

# Environmental Monitoring Report

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Project Number: 43253-027  
Semestral Report (January - June 2020)  
March 2021

## INDIA: Karnataka Integrated Urban Water Management Investment Program (Tranche 2)

### Appendices (PART A)

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

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## **APPENDIX 1   Photo Illustration**

## Appendix 1: Photo Illustration



**Hard Barricading at Ashok Nagar Pipe Laying Site-Mangalore UGD**



**Project Information Display Board without Contact Details at Matatkani Pipe Laying – Mangalore UGD**



**Toilets at Shakti Nagar Labour Camp, Mangalore UGD**



**Fire Extinguishers are to be properly placed at work sites, Mangalore UGD**



**First Aid Box needs enhancement at Shakti Nagar Labour Camp, Mangalore UGD**



**Tool Box Training, Mangalore UGD**





**Barricading at Kuvor STP DI Pipe Line, Mangalore UGD air**



**Flagmen are needed on either side of the work sites at Busy roads, Mangalore UGD**



**Kuntikan Pipe Laying Barricading –Night view, Mangalore UGD**



**Kuvor STP Pipe Line, Night Visibility needs enhancement, Mangalore UGD**



**Labour with PPEs,Kodi Beach, Kundapura WSS**



**Registers at Site,Kodi Beach,Kundapura WSS**



**Project Information Sign Board at Halekote OHT,Kundapura WSS**



**Barricading at Channel,Japti WTP, Kundapura WSS**



**Bunding is done at Material Storage,Kodi Beach, Kundapura WSS**



**Barricading at Hallekote OHT,Kundapura WSS**





**Material Storage should be properly done at Kodi Beach, Kundapura WSS**



**Proper Housekeeping needs to be done, Kodi Beach, Kundapura WSS**



**Hard Barricading done at Kodimbadi Pipe Laying, Puttur WSS**



**Flagmen at Kodimbadi Pipe Laying, Puttur WSS**



**Project Information Sign Board along with Contact number at NRCC Labour Camp, Puttur WSS**



**Mobile Toilets have been provided at NRCC Labour Camp, Puttur WSS**





**RO water Purifier at NRCC Labour Camp, Puttur WSS**



**First Aid Box at NRCC Labour Camp, Puttur WSS**



**Fire Extinguishers at NRCC Camp, Puttur WSS**



**Hard Barricading to be done at Storage Yard, NRCC Camp, Puttur WSS**



**Labours wear PPEs at Santhekatte OHT, Udupi WSS**



**Stocked soil is to be stored away from the Working area at Santhekatte OHT, Udupi WSS**





**Labour Camp as per the standards is to be provided, Santhekatte OHT, Puttur WSS**



**Caution Tape and Sig Baord at Doddengudde Pipe Laying, Udupi WSS**



**Caution Tape Barricading, Parlaka Pipe Laying at Udupi WSS**



**Barricading done at Santhekatte Store Yard, Udupi WSS**



**Mobile Toilets at Santhekatte Store Yard, Udupi WSS**



**Proper Project Information Sign Board along with contact numbers needs to be erected, Santhekatte, Udupi WSS**

## **APPENDIX 2   Monitoring Budget**

## Monitoring Budget

Sr. no.	Package	Tentative Monitoring budget (in Rs.)
1	Replacement of pumping mains Mangalore, Package No 02MNG02	₹12,15,000
2	Construction of 24X7 & Distribution Network - Operator assisted in Kundapura, Package No 02KDP01	₹11,75,000
3	Construction of 24X7 & Distribution Network - Operator assisted in Puttur,Package No 02PTR01	₹13,25,600
4	Construction of Distribution Network -Operator assisted in Udupi. Package No 02UDP01	₹13,70,000.



**APPENDIX 3: Letter No 855 Application to  
NHAI for the permission to laying pipeline-  
MANGALORE UGD**

# MANGALURU

Commissioner  
City Corporation,  
Mangaluru.



## CITY CORPORATION

Post Box No: 756  
Lalbagh, Mangaluru-575005.  
Telephone No: 0824-2220313-318  
Fax: 0824- 2220310.  
Website: [www.mangalorecity.gov.in](http://www.mangalorecity.gov.in)  
E-mail : [commissioner.mcc@gmail.com](mailto:commissioner.mcc@gmail.com)

Ref No: MCC/MNG/KUIDFC/Pumping main/2017-2018/255

Date: 13-03-2019

The Project Director,  
National Highway Authority of India,  
Project Implementation Unit - Mangaluru  
Bethel Tharathota Near Pumpwell,  
Mangaluru - 575005,

Sir,

Sub: Permission for laying sewer pumping main of 1100mm dia D/S class pipe at Kuntikana service road from Km 371.845 to km 372.325 on RHS for a length of 480m with 1 No. of crossing on NH-66 - Re- submission of bank guarantee linking through Structured Financial Message System (SFMS) - reg.

Ref: 1. This office letter No: MCC/MNG/KUIDFC/Pumping main/2017-18/632, dated:05-01-2018.

2. Your office letter No: 11017/2/2004/PIU (Mnglr)/513, dated: 17-01-2019

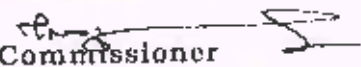
\*\*\*\*\*

With reference to the above, as per NHAI policy guidelines No. 31/22/2018 dated 23-01-2018 we are herewith re-submitting the bank guarantee linking with Structured Financial Message System (SFMS) obtained from Corporation Bank, Mangaluru for taking further action in this regard.

Encl: 1. Message report linking with SFMS platform.

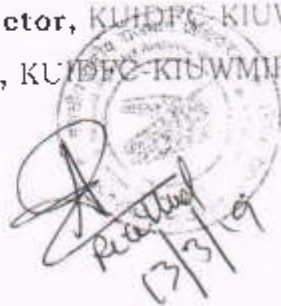
2. Bank Guarantee [original]

Yours faithfully

  
Commissioner  
Mangaluru City Corporation  
Mangaluru

Copy to:

1. Deputy Project Director, KUIDFC-KIUWMP-RPMU, Mangaluru for information.
2. Executive Engineer, KUIDFC-KIUWMP-PIU, Mangaluru for information.



# MANGALURU

Commissioner  
City Corporation,  
Mangaluru.



# CITY CORPORATION

Post Box No: 756  
Lalbagh, Mangaluru-575003.  
Telephone No: 0824-2220313-318  
Fax: 0824- 2220310.  
Website: www.mangalorecity.gov.in  
E-mail : commissioner.mcc@gmail.com

**Ref No: MCC/MNG/KUIDFC/ Pumping main /2017-18/632**

**Date: 05.01.2019**

The Project Director,  
National Highway Authority of India,  
Project Implementation Unit- Mangaluru  
Bethel, Tharethota Near Pumpwell,  
Mangaluru - 575005

Sir,

Sub: Permission for laying sewer pumping main of 1100mm dia DI K9 class pipe at Kurlikana service road from Km 371.845 to km 372.325 on RHIS for a length of 480m with 1 No. of crossing on NH-66 - reg.

Ref: 1) This office letter no: MCC/ MNG/Com/2017-18/128, dated: 17-07-2017.

2) Your office letter no: 11013/4/2004/PIU (Mnglr) /197, Dated: 19-07-2017.

3) Your office letter no: 11017/7/2004/PIU (Mnglr) /329(A), Dated: 28-09-2018.

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In continuation to this office letter in ref (1) the details as per NHAI policy circular No: RW/NH-33044/29/2015/S8 (R) dated: 22.11.2016 along with the following documents are furnished for taking further action in this regard.

1. Licence fee for 5 years - Rs. 11, 91,635/- including GST.
2. Security deposit Bank Guarantee of Rs. 3, 40,000/-.
3. Agreement regarding granting of right of way permission for laying sewer line.
4. Undertaking for standard conditions of NHAI guidelines.
5. Indemnity bond.
6. Affidavit undertaking
7. Undertaking to relocate the utilities at own cost.
8. Strip plan of sewer line passing and laying along NH- 66.
9. Methodology of laying sewer line.
10. Cross section of sewer line (Drawing).
11. Traffic management plan and methodology during execution of work.
12. Checklist.

This is for your kind information and further needful.



Yours sincerely

**Commissioner**

Mangaluru City Corporation  
Mangaluru

- CC: 1. **Deputy Project Director**, KIUWMIP-RPMU, Mangaluru for kind information.  
2. **Executive Engineer**, KUIDFC-KIUWMIP-PIU, Mangaluru for information

केवल बैंक मशीन से ही वैध / Valid for bank machine only

1 5 1 1 2 0 1 8  
D D M M Y Y Y Y

 **विजया बैंक**  
(CBS) 498474 24 29893  
VIJ-BENDOOR-1030

मांगे जाने पर ON DEMAND PAY NEW MANGALORE PORT ROAD COMPANY LTD को या उनके आदेश पर OR ORDER

रुपये RUPEES Eleven Lakh Ninety One Thousand Six Hundred

Thirty Five only अदा करें FOR VALUE RECEIVED ₹ \*\*\*\*\*11,91,635.00

कृते विजया बैंक For VIJAYA BANK

DD.No.550251 Remitter : DEPUTY PROJECT DIRECTOR

A/C. Payee  
प्रति, हस्ताक्षरित / AUTH SIGNATORY (प्र. प्र. सं. S.S.NO. 352550251)  
प्रति, हस्ताक्षरित / AUTH SIGNATORY (प्र. प्र. सं. S.S.NO. 352550251)

SERVICE BRANCH, MANGALORE  
952550251

550251 0000290000

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# न्यू मंगलूर पोर्ट रोड कंपनी लिमिटेड

(प्रांतीय राष्ट्रीय राजमार्ग प्राधिकरण की सहायक संस्था)

## New Mangalore Port Road Company Ltd.

(A Subsidiary of National Highways Authority of India)

परियोजना कार्यान्वयन इकाई-मंगलूर/ Project Implementation Unit - Mangalore

डोर नं. 3-29 'बेथेल', थारेथोटा, पंपवेल के पास (NH-66), मंगलूर - 575005.

Door No. 3-29, "Bethel", Tharethota, Near Pumpwell (NH.66), Mangalore - 575005.

टेलिफोन / Telephone : 91-824-4264499

टेलिफैक्स / Telefax : 91-824-4264499

ई-मेल / e-mail: man@nhai.org

CIN : U45203DL2004PLC124172

No.11017/7/2004/PIU (Mnglr)/ 329(A)

September 28<sup>th</sup>, 2018

To

The Commissioner

Mangalore City Corporation

Lalbagh

Mangalore-575003



**Sub: Development of Adequate Road Connectivity to New Mangalore Port-Permission for laying sewer pumping main of 1100mm dia DIK9 Class pipe at Kuntikan Service Road from Km.371.845 to Km. 372.375 on RHS for a length of 480m with 1 No. of crossing on NH-66-Reg.**

Ref: 1. Deputy Commissioner, D.K.Dist, Mangalore letter No; LAQ (1) Mis.CR 205/2018/54026/B1 Dt. 28.09.2018

2. MCC, Mangalore letter No: MCC/MNG/KUIDFC/Pumping main/2017-18/185 dt. 16.02.2018

3. This office letter No.11017/7/2004/PIU(Mnglr)/216 Dt. 30.07.2018

Sir,

This has reference to the above proposal vide this office letter 3<sup>rd</sup> cited requested to submit the detailed documents along with the **License Fees of Rs.Rs.44,99,906/- including GST** for the initial period of 10 years **along Bank Guarantee of Rs.2,20,000/-** for the above subject work as per the new policy circular No.RW/NH-33044/29/2015/S&R( R) dated 22.11.2016.

Further, vide letter 2<sup>nd</sup> cited you have requested to confirm the particulars for above subject work with license fee Rs.Rs.11,91,634/- including GST for the initial period of 10 years **along Bank Guarantee of Rs.2,20,000/-** as per NHAI Police Circular.

In this regard, Deputy Commissioner vide letter 1<sup>st</sup> cited also requested to grant the initial permission would be valid for a maximum of 5 years at a time, which can thereafter be considered for renewal for above work "as per NHAI Police Circular.

Accordingly, the proposal has been examined and it is requested to submit the License Fee charges and Bank Guarantee as per policy circular is as under:

*Proposed already sent to HO by RPNL 10/10*

**The details of License Fee charges calculation for 10 years as under:**

For sewer pumping main of 1100mm dia DI K9 Class pipe, the license fee is :

(i) **Utilized NH land area = Outer diameter /width of the concerned utility line X length:**

(1.10 x 40) = **44.00 Sqm** ( 1 Crossing)

(1.10 x 480) = **528.00Sqm** ( For a length of 480Mtr)

**Total area = 572.00Sqm**

(ii) **License Fee (Rs/Sqm/Month) = (Utilized NH land area X prevailing Circle rate of land per unit area) / (10 x 12):**

Crossing NH per Month =  $\frac{572.00 \times 10700 \text{ (guidance value Land Per Sq.m)}}{10 \times 12}$  = 51,003/-

License Fee for 5 years for the above subject work =  $51,003 \times 12 \times 5/-$  = **Rs.30,60,180/-**

**For Public Utility 33% of Industrial Utilities as per No.**

**RW/NH-33044/29/2015/S&R(R) Dated 22.11.2016 the License Fee for 5 years is Rs.10,09,859/-**

**Add GST 18% Rs. 1,81,776/-**

**Total License Fee for 5 years is Rs.11,91,635/- including GST.**

**The details of Bank Guarantee as under:**

For Crossing Highway Rs.1,00,000/- as per NHAI Policy Circular

**Total Bank Guarantee to be submitted is Rs.1,00,000/- for 1 No of crossing**  
As per latest Circular dated 22.11.2016

For sewer pumping main of 1100mm dia DI K9 Class pipe, the BG value is:

For total length 480.00Mtr along Service Road is as under :

> 1000mm dia =  $480 \times \text{Rs.}500/-$  = **Rs.2,40,000/-**

**Total Bank Guarantee to be submitted is Rs. 3,40,000/-**

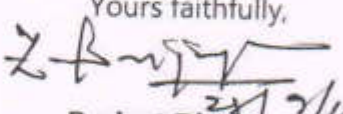
Hence, you requested to submit the detailed proposal as per NHAI Policy Circular No:  
RW/NH-33044/29/2015/S&R (R) Dt. 22.11.2016 along with following documents:

1. Agreement regarding granting of Right of Way permission for laying sewer line.
2. Undertaking for standard conditions of NHAI Guidelines.
3. Indemnity Bond

4. Affidavit Undertaking
5. Undertaking to relocate utilities at own cost.
6. Strip plan of sewer line passing and laying along NH-66
7. Methodology of laying sewer line.
8. Cross section of sewer line (drawing)
9. Traffic Management plan & methodology during execution of work.
10. LOI received from concerned State Department/LOA
11. Bank Guarantee as per policy Circular.
12. License fee for 10 years period at a time as per Policy Circular,
13. Checklist
14. Consent/Undertaking by Mangalore City Corporation for taking the repair works/damage done/defects in the road portion after laying sewer line and to keep the road condition in good condition.

In this regard, it is requested to resubmit the above documents along with the **License Fees of Rs.11,91,635/- including GST** for the initial period of 5 years **along Bank Guarantee of Rs.3,40,000/-** for the above subject work as per the new policy circular No.RW/NH-33044/29/2015/S&R( R) dated 22.11.2016 for sending the proposal to RO, Bangalore for approval.

Thanking you,

Yours faithfully,  
  
28/9/18  
Project Director  
PIU-Mangalore

Encl: As above.



# न्यू मंगलूर पोर्ट रोड कंपनी लिमिटेड

(भारतीय राष्ट्रीय राजमार्ग प्राधिकरण की सहायक संस्था)

## New Mangalore Port Road Company Ltd.

(A Subsidiary of National Highways Authority of India)

प्रियोजना कार्यान्वयन इकाई मंगलूर Project Implementation Unit - Mangalore

डोर नं. 3-29 'बेत्नेल' थारनोटा नजारे पम्पवेल के पास (NH-66), मंगलूर - 575005

Door No. 3-29 'Betnel' Tharunota Near Pumpwell (NH-66), Mangalore - 575005

टेलिफोन / Telephone : 91-824-4264499

टेलिफैक्स / Telefax : 91-824-4264499

ई-मेल / e-mail: man@nhai.org

CIN No - U45203DL2004

PLC 124172

### Invoice

No.11017/2/2004/PIU(Mnglr)/

October 3, 2018

To,  
The Chief Commissioner,  
Mangalore City Corporation,  
Lalbagh,  
Mangalore-57503

Invoice No.01	
Particulars	Amount
License fee for 5 years	Rs.10,09,859/-
Add:CGST @ 9%	Rs.90,888/-
SGST @ 9%	Rs.90,888/-
Total	Rs.11,91,635/-
Rupees Eleven Lakh Ninety One Thousand Six Hundred & Thirty Five Only	
Our Permanent Account number AABCN9106E	

Accountant  
New Mangalore Port Road Company Ltd.  
PIU-Mangalore

GSTIN No.29AABCN9106H1ZJ

Commissioner  
City Corporation,  
Mangaluru.



MANGALURU CITY CORPORATION

Post Box No: 756  
Lalbagh, Mangaluru-575003.  
Telephone No: 0824-2220313-318  
Fax: 0824- 2220310.  
Website: www.mangalorecity.gov.in  
E-mail : [commissioner.mcc@gmail.com](mailto:commissioner.mcc@gmail.com)

Ref No: MCC/MNG/KUIDFC/Pumping main/2017-2018 / 195

Dated 16.02.2018

To

The Project director,  
National Highway Authority of India,  
Project Implementation unit-Mangaluru,  
Bethel, Tharethota Near Pumpwell,  
Mangaluru-575005

Sir,

Sub: Permission for laying sewer pumping main of 1100mm dia DI K9 class pipe  
at chain age 5150 across NH-66 below kuntikana flyover-reg.

Ref: 1) The Commissioner, MCC letter No: MCC/Com/2017-18/128  
dated:17/07/2017

2) Your office letter no: 11013/4/2004/PIU(Mnglr)/197 dated:19/07/2017

\*\*\*\*\*

In continuation to this office letter in ref(1) the details as per NHAI policy circular  
no:RW/NH-33044/29/2015/S8 (R) dated:22/11/2016 along with the following  
documents are furnished for taking further action in this regard

- 1) Agreement regarding granting of right of way permission for laying sewerline
- 2) Undertaking for standard conditions of NHAI guidelines
- 3) Indemnity bond
- 4) Affidavit undertaking
- 5) Undertaking to relocate the utilities at own cost
- 6) Strip plan of sewer line passing and laying along NH-66
- 7) Methodology of laying sewer line
- 8) Cross section of sewer line (Drawing)
- 9) Traffic management plan and methodology during execution of work
- 10) Checklist

This is for your kind information and further needful

Your faithfully

Commissioner

Mangaluru City Corporation

Mangaluru

## **APPENDIX 4: Railways permission - Mangalore UGD**



Karnataka Urban Infrastructure Development & Finance Corpn. Ltd.,  
Karnataka Integrated Urban Water Management and Investment  
Programme - "Jalasiri"-Tranche-2

Office of the Executive Engineer Programme Implementation Unit,  
2<sup>nd</sup> Floor, MCC Commercial Complex, Lalbagh, Mangaluru 575003  
Email Id : [jalasiritranch2eemng@gmail.com](mailto:jalasiritranch2eemng@gmail.com) Ph-0824 2984623

No: KIUWMIP/PIU-MNG/CR-02/2017-18 / (Vol-IV)/54 |

Date: 14-10-2019

Project Manager

M/s DRS Infratech Pvt. Ltd.,  
Mangaluru

Sir,

Sub: "Replacement of old sewerage pumping mains and Rehabilitation of  
sewerage system for Mangaluru city: Package No: 02MNG02"-  
Submission of work programme - reg.

Ref : Divisional Railway Manager (Works), Southern Railway, Palakkad letter  
No: J/W.372/19/Pipeline/46/2017, Dated : 24-09-2019.

\*\*\*\*\*

With reference to the above, you are informed that permission has been  
obtained for laying sewer line from Jappu Bappal to Ridge Manhole near Cascia  
Church from Railway authorities. Hence you are requested to submit the work  
plan for the above laying work with minimum time period to do the work.

Yours faithfully

**Executive Engineer**  
KUIDFC-KIUWMIP-PIU  
Mangaluru

Encl: Approved drawing - 01 Set

CC :

1. **Commissioner**, Mangaluru City Corporation, Mangaluru for kind information.
2. **Deputy Project Director**, KUIDFC-KIUWMIP-RPMU, Mangaluru for kind information.



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CamScanner



Southern Railway.

No.J/W.372/19/Pipeline/46/2017.

Divisional Office,  
Works Branch,  
Palghat,  
Dt: 24.09.2019.

The Commissioner,  
Mangalore City Corporation,  
Post Box No.756,  
Lalbagh,  
Mangalore,  
Karnataka- 575003.

Sir,

Sub: - Permission for replacement of existing 450mm dia  
DI sewer pumping main across the Railway track at  
Railway kilometer 3/000-100 between Mangalore  
Central and Mangalore Junction Stations with  
450mm dia DI K9 class pipe through 1000 mm dia  
MS casing pipe.

Ref-1. Your application ID: SR- PGT-2017-67 dtd.  
10.11.2017.

2. This office letter No.J/W.372/19/Pipeline/46/2017  
dtd. 20.03.2019.

3. Your letter No. MCC/MNG/KUIDFC/ADB/2017-2018  
/433 dtd. 05.09.2019.

Having remitted the required amount of Rs.20, 97, 759/- as claimed  
vide DD No.323377 dtd. 09.11.2017 (Rs.2000/-), DD No. 323710  
dtd.05.06.2018 (Rs.81300/-) and DD No. 104074 dtd. 30.08.2019,  
(Rs. 20, 14, 459/-) and accepted all the conditions stipulated in the agreement,  
permission for laying water pipe line crossing through Railway track and as  
per plan number J/MAJN/E/13(ALT- I) is hereby accorded. In this  
connection you are requested to contact the Senior Section Engineer/  
Permanent Way/ Mangalore, and intimate your programme of taking up the  
work well in advance. The work shall be carried out under his supervision and  
directives. One copy of the agreement duly counter signed by the Railways is  
enclosed.

Encl: One set Agreement + one plan.

Yours faithfully,

महान रेल प्रबंधक (सकर्म)  
Divisional Railway Manager (Works)  
दक्षिण रेलवे, पालक्काड-2  
Southern Railway, Palakkad-2



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CamScanner



Copy to:-

St.DFM for information please.

St.DSTE for information please.(Encl: One plan).

ADEN/MAQ for information and necessary action please.

SSE/P.Way/MAQ } For information please. He will please

} render necessary supervision of the above location

} as and when the party contacts him.

} The work shall be carried out in accordance with :

} the enclosed plan No. J/MAJN/E/13(ALT- I) and *the*

} *date of completion of the work should be*

} *intimated to this office without fail.*



SOUTHERN RAILWAY

GRANT OF WAY LEAVE/EASEMENT RIGHTS ON RAILWAY LAND

An agreement made and entered in to this 30<sup>th</sup> day of Sept. two thousand and nineteen between the President of India represented by the Divisional Railway Manager (Works), Southern Railway, Palakkad (hereinafter called the "Administration" which expression usually include his successors and assignees) of the one part and the Commissioner, Mangalore City Corporation, Post Box No.756,Lalbagh, Mangalore, Karnataka- 575003 hereinafter referred to as "Applicant" which expression usually, where the context admits, include his/her/their legal representatives and assignees) of the other part, whereby it is agreed as follows :-

1. As and from the 30<sup>th</sup> day of Sept 2019 the applicant shall have the permission to avail the following facilities shown in the plan for the purpose of replacement of existing 450mm dia DI sewer pumping main across the Railway track at Railway kilometer 3/000-100 between Mangalore Central and Mangalore Junction Stations with 450mm dia DI K9 class pipe through 1000 mm dia MS casing pipe.


1.(i) Grant of Way Leave /Easement rights on Railway land involves occasional or limited use of the passage etc. without conferring upon the Applicant any right of possession or occupation of the land and without in any way affecting the Railway's title, possession, control and the use of the land.


1(ii) The Railway Administration retains full right to enter upon, pass through on the lands, at any time without any prior notice to the Applicant. In the event of the Way Leave / Easement rights facility being discontinued with, the Railway will not be liable to pay any compensation or reimburse any amount to the Applicant nor to provide any alternative arrangement for access etc. In such case any installations like underground pipelines etc. put up by the Applicant are liable to be removed/shifted by the Applicant at their own cost.

2. Way leave / Easement rights charges shall be paid by the Applicant for the permission granted under this agreements as advised by the Administration from time to time. Additional charges shall be levied if any extra Railway land or Road or any other facility is utilized by the Applicant for and on account of use of the way leave permission/Easement rights, as per extant rules of the Administration.

2 (i) The Applicant shall Deposit a sum of 15, 23, 778/- as capitalized charges, [equivalent to ten times the amount of annual way leave /Easement rights charges] in addition to security deposit equivalent to first year way leave /Easement rights charges.

2 (ii) The total amount to be paid by the Applicant towards the capitalized charges and other charges, are as follows.

  
Commissioner  
Mangaluru City Corporation

  
महल रेल प्रबंधक (संरचना)  
Divisional Railway Manager (Works)  
दक्षिण रेलवे, पालक्काड-2  
Southern Railway, Palakkad-2.



Sl.No.	Description of charges.	Amount (Rs.)
1	Capitalized cost for ten years.(i.e. 2018-19 – 2027-28).	Rs.15, 23, 778/-.
2	Supervision charges.	Rs.2, 53, 984/-.
3.	GST @ 18% on Rs.17, 77, 762/-.	Rs.3, 19, 997/-.
4.	TOTAL.	Rs.20, 97, 759/-.

The above amount can be paid in cash or demand draft payable in favour of Divisional cashier [Pay], Southern Railway, Palakkad. In the event of increase in Way leave/Easement rights charges the security deposit will also be increased to that extent and the Applicant shall deposit the extra amount so revised from time to time. The capitalized cost and security deposit do not bear any interest and only the security deposit shall be refunded as and when the land is taken back.

- The Applicant shall also pay proportionate maintenance charges to the event of the existing railway road being used on a pro-rata basis, based on the density and type of traffic and other factors.
- In addition to the above fees/charges, Applicant shall also pay during the currency of the permission period, all the Municipal and local taxes as may be fixed from time to time in respect of the usage of the railway land in the manner permitted by the Administration.
- The Way Leave permission/Easement Rights period will be normally for five years, being reckoned as per the Administration's extant policy guidelines for granting of Way leave facilities/Easement rights and is renewable/revisable once in five years basis. During initial grant of permission for any Way leave facility/Easement rights, the Applicant has to deposit the entire amount as per clause 2(I) & 2(ii), even if the permission period falls short of five years.

For granting Way leave permission/Easement rights, commencing on a date/other than closing date of the month, the actual date for calculation of Way leave/Easement rights charges, shall be the closing date of the month.

- The Administration shall have the right to review the rates of Way leave/Easement rights charges and other charges periodically and enhance the same if it is considered necessary. The Applicant shall be given 3 months notice in advance of the due date of such revision and if the Applicant fails to give his/her/their unconditional acceptance therefore as required by the notice, he/she/they shall vacate the premises before expiry of notice period.
- If the Applicant refuses to vacate the premises, after termination of the agreement, then, the Administration shall be entitled to:-

Initiate eviction proceedings to take appropriate action under section 122 of the Indian Railway Act, Provisions of P.P. Act and other relevant Acts for getting the railway land vacated/prevent enjoyment of Way leave facilities/Easement rights and to recover way leave charges/Easement Rights charges and other charges with interest at 18% per annum up to the date of actual vacation of the premises by the Applicant.

Commissioner

Mangalore City Corporation


Mangalore

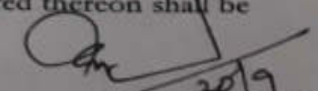
महल रेल प्रबंधक (सकय)

Divisional Railway Manager (Works)

दक्षिण रेलवे, पालक्काड-2

8. The Applicant shall not use the railway land for which Way leave permission /Easement Rights granted to him, for any purpose other than mentioned in clause No.1 and shall not also permit encroachments/trespass into said land. No construction (whether permanent, quasi permanent or temporary), other than a kutchra or pucca road in case the facility is expressly given for the same, is to be permitted on Railway land and if any construction comes up subsequently the same shall be removed immediately as soon as noticed and the Administration shall be at liberty to forfeit the security deposit and terminate the agreement at once by issuing a notice in writing to this effect and also seek the remedies open to it under clause 17, against the Applicant.
9. The Administration shall not be responsible for any development / damages/ inconvenience in the event of the agreement being terminated and the facilities offered withdrawn.
10. With regard to laying of pipelines carrying Cable for Cable TV network, water, oil, gas, drainage, sewage etc. across under railway track or taken overhead with supporting structures, the Applicant shall observe safety rules and such other rules, regulations and bye-laws as made from time to time or be made in this behalf or on behalf of the Administration or by the local Administration or by any local authority and subject to other conditions contained herein. This equally applies to power and communication lines taken either underground or overhead by the Electricity Department, P&T Dept. and by the private parties but will form part of agreement to be executed by the parties under the relevant rules.
11. (i) With regard to laying of road across the Railway track / provision of Level crossing, the conditions mentioned in clause 12 equally apply including safety.
- 11 (ii) For providing such facilities, in Railway land or across track, however necessary estimate/supervision/departmental charges shall be payable by the Applicant as per the extant orders of the Administration.
- (iii) The laying of Optical Fibre Cable along with the gas pipe line is strictly prohibited.
12. The Applicant shall allow the Administration or its officer(s) free access at all times to the said land whether the work for which the Way leave permission/Easement Rights granted is completed or in the course of construction and the applicant who have laid pipe lines shall whenever so requested forthwith replace or repair any part or parts of such pipes or fittings which Administration shall consider to be improperly situated or of defective design, construction or material or in want of repairs.
13. The pipe line and other crossing laid by the Applicant shall be removed from the said land by him/her/them at his/her/their expenses within one calendar month after the determination of the Way leave permission/Easement Right and the Applicant shall within the period last aforesaid at the Applicant's own expense restore to its former condition the land forming the site thereof and benefit shall be made herein the Administration may after the expiry of the said period carry out such removal and restoration if the Applicant shall fail to complete and may sell any material and things so removed and all expenses incurred thereon shall be paid by the Applicant to the Administration on demand.

  
Commissioner with  
Mangalore City Corporation  
Mangalore

  
मंडल रेल प्रबंधक (सकर्म)  
Divisional Railway Manager (Works)  
दक्षिण रेलवे, पालक्काड-2  
2019



14. The Applicant shall at all times keep the Administration indemnified against and shall reimburse to the Administration all claims, demands, legal expenses, stamp duty, eviction charges, losses, damages, cause charges and expenses etc. whatsoever which the Administration may sustain or incur by reason or in consequence of any injury to any person or to any property resulting directly or indirectly or in cause whatsoever from the pipe lines or other erection upon the said land by reason or any consequence of non-observance or non-compliance on the part of the Applicant afford in rule, regulation or bye-law referred to in clause-12 hereof/ Further the Applicant shall not be entitled to any claim from the Administration against any damage which Applicant might sustain for any reason however arising.

Applicant shall use the railway lands and enjoy the right granted under this agreement without causing any obstruction, hindrance or damage to the railway property or to the Railway working and in the event of such hindrance and obstruction etc. the Railway shall have the right to terminate this agreement.

15. The Applicant shall not use the said land or any part thereof or permit the same to be used for worship or religious or educational or dwelling purposes or for any other purpose not specified in clause-1. The Applicant shall at all times maintain the utility provided by using the way leave permission or easement right such as a pipe line or cable crossing or any other utility in proper upkeep as required under the safety regulations applicable to the Railways as well as to the Applicant and other users. If there is any occurrence such as fire or explosion of a pipe line or fire in the cables or thefts and damages committed, with the knowledge or otherwise of the Applicant, the entire cost of damage sustained by the Administration and all other costs connected to it, shall be paid by the Applicant to the Administration within a period of 3 months of the occurrence. Assessment of the damages made by the Administration shall be final.

16. The privileges mentioned in clause-1 hereof are on the express understanding that either party hereto shall be at liberty to determine and put an end to the Way leave permission/Easement rights by giving to either of them at any time one calendar months' notice in writing to that effect and such privileges may be determined by the Administration without any claim for compensation whatsoever on the part of the Applicant on the expiry of such notice the Applicant shall discontinue the use of said land/Way leave facilities/Easement rights for the purpose aforesaid or any other purpose, remove the structures, etc. if any put up at his/her/their own cost and shall yield up to the Administration the vacant and peaceful possession of the said land and premises in his/her/their occupation.

- 16(I) As and when the Railway land to which permission granted under Way leave facilities/Easement rights etc. is required for Railway for its maintenance and development works, Way leave Facilities/Easement rights will be discontinued.

17. Nothing herein contained shall be construed to create a tenancy in favour of the Applicant and he/she/they shall not assign or sublet or transfer the right of use of land and enjoyment of Way leave facilities/Easement rights and other privileges to any other person without the written authority of the Railway Administration.

- 17(I) Any addition or alteration to the approved proposal as mentioned in clause I should not be done by the Applicant without the prior approval of the Railway Administration.


18. In case any doubt, difference or dispute shall arise between the Applicant on the one hand and the Administration on the other hand as to the true intent of these provisions or of any article, clause or things herein contained, then in every such case the decision or difference or dispute shall be referred to the Divisional Railway Manager (Work) and his decision shall be final and binding on the Applicant.

## **APPENDIX 5: Labour License-Mangalore UGD**

## Labour License Mangalore UGD

LD1521000042107

1 - Renewal Certificate



**GOVERNMENT OF KARNATAKA**  
**DEPARTMENT OF LABOUR**

Licence No : ALC-MNG/CLA/C-100023295/2018-19

Registration No: RGN/CLA/MNG-202/2000-01

Assistant Labour Commissioner, Mangalore  
Division, Mangaluru  
Prakruthi Commercial  
Complex 2nd Floor, Opp.  
Bharath Beedi Works Pvt  
Ltd., Kadri road,  
Mangalore-575003

Licence Date: Dec-5-2018

**FORM-VI**  
[See Rule 25(1)]

1. Licence is hereby granted to DRS INFRA TECH PVT LTD, 1-N-6-454/5, DADDALKAD, NEAR  
INFOSYS, URWA STORE, ASHOKNAGAR, MANGALORE, 575006 Under Section 12  
[1] of the Contract Labour [Regulation and Abolition] Act-1970, subject to the conditions  
specified in annexure.

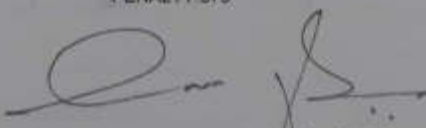
2. This Licence is for doing the work UGD WORKS in the establishment of  
Commissioner, City Corporation Of Mangalore, Lalbagh, Mangalore

3. The Licence shall remain in force till 06/06/2020

**Renewal**  
[Rule 29]

Sl no.	Date of Licence Renewal	Date of expiry	Fee paid for Licence Renewal	Next Date of expiry
1	01-07-2019	06-06-2019	LICENCE FEE: 1500, PENALTY: 375	06/06/2020

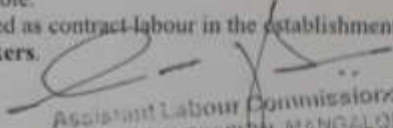
Please, verify authenticity of by visiting  
[www.labouronline.kar.nic.in](http://www.labouronline.kar.nic.in) & entering certificate Number

  
Assistant Labour Commissioner  
Mangalore Division, Mangalore  
MANGALORE DIVISION, MANGALORE

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ANNEXURE

The license is subject to the following conditions:-

1. The license shall be non-transferable.
2. The number of workmen employed as contract labour in the establishment shall not, on any day, exceeds **30 workers**.  
  
Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE
3. Expect as provided in the rules and fees paid for the grant or as the case may be, for renewal of the license shall be non-refundable
4. The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the schedule of employment under the Minimum Wages Act, 1948, where applicable and where the rates have been fixed by agreement settlement or award, not less than the rates, fixed.
5. In cases where the workmen employed by the contractor perform the same or similar kind of work as the workmen directly employed by the Principal Employer of the Establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of contractor shall be the same as applicable to the workmen directly employed by the Principal Employer of the Establishment on the same or similar kind of work; provided that in the case of disagreement with regards to the type of work the same shall be decided by the Commissioner of Labour whose decision shall be final.
6. In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Commissioner of Labour.
7. In every establishment where 20 or more women are ordinarily employed as contract labour shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as play room for the children and the other as bed room for the children. For this purpose the contract shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping in this behalf by the Commissioner of Labour.
8. The licenses shall notify any change in the number of workmen or the conditions of work to the licensing officer.
9. A copy of license shall be displayed prominently at the premises where the contract work is being carried on.
10. The contract labourers shall be provided the lunch/dinner, coffee/tea and breakfast, snacks free of cost during the working hours, if such facilities are extended to regular workmen employed by the principal employer.
11. The contract labourers shall be paid the minimum wages fixed under the minimum wages act.
12. The contract labourers shall be paid with the same rate of Bonus and Ex-gratia payable to the regular workmen employed by the principal employer.
13. The contract labourers shall be provided with free uniforms and shoes, with such facilities are extended to the regular workmen employed by the principal employer.
14. Employment of Child Labour below 14 years is prohibited.



## **APPENDIX 6: EMPLOYEE COMPENSATION INSURANCE-MANGALORE UGD**



## Employees Compensation Insurances – Mangalore UGD

THE NEW INDIA ASSURANCE CO. LTD.  
(Government of India Undertaking)



## POLICY SCHEDULE FOR EMPLOYEES COMPENSATION INSURANCE

Insured's Name	THE COMMISSIONER		
Insured's Details		Issuing Office Details	
Customer ID	PO57175662	Office Code	REGUMPET DO (611900)
Address	MANGALORE CITY CORPORATION, LALBAGH, MG ROAD, MANGALORE - 575003	Address	#6-3-862/A/B, 2ND FLOOR, LAL BUNGLOW, GREENLANDS, AMERPET 500016
Phone No	MANGALORE, KARNATAKA, 575003	Phone No	04023413936 / 04066616201
E-mail/Fax	drinfratech@gmail.com, /	E-mail/Fax	nia 611900@newindia.co.in / 04023413935
PAN No	AACCD5271F	S-Tax Regn. No	AAACN4165CGT178
GSTIN/UIN	29AACCD5271F1ZQ / NA	GSTIN	36AAACN4165C3ZQ
		SAC	997139 (Other non-life insurance services excl RI)

Policy Details			
Policy Number	61190036190100000143	Business Source Code	
Period of Insurance	From: 20/02/2020 05:10:54 PM To 19/02/2021 11:59:59 PM	Dev. Off Level/Broker/Corp. Agent/Web Aggregator	DIRECT BUSINESS (1D4023666)
Date of Proposal	20-Feb-20	Agent/Bancassurance/ Specified Person	RAMESH VENKAT RAD.K (NIA1D4021469) AGENT_SITE_50309 (1D4026447)
Prev. Policy no.		Phone No	8019506470 / NA
Client Type	Non-Corporate	E-mail/Fax	rameshkrab63@gmail.com, / / /

Premium(₹)	GST(₹)	Total (₹)	Total (₹ in words)	Receipt No. & Date
70128	12623	82751	RUPEES EIGHTY TWO THOUSAND SEVEN HUNDRED FIFTY-ONE ONLY	6119008119000000996 2 / 20/02/20

Details of Employees with monthly wages upto ₹ 15000:

Categories	Sub Categories	No of Employee	Cash Total Wages
Sewer and Road Contractors	40 Unskilled workers with wages @₹15000/- per month	40	7200000

Details of Employees with monthly wages above ₹ 15000:

Categories	Sub Categories	No of Employee	Cash Total Wages
Sewer and Road Contractors	10 skilled workers with wages @₹25000 per month	10	3000000
Sewer and Road Contractors	10 semi skilled workers with wages @₹20000 per month	10	2400000
Trade Description	Particular of Works	Location Details	Included All Sub Contractors

इन्सुरेस स्टॉप ब्रॉचर अदा की गई है।  
CONSOLIDATED STAMP DUTY  
FOR INSURANCE POLICY PAID  
Policy No. GSD/2174/P/2019,  
Dated 20-02-2019



Policy No. : 61190036190100000143 Document generated by 26743 at 20/02/2020 18:41:31 Hours



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CamScanner



Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 1415

## **APPENDIX 7: NOC from NH - for pipe laying-KUNDAPURA WSS**



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(National Highways Authority of India)

## National Highways Authority of India

(Ministry of Road Transport & Highways)

परियोजना कार्यान्वयन इकाई - मंगलूरु (Project Implementation Unit - Mangalore)

डोर नं. 3-29, बेथेर, मंगलूरु, पो 34, के.एम. (K-65), मंगलूरु - 575005.

Door No. 3-29, "Bethel", Mangalore, Po 34, K.M. (K-65), Mangalore - 575005.

टेलिफोन : Telephone : 91-824-4254495

टेलिफैक्स / Telex : 91-824-4254495

ई-मेल / e-mail: man@nhai.org



BHARATMALA  
ROAD TO PROSPERITY



भारतमाला  
प्रगति के पथ पर भारत

No.11039/1/2009/PIU(Mnglr)/ 38

25<sup>th</sup> April, 2019

To,  
The Chief Officer,  
Town Municipal Council,  
Kundapur  
Udupi District

32  
26/4/19

**Sub: Request for granting of permission for laying Clear Water Pumping Main of 200mm dia DI K9 from existing DUCT at Km.284.000 across Highway near Shastri Circle, Kundapur Taluk along NH-66 - reg.**

- Ref: 1) Your letter no.KIUWMIP/PIU/KDP/CR-16/2018-19 Dt.25.01.2019  
2) Independent Engineer letter no.AA/KS/IL/NHAI/2019/4298 Dt.22.03.2019  
3) Concessionaire letter no NUTPL/1233/SKR/2801 Dt.27.03.2019

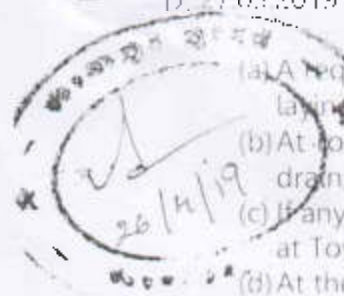
Sir,

This has reference to your letter 1<sup>st</sup> cited above, regarding request for granting permission for laying Clear Water Pumping Main of 200mm dia DI K9 from existing DUCT at Km.284.000 across Highway near Shastri Circle, Kundapur Taluk along NH-66. The Executive Engineer, KIUWMIP, Udupi has submitted necessary Performance Bank guarantee no. 180281BGP00038 Dt.08.08.2018 of Rs.1,00,000/- & License Fee charges vide D.D no. 550285 Dt.29.11.2018 of Rs.1,19,157/- respectively.

2. In this regard, our Independent Engineer M/s. Aarvee Associates vide in letter 2<sup>nd</sup> cited, has inspected the above said location and confirmed that, the proposal for laying of the clear water pumping main of 200mm DI K9 for existing duct at Km.284.000 across Highway is in order.

3. Further, the Concessionaire M/s. Navayuga Udupi Tollway Pvt. Ltd., vide in letter no.2801 Dt.27.03.2019 has also submitted their consent with the following conditions:

- A requisite permission for right of way from concerned Authority shall be obtained before laying the pipe line.
- At road crossing found in the culvert portion should be lay without disturbing the RCC drain, culvert & main carriageway.
- If any damages occur to the culvert or any other project property, it should be re-construct at Town Municipal Council, Kundapur own cost.
- At the time of further road widening pipeline should be shift / relocate by Town Municipal Council, Kundapur own cost.
- At the time of construction, if any of pipe damaged NUTPL is not responsible to repair the damaged section, it is under Authority own scope.
- After laying the pipe line need to be earth fill & re-compact properly on the side of the drains.
- While carrying out the works, all the safety precautions should be taken without affecting the live traffic, other existing utilities and construction works.
- Laying of pipeline shall be carried out only on the presence of technical staff of Concessionaire.
- Town Municipal Council, Kundapur shall inform NHAI / Concessionaire before starting of



26/4/19

26/4/19

:: 2 ::

4. In view of the above, the permission is being accorded to Town Municipal Council, Kundapur for laying Clear Water Pumping Main of 200mm dia Di K9 from existing DUCT at Km.284.000 across Highway near Shastri Circle, Kundapur Taluk along NH-66 at their own cost duly maintaining the above mentioned conditions.

This is for your information and necessary action.

Thanking you,

Yours faithfully,



Project Director  
PIU - Mangalore

Copy to: 1) The Team Leader, M/s. Aarvee Associates, Udipi  
2) The Project Manager, M/s. Navayuga Group Tollway Pvt. Ltd., Padubidri

## **APPENDIX 8: Kundapura - NOC from PWD - for pipe laying**





ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರವರ ಕಛೇರಿ,

ಲೋಕೋಪಯೋಗಿ ಬಂದರು ಮತ್ತು ಒಳನಾಡು ಜಲಸಾರಿಗೆ ಇಲಾಖೆ, ಸಂ.2ನೇ ಉಪವಿಭಾಗ - ಕುಂದಾಪುರ. 576201.

ದೂರವಾಣಿ & ಫ್ಯಾಕ್ಸ್ : ( 08254 ) 230363.

