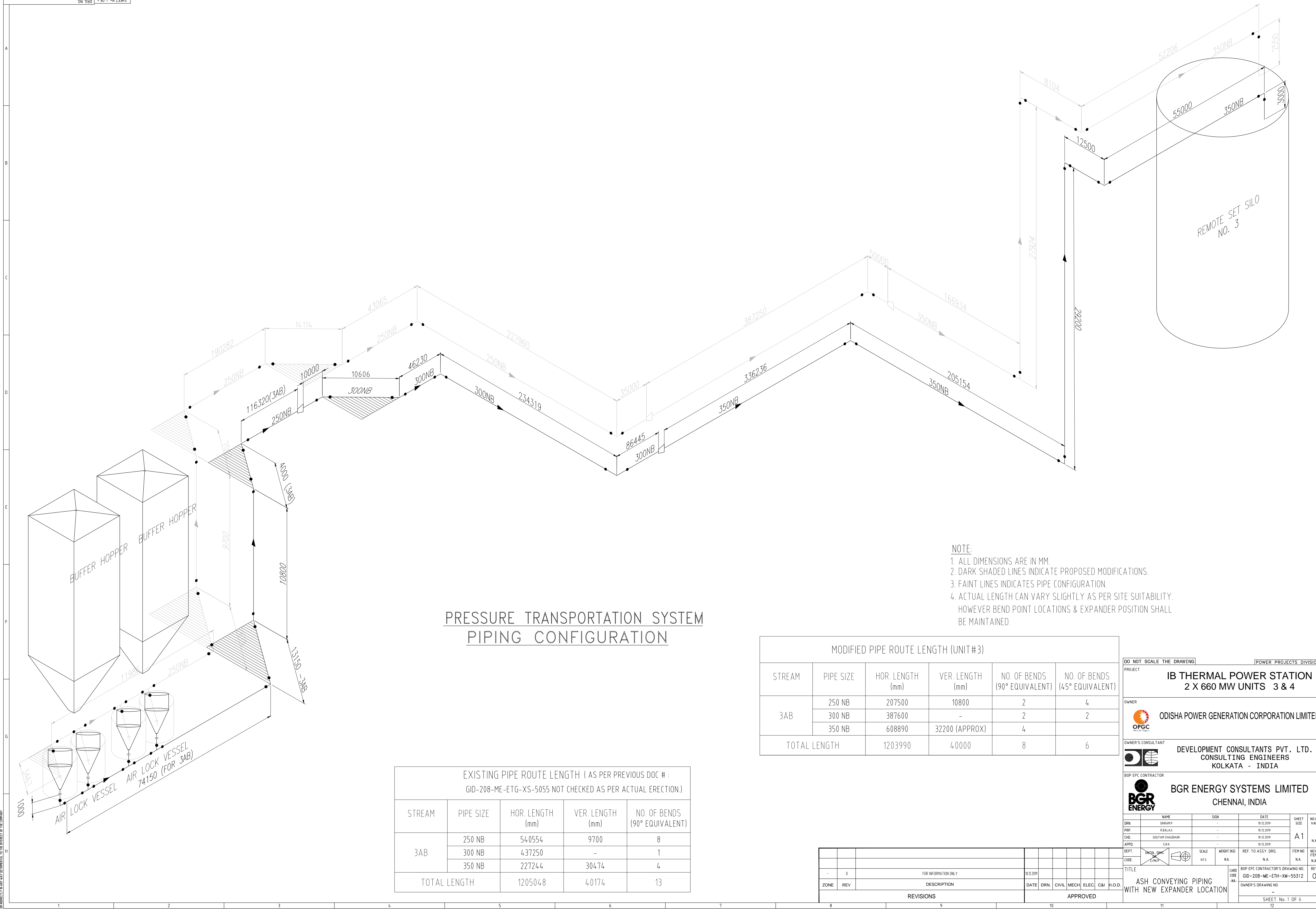


FIRST ANGLE PROJECTION
Z1555-MX-H13-3M-80Z-Q10
ON 0801 9.30 1. 13.345



PRESSURE TRANSPORTATION SYSTEM PIPING CONFIGURATION

- NOTE:**
1. ALL DIMENSIONS ARE IN MM.
 2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
 3. FAINT LINES INDICATES PIPE CONFIGURATION.
 4. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY. HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT#3)					
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)	NO. OF BENDS (45° EQUIVALENT)
3AB	250 NB	207500	10800	2	4
	300 NB	387600	-	2	2
	350 NB	608890	32200 (APPROX)	4	
TOTAL LENGTH		1203990	40000	8	6

EXISTING PIPE ROUTE LENGTH (AS PER PREVIOUS DOC # : GID-208-ME-ETG-XS-5055 NOT CHECKED AS PER ACTUAL ERECTION.)				
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)
3AB	250 NB	540554	9700	8
	300 NB	437250	-	1
	350 NB	227244	30474	4
TOTAL LENGTH		1205048	40174	13

DO NOT SCALE THE DRAWING

POWER PROJECTS DIVISION

**IB THERMAL POWER STATION
2 X 660 MW UNITS 3 & 4**

OWNER
ODISHA POWER GENERATION CORPORATION LIMITED
OPGC

OWNER'S CONSULTANT
**DEVELOPMENT CONSULTANTS PVT. LTD.
CONSULTING ENGINEERS
KOLKATA - INDIA**

BOP EPC CONTRACTOR
**BGR ENERGY SYSTEMS LIMITED
CHENNAI, INDIA**

DRN	NAME	SIGN	DATE	SHEET	NO. OF
	SIBRAMP	-	18.12.2019	18	VAR.
	PRIP	-	18.12.2019	18	VAR.
	CDR	GOVIND CHAUDHARI	18.12.2019	18	N.A.
	APPR	S.S.K	18.12.2019	18	N.A.

