

ANNEXURE – 1
RAW WATER SPECIFICATION

THE FERTILISERS AND CHEMICALS TRAVANCORE Ltd.			
COCHIN DIVISION			
WATER ANALYSIS			
No	Analysis Details	Unit	Raw Water
1	pH		6.8
2	Conductivity	micro	42.00
3	Turbidity	NTU	3.0
4	Alkalinity	ppm	2
5	Chlorides as - Cl	"	35
6	Total Hardness	"	5
7	Ca Hardness	"	4
8	Mg.Hardness	"	1
9	Phosphate as P	"	0.44
10	Sulphate as SO ₄	"	0.32
11	Free & Saline NH ₃ as N	"	0.09
12	Ammonical Nitrogen	"	0.42
13	Nitrate as N	"	0.51
14	Total N	"	1.02
15	Total Solids	"	4.8
16	Total Dissolved Solids	"	4.0
17	Suspended Solids	"	0.8
18	Free CO ₂	"	1.0
19	Arsenic as As	"	ND
20	Chromium as Cr	"	ND
21	Copper as Cu	"	ND
22	Zinc as Zn	"	ND
23	Iron as Fe	"	0.50
24	Fluoride as F	"	0.10
25	Silica as SiO ₂	"	3.65
26	Oil	"	1.00
27	KMnO ₄ Value	"	0.40
28	C.O.D	"	1.2
29	Lead as Pb		ND
30	Cadmium as Cd		ND
31	Nickel as Ni		ND
32	Manganese as Mn		ND

ANNEXURE – 2
CIVIL DRAWINGS

LIST OF SELECTED DRAWINGS (CIVIL)

1000 tpd X 2 NP CONVEYOR FOR INTERPHASE

- 1 COCHIN PHASE II LAY OUT OF CONVEYORS AT PLANT SITE
- 2 COCHIN PHASE II - LOCATION AND DETAILS OF PEDESTALS FOR CONVEYORS N2 , N1 AND N11 , N12

UREA BAGGING PLANT

- 1 UREA BAGGING PLANT DETAILS OF COLUMN FOUNDATION
- 2 UREA BAGGING PLANT DETAILS OF COLUMNS ABOVE FLOOR LEVEL

UREA SILO

- 1 EAST END BAY - DETAILS OF FOOTING FOR COLUMNS C5,C6,C15 & C16
- 2 EAST END BAY DETAILS OF COLUMN C1,C10,C11 & C20
- 3 EAST END BAY DETAILS OF COLUMNS C2 TO C9 & C12 TO C19
- 4 EAST END BAY DETAILS OF FOOTINGS FOR COL C1 TO C4,C7 TO C10,C11 TO C14 & C17 TO C20
- 5 SILO ARCH PROFILE

ANNEXURE – 3

MPCE DOCUMENTS/DRAWINGS

LIST OF SELECTED DRAWINGS (MPCE)

1000 TPD X 2 NP CONVEYOR FOR INTERPHASE

- 1 GA OF BELT CONVEYOR N1D . N2D
- 2 GA OF CONVEYORS N1B . N2B AND GA OF JUNCTION HOUSES JH 1 & JH2 SHEET 1
- 3 GA OF CONVEYORS N1B . N2B AND GA OF JUNCTION HOUSES JH1 & JH 2 SHEET 2
- 4 GA OF CONVEYORS N1C . N2C
- 5 GA OF CONVEYORS N1D . N2D
- 6 GA OF JUNCTION HOUSE 3 SHEET 1
- 7 GA OF JUNCTION HOUSE 3 SHEET 2

UREA BAGGING PLANT

- 1 BAGGING PLANT PLAN & SECTION OF GROUND FLOOR SHOWING LOCATION OF RLY LINES & CENTRE OF COLUMNS
- 2 BAGGING PLANT PLAN OF GROUND FLOOR
- 3 BAGGING PLANT. SECOND FLOOR PLAN.
- 4 UREA BAGGING PLANT FIRST FLOOR PLAN & DETAILS OF POCKETS AND OPENINGS.
- 5 BAGGING PLANT FIRST FLOOR PLAN.
- 6 UREA BAGGING PLANT SECTION & ELEVATION.
- 7 UREA BAGGING PLANT PART PLAN OF SECOND FLOOR