E-mail : pwdkun@gmail.com

Website: https://www.kpwd.gov.in

ಸಂ:ಸ.ಕಾ.ಇಂ:ಲೋ.ಇ:ಕುಂಉವಿಭಾ:ಸಇ1:ರಾ.ಹೆ:ಜಂ:ಪ.ವೀ:2018-19:

ದಿನಾಂಕ:

ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರರು,

ಲೋಕೋಪಯೋಗಿ ಬಂದರು ಮತ್ತು ಒಳನಾಡು ಜಲಸಾರಿಗೆ ಇಲಾಖೆ,

ಉಡುಪಿ ವಿಭಾಗ,

ಉಡುಪಿ.

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕುಂದಾಪುರ ಪಟ್ಟಣಕ್ಕೆ ಒಳಚರಂಡಿ ವ್ಯವಸ್ಥೆ ಕಲ್ಪಿಸುವ ಯೋಜನೆಯಡಿಯಲ್ಲಿ

ಕುಂದಾಪುರ - ಶಿವಮೊಗ್ಗ ರಾಜ್ಯ ಹೆದ್ದಾರಿ ಎರಡು ಬದಿಯಲ್ಲಿ ಗ್ರಾಮಸಾರ ಕೊಳವೆ

ಮಾರ್ಗ ಹಾಗೂ ಆಳುಗುಂಡಿಗಳನ್ನು ನಿರ್ಮಾಣ ಕಾಮಗಾರಿ ಕೈಗೊಳ್ಳುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1) ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು, ಕನನೀಸ ಮತ್ತು ಒ.ಜಿ ಮಂಡಳಿ ವಿಭಾಗ,

ಮಂಗಳೂರು ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:1499/2017-18:ದಿನಾಂಕ:26-12-2017.

2) ಈ ಕಛೇರಿ ಪತ್ರ ಸಂಖ್ಯೆ:ಸಂ:ಸ.ಕಾ.ಇಂ:ಲೋ.ಇ:ಕುಂಉವಿಭಾ:ಸಇ1:ರಾ.ಹೆ:

ಜಂ:ಪ.ವೀ:2017-18:1672-73:ದಿನಾಂಕ:09-01-2018.

3) ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಉಪವಿಭಾಗ ಶೃಂಗೇರಿ

ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:ಸ.ಕಾ.ಇಂ/ರಾಹಉವಿ/ಶೃಂಗೇರಿ/2018-19/16/ದಿನಾಂಕ:11-04-2018

4) ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್ ಕ್ಯುಮಿಪಿ-ಪಿಐಯು ಉಡುಪಿ ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:

KIUWMIP/PIU/UDP/CR/21/2017-18/34/Dated:20-04-2018.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖ (1)ರ ಪತ್ರದಲ್ಲಿ ಉಡುಪಿ ಜಿಲ್ಲೆಯ ಕುಂದಾಪುರ ಪಟ್ಟಣಕ್ಕೆ ಕೇಂದ್ರ ಸರ್ಕಾರದ ಯು.ಐ.ಡಿ.ಎಸ್.ಎಸ್.ಎಮ್.ಟಿ ಯೋಜನೆಯಡಿ ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗಗಳ ಅಳವಡಿಕೆ, ಆರ್.ಸಿ.ಸಿ ಆಳುಗುಂಡಿಗಳ ಕಾಮಗಾರಿ ಪ್ರಗತಿಯಲ್ಲಿದ್ದು, ಕುಂದಾಪುರ - ಶಿವಮೊಗ್ಗ ರಾಜ್ಯ ಹೆದ್ದಾರಿಯ 2 ಬದಿಗಳಲ್ಲಿ ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗ ಮತ್ತು ಆಳುಗುಂಡಿಗಳನ್ನು ಅಳವಡಿಸಲು ಅನುಮತಿ ಕೋರಿದ್ದು, ಉಲ್ಲೇಖ (2)ರ ಈ ಕಛೇರಿ ಪತ್ರದಲ್ಲಿ ಕಾಮಗಾರಿ ನಿರ್ಮಿಸಲು ಉದ್ದೇಶಿಸಿರುವ ರಸ್ತೆಯು ತೀರ್ಥಹಳ್ಳಿ-ಕುಂದಾಪುರ ರಾಜ್ಯ ಹೆದ್ದಾರಿಯಾಗಿದ್ದು, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಇಲಾಖೆಯಿಂದ ಸಿಆರ್‌ಎಫ್ ಯೋಜನೆಯಡಿ ಮಂಜೂರಾದ ಕಾಮಗಾರಿಗಳಿಗೆ ಸದರಿ ರಸ್ತೆಯನ್ನು ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರರು, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಉಪವಿಭಾಗ ಶೃಂಗೇರಿ ಇವರಿಗೆ ಹಸ್ತಾಂತರಿಸಲಾಗಿರುತ್ತದೆ. ಆದುದರಿಂದ ಕಾಮಗಾರಿಗೆ ಅನುಮತಿಯನ್ನು ಸದರಿಯವರಿಂದ ಪಡೆಯಲು ತಿಳಿಸಲಾಗಿತ್ತು, ಆದರೆ, ಉಲ್ಲೇಖ(3)ರ ಪತ್ರದಲ್ಲಿ ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರರು, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಉಪವಿಭಾಗ ಶೃಂಗೇರಿ ಇವರು ಸದರಿ ರಸ್ತೆಯ ಸ್ವಾಮಿತ್ವವು ಈ ಇಲಾಖೆಯಲ್ಲಿರುವುದರಿಂದ ರಸ್ತೆಯ ಬದಿಯ ಅಗತಕ್ಕಾಗಿ ಅನುಮತಿಯನ್ನು ಈ ಇಲಾಖೆ ನೀಡಬೇಕಾಗಿ ತಿಳಿಸಿರುತ್ತಾರೆ. ಕಾಮಗಾರಿ ನಡೆಸಲು ಉದ್ದೇಶಿಸಿರುವ ತೀರ್ಥಹಳ್ಳಿ-ಕುಂದಾಪುರ ರಾಜ್ಯ ಹೆದ್ದಾರಿಯ ಬಸ್ಸುರು ಜಂಕ್ಷನ್‌ನಿಂದ ಹೊಂಡಾರ್ ಬೆಟ್ಟ ಸೇತುವೆ ವರೆಗಿನ ಭಾಗವು ಡಾಂಬಾರು ಮೇಲ್ಮೈ ಹೊಂದಿದ ಮಧ್ಯಮಪಥ ರಸ್ತೆಯಾಗಿರುತ್ತದೆ. ಸದರಿ ರಸ್ತೆಯನ್ನು ಪ್ರಸಕ್ತ ಸಾಲಿನಲ್ಲಿ ಸಿಆರ್‌ಎಫ್ ಯೋಜನೆಯಡಿ ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಉಪವಿಭಾಗ ಶೃಂಗೇರಿ ಇಲಾಖೆಯಿಂದ ಮರು ಡಾಂಬರೀಕರಣಗೊಳಿಸಲಾಗಿರುತ್ತದೆ. ಸದರಿ ರಸ್ತೆಯು ರಾಜ್ಯ ಹೆದ್ದಾರಿಯಾಗಿದ್ದು, 10,000 ಕ್ವಿ. ಅಧಿಕ ಪಿ.ಸಿ.ಯು. ಹೊಂದಿದ ಪಾಹನ ಸಂಚಾರವಿರುತ್ತದೆ. ಕಾಮಗಾರಿ ನಡೆಸಲು ಉದ್ದೇಶಿಸಿದ ಭಾಗದಲ್ಲಿ ರಸ್ತೆಯ ಶೋಲ್ಡರ್ ಭಾಗವು ತುಂಬಾ ಕಡಿಮೆ ಆಗಲು ಹೊಂದಿರುತ್ತದೆ. ರಸ್ತೆಯ ಮರು ಡಾಂಬರೀಕರಣ ಕಾಮಗಾರಿಯು "ಕಾಮಗಾರಿ ನಿರ್ವಹಣಾ ಅವಧಿ" ಇನ್ನು ಚಾಲ್ತಿಯಲ್ಲಿರುವುದರಿಂದ ರಸ್ತೆ ಬದಿ ಅಥವಾ ರಸ್ತೆಯಲ್ಲಿ ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗಗಳ ಅಳವಡಿಕೆ, ಆರ್.ಸಿ.ಸಿ ಆಳುಗುಂಡಿಗಳ ನಿರ್ಮಾಣ ಕಾಮಗಾರಿ ಕೈಗೊಳ್ಳುವುದರಿಂದ ಈ ಭಾಗದಲ್ಲಿ ರಸ್ತೆಯು ಸಂಪೂರ್ಣವಾಗಿ ಹಾಳಾಗುವ ಸಾಧ್ಯತೆಯಿರುತ್ತದೆ. ಸದರಿ ರಸ್ತೆಯಲ್ಲಿ ಅತೀ ಹೆಚ್ಚಿನ ಸಂಖ್ಯೆಯ ವಾಹನ ಸಂಚಾರ ಇರುವುದರಿಂದ ಹಾಗೂ ರಸ್ತೆಯ ಅಗಲ

ಕಡಿಮೆಯಿರುವುದರಿಂದ ಕಾಮಗಾರಿ ಸಂದರ್ಭದಲ್ಲಿ ರಸ್ತೆಯಲ್ಲಿ ವಾಹನ ಸಂಚಾರಕ್ಕೆ ತೀವ್ರ ಅಡಚಣೆ ಉಂಟಾಗುವ ಎಲ್ಲಾ ಸಾಧ್ಯತೆಗಳಿರುತ್ತದೆ. ಸದರಿ ರಸ್ತೆಯು ರಾಜ್ಯ ಹೆದ್ದಾರಿಯಾಗಿದ್ದು, ಜಿಲ್ಲೆಯ ಮುಖ್ಯ ಸಂಪರ್ಕ ರಸ್ತೆಯಾಗಿರುವುದರಿಂದ ಕಾಮಗಾರಿ ಸಂದರ್ಭದಲ್ಲಿ ವಾಹನ ಸಂಚಾರ ಅಡಚಣೆಯಿಂದ ಸಾರ್ವಜನಿಕರಿಗೆ ತೀವ್ರ ತೊಂದರೆಯಾಗುವ ಸಾಧ್ಯತೆಯಿರುತ್ತದೆ. ಸದರಿ ರಸ್ತೆಯಲ್ಲಿರುವ ವಾಹನ ಸಂಚಾರದ ಆಧಾರದಲ್ಲಿ ರಸ್ತೆಯನ್ನು ಮಧ್ಯಮಪಥದಿಂದ ದ್ವಿಪಥ ರಸ್ತೆಯನ್ನಾಗಿ ಮಾರ್ಪಡಿಸಬೇಕಾಗಿರುತ್ತದೆ. ಅದುದರಿಂದ ಈ ಮೇಲಿನ ಎಲ್ಲಾ ಕಾರಣಗಳಿಂದಾಗಿ ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗಗಳ ಅಳವಡಿಕೆ, ಆರ್.ಸಿ.ಸಿ ಅಳುಗುಂಡಿಗಳ ಕಾಮಗಾರಿಯನ್ನು ರಸ್ತೆಯ ಚರಂಡಿ ಹೊರಭಾಗದಲ್ಲಿ ದ್ವಿಪಥ ರಸ್ತೆಯನ್ನು ನಿರ್ಮಿಸಲು ಅಗತ್ಯವಿರುವ ಸ್ಥಳವನ್ನು ಬಿಟ್ಟು ಕೈಗೊಳ್ಳುವುದು ಸೂಕ್ತವೆಂದು ಅಭಿಪ್ರಾಯ ಪಡಲಾಗಿದೆ. ಕಾಮಗಾರಿ ಸಂದರ್ಭದಲ್ಲಿ "ಕಾಮಗಾರಿ ನಿರ್ವಹಣಾ ಅವಧಿ" ಯಲ್ಲಿರುವ ಮರು ಡಾಂಬರೀಕರಣಗೊಂಡ ರಸ್ತೆ ಹಾನಿಗೊಳಗಾದರೆ ಹಾಗೂ ಇದರಿಂದ ಉದ್ಭವಿಸುವ ಯಾವುದೇ ವ್ಯಾಜ್ಯಗಳಿಗೆ ಮತ್ತು ಕಾಮಗಾರಿ ಸಂದರ್ಭದಲ್ಲಿ ವಾಹನ ಸಂಚಾರಕ್ಕೆ ಅಡಚಣೆ ಉಂಟಾಗಿ ರಾಜ್ಯ ಹೆದ್ದಾರಿಯಲ್ಲಿ ವಾಹನ ಸಂಚಾರ ನಿರ್ಬಂಧಗೊಂಡರೆ ಅದರ ಸಂಪೂರ್ಣ ಜವಬ್ದಾರಿಯು ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗಗಳ ಅಳವಡಿಕೆ, ಆರ್.ಸಿ.ಸಿ ಅಳುಗುಂಡಿಗಳ ಕಾಮಗಾರಿಯನ್ನು ನಿರ್ವಹಿಸುವ ಇಲಾಖೆಯದಾಗಿರುತ್ತದೆ ಎಂಬ ಜರತ್ತಿನ ಮೇರೆಗೆ ಅನುಮತಿಯನ್ನು ನೀಡಬಹುದೆಂದು ಈ ಮೂಲಕ ಅಭಿಪ್ರಾಯಪಡಲಾಗಿದೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರರು,  
✓ ಬಿ.ಬಿ.ಬಿ.ಜಿ.ಇ., ನಂ.2ನೇ ಉಪವಿಭಾಗ,  
ಕುಂದಾಪುರ.

ಪ್ರತಿಯನ್ನು ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ ಉಪವಿಭಾಗ ತೃಂಗೇರಿ ಇವರಿಗೆ ಮಾಹಿತಿಗಾಗಿ ಕಳುಹಿಸುತ್ತಾ, "ಕಾಮಗಾರಿ ನಿರ್ವಹಣಾ ಅವಧಿ" ಯಲ್ಲಿರುವ ಸಿ.ಆರ್.ಎಫ್. ಬೋರ್ಡಿನೊಡನೆ ತಮ್ಮ ಇಲಾಖೆಯಿಂದ ಕೈಗೊಂಡ ಮರು ಡಾಂಬರೀಕರಣಗೊಂಡ ರಸ್ತೆಯು ಗ್ರಾಮಸಾರ ಕೊಳವೆ ಮಾರ್ಗಗಳ ಅಳವಡಿಕೆ, ಆರ್.ಸಿ.ಸಿ ಅಳುಗುಂಡಿಗಳ ಕಾಮಗಾರಿಯಿಂದ ಹಾನಿಗೊಂಡರೆ ಹಾಗೂ ಇದರಿಂದ ಉದ್ಭವಿಸುವ ವ್ಯಾಜ್ಯಗಳಿಗೆ ಈ ಇಲಾಖೆ ಹೊಣೆಗಾರರಲ್ಲ ಎಂಬ ಮಾಹಿತಿಯನ್ನು ಈ ಮೂಲಕ ತಿಳಿಸಲಾಗಿದೆ.

## **APPENDIX 8a: Kundapura - NOC from PWD - for pipe laying-English**

Karnataka Government

Assistant Executive Engineer Office

Public Works, Ports & Inland Water Transport Department no.2<sup>nd</sup> Sub-Division, Kundapura-576201

Telephone & Fax (08254)230363

E-Mail:pwdkund@gmail.com

Website:https://www.kpawd.gov.in

No.AEE: PWD: K.S.D:AE:S.H:J.P.D: 2018-19

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Date

Executive Engineer

Public Works, Ports & Inland Water Transport Department

Udupi division

Udupi

Sir

Sub: The proposed sewer net work inventive project to Kundapura Town, the proposed sewer pipeline laying, Jointing & Manhole construction in either side of the Shimoga state Highway For NOC –reg

Ref: (1) Executive Engineer, KUWs&DB division Mangalora. Letter no.1499/2017-18 Dt.26/12/2017

(2)This Office Letter No:AEE:PWD. Kundapura, Sub-Division: AE: StateHighway,

P-----2017-18/1672, Date: 09/01/2018

(3) Assistant Executive Engineer, National Highway sub Division, Shrungeri letter No.AEE/NHSD/

Shrungeri/2018-19/16 dt: 11/04/2018

(4) Executive Engineer KIUWMIP-PIU, Udupi: yours letter No: KIUWMIP-PIU/UDP/CR/21/2017-18/34

Dated: 20/04/2018

With respect to above mentioned subject Ref:(1) letter Udupi District to Kundapura Town under Central Govt.UIDSSMT project. The proposed sewer pipeline laying, Jointing & Manhole construction work in progress. The request for approval for the proposed sewer pipeline laying, Jointing & Manhole construction on either side of the Kundapura- Shimoga state Highway. With Ref:(2) letter to implementation of the proposed work comes under Teerthahalli- Kundapura State highway, This road has handed over to AEE National highway sub-division Shrungeri by National highway Department. The work granted under CRF, so the project work permission is to be taken from same Department with Ref:(3) letter AEE National highway Division Shrungeri. The same road comes under the National highway Department, so they informed that the utility of road side permission that Department will issuing, the proposed execution work in the Teerthahalli- Kundapura state highway from Basrur junction to Honchar Bettu bridge area the asphalt road having average quality. The same asphalt road restoration was completed recently under the CRF project National Highway sub division Shringeri Department. This road is belongs to state highway Daily 10,000 and more PCU vehicle traffic movement is there. The project implementing chainage of road shoulder width is very less the asphalt road restoration “O&M of work” currently in maintenance. So either side of sewer pipeline laying and jointing and RCC manhole construction implementation in this road suppose this work road will be damaged, due to heavy traffic and road width is less if the work in progress period the vehicle traffic movement will be in trouble. The

road is state highway and connected to the district highway. Work in progress period due to traffic obstruction nuisance possibility is more to the public. According to the vehicle movement in this medium road will be upgrading to double traffic road so all the above mentioned reason. The laying and jointing sewer pipeline and manhole construction will execute outside the surface drainage and leave the proposed double road space. So this is our suitable opinion. during the work in progress, the O&M period restored road will be damaged also due to this arising any litigation and traffic movement Trouble from vehicle movement on state highway, during period of laying and jointing and RCC manhole construction any problem arrised totally all responsibility on this related Client department On this basis conditional approval issuing.

Yours Faithfully

Assistant Executive Engineer  
P. W, P & I.W. T. D. no.2 Subdivision  
Kundapura

Information Copy to

Assistant Executive Engineer National highway Subdivision Shringeri. during the "O & M period "the work under CRF, the work executing by your Department, if any road damaged during the proposed sewer pipeline laying, Jointing & Manhole construction all the creating litigation this Department not responsible this information hereby brought to your knowledge.



## **APPENDIX 9: Labour License-Kundapura WSS**



## GOVERNMENT OF KARNATAKA

## DEPARTMENT OF LABOUR

Licence No : ALC-MNG/CLA/C-100022157/2018-19

Registration No: ALC-MNG/CLA/P-1000015240/2018-19

Assistant Labour  
Commissioner, Mangalore  
Division, Mangaluru  
Prakruthi Commercial  
Complex 2nd Floor, Opp.  
Bharath Beedi Works Pvt  
Ltd., Kadri road,  
Mangalore-575003

Licence Date: Sep 26 2018

**FORM-VI**

[See Rule 25(1)]

1. Licence is here by granted to Laxmi Civil Engineering Services Pvt Ltd, 1148, E, Sykes Extension, Kolhapur-41600, 1 Maharashtra, India Under Section 12[1] of the Contract Labour [Regulation and Abolition] Act-1970, subject to the conditions specified in annexure.

2. This Licence is for doing the work Water pipe line and civil construction in the establishment of Town Municipal Council Kundapura, With in municipal Area

3. The Licence shall remain in force till : 19/12/2020

**Renewal**  
[Rule 29]

Sl no.	Date of Licence Renewal	Date of expiry	Fee paid for Licence Renewal	Next Date of expiry
1	10-12-2019	19-12-2019	LICENCE FEE:1500, PENALTY:375	19/12/2020

Please, verify authenticity of by visiting  
[www.labouronline.kar.nic.in](http://www.labouronline.kar.nic.in) & entering certificate Number

  
**Assistant Labour Commissioner**  
MANGALORE DIVISION, MANGALORE  
Mangalore Division, Mangaluru

ANNEXURE

**The license is subject to the following conditions:-**

1. The license shall be non-transferable.
2. The number of workmen employed as contract labour in the establishment shall not, on any day, exceeds **40 workers**.
3. Expect as provided in the rules and fees paid for the grant or as the case may be, for renewal of the license shall be non-refundable
4. The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the schedule of employment under the Minimum Wages Act, 1948, where applicable and where the rates have been fixed by agreement settlement or award, not less than the rates, fixed.
5. In cases where the workmen employed by the contractor perform the same or similar kind of work as the workmen directly employed by the Principal Employer of the Establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of contractor shall be the same as applicable to the workmen directly employed by the Principal Employer of the Establishment on the same or similar kind of work; provided that in the case of disagreement with regards to the type of work the same shall be decided by the Commissioner of Labour whose decision shall be final.
6. In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Commissioner of Labour.
7. In every establishment where 20 or more women are ordinarily employed as contract labour shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as play room for the children and the other as bed room for the children. For this purpose the contract shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping in this behalf by the Commissioner of Labour.
8. The licenses shall notify any change in the number of workmen or the conditions of work to the licensing officer.
9. A copy of license shall be displayed prominently at the premises where the contract work is being carried on.
10. The contract labourers shall be provided the lunch/dinner, coffee/tea and breakfast, snacks free of cost during the working hours, if such facilities are extended to regular workmen employed by the principal employer.
11. The contract labourers shall be paid the minimum wages fixed under the minimum wages act.
12. The contract labourers shall be paid with the same rate of Bonus and Ex-gratia payable to the regular workmen employed by the principal employer.
13. The contract labourers shall be provided with free uniforms and shoes, with such facilities are extended to the regular workmen employed by the principal employer.
14. Employment of Child Labour below 14 years is prohibited.

Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE

Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE

## **APPENDIX 10: EMPLOYEE COMPENSATION INSURANCE-KUNDAPURA WSS**





POLICY SCHEDULE FOR EMPLOYEES COMPENSATION INSURANCE

Insured's Name		M/S LAXMI CIVIL ENGINEERING SERVICES PVT.LTD.	
Insured's Details		Issuing Office Details	
Customer ID	PO66850545	Office Code	NAGPUR DO II (160200)
Address	51, TEACHER COLONY, VINAYAK NAGAR, HINDALGA ROAD, BELGAVI, KARNATAKA BELGAUM, KARNATAKA, 590001	Address	PLOT NO. 42, PRAGATI COLONY OPPOSITE SAI MANDIR WARDHA ROAD, NAGPUR, 440015
Phone No	9422051444	Phone No	07122252333 / 07122252555
E-mail/Fax	nagpuroffice@icepl.com, /	E-mail/Fax	nia.160200@newindia.co.in / 07122252444
PAN No		S.Tax Regn. No	AAACN4165CST178
GSTIN/UIN	29AAACL5602N1ZA / NA	GSTIN	27AAACN4165C3ZP
		SAC	997139 (Other non-life insurance services excl Rt)

Policy Details			
Policy Number	16020036190100000258	Business Source Code	DIRECT BUSINESS - (2D10752899)
Period of Insurance	From: 07/02/2020 04:02:24 PM To: 06/08/2020 11:59:59 PM	Dev.Off level/Broker/Corp. Agent/Web Aggregator	
Date of Proposal	07-Feb-20	Agent/Bancassurance/ Specified Person	Mr. MILIND MANOHAR SAWARKAR (NIAAG00063948) MILIND SAWARKAR (SI00109865)
Prev. Policy no.		Phone No	9822363953 / NA
Client Type	Non-Corporate	E-mail/Fax	milind_s44002@yahoo.com, / / /

Premium(₹)	GST(₹)	Total (₹)	Total (₹ in words)	Receipt No. & Date
20698	3726	24424	RUPEES TWENTY-FOUR THOUSAND FOUR HUNDRED TWENTY-FOUR ONLY	1602008119000001124 4 - 07/02/20

Categories		Sub Categories	No of Employee	Cash Total Wages
------------	--	----------------	----------------	------------------

Categories		Sub Categories	No of Employee	Cash Total Wages
------------	--	----------------	----------------	------------------

Electrical Engineers (not manufacturers) Installation and repair of plant, fittings and Apparatus incl. wireless, telephone and telegraph	Work on ships and underground in mines and quarries	12	1000000
---	---	----	---------

Trade Description	Particular of Works	Location Details	Included All Sub-Contractors
ENGINEER AND CONTRACTOR	CONSTRUCTION OF 24X7 WATER SUPPLY SCHEME AT KUNDAPUR TOWN DIST.UDIPI (KARNATAKA) AS PER WORK ORDER NO.TMC/WSS/CR NO.01/2017-18 DTD 28/10/2017. ENGINEER-1, SUPERVISOR-3, SKILLED WORKERS-4, UNSKILLED WORKERS-4 TOTAL 12	AT.KUNDAPUR TOWN DIST.UDIPI	

Contractor/Sub-Contractor Details:							
Serial No	Name of Contractor	Description	Categorie	No. of Workers			Amount Wages
				Skilled	Unskilled	Others	

Extensions under the Policy Cover		Sub Limit of the Extension	Deductibles of the Extension
Name of the Extension			

Signature valid  
Digitally signed by  
Date: 07.02.20  
16:26:52 IST

Policy No.: 16020036190100000258 Document generated by 37552 at 07/02/2020 16:26:52 Hours

Read. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 002 TOLL FREE No. 160200 8880 015  
मंडल कार्यालय - II (160200) : प्लॉट नं. ४२, प्रगति कॉलोनी, साई मंदिर के सामने, वर्धा रोड, नागपुर, ४४० ०१५  
Divisional Office - II (160200) : Plot No. 42, Pragati Colony, Opp. Sai Mandir, Wardha Road, Nagpur, 440 015





Medical Extension	₹200000	NA
Special Conditions	NA	
Special Exclusions	NA	
Special Excess/Deductible	NA	
The Policy shall be subject to EMPLOYEES COMPENSATION INSURANCE Policy clauses attached herewith.		
Clauses	Description	

Premium and GST Details

	Rate of Tax	Amount in INR
Premium		₹ 20698.00
SGST	0	0
CGST	0	0
IGST	18	3726

In witness whereof the undersigned being duly authorised by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 07th day of February, 2020.

For and on behalf of

The New India Assurance Company Limited

Date of Issue: 07/02/2020

Duly Constituted Attorney(s)

Stamp Duty under the Policy is ₹1

Mudrank \_\_\_\_\_ Dt. \_\_\_\_\_ consolidated Stamp Fees Paid by Pay Order Number \_\_\_\_\_ vide receipt  
number \_\_\_\_\_ dt. \_\_\_\_\_.

Tax Invoice No : 16020019P0032406

IRDA Registration Number: 190







Issuing Office	1 NAGPUR DO II (160200)
Address	2 PLOT NO 42, PRAGATI COLONY OPPOSITE SAI MANDIR WARDHA ROAD, NAGPUR, 440015 NAGPUR
Phone	1 07122252333
Email	2 via.160200@newindia.co.in
Fax	1 07122252444
Collection Number	2 160200811000000011244
Collection Date	1 07/02/2020
Business Source Code	2 2D10752899
PAN No of Payer	1

Received with thanks from M/S LAXMI CIVIL ENGINEERING SERVICES PVT. LTD.

The amount received/adjusted is towards -

Policy No.	A/C Description	Amount ₹	A/C Code	Sub A/C Code
16020036190100000258	Bank-160200	24424.00	9100.160200	BA00007846-160200-9100
Total = ₹ 85000.00				

Total = ₹ 85000.00					Your Payment/Adjustment Details are as under -		Drawee Bank		Drawee Branch		Reference No.		Scrol/RTGA PO Balance	
Mode	Amount ₹	Cheque No.	Cheque Date											
RTGS	24424.00	7231289	06-FEB-20	YES BANK					KOLHAPUR			1602001910052063		N.A.
Total = ₹ 85000.00														

Total = ₹ 85000.00			
Utilization details of the Collected Amount :			
Premium	GST	Stamp Duty	Excess Amount
20698.00	3726.00	0.00	0
SI no.	Agency Code	Agency Name	Department Code
1	NIAAG00063948	MILIND SAIYARKAR	36

For The New India Assurance Company Limited



**Note -**

1. Please note the Policy Number, Collection Number and date in all future correspondence.

Tax Invoice No : 16020019P0032-106

IRDA Registration Number: 190

Signature valid  
Digitally signed by  
Valentin  
Date: 2010.02.07  
14:24:39 +01'00'

Policy No. : 18020036190100000258 Document generated by 37552 at 07/02/2020 16:26:52 Hours

मंडल कार्यालय - II (160200) : प्लॉट नं. 42, प्रागुठी कॉलोनी, साई मंदिर, वार्धा रोड, नागपुर - 440 015  
 Divisional Office - II (160200) : Plot No. 42, Pragathi Colony, Opp. Sai Mandir, Wardha Road, Nagpur - 440 015

## **APPENDIX 11: Contractors All Risk Insurance Policy-KUNDPURA WSS**





CONTRACTOR'S ALL RISKS INSURANCE POLICY

Insured's Name		LAXMI CIVIL ENGG. SERVICES P.LTD. & P.V.R.P.L (JV)	
Insured's Details			
Customer ID	PO57280732	Office Code	NAGPUR DO II (160200)
Address	32/1, FIRST TEMPLE ROAD, VASHISHTA PARADISE 10TH & 11TH CROSS, MALLESHWARAM BENGALURU (BANGLORE) URBAN, KARNATAKA BANGALORE, KARNATAKA, 560003	Address	PLOT NO. 42, PRAGATI COLONY OPPOSITE SAI MANDIR WARDHA ROAD, NAGPUR, 440015
Phone No	9422051544	Phone No	07122252333 / 07122252555
E-mail/Fax	tender@lcepl.com, /	E-mail/Fax	nia.160200@newindia.co.in / 07122252444
PAN No	AABAL6485C	S.Tax Regn. No	AAACN4165CST178
GSTIN/UIN	29AABAL6485C1ZH / NA	GSTIN	27AAACN4165C32P
		SAC	997139 (Other non-life insurance services excl RI)

Policy Details			
Policy Number	16020044190300000117	Business Source Code	
Period of Insurance	From: 07/02/2020 03:42:41 PM To: 06/08/2020 11:59:59 PM	Dev. Off. level/Broker/Corp. Agent	DIRECT BUSINESS - (2D10752899)
Date of Proposal	07-Feb-20	Agent/Bancassurance	Mr. MILIND MANOHAR SAWARKAR (NIAAG00063948) MILIND SAWARKAR (SI00109865)
Prev. Policy no.		Phone No	9822363953 / NA
Client Type	Non-Corporate	E-mail/Fax	milind_s44002@yahoo.com, / / /

Premium	GST	Total	Receipt No. & Date:
51335	9240	60576	16020081190000011244 - 07/02/20

\* Premium subject to adjustment on completion of the Project

Location of Contract site Risk Address : 1 KUNDAPURA TOWN DIST.UDIPI (KARNATAKA), NA, KUNDAPUR, KARNATAKA, INDIA, 576201

Principal(s)/ Contractor/ sub-contractor Details		
Sl. No.	Name	Address
1	LAXMI CIVIL ENGINEERING SERVICES PVT.LTD.	STERLING TOWER, GAWAT MANDAI, SAHUPURI, KOLHAPUR
2	THE CHIEF OFFICER, TOWN MUNICIPAL COUNCIL	KUNDAPURA (KARNATAKA)

Financier(s) Details		
Sl. No.	Name of the Financiers	Address of the Financier's Branch
1	KARNATAKA BANK LTD	KOLHAPUR
2	AXIS BANK	PUNE
3	STATE BANK OF INDIA	PUNE
4	YES BANK LTD	KOLHAPUR
5	BANK OF BARODA	PUNE

Description of Contract Works	
Sl. No.	1) CONSTRUCTION OF WORKS OF 24X7 WATER SUPPLY SYSTEM FOR KUNDAPURA TOWN DIST.UDIPI576201(KARNATAKA) AS PER WORK ORDER NO TMC/WSS/CR NO.01/2017-18 DTD 28.10.2017 2) DEBRIS REMOVAL (I) 50 LAC, (E) 50 LAC. DEWATERING CHARGES 50 LAC, SURROUNDING PROPERTY 1 CR., TEMP. FACILITIES 50 LAC. 3) NA

Period of Insurance	
Sl. No.	1
Period of Insurance From :	07/02/2020 03:42:41 PM To : 06/08/2020 11:59:59 PM plus 0 months maintenance period

Section I - Material Damage :

1. Permanent and Temporary works ( Permanent and Temporary works including all materials to be incorporated therein )

Digitally signed by Shivraj Vaidya Date: 2020.02.10 13:28:57

Policy No. : 16020044190300000117 Document generated by 33206 at 10/02/2020 13:28:57 Hours.

Regd. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 4502

मंडल कार्यालय - II (160200) : प्लॉट नं. ४२, प्रगति कॉलनी, साई मंदिर के सामने, वर्धा रोड, नागपुर - ४४००१५  
Divisional Office - II (160200) : Plot No. 42, Pragati Colony, Opp. Sai Mandir, Wardha Road, Nagpur - 440015







Sl. No.	1.1) Contract price	1.2) Materials or items supplied by the Principal	2) Any other works and installations not included in 1.1 and 1.2 above (e.g. camp, colony, stores etc. as per list enclosed)	Total Project Sum Insured
1	₹231000000	₹0	₹0	₹231000000

3. Contractors Plant and Machinery (Memo 4) as per list enclosed								
Item No.	Quantity	Description of Items (Type, Manufacture, Capacity)	Year of Manufacture	Sum Insured (In ₹)	Risk Code	Excess due to AOG Perils	Excess due to Other than AOG Perils	Excess for Boom Section

4. Add on Covers			
1. Owners Surrounding Property			
Sl. No.	Limit of Indemnity	Excess	
1	15000000	Policy Excess	

2. Additional Custom Duty			
Sl.	No. Limit of Indemnity	Excess	
1	₹ 0	5 % of Additional Duty	

3. Removal of Debris per occurrence			
Sl.	No. Limit of Indemnity	Excess	
1	₹ 10000000	Policy Excess	

4. Professional Fees			
Sl.	No. Limit of Indemnity	Excess	
1	₹ 0	Policy Excess	

5. Expediting Cost including Air Freight & Express Freight			
Sl.	No. Limit of Indemnity	Excess	
1	₹	Policy Excess	

6. Offsite Storage/ Fabrication			
Sl. No.	Limit of Indemnity	Excess	
1	₹ 0	Policy Excess	

7a. On Increased Replacement Value which may have to be paid on replacement of Item 1.1			
Sl. No.	Limit of Indemnity	Excess	
1	₹0	Policy Excess	

7b. On Increased Replacement Value which may have to be paid on replacement of Item 1.2			
Sl. No.	Limit of Indemnity	Excess	
1	₹0	Policy Excess	

7c. On Increased Replacement Value which may have to be paid on replacement of Item 1.3			
Sl. No.	Limit of Indemnity	Excess	
1	₹0	Policy Excess	

8. Automatic Reinstatement clause			
Sl. No.	Limit of Indemnity	Excess	
1	0	Policy Excess	

9. Loss minimisation expenses			
Sl. No.	Limit of Indemnity	Excess	
1	₹ 0	Policy Excess	

10. Cover for valuable documents			
Sl. No.	Limit of Indemnity	Excess	







Sl. No.	Limit of Indemnity	Excess
1	₹ 0	Policy Excess

**11. Design Defect Cover**

Sl. No.	Limit of Indemnity	Excess
1	₹ NA	5 times Policy Excess

**Section II - Third Party Liability :**

Sl. No.	Limit of indemnity in respect of any one accident or series of accidents arising out of one event	Total limit of Section II during policy period	Any One Person
1	₹ 5000000	₹ 5000000	₹ 1000000

**Excesses for Section I and II :**

Sl. No.	1. For Storage & Construction claims	2. For Maintenance period claims	3. For Major peril claims as per Memo 8 of Section I	Terrorism Claims
1	5% of Claim Amount subject to Minimum of ₹ 15000 each claim	5% of Claim Amount subject to Minimum of ₹ 50000 each claim	5% of Claim Amount subject to Minimum of ₹ 50000 each claim	0.5 % of Total Sum Insured subject to minimum of ₹ 1,00,000/- for each and every claim

**Excesses For Specific AddOn Covers :**

Sl. No.	Description Of Cover	Excess
	Terrorism Covered	Terrorism Premium
	NO	0
	Risk Serial No.	Earth Quake Cover
	1	YES
	Risk Serial No.	STFI Cover
	1	YES

Installment Details			
Installment Number	Installment Date on or before	Installment Amount (₹)	
		Premium	GST
1	07/02/2020	51335	9240

ENDORSEMENTS ATTACHED TO & FORMING PART OF THE POLICY		
Sl. No.	Endorsement Number	Endorsement Title
0	ABC	Agreed Bank Clause
1	CAR 001	Pipeline Construction
2	CAR 002	Exclusion of Loss of Stabilising Fluid
3	CAR 003	Road Construction
4	CAR 004	Piling Construction
5	CAR 005	Abandonment of Shafts
6	CAR 006	Crops, Forests, Cultivated Areas
7	CAR 007	Existing underground cables
8	CAR 008	Contract works time schedule
9	CAR 009	Temporary access Roads
10	CAR 010	Special conditions concerning the construction of Dam and Water Reservoir
11	CAR 011	Special conditions concerning safety measures with respect to Precipitation, Flood and Inundation
12	CAR 012	Breakage of glass
13	ENG 004	Escalation
14	ENG 005	Air Freight
15	ENG 007	Additional Customs Duty
16	ENG 001	Coinsurance



Policy No. : 16020044190300000117 Document generated by 37552 at 07/02/2020 16:27:02 Hours

मंडल कार्यालय - II (160200) : प्लॉट नं. 42, प्रगति कॉलोनी, साई मंदिर रोड, वार्धा रोड, नागपुर - 440 015  
Divisional Office - II (160200) : Plot No. 42, Pragati Colony, Opp. Sai Mandir, Wardha Road, Nagpur - 440 015





Sl. No.	Endorsement Number	Endorsement Title
17	ENG 011	Deletion of earthquake (Fire & Shock) Perils in EQ ZONE I & II
18	PR 001	Cross Liability
19	PR 002	Limited Maintenance Visits Cover
20	PR 003	Extended Maintenance Cover
21	PR 005	Installment Facility
22	PR 007	Expenses related of Freight, Insurance, Customs Duty
23	PR 008	Exclusion of transit losses
24	PR 009	Refund for early completion
25	PR 010	Deletion of Maintenance cover
26	PR 011	Extension of policy period
27	PR 012	Change in commencement date
28	PR 013	Mid-term increase in SI
29	PR 014	Cancellation of policy
30	PR 015	Professional Fees
31	LR 001	Cover Extra charges-OT,Night Work,Work Public Holidays,Exp Frght incl Air Frght
32	LR 002	Special conditions concerning Fire Fighting Facilities
33	LR 003	72 hours Clause
34	LR 004	Professional Fees Clause
35	LR 005	Clearance & Removal of Debris Clause
36	LR 006	50:50 Clause
37	LR 007	Cover for Increased Customs Duty
38	LR 008	Loss minimisation expenses
39	LR 009	Owners Surrounding Property
40	LR 010	Automatic Reinstatement
41	LR 011	Cover for Cross Liability
42	LR 012	Waiver of Subrogation
43	LR 013	Cover for manufacturers risk
44	LR 014	Extended maintenance cover
45	LR 015	Cover for 'valuable documents'
46	LR 016	Cover for Offsite Storage
47	LR 017	Waiver of Contribution
48	LR 018	Continuity of cover
	ENG 003	Exclusion of terrorism damage

Premium and GST Details

	Rate of Tax	Amount in INR
Premium		₹51335
SGST	0	0
CGST	0	0
IGST	18	9240

In witness whereof the undersigned being duly authorised by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 07th day of February, 2020.

Date of Issue: 07/02/2020

For and on behalf of  
The New India Assurance Company Limited

Duly Constituted Attorney(s)

Tax Invoice No : 16020019P0032407



Policy No. : 16020044190300000117 Document generated by 37552 at 07/02/2020 16:27:02 Hours.  
Regd. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001, TOLL FREE No. 1 800 209 1415.





DIA  
it of

## COLLECTION RECEIPT CUM ADJUSTMENT VOUCHER

Issuing Office : NAGPUR DO II (160200)  
Address : PLOT NO. 42, PRAGATI COLONY  
OPPOSITE SAI MANDIR  
WARDHA ROAD, NAGPUR, 440015  
NAGPUR  
Phone : 07122252333  
Email : nia.160200@newindia.co.in  
Fax : 07122252444  
Collection Number : 16020081190000011244  
Collection Date : 07/02/2020  
Business Source Code : 2D10752899  
PAN No of Payer : AABAL6485C

Received with thanks from M/S LAXMI CIVIL ENGINEERING SERVICES PVT.LTD.

The amount received/Adjusted is towards -

Policy No.	A/C Description	Amount	A/C Code	Sub A/C Code
16020044190300000117	Bank-160200	60576.00	9100.160200	8A00007846-160200-9100

Total = ₹ 85000.00

Your Payment/Adjustment Details are as under -

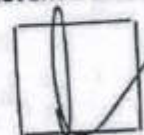
Mode	Amount ₹	Cheque No.	Cheque Date	Drawee Bank	Drawee Branch	Reference No.	Scroll/BG/A PD Balance
RTGS	60576.00	7231289	06-FEB-20	YES BANK	KOLHAPUR	1602001910052060	N.A.

Total = ₹ 85000.00

Utilization details of the Collected Amount :

Premium	GST	Stamp Duty	Excess Amount
51335.00	9240.00	1.00	0
Sl no.	Agency Code	Agency Name	Department Code
1	NIAAG00063948	MILIND SAWARKAR	44

For The New India Assurance Company Limited  
Revenue Stamp



Date of Issue: 07/02/2020

Cashier's Initial

Authorized Signatory

Note -

- Please note the Policy Number, Collection Number and date in all future correspondence.
- NIA shall not be liable for any claim arising out of sales made during the period between the due date and date of payment of the instalment if the premium paid has been exhausted by turnover declarations if there is insufficient premium balance.

Tax Invoice No : 16020019P0032407

IRDA Registration Number: 190

Signature valid

Digitally signed  
by  
Date: 2020.02.07  
16:27:05 IST

Policy No. : 16020044190300000117 Document generated by 37552 at 07/02/2020 16:27:02 Hours

Read & Head Office, New India Assurance Bldg., 87 M. G. Road, Fort, Mumbai - 400 002. TOH/Free No. 1800 094 880 094  
मंडल कार्यालय - II (160200) : प्लॉट नं. ४२, प्रगति कॉलोनी, साई मंदिर के सामने, वर्धा रोड, नागपुर - ४४० ०१५  
Divisional Office - II (160200) : Plot No. 42, Pragati Colony, Opp. Sai Mandir, Wardha Road, Nagpur - 440 015

## **APPENDIX 12: Tree compensation Documents**



NO: KIUWMIP/RPMU/CR 18 /2016-17/611

ದಿನಾಂಕ: 03-01-2019

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು

KIUWMIP-PIU

ಉಡುಪಿ

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕುಂದಾಪುರ ಪಟ್ಟಣದ 24x7 ಕುಡಿಯುವ ನೀರು ಸರಬರಾಜು ಯೋಜನೆಗೆ ಬಿಡುಗಡೆಯಾದ ಪರಿಹಾರ ಮೊತ್ತವನ್ನು

ಪ್ರಯೋಜನಾರ್ಥಿಗಳಿಗೆ ಪಾವತಿಸುವ ಬಗ್ಗೆ

ಉಲ್ಲೇಖ: 1. ಕೇಂದ್ರ ಕಛೇರಿಯ ಇ-ಮೇಲ್ ಸಂದೇಶ ದಿನಾಂಕ 14-03-2018

2. ಪ್ರದಾನ ವ್ಯವಸ್ಥಾಪಕರು (ಯೋಜನಾ ಹಣಕಾಸು), KUIDFC ಬೆಂಗಳೂರು ಇವರ ಪತ್ರ

ಸಂಖ್ಯೆ:KUIDFC/FIN/Funds-RTGS/2018-19/ ದಿನಾಂಕ:18-12-2018.

.....

ಮೇಲಿನ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಉಲ್ಲೇಖಿತ (1)ರ ಇ-ಮೇಲ್ ಸಂದೇಶದಲ್ಲಿ ತಿಳಿಸಿರುವಂತೆ ಕುಂದಾಪುರ ಪಟ್ಟಣದ 24x7 ಕುಡಿಯುವ ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯ Resettlement Plan ಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸರ್ಕಾರಿ ಜಮೀನು ಬೆಳಸಲಾಗಿದ್ದ ತೆಂಗಿನ ಮರಗಳ ಪರಿಹಾರ ಧನ ವನ್ನು ಸಂಬಂಧಪಟ್ಟ ಪಲಾನುಭವಿಗಳಿಗೆ ಈಗಾಗಲೇ ಪಾವತಿಸಿದ್ದು, ಬಾಕಿಯ Subistence allowance ಮತ್ತು IGA and initial capital ನ್ನು ಪಾವತಿಸುವ ಬಗ್ಗೆ ಉಲ್ಲೇಖಿತ (2) ರ ಪತ್ರದಲ್ಲಿ ಕೇಂದ್ರ ಕಛೇರಿಯ ಬಿಡುಗಡೆಯಾಗಿರುವ ರೂ.2,28,000 - ಮೊಬಲಗನ್ನು ಕೇಂದ್ರ ಕಛೇರಿಯ ನಿರ್ದೇಶನದಂತೆ ಈ ಕೆಳಗಿನ ಪಲಾನುಭವಿಗಳಿಗೆ ಮುಖಾಂತರ ಪಾವತಿಸಲು ಮೂರು ಚೆಕ್ ಗಳನ್ನು ಇದರೊಂದಿಗೆ ಲಗತ್ತಿಸಿ ಕಳುಹಿಸಿದೆ.