DEPT.	INSTR. DESK	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF
	CPW	1:15	NA	N.A.	NA	ITEMS

TITLE
**ASH CONVEYING PIPING
WITH NEW EXPANDER LOCATION**

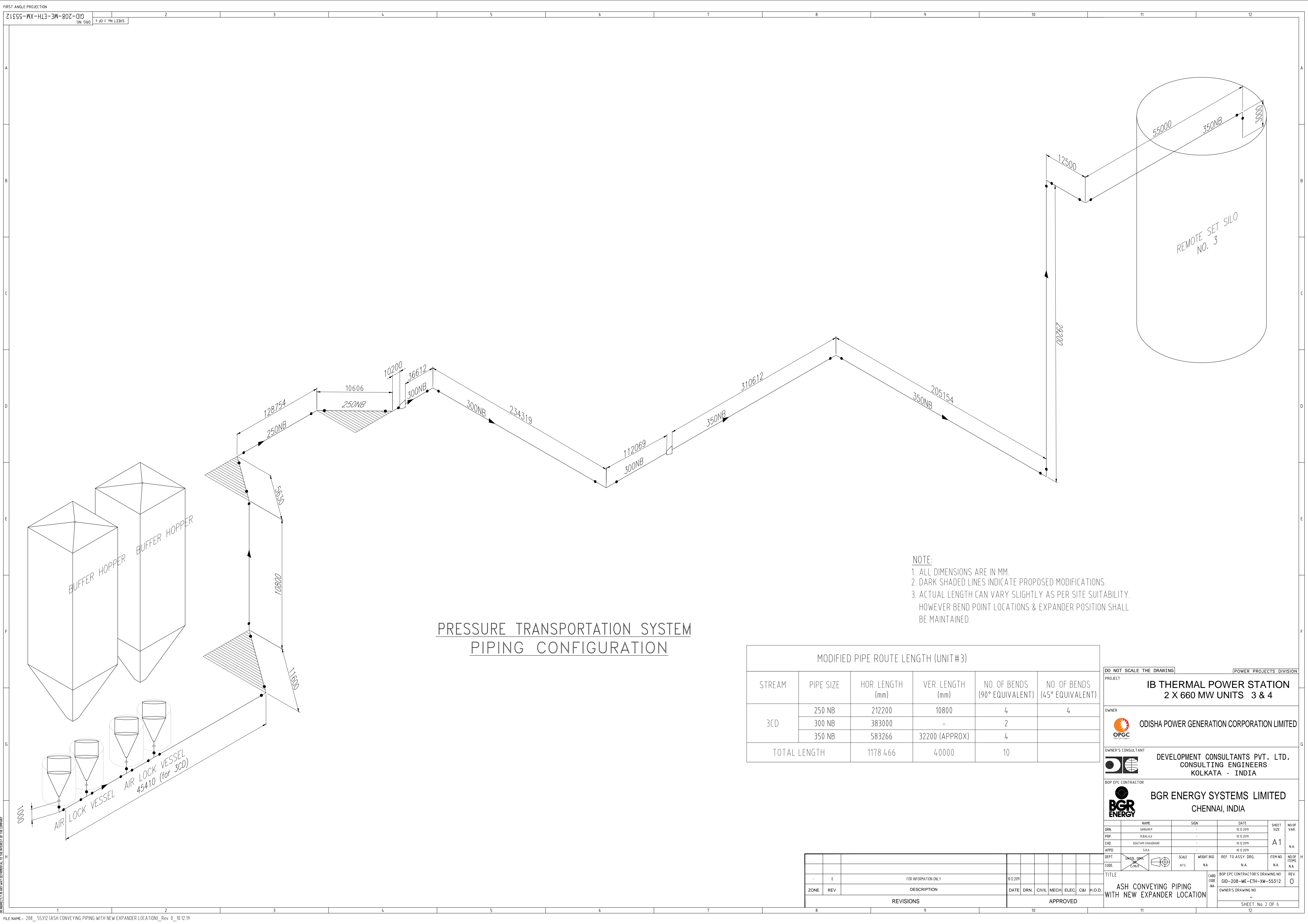
CARD NO. BOP EPC CONTRACTOR'S DRAWING NO. GID-208-ME-ETH-XM-55312
OWNER'S DRAWING NO. -

SHEET No. 1 OF 6

ZONE	REV	DESCRIPTION	DATE	DRN	CIVIL	MECH	ELEC	CAI	H.O.D.
FOR INFORMATION ONLY									
REVISIONS									
APPROVED									

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED. THE DIMENSIONS OF THE COMPONENTS SHALL BE AS PER THE DRAWING. THE DIMENSIONS OF THE COMPONENTS SHALL BE AS PER THE DRAWING. THE DIMENSIONS OF THE COMPONENTS SHALL BE AS PER THE DRAWING.

