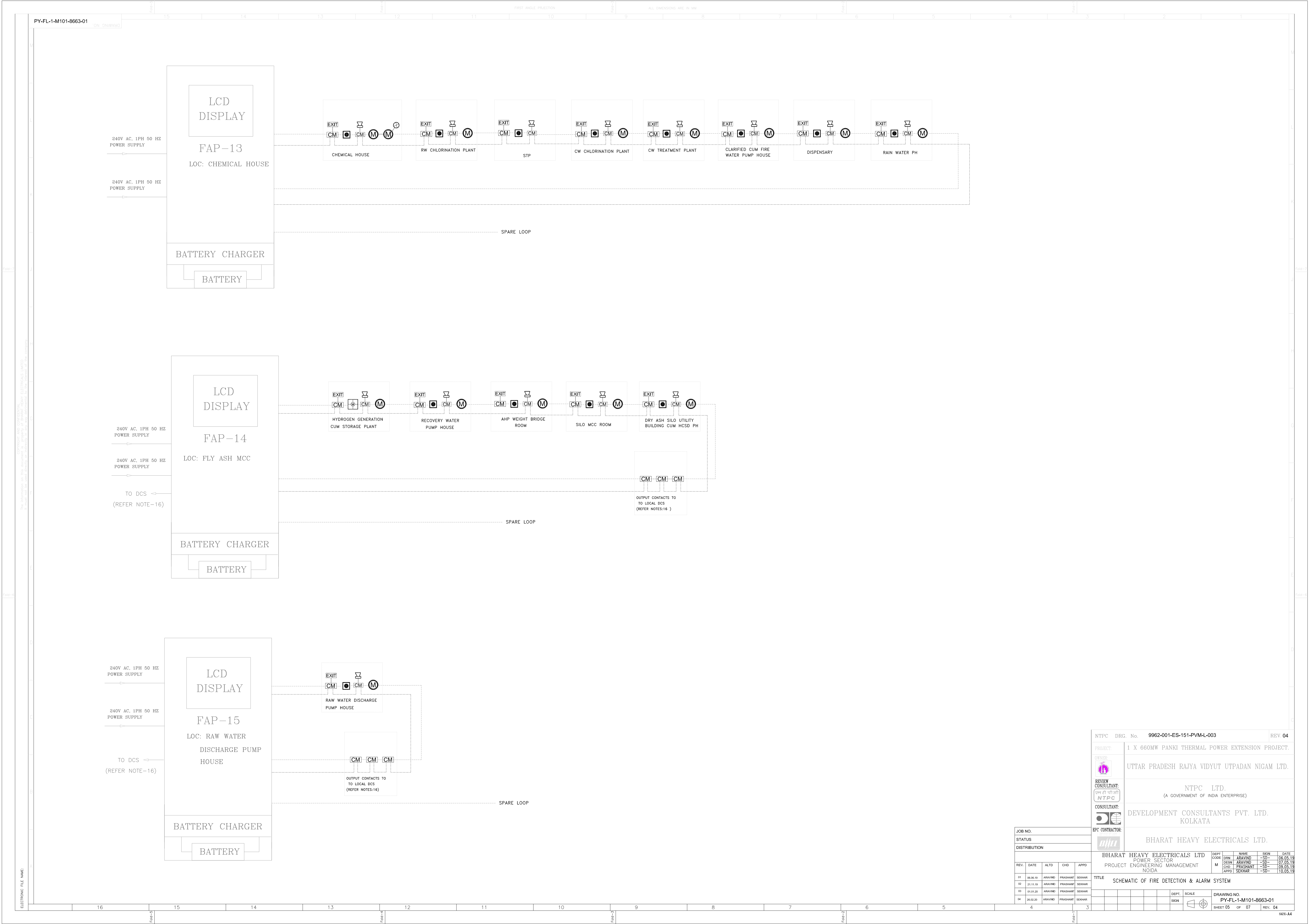
TITLE SCHEMATIC OF FIRE DETECTION & ALARM SYSTEM





NTPC	DRG. No.	9962-001-ES-151-PVM-L-003	REV	04
PROJECT:	1 X 660MW PANKI THERMAL POWER EXTENSION PROJECT.			
OWNER:	UTTAR PRADESH RAJYA VIDYUT UTPADAN NIGAM LTD.			
REVIEW CONSULTANT:	NTPC LTD. (A GOVERNMENT OF INDIA ENTERPRISE)			
CONSULTANT:	DEVELOPMENT CONSULTANTS PVT. LTD. KOLKATA			
EPC CONTRACTOR:	BHARAT HEAVY ELECTRICALS LTD.			