ಕ್ರ. ಸಂ.	ಪಲಾನುಭವಿಗಳ ಹೆಸರು	Subistence allowance (ಮೊಬಲಗು ರೂ.ಗಳಲ್ಲಿ)	IGA and initial capital (ಮೊಬಲಗು ರೂ.ಗಳಲ್ಲಿ)	ಒಟ್ಟು ಮೊಬಲಗು ರೂ.ಗಳಲ್ಲಿ	ಚೆಕ್ ಸಂಖ್ಯೆ / ದಿನಾಂಕ
1	ಮೋಹನ ಮೋಗವೀರ	36,000	40,000	76,000.00	586914 ದಿ:01-01-2019
2	ಮಾಧವ ಎಮ್ ಮಂಜು ಪೂಜಾರಿ	36,000	40,000	76,000.00	586915 ದಿ:01-01-2019
2	ಸೀತಾ ಪೂಜಾರ್ತಿ w/o late ಕುಪ್ಪಯ್ಯ ಪೂಜಾರಿ	36,000	40,000	76,000.00	586916 ದಿ:01-01-2019
	ಒಟ್ಟು	108,000	120,000	2,28,000	

ಸದ್ರಿ ಚೆಕ್ ನ್ನು ಕುಂದಾಪುರ ಪುರಸಭೆಯ ಮುಖ್ಯಾಧಿಕಾರಿಯವರ ಸಮಕ್ಷಮದಲ್ಲಿ ಪಲಾನುಭವಿಗಳಿಗೆ ಪಾವತಿಸುವ ಕೈಗೊಂಡು ಲಗತ್ತಿಸಿರುವ ನಮೂನೆಯಲ್ಲಿ ಭಾವ ಚಿತ್ರ ಸಮೇತ ಸ್ವೀಕೃತಿಯನ್ನು ದ್ವಿಪ್ರತಿಯಲ್ಲಿ ಪಡೆದು ಈ ಕಛೇರಿಗೆ ಸಲ್ಲಿಸುವಂತೆ ಸೂಚಿಸಲಾಗಿದೆ.

ಲಗತ್ತು: 1 ಸ್ವೀಕೃತಿ ಪತ್ರ ನಮೂನೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ

2. 3 ಸಂಖ್ಯೆ ಚೆಕ್ ಗಳು.

ಉಪಯೋಜನಾ ನಿರ್ದೇಶಕರು  
KUIDFC-KIUWMIP-RPMU  
ಮಂಗಳೂರು 03/01/19

ಪ್ರತಿಯನ್ನು: 1. ಮುಖ್ಯಾಧಿಕಾರಿ, ಪುರಸಭೆ, ಕುಂದಾಪುರ ಇವರಿಗೆ ಮಾಹಿತಿಗಾಗಿ ಹಾಗೂ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸಿದೆ.

2. ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು, PIU, ಕುಂದಾಪುರ ಇವರಿಗೆ ಮಾಹಿತಿಗಾಗಿ





विजया बैंक  
VIJAYA BANK

बेंदूर, कर्नाटक - 575 002  
BENDOOR, KARNATAKA - 575 002  
IFSC : VIJB0001030

Valid for three months from the date of instrument

01012019  
D D M M Y Y Y Y

Pay Mohan Magaveera

या धारक को or Beare

रुपये Rupees Seventy Six thousand only

अदा करें

₹ 76000/-

खा. सं.  
A/c. No.

103001501000001

Payable at all our branches  
for transfer and clearing

87

Deputy Project Director  
KUIDFC - KIUWMIP Jalasiri  
RPMU, Tranche 2  
Mangaluru - 575 002

586911 575029005 103087 10



विजया बैंक  
VIJAYA BANK

बेंदूर, कर्नाटक - 575 002  
BENDOOR, KARNATAKA - 575 002  
IFSC : VIJB0001030

Valid for three months from the date of instrument

01012019  
D D M M Y Y Y Y

Pay Madava M. Poojari

या धारक को or Bearer

रुपये Rupees Seventy Six thousand only

अदा करें

₹ 76000/-

खा. सं.  
A/c. No.

103001501000001

Payable at all our branches  
for transfer and clearing

87

Deputy Project Director  
KUIDFC - KIUWMIP Jalasiri  
RPMU, Tranche 2  
Mangaluru - 575 002

586915 575029005 103087 10



विजया बैंक  
VIJAYA BANK

बेंदूर, कर्नाटक - 575 002  
BENDOOR, KARNATAKA - 575 002  
IFSC : VIJB0001030

Valid for three months from the date of instrument

01012019  
D D M M Y Y Y Y

Pay Seetha poojathri

या धारक को or Bearer

रुपये Rupees Seventy Six thousand only

अदा करें

₹ 76000/-

खा. सं.  
A/c. No.

103001501000001

Payable at all our branches  
for transfer and clearing

87

Deputy Project Director  
KUIDFC - KIUWMIP Jalasiri  
RPMU, Tranche 2  
Mangaluru - 575 002

586916 575029005 103087 10



### KUNDAPURA 24X7 WATER SUPPLY SCHEME

PHOTOGRAPH SHOWING THE COMPENSATION PAID TO THE THREE BENEFICIARIES HOLDERS OF COCONUT TREES AT KUNDAPURA







Karnataka Urban Infrastructure Development & Finance Corporation  
Karnataka Integrated Urban Water Management and Investment  
Programme - "Jalasiri"-Tranche-2  
Office of the Asst. Executive Engineer Programme Implementation  
Unit, Kundapura  
Email Id - jalasiritranch2aeeekdp@gmail.com

NO:KIUWMIP/PIU-KDP/CR-21(V-2)/2017-18/60

ದಿ: 3-10-2018

ಶ್ರೀ,

ಉಪನಿರ್ದೇಶಕರು ನಿರ್ಮಿತಕರು:

KUIDFC-RMPU ಮಂಗಳೂರು

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕುಂಬಾರಮಠ ಯೋಜನೆ ನಿರ್ಮಾಣದ ಫಲಿತ 24\*7 ಕಡಿಯುವ ನೀರು ಸರಬರಾಜು  
ಯೋಜನೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಕೋಡಿ ಗ್ರಾಮದಲ್ಲಿ ತೆಂಗಿನ ಮರದ ಪರಿಹಾರದ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1)ಈ ಕಛೇರಿ ಪ್ರತಿ ಸಂಖ್ಯೆ KIUWMIP/PIU UDP/CR-21/V-2/2018-19  
ದಿ-5.07.2018

2) KUIDFC Social Development officers visit ದಿನಾಂಕ 14.09.2018.

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ಉಲ್ಲೇಖ (1)ರಲ್ಲಿ ದಿನಾಂಕ 23.08.2018 ರಂದು ಕುಂಬಾರಮಠ ಯೋಜನೆ ನಿರ್ಮಾಣದ ಫಲಿತ ಕೋಡಿ  
ಪ್ರದೇಶದಲ್ಲಿ ನಿರ್ಮಾಣದ ಉದ್ದೇಶವಿರುವ ಮೇಲ್ಕಂಡ ಎಲೆ ಸಂಗ್ರಹಾಲಯದ ಸ್ಥಳದಲ್ಲಿ ಸದರಿ ಗ್ರಾಮದ ನಿವಾಸಿಗಳು  
ಜೊತೆಜೊತೆಗೆ 21 ತೆಂಗಿನ ಮರಗಳಿಗೆ ಪರಿಹಾರ ಧನವನ್ನು ವಿತರಿಸುವುದು ಸರಿಯು.

ದಿನಾಂಕ 14.09.2018 ರಂದು KUIDFC ಕೇಂದ್ರ ಕಛೇರಿಯ Social Development officer ರವರ ಭೇಟಿ  
ಮೂಲಕ ಸದರಿ ಪರಿಹಾರಾಲಯಕ್ಕೆ ಹೆಚ್ಚುವರಿ ಪರಿಹಾರದಾಗಿ ಯಾವುದಾದರೂ ಉದ್ಯಮ ಮಾಡುವುದರಲ್ಲಿ ಅವರಿಗೆ  
AIB ನಿರ್ದೇಶನದಂತೆ ಕಾರಣ ದರಿ ವಿತರಿಸಲು ಅವಕಾಶ ನೀಡುವುದಾಗಿ ತಿಳಿಸುತ್ತೇನೆ.

ಈ ವಿಷಯದಲ್ಲಿ ಈ ಕೆಳಕಂಡ ಪರಿಹಾರಾಲಯಕ್ಕೆ ಹೆಚ್ಚುವರಿಯಾಗಿ ಮಾಡಲು ಉದ್ದೇಶಿಸಿರುವ ಈ ಕೆಳಕಂಡ  
ಉದ್ಯಮಗಳಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿತರಿಸಲು ದಾಖಲೆಗಳನ್ನು ಪಡೆದು ಮುಂಬಿನ 1ನೇ ತಿಂತ್ರಿ ಕ್ರಮಕಾಗಿ ತಮ್ಮ ಅನುಷ್ಠಾನದಾಗಿ  
ಸಲ್ಲಿಸಿ.

ಕ್ರಮ ಸಂಖ್ಯೆ	ಪರಿಹಾರಾಲಯ ಹೆಸರು	ಪರಿಹಾರಾಲಯದ ವಿವರ
1	ಮೆಂಡಿಂಗ್ ಶಾಪ್	ಮೆಂಡಿಂಗ್ ಶಾಪ್ ನಿರ್ಮಾಣ
2	ಮೆಂಡಿಂಗ್ ಶಾಪ್ w/o ಕಾರಣ	ಮೆಂಡಿಂಗ್ ಶಾಪ್ ನಿರ್ಮಾಣ over draft
3	ಮೆಂಡಿಂಗ್ ಶಾಪ್ ನಿರ್ಮಾಣ	ಮೆಂಡಿಂಗ್ ಶಾಪ್ ನಿರ್ಮಾಣ

ನಮ್ಮ ವಿಶ್ವಾಸ

ಕಾರ್ಯನಿರ್ದೇಶಕರು  
ಯೋಜನೆ ನಿರ್ಮಾಣ ಫಲಿತ ಉಪನಿರ್ದೇಶಕರು



Karnataka Urban Infrastructure Development & Finance Corp. Ltd.  
Karnataka Integrated Urban Water Management and Investment  
Programme (KIUWMIP) - Phase 2 - Franchise 2  
Regional Programme Management Unit (RPMU)  
First Floor, Mangalore Gas Corporation Commercial Complex,  
Mankanna Road, Mangalore - 575002  
E-mail: gubun@kuidfc.kiudfcltd.com Tel: 0824 2981109

NO: KIUWMIP/RPMU/CR 18 /2016-17/

ದಿನಾಂಕ: 18-07-2018

ಟಾನ್ಸ್ ಮ್ಯಾನೇಜರ್

ಕರ್ನಾಟಕ ನಗರ ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ ಮತ್ತು ಹಣಕಾಸು ನಿಗಮ ನಿಯಮಿತ  
ನಗರಾಭಿವೃದ್ಧಿ ಭವನ, # 22, 17 ನೇ ಎಸ್ ಕ್ರಾಸ್ ರಸ್ತೆ,  
ಹಳೆ ಮದ್ರಾಸ್ ರಸ್ತೆ, ಇಂದಿರಾ ನಗರ, 2ನೇ ಹಂತ,  
ಬಿಬಿಎಸ್ ಬಸ್ ಡಿಪೋ ಹತ್ತಿರ, ಬೆಂಗಳೂರು-560038

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕುಂದಾಪುರ ಪಟ್ಟಣದ 24x7 ಕುಡಿಯುವ ನೀರು ಸರಬರಾಜು ಯೋಜನೆಗೆ ಸಂಬಂಧಿಸಿ ತೆಂಗಿನ ಮರಗಳ  
ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ಬಿಡುಗಡೆಯಾದ ಪರಿಹಾರ ವಾಡತನ- ಸ್ವೀಕೃತಿ ದಾಖಲೆಗಳೊಂದಿಗೆ ಸಲ್ಲಿಸುವ ಬಗ್ಗೆ  
ಉಲ್ಲೇಖ: ತಮ್ಮ ಕಛೇರಿ ಇ-ಮೇಲ್ ಸಂದೇಶ ದಿನಾಂಕ 12-07-2018.

\*\*\*\*\*

"ಕ್ರಿಮಿಡ್" ಯೋಜನೆಯಡಿ ಕುಂದಾಪುರ ಪಟ್ಟಣದ 24x7 ಕುಡಿಯುವ ನೀರು ಸರಬರಾಜು ಯೋಜನೆಗೆ ಸಂಬಂಧಿಸಿದ  
ADB Approved Resettlement Plan ಪ್ರಕಾರ ಸರ್ಕಾರಿ ಜಮೀನಿನಲ್ಲಿ ಬೆಳೆಸಲಾಗಿದ್ದ ತೆಂಗಿನಮರಗಳ ಪರಿಹಾರ ಧನ  
ಸಂಬಂಧಪಟ್ಟ ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ವಾಡತಿಸಲು ಕೇಂದ್ರ ಕಛೇರಿ (KUIDFC) ಯಿಂದ ಬಿಡುಗಡೆಯಾದ ರೂ.81,847/-ನ್ನು ಈ ಕೆಳ  
ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ಕುಂದಾಪುರ ಪುರಸಭೆಯ ಮುಖ್ಯಾಧಿಕಾರಿ ಹಾಗೂ "ಕ್ರಿಮಿಡ್" ಯೋಜನೆಯ ಇಂಜಿನಿಯರ್ ರ ಸಮಕ್ಷಮ  
ವಾಡತಿಸಲಾಗಿದೆ

ಕ್ರ.ಸಂ	ಪಲಾನುಬದ್ಧಿಗಳ ಹೆಸರು	ಮೊಬಲಗು(ರೂ.ಗಳಲ್ಲಿ)	ಚೆಕ್ ಸಂಖ್ಯೆ / ದಿನಾಂಕ
1	Sri. Madhava Manja Pujari, Kundapura	27,282.00	569985/04-06-2018
2	Sri Mohan Pujari, Kundapura	27,282.00	569986/04-06-2018
3	Smt. Seetha Poojary, W/o late Kuppayya Pujari, Kundapura	27,282.00	572519/09-07-2018
	Total	81,846.00	

ಮೇಲ್ಕಾಣಿಸಿದಂತೆ ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ಪರಿಹಾರ ವಾಡತಿಸಿದ ಬಗ್ಗೆ ಮೂಲದಾಖಲೆಗಳನ್ನು ದೃಢೀಕರಿಸಿ ಇದರೊಂದಿಗೆ  
ಲಗತ್ತಿಸಿ ತಮ್ಮ ಅವಗಾಹನೆಗಾಗಿ ಸಲ್ಲಿಸಿದೆ.

- ಅಡಕ : ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ಪರಿಹಾರ ವಾಡತಿಸಿದ ಬಗ್ಗೆ ಪಡೆಯತಕ್ಕ  
ಸ್ವೀಕೃತಿಗಳು ಹಾಗೂ ಪಲಾನುಬದ್ಧಿಗಳ ಹೆಸರು (ನಿಗದಿತ ನಮೂನೆಯಲ್ಲಿ)  
2 ಪಲಾನುಬದ್ಧಿಗಳಿಗೆ ಪರಿಹಾರ ವಾಡತಿಸುವಾಗ ತೆಗೆದ ಛಾಯಾಚಿತ್ರ,  
3 ಪರಿಹಾರ ವಾಡತಿಸಿದ ಚೆಕ್ ಗಳ ಪ್ರತಿಗಳು.

ತಮ್ಮ ವಿಶ್ವಾಸಿ  
(ಬಿ. ಮಂಜುನಾಥಯ್ಯ)  
ಉಪಯೋಜನಾ ನಿರ್ದೇಶಕರು  
KUIDFC-KIUWMIP-RPMU  
ಮಂಗಳೂರು

ಪ್ರತಿ : ಶ್ರೀ ಬೆಂಜಮಿನ್ ನಾನೆಟ್ಟಿ, Social Development Officer, KUIDFC-KIUWMIP ಬೆಂಗಳೂರು ಇವರಿಗೆ ಮಾಹಿತಿಗಾಗಿ  
2 ಕಾರ್ಯವಾಹಕ ಅಭಿಯಂತರರು KIUWMIP-PIU ಉಡುಪಿ ಇವರಿಗೆ ಮೇಲಿನ ಅಡಕಗಳೊಂದಿಗೆ ಮಾಹಿತಿಗಾಗಿ



Kundapura 24x7 Water Supply System  
Photograph showing the Compensation paid to the Three beneficiaries holders of Coconut trees at Kundapura





PAYEE ONLY

विजया बैंक  
VIJAYA BANK

ब्रांच: कर्नाटक - 575 002  
BENDOO, KARNATAKA - 575 002  
IFSC: VIJB0001030

0406201  
DDMMYY

या धारक को or Be

Pay SRI MOHAN PUJARI, KUNDAPUR

रुपये Rupees TWENTY SEVEN THOUSAND TWO HUNDRED EIGHTY TWO ONLY  
₹ 27,282 -

अदा करें

क्र. सं.  
A/C NO.

No 103001501000001

Payable at all our branches  
for transfer and clearing

87

Deputy Project Director  
KUIDFC - KIUWMIP Jal  
RPMU, Tranche 2  
Mangaluru - 575 002  
Please sign above

\*569986\* 5750290051: 103087\* 10

PAYEE ONLY

विजया बैंक  
VIJAYA BANK

ब्रांच: कर्नाटक - 575 002  
BENDOO, KARNATAKA - 575 002  
IFSC: VIJB0001030

040620  
DDMMYY

या धारक को or

Pay SRI MADHAYA MANJA PUJARI, KUNDAPURA

रुपये Rupees TWENTY SEVEN THOUSAND TWO HUNDRED EIGHTY TWO ONLY  
₹ 27,282 -

अदा करें

क्र. सं.  
A/C NO.

No 103001501000001

Payable at all our branches  
for transfer and clearing

87

Deputy Project Director  
KUIDFC - KIUWMIP  
RPMU, Tranche 2  
Mangaluru - 575 002  
Please sign above

\*569986\* 5750290051: 103087\* 10

## **APPENDIX 12a: Tree compensation Documents - in ENGLISH**

No:KIUWMIP/RPMU/CR18/2016-17/611

Date:03/01/2019

Executive Engineer  
KIUWMIP-PIU  
Udupi

Sir

Sub: Released of Compensation amount for Kundapura 24x7 water supply Project and issuing the amount to beneficiaries.

Ref; 1) Central office, E-mail messaged Dated;-14/03/2018

2) General Managers (Project finance KUIDFC Bangalore letter No.KUIDFC/FIN/Funds-RTGS/2018-19 Dated; 18/12/2018

With reference to above mentioned Ref(1) as per E-mail message mentioned, Kundapura 24x7 Water supply project Resettlement related Coconut trees are grown in Govt. Land the same trees Compensation amount has issued already to related beneficiaries. Remaining Subsistence allowance &IGA and Initial capital Issuing regarding Ref(2) letter central office related Rs 228000/- amount as per direction of central office below mentioned beneficiaries' 3 (Three) cheques attached and sent.

Sl no	Beneficiaries' Name	Subsistence allowance Amount in Rs	IGA and Initial capital Amount in Rs	Total Amount in Rs	Cheque No.
1	Mohan Mogaveer	36000/-	40000/-	76000/-	586914 Dt.01/01/2019
2	Madhav M Manja Pujari	36000/-	40000/-	76000/-	586915 Dt.01/01/2019
3	Seeta Pujari W/o Late Kuppaiah Pujari	36000/-	40000/-	76000/-	586916 Dt.01/01/2019
	Total	108000/-	120000/-	228000/-	

The Cheque has issued to beneficiaries in the presence of chief officer Kundapura TMC and attached Acknowledgement form with photos and taken in 2 copies and submitted to office in the received form Attached.

- 1) Received letter Form
- 2) 3 nos Cheques

Yours Faith fully  
Deputy Project Director KUIDFC-KIUWMIP-RPMU  
Mangaluru

Copies Submitted

1. Chief Officer TMC Kundapura for your information and for next necessary action

No:KIUWMIP/PIU KDP/CR25(V2)/2017-18/60

Date:03/10/2018

To  
Deputy Project Director  
KIUWMIP-PIU  
Mangaluru

Sir

Sub: Regarding Coconut trees Compensation in Kodi Village comes in Kundapura Project Implementation Unit , 24x7 water supply Project.

Ref; 1) The office Letter No: KIUWMIP/PIU UDP/ CR21(V2)/2018-19 Dated;-05/07/2018

2 KUIDFC Social Development Officer Visited Dated; 14/09/2018

With Reference(1) Dated;23/08/2018 Kundapura Project Implementation Unit , The Proposed Construction of OHT in the Kodi place, in the same place the village residents grows 21 nos of Coconut trees and issuing them a Compensation amount is good.

Dated:- 14/09/2018 KUIDFC Central office Social Development Officer has visited and informed beneficiaries as per ADB Norms the additional compensation issuing for any business investment. On the basis of below mentioned beneficiaries shown and their interest on business for their survival the particular documents should be taken and next necessary action must be taken for the sake of beneficiaries.

Sl no	Beneficiaries' Name	Career seeking Occupation
1	Mohan Mogaveer	Two wheeler for selling fish
2	Madhav M Manja Pujari	Over Draft in Syndicate Bank
3	Seeta Pujari W/o Late Kuppaiah Pujari	Coconut oil Business

Yours Faith fully

Executive Engineer  
Project Implementation Unit  
Udupi

Copies Submitted

1. Chief Officer TMC Kundapura for your information and for next necessary action
2. Asst. Executive Engineer PIU Kundapura for your information



Task Manager

Karnataka Urban Infrastructure Development Finance Corporation  
Urban Development Building, #22,17<sup>th</sup> F cross road  
Old Madras road, Indhiranagar, 2<sup>nd</sup> Stage  
Near BMTC Bus Depot, Bangalore-560038

Sir

Sub: Released Compensation amount and paying to the beneficiaries to submit with particular documents for Kundapura 24x7 water supply Project.

Ref; 1) yours office, E-mail messaged Dated;-12/07/2018

Kundapura 24x7 Water supply project, according to ADB Approved Resettlement related Coconut trees are grown in Govt. Land and for the same trees Compensation amount has to pay released amount to the related beneficiaries from KUIDFC, Bengaluru. Released amount of Rs.81847 is paid to below mentioned beneficiaries in the presence of chief officer Kundapura TMC and KIUWMIP project engineer

Sl no	Beneficiaries' Name	Amount in Rs	Cheque No./date
1	Shri. Madhava Manja Pujari, kundapura	27282/-	569985 Dt.04/06/2018
2	Mohan Pujari, kundapura	27282/-	569986 Dt.04/06/2018
3	Seeta Pujari W/o Late Kuppayya Pujari	27282/-	572519 Dt.09/07/2019
	Total	81846/-	

Regarding amount paid to the above mentioned beneficiaries attached with 2 copies of particular documents and submitted to office

Attached.

- 1) Regarding documents taken from amount paid to the above mentioned beneficiaries and as per beneficiaries statement
- 2) Photographs taken while paying amount to beneficiaries.
- 3) Compensation paid Cheque copies

Yours Faithfully  
D. Manjunathaiah  
Deputy Project Director  
KUIDFC-KIUWMIP/RPMU  
Mangalore

Copies Submitted

1. Benjamin Nanethi , social development officer KUIDFC- KIUWMIP Bangalore
2. Executive Engineer KIUWMIP-PIU udupi for your information for kind reference



## **APPENDIX 13: NOC - CRZ kundapura kodi OHT - Kannada**

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಂಖ್ಯೆ: ಅಪಜೀ 162 ಸಿಆರ್‌ಜೆಡ್ 2017.

ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಸಚಿವಾಲಯ,  
ಬಹುಮಹಡಿ ಕಟ್ಟಡ,  
ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 11-7-2017.

ಇಂದ,

ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ,  
(ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ)  
ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಇಲಾಖೆ.

ಇವರಿಗೆ,

ಮುಖ್ಯಾಧಿಕಾರಿ,  
ಮುರಸಬ್,  
ಕುಂದಾಪುರ.

ಮಾನ್ಯರೇ,

ವಿಷಯ: "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯನ್ನು (Over Head Tank) ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಕೋಡಿ ಕಸ್ಟಾ ಪ್ರದೇಶದ ಸ.ನಂ. 292ರ ಸರ್ಕಾರಿ ಜಮೀನಿನ 0.20 ಎಕ್ರೆ ಪ್ರದೇಶದಲ್ಲಿ" ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ನೀಡುವ ಬಗ್ಗೆ.

- ಉಲ್ಲೇಖ: 1) ತಮ್ಮ ಪತ್ರ ದಿನಾಂಕ: 22.3.2017.  
2) ದಿನಾಂಕ: 07.04.2017 ರಂದು ನಡೆದ ಜಿಲ್ಲಾ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಸಮಿತಿ ಸಭೆಯ ನಡವಳಿಕೆಗಳು.  
3) ಪ್ರಾದೇಶಿಕ ನಿರ್ದೇಶಕರು (ಪರಿಸರ), ಉಡುಪಿ ಇವರಿಂದ ಬಂದಿರುವ ಪತ್ರ ಸಂಖ್ಯೆ: ಪ್ರಾನಿಪ/ನಿಪ/157/2016-17/72, ದಿನಾಂಕ: 19.4.2017.  
4) ದಿನಾಂಕ: 17.6.2017ರಂದು ನಡೆದ 18ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ ಸಭೆಯ ನಡವಳಿಕೆಗಳು.

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ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖಿತ (1)ರ ಪತ್ರದಲ್ಲಿ "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯನ್ನು (Over Head Tank) ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಕೋಡಿ ಕಸ್ಟಾ ಪ್ರದೇಶದ ಸ.ನಂ. 292ರ ಸರ್ಕಾರಿ ಜಮೀನಿನ 0.20 ಎಕ್ರೆ



ಪ್ರದೇಶದಲ್ಲಿ ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ಕೋರಿ ಸಲ್ಲಿಸಿದ್ದ ಪ್ರಸ್ತಾವನೆಯನ್ನು ದಿನಾಂಕ: 07.04.2017 ರಂದು ನಡೆದ ಜಿಲ್ಲಾ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಸಮಿತಿ ಸಭೆಯಲ್ಲಿ ಚರ್ಚಿಸಿ, ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ಅಧಿಸೂಚನೆ 2011ರ ಪ್ಯಾರಾ 8 III CRZ-III A (iii) (j) ರ ಪ್ರಕಾರ ಅನುಮತಿಸಬಹುದಾದ ಚಟುವಟಿಕೆಯಾಗಿರುವುದರಿಂದ ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ನೀಡಲು KSCZMA ಗೆ ಶಿಫಾರಸ್ಸು ಮಾಡಿರುತ್ತದೆ.

ಸಮಿತಿಯ ನಿರ್ಣಯದಂತೆ, ಉಲ್ಲೇಖಿತ (3)ರ ಪತ್ರದಲ್ಲಿ ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರಕ್ಕಾಗಿ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರಕ್ಕೆ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.

ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ದಿನಾಂಕ: 17.6.2017ರಂದು ನಡೆದ 18ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ ಸಭೆಯಲ್ಲಿ ಚರ್ಚಿಸಲಾಗಿರುತ್ತದೆ.

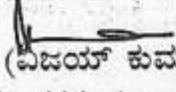
ಪ್ರಾಧಿಕಾರವು ಈ ಬಗ್ಗೆ ಚರ್ಚಿಸಿ, ಸಿ.ಆರ್.ಝಡ್ ಅಧಿಸೂಚನೆ, 2011ರ ಅನುಸಾರ ಅನುಮತಿಸಲ್ಪಟ್ಟಿರುವ ಚಟುವಟಿಕೆಯಾದುದರಿಂದ ಪ್ರಸ್ತಾಪಿತ ಮೇಲ್ಕಟ್ಟದ ಟ್ಯಾಂಕ್ ನಿರ್ಮಾಣಕ್ಕೆ ಕೆಲವೊಂದು ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ಪ್ರಾಧಿಕಾರದ ಅನುಮೋದನೆ ನೀಡಲು ತೀರ್ಮಾನಿಸಲಾಗಿರುತ್ತದೆ.

ಪ್ರಾಧಿಕಾರದ ಸದರಿ ನಿರ್ಣಯದಂತೆ, "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯನ್ನು (Over Head Tank) ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಕೋಡಿ ಕಸ್ಟಾ ಪ್ರದೇಶದ ಸ.ನಂ. 292ರ ಸರ್ಕಾರಿ ಜಮೀನಿನ 0.20 ಎಕರೆ ಪ್ರದೇಶದಲ್ಲಿ" ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ (CRZ Clearance) ವನ್ನು ಈ ಕೆಳಕಂಡಂತಹ ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ನೀಡಲಾಗಿದೆ.

- 1) ದಿನಾಂಕ:18.03.2017ರಂದು ಜರುಗಿದ ಪ್ರಾಧಿಕಾರದ 16ನೇ ಸಭೆಯಲ್ಲಿ ಸರ್ವೆ ನಂ. 294/3ಪಿ2 ರಲ್ಲಿ ಮೇಲ್ಕಟ್ಟದ ಟ್ಯಾಂಕ್ ನಿರ್ಮಾಣಕ್ಕಾಗಿ ನೀಡಲಾಗಿದ್ದ ಅನುಮೋದನೆಯನ್ನು ರದ್ದುಗೊಳಿಸಲಾಗಿದೆ.
- 2) ಯೋಜನಾ ಪ್ರವರ್ತಕರು ಸರ್ಕಾರ ಆದೇಶದ ಸಂಖ್ಯೆ:ಅಪಜೀ 1062 ಸಿಆರ್ಝಡ್ 2014 ದಿನಾಂಕ:16.01.2015ರ ಅನುಸಾರ ಅರ್ಜಿ ಸಂಸ್ಕರಣಾ ಶುಲ್ಕ ಪಾವತಿಸತಕ್ಕದ್ದು.
- 3) ಮೇಲ್ಕಟ್ಟದ ಟ್ಯಾಂಕ್ ನಿರ್ಮಾಣದ ಸಂದರ್ಭದಲ್ಲಿ ಅಲ್ಲಿನ ಪರಿಸರಕ್ಕೆ ಹೆಚ್ಚಿನ ಧಕ್ಕೆಯಾಗದಂತೆ ಮತ್ತು ಮಳೆನೀರಿನ ಹರಿವಿಗೆ ಅಡಚಣೆಯುಂಟಾಗದಂತೆ ಮುನ್ನೆಚ್ಚರಿಕೆ ವಹಿಸತಕ್ಕದ್ದು.
- 4) ಪ್ರಸ್ತಾಪಿತ ಯೋಜನೆಯಲ್ಲಿ ಪ್ರಾಧಿಕಾರದ ಪೂರ್ವಾನುಮೋದನೆ ಇಲ್ಲದೆ ಯಾವುದೇ ಬದಲಾವಣೆ ಅಥವಾ ವಿಸ್ತರಣೆ ಮಾಡತಕ್ಕದ್ದಲ್ಲ.
- 5) ಪ್ರಸ್ತಾಪಿತ ಯೋಜನೆಯ ಅಂಗವಾಗಿ ಕೈಗೊಳ್ಳುವ ಎಲ್ಲಾ ಕಾಮಗಾರಿ ಮತ್ತು ಚಟುವಟಿಕೆಗಳು ಸಿಆರ್ಝಡ್ ಅಧಿಸೂಚನೆ, ದಿನಾಂಕ:06.01.2011ಕ್ಕೆ ಒಳಪಟ್ಟಿರತಕ್ಕದ್ದು.

ಮೇಲ್ಕಂಡ ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ (CRZ Clearance)ವನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯದ ಅಧಿಸೂಚನೆಯ 2011ರ ಅವಕಾಶದಂತೆ ಹೊರಡಿಸಲಾಗಿದೆ.

ತಮ್ಮ ನಂಬುಗೆಯ,

  
(ವಿಜಯ್ ಕುಮಾರ್)

ವಿಶೇಷ ನಿರ್ದೇಶಕರು (ತಾಂತ್ರಿಕ ಕೋಶ) ಮತ್ತು  
ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ,  
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ  
ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಇಲಾಖೆ.

**APPENDIX 13a: NOC- CRZ kundapura  
kodi OHT - English -Translated**

# Government of Karnataka

No: FEB162 CRZ 2017

Ministry of Karnataka government  
Multi story Building  
Bangalore, Dated: 11-07-2017

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From,  
Government Secretary  
(Biosphere and Environment)  
Department of Forest, Biosphere and Environmental

To,  
Chief Officer  
Town Municipal Corporation  
Kundapura

Sir,

**Subject:** Under ADB assisted KIUWMIP Tranche-2 in Kundapura Town 24x7 Water Supply project, implementation of OHT at Kodi, Kasaba area survey no. 292 in government land 0.20 acre area issuing of NOC by coastal regulation zone-reg.

**Ref:** 1- Your letter dated 22/03/2017

- 2- Proceedings of district coastal zone maintenance committee meeting on Dated 07/04/2017
- 3- Letter dated 19/4/2017 from Regional Director (Environmental) Udupi no: PNP/NP/157/2016-17/72
- 4- Proceedings of 18<sup>th</sup> Karnataka state coastal zone maintenance authority meeting held on Dated 17/06/2017

With reference to the above mentioned subject ref. (1) letter, Under ADB assisted KIUWMIP Tranche-2 project 24x7 water supply for Kundapura Town, the implementation of OHT at Kodi, Kasaba area survey no. 292, in Government land 0.20 acre area submitted proposal. It was requested for issuing of NOC from Coastal regulation zone. The matter was discussed on date 07/04/2017 According to notification of 2011 Para 8 III CRZ-(iii) A (iii)(j) approved this proposal and recommended to KSCZMA for issuing NOC .

As per committee discussion ref (3) letter the proposal submitted to Karnataka State coastal zone maintenance authority for issuing coastal regulation zone NOC

The proposal discussed in the organised meeting of 18<sup>th</sup> Karnataka state coastal zone maintenance authority on date 17/06/2017 the Authority discussed according to CRZ notification 2011 approval of proposed construction of OHT on the same conditional approval by authority.

The authority decision ADB assisted KIUWMIP Tarnche-2 project of 24x7 water supply for Kundapura Town the implementation of OHT at Kodi, Kasaba area survey no. 292 government land 0.20 acre area. Coastal regulation zone issued of NOC(CRZ Clearance) on the basis of following conditional approval



1. Meeting organised on Dated 18/03/2017, in 16<sup>th</sup> authority meeting the survey no: 294/3P2 cancelled the issued approval of construction of OHT
2. Project promoters Government order no: FEB1062 CRZ 2014 dated 16/01/2015 in accordance with application processing payment of the fees
3. Precaution should be taken at the time of construction of OHT without impairment to environment and storm water
4. Without approval of authority couldn't any change and expansion of proposed project
5. For the proposed project implementation of all work and activity to be subjected under CRZ notification dated:06/01/2011
6. The above coastal regulation zone NOC has been issued as per CRZ 2011 notification.

Yours Faithfully

Special Directors (Technical Cell) and Member of Secretary  
Karnataka State coastal zone maintenance authority  
Department of Forest, Biosphere and Environment

## **APPENDIX 14: NOC - CRZ kundapura kodi Pipeline - Kannada**

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸಂಖ್ಯೆ: ಅಪಜೀ 161 ಸಿಆರ್‌ಜೆಡ್ 2017.

ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಸಚಿವಾಲಯ,  
ಬಹುಮಹಡಿ ಕಟ್ಟಡ,  
ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 11-7-2017.

ಇಂದ,

ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ,  
(ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ)  
ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಇಲಾಖೆ.

ಇವರಿಗೆ,

ಮುಖ್ಯಾಧಿಕಾರಿ,  
ಪುರಸಭೆ,  
ಕುಂದಾಪುರ.

ಮಾನ್ಯರೇ,

ವಿಷಯ: "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯಲ್ಲಿ ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಸಲು" ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ನೀಡುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ:

- 1) ತಮ್ಮ ಪತ್ರ ದಿನಾಂಕ: 7.3.2017.
- 2) ದಿನಾಂಕ: 07.04.2017 ರಂದು ನಡೆದ ಜಿಲ್ಲಾ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಸಮಿತಿ ಸಭೆಯ ನಡವಳಿಗಳು.
- 3) ಪ್ರಾದೇಶಿಕ ನಿರ್ದೇಶಕರು (ಪರಿಸರ), ಉಡುಪಿ ಇವರಿಂದ ಬಂದಿರುವ ಪತ್ರ ಸಂಖ್ಯೆ: ಪ್ರಾನಿಪ/ನಿಪ/146/2016-17/71, ದಿನಾಂಕ: 19.4.2017.
- 4) ದಿನಾಂಕ: 17.6.2017 ರಂದು ನಡೆದ 18ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ ಸಭೆಯ ನಡವಳಿಗಳು.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖಿತ (1)ರ ಪತ್ರದಲ್ಲಿ "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯಲ್ಲಿ ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಸಲು" ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ಕೋರಿ ಸಲ್ಲಿಸಿದ್ದ ಪ್ರಸ್ತಾವನೆಯನ್ನು ದಿನಾಂಕ: 07.04.2017 ರಂದು ನಡೆದ ಜಿಲ್ಲಾ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಸಮಿತಿ ಸಭೆಯಲ್ಲಿ ಚರ್ಚಿಸಿ, ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ಅಧಿಸೂಚನೆ 2011ರ ಪ್ಯಾರಾ 8 I CRZ I (ii) (b) ಹಾಗೂ 8 III CRZ III A iii(j) ರ ಪ್ರಕಾರ ಅನುಮತಿಸಬಹುದಾದ ಚಟುವಟಿಕೆಯಾಗಿರುವುದರಿಂದ ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ ನೀಡಲು KSCZMA ಗೆ ಶಿಫಾರಸ್ಸು ಮಾಡಿರುತ್ತದೆ.

ಸಮಿತಿಯ ನಿರ್ಣಯದಂತೆ, ಉಲ್ಲೇಖಿತ (3)ರ ಪತ್ರದಲ್ಲಿ ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರಕ್ಕಾಗಿ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರಕ್ಕೆ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.



ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ದಿನಾಂಕ: 17.6.2017ರಂದು ನಡೆದ 18ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ ಸಭೆಯಲ್ಲಿ ಚರ್ಚಿಸಲಾಗಿರುತ್ತದೆ.


ಪ್ರಾಧಿಕಾರವು ಈ ಬಗ್ಗೆ ಚರ್ಚಿಸಿ, ಸಿ.ಆರ್.ಝಡ್ ಅಧಿಸೂಚನೆ, 2011ರ ಅನುಸಾರ ಅನುಮತಿಸಲ್ಪಟ್ಟಿರುವ ಚಟುವಟಿಕೆಯಾದುದರಿಂದ ಪ್ರಸ್ತಾಪಿತ ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಕೆಗೆ ಕೆಲವೊಂದು ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ಪ್ರಾಧಿಕಾರದ ಅನುಮೋದನೆ ನೀಡಲು ತೀರ್ಮಾನಿಸಲಾಗಿರುತ್ತದೆ.

ಪ್ರಾಧಿಕಾರದ ಸದರಿ ನಿರ್ಣಯದಂತೆ, "ADB ನೆರವಿನ KIUWMIP-Tranche-2 ಯೋಜನೆಯಲ್ಲಿ ಕುಂದಾಪುರ ನಗರಕ್ಕೆ 24X7 ನೀರು ಸರಬರಾಜು ಯೋಜನೆಯಲ್ಲಿ ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಸಲು" ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ (CRZ Clearance) ವನ್ನು ಈ ಕೆಳಕಂಡಂತಹ ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ನೀಡಲಾಗಿದೆ.

- 1) ಯೋಜನಾ ಪ್ರವರ್ತಕರು ಸರ್ಕಾರ ಆದೇಶದ ಸಂಖ್ಯೆ:ಅಪಜೇ 1062 ಸಿಆರ್‌ಝಡ್ 2014 ದಿನಾಂಕ:16.01.2015ರ ಅನುಸಾರ ಅರ್ಜಿ ಸಂಸ್ಕರಣಾ ಶುಲ್ಕ ಪಾವತಿಸತಕ್ಕದ್ದು.
- 2) ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಸುವ ಸಂದರ್ಭದಲ್ಲಿ ಅಲ್ಲಿನ ಪರಿಸರದ ಮೇಲ್ಮೈ ಏರುಪೇರಾಗದಂತೆ ಮತ್ತು ಮಳೆನೀರಿನ ಹರಿವಿಗೆ ಅಡಚಣೆಯುಂಟಾಗದಂತೆ ಮುನ್ನೆಚ್ಚರಿಕೆ ವಹಿಸತಕ್ಕದ್ದು.
- 3) ಪೈಪ್‌ಲೈನ್ ಅಳವಡಿಕೆಯ ಮಾರ್ಗದಲ್ಲಿ ಕಾಂಡ್ಲಾವನ ಕಂಡುಬಂದಲ್ಲಿ ಅವುಗಳಿಗೆ ಹೆಚ್ಚಿನ ಹಾನಿಯಾಗದಂತೆ ಮುನ್ನೆಚ್ಚರಿಕೆ ವಹಿಸತಕ್ಕದ್ದು ಮತ್ತು ಅವುಗಳ ರಕ್ಷಣೆಗೆ ಸೂಕ್ತ ಕ್ರಮ ಕೈಗೊಳ್ಳತಕ್ಕದ್ದು.
- 4) ಪ್ರಸ್ತಾಪಿತ ಯೋಜನೆಯಲ್ಲಿ ಪ್ರಾಧಿಕಾರದ ಮೂರ್ವಾನುಮೋದನೆ ಇಲ್ಲದೆ ಯಾವುದೇ ಬದಲಾವಣೆ ಅಥವಾ ವಿಸ್ತರಣೆ ಮಾಡತಕ್ಕದ್ದಲ್ಲ.
- 5) ಪ್ರಸ್ತಾಪಿತ ಯೋಜನೆಯ ಅಂಗವಾಗಿ ಕೈಗೊಳ್ಳುವ ಎಲ್ಲಾ ಕಾಮಗಾರಿ ಮತ್ತು ಚಟುವಟಿಕೆಗಳು ಸಿಆರ್‌ಝಡ್ ಅಧಿಸೂಚನೆ, ದಿನಾಂಕ:06.01.2011ಕ್ಕೆ ಒಳಪಟ್ಟಿರತಕ್ಕದ್ದು.

ಮೇಲ್ಕಂಡ ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯ ನಿರಾಕ್ಷೇಪಣಾ ಪತ್ರ (CRZ Clearance)ವನ್ನು ಕರಾವಳಿ ನಿಯಂತ್ರಣ ವಲಯದ ಅಧಿಸೂಚನೆಯ 2011ರ ಅವಕಾಶದಂತೆ ಹೊರಡಿಸಲಾಗಿದೆ.

ತಮ್ಮ ನಂಬುಗೆಯ,

  
(ವಿಜಯ್ ಕುಮಾರ್)

ವಿಶೇಷ ನಿರ್ದೇಶಕರು (ತಾಂತ್ರಿಕ ಕೋಶ) ಮತ್ತು  
ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ,  
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಕರಾವಳಿ ವಲಯ ನಿರ್ವಹಣಾ ಪ್ರಾಧಿಕಾರ  
ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಇಲಾಖೆ.

**APPENDIX 14a: NOC - CRZ kundapura  
kodi Pipeline -ENGLISH Translated**

# Government of Karnataka

No: FEB161 CRZ 2017

Ministry of Karnataka government  
Multi story Building  
Bangalore, Dated: 11-07-2017

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From,  
Government Secretary  
(Biosphere and Environment)  
Department of Forest, Biosphere and Environmental

To,  
Chief Officer  
Town Municipal Corporation  
Kundapura

Sir,

**Subject:** Under ADB assisted KIUWMIP Tranche-2 in Kundapura Town 24x7 Water Supply project, implementation of OHT at Kodi, Kasaba area survey no. 292 in government land 0.20 acre area issuing of NOC by coastal regulation zone-reg.

**Ref:** 1- Your letter dated 07/03/2017

- 2- Proceedings of district coastal zone maintenance committee meeting on Dated 07/04/2017
- 3- Letter dated 19/4/2017 from Regional Director (Environmental) Udupi no: PNP/NP/146/2016-17/71
- 4- Proceedings of 18<sup>th</sup> Karnataka state coastal zone maintenance authority meeting held on Dated 17/06/2017

With reference to the above mentioned subject ref. (1) letter, Under ADB assisted KIUWMIP Tranche-2 project 24x7 water supply for Kundapura Town, the implementation of pipeline laying and jointing, It was requested for issuing of NOC from Coastal regulation zone. The matter was discussed on date 07/04/2017 According to notification of 2011 Para 8 I CRZ I-(ii) (b) and 8 III CRZ III A iii (j) approved this proposal and recommended to KSCZMA for issuing NOC.