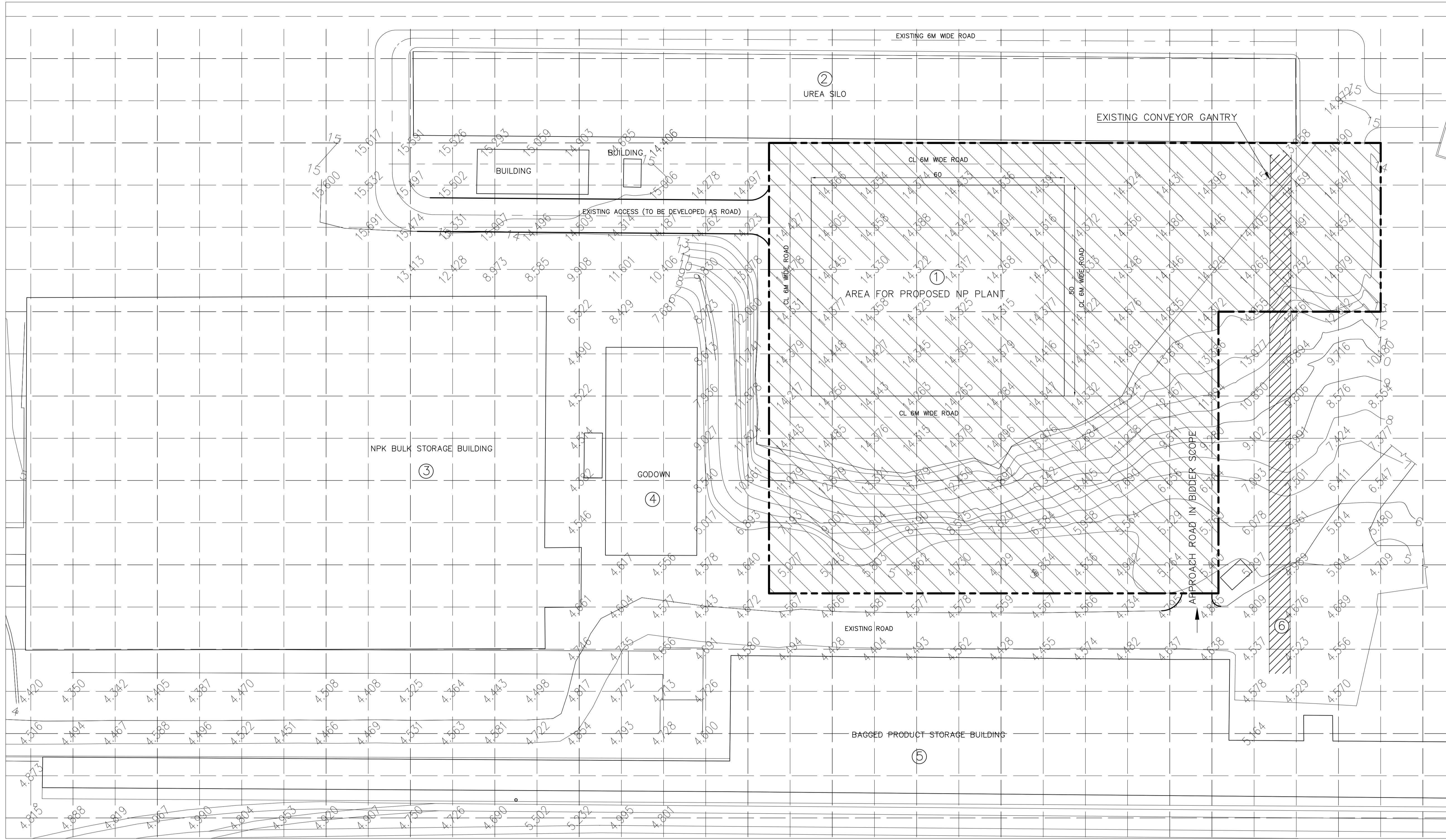
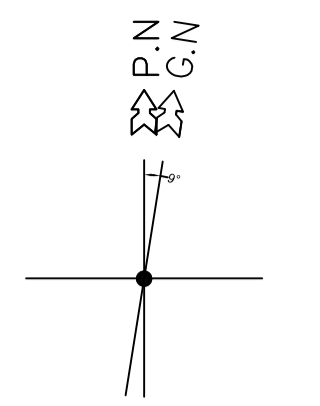
UREA SILO