FIRST ANGLE PROJECTION
Z1555-MX-H13-3M-80Z-Q10
ON 0801 9.30 2.0N 13345



**PRESSURE TRANSPORTATION SYSTEM
PIPING CONFIGURATION**

NOTE:
1. ALL DIMENSIONS ARE IN MM.
2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
3. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY,
HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL
BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT#3)					
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)	NO. OF BENDS (45° EQUIVALENT)
3CD	250 NB	212200	10800	4	4
	300 NB	383000	-	2	
	350 NB	583266	32200 (APPROX)	4	
TOTAL LENGTH		1178.466	4.0000	10	

DO NOT SCALE THE DRAWING [POWER PROJECTS DIVISION]

PROJECT
IB THERMAL POWER STATION
2 X 660 MW UNITS 3 & 4

OWNER
ODISHA POWER GENERATION CORPORATION LIMITED
OPGC

OWNER'S CONSULTANT
DEVELOPMENT CONSULTANTS PVT. LTD.
CONSULTING ENGINEERS
KOLKATA - INDIA

BOP EPC CONTRACTOR
BGR ENERGY SYSTEMS LIMITED
CHENNAI, INDIA

DRN	NAME	SIGN	DATE	SHEET	NO. OF
DRN	SIBRAMP	-	18.12.2019	SIZE	VAR.
DRN	PRASAD	-	18.12.2019	A1	
DRN	GOVIND CHAUDHARI	-	18.12.2019	N.A.	
DRN	S.S.K	-	18.12.2019	N.A.	

DEPT.	INSTR. DESK	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF
CODE	CP/PP	N15	NA	N.A.	N.A.	ITEMS