As per committee discussion ref (3) letter the proposal submitted to Karnataka State coastal zone maintenance authority for issuing NOC from coastal regulation zone

The proposal discussed in the organised meeting of 18<sup>th</sup> Karnataka state coastal zone maintenance authority on date 17/06/2017

As per 2011 CRZ notification approvable work for proposed laying of pipeline is decided based on some conditional approval issuing by authority.

As per the authority decision, ADB assisted KIUWMIP Tanche-2 project of 24x7 water supply for Kundapura Town for the implementation proposed laying of pipeline. Coastal regulation zone issued NOC letter based on (CRZ Clearance) the following conditions,



1. Project promoters Government order no: APG 1062 CRZ 2014 dated 16/01/2015 in accordance with application processing fee should pay.
2. Safety Precaution should be taken at the time of pipeline laying without impairment to the environment and storm water.
3. During pipe laying work there should not be any harm to the existing trees and safety measures should be taken carefully.
4. Without any pre-approval from the authority, there should not be any change and expansion in the proposed project.
5. For the proposed project implementation of all work activities must be done as per the CRZ notification dated:06/01/2011.

The above coastal regulation zone NOC has been issued as per CRZ 2011 notification.

Yours Faithfully

Vijay kumar  
Special Directors (Technical Cell) and Member of Secretary  
Karnataka State coastal zone management authority  
Department of Forest, Biosphere and Environment

## **APPENDIX 15: LABOUR LICENSE- PUTTUR WSS**



**GOVERNMENT OF KARNATAKA**  
**DEPARTMENT OF LABOUR**

Licence No : ALC-MNG/CLA/C-100034603/2019-20

Registration No: ALC-MNG/CLA/P-1000023667/2019-20

Assistant Labour  
Commissioner, Mangalore  
Division, Mangaluru  
Prakruthi Commercial  
Complex 2nd Floor, Opp.  
Bharath Beedi Works Pvt  
Ltd., Kadri road,  
Mangalore-575003

Licence Date: Nov 20 2019

**FORM-VI**

[See Rule 25(1)]

- Licence is hereby granted to SPPL SIPL DRS INFRATECH JV, Kausthuba Building, No.1/28/A, Padil, Bannur post, Puttur, Dakshina Kannada Dist. Under Section 12[1] of the Contract Labour [Regulation and Abolition] Act-1970, subject to the conditions specified in annexure.
- This Licence is for doing the work Water supply in the establishment of CITY MUNICIPAL COUNCIL PUTTUR, PUTTUR
- The Licence shall remain in force till : 11/01/2021

**Renewal**  
**[Rule 29]**

Sl no.	Date of Licence Renewal	Date of expiry	Fee paid for Licence Renewal	Next Date of expiry
1	10-01-2020	11-01-2020	LICENCE FEE:2250, PENALTY:562	11/01/2021

Please, verify authenticity of by visiting  
[www.labouronline.kar.nic.in](http://www.labouronline.kar.nic.in) & entering certificate Number

**Assistant Labour Commissioner**  
**MANGALORE DIVISION, MANGALORE**  
Assistant Labour Commissioner,  
Mangalore Division, Mangaluru



ANNEXURE

**The license is subject to the following conditions:-**

1. The license shall be non-transferable.
2. The number of workmen employed as contract labour in the establishment shall not, on any day, exceeds **100 workers**.
3. Expect as provided in the rules and fees paid for the grant or as the case may be, for renewal of the license shall be non-refundable
4. The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the schedule of employment under the Minimum Wages Act, 1948, where applicable and where the rates have been fixed by agreement settlement or award, not less than the rates, fixed.
5. In cases where the workmen employed by the contractor perform the same or similar kind of work as the workmen directly employed by the Principal Employer of the Establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of contractor shall be the same as applicable to the workmen directly employed by the Principal Employer of the Establishment on the same or similar kind of work; provided that in the case of disagreement with regards to the type of work the same shall be decided by the Commissioner of Labour whose decision shall be final.
6. In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Commissioner of Labour.
7. In every establishment where 20 or more women are ordinarily employed as contract labour shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as play room for the children and the other as bed room for the children. For this purpose the contract shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping in this behalf by the Commissioner of Labour.
8. The licenses shall notify any change in the number of workmen or the conditions of work to the licensing officer.
9. A copy of license shall be displayed prominently at the premises where the contract work is being carried on.
10. The contract labourers shall be provided the lunch/dinner, coffee/tea and breakfast, snacks free of cost during the working hours, if such facilities are extended to regular workmen employed by the principal employer.
11. The contract labourers shall be paid the minimum wages fixed under the minimum wages act.
12. The contract labourers shall be paid with the same rate of Bonus and Ex-gratia payable to the regular workmen employed by the principal employer.
13. The contract labourers shall be provided with free uniforms and shoes, with such facilities are extended to the regular workmen employed by the principal employer.
14. Employment of Child Labour below 14 years is prohibited.

  
Assistant Labour Commissioner

MANGALORE DIVISION. MANGALORE

  
Assistant Labour Commissioner

MANGALORE DIVISION. MANGALORE

**APPENDIX 16: EMPLOYEE  
COMPENSATION INSURANCE-PUTTUR  
WSS**



**POLICY SCHEDULE FOR EMPLOYEES COMPENSATION INSURANCE**

<b>Insured's Name</b>	: SUEZ PROJECTS PVT. LTD.,SUEZ INDIA PVT. LTD.		
<b>Insured's Details</b>		<b>Issuing Office Details</b>	
<b>Customer ID</b>	: PO70855544	<b>Office Code</b>	: Delhi LCO 930000 (930000)
<b>Address</b>	: DRS INFRATECH PVT. LTD. JV IST FLOOR, 18 CSI COMPOUND, 2ND CROSS, MISSION ROAD, BANGALURU, BENGALURU URBAN, KARNATAKA BANGALORE ,KARNATAKA, 560027	<b>Address</b>	: 301,R.G.CITY CENTER LSC, BLOCK B, LAWRENCE ROAD NEW DELHI,110035
<b>Phone No</b>	: 9871459093	<b>Phone No</b>	: 27196509 / 27196510
<b>E-mail/Fax</b>	: dharmesh.s@jbbodamail.com, /	<b>E-mail/Fax</b>	: nia.930000@newindia.co.in / 27196515
<b>PAN No</b>	: ABBAS5237L	<b>S.Tax Regn. No</b>	: AAACN4165CST178
<b>GSTIN/UIN</b>	: 29ABBAS5237LIZI / NA	<b>GSTIN</b>	: 07AAACN4165C1ZT
		<b>SAC</b>	: 997139 (Other non-life insurance services excl RI)

<b>Policy Details</b>			
<b>Policy Number</b>	: 93000036190100000031	<b>Business Source Code</b>	
<b>Period of Insurance</b>	: From: 05/07/2019 12:00:01 AM To: 04/07/2020 11:59:59 PM	<b>Dev.Off level./Broker/Corp. Agent/Web Aggregator</b>	: J.B. BODA INSURANCE & REINSURANCE BROKERS PVT LTD. - (DM2347225) JB BODA-311800 (SI00063547)
<b>Date of Proposal</b>	: 05-Jul-19	<b>Agent/Bancassurance/ Specified Person</b>	:
<b>Prev. Policy no.</b>	:	<b>Phone No</b>	: 26402878, 8912502165, 9440281062 / NA
<b>Client Type</b>	: Corporate	<b>E-mail/Fax</b>	: accountshyd@jbbodamail.com, / / /

<b>Premium(₹)</b>	<b>GST(₹)</b>	<b>Total (₹)</b>	<b>Total (₹ in words)</b>	<b>Receipt No. &amp; Date</b>
163457	29422	192879	RUPEES ONE LAC NINETY-TWO THOUSAND EIGHT HUNDRED SEVENTY- NINE ONLY	9300008119000000249 2 - 12/07/19

**Details of Employees with monthly wages upto ₹ 8000:**

Categories	Sub Categories	No of Employee	Cash Total Wages
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**Details of Employees with monthly wages above ₹ 8000:**

Categories	Sub Categories	No of Employee	Cash Total Wages
Engineers not otherwise classified	Incl. work away from shop or yard upto 9 mtrs height  SKILLED - ₹ 11544/- PM	18	2493504
Engineers not otherwise classified	Incl. work away from shop or yard upto 9 mtrs height  SEMI SKILLED - ₹ 11154/- PM	39	5220072
Engineers not otherwise classified	Incl. work away from shop or yard upto 9 mtrs height  UN SKILLED - ₹ 10894/- PM	97	12680616
Trade Description	Particular of Works	Location Details	Included All Sub - Contractors
Laying of Water Pipelines Water Distribution services in Puttur, karnataka		Puttur, Karnataka	

**Contractor/Sub-Contractor Details:**

Serial No	Name of Contractor	Description	Categorie	No. of Workers			Amount Wages
				Skilled	Unskilled	Others	

Signature Not  
Verified  
Digitally signed  
by Srinivasan  
Vaideswaran  
Date: 2019.07.12  
15:50:40 +05'30'





**Extensions under the Policy Cover**

Name of the Extension	Sub Limit of the Extension	Deductibles of the Extension
Special Conditions	SKILLED - 18 (₹ 11544/- PM) SEMI SKILLED-39 (₹ 11154/- PM) UNSKILLED - 97 (₹ 10894/- PM)	
	NA	

Special Exclusions	NA
Special Excess/Deductible	NA

**The Policy shall be subject to EMPLOYEES COMPENSATION INSURANCE Policy clauses attached herewith.**

Clauses	Description
Conditions	Due observance and fulfilment of terms, conditions and endorsements of policy
Conditions	The Company may cancel Policy by sending seven days notice by registered letter
Conditions	Name of every employee with amount of wages, earnings shall be properly recorded
Conditions	No payment shall be made by or on behalf of Insured without consent of Company
Conditions	Remedy available to the insured if the company disclaims liability
Conditions	The insured shall take reasonable precaution to prevent accidents and diseases
Conditions	Notice or communication under this policy shall delivered in writing to Company
Conditions	The Policy and the Schedule shall be read together as one contract
Conditions	liability being otherwise admitted
Conditions	In the event claim, Insured shall give notice to Company with full particulars
Exclusions	Any accident, loss or legal liability arising from nuclear weapons material
Exclusions	Death, injury caused directly or indirectly by ionising radiation or contamination by radioactivity
Exclusions	Any legal liability of whatsoever nature
Exclusions	Any sum which the insured would have been entitled to recover from any party but for an agreement between insured and such party
Exclusions	Liability of the insured which arises by virtue of an agreement
Exclusions	Any employee who is not a workman within the meaning of the Law(s)
Exclusions	Insureds liability to employees of their contractors
Exclusions	Any injury or disease directly attributable to war or war-like situations
Exclusions	Damage to any property or any Consequential losses

**Premium and GST Details**

	Rate of Tax	Amount in INR
Premium		₹ 163457.00
SGST	0	0
CGST	0	0
IGST	18	29422

In witness whereof the undersigned being duly authorised by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 12th day of July, 2019.

For and on behalf of

The New India Assurance Company Limited

Date of Issue: 12/07/2019		
		Duly Constituted Attorney(s)

Stamp Duty under the Policy is ₹1

Mudrank \_\_\_\_\_ Dt. \_\_\_\_\_ consolidated Stamp Fees Paid by Pay Order Number \_\_\_\_\_ vide receipt number \_\_\_\_\_ dt. \_\_\_\_\_.



Tax Invoice No : 93000019P0005629

**IRDA Registration Number: 190**

## **APPENDIX 17: MARINE-CUM-ERECTION INSURANCE POLICY-PUTTUR WSS**



**MARINE-CUM-ERECTION INSURANCE POLICY**

<b>Insured's Name</b>	: SUEZ PROJECTS PVT. LTD.,SUEZ INDIA PVT. LTD.		
<b>Insured's Details</b>		<b>Issuing Office Details</b>	
<b>Customer ID</b>	: PO70855544	<b>Office Code</b>	: Delhi LCO 930000 (930000)
<b>Address</b>	: DRS INFRATECH PVT. LTD. JV 1ST FLOOR, 18 CSI COMPOUND, 2ND CROSS, MISSION ROAD, BANGALURU, BENGALURU URBAN, KARNATAKA BANGALORE ,KARNATAKA, 560027	<b>Address</b>	: 301,R.G.CITY CENTER LSC, BLOCK B, LAWRENCE ROAD NEW DELHI,110035
<b>Phone No</b>	: 9871459093	<b>Phone No</b>	: 27196509 / 27196510
<b>E-mail/Fax</b>	: dharmesh.s@jbbodamail.com, /	<b>E-mail/Fax</b>	: nia.930000@newindia.co.in/27196515
<b>PAN No</b>	: ABBAS5237L	<b>S.Tax Regn. No</b>	: AAACN4165CST178
<b>GSTIN/UIN</b>	: 29ABBAS5237LIZI/NA	<b>GSTIN</b>	: 07AAACN4165C1ZT
		<b>SAC</b>	: 997139 (Other non-life insurance services excl RI)

<b>Policy Details</b>			
<b>Policy Number</b>	: 93000044190800000022	<b>Business Source Code</b>	
<b>Period of Insurance</b>	: 05/07/2019 12:00:01 AM to 02/11/2022 11:59:59 PM	<b>Dev.Off. level/Broker/Corp. Agent</b>	: J.B. BODA INSURANCE & REINSURANCE BROKERS PVT LTD. - (DM2347225) JB BODA-311800 (SI00063547)
<b>Date of Proposal</b>	: 05-Jul-19	<b>Agent/Bancassurance</b>	:
<b>Prev. Policy no.</b>	:	<b>Phone No</b>	: 26402878, 8912502165, 9440281062 / NA
<b>Client Type</b>	: Corporate	<b>E-mail/Fax</b>	: accountshyd@jbbodamail.com, / / /

<b>Premium:</b>	<b>GST:</b>	<b>Stamp Duty</b>	<b>Total (₹)</b>	<b>Receipt No. &amp; Date:</b>
1664278	299570	0	1963848	9300008119000000246 2 - 11/07/19

Limit : By Rail/ Road ₹: 50000000	PERIOD: The cover commences from the date of the first consignment of despatch from the manufacturer's/ supplier's warehouse either in India or abroad and remains in force for the period as mentioned above (the said period starting from the arrival of the first consignment or despatch at the site of erection) or the completion of erection including test period not exceeding ----- weeks, whichever is earlier.
Limit : By Air / Sea ₹: 50000000 any one vessel	
Limit as per Location Clause ₹: 100000000	
LOCATION CLAUSE : In case of loss and/ or damage before shipment after discharge to the Insured interest in any one locality the underwriter notwithstanding anything to the contrary contained in this contract, shall not be liable in respect of any one accident or series of accidents arising, out of the same event for more than its proportion of an amount upto, but not exceeding, the sum of ₹ _____. The conveyance of the insured interest upon interior or by land transit shall not be deemed to be shipment within the meaning of this clause.	Special Conditions: Excess : 0.5% of claim amount subject to minimum of ₹10,000/- eel. Coverage : ITC-A+SRCC+RSMD.
Excess for Cargo: 10000	PREMIUM: As per Premium Endorsement hereunder:

<b>Voyage</b>		
<b>Sl. No.</b>	<b>From</b>	<b>To</b>
1	Anywhere in India	Anywhere in India

CLAIMS PAYABLE: On the basis of the actual loss sustained at the time of claim. NOTICE of loss or damage to be given and survey arranged and a certificate obtained from the Company's Agent at port of discharge or in case where the Company has no agent, by a Certificate from Lloyd's Agents, without which Certificates no claim for loss will be paid. In the event of loss or damage which may result in claim under this Insurance, immediate notice must be given to policy issuing Office/ any office nearest to the destination who are the Company's agent at port of discharge, in order they may examine the goods and issue a survey report. Where the Company has no agent, the notice must be given to W. K. Webster's

Digitally signed  
by Srinivasan  
Vaideswaran  
Date: 2019.07.11  
16:34:27 IST





Closing Particulars - All shipments are to be declared to the Company immediately upon receipt of shipping documents and stamped certificates to be obtained from the Company's Office at the issuing Office.

**\* Premium subject to adjustment on completion of the Project**

Sl. No.	Type of Project/Description of Project
1	110603 - Laying of Water Pipelines / 1) Water distribution services in Puttur, Karnataka

Site of Erection	Risk Address : 1 Puttur Town, Karnataka,dakshin kannad,KA025,UDUPI, KA,KARNATAKA, INDIA, 560211
------------------	---

Principal(s)/ Contractor/ sub-contractor Details:		
Sl. No.	Name	Address
1	SUEZ PROJECTS PVT. LTD.,SUEZ INDIA PVT. LTD.	DRS INFRATECH PVT. LTD. JV

Sl. No.	Period of Insurance
1.	Period of Insurance From : 05/07/2019 12:00:01 AM To : 02/11/2022 11:59:59 PM (including 1 months Testing ) plus 12 months Extended Maintenance period

**Section I - Material Damage :**

**1. Plant & Equipments to be erected (New Machine)**

**a ) Landed Cost of Imported machinery as at Factory site at exchange Rate : 0 (sub divided as)**

Sl. No.	Invoice Cost	Freight insurance, handling, Clearing and Forwarding charges up to Factory site	Custom duty
1	0	0	0

**b ) On machinery fabricated or manufactured in India (sub divided as)**

Sl. No.	Invoice Cost including Insurance, handling, clearing and transport up to Factory site	Excise Duty
1	640000000	0

**Second Hand Machinery(to be Erected)**

**i) Landed cost of Imported machinery as at Factory site at exchange rate : «SHEXchange Rate ER ME» (sub divided as)**

Sl. No.	Invoice Cost	Freight insurance, handling, Clearing and Forwarding charges up to Factory site	Custom duty
1	NA	NA	NA

**ii ) On machinery fabricated or manufactured in India (sub divided as)**

Sl. No.	Invoice Cost including Insurance, handling, clearing and transport up to Factory site
1	0

Sl. No.	c ) On Cost of erection including salaries of all Foreign and Indian Technicians and Wages of all skilled and unskilled labour employed at Factory Site during erection :
1	0

**d ) On Building in which the above Plant and Machinery is to be erected**

Sl. No.	a) Permanent Civil Engineering Works	b) Temporary Works	Completely erected value
1	0	0	640000000

**2. Contractors Plant and Machinery (Memo 4) as per list enclosed**



Item No.	Quantity	Description of Items (Type, Manufacture, Capacity)	Year of Manufacture	Sum Insured (In ₹)	Risk Code	Excess due to AOG Perils	Excess due to Other than AOG Perils	Excess for Boom Section
----------	----------	--	---------------------	--------------------	-----------	--------------------------	-------------------------------------	-------------------------

### 3. Add on Covers

#### 1. Owners Surrounding Property

Sl. No.	Limit of Indemnity	Excess
1	5000000	0

#### 2. Additional Custom Duty

Sl. No.	Limit of Indemnity	Excess
1	5000000	0

#### 3. Removal of Debris per occurrence

Sl. No.	Limit of Indemnity	Excess
1	5000000	0

#### 4. Professional Fees

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 5. Expediting Cost including Air Freight & Express Freight

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 6. Offsite Storage/ Fabrication

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 7. on increased replacement value (including duty on such additional replacement value) which may have to be paid on replacement of Imported Plant and Machinery as per 1(a) above

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 8. on increased replacement value which may have to be paid on replacement of indigenous Plant and Machinery as per 1(b) above

Sl. No.	Limit of Indemnity	Excess
1	64000000	0

#### on increased replacement value which may have to be paid on replacement of Plant and Machinery as per 1(d) a) above

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 9. Dismantling cover for Used /Second Hand Machinery

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 10. Automatic Reinstatement clause

Sl. No.	Limit of Indemnity	Excess
1	0	0

#### 11. Loss minimisation expenses



Sl. No.	Limit of Indemnity	Excess
1	0	0

**12. Cover for valuable documents**

Sl. No.	Limit of Indemnity	Excess
1	0	0

**13. Continuity of cover during operational phase for unit / plant tested but awaiting integral testing (along with other units / plants)**

Sl. No.	Limit of Indemnity	Excess
1	0	0

**14. Design Defect Cover**

Sl. No.	Limit of Indemnity	Excess
1	DE-4 of Munich Re	5 times AOG excess

**15. Waiver of Subrogation clause**

Sl. No.	Limit of Indemnity	Excess
1	NA	0

**Section II - Third Party Liability :**

**Limit of Indemnity**

Sl. No.	For any one accident	For all accidents during the period	Any One Person
1	6400000	6400000	6400000

**EXCESS for Section I and II :**

Sl. No.	For Storage & Erection Claims	For Testing Period Claims/ maintenance period claims	For Acts of God Claims (as per Memo 6)/Maintenance Cover ( to be removed)	For Fire / Explosion Claims	Terrorism
1	5 % of the claim amount subject to a minimum of ₹ 75000	5 % of the claim amount subject to a minimum of ₹ 200000	10 % of the claim amount subject to a minimum of testing period excess & a maximum of ₹ 5 Crores	10% of the claim amount subject to a minimum of testing period excess & a maximum of ₹ 2 Crores	0.5 % of Total Sum Insured subject to minimum of ₹ 1,00,000/-for each and every claim

**Excesses For Specific AddOn Covers :**

Sl. No.	Description Of Cover	Excess
---------	----------------------	--------

Terrorism Covered	Terrorism Premium
YES	386640

Deductibles Opted for Terrorism Pool	: 5% of the claim amount for each and every claim subject to Minimum of ₹1,00,000 and Maximum of ₹2,50,00,000
--------------------------------------	---

Risk Serial No.	STFI Cover
2	YES

Risk Serial No.	Earth Quake Cover
1	YES

**Installment Details**

Installment Number	Installment Date	Installment Amount (₹)
1	05/07/2019	456236



Installment Number	Installment Date	Installment Amount (₹)
2	05/07/2019	244717
3	02/10/2019	126290
4	02/01/2020	126290
5	02/04/2020	126290
6	02/07/2020	126290
7	02/10/2020	126290
8	02/01/2021	126290
9	02/04/2021	126290
10	02/07/2021	126290
11	02/10/2021	126290
12	02/01/2022	126285

The policy is subject to endorsements, warranties attached.

ENDORSEMENTS ATTACHED TO & FORMING PART OF THE POLICY		
Sl. No.	Endorsement Number	Endorsement Title
	ENG 002	Extension of terrorism damage
	SLEC	Section Limitation and Exclusion Clause
Risk Code		Excess
NA		NA

In witness whereof the undersigned being duly authorized by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 11th day of July, 2019

For and on behalf of  
The New India Assurance Company  
Limited

Duly Constituted Attorney(s)

#### Premium and GST Details

	Rate of Tax	Amount in INR
Premium		₹1664278
SGST	0	0
CGST	0	0
IGST	18	299570

In witness whereof the undersigned being duly authorized by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 11th day of July, 2019

For and on behalf of  
The New India Assurance Company  
Limited





Duly Constituted Attorney(s)

Tax Invoice No :

**IRDA Registration Number: 190**

## **APPENDIX 18: LABOUR LICENSE-UDUPI WSS**



## GOVERNMENT OF KARNATAKA

## DEPARTMENT OF LABOUR

Licence No : ALC-MNG/CLA/C-100027485/2019-20

Registration No: ALCM/RGN/CLA/UDP-29/2008

Assistant Labour  
Commissioner, Mangalore  
Division, Mangaluru  
Prakruthi Commercial  
Complex 2nd Floor, Opp.  
Bharath Beedi Works Pvt  
Ltd., Kadri road,  
Mangalore-575003

Licence Date: Jun 21 2019

**FORM-VI**

[See Rule 25(1)]

1. Licence is here by granted to SPPL SIPL- DRS INFRA- JV, #1-44, Animitha House, Padubettu, Adi-Udupi Under Section 12[1] of the Contract Labour [Regulation and Abolition] Act-1970, subject to the conditions specified in annexure.


2. This Licence is for doing the work Water supply in the establishment of City Municipal Commissioner, Udupi

3. The Licence shall remain in force till : 11/01/2021

Renewal  
[Rule 29]

Sl no.	Date of Licence Renewal	Date of expiry	Fee paid for Licence Renewal	Next Date of expiry
1	10-01-2020	11-01-2020	LICENCE FEE:2250, PENALTY:562	11/01/2021

Please, verify authenticity of by visiting  
[www.labouronline.kar.nic.in](http://www.labouronline.kar.nic.in) & entering certificate Number

  
Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE  
Mangalore Division, Mangaluru

The license is subject to the following conditions:-

1. The license shall be non-transferable.
2. The number of workmen employed as contract labour in the establishment shall not, on any day, exceeds 100 workers.

— Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE

3. Expect as provided in the rules and fees paid for the grant or as the case may be, for renewal of the license shall be non-refundable
4. The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the schedule of employment under the Minimum Wages Act, 1948, where applicable and where the rates have been fixed by agreement settlement or award, not less than the rates, fixed.
5. In cases where the workmen employed by the contractor perform the same or similar kind of work as the workmen directly employed by the Principal Employer of the Establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of contractor shall be the same as applicable to the workmen directly employed by the Principal Employer of the Establishment on the same or similar kind of work; provided that in the case of disagreement with regards to the type of work the same shall be decided by the Commissioner of Labour whose decision shall be final.
6. In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Commissioner of Labour.
7. In every establishment where 20 or more women are ordinarily employed as contract labour shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as play room for the children and the other as bed room for the children. For this purpose the contract shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping in this behalf by the Commissioner of Labour.
8. The licenses shall notify any change in the number of workmen or the conditions of work to the licensing officer.
9. A copy of license shall be displayed prominently at the premises where the contract work is being carried on.
10. The contract labourers shall be provided the lunch/dinner, coffee/tea and breakfast, snacks free of cost during the working hours, if such facilities are extended to regular workmen employed by the principal employer.
11. The contract labourers shall be paid the minimum wages fixed under the minimum wages act.
12. The contract labourers shall be paid with the same rate of Bonus and Ex-gratia payable to the regular workmen employed by the principal employer.
13. The contract labourers shall be provided with free uniforms and shoes, with such facilities are extended to the regular workmen employed by the principal employer.
14. Employment of Child Labour below 14 years is prohibited.

— Assistant Labour Commissioner  
MANGALORE DIVISION, MANGALORE



## **APPENDIX 19: EMPLOYEE COMPENSATION INSURANCE-UDUPI WSS**



**ADDITIONAL ENDORSEMENT DOCUMENT**  
**EMPLOYEES COMPENSATION Insurance Policy**

<b>Insured Name</b>	: SUEZ PROJECTS PVT. LTD., SUEZ INDIA PVT. LTD.	<b>Insurer Office Code</b>	: Delhi LCO 930000 (930000)
<b>Address</b>	: DRS INFRATECH PVT. LTD. JV 1ST FLOOR, 18 CSI COMPOUND, 2ND CROSS, MISSION ROAD, BANGALURU, BENGALURU URBAN, KARNATAKA BANGALORE, KARNATAKA, 560027	<b>Address</b>	: 301, R.G. CITY CENTER LSC, BLOCK B, LAWRENCE ROAD NEW DELHI, 110035
<b>Telephone</b>	: //9871459093	<b>Telephone</b>	: 27196509 / 27196510
<b>Fax</b>	:	<b>Fax</b>	: 27196515
<b>Email</b>	:	<b>Email</b>	: nia.930000@newindia.co.in
<b>GSTIN</b>	: 29ABBAS5237LIZI	<b>GSTIN</b>	: 07AAACN4165C1ZT
<b>UIN</b>	: NA	<b>SAC</b>	: 997139 (Other non-life insurance services excl RI)

Endorsement attached to forming part of Policy Number			: 93000036190100000031
Department	: Liability Insurance	Cover	Workmen's CompensationPolicy
Period of Insurance	: From 05/07/2019 12:00:01 AM To 04/07/2020 11:59:59 PM	Endorsement No	: 93000036190183000006
		Effective Date	: 18 February 2020
Date Signed	: 21/02/2020	Sum Insured₹	: 21,294,192.00
Additional Premium ₹	: 4,432.00	Additional GST ₹	: 798
Refund Premium ₹	: N/A	Refund ST/GST. ₹	: N/A
Policy Duration	: 1 Years		

**Change in Policy Attributes**

Parameter Name	Changed Value	Old Value
Policy Status	06	
Is this risk located in SEZ Zone?	NO	
getSecndOption	100	00

**Change in Policy Risk Attributes**

Risk Number	Parameter Name	Changed Value	Old Value
1	Special Conditions1	SKILLED - 18 (₹ 11544/- PM) SEMI SKILLED-39 (₹ 11154/- PM) UNSKILLED - 97 (₹ 10894/- PM) HIGHLY SKILLED - 3 (RS. 25000/- PM)	SKILLED - 18 (₹ 11544/- PM) SEMI SKILLED-39 (₹ 11154/- PM) UNSKILLED - 97 (₹ 10894/- PM)
1	Sum Insured	21294192	20394192

It is hereby understood and agreed that the endorsement on policy 93000036190100000031 will be in effect from 18 February 2020.

<b>Reason</b>	Notwithstanding anything herein contained to the contrary it is hereby agreed and declared that at the request of insured 3 employees are added under the said policy w.e.f. 18.2.2020.  Details of Additional Premium as under: Sum Insured Premium Additions of 3 ₹ 3.0 Lac per employee ₹ 4432/- + GST extra. (Highly skilled employees)  All other terms and conditions remain unaltered
---------------	---

**Premium and GST Details**

**Premium**  
Verified  
Digitally signed  
by Srinivasan  
Vaideswaran  
Date: 2020.02.21  
16:49:44 IST

**Rate of Tax**

**Amount**

4,432.00

**Policy No. : 93000036190100000031 Document generated by 33309 at 21/02/2020 16:49:43 Hours.**

**Regd. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 1415.**



SGST	0	0
CGST	0	0
IGST	18	798
TOTAL PAYABLE	:	5230
TOTAL PAYABLE (In words)	:	RUPEES FIVE THOUSAND TWO HUNDRED THIRTY ONLY

IN WITNESS WHEREOF THIS POLICY has been signed at \_\_\_\_\_ this 21-Feb-20.

**Extension Details :**

Period of extension	Modified Expiry date
	04-JUL-20

Place :BLOCK B, LAWRENCE ROAD,  
NEW DELHI,110035  
Date :21-Feb-20

For and on behalf of  
The New India Assurance Company Limited  
Authorized Signatory

Tax Invoice No : 93000019E0022246

**IRDA Registration Number: 190**

**APPENDIX 20: SITE SPECIFIC EMP-  
CONSTRUCTION STAGE- January to June  
2020**



# Monthly Environmental Monitoring Report

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Project Number: 43253-027  
January 2020

IND: Karnataka Integrated Urban Water  
Management Investment Program (Tranche 2) –  
Replacement of Old Sewerage Pumping Mains for  
Mangalore City

Package No. 02MNG02

Prepared by



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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udupi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur, and Udupi) improved. The outputs are (i) UWSS infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) project management capacity of KUIDFC and ULBs strengthened capacity. This initial environmental examination (IEE) is based on an assessment sewerage projects within the project area, i.e., Mangalore.

### 2. Existing Sewerage System in Mangalore

The first sewerage system in Mangalore was built in 1961 and was designed for an ultimate flow of 27.04 million liters per day (MLD) estimated for a design population of 200,000 of the year 1991. This scheme was implemented by Public Health Department. The total area covered by the sewerage network is about 25 km<sup>2</sup> with two sewerage districts and seven zones. Total length of sewerage network constructed was about 250 km with pipe diameter varying from 150mm to 600mm with 7,000 manholes

and eight wet wells-cum-pump houses. In 1974, Karnataka Urban Water Supply and Sewerage Board (KUWSDB) extended the sewerage networks within the existing 25 km<sup>2</sup> area by another 245 km with 8,000 units of manholes.

The second scheme was established in 2003 under the ADB funded Karnataka Urban Development and Coastal Environmental Management Project (KUDCEMP) and commissioned in 2007-2008 and the sewerage system was upgraded for an ultimate flow of 88.75MLD for a design population of 624,432.

Sewerage network extended to adjoining areas of old city and to other areas in Mangalore City Corporation (MCC) boundary covering 50.60 km<sup>2</sup>. Overall 60% of Mangalore, 75.60 km<sup>2</sup>, is covered with sewerage systems.

Mangalore city is divided into two parts as Surathkal and Mangalore, further subdivided into seven sewerage districts. Each district has one STP. The total length of sewerage network is about 360 km including 14,875 Manholes with pipe diameter varying from 150 mm to 900 mm, and 22 wetwells.

North District consists of 10 zones (complete Surathkal area) covers about 25 km<sup>2</sup>. West district consists of 6 zones (city center of Mangalore) covers 30.82 km<sup>2</sup>. South district consists of 3 zones (Jeppinamogaru, Bajal, Padil) covers 19.66 km<sup>2</sup>. East district consists of 1 zone (Pachanady, Bondel and Shakatinagara) covers 18.78 km<sup>2</sup>.

**Table 1: Salient Features of Existing Sewerage System in Mangalore**

Location	12°87'N Latitude 74°88'E Longitude
Area	132.45 km <sup>2</sup>
Population 2011	488,487
Number of households	115,036
Road length	1,134 km
Projected population for the year 2016	554,183
Projected population for the year 2031	756,903
Projected population for the year 2046	1,033,778
<b>Existing Underground Drainage (1961 Scheme) by Public Health Department</b>	
Underground drainage Network	250 km (diameter varying from 150 mm to 750 mm) Sewers of stoneware pipes
Total Number of Manholes	8000
Total Number of Wet Wells	8
Total area covered	25 km <sup>2</sup>
Designed Population	2,00,000 for the year 1991
<b>Extension of Underground drainage system (1974) by KUWSDB and MCC</b>	
Underground drainage Network	245 km
Total Number of Manholes	8000
<b>Underground drainage system (2005) under KUDCEMP by KUIDFC</b>	
No. of Sewerage Catchments	24
Underground drainage Network	360 km - diameter varying from 150 mm to 900 mm
Total Number of Manholes	14,815
Total Number of Wet Wells	22
Total Area Covered	70%
Designed Population	624,432
Capacity and Technology of STP	
• STP at Kavour	43.5 MLD UASB
• STP at Pachanady	8.75 MLD ASP
• STP at Bajal	20 MLDASP
• STP at Surathkal	16 MLD ASP
Total Number of House ServiceConnections	45,000

ASP = activated sludge process, km = kilometer, KUDCEMP = Karnataka Urban Development and Coastal Environment Management Project, KUIDFC = Karnataka Urban Infrastructure Development and Finance Corporation, KUWSDB=Karnataka Urban Water Supply and Drainage Board, MCC = Mangalore City Corporation, mm = millimeter, MLD = million liters per day, STP = sewage treatment plant, km<sup>2</sup> = square kilometer, UASB = up-flow anaerobic sludge blanket.

### 3. The proposed subproject:

Under this subproject, it is proposed to replace existing sewage pumping mains, which are damaged, undersized and/or choked up in sewerage zones 3, 4, 6 and 7.

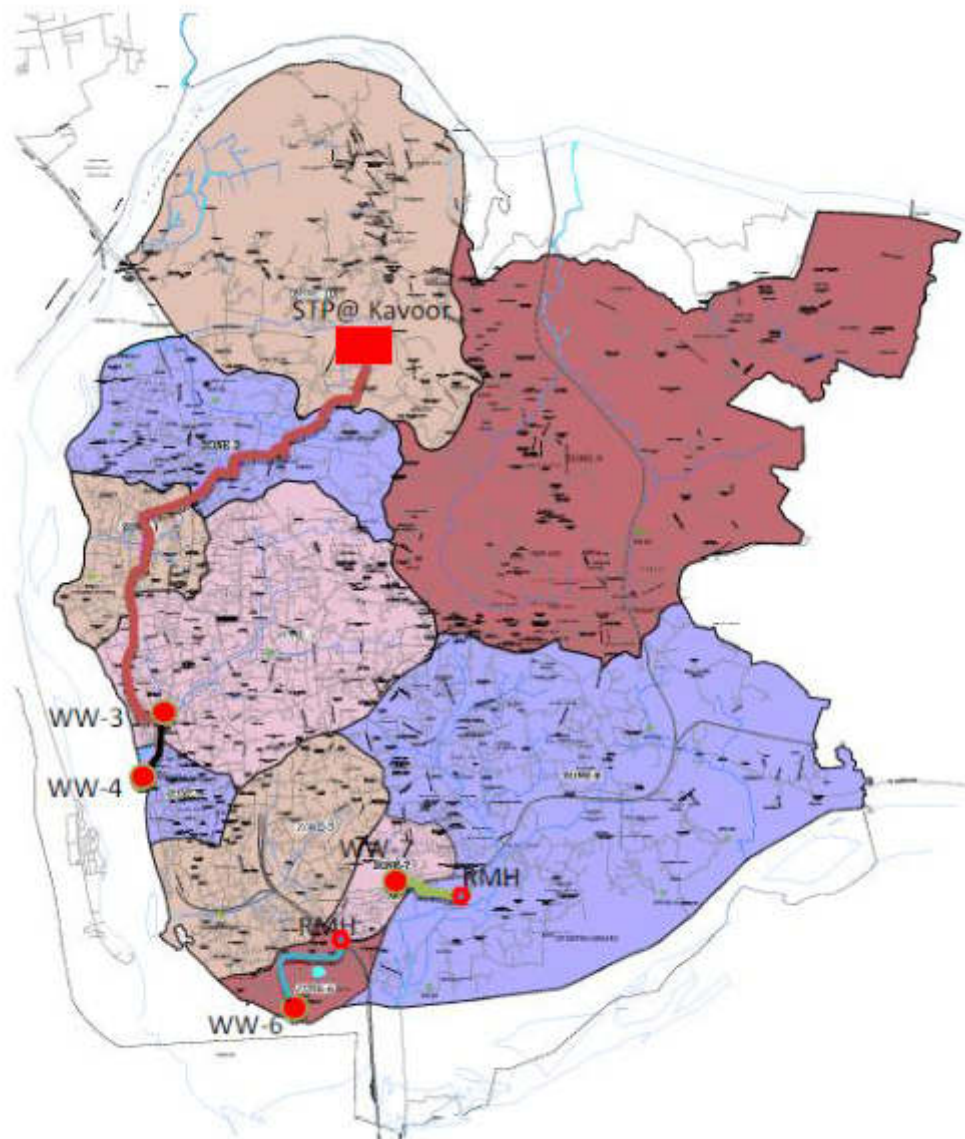
The subproject include providing following sewage mains:

- 7.65 kilometer (km) length 1,100 millimeter (mm) diameter sewer pumping main from Kudroli wet well no.-3 to Kavour sewage treatment plant (STP);
- 0.95 km length 900 mm diameter main from Kandathpalli wet well no.-4 to Kudroli wet well no.3;
- 1.7 km length 450 mm diameter main from Mulihitilu wet well no.-6 to Ridge Manhole near Morgans gate; and
- 1.1 km length 450 mm diameter main from JeppuBappal wet well no.7 to ridge manhole near Yekkur, inside old sewage treatment plant (STP).



includes of replacement of sewerage pumping mains from wet wells to the STP. Table 2 shows the nature and size of the various components of the subproject, based on the detailed engineering design of the subproject. Figure 1 shows the location of four proposed pumping main sections in Mangalore City.

**Figure 1 Key Plan Showing Pumping Main Alignments**



**Table 2: Proposed Subprojectand Components**

Infrastructure	Function	Description	Location
Pumping Mains	Convey the collected sewage from wet well to the STP	<p>Replacement of old pumping main of total length 11.4 km with new mains of ductile iron pipes at following section:</p> <ul style="list-style-type: none"> <li>(i) From Kudroli wet well 3 to Kavoor STP: 7.65 km length and 1,100 mm diameter</li> <li>(ii) From Kandathpalli wet well 4 to Kudroli wet well 3: 0.95 km length and 900 mm diameter</li> <li>(iii) From Mulihitlu wet well 6 to Ridge manhole near Morgans gate: 1.7 km length and 450 mm diameter</li> <li>(iv) From Jeppu Bappal wet well 7 to Ridge manhole near Yekkur, inside old STP: 1.1 km length and 450 mm diameter</li> </ul>	<p>New pumping mains will be laid along the public roads – in the vacant earthen shoulder where it is available, or in the tarmac portion, where there is no vacant land. New pipeline will be mostly laid adjacent to the existing ones which are currently in operation:</p> <p>Road width varies from 3.5 m to 8 m. List of roads and alignment details of each pipeline section is provided in Table 11.</p>

km = kilometer, mm = millimeter, STP = sewage treatment plant.

#### 4. Environmental Management Plan

An environmental management plan (EMP) is included as part of this IEE, which includes: (i) mitigation measures for environmental impacts during implementation; (ii) an environmental monitoring program, and the responsible entities for mitigating, monitoring, and reporting; (iii) public consultation and information disclosure; and (iv) a grievance redress mechanism. A number of impacts and their significance have already been reduced by amending the designs.