- 1 ARRANGEMENT OF BELT PROPELED TRAVELLING TRIPPER FOR CONV U3
- 2 ARRANGEMENT OF CONVEYOR EXTENSION AND TRIPPER
- 3 ARRANGEMENT OF CONVEYOR EXTENSION AND TRIPPER2
- 4 UREA SILO DETAILED SCOPE DRAWING - 1
- 5 UREA SILO DETAILED SCOPE DRAWING - 2
- 6 UREA SILO GENERAL ARRANGEMENT OF CONVEYOR PLAT FORMS

GANTRY SILO- UREA BAGGING PLANT

- 1 CONVEYOR FROM SILO TO BAGGING PLANT - U5 DET'LS OF CONVEYOR GANTRY AT JUNCTION OF U5 WITH EQP'T BULDG
- 2 CONVEYOR GANTRY FROM SILO TO BAGGING PLANT - U5 TYPICAL ARRANGEMENTS OF POCKETS FOR CONVEYOR SUPPORTS
- 3 CONVEYOR GANTRY FROM UREA SILO TO BAGGING PLANT (U5) DETAILS OF COMBINED FOOTINGS
- 4 CONVEYOR GANTRY FROM UREA SILO TO BAGGING PLANT DETAILS OF COMBINED FOOTING FOUNDATION
- 5 CONVEYOR GANTRY FROM UREA SILO TO BAGGING PLANT DETAILS OF GANTRY BOX,BEAMS AND COLUMNS FOR U5 CONVEYOR
- 6 CONVEYOR GANTRY FROM UREA SILO TO BAGGING UNIT - U5 LOCATION & DETAILS OF REINF OPENING
- 7 GA OF CONV FROM PRILLING TOWER TO UREA BAGGING
- 8 GENERAL ARRANGEMENT OF CONVEYOR - U5 FROM SILO TO BAGGING PLANT
- 9 KEY PLAN - FOR CONVEYOR GANTRY UREA SILO BAGGING UNIT AND EMPTY BAG STORAGE
- 10 KEY PLAN FOR CONVEYOR GANTRY UREA SILO BAGGING UNIT & EMPTY BAG STORAGE

ANNEXURE – 4
AREA PLOT PLAN



LIST OF UNITS		
UNIT NO.	DESCRIPTION	REMARKS
1	PROPOSED NP PLANT AND ASSOCIATED FACILITIES	NEW
2	UREA SILO	EXISTING
3	NPK BULK STORAGE BUILDING	EXISTING
4	GODOWN	EXISTING
5	BAGGED PRODUCT STORAGE BUILDING	EXISTING
6	CONVEYOR GALLERY	EXISTING

LEGEND: -

AREA FOR NEW FACILITY

EXISTING

NOTES: -

- ALL DIMENSIONS ARE IN METER.
- GRID INTERVAL ARE 10Mx10M
- COORDINATE 10000.000 NORTH, 10000.000 EAST, 14.5 ELEVATION AT BENCH MARK POINT.

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CLIENT	M/S FACT-CD	DRAWING NO.	TITLE	NO	ZONE	PARTICULARS	REVISED	CHECKED	APPROVED	DATE	CHECKED	JTG	APPROVED	KK	
SURVEY DRAWING BY LAN-DECK DATED 10-06-2016		REFERENCE DRAWING													

SCALE: 2:1
 DATE: 22.05.2020
 DRAWN: MAHESH
 CHECKED: TKA
 DESIGNED: JTG
 PROJECT NAME: NEW 1650 TPD COMPLEX FERTISER PLANT AT FACT-CD PROJECT NO: 32647
FACT ENGINEERING & DESIGN ORGANISATION
THE FERTILISERS AND CHEMICALS TRAVANCORE LTD
UDYOGAMANDAL KERALA

TITLE: AREA PLOT PLAN - NP PLANT
 SHEET 1 OF 1 DRG. NO. 32647-03-AP-00001
 REV. 0

ANNEXURE – 5
SUB-VENDOR LIST