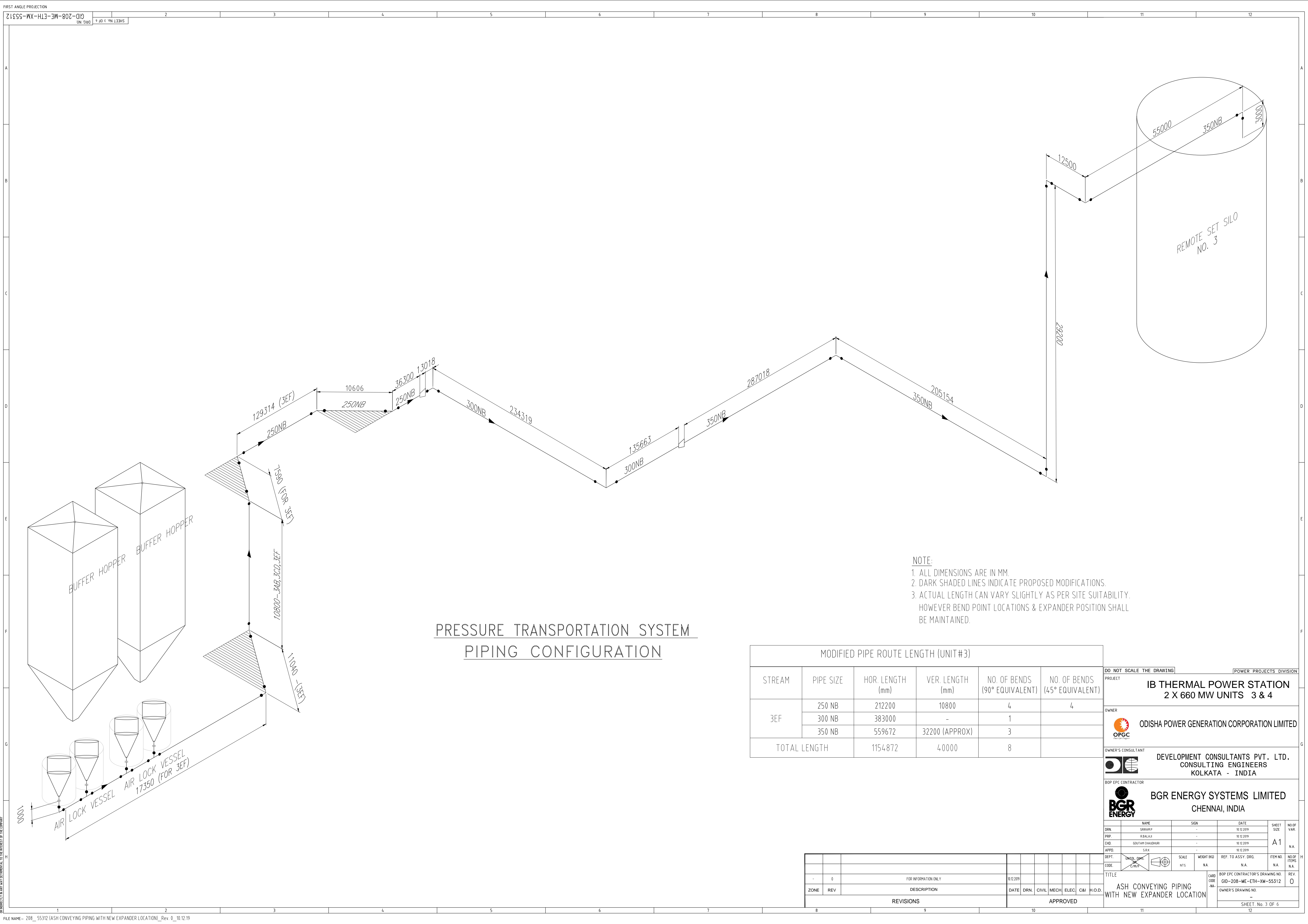
TITLE
ASH CONVEYING PIPING WITH NEW EXPANDER LOCATION

CARD
BOP EPC CONTRACTOR'S DRAWING NO. CID-208-ME-ETH-XM-55312
OWNER'S DRAWING NO. -

SHEET No. 2 OF 6

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO CENTERLINE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO SURFACE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO CENTERLINE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO SURFACE UNLESS OTHERWISE SPECIFIED.

FIRST ANGLE PROJECTION
Z155S-WX-H13-3M-80Z-Q10
ON 0801 9.30 1.13.19



**PRESSURE TRANSPORTATION SYSTEM
PIPING CONFIGURATION**

NOTE:
1. ALL DIMENSIONS ARE IN MM.
2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
3. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY,
HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL
BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT #3)					
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)	NO. OF BENDS (45° EQUIVALENT)
3EF	250 NB	212200	10800	4	4
	300 NB	383000	-	1	-
	350 NB	559672	32200 (APPROX)	3	-
TOTAL LENGTH		1154872	40000	8	-

DO NOT SCALE THE DRAWING [POWER PROJECTS DIVISION]

PROJECT
IB THERMAL POWER STATION
2 X 660 MW UNITS 3 & 4

OWNER
ODISHA POWER GENERATION CORPORATION LIMITED

OWNER'S CONSULTANT
DEVELOPMENT CONSULTANTS PVT. LTD.
CONSULTING ENGINEERS
KOLKATA - INDIA

BOP EPC CONTRACTOR
BGR ENERGY SYSTEMS LIMITED
CHENNAI, INDIA

DRN	NAME	SIGN	DATE	SHEET	NO. OF
DRN	SIBRAMP	-	18.12.2019	SIZE	VAR.
DRN	PRIP	-	18.12.2019	A1	N.A.
DRN	GOVIND CHANDRAN	-	18.12.2019		
DRN	S.S.K	-	18.12.2019		

DEPT.	INSTR.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF
CODE	CPW	N15	NA	N.A.	N.A.	ITEMS