Karnataka Integrated Urban Water Management Investment Program	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Replacement of Old Sewerage Pumping Mains for Mangalore City	<b>Name of the Contractor:</b> DRS Infra Tech Pvt, Ltd.,
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Mangalore	<b>Name of SE/EE/AE Of concerned division PIU :-</b> AE - Mr. Shiv Kumar
<b>Date of monitoring:</b> 20/01/2020	<b>Name of Environment, Health And Safety (EHS) Engineer :-</b> Mr. Madukar

### Status of implementation of Environmental Management Plan for Anticipated Impacts –Construction– Mangalore

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Construction Impacts	<ul style="list-style-type: none"> <li>Impacts due to excess excavated earth, excess construction materials, solid waste etc.; and</li> <li>Occupational hazards which can occur to workers and public during work.</li> </ul>	<p>Prepare and submit a Method Statement for pumping main pipeline works in a table format with appended site layout map and cover the following:</p> <ol style="list-style-type: none"> <li>1. Work description; No. of workers (skilled and unskilled); Details of Plant, equipment and machinery, vehicles;</li> <li>2. Work duration (total, and activity-wise, for example for pipe laying, from excavation to road resurfacing/testing);</li> <li>3. Personal Protection Equipment (PPE) (helmet, gloves, boots, etc.) details for each type of work;</li> <li>4. Details of materials at each site (type and quantity);</li> </ol>	Construction Contractor	<ul style="list-style-type: none"> <li>Site inspection and record verification; - Done.</li> <li>Appointment of Environmental, Health and Safety (EHS) Engineer by contractor prior to start of work - Done</li> <li>Site specific Occupational Health and Safety (OHS) plan;</li> <li>Spoil and waste management plan; and</li> <li>Complaints from sensitive receptors and public.</li> </ul>	Good construction practice to be followed by contractor – no additional costs	<ol style="list-style-type: none"> <li>1. Maintaining daily work records <b>Attached in annexure 5 a &amp; b</b></li> <li>2. Complied. <b>Attached in Sep 2019 annexure 3</b></li> <li>3. Complied and PPEs are provided to workers on site. <b>Attached in annexure Sep 2019 1.v</b></li> <li>4. Contractor maintained registers for pumping main</li> </ol>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>5. Risks/hazards associated with the work (for example, Trench excavation will have risks such as trench collapse, persons/vehicles falling into trench, structural risk to nearby buildings, damage to buildings, infrastructure etc.);</p> <p>6. Construction waste/debris generated (details and quantity);</p> <p>7. Detail the sequence of work process (step-by- step) including specific details of each work;</p> <p>8. Contractor's supervision and management arrangements for the work; Emergency: Designate (i) Responsible person on site, and (ii) first aider; and (iii) Typical site layout plan including pipe trenching, placement of material, excavated earth, barricading, etc.</p> <p>9. The pumping main lines are to be laid along the roads, Roads are provided with side drains to carry rain water. The excavated soil, placed along the trench may get disturbed due to wind, rain water and the movement of</p>				<p>sites and recommended to maintain for each site</p> <p>5. Building and infrastructure were not found near excavation area. And instructed contracting agency to put hard barricades.</p> <p>6. Contractor maintained register for damaged infrastructure. Attached as <b>Annexure-11 in May - 2019 report.</b> Recommended contracting agency to Updated work record monthly</p> <p>7. Not complied. Work plan has to be prepared.</p> <p>8. Not Complied. First aider not</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>workers, vehicles and pedestrians, and spill onto road way – disturbing road users, creating dust, road safety issues, etc., and also into nearby open drains.</p> <p><b>The following should be included in the site layout plan:</b></p> <ul style="list-style-type: none"> <li>a) Provide barricading/security personnel at the site to prevent entry/trespassing of pedestrian/vehicles into the work zone;</li> <li>b) Location of temporary stockpiles and provision of bunds;</li> <li>c) Separation of stockpiles areas with workers/vehicle movement paths to avoid disturbing the stockpiled soil;</li> <li>d) Wetting of soil to arrest dust generation by sprinkling water; and</li> <li>e) Waste/surplus soil utilization and disposal plan – indicate expected duration of temporary stockpiling along the trench at each site and identify final surplus soil utilization/disposal site in consultation with program implementation unit (PIU).</li> </ul>				<p>provided.</p> <p>9. Typical site layout plan not prepared</p> <p>a) Barricading and security personals are provided on working site.</p> <p>b) Contractor is dumping surplus soil in the Pachanady Solid waste management with permission of PIU.</p> <p>c) Contractor is dumping surplus soil in the Pachanady Solid waste management.</p> <p>d) Complied.</p> <p>e) Site layout plan Not prepared as per given mitigation Measures.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Utilities	Disturbance/ damage to existing utilities on the sites  (Telephone lines, electric poles and wires, water lines within proposed project sites)	<p>10. At least two-weeks prior to start of work at any section, Identify utilities that will be required to be temporarily disturbed / shifted for the construction work;</p> <p>11. Liaise with the respective utility department, provide prior information to the affected public and restore the utilities as soon as the work is complete</p> <p>12. Provide contingency services where required (temporary diversion of drains, provision of water supply by tankers, etc.,)</p> <p>13. Coordinate with the respective department and ensure that</p>	Construction Contractor and PIU	<p>Section-wise list of utilities to be shifted / disturbed to be submitted to PIU two-weeks prior to start of work at that section along with a plan to shift and contingency steps to be taken</p> <p>Record to confirm that contingency services are provided and all damaged utilities are restored after the work</p>	Part of project cost	<p>10 Complied-Recommended Contractor to maintain list of utilities identified prior to start of work at any section.</p> <p><b>11</b> Proper record of restoration of the utilities and letter of communication with Different departments and Public is available and Copy should be maintained by Contractor. <b>Attached as Annexures-2, 3, 4 &amp; 5 in May - 2019 report</b></p> <p>12 Work is in progress and Recommended contractors to provide diversion of drains and provision of water tanker</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>electricity and telephone services are restored quickly</p> <p>14. Reconstruct the damaged compound walls, culverts and drains immediately after the completion of pipeline work in that particular section</p>				<p>whenever and wherever required on site.</p> <p>13 Work in progress and no such damage and restoration found in this month during site visit.</p> <p>14 Work in progress and no such damage and restoration happened in this month.</p> <p>List of identified damaged compound walls, culverts and drains for reconstruction have to be maintained. Record of before and after Condition also to be maintained at site by contractor.</p>
Construction work camps, stockpile areas, storage areas, and	Disruption to traffic flow and sensitive areas and receptors	<p>15. Prioritize areas within or nearest possible vacant space in the subproject location;</p> <p>16. Avoid locating construction work camps close (100 m away) to</p>	Construction Contractor	List of selected sites for construction work camp, storage area and disposal area.	Good construction practice to be followed by contractor –no	<p>15 Compiled</p> <p>16 Compiled – Advised contractor to</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
disposal areas		<p>residential areas;</p> <p>17. Do not consider residential areas; for stockpiling the waste/surplus soil; and</p> <p>18. Material stockpiles shall be protected by bunds during the monsoon to arrest the silt laden runoff into drains.</p>		<p>Complaints from sensitive receptors</p>	additional costs	<p>mark dumping yard location on google map which is complied. <b>Attached in Sep 2019 annexure 4</b></p> <p>17 Complied- Contractor Dumping surplus soil in the Pachanady Solid waste management treatment plant. Location is marked on Google map. <b>Attached in Sep 2019 annexure 4</b></p> <p>18 Instructed contracting agency, if any stockpiles have been stored temporarily in working site must be provided by bunds or dumped in the stock yard.</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
						Attached in annexure 4
Source of construction materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution	<p>19. Contractor should obtain material from existing mines approved/licensed by Mines and Geology Department/ Revenue Department only;</p> <p>20. Verify suitability of all material sources and obtain approval of implementing agency;</p> <p>21. No new quarry sites shall be developed for the subproject purpose; and</p> <p>22. Submit a monthly statement of construction material procured indicating material type, source and quantity.</p>	Construction Contractor	Check Sources and approval	Good construction practice to be followed by contractor –no additional costs	<p>19 Contractor obtained material from authorised agency but no supporting documents maintained by Contractor.</p> <p>20 Contractor has been recommended to maintain the Proper Documentation.</p> <p>21 Complied - No new quarry sites developed by contractor for this project</p> <p>22 Complied</p>
Air quality	Dust and emissions from construction activity may de-grade the air quality	<p>23. Consult with PIU on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</p> <p>24. Damp down exposed soil and any stockpiled on site by</p>	Construction Contractor	Site observations Informal Ambient air quality monitoring (4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months, parameters -	<p>Good construction practice to be followed by contractor</p> <p>Contractor's cost – air quality monitoring (4</p>	<p>23 Complied- Recommended contractor to maintain the copy of Document.</p> <p>24 No such exposed</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		spraying with water when necessary during dry weather; 25. Bring materials (aggregates, sand, etc. gravel) as and when required; 26. Use tarpaulins to cover sand and other loose material when transported by vehicles; 27. Stockpile sand and other loose material only in barricaded area and protect/cover by tarpaulins to avoid dust generation 28. Clean wheels and undercarriage of vehicles prior to leaving construction site; 29. Fit all heavy equipment and machinery with air pollution control devices which are operating correctly; ensure valid Pollution Under Control (PUC) Certificates for all vehicles and equipment used in the construction activity; and  30. Carry out air quality monitoring.		SPM, RSPM, SOx, NOx)	locations x 9 samples in construction x 5000 = INR 1,80,000)	soil and stockpiled were found but instructed contracting agency must spray water wherever necessary.  25 Complied  26 Complied 27 Stockpile, sand and other loose material are kept in barricaded areas. 28 Complied 29 Not Complied.  Recommended to Contractor to maintain Pollution under Control (PUC) Certificates for all vehicles and equipments used in the construction.

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
						30 Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter.
Noise Level	High noisy construction activities may have adverse impacts on sensitive receptors and structures	<p>31. Plan activities in consultation with the PIU so that activities with the greatest potential to generate noise (road cutting activity) are conducted during periods of the day which will result in least disturbance;</p> <p>32. Construction work shall be limited to day light hours (6 AM to 6 PM) for all the works located within the town; Provide prior information to the local public about the work schedule;</p> <p>33. Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiselling;</p> <p>34. Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and</p>	Construction Contractor	<p>Complaints from sensitive receptors</p> <p>Site observations</p> <p>Ambient noise monitoring (day and night time / 24 hours monitoring at 4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months)</p>	<p>Good construction practice to be followed by contractor</p> <p>Contractor's cost – noise level monitoring (4 locations x 9 samples in construction x 2500 = ₹90.000)</p>	<p>31 Complied.</p> <p>32 Complied.</p> <p>33 Till now such buildings are not found and will be complied when such sensitive buildings observed.</p> <p>34 However; noise will be minimized by using construction equipment by using vehicle</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		35. Maintain maximum sound levels not exceeding 80 decibels (dB) when measured at a distance of 10 m or more from the vehicles				silencers.  Recommended to fit jackhammers with noise-reducing mufflers, and portable street barriers at sensitive receptors.  35 Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter
Water Quality	Impacts on surface drainage and water quality due to contaminated runoff from construction areas in monsoon	36. Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;  37. Stockpiles shall be provided with temporary bunds;	Construction Contractor	Site observations	Good construction practice to be followed by contractor –no additional costs	36 Contractor not carried out Major Construction works during monsoon season. Stockpiling of earth fill not observed during site visit.  37 Work in progress and no such stockpiles found on work site.



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>38. Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with Implementing Agency on designated disposal areas;</p> <p>39. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</p> <p>40. Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund;</p> <p>41. Dispose any wastes generated by construction activities in designated sites; and,</p> <p>42. Ensure that there is no spill over of excavated earth, construction materials like cement concrete into the drain near wet well no. 3; also ensure that the drain flow is not blocked / disturbed during</p>				<p>38 Complied- Contractor Dumping surplus soil in the Pachanady Solid waste management treatment plant</p> <p>39 NA - Surface water bodies not observed along the Project alignment.</p> <p>40 Complied. Contractor not using fuels and lubricants in bulk. Whenever required fuel used on particular day onsite. But instructed contracting agency to provide storage yard if fuel stored in bulk.</p> <p>41 Complied Followed by contracting agency</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		the work				42 Complied  Followed by contracting agency
Landscape and aesthetics	Impacts on landscape and aesthetics due to construction activity	<p>43. Manage surplus soil, construction debris and solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>44. Coordinate with PIU / MCC for beneficial uses of road debris and surplus soils in on-going construction works or for temporary storage for future use or disposal in landfill</p> <p>45. In unavoidable case of disposal, debris shall be disposed at landfill site or site approved by PIU / MCC; waste shall not be disposed in the forest areas and in or near water bodies/ rivers;</p> <p>46. Prepare and implement Waste Management Plan – it should present how the surplus waste generated will temporarily stocked at the site, transported, reused and disposed properly;</p> <p>47. Surplus soil and debris from work site shall be removed / cleared at the end of each day of work;</p>	Construction Contractor	<p>Work site inspection</p> <p>Complaints from public</p>	Good construction practice to be followed by contractor – no additional costs	<p>43 Complied</p> <p>44 Compiled-disposed in the Pachanady Solid waste management treatment plant</p> <p>45 No such activities observed at the time of inspection</p> <p>46 Partially Complied-Waste Management Plan prepared by contractor needs to be updated.</p> <p>47 Complied  Followed by</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>there shall be no stock piling of debris / surplus soil at the site</p> <p>48. Recover used oil and lubricants and reuse or remove from the sites;</p> <p>49. Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p>50. Request program implementation unit (PIU)/ project management, design and construction supervision consultant (PMDSCS) to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>				<p>contracting agency</p> <p>48 Complied</p> <p>49 Complied</p> <p>50 Construction work is in progress.</p>
Construction works	Hindrance to traffic movement / accessibility	<p>51. Plan pipeline work in consultation with the traffic police; Prepare a Traffic Management Plan – a template is provided for reference at Appendix 8.</p> <p>52. Strictly follow the pipe laying method presented in Table 13 so that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time</p> <p>53. Provide for immediate consolidation of backfilling material to desired compaction – this will allow immediate road restoration and therefore will minimise disturbance to the</p>	Construction Contractor	Work Program Review	Good construction practice to be followed	<p>51 Traffic Management Plan prepared by Contractor and it needs to be updated again.</p> <p>52 Complied</p> <p>53 Complied.</p> <p>54 Complied.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>traffic movement;</p> <p>54. Do not close the road completely, ensure that work is conducted onto edge of the road; allow traffic to move on one line;</p> <p>55. In narrow roads with considerable traffic (Jama Masjid- Road, Ashok Nagara road, and old port / Kandathapalli Road), work shall be undertaken between two intersections and diverting traffic in that section to a parallel road, so that through traffic is not blocked fully.</p> <p>56. In some sections on Jama Masjid- Road, Old Port Road and Kandathapalli Road there are no parallel roads to divert traffic; in those sections work shall be conducted in the nights or in low traffic hours in day time; but in case of day-time work traffic shall not be blocked for more than 2-3 hours at a stretch; prior information shall be provided to public – a week before and a day before work, about the schedule of the work and temporary road closure; proper signage shall be provided</p> <p>57. Maintain safe pedestrian access at all times to the houses along the work site</p> <p>58. At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing</p>				<p>55 Complied. <b>(Attached in june 2019)</b></p> <p>56 Complied.  Work is carried out in low traffic hours in day time and; prior information given about the schedule of the work.</p> <p>57 Complied <b>(Attached in June 2019) and</b> no such work are executing near residential areas during site visit</p> <p>58 Caution board provided at work site. Entry restriction information; competent official's name and contact for</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>agency and contractor details; nature and schedule of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints.</p> <p>59. In densely populated areas like market place or layouts, roads with heavy traffics additional care has to be taken.</p> <p>60. Hard barricades should be mandatorily provided along with caution board and traffic diversion boards. Some of the densely populated area identified in project area are Old Port Road, Jeppubappal to Suterpete</p>				<p>public complaints provided. Recommended all sign board must be Retro reflective <b>(Attached in Sep 2019 annexure 4 g, h, i, j, k and l)</b></p> <p>59 Respective Engineers present on the site for continuous monitoring</p> <p>60 Traffic diversion boards, hard barricading and Caution boards provided. Recommended all sign board must be Retro reflective <b>(Attached in Sep 2019 annexure 4 g, h, i, j, k and l)</b></p>
Nuisance/ disturbance to sensitive areas	Schools, hospitals and religious places) due construction work in the proximity (within 250 m of such place)	<p>61. No material should be stocked in this area; material shall be brought to the site as and when required</p> <p>62. Conduct work manually with small group of workers and less noise; minimize use of</p>	Construction Contractor	<p>Complaints from sensitive receptors</p> <p>Work program</p>	Good construction practice to be followed by contractor – no additional costs	<p>61 Complied</p> <p>Followed by contracting agency</p> <p>62 Complied</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>equipment and vehicles</p> <p>63. No work should be conducted near the religious places during religious congregations</p> <p>64. Material transport to the site should be arranged considering school timings; material should be in place before school starts;</p> <p>65. Notify concerned schools, hospitals, etc. 2 weeks prior to the work; conduct a 30 minutes awareness program at on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>				<p>Followed by contracting agency</p> <p>63 Followed by contracting agency</p> <p>64 Complied</p> <p>Followed by contracting agency</p> <p>65 Complied – Recommended to maintain documentary Evidence</p>
Socio-Economic-Livelihood Impediment of access to houses and business	Impediment of access to houses and business	<p>66. Leave space for access between mounds of excavated soil, where required</p> <p>67. Provide wooden planks/footbridges for pedestrians and metal sheets for vehicles to allow access across trenches to premises where required.</p>	Construction Contractor	<ul style="list-style-type: none"> <li>• Number of walkways, wooden planks and foot bridges;</li> <li>• Complaints from public;</li> <li>• Spoil Management Plan; and</li> <li>• Traffic Management plan.</li> </ul>	Good construction practice to be followed by contractor – no additional costs	<p>66 Complied.</p> <p>67 Complied – access provided by contractor. <b>(Attached in june 2019 )</b></p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>68. Consult affected business people to inform them in advance when work will occur</p> <p>69. Address livelihood issues, if any; implement the Resettlement Plan to address these issues</p> <p>70. Provide sign/caution/warning boards at work site indicating work schedule and traffic information; prevent public entry into work sites through barricading and security; and</p> <p>71. Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p>				<p>68 Complied - Public Consultation were conducted for the affected people to provide prior information about the work.</p> <p>69 Complied implementation Resettlement Plan to address these issues in progress <b>(Attached in June 2019)</b></p> <p>70 Complied - Traffic diversion boards, Hard barricading and Caution boards provided<b>(Attached in June 2019)</b> work schedule not provided.</p> <p>71 Complied. Recommended all project information</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		72. Prepare a Traffic Management Plan – a template is provided for reference at Appendix 8. The site-specific traffic management plan should be part of the Construction Management Plan.				board and sign board must be Retro reflective ( <b>Attached in annexure 4 g, h, i, j, k and l</b> )  72 Site-Specific Traffic Management Plan Prepared by contractor is not adequate and to get it updated again. <b>Recommended to comply (Attached in June 2019)</b>
Socio-Economic Employment	Impact on local employment generation	73. Employ local labour force to the maximum extent, if manpower is available	Construction Contractor	Employment Records Compliance to labour laws	NA	73 Complied
Occupational Health and Safety	Workers occupational health and safety	74. Develop and implement site-specific Health and Safety (H&S) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use Personal Protective Equipment (PPE); (c) H&S Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;	Construction Contractor	Site specific OHSEquipped first aid station.  Potable watersupply andclean eating area.  PPE and medical insurance	Good construction practice to be followed by contractor – no additional costs	74 Complied Site-specific Health and Safety (H&S) Plan prepared by contractor. Proper implementation required.  75 Not Complied.



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>75. All trenches in sandy and mixed sandy soils irrespective of depth and trenches deeper than 2m (or less, if designed by the engineer) in other soils shall be protected against collapse to avoid safety risks to workers, public and nearby buildings/structures; provision has been made for well point type dewatering, sheet piling for shoring and strutting etc., precaution shall be taken at the time of execution;</p> <p>76. Take all necessary precaution during isolation and blocking of existing pumping main and connecting the new main to the existing system. Skilled supervision, appropriate apparatus and PPEs must be used;</p> <p>77. Extreme care shall be taken while working on existing sewer lines/ manholes, where they are required to be shifted, to safeguard the workers against the gaseous emissions and hazardous working conditions</p> <p>78. Create awareness among all workers, supervisors and site engineers on potential hazard conditions and safety risks in working with existing/old sewer lines; working conditions may be hazardous with harmful gaseous emissions (hydrogen sulphide,</p>				<p>76 Complied. PPEs like nose masks, oxygen masks for emergency, ear plugs and Hand gloves are provided. (<b>Attached Sep 2019 in annexure 1.v</b>)</p> <p>77 PPEs like nose masks, oxygen masks for emergency. ear plugs and Hand gloves are provided</p> <p>78 Complied</p> <p>79 Oxygen masks for emergency</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		carbon monoxide, methane, etc.) and oxygen deficiency; 79. Provide all necessary personnel protection equipment; including oxygen masks for emergency use;  80. Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site; 81. Provide medical insurance coverage for workers;        82. Secure all installations from unauthorized intrusion and accident risks; 83. Provide supplies of potable drinking water; 84. Provide clean eating areas where workers are not exposed to hazardous or noxious substances; 85. Provide H & S orientation training to all new workers to				not provided PPEs are provided  80 Not Complied   81 Employees Compensation Insurances taken for 40 Unskilled and for 10 semiskilled workers      82 Complied.  83 Complied.  84 Specific eating area not provided.  85 Safety and Tool box meeting

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p>86. Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>87. Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>88. Ensure moving equipment is outfitted with audible back-up alarms;</p> <p>89. Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.</p> <p>90. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate;</p> <p>91. Disallow worker exposure to noise level greater than 85 dB for duration of more than 8 hours per day without hearing</p>				<p>conducted. (Attached in Sep 2019 annexure 1.u)</p> <p>86 Not Complied</p> <p>87 Complied.</p> <p>88 Compiled</p> <p>89 Not Complied.</p> <p>90 Signage are Provided but not in accordance with international standards</p> <p>91. Duration of working hours- 8 hours per day. Hearing protection is provided by contractor. (Attached in Sep</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>protection. The use of hearing protection shall be enforced actively; and</p> <p>92. Overall, the contractor should comply with IFC EHS Guidelines on Occupational Health and Safety (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2BAnd%2BSafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2BAnd%2BSafety.pdf?MOD=AJPERES</a>).</p>				<p><b>2019 annexure 1.v)</b></p> <p>92. Not Complied</p>
Community Health and Safety	Danger due to deep excavations, hindrance to traffic and chances of accident,	<p>93. All trenches in sandy and mixed sandy soils irrespective of depth, and trenches deeper than 2m (or less, if desired by engineer) shall be protected against collapse to avoid safety risks to workers, public and nearby buildings/structures; provision has been made for well point type dewatering, sheet piling for shoring and strutting etc., precaution shall be taken at the time of execution;</p> <p>94. Plan material and waste routes to avoid times of peak-pedestrian activities;</p> <p>95. One week prior to start of work at any section, a joint inspection shall be conducted along with PIU and MCC to identify risk areas and buildings and take</p>	Construction Contractor	<ul style="list-style-type: none"> <li>• Traffic Management Plan</li> <li>• Complaints from public</li> </ul>	Good construction practice to be followed by contractor – no additional costs	<p><b>93 Traffic Management Plan submitted by contractor is not sufficient and it needs updation.</b></p> <p>No such deep trench found during site visit but instructed contracting agency to Provide sheet piling for shoring and strutting if depth is more than 2m.</p> <p>94 Partially Complied – waste management plan not prepared</p> <p>95 Complied. Joint inspection conducted along with</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>necessary precautions for safe conduct of work;</p> <p>96. Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p> <p>97. Provide road signs and flag persons to warn of dangerous conditions, for all the sites along the roads; and</p> <p>98. Overall, the contractor should comply with IFC EHS Guidelines Community Health and Safety (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2BCommunity%2Bhealth%2Band%2BSafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2BCommunity%2Bhealth%2Band%2BSafety.pdf?MOD=AJPERES</a>).</p>				<p>PIU and MCC to identify risk areas and buildings to take necessary precautions <b>but not maintained record of joint inspection.</b></p> <p>96 Complied</p> <p>97 Complied Followed by contracting agency</p> <p>98 Contractor Not Complied with IFC EHS Guidelines Community Health and Safety Recommended and attached as</p>
Worker Camps	Temporary worker camps	<p>99 The contractor should operate the temporary worker camps in compliance with IFC EHS Guidelines specific to workers accommodation (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_gpn_workers_accommodation">http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_gpn_workers_accommodation</a>), including the following:</p>	Construction Contractor	<p>List of selected sites. Written consent of land owner</p> <p>Waste Management plan</p>	Good construction practice to be followed by contractor – no additional costs	<p>99. Contractor Not operating the temporary worker camps in compliance with IFC EHS Guidelines specific to workers accommodation.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		100 Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located within reasonable distance of work site;				100 Complied.
		101 Minimize removal of vegetation and disallow cutting of trees;				101 Complied.
		102 Labour camps shall include accommodation for workers/labourers along with other basic amenities such as kitchen, potable water supply, sanitation (toilets, bathrooms, washing areas and water supply for such needs), first aid room as well as garbage collection and disposal facility.				102 Proper Kitchen, bathrooms garbage room yet to be provided.
		103 The roof height of the worker's and labour camp shall not be less than 3 m from floor level to the lowest part of the roof.				103 Complied.
		104 The camps shall be floored with concrete, shall be kept clean, and with proper cross ventilation, and the space provided shall be on the basis of one sq.mt per head or as per the relevant regulation, whichever is higher.				104 Not Complied
		105 Fire and electrical safety pre-cautions shall be adhered to.				105. Not Complied.
		106 Cooking, sanitation and washing areas shall be provided separately.				106. Separate Cooking area yet to be provided by Contractor. Washing area is not proper as per the stipulated
		107 The Contractor shall maintain necessary living accommodation and ancillary facilities (including provision of clean fuel to prevent damage to forests and to prevent fuel wood cutting and				

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>burning by labor) in functional and hygienic manner.</p> <p>108 The site must be graded and rendered free from depressions such that water does not get stagnant anywhere.</p> <p>109 The entire boundary of the site should be fenced all around with barbed wire so as to prevent the trespassing of humans and animals.</p> <p>110 Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 lpcd); all water storage structures must be cleaned regularly and covered properly to avoid any contamination;</p> <p>111 Provide separate facilities for men and women; sanitary facilities shall be properly build and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons;</p> <p>112 Train employees in the storage and handling of materials which can potentially cause soil contamination;</p> <p>113 Recover used oil and lubricants and reuse or remove from the site;</p> <p>114 Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>115 Remove all wreckage, rubbish, or temporary structures which are</p>				<p>norms.</p> <p>107. Partially Complied</p> <p>108. Such depressions not found during site visit</p> <p>109. Not complied.</p> <p>110. Complied.</p> <p>111. Complied.</p> <p>112. Complied.</p> <p>113. Reused.</p> <p>114. Complied.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		no longer required; and 116 Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.				115. Complied.  116. Work is in progress.

#### Conclusion:-

Overall The Contractor's compliance with the Environment and Health and safety requirements of the Project needs improvement. Contractor maintained copy of IEE. Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019. HIV AIDS Awareness Training programme has to be conducted by Contractor. Instructed Contracting Agency to submit September, October, November, December 2019 month and January 2020 month EMP reports with PIU letter.

#### Recommendation:-

Key Issues: Following are the key issues which required immediate necessary action / further improvement.

S.No	Monitoring of Mitigation / Key Issues to be complied	Recommendation and Action Required by Contractor	Time line/Remarks
1.	Site inspection and record verification	<ul style="list-style-type: none"> <li>Site inspection Register must be maintained</li> </ul>	<b>Complied</b>
2.	Appointment of Environmental, Health and Safety (EHS) Engineer by contractor prior to start of work - Done		<b>Complied</b>
3.	Site specific Occupational Health and Safety (OHS) plan;	Site specific Occupational Health and Safety including ( International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines on occupational health and safety) <ul style="list-style-type: none"> <li>Institutional setup</li> <li>List of PPE provided and standards followed, Site specific OHS Equipped first aid station, Medical insurance. Hospitals recognized in emergency.</li> <li>Health Camps and Check -up should conducted for the workers</li> <li>Necessary HIV/AIDS prevention measures and awareness programme conducted by Contractor.</li> <li>Electrical measures safety</li> <li>Fire safety measures should be reflect in OHS plan.</li> <li>Weekly and monthly monitoring and safety training programs have</li> </ul>	OHS Plan submitted – but not adequate, recommended the contractor to update the same and submit



		to be documented properly including mock drill register	
4.	Waste management plan; and	<ul style="list-style-type: none"> <li>Type of waste generated (Solid and Hazardous)</li> <li>Quantity of different waste generated at site</li> <li>List and type of garbage bins provided</li> <li>Time of waste collection</li> <li>Location of Waste disposal site identified consultation with PIU</li> <li>If private land NOC from owner.</li> <li>Location of Waste disposal site mark on google map.</li> <li>The contractor will provide garbage bins in the camp and construction site and it will be ensured that these are regularly emptied and waste is disposed off in a hygienic manner as per the Solid Waste (Handling and Management) Rules, 2016.</li> </ul>	Comply with in 15 days
5.	Complaints from sensitive receptors and public.	<ul style="list-style-type: none"> <li>Complaints register must be maintained at each site.</li> </ul>	Complaint register maintained at pumping station and recommended the contractor to maintain the complaint register at all working sites
6.	Section-wise list of utilities to be shifted / disturbed to be submitted to PIU two-weeks prior to start of work at that section along with a plan to shift and contingency steps to be taken	<ul style="list-style-type: none"> <li>Section-wise list of utilities to be shifted/ disturbed</li> <li>Submission Letters of Section-wise list of utilities to be shifted/ disturbed to PIU</li> <li>Plan to shift and contingency steps to be taken</li> </ul>	Complied partially - Communication Letters to different Departments from PIU maintained. Contractor has to maintain the recommended documents Comply with in 7 days
7.	Record to confirm that contingency services are provided and all damaged utilities are restored after the work		Complied
8.	List of selected sites for construction work camp, storage area and disposal area	<ul style="list-style-type: none"> <li>Identify the location consultation with PIU</li> <li>Letters of communications and finalization location</li> <li>Mark the location on google map.</li> </ul>	Complied - letter for finalization of the disposal site. The <b>letters</b> for finalization of the locations for (work camp, storage area) have to be complied. Marking the locations on Google map complied
9.	Check Sources and approval	<ul style="list-style-type: none"> <li>Maintain Copy of Certification of authorized material sources</li> </ul>	Comply with in 5 days
10.	Site observations Informal Ambient air quality monitoring (4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months, parameters - SPM, RSPM, SOx, NOx)	<ul style="list-style-type: none"> <li>During the construction phase, the contractor will carry out environmental monitoring Air quality by engaging NABL approved laboratory</li> </ul>	Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter
11.	Site observations	<ul style="list-style-type: none"> <li>Maintain Register for site observation at site</li> </ul>	Complied

12.	Ambient noise monitoring (day and night time / 24 hours monitoring at 4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months)	<ul style="list-style-type: none"> <li>During the construction phase, the contractor will carry out environmental monitoring Air quality by engaging NABL approved laboratory</li> </ul>	Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter
13.	Work Program Review	<ul style="list-style-type: none"> <li>Work plan must be prepared and review</li> </ul>	Comply with in 7 days
14.	Number of walkways, wooden planks and foot bridges;	<ul style="list-style-type: none"> <li>List of walkways, wooden planks and foot bridges provided with location must be maintained</li> </ul>	Work in progress and instructed contractors to provide walkways, wooden planks and foot bridge if area is excavated.
15.	Spoil Management Plan	<p>Waste material brought up during the course of an excavation or a dredging or mining operation.</p> <ul style="list-style-type: none"> <li>Type and quantity of waste generated will be waste generated.</li> <li>Reuse of quantity of waste generated in any other projects or any other place</li> <li>Amount of waste disposed in identified disposal areas consultation with PIU</li> <li>If private land NOC from owner.</li> <li>Location of Waste disposal site mark on google map</li> </ul>	Spoil Management Plan submitted – not adequate Comply with in 5 days
16.	Traffic Management plan		<p>Traffic Management Plan submitted –not adequate and recommended the contractor to update the same and submit</p> <p>Comply with in 5 days</p>
17.	Employment Records Compliance to labour laws	<ul style="list-style-type: none"> <li>Attendance registers of labour at each site.</li> <li>Register of payment to the workers at each site.</li> </ul>	<p><b>Attendance register is maintained attached in annexure 4. but Register of payment to the workers Not maintained</b></p> <p>Comply with in 5 days</p>
18.	Site specific OHS Equipped first aid station	<ul style="list-style-type: none"> <li>Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall be provided in all work zones.</li> <li>Trained first aid personal will be available at the construction site.</li> <li>Emergency numbers will be displayed prominently at camp and construction site.</li> <li>Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can be used as ambulance, will be available at construction site.</li> <li>The contractor shall identify nearby hospital, which could be used in case of emergency.</li> </ul> <p>First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</p>	Comply with in 10 days (when work is in progress all this facilities must be provided)
19.	Potable water supply and clean	<ul style="list-style-type: none"> <li>Potable water supply: Sufficient (minimum 20 liters at any given</li> </ul>	Complied

	eating area.	point of time) and clean (potable) water for drinking shall be placed in the mess/labour camp and at the each construction site.	
20.	PPE and medical insurance	<ul style="list-style-type: none"> <li>• The Contractor shall provide and ensure enforcement with zero tolerance the following:</li> <li>• Safety vests will be used by workers when on the construction site.</li> <li>• Hard hat or helmets to all workers, supervising staff and inspecting official entering work site, plant area, and engaged in loading/unloading operations</li> <li>• Protective footwear, protective goggles and nose masks (as required) will be provided to the workers employed. These shall be provided to all workers employed for handling of cement, mortar, concrete and similar dust generating operations shall be provided.</li> <li>• During reinforcement/fabrication operation, safety appliances like: helmets, protective eye wear, gum boots and hand gloves shall be provided to labour/workers at the construction site.</li> <li>• Welder's protective eye-shields will be provided to workers who are engaged in welding works.</li> <li>• Nettings below and on the sides of overhead construction to prevent mishaps due to accidental fall of a workman, tool and/or debris shall be provided.</li> <li>• Proper moving guards will be provided at all moving machines, like motors and pulleys.</li> <li>• All workforces on the construction site shall be provided with identity cards.</li> <li>• High risk areas are to be provided with warning signage.</li> </ul>	Complied
21.	List of selected sites. Written consent of land owner	<ul style="list-style-type: none"> <li>• If any Activity related to project carrying out in private land written consent of land owner (NOC) must be taken.</li> </ul>	If any, Comply with in 20 days



**Mahmad Raphiyoddin Shaphiyoddin Malik**  
**Environmental Specialist, EGIS,**  
**Mangalore, KIUWMIP – Tranche 2.**

## Annexure -1

### Status of Site Observations for the month of 20<sup>th</sup> January 2020

S.No	Observation		Recommendation
a	Water sprinkling at dry location at kadathpalli		Water is sprinkled by contracting agency after work in dry areas to avoid dust generation at work site kandatpalli site

<b>b</b>	PPEs at work locations and hard barricading at konchady loaction		<p>All workers are wearing PPEs during site visit at konchady location</p> <p>Hard barricading should be maintained at work site</p>
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<b>c</b>	Safety helmets jackets, shoes and safety ear plug for drivers	 A yellow CASE road roller is shown paving a road. The roller is moving from left to right, leaving a fresh layer of dark gravel behind it. A person is standing near the roller, and another person is visible in the background. The road is in an urban area with buildings and trees in the background.	Safety helmets jackets, shoes and safety ear plug must be woreed by drivers during working at site
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<b>d</b>	Sign boards and hard barricade at work site			Work in progress sign board should be kept and hard barricading must be done during road restoration work to avoid public entrance to carry safe work
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<b>d</b>	One toilet was found damaged		Repair the Toilet
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<b>e</b>	Labours are cooking food in their staying room		Separate Cooking facility is to be provided for the Contractor's labours and sub-contractor's labours
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<b>f</b>	Loose electrical wires found		Electrical wires should be properly fitted with in safety electrical pipes and new switchboard
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<b>g</b>	Poor Housekeeping at shakti nagar labour camp of subcontractor		Labour camp of subcontractor at shaktinagar is not properly maintained. Housekeeping should be done properly to keep surrounding area clean.
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<b>h</b>	Sign Boards are not properly visible from the distance		Retro reflective sign boards with legible matter are to placed so that it may be visible from the considerable distance for the fast moving vehicles
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## Annexure -3

### Status of Site Observations for the month of November 2019

S.N o	Observation		Recommendation	Status of observations
a	Proper barricading and Cautionary Sign. information		<p>Barricading is done at kunttikana site</p> <p>Instructed contracting agency to put hard barricading continuous without gap.</p>	Partially Complied




<b>b</b>	Flag man at kunttikanna Work location		Flagman provided t both side of the road to maintain traffic and avoid any accident and incident  Again instructed to follow it properly	Complied
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c	PPEs at work locations		<p>All workers are wear PPEs during site visit at kuttikana and kandatpalli locations</p> <p>Instructed to follow it properly at all work site</p> <p>Drinking water must be provided at all working locations for workers</p> <p>One mobil toilet should be provided site site</p>	Partially Complied
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<b>d</b>	Labour Camp at Shakti Nagar		Proper housekeeping must be maintained in and around the camp	Partially Complied
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e	Gas stove is being used for cooking food		<p>Gas cylinder is to be provided for cooking</p> <p>Kitchen must be separate for cooking</p> <p>Lose electrical cables or boards must be replaced to avoid from electric shocks</p>	Not Complied
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f	Material stocks at shakti nagara locations		<p>Proper sign board in frame with stand should be at site</p> <p>And soft barricading should be done for every stocked materials</p>	Partially Complied
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g	Water Tank for daily use of water at Low Height		Water Tank should be provided at proper Height	Not Complied
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h	Separate Toilets for Gents and Ladies are provided	 <p>Latitude: 12.90915 Longitude: 74.876439 Elevation: 54.77m Accuracy: 3.2m Time: 08-31-2019 12:27 Note: labour toilet at Shakti nagar 1</p> <p>Powered by Note</p>		Complied
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i	Water Tap and electricity connections not provided		Water Tap and electricity connections are to be provided	Not Complied
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## Annexure -2

### Site Observations for the month of 19<sup>th</sup> December 2019

S.No	Observation		Recommendation	Status of observation
a.	PPEs at work locations		<p>All workers are wearing PPEs during site visit at kuttikana and kandatpalli locations</p> <p>Instructed to follow it properly at all work site</p> <p>Drinking water must be provided at all working locations for workers</p> <p>One mobil toilet should be provided site site</p>	<p>Complied</p> <p>Drinking water and 1nos Mobil toilets to be provided for 10nos workers at work site</p>

b	Project information board at work matadkani site	 <p><b>MANGALURU CITY CORPORATION / KUIDFC</b> <b>KIUMIP PROJECT</b> <b>WORK IN PROGRESS</b></p> <p>Implementing Agency : Replacement of Old Sewerage Pumping main and rehabilitation of sewerage system</p> <p>Name of Contractor : M/s. GRS InfraTech Pvt. Ltd., Hyderabad</p> <p>Consultant : M/s. EGIS India Ltd., OMR</p> <p>Engineer in charge : Mob. 7318188457</p> <p>Consultant Engineer : Mob. 9600733297</p> <p>Project Manager : Mob. 2945921886</p> <p>Emergency Nos : Ambulance : 108 Police : 100 Fire : 101</p> <p>Latitude: 12.882412 Longitude: 74.82842 Elevation: 99.05m Accuracy: 2.2m Time: 19-12-2019 16:02 Note: Matadkani pipe laying</p>	Provided information board at matadkani work site	Project at Complied
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<b>c</b>	Labours are cooking food in their staying room	 <p>Latitude: 12.909333 Longitude: 74.876655 Elevation: 102.96m Accuracy: 2.8m Time: 19-12-2019 16:41 Note: Shakti Nagar Labour Camp</p> <p>Powered by NoteCam</p>	Separate Cooking facility is to be provided for the Contractor's labours and sub-contractor's labours  Rest room for workers should be separate	Not complied
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<b>d</b>	First Aid Box is not adequate	 <p>Latitude: 12.914864 Longitude: 74.877576 Accuracy: 1700.0m Time: 19-12-2019 16:50 Note: Shakti Nagar Labour Camp</p> <p>Powered by NoteCam</p>	First Aid Box with adequate materials as specified by ADB is to be provided at labour camp.	Not complied
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<b>e</b>	Loose electrical wires found		Electrical wires should be properly fitted with pipes and plugs are to be used instead loose connections.	Not complied
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f	Sign boards found and proper hard barricading	 <p>Latitude: 12.882322 Longitude: 74.828388 Elevation: 95.45m Accuracy: 2.1m Time: 19-12-2019 16:02 Note: Matatkani pipe laying</p> <p>Powered by NoteCam</p>	Proper sign boards are to be placed at open trench with Retro reflective sign boards and with hard barricading at matatkani site	Not complied
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h	Project Information Board is not proper	 <p>Latitude: 12.882412 Longitude: 74.82842 Elevation: 99.05m Accuracy: 2.2m Time: 19-12-2019 16:02 Note: Matatkali pipe laying</p>	<p>Project information board, Go slow boards, work in progress board is provided by contracting agency</p> <p>But project information board, Go slow boards, work in progress board is to be provided Retro reflective as per instructions</p>	Partially complied
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i	Fire Extinguisher at shakinagara labour camp site	 <p>Latitude: 12.908873 Longitude: 74.876535 Elevation: 133.07m Accuracy: 1.9m Time: 19-12-2019 16:52 Note: Shakti Nagar Labour Camp</p> <p>Powered by NoteCam</p>	Provided Fire Extinguisher at shakinagara labour camp and instructed safety person to keep one Fire Extinguisher at all work site for any emergency	Partially complied
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# Monthly Environmental Monitoring Report

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Project Number: 43253-027  
January 2020

IND: Karnataka Integrated Urban Water Management  
Investment Program (Tranche2) – Improvements for 24  
x 7 Water Supply System for Town Municipal Council in  
Kundapura

Package No. 02KDP01

Prepared by





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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udupi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur, and Udupi) improved. The outputs are (i) UWSS infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) project management capacity of KUIDFC and ULBs strengthened capacity. This initial environmental examination (IEE) is based on an assessment sewerage projects within the project area, i.e., Mangalore.

### 2. Existing Water Supply System in Kundapura

Kundapura is located in Udupi District in Karnataka and is the headquarters of the Kundapura Taluk placed 92 km from Mangalore and 416 km from Bangalore (Figure 1). Geographically, Kundapura Town is located at a latitude of 13°08'N and longitude of 74°07'E at an average altitude of 80 m above the mean sea level (msl). The municipality spreads in an area of 14 square kilometer (km<sup>2</sup>) and consists of Kundapura Kasaba and Vaderahobli villages, with 23 municipal wards. Population of Kundapura is 30,450 (2011 Census). Kundapura is well connected to other parts of the state and country by highways and railways. National highway (NH-66) passes through the town. Nearest airport is Mangalore International Airport, 87 km from Kundapura. Kundapura is also connected to the Konkan Railway, which runs from Mumbai to Mangalore. Nearest railway station is at about 4 km from the town.

Kundapuram Town Municipal Council (TMC) provides urban services to the people efficiently and is well recognized by the state and central governments. Kundapura TMC has been awarded following certificates of appreciation by the Government of Karnataka:

- (i) Best Urban Local Body in the year of 1996-1997;
- (ii) Best Urban Local Body Award in the 2009-2010;
- (iii) Second Best Practices Award in the year 2010 for Reduction of Nonrevenue Water Supply;
- (iv) Third Best Practices Award-2010 for Solid Waste Management (SWM) for providing excellent Municipal Services, maintaining Healthy Environment;
- (v) The best Utilization of reserved Fund for the social Service Activities; and
- (vi) Town Municipal Council also grabbed Green Leaf Award-2009, Nation Urban Water Awards-2009, and ICONSMW Award-2011 in National level.

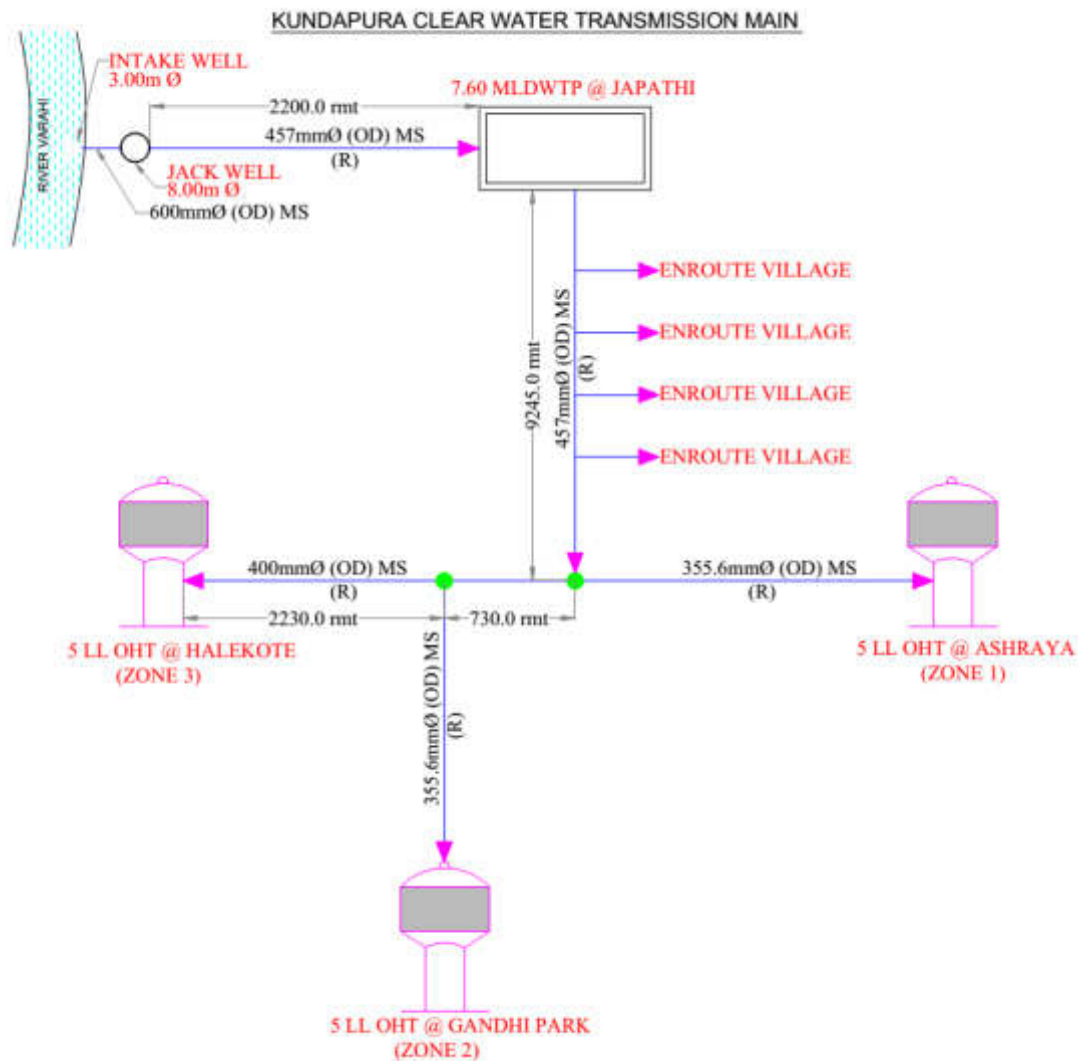
### 3. Need for Infrastructure Improvement in Kundapura

River Varahi is the main surface source of water supply to Kundapura. The intake works, located in Jambu beside Jambukeshwara Temple, about 11 km from Kundapura, pump raw water to the WTP constructed on a hillock in Japhthi village at a distance of about 2.5 km from the intake works by 400 mm diameter mild steel (MS) rising main. Treated water from WTP is pumped through a 400mm diameter MS rising main to the 500

kilolitre (kl) capacity OHT at Ashraya Colony, 500klcapacity OHT at Gandhi Park and 500klcapacity OHT at Halekote. The

clear water transmission main passes through Kundapura-Shimoga Road and pass through four-enroutevillages viz., Japhthi, Balkur, Basrur and Koni. A Schematic diagram of the existing water supply systemis shown in the Figure 1.