JOB NO.	BHARAT HEAVY ELECTRICALS LTD			
STATUS	POWER SECTOR			
DISTRIBUTION	PROJECT ENGINEERING MANAGEMENT			
REV.	DATE	ALTD	CHD	APPD
01	06.06.19	ARAVIND	PRASHANT	SEKHAR
02	21.11.19	ARAVIND	PRASHANT	SEKHAR
03	01.01.20	ARAVIND	PRASHANT	SEKHAR
04	20.02.20	ARAVIND	PRASHANT	SEKHAR
TITLE				
SCHEMATIC OF FIRE DETECTION & ALARM SYSTEM				
DEPT. SCALE				
SIGN				
DRAWING NO.				
PY-FL-1-M101-8663-01				
SHEET 04 OF 07				
REV. 04				



NTPC	DRG. No.	9962-001-ES-151-PVM-L-003	REV	04
PROJECT:	1 X 660MW PANKI THERMAL POWER EXTENSION PROJECT.			
OWNER:	UTTAR PRADESH RAJYA VIDYUT UTPADAN NIGAM LTD.			
REVIEW CONSULTANT:	NTPC LTD. (A GOVERNMENT OF INDIA ENTERPRISE)			
CONSULTANT:	DEVELOPMENT CONSULTANTS PVT. LTD. KOLKATA			
EPC CONTRACTOR:	BHARAT HEAVY ELECTRICALS LTD.			
JOB NO.	BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT Noida			
STATUS				
DISTRIBUTION				
REV.	DATE	ALTD	CHD	APPD
01	06.06.19	ARAVIND	PRASHANT	SEKHAR
02	21.11.19	ARAVIND	PRASHANT	SEKHAR
03	01.01.20	ARAVIND	PRASHANT	SEKHAR
04	26.02.20	ARAVIND	PRASHANT	SEKHAR
TITLE				
SCHEMATIC OF FIRE DETECTION & ALARM SYSTEM				
DEPT. SCALE				
SIGN				
DRAWING NO. PY-FL-1-M101-8663-01				
SHEET 05 OF 07 REV. 04				

ELECTRONIC FILE NAME:

Project: 1x660 MW PANKI TPEP
Title: Schematic of Fire Detection and Alarm System
Drg No: PY-FL-1-M101-8663-01

Sl.No	Customer Comments	BHEL Replies	Customer Comments	BHEL Replies	Customer Comments	BHEL Replies
1	Clarify the type of fire alarm panels envisaged in ESP control room, AHP control room, WTP control room, FO control room etc.	As per contract document, Fire alarm panel shall be micro-processor based analog addressable panel.	Clarify the type of fire alarm panels envisaged in ESP control room, AHP control room, WTP control room, FO control room etc.	As per contract document, Fire alarm panel shall be micro-processor based analog addressable panel.	Show the exact interface of DVLCP with MM and CM modules and loop as well as power connection.	Interface of DVLCP with MM & CM (Input and Control/Output) modules is shown at Pg-06 of 07 in the revised FDA Scheme.
2	Operator stations and printer shall be considered in fire station also.	Noted and updated accordingly.	Operator stations and printer shall be considered in fire station also.	Noted and updated accordingly.	There shall be 02 nos of power supply feeders for 02 battery chargers of each FAP.	Noted and modified accordingly.
3	Fire alarm panels shall be floor mounted.	Fire alarm panels shall be floor mounted as per CL: 2.0 - B (vi) - Chapter 24 of Vol-III Mechanical Works (sheet 32 of 68) . Repeater panel shall be wall mounted as per OEM standard.	Fire alarm panels shall be floor mounted.	Fire alarm panels shall be floor mounted as per CL: 2.0 - B (vi) - Chapter 24 of Vol-III Mechanical Works (sheet 32 of 68) . Repeater panel shall be wall mounted as per OEM standard.	2 X 100% for each FAP.	Noted and updated accordingly.
4			Comments marked previous revision have not been incorporated. Further, Reply/Compliance sheet is not attached.	Comments marked in the previous revision have been incorporated. Please find the replies at SI.No:1, 2 & 3 above.	Indicate the same in FAPs shown above.	Interface of DVLCP with MM & CM (Input and Control/Output) modules is shown at Pg-06 of 07 in the revised FDA Scheme.
5			BHEL is requested to ensure and confirm to cover all protection(HVW/MVW/Foam/Inert Gas/etc.) and detection system of all equipments/areas by fire alarm system. Further, BHEL to indicate FAPwise all System (Pumps, HVW, MVW, Foam, Inert Gas, MSD, LHS, IRD, etc) Coverage apart from building/area details.	Noted and confirmed. Wherever HVWS, MVWS spray systems and Inert gas systems are applicable same were shown in the scheme already. For Foam system, scheme is updated in the latest revision. Schematic of FDA system is only a representation of areas which are covered and the type of detection envisaged there. FAP wise systems indication can be shown after detail engineering/Loop configuration. It will be submitted as a separate document after detail engineering.	BHEL shall remove the configuration of OWS from the document as the same shall be reviewed in the datasheet.	Noted and updated accordingly.
6			Inert Gas System in Switchyard Control Room MVW, MSD & LHSC in Cable Gallery MSD in Switchgear Room, Battery Room	FDA system for Switchyard shall be in the scope of our sister unit BHEL-TBG. Please refer "Design Philosophy for Fire fighting System " Drg No: 9962-001-TB-572-PVM-U-002.		