TITLE
ASH CONVEYING PIPING
WITH NEW EXPANDER LOCATION

CARD
BOP EPC CONTRACTOR'S DRAWING NO. GID-208-ME-ETH-XM-55312
OWNER'S DRAWING NO. -

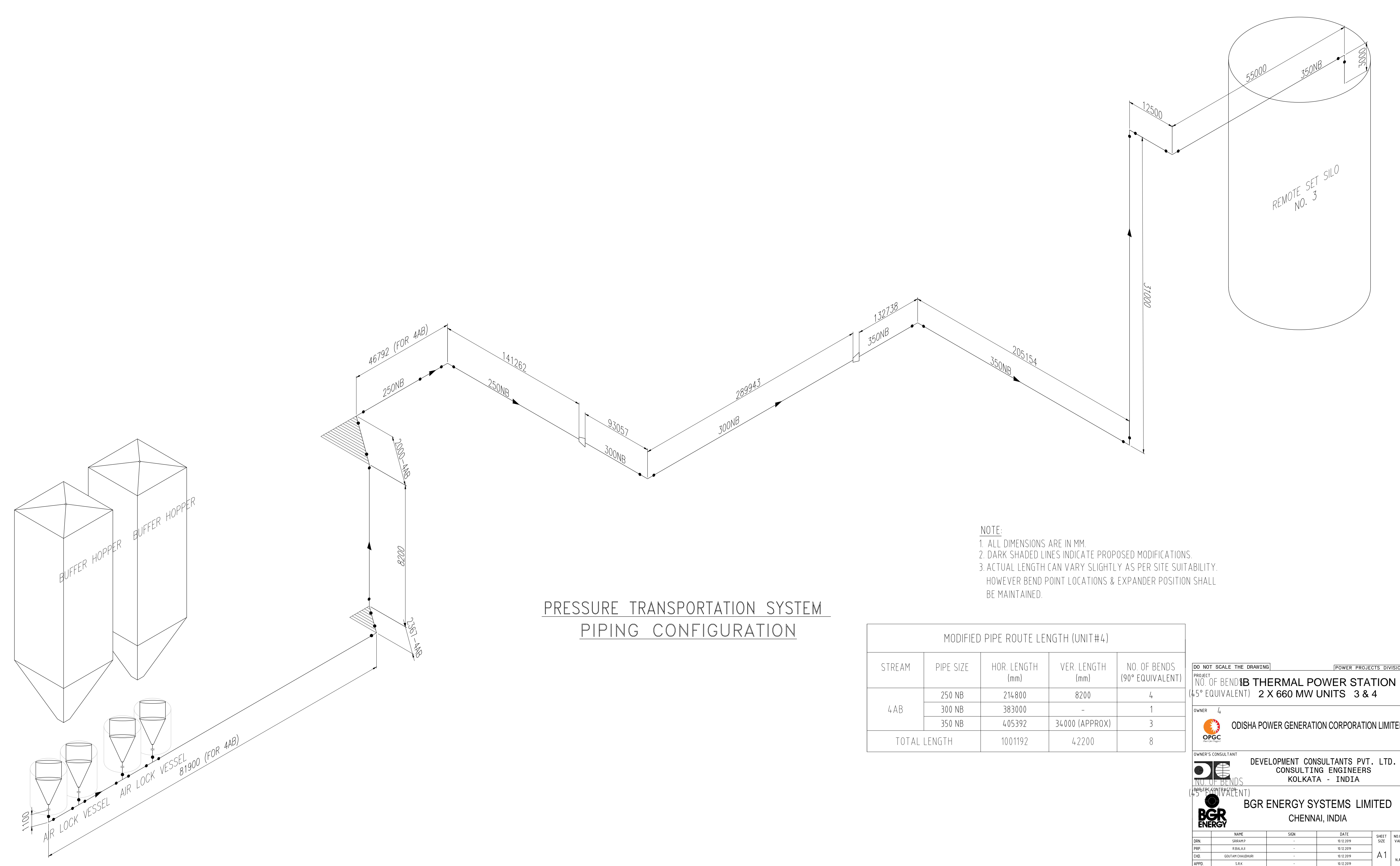
SHEET No. 3 OF 6

ZONE	REV	DESCRIPTION	DATE	DRN	CIVIL	MECH	ELEC	CAI	H.O.D.
REVISIONS									
APPROVED									

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO BE MAINTAINED TO THE CENTERLINE OF THE PIPE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS TO BE MAINTAINED TO THE CENTERLINE OF THE PIPE UNLESS OTHERWISE SPECIFIED.

FIRST ANGLE PROJECTION

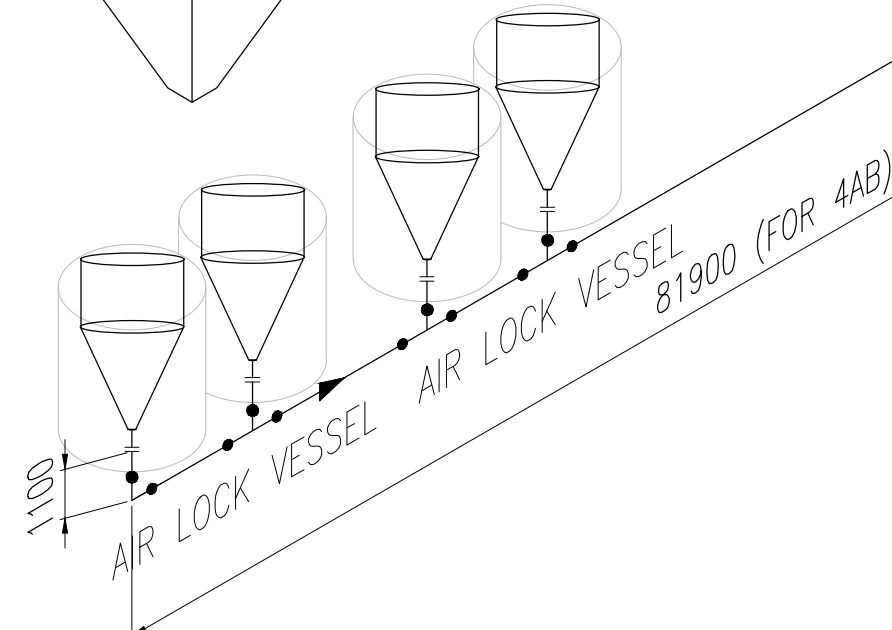
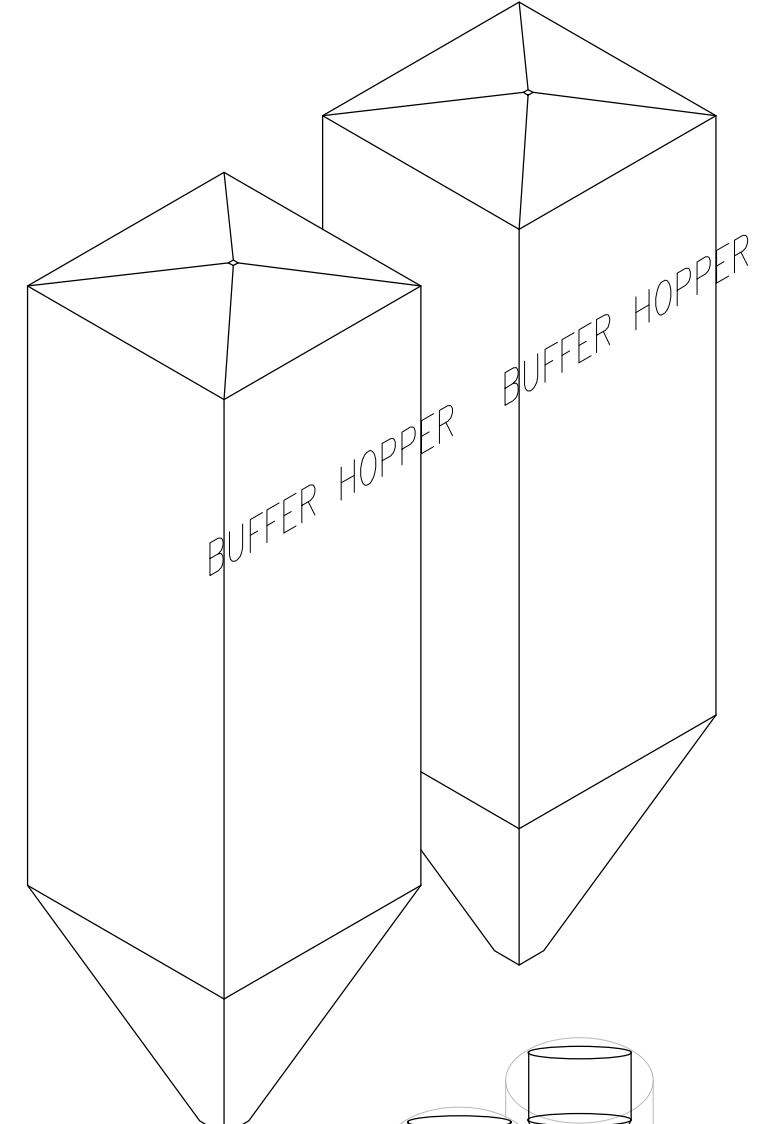
Z1555-WX-H13-3M-80Z-Q10
ON 09/12/19