**Figure 1: Existing Water Supply System in Kundapura**



**Table 1: Component of Existing Water Supply System in Kundapura**

WTP Location	Capacity (MLD)	Treatment Process	Preliminary Design Stage? (Y/N)	Distance of WTP to nearest receptors in meters	Receiving Water of WTP Backwash /Wastewater Discharge	Uses of the receiving water (swimming, boating, fishing, irrigation, others [please specify])
Japthi, Kundapura	7.6	Inlet chamber ,Parshall flume,Flash Mixer , ClrifloculatorFilterhouse, Chlorination,	Existing WTP Rehabilitation	79	Discharged to drain	Irrigation

#### 4. The proposed subproject:

The subproject formulated under this Investment Program to address gaps in current water supply system. Detailed design of all the subproject components is completed prior to the bidding, and as per the detailed design the subproject includes the following components:

- (i) rehabilitation works and replacement of electromechanical equipment in Jack well at Jambu (Japthi village) to sufficiently supply 9.37 million liters per day (MLD) of raw water to the water treatment plant (WTP), and provision of a new diesel generator set for the un-interrupted power supply;
- (ii) rehabilitation of the existing 7.60 MLD WTP in Japthi village including provision of backwash water recirculation and sludge management system;
- (iii) laying of 4.8 kilometer (km) feeder main tapping from existing clear water main with 200 millimeter (mm) diameter pipe to feed to the proposed overhead tank (OHT) located in Kodi for the newly added zone 4;
- (iv) construction of 2 OHTs with a total capacity of 0.9 million liter;
- (v) extension of 31.64 km distribution network of diameter of 75 mm to 250 mm; and
- (vi) replacement of 4,200 existing meters and providing new metered house service connection (HSC) of 2,250 for uncovered households.

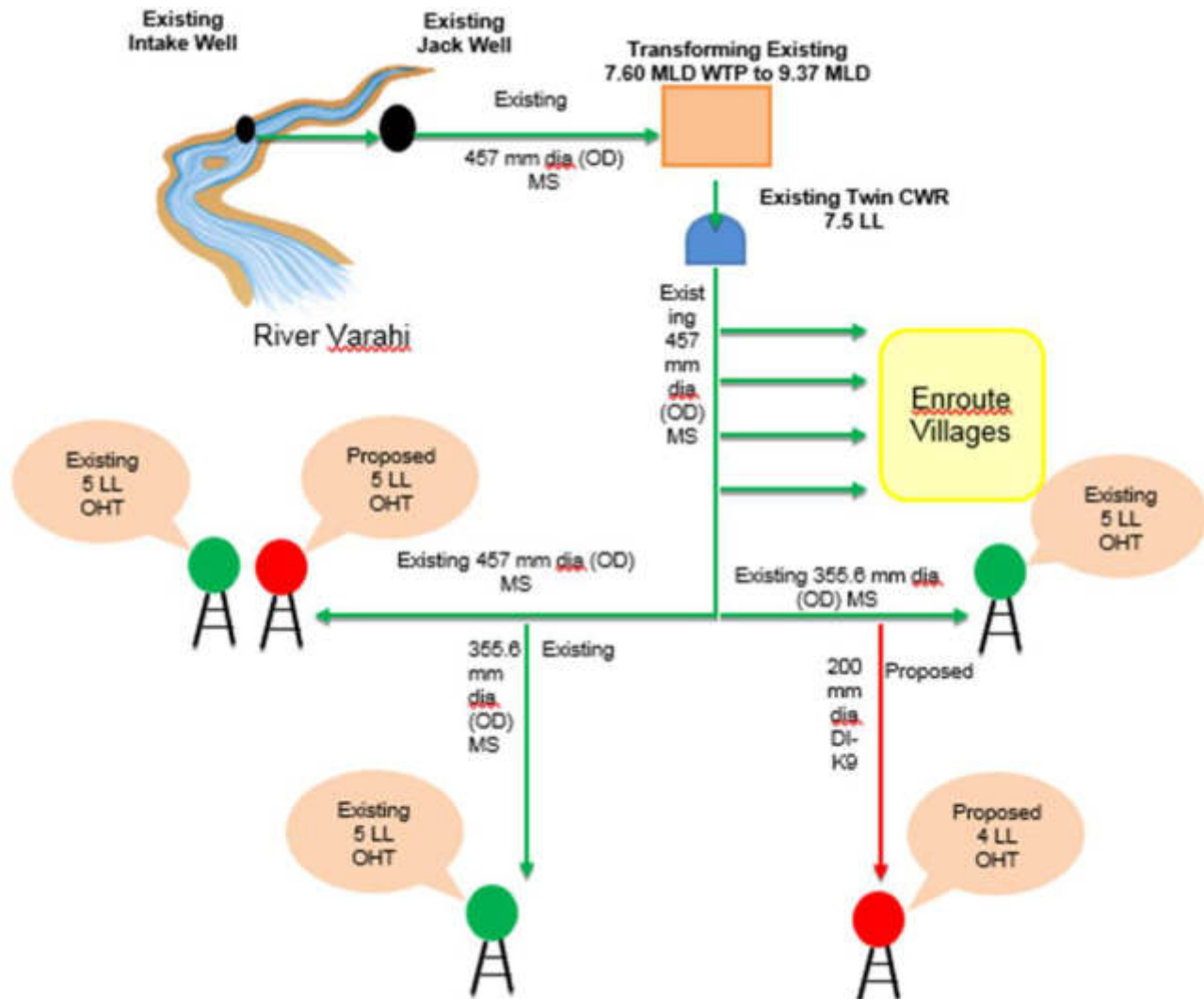
Following Table 2 provides details of the KIUWMIP Tranche 2 subproject components in Kundapura based on the detailed engineering design of the subproject. Schematic diagram of water supply system in Kundapura is shown in Figure 2. Locations of proposed components in Kundapura are shown. The position of the pipe alignment shown on road section is not exact due to mapping scale and underground utilities, and it will be fixed exactly during the pipeline laying work on site. All pipelines will be laid in the road shoulder, wherever it is available, or into the edge of road carriage way.

**Table 2: Proposed Components for 24x7 Water Supply Systems**

Infrastructure	Function	Description	Location
Jack well and Pump House	Pumping raw water to water treatment plant (WTP)	Rehabilitation works in Jack well by replacing mechanical equipment inside the pump house (pressure gauges, dewatering pumps, and electrical improvements) Provision of diesel generator set of 200 kilovolt ampere (kVA) for the un-interrupted power supply to the Jack well.	Works will be conducted within the existing Jack well near Jambukeshwara Temple in Jambu village
WTP	Treats raw water	Rehabilitation works in WTP by replacement equipment (flow meters, valves, pressure gauges, flash mixer, clari-floculator, alum and lime mixer, chlorinator, lab equipment etc.), Provision of diesel generator set (160 kVA) at WTP. Provision of backwash water recirculation and sludge management system to cater to total capacity of WTP (7.6 MLD); clarified water will be re-circulated to WTP inlet and accumulated sludge will be disposed in sanitary landfill	Works will be conducted within the existing WTP at Japthi village Sufficient land available within the WTP campus to develop backwash and sludge management facilities (see Figure 7)
Clear Water Transmission Main	Conveys clear water to service reservoirs	4.8 kilometer (km) length 200 millimeter (mm) diameter ductile iron pipe	Pipeline will be laid from the existing clear water main on NH-66 near Vinayaka theater to proposed new overhead tank (OHT) Kodi. Alignment is all along Kodi Road Alignment and profile drawings are shown in Figures 9 to 16.
Water service reservoirs	Water storage for supply	2 no.OHTs (of reinforced cement concrete, RCC) including compound walls at the sites: 500kiloliter (kl) capacity for Zone-3 at Halekote 400klcapacity for Zone-4 at Kodi	Site is vacant and owned by TMC Site is vacant and owned by Government of Karnataka Layout plans and elevations of OHTs are shown in Figures 17 to 20.
Distribution system Pipelines	Distributes clear water to the houses for the entire Town	31.64 km length diameter 75 - 250 mm high density poly ethylene (HDPE)pipes 75 mm dia-12.01km 90 mm dia- 5.89 km 110 mm dia- 7.08 km 160 mm dia- 2.27 km 200 mm dia- 2.33 km 250 mm dia- 2.06 km	Distribution pipes will be laid along the roads, within the road right of way, in 4 zones in KundapuraTown Municipal Council (TMC) area. Distribution zones with existing and proposed pipelines are shown Zone wise in Figures 21 to 24.
House Service Connections (HSC)	Individual houses get water after HSC.	HSC with Class B Multijet water meters 2,250 new 4,200 replacement	All households in four zones



**Figure 2: Proposed 24/7 Water Supply System for Kundapura**



CWR = clear water reservoir, dia = diameter, LL = lakh liter, mm = millimeter, MLD = million liters per day, MS = mild steel, OHT = overhead tank, WTP = water treatment plant.

## 5. Environmental Management Plan

The environmental management plan (EMP) aims to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i) providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project; (iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with.

<b>Karnataka Integrated Urban Water Management Investment Program</b>	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Improvements for 24 x 7 Water Supply System for Town Municipal Council in Kundapura	<b>Name of the Contractor:</b> Laxmi Civil Engineering Services Pvt, Ltd
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Kundapura	<b>Name of SE/EE/AE of concerned division PIU :-</b> Mr.Harish Walmiki, AEE
<b>Date of monthly monitoring:</b> 23/01/2020	<b>Name of Environment, Health And Safety (EHS) Engineer :-</b> Mr. Vijay

**Status of implementation of Environmental Management Plan for Anticipated Impacts –Construction–Kundapura**

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds	Status of implementation
Environmental Management Plan (EMP) Implementation Training	Impacts on the environment, workers, and community due to improper implementation of EMP	<ol style="list-style-type: none"> <li>Project manager and all key workers will be required to undergo EMP implementation including spoils management, standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.; and</li> <li>Appointment of Environmental, Health and Safety (EHS) Engineer by contractor prior to start of work.</li> </ol>	Construction Contractor/ project implementation unit (PIU)/ Project Management Design and Construction Supervision Consultant (PMDSC)	<ol style="list-style-type: none"> <li>Certificate of Completion (Safeguards Compliance Orientation)</li> <li>Posting of Certification of Completion at worksites</li> <li>Posting of EMP at worksites.</li> </ol>	Cost of EMP Implementation Orientation Training to contractor is responsibility of Program Management Unit (PMU). Other costs responsibility of contractor.	<ol style="list-style-type: none"> <li>Contractor prepared SOPs.OHS plan and Activities are going on as per company EHS Policies.</li> <li>Complied Environmental, Health and Safety (EHS) Engineer appointed by contractor.</li> </ol>

Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<ol style="list-style-type: none"> <li>1) Consult with PMU/PMDCSC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</li> <li>2) Damp down exposed soil and any stockpiled on site by spraying with water when necessary during dry weather;</li> <li>3) Use tarpaulins to cover sand and other loose material when transported by trucks; and</li> <li>4) Stockpile sand and other loose material only in barricaded area and protect/cover by tarpaulins to avoid dust generation</li> <li>5) Clean wheels and undercarriage of vehicles prior to leaving construction site; and</li> <li>6) Fit all heavy equipment and machinery with air pollution control devices which are operating correctly.</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Location of stockpiles;</li> <li>b) Complaints from sensitive receptors;</li> <li>c) Heavy equipment and machinery with air pollution control devices;</li> <li>d) Certification that vehicles are compliant with Air Act</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Complied</li> <li>2) Instructed to contracting agency to Spray water on exposed soil and stock piled mainly in commercial and residential area</li> <li>3) Complied</li> <li>4) Partially Complied.</li> <li>5) Complied</li> <li>6) Complied</li> </ol>
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Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during installation of pipelines can contaminate nearby surface water quality.	<ol style="list-style-type: none"> <li>1) Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</li> <li>2) Laying of pipelines during dry season and closing of all trenches before rainy season and avoid any chances of collecting the water in the trenches or pumping;</li> <li>3) Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, dispose in municipal landfill (Sample Spoils Management Plan in Appendix 10);</li> <li>4) Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</li> <li>5) Provide temporary bunds for stockpiles and materials;</li> <li>6) Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 100% capacity bund; and</li> <li>7) Dispose any wastes generated by construction activities in landfill or reuse in beneficial purposes</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Areas for stockpiles, storage of fuels and lubricants and waste materials;</li> <li>b) Number of silt traps installed along trenches leading to water bodies;</li> <li>c) Records of surface water quality inspection;</li> <li>d) Effectiveness of water management measures;</li> <li>e) No visible degradation to nearby drainages, nallahs or waterbodies due to civil works</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Stockpiling of earth fill not found during the site visit</li> <li>2) Instructed to contracting agency to close all opened trenches Before rainy season</li> <li>3) Partially Complied - Spoil Management plan prepared by Contractor Annexure attached in Feb 2019 report and recommended to update according to the suggestions given and submit Spoil Management Plan.  updated /Corrected Spoil Management plan yet to be submitted by Contractor</li> <li>4) Surface Water bodies not found along the Project site.</li> <li>5) Partially Complied</li> <li>6) Fuels and lubricants in bulk are not stored by contractor at site.</li> <li>7) Debris generated by construction is disposed in the ULB designated areas. Waste is used to fill the low line area</li> </ol>
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	Contamination of coastal water due to works in coastal zone	<p>In addition to the above measures following measures given below for piling works:</p> <p>8) Piling activities for OHT foundation work at Kodi shall be conducted carefully; there shall no spillage of bentonite on the ground; bentonite slurry shall be properly collected in leak proof containers and re-circulated in the piling activity; excess bentonite slurry shall be dried properly in containers, and disposed in landfill safely</p>			Cost for implementation of mitigation measures responsibility of contractor.	8) Pilling activities for OHT foundation work at Kodi beach has been done and OHT Construction work in progress and excess earth is disposed in landfill
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	<p>1) Plan activities in consultation with PMU/PMDCSC so that activities with the greatest potential to generate noise (road cutting and piling activity) are conducted during periods of the day which will result in least disturbance;</p> <p>2) Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p> <p>3) Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and</p> <p>4) Maintain maximum sound levels not exceeding 80 decibels (dB) when measured at a distance of 10 m or more from the</p>	Construction Contractor	<p>a) Complaints from sensitive receptors;</p> <p>b) Use of silencers in noise-producing equipment and sound barriers; and</p> <p>c) Equivalent day and night time noise levels (Appendix 3)</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p>1) Complied</p> <p>2) Complied</p> <p>3) Complied</p> <p>4) Complied</p>



		vehicle/s.				
Landscape and aesthetics	Impacts due to excess excavated earth, excess construction and demolition materials and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<ol style="list-style-type: none"> <li>1) Manage surplus soil, debris and solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</li> <li>2) Coordinate with PIU / Kundapura TMC for beneficial uses of road debris and surplus soils in on-going construction works or for temporary storage for future use or disposal in landfill</li> <li>3) In unavoidable case of disposal, debris shall be disposed at landfill site or site approved by PIU / Kundapura; waste shall not be disposed in the forest areas and in or near water bodies/ rivers / coast</li> <li>4) Prepare and implement spoils management plan;</li> <li>5) Surplus soil and debris from work site shall be removed / cleared at the end of each day of work; there shall be no stock piling of debris / surplus soil at the site</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Complaints from sensitive receptors;</li> <li>b) Worksite clear of hazardous wastes such as oil/fuel; and</li> <li>c) Worksite clear of any excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Complied. No excess excavated earth at work site.</li> <li>2) Complied - Contractor Coordinated with PIU / Kundapura TMC and surplus soils Disposed in Authorized landfill.</li> <li>3) Complied</li> <li>4) Partially Complied spoil management plan Prepared and Implementation is going on accordingly (SPM attached as Annexure in Feb 2019 Monthly report. Recommended the Contractor for update as per suggestions given and to submit SM Plan. Updated /Corrected Spoil Management plan not submitted by Contractor</li> <li>5) Complied</li> </ol>

		6) Recover used oil and lubricants and reuse or remove from the sites; 7) Remove all wreckage, rubbish, or temporary structures which are no longer required; and 8) Request PIU/PMDCSC to report in writing that the necessary environmental restoration works have been adequately performed before acceptance of work.				6) Used oil and lubricants not generated on site  7) Complied  8) Restoration work is going on and when work gets completed, joint site inspection will be conducted and report / letter will be issued.
Utilities - existing Infrastructure and Facilities	Disruption of service and damage to existing infrastructure at specified project location	1) At least two-weeks prior to start of work at any section, Identify utilities that will be required to be temporarily disturbed / shifted for the construction work; 2) Liaise with the respective utility department, provide prior information to the affected public and restore the utilities as soon as the work is complete 3) Provide contingency services where required (temporary diversion of drains, provision of water supply by tankers, etc.,) 4) Coordinate with the respective department and ensure that electricity and telephone services are restored quickly 5) Reconstruct the damaged footpath and drains immediately after the completion of pipeline work in that particular section	Construction Contractor and PIU	a) Section-wise list of utilities to be shifted / disturbed to be submitted to PIU two-weeks prior to start of work at that section along with a plan to shift and contingency steps to be taken b) Record to confirm that contingency services are provided and all damaged utilities are restored after the work	Part of project cost	1) Complied  2) Complied contingency services are provided and restoration is going on after the work.  3) Complied  4) Complied  5) Complied

Ecological Resources – Terrestrial	Loss of vegetation and tree cover	<ol style="list-style-type: none"> <li>1) Except four (4) coconut trees at Kodi OHT site, and pruning of large tree to the minimum required extent at Halekoti OHT site, no trees shall be removed for the subproject.</li> <li>2) Trees in the pipeline alignments shall be avoided during construction by locally altering the alignment.</li> <li>3) Obtain tree cutting and pruning permission from Tree Officer; plant and maintain 10 trees for each tree that is removed</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) PMU/PMDSC to report in writing the number of trees cut and planted.</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Complied. 6 trees got felled and compensations were paid to the owners.  Attached as <b>Annexures 10 in the May 2019 report.</b> And also ADB Social safeguard team visited on 23/9/2019 to particular affected persons to provide further training for them.</li> <li>2) Complied</li> <li>3) Compensation paid to the owner of the tree.</li> </ol>
Accessibility	Traffic problems and conflicts near project locations and haul road	<ol style="list-style-type: none"> <li>1) Plan pipeline work in consultation with the traffic police; prepare a Traffic Management Plan – a template is provided for reference at Appendix 11.</li> <li>2) Strictly follow the pipe laying method presented in Table 7 so that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</li> <li>3) Provide for immediate consolidation of backfilling material to desired</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Traffic route during construction works including number of permanent signages, barricades and flagmen on worksite (Appendix 11);</li> <li>b) Complaints from sensitive receptors; and</li> <li>c) Number of signages placed at project location.</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Traffic Management Plan prepared by contractor and followed accordingly. Traffic Management Plan attached as <b>Annexure- 9 in the May 2019 report.</b> It was advised to contractor to update Traffic Management Plan.  Traffic management plan yet to be updated</li> <li>2) Complied</li> </ol>

		<p>compaction – this will allow immediate road restoration and therefore will minimize disturbance to the traffic movement;</p> <p>4) Schedule transport and hauling activities during non-peak hours;</p> <p>5) No road shall be completely closed for traffic; in unavoidable circumstances of road closure (eg, NH service road closure at Shastri Circle for trenchless work), provide alternative route, and ensure that public is informed about such traffic diversions;</p> <p>6) Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p>7) Maintain safe pedestrian access at all times to the houses along the work site;</p> <p>8) Hard barricades should be mandatorily provided for work sites in residential and commercial areas, along with caution board.</p> <p>9) At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing agency and contractor details; nature and</p>				<p>3) Complied</p> <p>4) Complied</p> <p>5) Contractor has to provide traffic management plan for their all working areas to minimize the traffic in busy and small congested areas</p> <p>6) Complied</p> <p>7) Complied</p> <p>8) MS tubular barricades are provided by Contractor at HaleKote OHT and Kodi OHT Site.</p> <p>9) The public information/caution boards at work sites not provided with details mentioned in Mitigation Measures except at Kodi Beach</p>
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		<p>schedule of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints;</p> <p>10) Keep the site free from all unnecessary obstructions;</p> <p>11) Drive vehicles in a considerate manner</p> <p>In narrow roads listed above, Inform the affected local population on week in advance, and again a day before the work</p>				<p>which is also in Kannada.</p> <p>10) Complied</p> <p>11) Partially Complied</p>
Socio-Economic – Income.	Impede the access of residents and customers to nearby shops	<p>1) Strictly follow the pipe laying method presented in Table 7 so that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</p> <p>2) Leave spaces for access between mounds of soil;</p> <p>3) Provide walkways and metal sheets where required for people;</p> <p>4) Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;</p> <p>5) Consult businesses and institutions regarding operating hours and factoring this in work schedules; and</p> <p>6) Provide sign boards for pedestrians to inform nature and duration of</p>	Construction Contractor	<p>a) Complaints from sensitive receptors;</p> <p>b) Spoils management plan; and</p> <p>c) Number of walkways, signs, and metal sheets placed at project location.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p>1) Complied</p> <p>2) Complied</p> <p>3) Complied</p> <p>4) Complied</p> <p>5) Complied</p> <p>6) Not Complied. Project information board was not provided at all working</p>



		construction works and contact numbers for concerns/complaints.				areas. <b>Provided board in kannada only at OHT work, Kodi and Hallekote. Instructed contracting agency to provide project information board in both Kannada and English</b>
Socio cultural resources	Disturbance to socio cultural resources (religious, educational, health care etc.), access disruptions etc.,	<ol style="list-style-type: none"> <li>1) No material should be stocked close to these areas; material shall be brought to the site as and when required;</li> <li>2) Conduct work manually with small group of workers and less noise; minimize use of equipment and vehicles;</li> <li>3) Strictly follow the pipe laying method presented in Table 7 so that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</li> <li>4) No work should be conducted near the religious places during religious congregations;</li> <li>5) Material transport to the site should be arranged considering school timings; material should be in place before school starts;</li> <li>6) Notify concerned schools, hospitals etc., 2 weeks prior to the work; conduct a 30-minute awareness</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Visual site observations</li> <li>b) Public complaints</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Complied</li> <li>2) Contractor conducting work manually for all possible works to minimize the use of equipment.</li> <li>3) Complied</li> <li>4) Complied</li> <li>5) Complied</li> <li>6) Recommended contacting agency to provide information about project work and Proper record has to be maintained</li> </ol>

		<p>program on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts; and</p> <p>7) Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>				<p>7) Improvement is required in Implementation.</p>
Socio-Economic - Employment	Generation of contractual employment and increase in local revenue	<p>1) Employ local labor force to the maximum extent, if manpower is available; and</p> <p>2) Comply with labor laws</p>	Construction Contractor	<p>a) Employment records;</p> <p>b) Records of sources of materials; and</p> <p>c) Compliance to core labor laws (See Appendix 2 of this IEE)</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p>1) Register maintained by contractor attached as <b>Annexure – 7 in May 2019 report.</b></p> <p>2) Contractor Obtained Labour license and Employees Compensation Insurances for Workers (Skilled and unskilled). Attached as <b>Annexure 11 and 12 in May 2019 report.</b></p>
Occupational Health and Safety	Occupational hazards which can arise during work	<p>1) Comply with all national, state and local core labor laws (See Appendix 2 of this IEE);</p> <p>2) Develop and implement site-specific health and safety (H&amp;S) plan which will include measures such</p>	Construction Contractor	<p>a) Site-specific OHS Plan;</p> <p>b) Equipped first-aid stations;</p> <p>c) Medical insurance coverage for workers;</p> <p>d) Number of accidents;</p> <p>e) Supplies of potable drinking water;</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p>1) Contractor following Company EHS Policy Site-specific OHS Plan Not prepared by Contractor and is yet to be submitted</p> <p>2) Contractor following</p>

		<p>as:  <b>(a)</b> excluding public from the site;  <b>(b)</b> ensuring all workers are provided with and use Personal Protective Equipment;  <b>(c)</b> H&amp;S Training for all site personnel;  <b>(d)</b> documented procedures to be followed for all site activities; and  <b>(e)</b> documentation of work-related accidents;</p> <p>3) All trenches in sandy and mixed sandy soils irrespective of depth shall be protected with safety shoring / strutting to avoid safety risks to workers, public and nearby buildings/structures</p> <p>4) Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p>5) Provide medical insurance coverage for workers;</p> <p>6) Secure all installations from unauthorized intrusion and accident risks;</p> <p>7) Provide supplies of potable drinking water;</p> <p>8) Provide clean eating areas where workers are not</p>		<p>f) Clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>g) record of H&amp;S orientation trainings</p> <p>h) personal protective equipment;</p> <p>i) % of moving equipment outfitted with audible back-up alarms;</p> <p>j) permanent sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.</p> <p>k) Compliance to core labor laws (Appendix 2)</p>		<p>Company EHS Policy-PPE'S provided by Contractor. Proper Documentation has to be maintained by Contractor</p> <p>3) Recommended contractor to implement the mitigation measure when such deep trenches are to be executed.</p> <p>4) First aid box is available but not adequate as per standards. The equipped first-aid station not provided.</p> <p>5) Employees Compensation Insurances for Workers (Skilled and unskilled).</p> <p>6) Complied</p> <p>7) Complied</p> <p>8) Separate clean eating areas not provided by contractor.</p>
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		<p>exposed to hazardous or noxious substances</p> <p>9) Provide H&amp;S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p>10) Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>11) Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>12) Ensure moving equipment is outfitted with audible back-up alarms;</p> <p>13) Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and</p>				<p>9) <b>H&amp;S</b> orientation training for workers not found during the work and proper documentation required need to be done</p> <p>10) Not Complied</p> <p>11) Complied</p> <p>12) Complied</p> <p>13) Not Complied</p>
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		<p>be well known to, and easily understood by workers, visitors, and the general public as appropriate;</p> <p>14) Disallow worker exposure to noise level greater than 85 dB for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively; and</p> <p>15) Overall, the contractor should comply with International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines on occupational health and safety. (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2Boccupational%2Bhealth%2Band%2Bsafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2Boccupational%2Bhealth%2Band%2Bsafety.pdf?MOD=AJPERES</a>)</p>				<p>14) Not Complied Recommended the Contractor to use hearing protection measures and not allow worker to work more than 8 hours per day during the work.</p> <p>15) Not complied</p>
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<p>1) Provide protective shoring / strutting hard barricading for all deep excavations in sandy and mixed sandy that may require especially for pipe lines soils (&gt;1m);</p> <p>2) One week prior to start of work at any section, a joint inspection shall be conducted along with PIU and Kundapura TMC to identify risk areas and buildings at risk (due to</p>	Construction Contractor	<p>a) Traffic Management Plan; and</p> <p>b) Complaints from sensitive receptors</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p>1) Recommended contractor to implement the mitigation measure when such deep trench were executed.</p> <p>2) Complied</p>



		<p>excavation, vibration and noise) and take necessary precautions for safe conduct of work.</p> <p>3) identify buildings at risk prior to start of excavation work and take necessary precautions for safe conduct of work;</p>				<p>3) Joint inspection conducted along with PIU and Kundapura TMC to identify risk areas and buildings at risk (due to excavation, vibration and noise) and should take necessary precautions for safe conduct of work, No such record found at time of inspection</p> <p>4) Complied</p> <p>5) Complied</p> <p>6) Not complied- Register of Equipment and Vehicles maintenance certificates not found at site during the site visit.</p> <p>7) Work in progress at Halekote OHT and sign boards provided at work site but no pipe execution work was in progress during inspection. Instructed contracting agency to keep necessary sign boards when pipe execution work starts.</p>
		<p>4) Plan material and waste routes to avoid times of peak-pedestrian activities;</p> <p>5) Liaise with Kundapura TMC in identifying risk areas on route cards/maps;</p> <p>6) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p> <p>7) Provide road signs and flag persons to warn of dangerous conditions, for all work sites along the roads; and</p>				
		8) Overall, the contractor				8) Not Complied.

		should comply with IFC EHS Guidelines Community Health and Safety (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2Bcommunity%2Bhealth%2BAnd%2Bsafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2Bcommunity%2Bhealth%2BAnd%2Bsafety.pdf?MOD=AJPERES</a> ).				
Work Camps and worksites	<p>Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers</p>	<ol style="list-style-type: none"> <li>1) Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located within reasonable distance of work site;</li> <li>2) Minimize removal of vegetation and disallow cutting of trees;</li> <li>3) Labor camps shall include accommodation for workers/laborers along with other basic amenities such as kitchen, potable water supply, sanitation (toilets, bathrooms, washing areas and water supply for such needs), first aid room as well as garbage collection and disposal facility.</li> <li>4) The roof height of the worker's and labor camp shall not be less than 3 m from floor level to the lowest part of the roof.</li> <li>5) The camps shall be floored with concrete, shall be kept clean, and with proper cross ventilation, and the space provided shall be on the basis of one sq.mt per head or as per the relevant regulation, whichever is higher.</li> <li>6) Fire and electrical safety precautions shall be adhered to.</li> </ol>	Construction Contractor	<ol style="list-style-type: none"> <li>a) Complaints from sensitive receptors;</li> <li>b) Drinking water and sanitation facilities for employees</li> </ol>	Cost for implementation of mitigation measures responsibility of contractor.	<ol style="list-style-type: none"> <li>1) Complied.</li> <li>2) Removal of vegetation minimized by selecting best alignment.</li> <li>3) Labor camps facilities provided by the Contractor to be improved.</li> <li>4) Not Complied</li> <li>5) Not Complied</li> <li>6) Fire Extinguisher not provided and</li> </ol>

		<p>7) Cooking, sanitation and washing areas shall be provided separately.</p> <p>8) The Contractor shall maintain necessary living accommodation and ancillary facilities (including provision of clean fuel to prevent damage to forests and to prevent fuel wood cutting and burning by labor) in functional and hygienic manner.</p> <p>9) The site must be graded and rendered free from depressions such that water does not get stagnant anywhere.</p> <p>10) The entire boundary of the site should be fenced all around with barbed wire so as to prevent the trespassing of humans and animals.</p> <p>11) Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 lpcd); all water storage structures must be cleaned regularly and covered properly to avoid any contamination;</p> <p>12) Provide separate facilities for men and women; sanitary facilities shall be properly build and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons;</p> <p>13) Train employees in the storage and handling of materials which can potentially cause soil contamination;</p> <p>14) Recover used oil and lubricants and reuse or remove from the site;</p> <p>15) Manage solid waste according to the following preference hierarchy: reuse, recycling and</p>				<p>electrical cable connections are not safely maintained.</p> <p>7) Separate Cooking area has not been provided</p> <p>8) Gas Cylinder has been Provided by Contractor</p> <p>9) Complied</p> <p>10) Not complied</p> <p>11) Complied</p> <p>12) Not Complied. The toilets are in unhygienic conditions.</p> <p>13) Not Complied</p> <p>14) Complied - reused.</p> <p>15) Complied</p>
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		disposal to designated areas; 16) Remove all wreckage, rubbish, or temporary structures which are no longer required; 17) Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.				16) Complied  17) Still Construction Phase is in progress.
Social and Cultural Resources	Risk of archaeological chance finds	18) Create awareness among the workers and supervisors about the chance finds during excavation work; 19) Stop work immediately if any finds are suspected to allow further investigation; 20) Inform archaeological agencies promptly if a find is suspected, and take any action they require to ensure its removal or protection in site; and 21) Adjacent to important religious sites, undertake excavation and construction work in such a way that no structural damage is caused to the building.	Construction Contractor	Records of chance finds	Cost for implementation of mitigation measures responsibility of contractor.	18) Complied  19) Till now no such suspected items found nor recorded 20) Till now no such archaeological items recorded  21) Till now no such change found nor recorded
Submission of EMP implementation report	Unsatisfactory compliance to EMP	22) Timely submission of monitoring reports including pictures.	Construction contractor	a) Availability and competency of appointed supervisor Monthly report	Cost for implementation of mitigation measures responsibility of contractor.	23) Monthly report submitted by Contractor.
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	24) Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; 25) All excavated roads shall be reinstated to original condition.	Construction Contractor	a) PMU/PMDCSC report in writing that (i) worksite is restored to original conditions; (ii) camp has been vacated and restored to pre-project conditions;	Cost for implementation of mitigation measures responsibility of contractor.	24) Complied  25) Complied

		<p>26) All disrupted utilities restored.</p> <p>27) All affected structures rehabilitated/compensated.</p> <p>28) The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up;</p> <p>29) All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the revegetation specification that forms part of this document;</p> <p>30) The contractor must arrange the cancellation of all temporary services; and</p> <p>31) Request PMU/PMDCSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>		<p>(iii) all construction related structures not relevant to operation and maintenance (O&amp;M) are removed; and</p> <p>(iv) Worksite clean-up is satisfactory.</p>		<p>26) Complied</p> <p>27) Till now no structures affected</p> <p>28) Complied</p> <p>29) Construction Phase is in progress</p> <p>30) Construction Phase is in progress.</p> <p>31) Construction Phase is in progress</p>
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### Conclusion:-

Overall The Contractor's compliance with the Environment and Health and safety requirements of the Project is not satisfactory. Contractor is maintaining copy of IEE. HIV AIDS Awareness Training programme have to be conducted by the Contractor. Proper Safety precautions should be improved by Contractor. January 2020 Monthly report with PIU letter has to be submitted from the contracting agency.

### Recommendation:-

Key Issues: Following are the key issues which required immediate necessary action / further improvement.

S.No	Monitoring of Mitigation /Key Issues to be complied	Recommendation and Action Required by Contractor	Time line/Remarks
1.	Certificate of Completion (Safeguards Compliance Orientation)	<ul style="list-style-type: none"> <li><b>Register of Clearances required /status</b></li> </ul>	1) CRZ Clearance attached as <b>Annexures 2,3 &amp;4 in June 2019 report</b> 2) Tree cutting permission from tree officer not provided yet.
2.	Posting of Certification of Completion at worksites	<ul style="list-style-type: none"> <li>If any Respective Project Site work completed - Certification of Completion will be provided at worksites on Information board.</li> </ul>	Within 3 day of work Completion
3.	Posting of EMP at worksites.	<ul style="list-style-type: none"> <li><b>Project Information board should also be in Kannada Language along with contact numbers for grievance Redressal</b></li> </ul>	Comply with in 15 days
4.	Location of stockpiles;	<ul style="list-style-type: none"> <li>To prepare the Google map of the Locations of identified stockpiles</li> </ul>	Comply with in 5 days
5.	Complaints from sensitive receptors;	<ul style="list-style-type: none"> <li><b>Complaints/Grievance Redressal Registers should be maintained at each work site.</b></li> </ul>	<b>Compiled and maintaining grievance registers at site</b>
6.	Heavy equipment and machinery with air pollution control devices;	<ul style="list-style-type: none"> <li><b>PUC certification for all vehicles/equipment used for/during construction and certification of users at site.</b></li> </ul>	Comply with in 7 days
7.	Certification that vehicles are compliant with Air Act	<ul style="list-style-type: none"> <li><b>Register of Equipment and Vehicles maintenance certificates at site</b></li> </ul>	Comply with in 5 days
8.	Areas for stockpiles, storage of fuels and lubricants and waste materials;	<ul style="list-style-type: none"> <li>Storage of materials like fuel, chemicals, and cement shall be done in a manner (with impervious layer on bottom and a covered shed on top) that does not contaminate land and ground/surface water.</li> </ul>	Comply with in 7 days
9.	Number of silt traps installed along trenches leading to water bodies;	<ul style="list-style-type: none"> <li>Prepare list of silt traps installed along trenches</li> </ul>	If applicable in 8 days
10	Records of surface water quality inspection;	<ul style="list-style-type: none"> <li>If any surface water body is Present nearby project area during</li> </ul>	For every 3 months,

		the construction phase, the contractor will carry out environmental monitoring and testing for Surface water engaging NABL approved laboratory.	<b>Complied (Jan to March Monitoring).Annexure 2 in May 2019 report.</b> The Water quality monitoring is done in January 2020 and attached as <b>Annexure-5c</b>
11	Use of silencers in noise-producing equipment and sound barriers; and	<ul style="list-style-type: none"> <li>• <b>Only acoustic enclosures fitted DG set will be allowed at the construction site and camp sites.</b></li> <li>• Maintenance of equipment and machinery (including proper lubrication, tuning and checks for muffler effectiveness) shall be regular and up to the satisfaction of the Engineer to keep noise level under control.</li> <li>• <b>Barricading- Hard Barricade should be provided to protect from unauthorized access of common people</b></li> </ul>	<p>Daily monitoring required at site during the work</p> <p>Comply during the work.</p>
12	Equivalent day and night time noise levels (Appendix 3)	<ul style="list-style-type: none"> <li>• During the construction phase, the contractor will carry out environmental monitoring noise levels by engaging NABL approved laboratory.</li> </ul>	<p>For every 3 months, <b>Complied (Jan to March Monitoring). Annexure 2in May 2019 report.</b> And <b>informed contractors to conduct the noise test every 3 months.</b> The Noise level monitoring is done in January 2020 and attached as <b>Annexure-5b</b></p>
13	Records of Air quality inspection	<ul style="list-style-type: none"> <li>• If contractor carrying out Construction activities near sensitive receptor( residential areas, temples, Hospitals, schools ) During the construction phase, the contractor will carry out Ambient Air quality monitoring by engaging NABL approved laboratory</li> </ul>	<p>For every 3 months, <b>Complied (Jan to March Monitoring). Annexure-2</b>during the work. <b>Informed the contractors to conduct the air quality test every 3 months.</b> The Air quality monitoring is done in January 2020 and attached as <b>Annexure-5a</b></p>
14	Worksite clear of hazardous wastes such as oil/fuel;	<ul style="list-style-type: none"> <li>• Used oil generated from vehicles/DG set at plant/camp site will be collected in closed containers and sold to MoEF&amp;CC/SPCB approved used oil recyclers.</li> <li>• No solid or hazardous wastes (such as oil contaminated waste) will be dumped in drains or in open areas</li> </ul>	<p>Daily monitoring required at site during the work</p> <p>Comply during the work</p>

15	solid waste such as removed concrete, wood, packaging materials, empty containers	<ul style="list-style-type: none"> <li>Burning of wastes will not be allowed.</li> <li>The contractor will provide garbage bins in the camp and construction site and it will be ensured that these are regularly emptied and waste is disposed off in a hygienic manner as per the Solid Waste (Handling and Management) Rules, 2016.</li> <li>Solid waste generated at the construction site, plant/camp site, will be collected in covered wasted bins and segregated as biodegradable (food waste, paper, etc) and non-biodegradable (plastic, polyethylene bag etc.). Polyethylene/plastic wastes will be stored in empty cement bags and should be sent for recycling. Biodegradable (food waste, paper etc.) solid waste will be disposed in a compost pit.</li> </ul>	<p>Daily monitoring required at site during the work</p> <p>Comply all the issues during the work</p>
16	Section-wise list of utilities to be shifted / disturbed to be submitted to PIU two-weeks prior to start of work at that section along with a plan to shift and contingency steps to be taken	<ul style="list-style-type: none"> <li><b>Maintain copy of Section-wise list of utilities to be shifted / disturbed.</b></li> </ul>	<p>Partially Complied.</p> <p>Communication letter maintained by PIU <b>attached as Annexures 3&amp;4 in the May 2019 report.</b> Contactor should also have copy with him <b>Section-wise list of utilities to be shifted</b> comply within 7 days.</p>
17	Record to confirm that contingency services are provided and all damaged utilities are restored after the work	<ul style="list-style-type: none"> <li><b>Register of damaged infrastructure</b></li> <li><b>Register of reinstated infrastructure</b></li> </ul>	Comply with in 3 days
18	PMU/PMDSC to report in writing the number of trees cut and planted.	<ul style="list-style-type: none"> <li><b>Maintain separate file with all relevant documents of tree cutting, felling permission and Compensation.</b></li> </ul>	<b>Complied attached as Annexures 10 in the May 2019 report</b>
19	Number of signage's placed at project location.	<ul style="list-style-type: none"> <li><b>Maintain the signages placed at project location</b></li> </ul>	Comply with in 5 days
20	Visual site observations	<ul style="list-style-type: none"> <li><b>Register of official visiting the site and directions given if any at each site.</b></li> </ul>	Comply with in 3 days
21	Employment records;	<ul style="list-style-type: none"> <li><b>Attendance registers of labour at each site.</b></li> </ul>	<b>Complied and attached as Annexure 7 in the May 2019 report and maintaining the attendance register.</b>
22	Records of sources of materials; and	<ul style="list-style-type: none"> <li><b>Maintain separate record of quantity of materials used and with all authorized certificates of suppliers</b></li> </ul>	Comply with in 5 days
23	Compliance to core labor laws (See Appendix 2 of this IEE)	<ul style="list-style-type: none"> <li><b>Register of payment to the workers</b></li> </ul>	Comply Immediately
24	Site-specific OHS Plan;	<ul style="list-style-type: none"> <li><b>Site-specific Occupational Health and Safety Plan</b></li> </ul>	Comply with in 4 days
25	Equipped first-aid stations;	<ul style="list-style-type: none"> <li>Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall</li> </ul>	Comply with in 7 days

		<p>be provided in all work zones.</p> <ul style="list-style-type: none"> <li>• Trained first aid personal will be available at the construction site.</li> <li>• Emergency numbers will be displayed prominently at camp and construction site.</li> <li>• Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can be used as ambulance, will be available at construction site.</li> <li>• The contractor shall identify nearby hospital, which could be used in case of emergency.</li> <li>• First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</li> </ul>	
26	Medical insurance coverage for workers;	<ul style="list-style-type: none"> <li>• <b>File of insurance as per 13.1 PCC with contents showing the validity.</b></li> <li>• Health Camps and Check -up should be conducted for the workers</li> <li>• <b>Necessary HIV/AIDS prevention measures and awareness programme conducted by Contractor.</b></li> </ul>	Comply with in 12 days
27	Number of accidents;	<ul style="list-style-type: none"> <li>• <b>Accident and Incident register will be maintained by Contractor at each work site.</b></li> </ul>	<b>Complied. Attached in Annexure 1 in Aug 2019</b>
28	Supplies of potable drinking water;	<ul style="list-style-type: none"> <li>• Potable water supply: Sufficient (minimum 20 liters at any given point of time) and clean (potable) water for drinking shall be placed in the mess/labour camp and at the construction site.</li> </ul>	<b>Complied</b>
29	Clean eating areas where workers are not exposed to hazardous or noxious substances;	<ul style="list-style-type: none"> <li>• Since a common mess is not provided/operated, separate space for cooking and eating shall be provided.</li> </ul>	Comply with in 4 days
30	Record of H&S orientation trainings personal protective equipment;	<ul style="list-style-type: none"> <li>• <b>Weekly and monthly monitoring and safety training programs have to be documented properly including mock drill register</b></li> <li>• <b>The list of PPEs to be provided.</b></li> </ul>	Comply with in 7 days
31	Personal protective equipment;	<p>The Contractor shall provide and ensure enforcement with zero tolerance the following:</p> <ul style="list-style-type: none"> <li>• Safety vests will be used by workers whenever on the construction site.</li> <li>• Hard hat or helmets to all workers, supervising staff and inspecting official entering work site, plant area, and engaged in loading/ unloading operations</li> <li>• Protective footwear, protective goggles and nose masks (as required) will be provided to the workers employed. These shall be provided to all workers employed for handling of cement, mortar, concrete and similar dust generating</li> </ul>	Comply with in 5 days

		<ul style="list-style-type: none"> <li>operations shall be provided.</li> <li>During reinforcement/fabrication operation, safety appliances like: helmets, protective eye wear, gum boots and hand gloves shall be provided to labour/workers at the construction site.</li> <li>Welder's protective eye-shields will be provided to workers who are engaged in welding works.</li> <li>Nettings below and on the sides of overhead construction to prevent mishaps due to accidental fall of a workman, tool and/or debris shall be provided.</li> <li>Proper moving guards will be provided at all moving machines, like motors and pulleys.</li> <li>All workforces on the construction site shall be provided with identity cards.</li> <li>High risk areas are to be provided with warning signage.</li> </ul>	
32	Permanent sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.	<ul style="list-style-type: none"> <li><b>The contractor should comply with International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines on occupational health and safety. Guidelines.</b></li> </ul>	Comply with in 10 days
33	Records of chance finds	<ul style="list-style-type: none"> <li>Concerned records should be maintained if any chance find transpires.</li> </ul>	Comply immediately as soon as chance find occurs.
34	Availability and competency of appointed supervisor	<ul style="list-style-type: none"> <li>Certified and Experienced supervisor will be appointed by Contractor</li> </ul>	Contractor must appoint certified and Experienced supervisor.
35	Monthly report	<ul style="list-style-type: none"> <li><b>Contractor submitted Monthly report to PIU &amp; PMU</b></li> </ul>	January 2020 Monthly report has to be submitted
36	camp has been vacated and restored to pre-project conditions	<ul style="list-style-type: none"> <li>All construction related structures not relevant to operation and maintenance (O&amp;M) are removed; and</li> <li>Worksite clean-up must be satisfactory.</li> </ul>	Will be Compiled Within 2 days of Work Completion



**MAHAMMAD RAPHIYODDIN SHAPHIYODDIN MALIK**  
Environmental Specialist, EGIS,  
Mangalore, KIUWMIP – Tranche 2.



## ANNEXURE-1

### SITE VISIT OBSERVATIONS VISITED ON 23<sup>rd</sup> JANURAY 2020

S.No	Observation		Recommendation
1	Sign Boards at Kodi Beach OHT are not proper	 	<p>Work in progress Board is to be placed at site, which should be legible</p> <p>Project Information Board also to be in English along with necessary contact numbers for Grievance Redressal.</p>

2	Material storage area not barricaded and bunding is done partially	 <p>Latitude: 13.630742 Longitude: 74.669433 Elevation: 81.52m Accuracy: 1.7m</p>	Material storage area is to be barricaded and proper bunding is to be done around the stored material
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3	Registers maintained at site	 <p>The image shows three registers placed on a patterned surface. The registers are labeled 'LABOUR REGISTER', 'GRIEVANCE REGISTER', and 'ACCIDENT AND INCIDENT REGISTER'. Each register has a white label with the text 'KODI OHT.' below the title. The registers are decorated with a colorful pattern of trees and flowers. A person's hand is visible on the right side of the registers.</p>	Contracting Agency has been recommended to maintain all necessary registers asked by time to time.
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4	Steel bars/ iron rods openly laying on roads without any hard barricading or caution sign, which can cause harm		<p>Immediately shift the steel bars from the present location and keep near the Store Room, where space is available. Put proper caution signboards near the storage area.</p> <p>Steel Reinforcement Work should be carried out in safe working location</p>
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5	Housekeeping at work Halikote OHT		<p>Materials after use must be shifted to their yards. Proper housekeeping should be done at work site to avoid injuries</p>
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6	Housekeeping near store room not maintained		The housekeeping near store room should be done properly
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7	<p>Proper Barricading is not done at valley side and proper platform/place has not been provided for washing or bathing at OHT Site Hallekote</p>		<p>Proper Hard Barricading is to be done completely along with sign boards from behind the labour room to washing area up to last point of working area at backside in order to prevent fall of any of the persons. Proper bathrooms and washing platform need to be provided.</p>
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8	Toilet is not properly maintained at OHT Halekote, Kundapura		Toilet facilities at works camp at Halekote must be maintained properly along with provision of Water and electricity connection. The cleanliness should be maintained.
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9	Found damaged cable cover used for the trial run checking of rotating mechanism of Clariflocculator.			It should be replaced with another cable of required specifications and with no damage
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## ANNEXURE -2

### STATUS OF SITE OBSERVATIONS VISITED ON DECEMBER 2019

S.No	Observation		Recommendation	Status of Observations
1	PPEs at work site	 <p>Latitude: 13.630407 Longitude: 74.669418 Elevation: 86.12m Accuracy: 7.6m Time: 17-12-2019 12:45 Note: Kodi Beach OHT</p>	Workers wearing PPEs at kodi OHT site and instructed to wear PPEs regularly at working sites	Complied



2	Project information board at kodi OHT Site to be provided in English as well		Project information board in English must be provided.	Contact number must be provided for emergency and for public complaints in English and Kannada language as well	Partially Complied
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3	Material storage area not barricaded and not provided sign board at Kodi OHT at material stocks		Material storage area is to be barricaded properly and sign boards must be provide at stock yard	Complied
---	---	---	--	----------

4	Steel bars/ iron rods openly laying on roads without any hard barricading or caution sign, which can cause vehicular accidents by passing traffic	 <p>Latitude: 13.630648 Longitude: 74.669873 Elevation: 86.02m Accuracy: 1.8m Time: 17-12-2019 12:59 Note: Kodi Beach OHT</p> <p>Powered by NoteCam</p>	Immediately shift the steel bars from the present location and keep near the Store Room, where space is available. Put proper caution signboards near the storage area.	Not Complied
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5	Pipes and other material stockpiled along the access roads	 <p>The left photograph shows a large coil of black pipes with a white sign in front of it that reads 'PIPE STOCKING AREA'. The right photograph shows a larger stockpile of black pipes, with blue pipes visible in the foreground. Both images are dated 11/7-15/12/14.</p>	Provide a designated area for material stockpile away from access ways to maintain flow of the traffic and proper barricading is to be done for the stored material along with sign board	Partially complied
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6	Housekeeping near store room not maintained	 <p>Latitude: 13.63047 Longitude: 74.670185 Elevation: 84.22m Accuracy: 1.9m Time: 17-12-2019 13:06 Note: Kodi Beach OHT</p> <p>Powered by NoteCam</p>	The housekeeping near store room should be done properly	Not Complied
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7	Worker cutting steel without safety	 <p>Latitude: 13.630457 Longitude: 74.669705 Elevation: 92.52m Accuracy: 2.1m Time: 17-12-2019 12:47 Note: Kodi Beach OHT</p> <p>Powered by NoteCam</p>	Worker must wear face shield or safety glasses or goggles and protective hand gloves	Partially complied
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8	OHT Hallekote work site is barricaded except a small portion which is for material transportation	 <p>Latitude: 13.635018 Longitude: 74.70436 Elevation: 235.27m Accuracy: 5.3m Time: 17-12-2019 14:27 Note: Hallekote OHT</p> <p>Powered by NoteCam</p>	<p>Provide Corrugated metal sheets only to a portion adjacent to the houses in order to prevent entry of any person/animal into the work site.</p> <p>Loose materials should be disposed off to their landfills area</p>	Complied
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9	Steel bars coming out of the storage area posing a risk of injury to the workers near labour room	 <p>Latitude: 13.636012 Longitude: 74.7039 Elevation: 236.26m Accuracy: 4.6m Time: 17-12-2019 14:24 Note: Hallekote OHT</p> <p>Powered by NoteCam</p>	<p>Immediately remove the steel bars from the area and store it at a proper place.</p> <p>And proper housekeeping should be maintained after work at work sites</p>	Complied
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10	The distribution board provided for the clariflocculator is found open during raining condition			<p>The distribution board should be kept closed and only authorised electrician is allowed to operate it. Necessary warning with distribution board number should be displayed on it for awareness of others</p> <p>The distribution board should be protected from weather. ELCB should be fixed on the DB for the safety of employees from electric shock.</p>	Not Complied
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11	Found damaged cable cover used for the trial run checking of rotating mechanism of Clariflocculator.		It should be replaced with another cable of required specifications and with no damage	Not Complied
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12	A small portion is left out of barricading	 <p>Latitude: 13.610837 Longitude: 74.759177 Elevation: 137.53m Accuracy: 2.3m Time: 17-12-2019 14:51 Note: Japti WTP</p> <p>Powered I</p>	The left out portion of barricading is to be done	Complied
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13	One side of the Clariflocculator Japti WTP Site, Kundapurais open and it may endanger the life or may cause injuries to any person, animal by risking to fall inside Clariflocculator		One side Opening is required with proper channel/Gate/tubular rods.	Not Complied
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14	Hard Barricading has been completed as per the instructions near GL Water Reservoir at Japti WTP Site Kundapura	 <p>Latitude: 13.61086 Longitude: 74.75881 Elevation: 130.63m Accuracy: 1.8m Time: 17-12-2019 14:54 Note: Japti WTP</p> <p>Powered by NoteCam</p>	The remaining Hard Barricading is done near GL Water Reservoir at Japti WTP Site , Kundapura	Complied
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15	Stones are lying in the premises	 <p>Latitude: 13.613219 Longitude: 74.757898 Accuracy: 135.6m Time: 17-12-2019 14:54 Note: Japti WTP</p> <p>Powered by Not</p>	It should be either used or disposed off appropriately.	Not complied
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### ANNEXURE -3

#### STATUS OF SITE OBSERVATIONS VISITED ON NOVEMBER 2019

S.No	Observation		Recommendation	Status of observation
a	First Aid Box not properly maintained at Halekote OHT Site , Kundapura		To have proper first hand treatment at site if any injury occurs to any personnel, First Aid Box as per standards is to be provided at site immediately.	Not complied



<b>b</b>	One side of the Clariflocculator Japti WTP Site, Kundapurais open and it may endanger the life or may cause injuries to any person, animal by risking to fall inside Clariflocculator.		One side Opening is required with proper channel/Gate/tubular rods.	Not complied
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<b>c</b>	Electrical Switch Board Panel is without proper Enclosure at WTP Jabti, Kundapura		Electrical Switch Board Panel should be covered with proper box cover which prevents rain water from entering inside the panel box.	Not complied
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<b>d</b>	Hard Barricading has not been completed as per the instructions at Japti WTP Site , Kundapura		The remaining Hard Barricading is to be completed at Japti WTP Site , Kundapura the earliest	Not complied
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e	OHT site at Kodi beach is kept open barricading not provided,	 <p>Latitude: 13.630524 Longitude: 74.669443 Elevation: 2.42m Accuracy: 3.2m Time: 09-23-2019 13:01 Note: Kodi I</p> <p>Powered by Abhishek</p>	<p>Hard barricading must be provided with single entry point to restrict the entries of unauthorised persons for their safety</p> <p>Contact number must be provided for emergency and for public complaints</p> <p>Project information board in English must be provided.</p> <p>Complaint register must be Available at site.</p>	Partially complied
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f	Barricading is not done at valley side and proper platform/place has not been provided for washing or bathing at OHT Site,Holkote		Hard Barricading is to be done at river side near Water Tank in order to prevent fall of any person. Proper bathroom and washing platform need to be provided.	Not complied
g	OHT Halkote work site is barricaded except a small portion which is for material transportation		Hard barricading provided with single entry point but barricading are supported with still bars which may Cause high risk to works  Scaffolding must be provided	Not complied



h	Project information board is provided in Kannada		<p>Emergency Contact numbers must be provided for public complaints.</p> <p>Project information board is also to be provided in English</p> <p>Complaint register must be Available at site.</p> <p>Safety information provided on banners are to be fixed on wooden board</p>	Not complied
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i	Housekeeping not properly maintained		<p>All accesses to and from the work place kept clear and clean at all times areas.</p> <p>The waste materials shifted to designated dumping locations on daily basis.</p>	Not complied
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j	Kitchen and rest room are at same place. Proper ventilation not provided		Proper ventilation should be provided  Separate kitchen facility must be provided  As per IFC guidelines facilities must be provided at workers camp	Not complied
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k	Toilet is not properly maintained at OHT Halekote, Kundapura		Toilet facilities at works camp at Halekote must be maintained properly	Not complied
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m	PPEs at Halekote OHT Site , Kundapura		<p>The PPEs provided for labours. Instructed to safety person to make them to wear regularly and to maintain all registers and records of PPEs provided to labour at site</p>	Complied
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**ANNEXURE-4**

**AIR QUALITY, NOISE LEVEL AND WATER  
QUALITY MONITORING AND SAMPLING  
PHOTOS**

## AIR QUALITY MONITORING

### 1. Shastri Circle



### 2. OHT Halekote



### 3. WTP



### 4. Parijatha Circle





##### 5. Office (Nearby Land Post)



##### 6. Basrur Main Road



## 7. Church Road



## 8. M. Kodi





## 9. OHT Kodi



## 10. Public Park (Near Juma Masjid)



## NOISE LEVEL MONITORING

### 1. Shastri Circle



### 2. OHT Halekote





### 3. WTP



### 4. Parijatha Circle



5. Office (Near HEAD Post office )



6. Basoor Main Road





## 7. Church Road



## 8. M Kodi





## 9. OHT Kodi



## 10. Public Park



## Raw Water



## Surface Water





Treated RO water



Latitude: 13.610986  
Longitude: 74.758872  
Elevation: 39.26m  
Accuracy: 4.9m  
Time: 10-01-2020 16:12  
Note: Treated water@ WTP Kanku

Powered by NoteCam

## TEST REPORT

Page 1 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ1: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Shastri Circle</b>
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/001/100120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
10.01.2020	25.8	27.4	69.5	154.7
NAAQ Standards	80*	80*	100*	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)

RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

Page 2 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ2: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>OHT Halekote</b>
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/002/100120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
10.01.2020	21.4	23.5	57.8	149.2
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)

RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

**CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**



## TEST REPORT

Page 3 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ3: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>WTP</b>
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/003/100120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	$\mu\text{g}/\text{m}^3$			
10.01.2020	26.4	28.1	57.6	119.2
NAAQ Standards	80*	80*	100*	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide;  $\mu\text{g}/\text{m}^3$  - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

Page 4 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ4: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Parijatha Circle</b>
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/004/100120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
10.01.2020	22.1	24.7	48.0	98.5
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved west and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

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Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ5: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Office (Nearby Land Post)</b>
Date of Sample Receipt	13.01.2020
Analysis Commenced On	13.01.2020
Completed On	20.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/005/130120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
13.01.2020	20.9	23.5	50.4	94.7
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

**CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

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Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ6: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Basroor Main Road</b>
Date of Sample Receipt	13.01.2020
Analysis Commenced On	13.01.2020
Completed On	16.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/006/130120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	$\mu\text{g}/\text{m}^3$			
13.01.2020	27.5	29.6	45.1	80.3
NAAQ Standards	80*	80*	100*	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)

RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide;  $\mu\text{g}/\text{m}^3$  - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

Page 7 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ7: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Church Road</b>
Date of Sample Receipt	14.01.2020
Analysis Commenced On	14.01.2020
Completed On	18.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/007/140120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
14.01.2020	22.3	26.8	42.7	80.9
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**



## TEST REPORT

Page 8 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ8: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>M. Kodi</b>
Date of Sample Receipt	14.01.2020
Analysis Commenced On	14.01.2020
Completed On	18.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/008/140120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
14.01.2020	19.6	22.8	42.5	68.2
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \* : 24 hours average; \*\* : 8 hours average; \*\*\* : Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

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Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ9: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>OHT Kodi</b>
Date of Sample Receipt	14.01.2020
Analysis Commenced On	14.01.2020
Completed On	18.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/009/140120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
14.01.2020	20.5	24.1	43.4	68.7
<b>NAAQ Standards</b>	<b>80*</b>	<b>80*</b>	<b>100*</b>	-

Note: \* : 24 hours average; \*\* : 8 hours average; \*\*\* : Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved west and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT

Page 10 of 10

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	AAQ10: Ambient Air Quality Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	Public Park (Near Juma Masjid)
Date of Sample Receipt	14.01.2020
Analysis Commenced On	14.01.2020
Completed On	18.01.2020
Report Date	20.01.2020
Report No	HECS/AAQ/010/140120

### RESULTS OF AMBIENT AIR QUALITY MONITORING

Date of Sampling	SO <sub>2</sub>	NO <sub>2</sub>	RSPM	SPM
	µg/m <sup>3</sup>			
14.01.2020	14.2	16.9	25.8	49.6
NAAQ Standards	80*	80*	100*	-

Note: \*: 24 hours average; \*\*: 8 hours average; \*\*\*: Annual average

#### Test Methods Followed:

SPM : IS 5182 (Pt 4): 1999 (RA 2005) (Gravimetric)  
RSPM : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)  
SO<sub>2</sub> : IS 5182 (Pt 2): 2001 (RA 2017) (Improved west and Geake method)  
NO<sub>2</sub> : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

BDL =Below detection limit; DL - Detection Limit; SPM- Suspended Particulate matter, RSPM- Respirable Suspended Particulate matter;  
SO<sub>2</sub> - Sulphur dioxide; NO<sub>2</sub> - Nitrogen-di-oxide; µg/m<sup>3</sup> - microgram per cubic meter.

### **CONCLUSION: ALL THE PARAMETERS ARE WITHIN THE PERMISSIBLE LIMIT**

\*\*\*\*\*End of Report \*\*\*\*\*

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT OF NOISE LEVEL MONITORING

Page 1 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM1: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Shastri Circle (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/001/200120

S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	53.2
2		07-08	54.6
3		08-09	56.3
4		09-10	60.7
5		10-11	60.5
6		11-12	60.8
7		12-13	62.8
8		13-14	61.7
9		14-15	59.8
10		15-16	62.6
11		16-17	63.5
12		17-18	60.5
13		18-19	57.3
14		19-20	56.9
15		20-21	54.6
16		21-22	55.7
17	Night Time	22-23	49.2
18		23-00	47.7
19		00-01	47.3
20		01-02	47.3
21		02-03	48.6
22		03-04	50.3
23		04-05	50.5
24		05-06	51.5
MIN			47.30
MAX			63.50
Day dB(A)			58.28
Night dB(A)			49.03

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## TEST REPORT OF NOISE LEVEL MONITORING

Page 1 of 10

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited		
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001		
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201		
Sample Description	NM2: Noise Monitoring		
Sample Collected by	Hubert Enviro Care Systems (P) Ltd		
Sampling Location	OHT Halekote (24 hrs on hourly basis)		
Report Date	20.01.2020		
Report No	HECS-LCESPL/NM/002/200120		
S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	39.9
2		07-08	40.2
3		08-09	41.4
4		09-10	41.7
5		10-11	42.5
6		11-12	43.6
7		12-13	44.4
8		13-14	44.9
9		14-15	45.1
10		15-16	43.7
11		16-17	43.1
12		17-18	47.2
13		18-19	48.5
14		19-20	46.1
15		20-21	45.8
16		21-22	45.9
17	Night Time	22-23	43.5
18		23-00	40.4
19		00-01	40.9
20		01-02	39.2
21		02-03	38.4
22		03-04	39
23		04-05	39.3
24		05-06	40.6
MIN			38.4
MAX			48.5
Day dB(A)			44.0
Night dB(A)			40.0

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). **Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).**

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**



## TEST REPORT OF NOISE LEVEL MONITORING

Page 1 of 10

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM3: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>WTP (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/003/200120

S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB
			10.01.2020
1	Day Time	06-07	55.9
2		07-08	57.6
3		08-09	53.5
4		09-10	57.9
5		10-11	64.5
6		11-12	67.3
7		12-13	68.8
8		13-14	68.2
9		14-15	67.4
10		15-16	64.5
11		16-17	65.9
12		17-18	68.3
13		18-19	67.4
14		19-20	65.6
15		20-21	61.3
16		21-22	60.5
17	Night Time	22-23	59.9
18		23-00	59.4
19		00-01	58.7
20		01-02	55.6
21		02-03	49.8
22		03-04	49.3
23		04-05	48.5
24		05-06	46.8
MIN			46.8
MAX			68.8
Day dB(A)			63.21
Night dB(A)			52.59

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

## **TEST REPORT OF NOISE LEVEL MONITORING**

Page 1 of 10

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited		
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001		
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201		
Sample Description	NM4: Noise Monitoring		
Sample Collected by	Hubert Enviro Care Systems (P) Ltd		
Sampling Location	Parijatha Circle (24 hrs on hourly basis)		
Report Date	20.01.2020		
Report No	HECS-LCESPL/NM/004/200120		
S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	53.2
2		07-08	54.2
3		08-09	55.3
4		09-10	54.9
5		10-11	54.8
6		11-12	55.1
7		12-13	55.3
8		13-14	55.9
9		14-15	53.2
10		15-16	62.8
11		16-17	47.7
12		17-18	62.7
13		18-19	53.6
14		19-20	62.8
15		20-21	65.2
16		21-22	53.6
17	Night Time	22-23	50.5
18		23-00	49.2
19		00-01	46.8
20		01-02	44.6
21		02-03	43.7
22		03-04	41.2
23		04-05	40.9
24		05-06	40.5
MIN			40.5
MAX			65.2
Day dB(A)			55.93
Night dB(A)			43.84

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

### **TEST REPORT OF NOISE LEVEL MONITORING**

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM5: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Office (Near HEAD Post office ) (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/005/200120

S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	55.8
2		07-08	54.9
3		08-09	54.8
4		09-10	53.7
5		10-11	52.6
6		11-12	53.4
7		12-13	52.3
8		13-14	50.7
9		14-15	50.3
10		15-16	49.6
11		16-17	48.5
12		17-18	48.1
13		18-19	49.9
14		19-20	50.7
15		20-21	51.8
16		21-22	48.6
17	Night Time	22-23	45.5
18		23-00	43.3
19		00-01	44.8
20		01-02	45.3
21		02-03	43.8
22		03-04	43.7
23		04-05	43.5
24		05-06	43.6
MIN			43.30
MAX			55.80
Day dB(A)			51.25
Night dB(A)			44.00

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). **Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).**

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

### **TEST REPORT OF NOISE LEVEL MONITORING**

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM6: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Basoor Main Road (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/006/200120

S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB
			10.01.2020
1	Day Time	06-07	55.2
2		07-08	54.2
3		08-09	53.5
4		09-10	54.8
5		10-11	52.1
6		11-12	53.5
7		12-13	52.7
8		13-14	50.1
9		14-15	49.6
10		15-16	49.8
11		16-17	50.2
12		17-18	50.7
13		18-19	49.7
14		19-20	50.8
15		20-21	51.4
16		21-22	52.3
17	Night Time	22-23	48.9
18		23-00	47.5
19		00-01	46.5
20		01-02	45.8
21		02-03	46.5
22		03-04	44.2
23		04-05	47.6
24		05-06	41.2
MIN			41.2
MAX			55.2
Day dB(A)			51.7
Night dB(A)			45.6

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). **Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).**

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

### **TEST REPORT OF NOISE LEVEL MONITORING**

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM7: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>Church Road (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/007/200120

Noise Level (dB(A))			
S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	51.8
2		07-08	53.7
3		08-09	54.9
4		09-10	54.2
5		10-11	53.4
6		11-12	53.4
7		12-13	54.7
8		13-14	56.4
9		14-15	51.3
10		15-16	64.8
11		16-17	45.6
12		17-18	61.5
13		18-19	52.3
14		19-20	61.9
15		20-21	64.9
16		21-22	52.3
17	Night Time	22-23	49.3
18		23-00	48.1
19		00-01	45.4
20		01-02	39.5
21		02-03	40.5
22		03-04	39.9
23		04-05	40.1
24		05-06	39.9
MIN			39.5
MAX			64.9
Day dB(A)			55.08
Night dB(A)			41.91

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**



### **TEST REPORT OF NOISE LEVEL MONITORING**

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	NM8: Noise Monitoring
Sample Collected by	Hubert Enviro Care Systems (P) Ltd
Sampling Location	<b>M Kodi (24 hrs on hourly basis)</b>
Report Date	20.01.2020
Report No	HECS-LCESPL/NM/008/200120

S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	55.7
2		07-08	54.9
3		08-09	56.2
4		09-10	54.1
5		10-11	55.3
6		11-12	53.7
7		12-13	54.6
8		13-14	52.1
9		14-15	53.3
10		15-16	50.1
11		16-17	50.4
12		17-18	51.1
13		18-19	50.8
14		19-20	50.7
15		20-21	51.3
16		21-22	50.4
17	Night Time	22-23	47.8
18		23-00	49.3
19		00-01	45.8
20		01-02	46.5
21		02-03	48.3
22		03-04	48.7
23		04-05	44.8
24		05-06	47.5
MIN			44.8
MAX			56.2
Day dB(A)			52.5
Night dB(A)			47.3

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). **Residential Area: Day Time-55 dB (A), Night Time-45 dB (A).** Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

### **TEST REPORT OF NOISE LEVEL MONITORING**

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited		
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001		
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201		
Sample Description	NM9: Noise Monitoring		
Sample Collected by	Hubert Enviro Care Systems (P) Ltd		
Sampling Location	OHT Kodi (24 hrs on hourly basis)		
Report Date	20.01.2020		
Report No	HECS-LCESPL/NM/009/200120		
S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB
			10.01.2020
1	Day Time	06-07	52.3
2		07-08	55.2
3		08-09	54.7
4		09-10	55.2
5		10-11	51.8
6		11-12	53.6
7		12-13	54.1
8		13-14	52.8
9		14-15	50.6
10		15-16	48.9
11		16-17	48.4
12		17-18	50.5
13		18-19	51.3
14		19-20	52.2
15		20-21	51.3
16		21-22	49.2
17	Night Time	22-23	47.9
18		23-00	48.7
19		00-01	49.8
20		01-02	38.9
21		02-03	39.8
22		03-04	40.1
23		04-05	39.2
24		05-06	38.9
MIN			38.9
MAX			55.2
Day dB(A)			51.8
Night dB(A)			42.2

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). **Residential Area: Day Time-55 dB (A), Night Time-45 dB (A).** Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

**Authorized Signatory**  
**(Dr K Ganesan - Lab Manager)**

### TEST REPORT OF NOISE LEVEL MONITORING

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited		
Address of the Customer	C.S.NO. 1031 / K2, E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001		
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201		
Sample Description	NM10: Noise Monitoring		
Sample Collected by	Hubert Enviro Care Systems (P) Ltd		
Sampling Location	Public Park (24 hrs on hourly basis)		
Report Date	20.01.2020		
Report No	HECS-LCESPL/NM/010/200120		
S. No	Day / Night	Time (hrs)	Leq Noise Level (Hourly), dB)
			10.01.2020
1	Day Time	06-07	55.7
2		07-08	54.9
3		08-09	56.2
4		09-10	54.1
5		10-11	55.3
6		11-12	53.7
7		12-13	54.6
8		13-14	52.1
9		14-15	53.3
10		15-16	50.1
11		16-17	50.4
12		17-18	51.1
13		18-19	50.8
14		19-20	50.7
15		20-21	51.3
16		21-22	50.4
17	Night Time	22-23	47.8
18		23-00	49.3
19		00-01	45.8
20		01-02	46.5
21		02-03	48.3
22		03-04	48.7
23		04-05	44.8
24		05-06	47.5
MIN			44.8
MAX			56.2
Day dB(A)			52.5
Night dB(A)			47.3

Limits: Industrial Area: Day Time-75 dB (A), Night Time-70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). **Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).**

Note: Monitoring Date represents 24 hours from 6:00 am to 6:00am next day. Legend: Leq- Equivalent Noise Level (hourly); Ld-Day Time Equivalent Noise Level (06:00-22:00 hrs); Ln-Night Time Equivalent Noise Level (22:00-06:00 hrs); and Ldn-24 hourly Equivalent Noise Level.

Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi.

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**(Dr K Ganesan - Lab Manager)**

## WATER ANALYSIS TEST REPORT

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Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Raw Water
Sample Mark	RW-1
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/004/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
1.	Color	HU	BDL (DL 1)	IS 3025 (Pt 4) :1983 (RA 2017)
2.	Odour	-	Agreeable	IS 3025 (Pt 5):1983 (RA 2018)
3.	Conductivity at 25°C	µS/cm	64	IS:3025: (Pt-14): 1983 (RA 2006)
4.	pH @ 25°C	-	7.5	IS 3025 (Pt 11): 1983 (RA 2017)
5.	Total Dissolved Solids	mg/L	47	IS 3025 (Pt 16): 1984 (RA 2017)
6.	Turbidity	NTU	BDL (DL 0.1)	IS:3025: (Pt-10): 1984 (RA 2006)
7.	Total Alkalinity	mg/L	12.6	IS 3025 (Pt 23): 1986 (RA 2009)
8.	Total hardness as CaCO <sub>3</sub>	mg/L	26.4	IS 3025 (Pt 21): 1983 (RA 2006)
9.	Chloride as Cl	mg/L	8.2	IS 3025 (Pt 32): 1988 (RA 2009)
10.	Sulphate as SO <sub>4</sub>	mg/L	15.6	IS 3025 (Pt 24): 1986 (RA 2009)
11.	Total Chromium as Cr	mg/L	BDL (0.01)	IS 3025 (Pt 52): 2003 (RA 2009)
12.	Calcium as Ca	mg/L	11.8	IS 3025 (Pt 40): 1991 (RA 2009)
13.	Magnesium as Mg	mg/L	4.1	IS 3025 (Pt 46): 1994 (RA 2009)
14.	Total Iron	mg/L	BDL (DL 0.02)	IS 3025 (Pt 53): 2003 (RA 2009)
15.	Sodium	mg/L	5.5	3500 Na B APHA 23 <sup>rd</sup> Edition, 2017
16.	Potassium	mg/L	3.9	3500 Na B APHA 23 <sup>rd</sup> Edition, 2017
17.	Cyanide as CN	mg/L	BDL (DL0.01)	IS 3025 (Part - 27):1986

Note: NP - HU - Hazen Unit; µS/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;  
BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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## WATER ANALYSIS TEST REPORT

Page No. 2 of 2

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Raw Water
Sample Mark	RW-1
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/004/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
18.	Fluoride	mg/L	0.029	IS 3025 (Part - 60):2008
19.	Biological Oxygen Demand at 27 °C, 3 days	mg/L	2.0	IS 3025 (Pt 44): 1993 (RA 2014)
20.	Chemical Oxygen Demand	mg/L	7.04	IS 3025: (Pt 58): 2006 (RA 2017)
21.	Nitrate as NO <sub>3</sub>	mg/L	BDL (DL 0.01)	ASTM (Part - 31)1978
22.	Aluminium as Al	mg/L	BDL (DL0.03)	IS 3025 (Part - 55):2003
23.	Boron as B	mg/L	BDL (DL0.1)	IS:3025 (Part - 57):2003
24.	Phenolic Compounds	mg/L	BDL (DL0.001)	IS 3025 (Part - 43)1992
25.	Zinc as Zn	mg/L	BDL (DL 0.1)	IS 3025 (Part49)-1994 (Reaff 2009)
26.	Copper as Cu	mg/L	BDL (DL 0.01)	IS 3025 (Pt 42)-1992(Reaff :2009)
27.	Manganese as Mn	mg/L	BDL (DL 0.05)	IS 3025:(Part - 59):2006
28.	Cadmium as Cd	mg/L	BDL (DL 0.001)	IS 3025: (Part - 41)1991
29.	Lead as Pb	mg/L	BDL (DL 0.005)	IS 3025: (Part - 47)1994(Reaff 2009)
30.	Selenium as Se	mg/L	BDL (DL 0.005)	IS 3025: Part (56)2003
31.	Arsenic as As	mg/L	BDL (DL 0.005)	IS 3025: (Part-37):1988(Reaff 2009)
32.	Mercury as Hg	mg/L	BDL (DL 0.0005)	IS 3025: (Part48):1994 RA 1999
33.	Residual Free Chlorine	mg/L	BDL (DL 0.1)	IS 3025 (Part - 26):1986

Note: NP - HU - Hazen Unit; µS/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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## WATER ANALYSIS TEST REPORT

Page No. 1 of 2

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Surface Water - I
Sample Mark	SW-1
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/002/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
1.	Color	HU	1 HU	IS 3025 (Pt 4) :1983 (RA 2017)
2.	Odour	-	Agreeable	IS 3025 (Pt 5):1983 (RA 2018)
3.	Taste	-	Agreeable	IS 3025 (Part - 8):1984
4.	pH @ 25°C	-	7.05	IS 3025 (Pt 11): 1983 (RA 2017)
5.	Total Dissolved Solids	mg/L	118.5	IS 3025 (Pt 16): 1984 (RA 2017)
6.	Turbidity	NTU	BDL (DL 0.1)	IS:3025: (Pt-10): 1984 (RA 2006)
7.	Total Alkalinity	mg/L	19.2	IS 3025 (Pt 23): 1986 (RA 2009)
8.	Total hardness as CaCO <sub>3</sub>	mg/L	14.5	IS 3025 (Pt 21): 1983 (RA 2006)
9.	Chloride as Cl	mg/L	13.2	IS 3025 (Pt 32): 1988 (RA 2009)
10.	Sulphate as SO <sub>4</sub>	mg/L	BDL (DL 5)	IS 3025 (Pt 24): 1986 (RA 2009)
11.	Total Chromium as Cr	mg/L	BDL (0.01)	IS 3025 (Pt 52): 2003 (RA 2009)
12.	Calcium as Ca	mg/L	5.2	IS 3025 (Pt 40): 1991 (RA 2009)
13.	Magnesium as Mg	mg/L	BDL (DL 2)	IS 3025 (Pt 46): 1994 (RA 2009)
14.	Total Iron	mg/L	0.1	IS 3025 (Pt 53): 2003 (RA 2009)

Note: NP - HU - Hazen Unit;  $\mu\text{S}/\text{cm}$  - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

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## WATER ANALYSIS TEST REPORT

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Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Surface Water - I
Sample Mark	SW-1
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/002/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
15.	Fluoride	mg/L	0.01	IS 3025 (Part - 60):2008
16.	Nitrate as NO <sub>3</sub>	mg/L	0.4	ASTM (Part - 31):1978
17.	Aluminium as Al	mg/L	BDL (DL0.03)	IS 3025 (Part - 55):2003
18.	Boron as B	mg/L	BDL (DL 0.1)	IS:3025 (Part - 57):2003
19.	Phenolic Compounds	mg/L	BDL (DL0.001)	IS 3025 (Part - 43):1992
20.	Zinc as Zn	mg/L	BDL (DL 0.1)	IS 3025 (Part49)-1994 (Reaff 2009)
21.	Copper as Cu	mg/L	BDL (DL 0.01)	IS 3025 (Pt 42)-1992(Reaff :2009)
22.	Manganese as Mn	mg/L	BDL (DL 0.05)	IS 3025:(Part - 59):2006
23.	Cadmium as Cd	mg/L	BDL (DL 0.001)	IS 3025: (Part - 41):1991
24.	Lead as Pb	mg/L	BDL (DL 0.005)	IS 3025: (Part - 47):1994(Reaff 2009)
25.	Selenium as Se	mg/L	BDL (DL 0.005)	IS 3025: Part (56):2003
26.	Arsenic as As	mg/L	BDL (DL 0.005)	IS 3025: (Part-37):1988(Reaff 2009)
27.	Mercury as Hg	mg/L	BDL (DL 0.0005)	IS 3025: (Part48):1994 RA 1999
28.	Residual Free Chlorine	mg/L	BDL (DL0.1)	IS 3025 (Part - 26):1986

Note: NP - HU - Hazen Unit;  $\mu$ S/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;  
BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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## WATER ANALYSIS TEST REPORT

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Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Surface Water - II
Sample Mark	SW-2
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/003/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
1.	Color	HU	1 HU	IS 3025 (Pt 4) :1983 (RA 2017)
2.	Odour	-	Agreeable	IS 3025 (Pt 5):1983 (RA 2018)
3.	Taste	-	Agreeable	IS 3025 (Part - 8):1984
4.	pH @ 25°C	-	7.00	IS 3025 (Pt 11): 1983 (RA 2017)
5.	Total Dissolved Solids	mg/L	109.2	IS 3025 (Pt 16): 1984 (RA 2017)
6.	Turbidity	NTU	0.7	IS:3025: (Pt-10): 1984 (RA 2006)
7.	Total Alkalinity	mg/L	15.2	IS 3025 (Pt 23): 1986 (RA 2009)
8.	Total hardness as CaCO <sub>3</sub>	mg/L	12.24	IS 3025 (Pt 21): 1983 (RA 2006)
9.	Chloride as Cl	mg/L	10.06	IS 3025 (Pt 32): 1988 (RA 2009)
10.	Sulphate as SO <sub>4</sub>	mg/L	BDL (DL 5)	IS 3025 (Pt 24): 1986 (RA 2009)
11.	Total Chromium as Cr	mg/L	BDL (0.01)	IS 3025 (Pt 52): 2003 (RA 2009)
12.	Calcium as Ca	mg/L	4.90	IS 3025 (Pt 40): 1991 (RA 2009)
13.	Magnesium as Mg	mg/L	BDL (DL 2)	IS 3025 (Pt 46): 1994 (RA 2009)
14.	Total Iron	mg/L	0.15	IS 3025 (Pt 53): 2003 (RA 2009)

Note: NP - HU - Hazen Unit; µS/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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## WATER ANALYSIS TEST REPORT

Page No. 2 of 2

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3 <sup>rd</sup> Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Surface Water - II
Sample Mark	SW-2
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/003/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
15.	Fluoride	mg/L	0.037	IS 3025 (Part - 60):2008
16.	Nitrate as NO <sub>3</sub>	mg/L	2.31	ASTM (Part - 31)1978
17.	Aluminium as Al	mg/L	BDL (DL0.03)	IS 3025 (Part - 55):2003
18.	Boron as B	mg/L	BDL (DL0.1)	IS:3025 (Part - 57):2003
19.	Phenolic Compounds	mg/L	BDL (DL0.001)	IS 3025 (Part - 43)1992
20.	Zinc as Zn	mg/L	BDL (DL 0.1)	IS 3025 (Part49)-1994 (Reaff 2009)
21.	Copper as Cu	mg/L	BDL (DL 0.01)	IS 3025 (Pt 42)-1992(Reaff :2009)
22.	Manganese as Mn	mg/L	BDL (DL 0.05)	IS 3025:(Part - 59):2006
23.	Cadmium as Cd	mg/L	BDL (DL 0.001)	IS 3025: (Part - 41)1991
24.	Lead as Pb	mg/L	BDL (DL 0.005)	IS 3025: (Part - 47)1994(Reaff 2009)
25.	Selenium as Se	mg/L	BDL (DL 0.005)	IS 3025: Part (56)2003
26.	Arsenic as As	mg/L	BDL (DL 0.005)	IS 3025: (Part-37):1988(Reaff 2009)
27.	Mercury as Hg	mg/L	BDL (DL 0.0005)	IS 3025: (Part48):1994 RA 1999
28.	Residual Free Chlorine	mg/L	BDL (DL 0.1)	IS 3025 (Part - 26):1986

Note: NP - HU - Hazen Unit;  $\mu$ S/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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## WATER ANALYSIS TEST REPORT

Page No. 1 of 2

Name of the Customer	Ms. Laxmi Civil Engineering Services Pvt. Limited
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Drinking - Treated RO Water
Sample Mark	DW-RO
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/001/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
1.	Color	HU	BDL (DL 1)	IS 3025 (Pt 4) :1983 (RA 2017)
2.	Odour	-	Agreeable	IS 3025 (Pt 5):1983 (RA 2018)
3.	pH @ 25°C	-	7.3	IS 3025 (Pt 11): 1983 (RA 2017)
4.	Total Dissolved Solids	mg/L	45	IS 3025 (Pt 16): 1984 (RA 2017)
5.	Turbidity	NTU	BDL (DL 0.1)	IS:3025: (Pt-10): 1984 (RA 2006)
6.	Total Alkalinity	mg/L	10.1	IS 3025 (Pt 23): 1986 (RA 2009)
7.	Total hardness as CaCO <sub>3</sub>	mg/L	19.7	IS 3025 (Pt 21): 1983 (RA 2006)
8.	Chloride as Cl	mg/L	10.5	IS 3025 (Pt 32): 1988 (RA 2009)
9.	Sulphate as SO <sub>4</sub>	mg/L	BDL (DL 5)	IS 3025 (Pt 24): 1986 (RA 2009)
10.	Total Chromium as Cr	mg/L	BDL (0.01)	IS 3025 (Pt 52): 2003 (RA 2009)
11.	Calcium as Ca	mg/L	10.7	IS 3025 (Pt 40): 1991 (RA 2009)
12.	Magnesium as Mg	mg/L	3.5	IS 3025 (Pt 46): 1994 (RA 2009)
13.	Total Iron	mg/L	BDL (DL 0.02)	IS 3025 (Pt 53): 2003 (RA 2009)
14.	Sodium	mg/L	1.2	3500 Na B APHA 23 <sup>rd</sup> Edition, 2017
15.	Potassium	mg/L	2.4	3500 Na B APHA 23 <sup>rd</sup> Edition, 2017
16.	Cyanide as CN	mg/L	BDL (DL 0.01)	IS 3025 (Part - 27):1986
17.	Anionic Detergents as MBAS	mg/L	BDL (DL 0.05)	Annex K of IS 13428-2005
18.	Pesticides	mg/L	BDL (DL 0.0005)	HECS/W&WW/SOP/063
19.	Nickel	mg/L	BDL (DL 0.05)	IS 3025:(Part-54):2003(Reaff 2009)
20.	Ammonia as NH <sub>3</sub>	mg/L	BDL (DL 0.02)	IS 3025 (Part - 34) 1982
21.	Barium as Ba #	mg/L	BDL (DL 0.1)	HECS/W&WW/SOP/066

Note: NP - HU - Hazen Unit;  $\mu$ S/cm - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

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Authorized Signatory



## WATER ANALYSIS TEST REPORT

Page No. 2 of 2

Name of the Customer	<b>Ms. Laxmi Civil Engineering Services Pvt. Limited</b>
Address of the Customer	C.S.NO. 1031 / K2 , E Ward, 3rd Floor, Sterling Tower, Gavati Mandai, Kolhapur, Maharashtra - 416001
Name of the work / site	Ref. 02KDP01 dt. 19.12.2017. Construction of Works and Services for Operation and Management of 24 x 7 Water Supply System for Kundapura town, Udupi Dt. Karnataka - 576201
Sample Description	Drinking - Treated RO Water
Sample Mark	DW-RO
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Date of Sampling	10.01.2020
Qty. of sample received	2.5 L in HDPE Can
Date of Sample Receipt	10.01.2020
Analysis Commenced On	10.01.2020
Completed On	16.01.2020
Report No	HECS/W/001/100120
Report Date	18.01.2020

### RESULTS

S.No	Parameters	Units	Results	Test Method Followed
22.	Fluoride	mg/L	BDL (DL 0.01)	IS 3025 (Part - 60):2008
23.	Nitrate as NO <sub>3</sub>	mg/L	BDL (DL 0.01)	ASTM (Part - 31):1978
24.	Aluminium as Al	mg/L	BDL (DL0.03)	IS 3025 (Part - 55):2003
25.	Boron as B	mg/L	BDL (DL0.1)	IS:3025 (Part - 57):2003
26.	Phenolic Compounds	mg/L	BDL (DL0.001)	IS 3025 (Part - 43):1992
27.	Zinc as Zn	mg/L	BDL (DL 0.1)	IS 3025 (Part49)-1994 (Reaff 2009)
28.	Copper as Cu	mg/L	BDL (DL 0.01)	IS 3025 (Pt 42)-1992(Reaff :2009)
29.	Manganese as Mn	mg/L	BDL (DL 0.05)	IS 3025:(Part - 59):2006
30.	Cadmium as Cd	mg/L	BDL (DL 0.001)	IS 3025: (Part - 41):1991
31.	Lead as Pb	mg/L	BDL (DL 0.005)	IS 3025: (Part - 47):1994(Reaff 2009)
32.	Selenium as Se	mg/L	BDL (DL 0.005)	IS 3025: Part (56):2003
33.	Arsenic as As	mg/L	BDL (DL 0.005)	IS 3025: (Part-37):1988(Reaff 2009)
34.	Mercury as Hg	mg/L	BDL (DL 0.0005)	IS 3025: (Part48):1994 RA 1999
35.	Residual Free Chlorine	mg/L	BDL (DL 0.1)	IS 3025 (Part - 26):1986
36.	Silver as Ag	mg/L	BDL (DL 0.05)	HECS/W&WW/SOP/066
37.	Alpha Emitters	Bq/l	BDL (DL0.01)	IS 14194 (Part - 2):1994
38.	Beta Emitters	Bq/l	BDL (DL0.1)	IS 14194 (Part - 1):1994
39.	Chloramines	mg/L	BDL (DL0.01)	IS 3025 (Part - 26):1986
40.	Molybdenum #	mg/L	BDL (DL 0.01)	HECS/W&WW/SOP/066
41.	Polychlorinated Biphenyls	mg/L	BDL(DL 0.0001)	ASTM 5173
42.	Bromoform	mg/L	BDL(DL 0.0001)	APHA 6232
43.	Dibromochloromethane	mg/L	BDL (DL 0.0001)	APHA 6232

Note: NP - HU - Hazen Unit;  $\mu\text{S/cm}$  - micro Siemens per centimeter; NTU- Nephelometric Turbidity Unit; mg/L - milligram per liter;

BDL - Below Detection Limit; DL - Detection Limit;

\*\*\*\*\*End of Report\*\*\*\*\*

(Dr K GANESAN)  
Authorized Signatory

# Monthly Environmental Monitoring Report

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Project Number: 43253-027  
January 2020

IND: Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Improvements for 24 x 7 Water Supply System for City Municipal Council in Puttur

Package No. 02PTR01

Prepared by



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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udipi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be improved water resource planning, monitoring and service delivery in 24x7 water supply for Puttur City. Project 2 will have 3 outputs: (i) UWSS and sanitation infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) institutional capacity of KUIDFC and ULBs strengthened. The IEE is based on an assessment of these components within the project area.

### 2 Need for Infrastructure Improvement in Puttur

At present, Puttur City meets its water supply requirement through surface source. River Kumaradhara is the main surface source of water supply to Puttur. A new vented dam was constructed under KUDCEMP with a storage capacity of 0.61 million cubic meter (MCM) and a storage spreading of 2,400 m upstream the vented dam. Existing water supply system is depicted in Figure 1.