**PRESSURE TRANSPORTATION SYSTEM
PIPING CONFIGURATION**

- NOTE:**
 1. ALL DIMENSIONS ARE IN MM.
 2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
 3. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY.
 HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT#4)				
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)
4 AB	250 NB	214800	8200	4
	300 NB	383000	-	1
	350 NB	405392	34000 (APPROX)	3
TOTAL LENGTH		1001192	42200	8



DO NOT SCALE THE DRAWING [POWER PROJECTS DIVISION]

PROJECT: NO. OF BENDS (4.5° EQUIVALENT) **B THERMAL POWER STATION 2 X 660 MW UNITS 3 & 4**

OWNER: 4 **ODISHA POWER GENERATION CORPORATION LIMITED**

OWNER'S CONSULTANT: DEVELOPMENT CONSULTANTS PVT. LTD. CONSULTING ENGINEERS KOLKATA - INDIA

CONSULTANT: BGR ENERGY SYSTEMS LIMITED CHENNAI, INDIA

NO.	NAME	SIGN.	DATE	SHEET	NO. OF
DRN	SIBRAMP	-	18.12.2019	1	VAR.
PIP	PRASAD	-	18.12.2019	A1	
CDR	GOUTAM CHAUDHARI	-	18.12.2019		N.A.
APPR	S.S.K	-	18.12.2019		N.A.

DEPT.	INSTR. DMS	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF
CODE	CPWP	N15	NA	N.A.	N.A.	ITEMS

TITLE: ASH CONVEYING PIPING WITH NEW EXPANDER LOCATION

REVISIONS:

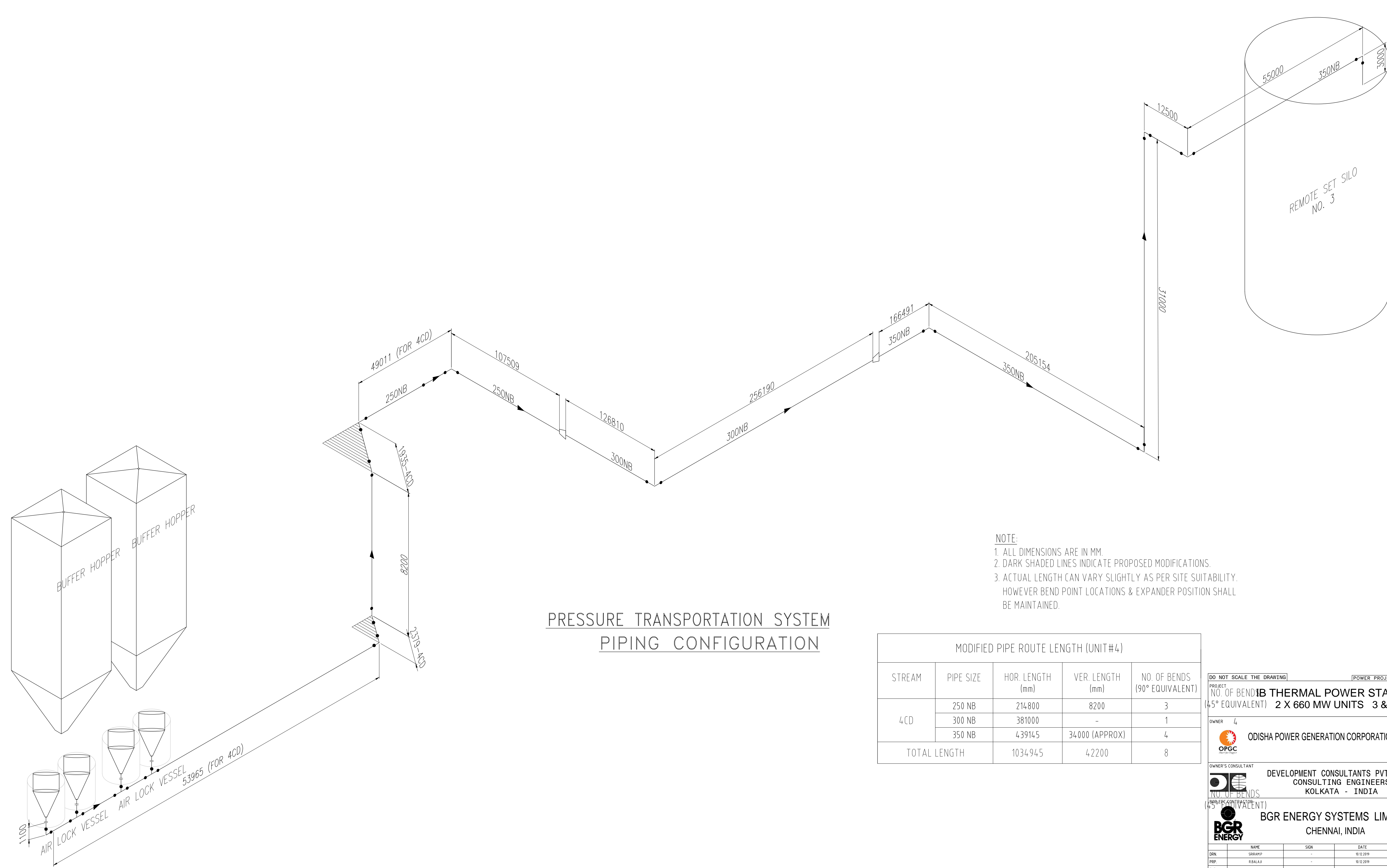
ZONE	REV	DESCRIPTION	DATE	DRN	CIVIL	MECH	ELEC	CAI	H.O.D.
	0	FOR INFORMATION ONLY	10.12.2019						

APPROVED:

CARD: BOP EPC CONTRACTOR'S DRAWING NO. GID-208-ME-ETH-XM-55312
 OWNER'S DRAWING NO.

SHEET No. 4 OF 6

FIRST ANGLE PROJECTION
Z1555-MX-H13-3M-80Z-Q10
ON 08/11/19



**PRESSURE TRANSPORTATION SYSTEM
PIPING CONFIGURATION**

NOTE:
1. ALL DIMENSIONS ARE IN MM.
2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
3. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY.
HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT#4)				
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)
4CD	250 NB	214800	8200	3
	300 NB	381000	-	1
	350 NB	439145	34000 (APPROX)	4
TOTAL LENGTH		1034945	42200	8

DO NOT SCALE THE DRAWING
PROJECT NO. OF BENDS
B THERMAL POWER STATION
(4.5° EQUIVALENT) 2 X 660 MW UNITS 3 & 4

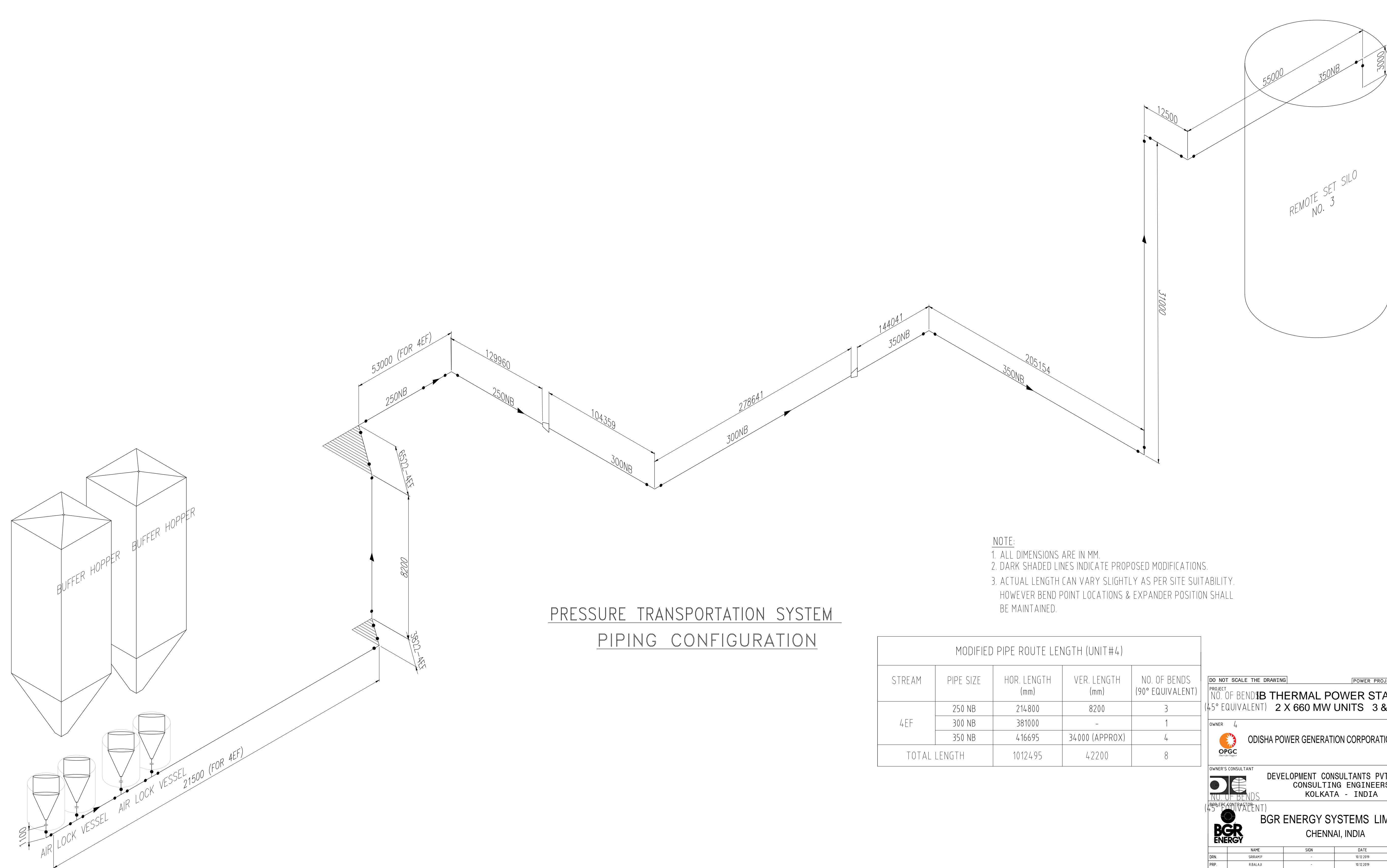
OWNER: 4
ODISHA POWER GENERATION CORPORATION LIMITED
OPGC

OWNER'S CONSULTANT: DEVELOPMENT CONSULTANTS PVT. LTD.
CONSULTING ENGINEERS
KOLKATA - INDIA

CONSULTANT: BGR ENERGY SYSTEMS LIMITED
CHENNAI, INDIA

DRN	NAME	SIGN	DATE	SHEET	NO. OF			
DRN	SIBIRAP	-	18.12.2019	1	VAR.			
DRN	PRIP	-	18.12.2019	A1				
DRN	CD/DR	-	18.12.2019		N.A.			
DRN	APPO	-	18.12.2019		N.A.			
DRN	DEPT.	INSTR. ENGRG.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.			
DRN	CODE	CP/PP	N15	NA	N.A.			
DRN	TITLE	ASH CONVEYING PIPING WITH NEW EXPANDER LOCATION						
DRN	REVISIONS	DATE	DRN	CIVIL	MECH	ELEC	CAI	H.O.D.
DRN	APPROVED							
DRN	REVISIONS							
DRN	APPROVED							

FIRST ANGLE PROJECTION
Z:\555-MX-H13-3M-80Z-Q10
ON 08/11/19



**PRESSURE TRANSPORTATION SYSTEM
PIPING CONFIGURATION**

- NOTE:**
 1. ALL DIMENSIONS ARE IN MM.
 2. DARK SHADED LINES INDICATE PROPOSED MODIFICATIONS.
 3. ACTUAL LENGTH CAN VARY SLIGHTLY AS PER SITE SUITABILITY. HOWEVER BEND POINT LOCATIONS & EXPANDER POSITION SHALL BE MAINTAINED.

MODIFIED PIPE ROUTE LENGTH (UNIT#4)				
STREAM	PIPE SIZE	HOR. LENGTH (mm)	VER. LENGTH (mm)	NO. OF BENDS (90° EQUIVALENT)
4EF	250 NB	214800	8200	3
	300 NB	381000	-	1
	350 NB	416695	34000 (APPROX)	4
TOTAL LENGTH		1012495	42200	8

DO NOT SCALE THE DRAWING
 PROJECT NO. OF BENDS
 NO. OF BENDS (45° EQUIVALENT) 2 X 660 MW UNITS 3 & 4

OWNER 4
 ODISHA POWER GENERATION CORPORATION LIMITED

OWNER'S CONSULTANT
 DEVELOPMENT CONSULTANTS PVT. LTD.
 CONSULTING ENGINEERS
 KOLKATA - INDIA

OWNER'S CONSULTANT
 BGR ENERGY SYSTEMS LIMITED
 CHENNAI, INDIA

DRN	NAME	SIGN	DATE	SHEET	NO. OF
DRN	SIBIRAP	-	18.12.2019	SIZE	VAR.
DRN	DRN	-	18.12.2019	A1	N.A.
DRN	DRN	-	18.12.2019		N.A.
DRN	DRN	-	18.12.2019		N.A.

TITLE
 ASH CONVEYING PIPING WITH NEW EXPANDER LOCATION
 SHEET No. 6 OF 6

ZONE	REV	DESCRIPTION	DATE	DRN	CIVIL	MECH	ELEC	CAI	H.O.D.
	0	FOR INFORMATION ONLY	10.12.2019						
REVISIONS					APPROVED				