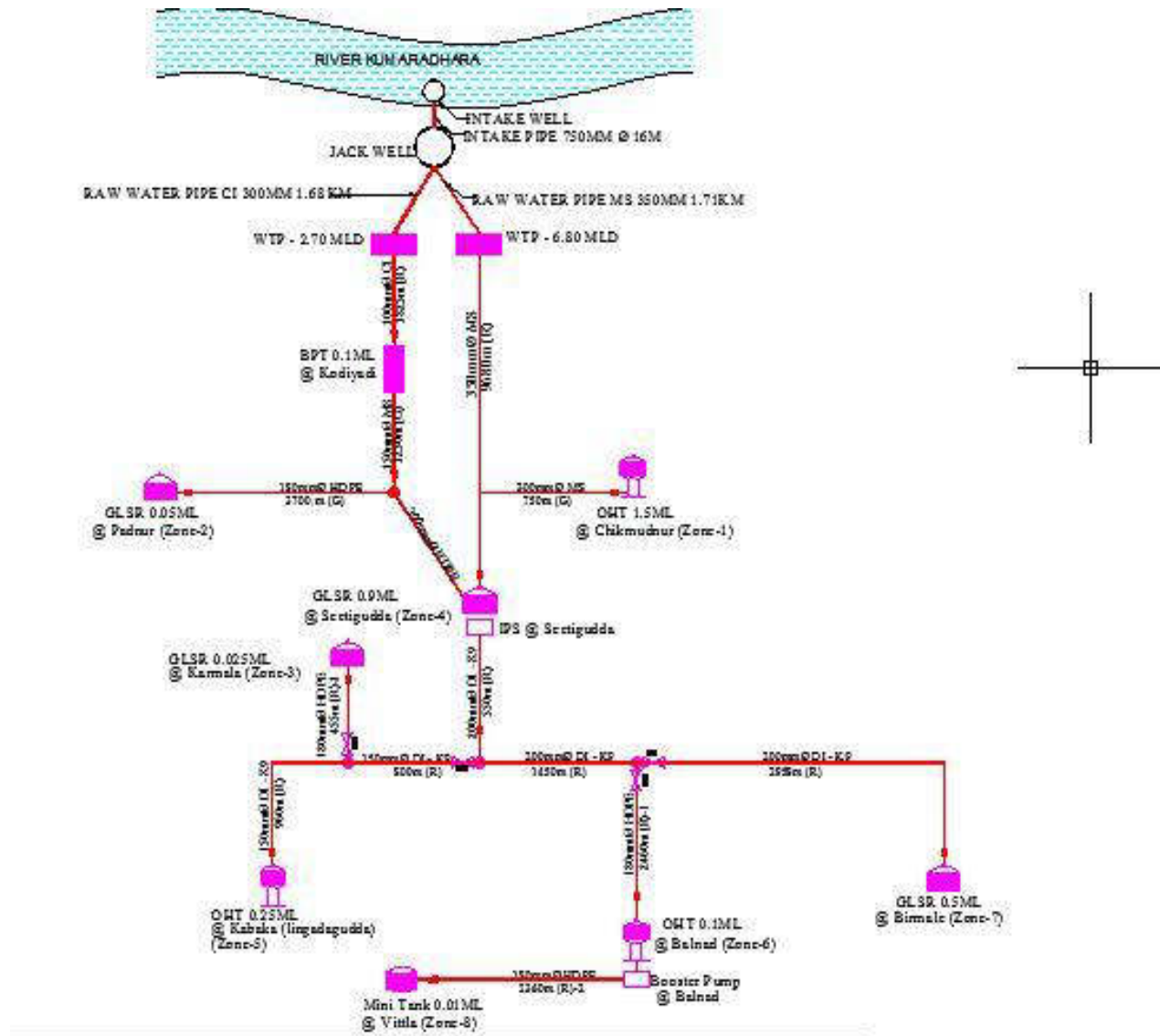
### 3 The proposed subproject:

This subproject includes the following components:

- (i) Replacement of two old pumps with new vertical turbine pumps in Jackwell at Nekkilady;
- (ii) construction of 1.68 kilometer (km) of raw water pumping main (400 millimeter (mm) diameter) from Jackwell to water treatment plant (WTP) at Nekkilady;
- (iii) construction of 12.42 km clear water main of 400 mm diameter from the proposed new Water Treatment Plant (WTP) at Nekkilady to ground level service reservoir (GLSR) at Tenkila;
- (iv) construction of new WTP of capacity 8.7 million litres per day (MLD) at Nekkilady;
- (v) replacement of clear water pumps in existing WTP at Nekkilady;
- (vi) construction of 5.06 km of clear water feeder mains;
- (vii) construction of six new overhead tanks (OHTs) – (a) 300 kiloliters (kl) capacity in Zone-2 at Mura Shantinagra, Padnur, (b) 100 kl in Zone-3 at Karmala near Microwave station, (c) 600 kl in Zone-4A at Darbe; (d) 250 kl in zone-5 at Lingadagudda, Kabaka, (e) 200 kl in Zone-6A at Balnad Helipad, and (f) 100 kl zone-8 at BalnadKelyadi, Vitla Road;
- (viii) construction of two GLSRs - (a) 1,000 kl capacity at Seethigudda, and (b) 2,000 KL at Tenkila;
- (ix) Intermediate pumping station at Tenkila; (x) booster pumping station at Balnad Helipad, (xi) 29 bulk water meters;
- (x) 142.66 km of distribution network to cover 24x7 water supply to Puttur city for 8 zones; and

- (xi) Replacement of 8,441 existing meters and providing new house service connections of 4,500 for un-covered households.

**Figure 1: Existing Water Supply System in Puttur**





**Table 1: Proposed Components for 24x7 Water Supply System**

Infrastructure	Function	Description	Location
Raw water pumps in existing Jack well	Pumping of Raw water from Jack well Standby power supply arrangement for pumping	-Replacement of two old pumps with new vertical turbine pumps of capacity 335 m <sup>3</sup> /h, 75 m head (1+1) Procurement of diesel generator of 500 kilovolt-ampere -(kVA)	Jack well site at Nekkilady  Jack well site at Nekkilady
Raw water Transmission Main	Conveys raw water to WTP by pumping	1.68 km length 400 mm diameter DI pipe	Pipe will be laid underground from Nekkilady to WTP all along the existing road
Water Treatment Plant	Treats raw water to meet drinking water standards	New 8.7 MLD capacity WTP based on conventional treatment Process. The components Include Cascade Aerator Parshall flume Flash mixer Flocculators – 2 units Tube settlers – 2 units Rapid sand filters - 4 beds Chlorination system with safety measures Lime and alum mixing Tanks Clear water sump and pump house Backwash water recirculation and sludge management system (sludge collection, drying beds) – a combined system of adequate capacity for backwash and sludge management will be developed to cater to both new and existing WTPs. This component addresses the issues of concern identified in the environmental audit of existing WTP (Ref Corrective Action Plan, Table 8)	Nekkilady  Adjacent to the existing WTP; sufficient land available within the existing WTP campus to accommodate the new WTP
Clear water Pumps in existing WTP	Pumps clear water to Service reservoirs	Replacement of old pumps within new pumps: 2 pump sets of capacity 325 m <sup>3</sup> /hour and 84 m head (1+1)	Pumps will be installed in the existing clear water pumping station at WTP, Nekkilady
Clear Water Transmission Main	Pumping of clear water from WTP (water treatment plant) to service reservoirs	12.42 km length 400 mm diameter DI pipe	Pipe will be laid underground from Nekkilady to Tenkila GLSR along the public roads within the road right of way
Clear water feeder main	Pumping of clear water from MBR to Service Reservoirs	5.06 km length 180 – 300 mm diameter DI /HDPE) pipes DI pipe of 300 mm diameter – 1.134 km DI Pipe of 200 mm diameter – 2.422 km	Laying of pipes underground along public roads within the ULB area

Infrastructure	Function	Description	Location
Water service reservoirs	Water storage for supply	<p>DI Pipe of 150 mm diameter – 0.591 km HDPE pipe of 180 mm – 0.918 km</p> <p>Six OHTs and two GLSRs of RCC including compound walls at the selected sites:</p> <p><b>OHT</b> 300KL for Zone-2 at Mura Shantinagra, Padnur</p> <p>100KL for Zone-3 at Karmala near Microwave station 600KL for Zone-4A at CTO, Darbe 250KL for Zone-5 at Lingadagudda, Kabaka 200KL for Zone-6A at Balnad Helipad 100KL for zone-8 at, Balnad Kelyadi, Vitla Road1</p> <p><b>GLSR</b> 1,000KL in Zone-4 at Seethigudda 2,000 KL GLSR at Tenkila</p>	<p><b>OHT</b> Existing within ULB Properties. No non-title users are present at these sites</p> <p><b>GLSR</b> Seethigudda land is ULB property. And  Tenkila is purchase by Karnataka Housing Board, Government of Karnataka, and it will be purchased through negotiated Settlement.</p>
Intermediate Pumping Stations (IPS)	To provide adequate pressure in the system for supply	<p>Intermediate pumping station at Tenkila Pump capacities: 65m<sup>3</sup>/h and 85 m head for zone 3 and 5 (1+1) 82 m<sup>3</sup>/h and 33 m head for zone 4A, (1+1) 119 m<sup>3</sup>/h and 100 m head for zone 6, 6A and 7, (1+1)</p> <p>Booster pumping station at Balnad Pump capacity 11 m<sup>3</sup>/h and 80 m head (1+1)</p>	<p>Pumping station will be located within Tenkila GLSR site</p> <p>Pumping station will be located within the site identified for Zone 6A OHT at Balnad Helipad</p>
Distribution system	Supply of water from service reservoirs to consumers	<p>142.66 km of pipe lines of diameter 75 mm to 280 mm (HDPE / DI pipes)</p> <p>75 mm – 106.139 km 90 mm – 1.853 km 110 mm – 21.744 km 150 mm (DI) - 2.784 km 160 mm – 2.889 km 200 mm – 1.403 km</p>	<p>In 8 zones within the city limits Pipes will be laid underground along the roads within the ROW</p>

	250 mm – 0.362 km	
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Infrastructure	Function	Description	Location
		250 mm (DI)- 4.916 km 280 mm – 0.570 km	
Bulk Water Meters	To record data of volume of flow to each Distribution System zones at desired time interval.	29 no.	Bulk meters will be fixed at strategic locations in the pipe line at Jack well point, WTP and service reservoir points
House Service Connections (HSC)	For each house connection will be provided with meters to supply water and record volume of water. W	4,500 new HSC connections 9226 replacement of existing domestic water meters	In 8 zones for all the houses within the city limits

CMC = City Municipal Council, m<sup>3</sup>/h = cubic meter per hour, DI = ductile iron, GLSR = ground level service reservoir, HDPE = high density polyethylene, HSC = House Service Connections, IPS = Intermediate Pumping Stations, km = kilometer, m = meter, mm = millimeter, MLD = million liters per day, OHT = overhead tank, RCC = reinforced cement concrete, ROW = right-of-way, ULB = urban local body, WTP = water treatment plant.

#### **4 Environmental Management Plan**

The environmental management plan (EMP) aims to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i) providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project; (iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with

Karnataka Integrated Urban Water Management Investment Program	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Improvements for 24 x 7 Water Supply System for City Municipal Council in Puttur	<b>Name of the Contractor:</b> Suez Civil Engineering services Pvt, LTD
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Puttur	<b>Name of SE/EE/AE Of concerned division PIU :-</b> Mr.Shamath, AE
<b>Date of monthly monitoring:</b> 22/01/2020	<b>Name of Environment, Health And Safety (EHS) engineer :-</b> Mr.Y Amruth



**Table 2: Status of implementation Environmental Management Plan for Anticipated Impacts –Construction Stage - PUTTUR**

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds	Status of Implementation
Environmental Management Plan (EMP) Implementation Training	Impacts on the environment, workers, and community due to improper implementation of EMP	<p>1) Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOPs) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.; and</p> <p>2) appointment of Environment, Health and Safety (EHS) Engineer by contractor prior to start of work</p>	Construction Contractor/ Program Implementation Unit (PIU)/ Project Management Design, Construction and Supervision Consultant (PMDSC)	<p>(i) Certificate of Completion (Safeguards Compliance Orientation);</p> <p>(ii) Posting Certification Completion</p> <p>(iii) Posting of EMP at worksites</p>	Cost of EMP Implementation Orientation Training to contractor is Responsibility Other costs Responsibility	<p>1) Spoil management submitted but it needs to be updated</p> <p>2) EHS Engineer appointed</p>
Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, Sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<p>3) Consult with PIU/PMDSC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</p> <p>4) Damp down exposed soil and any stockpiled on-site by spraying with water when necessary during dry weather;</p> <p>5) Enclose the area with dust screens of sufficient height during the dismantling work; employ proper construction methods limiting the dust generation;</p> <p>6) Use tarpaulins to cover sand and other loose material when transported by trucks;</p> <p>7) Clean wheels and undercarriage of vehicles prior to leaving construction site; and</p>	Construction Contractor	<p>(i) Location of stockpiles;</p> <p>(ii) Complaints from sensitive receptors;</p> <p>(iii) Heavy equipment and machinery with air pollution</p> <p>(iv) Certification that vehicles are compliant with Air Act.</p>	Cost for implementation of mitigation measures responsibility	<p>3) Complied</p> <p>4) Instructed contracting agency to spray water at commercial and residential areas if stock piled on-site.</p> <p>5) Not complied</p> <p>6) Not complied</p> <p>7) Complied</p> <p>8) Complied</p>

		8) Fit all heavy equipment and machinery with air pollution control devices which are operating correctly.				
Surface water quality	Mobilization of settled silt materials and chemical contamination from fuels and lubricants during installation of pipelines can contaminate nearby surface water quality.	<p>9) Prepare and implement a spoils management plan as the part of the Construction Management Plan;</p> <p>10) Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</p> <p>11) Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</p> <p>12) Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund;</p>	Construction Contractor	<p>(i) Areas for stockpiles, storage of fuels and lubricants and waste materials;</p> <p>(ii) Number of silt traps installed along trenches leading to water bodies;</p> <p>(iii) Records of surface water</p> <p>(iv) Effectiveness of water management measures; and</p> <p>(v) No visible degradation to nearby drainages, nallahs or</p>	Cost for implementation of mitigation measures responsibility	<p>9) Spoil management plan is submitted during preconstruction stage. Updation is to be done for construction stage</p> <p>10) Instructed contracting agency to use tarpaulins or sheets for Stockpiling during monsoon season</p> <p>11) No such water bodies found during site visit but instructed contracting agency to use silt trap if any water bodies found</p> <p>12) Contracting agency not using fuels and lubricants in bulk but instructed to provide separate room for bulk quantity</p>

		<p><b>13)</b> Dispose any wastes generated by installation of pipeline in designated sites; and</p> <p><b>14)</b> Conduct surface quality inspection according to the Environmental Management Plan (EMP).</p>		waterbodies due to civil works.		<p><b>13)</b> Complied</p> <p><b>14)</b> Not complied</p>
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	<p><b>15)</b> Plan activities in consultation with PIU/PMDCSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <p><b>16)</b> Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p> <p><b>17)</b> Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor;</p> <p><b>18)</b> Properly enclose the dismantling area with temporary noise barriers; and</p> <p><b>19)</b> Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Use of silencers in noise-producing equipment and sound barriers; and</p> <p>(iii) Equivalent day and night time noise levels (See Appendix 4 of this IEE).</p>	Cost for implementation of mitigation measures responsibility	<p><b>15)</b> Complied</p> <p><b>16)</b> Complied</p> <p><b>17)</b> Complied</p> <p><b>18)</b> Complied</p> <p><b>19)</b> Complied</p>

Landscape and aesthetics	Impacts due to excess excavated earth, excess construction and demolition materials and solid waste such as removed concrete, wood, packaging materials, empty	<p><b>20)</b> Prepare and implement spoils management plan;</p> <p><b>21)</b> Avoid stockpiling of excess excavated soils;</p> <p><b>22)</b> Coordinate with Puttur CMC for beneficial uses of excess excavated soils or immediately dispose to designated areas;</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Worksite clear of hazardous wastes such as oil/fuel; and</p> <p>(iii) Worksite clear of any excess excavated earth,</p>	Cost for implementation of mitigation measures responsibility	<p><b>20)</b> Spoil management plan is prepared (<b>attached in annexure 3a july 2019 but updation is to be done</b>) and contractor agency following and found no surplus soil found in sites</p> <p><b>21)</b> Complied</p> <p><b>22)</b> Complied (<b>attached in annexure 4 september 2019</b>)</p>
	containers, spoils, oils, lubricants, and other similar items. C & D materials after dismantling of the old WTP and old GLSR are identified	<p><b>23)</b> Recover used oil and lubricants and reuse or remove from the sites;</p> <p><b>24)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p><b>25)</b> Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p><b>26)</b> Request PIU/PMDCSC to report in writing that the necessary environmental restoration works has been adequately performed before acceptance of work.</p> <p>C &amp; D materials after dismantling of the old WTP and old GLSR shall be managed as per C &amp; D Rules 2016,</p>		and solid waste such as removed concrete, wood, packaging materials, empty containers.		<p><b>23)</b> Used oil and lubricants not generated on site</p> <p><b>24)</b> Complied (<b>attached in annexure 4 september 2019</b>)</p> <p><b>25)</b> Complied</p> <p><b>26)</b> No such damages found during the site visits but instructed contracting agency to restore immediately and when work gets completed, joint site inspection will be conducted and report / letter will be issued.</p>

Existing Infrastructure and Facilities	Disruption of service and damage to existing infrastructure at specified project location	<p><b>27)</b> Obtain from PIU/PMDCSC the list of affected utilities and operators if any;</p> <p><b>28)</b> Prepare a contingency plan to include actions to be done in case of unintentional interruption of service; and</p> <p><b>29)</b> The public should be given notice at least three days in advance and any accidental breaking should be rectified immediately.</p>	Construction Contractor	Existing Utilities Contingency Plan	Cost for implementation of mitigation measures responsibility	<p><b>27)</b> No such utilities were shifted or damaged but Recommended Contractor to maintain list of utilities identified prior to start of work at any section.</p> <p><b>28)</b> Not complied</p> <p><b>29)</b> Complied</p>
Ecological Resources – Terrestrial	Loss of vegetation and tree cover	<p><b>30)</b> Minimal tree cutting is envisaged as part of this sub project. to safeguard any tree removal, following measures to be implemented;</p> <p>(a) Minimize removal of vegetation and disallow cutting of trees;</p>	Construction Contractor	PMU/PMDCSC to report in writing the no of trees cut and planted.	Cost for implementation of mitigation measures responsibility	<p><b>30)</b> Instructed contracting agency to avoid tree cutting and to get permission from concerned department before start of the work</p> <p>a) Instructed contracting agency to avoid tree cutting and to get permission from concerned department before start of the work</p>
		<p>b) If tree-removal will be required, obtain tree-cutting permit from the Forest Department; and</p> <p>c) Plant two native trees for every one that is removed.</p>				<p>b) Instructed contracting agency to avoid tree cutting and to get permission from concerned department before start of the work</p> <p>c) Instructed contracting agency</p>



Accessibility	Traffic problems and conflicts near project locations and haul road	<p><b>31)</b> Traffic Management Plan (TMP) should be part of the Construction Management Plan.</p> <p><b>a)</b> Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p><b>b)</b> Schedule transport and hauling activities during non-peak hours;</p> <p><b>c)</b> Locate entry and exit points in areas where there is low potential for traffic congestion;</p> <p><b>d)</b> Keep the site free from all unnecessary obstructions;</p> <p><b>e)</b> Drive vehicles in a considerate manner;</p> <p><b>f)</b> Coordinate with Traffic Police for temporary road diversions and with for provision of traffic aids if transportation activities cannot be avoided during peak hours;</p> <p><b>g)</b> Notify affected sensitive receptors 2 days in advance by providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints;</p> <p><b>h)</b> Plan and execute the work in such a way that the period of disturbance/ loss of access is minimum; and</p> <p><b>i)</b> Provide pedestrian access in all the locations until normalcy is restored.</p>	Construction Contractor	<p>(i) Traffic route during construction works including number of permanent signages, barricades and flagmen on worksite (refer outline TMP is provided in Appendix 12);</p> <p>(ii) Complaints from sensitive receptors; and</p> <p>(iii) Number of signages placed at project location.</p>	Cost for implementation of mitigation measures responsibility	<p><b>31)</b> Traffic Management Plan is prepared by contracting agency <b>(attached in annexure 3b july 2019 but updation is to be done)</b></p> <p><b>a) Not complied.</b> Instructed to prepare plan</p> <p><b>b) Complied</b></p> <p><b>c) Complied</b></p> <p><b>d) Complied</b></p> <p><b>e) Complied</b></p> <p><b>f)</b> Instructed contracting agency to inform traffic department for temporary road diversion before two days start of the work.</p> <p><b>g) Complied</b></p> <p><b>h) Complied</b></p> <p><b>i)</b> No such execution work found near any commercials or residential areas. But instructed contracting agency to provide pedestrian wherever required</p>
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Socio-Economic – Income.	Impede the access of residents and customers to nearby shops	<b>32)</b> Prepare and implement spoils management plan; <b>33)</b> Leave spaces for access between mounds of soil; <b>34)</b> Provide walkways and metal sheets where required for people; <b>35)</b> Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools; <b>36)</b> Consult businesses and institutions regarding operating hours and factoring this in work schedules; and <b>37)</b> Provide sign boards for pedestrians to inform nature and duration of construction works and contact	Construction Contractor	(i) Complaints from sensitive receptors; (ii) Spoils management plan; and (iii) Number of walkways, signages, and metal sheets placed at project location.	Cost for implementation of mitigation measures responsibility	<b>32)</b> Spoil management plan is prepared ( <b>attached in annexure 3a july 2019 but updation is to be done</b> ) <b>33)</b> Complied <b>34)</b> Complied <b>35)</b> Complied <b>36)</b> Complied <b>37)</b> Complied
Socio-Economic - Employment	Generation of contractual employment and increase in local revenue	<b>38)</b> Employ local labor force to the maximum extent, if manpower is available; and <b>39)</b> Comply with core labor laws	Construction Contractor	(i) Employment records; and (ii) Compliance to core labor laws (See Appendix 2 of this IEE).	Cost for implementation of mitigation measures responsibility	<b>38)</b> Register maintained by contractor attached as <b>Annexure – 4 in dec 2019</b> <b>39)</b> Contractor Obtained Labour license and Employees Compensation Insurances for Workers (Skilled and unskilled).

Occupational Health and Safety	Occupational hazards which can arise during work	<p><b>40)</b> Comply with all national, state and local core labor laws (See Appendix 2 of this IEE);</p> <p><b>41)</b> Develop and implement site- specific occupational health and safety (OHS) Plan, and include in the Construction Management plan. The OHS plan will include measures such as:</p> <p>(a) excluding public from the site; (b) ensuring all workers are provided with and use</p>	Construction Contractor	<p>(i) Site-specific OHS Plan;</p> <p>(ii) Equipped first-aid stations;</p> <p>(iii) Medical insurance coverage for workers;</p> <p>(iv) Number of accidents;</p> <p>(v) Supplies of potable drinking water;</p>	Cost for implementation of mitigation measures responsibility	<p><b>40)</b> Contractor following Company EHS Policy Site-specific OHS Plan Have to be prepared by Contractor.</p> <p><b>41)</b> Contractor following Company EHS Policy- PPE'S provided by Contractor.</p> <p><b>a) Complied</b></p> <p><b>b) Complied.</b> PPE'S provided by Contractor to workers and tool box training provided at site.</p> <p><b>Annexure-4</b></p>
		<p>personal protective equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs;</p> <p>(c) OHS Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</p> <p><b>42)</b> Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p><b>43)</b> Provide medical insurance coverage for workers;</p> <p><b>44)</b> Secure all installations from unauthorized intrusion and accident risks;</p> <p><b>45)</b> Provide supplies of potable drinking water;</p> <p><b>46)</b> Provide clean eating areas where workers are not exposed to hazardous or</p>		<p>(vi) Clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(vii) record of health and safety orientation trainings;</p> <p>(viii) personal protective equipment;</p> <p>(ix) % of moving equipment outfitted with audible back-up alarms;</p> <p>(x) permanent sign boards for hazardous areas such as</p>		<p><b>c) Complied</b></p> <p><b>d) Not complied</b></p> <p><b>e) Accident and incident register maintained</b></p> <p><b>42)</b> Partially Complied. Instructed to keep first-aid box at each working sites separately</p> <p><b>Annexure-4 in dec 2019</b></p> <p><b>43)</b> Not complied</p> <p><b>44)</b> Complied</p> <p><b>45)</b> Complied</p> <p><b>46)</b> Complied</p>

		<p>noxious substances;</p> <p><b>47)</b> Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p><b>48)</b> Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p><b>49)</b> Ensure the visibility of workers through their use of high visibility</p>		<p>energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal; and</p> <p>(xi) Compliance to core labor laws (See Appendix 2 of this IEE).</p>		<p><b>47)</b> Not complied. Instructed to Provide health and safety orientation training to all workers</p> <p><b>48)</b> Not complied</p> <p><b>49)</b> Complied <b>Annexure-1 in dec 2019</b></p>
		<p>vests when working in or walking through heavy equipment operating areas;</p> <p><b>50)</b> Ensure moving equipment is outfitted with audible back-up alarms;</p> <p><b>51)</b> Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p><b>52)</b> Disallow worker exposure to noise level greater than 85 dBA for a duration of more</p>				<p><b>50)</b> Complied</p> <p><b>51)</b> Complied</p> <p><b>52)</b> Workers not allowed to work more than 8 hours per day without hearing protection who are exposing to noise level greater than 85 dB. Recommended Contractor to use hearing protection Measures to workers</p>

		than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<p><b>53)</b> Plan routes to avoid times of peak-pedestrian activities.</p> <p><b>54)</b> Liaise with PIU/PMDSC in identifying high-risk areas on route cards/maps.</p> <p><b>55)</b> Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.</p> <p><b>56)</b> Provide road signs and flag persons to warn of on-going trenching activities.</p>	Construction Contractor	(i) Traffic Management Plan; and (ii) Complaints from sensitive receptors.	Cost for implementation of mitigation measures responsibility	<p><b>53)</b> Not complied</p> <p><b>54)</b> Not complied</p> <p><b>55)</b> Not complied</p> <p><b>56)</b> Complied</p>
Work Camps and worksites	Temporary air and noise pollution from machine operation	<p><b>57)</b> Consult with PIU before locating workers camps/sheds, and construction plants; as far as</p>	Construction Contractor	(i) Complaints from sensitive receptors;	Cost for implementation of mitigation measures	<p><b>57)</b> Complied Contractor informed to PIU office regarding labour camp construction at mottetadka opposite NCRC but they not having letter from PIU.</p>



	<p>water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers.</p>	<p>possible located at least 200 m from residential areas;</p> <p><b>58)</b> Minimize removal of vegetation and disallow cutting of trees;</p> <p><b>59)</b> Living facilities shall be built with adequate materials, and should be in good condition and free from rubbish and other refuge;</p> <p><b>60)</b> The camp site should be adequately drained to avoid the accumulation of stagnant water;</p> <p><b>61)</b> Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60-80 LPCD); all water storage structures must be cleaned regularly and covered properly to avoid any contamination;</p> <p><b>62)</b> Provide separate facilities for men and women; sanitary facilities shall be properly build and</p>		<p>(ii) Drinking water and sanitation facilities for employees.</p>	responsibility	<p><b>58)</b> Removal of vegetation Minimize by selecting best alignment.</p> <p><b>59)</b> Instructed contracting agency to built labour shad with sheets with proper ventilation in clean hygienic area.</p> <p><b>60)</b> Instructed contracting agency to built with sheets with proper ventilation in clean hygienic area.</p> <p><b>61)</b> Instructed contracting agency to provide drinking water as per the standards at camp</p> <p><b>62)</b> Instructed contracting agency to provide separate toilet facilities for men and women at camp and working sites</p> <p><b>63)</b> Instructed contracting agency to provide</p>

		<p>well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons;</p> <p><b>63)</b> Train employees in the storage and handling of materials which can potentially cause soil contamination;</p> <p><b>64)</b> Recover used oil and lubricants and reuse or remove from the site;</p> <p><b>65)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p>				<p>training of solid and liquid materials handling at camp</p> <p><b>64)</b>Instructed to contracting agency</p> <p><b>65)</b> Complied</p>
		<p><b>66)</b>Remove all wreckage, rubbish, or temporary structures which are no longer required;</p> <p><b>67)</b> Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work; and</p> <p><b>68)</b> The work camp details should be included in the Construction Management Plan.</p>				<p><b>66)</b> Complied</p> <p><b>67)</b> Construction work is in progress.</p> <p><b>68)</b> Not complied</p>

Social and Cultural Resources	Risk of archaeological chance finds	<p><b>69)</b> Create awareness among the workers and supervisors about the chance finds during excavation work;</p> <p><b>70)</b> Stop work immediately if any finds are suspected to allow further investigation;</p> <p><b>71)</b> Inform archaeological agencies promptly if a find is suspected, and take any action they require to ensure its removal or protection in situ; and</p> <p><b>72)</b> Adjacent to important religious sites, undertake excavation and construction work in such a way that no structural damage is caused to the building.</p>	Construction Contractor	Records of chance finds	Cost for implementation of mitigation measures responsibility	<p><b>69)</b> Till now no such suspected items found nor recorded</p> <p><b>70)</b> Till now no such suspected items found nor recorded</p> <p><b>71)</b> Till now no such archaeological items recorded</p> <p><b>72)</b> No such damages recorded during the visit. But instructed to maintain if such damages happens.</p>
Submission of EMP implementation report	Unsatisfactory compliance to EMP	<p><b>73)</b> Appointment of EHS Engineer to ensure EMP implementation; and</p> <p><b>74)</b> Timely submission of monitoring reports including pictures.</p>	Construction contractor	Availability and competency of appointed EHS engineer Monthly report	Cost for implementation of mitigation measures responsibility	<p><b>73)</b> EHS Engineer appointed</p> <p><b>74)</b> Complied <b>Annexure-5 in dec 2019</b></p>

Post-construction clean-up	Damage due to debris, spoils, excess construction materials	<p><b>75)</b> Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required;</p> <p><b>76)</b> All excavated roads shall be reinstated to original condition.</p>	Construction Contractor	<p>PIU/PMDSC report in writing that</p> <p>(i) worksite is restored to original conditions;</p> <p>(ii) camp has been vacated and restored to</p>	Cost for implementation of mitigation measures responsibility	<p><b>75)</b> Complied</p> <p><b>76)</b> No such bitumen or concrete road damaged during site visit. But instructed to restore road same as it was before damage</p>
		<p><b>77)</b> All disrupted utilities restored;</p> <p><b>78)</b> All affected structures rehabilitated/compensated;</p> <p><b>79)</b> The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up;</p> <p><b>80)</b> All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the revegetation specification that forms part of this document;</p> <p><b>81)</b> The contractor must arrange the cancellation of all temporary services; and</p> <p><b>82)</b> Request PMU/PMDSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>		<p>pre-project conditions; and</p> <p>(iii) all construction related structures not relevant to O&amp;M are removed; and</p> <p>(iv) worksite clean-up is satisfactory.</p>		<p><b>77)</b> If utilities are to be shifted contracting agency must take permission from concern authorities before start the work and restore it properly as it was before the damage</p> <p><b>78)</b> Till now no structures affected</p> <p><b>79)</b> Not complied Instructed contracting agency to properly clean surface area free of oil and paints for construction camp</p> <p><b>80)</b> Not complied</p> <p><b>81)</b> Not complied</p> <p><b>82)</b> Construction work is in progress</p>

### Conclusion:-

Construction stage is in progress. Health and HIV AIDS Awareness Training programme has to be conducted by Contractor. Proper Record maintenance should be improved by Contractor. Proper safety measures like project information boards, safety sign boards, hard barricading and register books should be maintained at all work sites. Contractor has to submit Site specific EMP of January 2020 with PIU letter, Puttur.

### Recommendation:-

S.No	Monitoring of Mitigation / Key Issues to be complied	Recommendation and Action Required by Contractor	Time line/Remarks
1.	Mobilization of Environment, Health And Safety(EHS)engineer		Complied
2.	Submission of Site specific EMP		Before start of Construction work Comply with in 7days
3.	Submission of monthly reports.	<ul style="list-style-type: none"> <li>Construction status or compliance report</li> </ul>	Contractor has to submit Site specific EMP of January 2020 Comply with in 7 days
4.	Telephone lines, electric Poles and wires, water Lines within proposed project area	<ul style="list-style-type: none"> <li>List of utilities going to effect will be submitted to PIU</li> </ul>	Before start of Construction work
5.	Heavy equipment and machinery with air pollution control devices;	<ul style="list-style-type: none"> <li><b>PUC certification for all vehicles/equipment used for/during construction and certification of users at site.</b></li> </ul>	Comply with in 7days
6.	Certification that vehicles are compliant with Air Act	<ul style="list-style-type: none"> <li><b>Register of Equipment and Vehicles maintenance certificates at site</b></li> </ul>	Comply with in 5 days
7.	Layout plan of overhead tanks (OHTs);		Comply with in 7 days
8.	Tree cutting/pruning permission; and	<ul style="list-style-type: none"> <li>If any of the tree is getting affected, it is to be noted in the survey and its permission has to be taken</li> </ul>	Comply with in 7 days
9.	Compensatory tree plantation as part of the project.	NA	Identify Before start of Construction work and Compensate during Construction
10.	Areas for stockpiles, storage of fuels and lubricants and waste materials;	<ul style="list-style-type: none"> <li>Storage of materials like fuel, chemicals, and cement shall be done in a manner (with impervious layer on bottom and a covered shed on top) that does not contaminate land and ground/surface water.</li> </ul>	Comply with in 7 days
11.	List of selected sites for construction work camps, hot mix plants, stockpile areas, storage areas, and disposal Areas.	<ul style="list-style-type: none"> <li>Location must be identified and marked on google map and consult with PIU and after joint inspection and with consideration of all given mitigation measure given.</li> </ul>	Complied Attached as <b>Annexure –2 &amp; 3 in may 2019.</b> Take site approval letter from PIU (for construction work camps, hot



			mix plants, stockpile areas, storage areas, and disposal areas.) Before start of Construction work
12.	Written consent of landowner/s (not lessee/s) for reuse of excess spoils to agricultural land	<ul style="list-style-type: none"> <li>If any private land is selected NOC from owner has to be taken</li> </ul>	Comply with in 15 days
13.	List of selected sites for disposal	<ul style="list-style-type: none"> <li>Location must be identified and marked on google map and consult with PIU and after joint inspection with consideration of all given mitigation measure given.</li> <li>If any private land is selected ,NOC from owner have to be taken</li> </ul>	Debris disposal land location identified and Permission letter has been issued by PIU. <b>Attached as annexure 4 in September 2019.</b>
14.	List of approved quarry Sites and Sources of materials; and		Before start of Construction work
15.	Bid document to include requirement for verification of suitability of sources and permit for additional quarry sites if necessary.		Before start of Construction work
16.	Method of statement in table format	<ul style="list-style-type: none"> <li>As mention in mitigation measures</li> </ul>	Comply with in 10 days
17.	Spoil Management Plan	<p>Waste material brought up during the course of an excavation or a dredging or mining operation.</p> <ul style="list-style-type: none"> <li>Type and quantity of waste generated.</li> <li>Identify the impact</li> <li>Spoil Transportation Methodology</li> <li>Reuse of quantity of waste generated in any other projects or any other place</li> <li>Amount of waste disposed in identified disposal areas consultation with PIU</li> <li>If private land NOC from owner.</li> <li>Location of Waste disposal site mark on Google map</li> </ul>	<p>Draft copy shown and submitted attached as an <b>annexure 3a in August 2019 report but updation is to be done</b> and informed contractors to update plan once construction phase starts</p> <p>Debris disposal land location identified and Permission letter has been issued by PIU. <b>Attached as annexure 4 in September 2019.</b></p>
18.	Traffic management plan		<p>Draft copy shown and submitted attached as <b>annexure 3b August 2019 report but updation is to be done</b> and informed contractors to update plan once construction phase starts</p> <p>Comply with in 7 days</p>
19.	Environmental management plan		<p>Draft copy shown and submitted attached as an <b>annexure 3c in August 2019 report but updation is to be done</b> and informed contractors to update</p>

			plan once construction phase starts Comply with in 7 days
20.	Site specific OHS Plan	<ul style="list-style-type: none"> <li>Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall be provided in all work zones.</li> <li>Trained first aid personal will be available at the construction site.</li> <li>Emergency numbers will be displayed prominently at camp and construction site.</li> <li>Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can be used as ambulance, will be available at construction site.</li> <li>The contractor shall identify nearby hospital, which could be used in case of emergency.</li> </ul> <p>First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</p>	Comply with in 7 days
21.	Equivalent day and night time noise levels	<ul style="list-style-type: none"> <li>During the construction phase, the contractor will carry out environmental monitoring noise levels by engaging NABL approved laboratory.</li> </ul>	Complied. Pre-construction test conducted in November 2019 and noise report has to submit by contractors
22.	Records of Air quality inspection	<ul style="list-style-type: none"> <li>If contractor carrying out Construction activities near sensitive receptor( residential areas, temples, Hospitals, schools ) During the construction phase, the contractor will carry out Ambient Air quality monitoring by engaging NABL approved laboratory</li> </ul>	Complied. Pre-construction test conducted in November 2019 and air report has to submit by contractors



**Mahmad Raphiyoddin Shaphiyoddin Malik**  
**Environmental Specialist**  
**KIUWMIP – Tranche 2**

## Annexure 1

### Site Visit observations on 22<sup>nd</sup> January 2020

1	Project information board and sign boards and hard barricading must be provided all OHT Sites	 	<p>Instructed contracted agency to provide hard barricading for such deep trenches</p> <p>Provide project information board related to the particular project work and place at all working OHT site</p> <p>Project information Board is to be provided both in English and Kannada language along with contact numbers</p>
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2	Loose earth at OHT work site		<ul style="list-style-type: none"><li>• Project information board must be framed in proper frame</li><li>• All excess loose earth and debris must be removed from work site to dumping yard</li><li>• Proper bunding should be done to stored sand and aggregates</li></ul>
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3	Pedestrian to be provided		Instructed contractors to restore and provide steel or wooden pedestrians in front of residential doors if work delayed to next day
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4	Barricading and sign boards at distribution work	 <p>Shot on Y83 Pro vivo dual camera</p> <p>Shot on Y83 Pro vivo dual camera</p>	<p>Instructed contractors to provide project information boards, full hard barricade and to keep go slow sign boards, work in progress sign boards and two flag men at both road ends to maintain traffic and to avoid accidents when work is progress in main road area</p>
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5	Steel rods used for barricading at OHT sites		Instructed contractors to use wooden planks and remove steel rods used for barricading propose at all OHT sites
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6	PPEs for worker and drinking water		Contracting agency provided PPEs but instructed them to provide Drinking Water facility and one mobil toilet to worker at all working site
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## Annexure 2

### Status of Site Visit observations of 19<sup>th</sup> December 2019

S.No	Observation		Recommendation	Status of observation
1	Project Information Board at padnur, Puttur		<p>Contracting agency provided Project information</p> <p>Board sign boards at padnur OHT in kannada But instructed to be provided both in English and Kannada language</p> <p>Sign boards should be easily seen to all and placed in the entrance of the site not into the bushes</p>	<p>Partially complied</p> <p>Project information only in kannada. instructed to put English and should be proper open area not in bushes</p>

2	Project Information Board at padnur, kabaka		Contracting agency provided Project information Board sign boards at padnur OHT in kannada But instructed to be provided both in English and Kannada language	Not complied
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3	Material Bunding at work site		<p>Sand should be properly bunded with sand bags to avoid flow of sand due to slope</p> <p>And also aggregates should be bunded if stocking in future at sites</p> <p>Sign boards should be placed on ground should be properly framed with stand</p>	Not complied
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4	Loose earth stocking at site	 <p>Shot on Y83 Pro vivo dual camera</p> <p>Shot on Y83 Pro vivo dual camera</p>	Loose earth must be disposed off to the landfills, it should not be stocked at the working places	Not complied
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5	Workers wearing PPEs at work places		<p>Worker wearing PPEs at all work places but also found some are not wearing. So instructed safety person, workers must wear PPEs at work places</p> <p>Drinking Water can must be provided to workers at sites</p> <p>Mobil toilet for workers 1nos should be provide at work places</p>	<p>Complied</p> <p>Drinking water can is not provided at site for workers And no mobil toilets provided at site for workers</p>
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6	Project information board, Safety sign and Barricading and flagman at pipe laying at Nekkeladi road		<p>No sign boards provided at Nekkeladi main road.</p> <p>No proper hard barricading.</p> <p>No flagman at road side for management of vehicles movement</p>	Not complied
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### Annexure-3

#### Status of Site Visit observations on 19<sup>th</sup> November 2019

1	Project information board and sign boards must be provided at work site.		Provide project information board related to the particular project work and place at all working site  Project information Board is to be provided both in English and Kannada language along with contact numbers	Partially complied  Project information Board is to be provided both in English and Kannada language along with contact numbers
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		 <p>Latitude: 12.736859 Longitude: 75.205478 Elevation: 105.02m Accuracy: 3.2m Time: 10-24-2019 14:34 Note: excavation work stopped due to rain at ama zone 7</p>	 <p>Latitude: 12.736936 Longitude: 75.205572 Elevation: 98.28m Accuracy: 3.2m Time: 10-24-2019 14:33 Note: excavation work stopped due to rain at ama zone 7</p>	Warning sign boards must be kept at work site if work stopped due to rain for public indication about slushy soil to avoid any accident	Not complied
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3	Labour camp at Nekkeladi WTP	 <p>Latitude: 12.825522 Longitude: 75.229794 Elevation: 84.81m Accuracy: 3.2m Time: 10-24-2019 13:26 Note: temporary labour camp at nekkeladi wtp</p> <p>Powered by NoteCam</p>	Labour camp must be approved from PIU and must be shown in Google map	Not complied
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			<ul style="list-style-type: none"> <li>• Kitchen must be hygienic and kept clean and light connection must be given for proper visibility.</li> <li>• Drinking Water facility must be provided for cooking and drinking purpose</li> </ul>	<p>Partially complied</p> <p>Partially complied</p>
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		 <p>Latitude: 12.825428 Longitude: 75.229923 Elevation: 113.23m Accuracy: 40.7m Time: 10-24-2019 13:31 Note: bathroom labour camp at nekkand. shp</p> <p>Powered by NoteCam</p>	 <p>Latitude: 12.825401 Longitude: 75.229932 Elevation: 80.37m Accuracy: 3.2m Time: 10-24-2019 13:32 Note: bathroom labour camp at nekkand. shp</p> <p>Powered by NoteCam</p>	<p>Bathroom and toilet</p> <p>If women's are working then for them separate toilet bathroom must be provided.</p>	<p>Partially complied</p>
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4	First aid box at nekkeladi WTP	 <p>Latitude: 12.825816 Longitude: 75.230136 Elevation: 86.18m Accuracy: 4.3m Time: 10-24-2019 13:09 Note: first aid box nekkeladi</p> <p>Latitude: 12.825865 Longitude: 75.230093 Elevation: 96.14m Accuracy: 5.4m Time: 10-24-2019 13:09 Note: first aid box nekkeladi</p>	<p>First aid box at nekkeladi</p> <p>And same first aid box must be kept at all working site</p>	<p>Complied</p> <p>And should maid first aid kit at all working sites</p>
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5	PPEs workers work site for at	 <p>Latitude: 12.825953 Longitude: 75.230219 Elevation: 90.64m Accuracy: 3.2m Time: 10-24-2019 13:11 Note: nekkeladi wtp</p> <p>Powered by NoteCam</p>	Workers wearing PPEs at works site	Complied
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# Monthly Environmental Monitoring Report

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Project Number: 43253-027  
January 2020

IND: Karnataka Integrated Urban Water Management  
Investment Program (Tranche 2) – Improvements for  
24 x 7 Water Supply System for City Municipal Council  
in Udupi

Package No. 02UDP01

Prepared by



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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udupi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur and Udupi) improved. The outputs are (i) UWSS infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) institutional capacity of KUIDFC and ULBs strengthened capacity. This initial environmental examination (IEE) is based on an water supply projects within the project area i.e. Udupi

### 2 Need for Infrastructure Improvement in Udupi

A detailed assessment of existing situation was carried out and it concludes that the present water production of 27.24 million liters per day (MLD), is insufficient to meet water demand of Udupi till the year 2031 as per national standards. Besides Udupi town, this subproject investment also need to provide water supply covering 5 en-route villages, 5 outgrowth villages and 7 adjacent villages.

The present inadequacy in the water supply system, is due to

- (i) mainly shortage in water source in summer season;
- (ii) increased water demand; and
- (iii) old and leaking distribution system, along with weak management system.

In order to meet required water demand of Udupi, an alternate water source from River Varahi is proposed under a government funded bulk water supply project. The necessary improvements and augmentation in water distribution system is proposed under the ADB funded KIUWMIP Tranche 2

### 3 The proposed subproject:

Subproject includes the following components:

- (i) clear water feeder mains of 7.47 kilometer (km) of diameter 150 millimeters (mm) to 355 mm to feed tonew overhead tanks (OHTs);
- (ii) 7 OHTs of total storage capacity 5.2 ml;
- (iii) distribution network of 358.17 km (diameter 150 mm to 355 mm); and,
- (iv) Replacement of 16,870 existing meters and providing new metered house service connections of 15,000 for uncovered households. Distribution network pipes will be laid along existing road right-of-way (ROW) and OHTs will be constructed in government-owned lands. New water source from river Varahi about 38.5 kms from Udupi has been selected to meet shortage of water for summer four months. RCC Intake well, RCC Jackwell cum pump house and raw water pipe line for 38.5 Kms is proposed under AMRUTH Scope. Also it is proposed 30 MLD WTP at Baje to meet additional demand of Udupi under State fund.

Table 1 provides details of the KIUWMIP Tranche 2 subproject components in Udupi based on the detailed engineering design of the subproject

**Table 1: Proposed Subproject Components**

No.	Component	Details	Location
1	Clear water feeder main to feed treated water to overhead tanks (OHTs)	<p>7.47 km length 150 mm – 355 mm diameter <b>Ductile Iron Pipes</b></p> <ul style="list-style-type: none"> <li>1.50 km - 150 mm diameter from ground level service reservoir (GLSR) at Manipal to OHT for Zone 5 at Manipal near Manapalla lake</li> <li>0.5 km - 200 mm diameter from GLSR at Manipal to zone-3 OHT at Manipal</li> </ul> <p><b>Mild Steel Pipes</b></p> <ul style="list-style-type: none"> <li>60 m - 219 mm diameter for zone -7C OHT at Kolambe</li> </ul>	Along the public roads within the road right of way
		<ul style="list-style-type: none"> <li>45 m - 219 mm diameter for zone -8C OHT at Indrali</li> <li>1.7 km - 273.1 mm diameter for zone-6B OHT at Manchi</li> <li>815 m - 323.90 mm diameter for zone-8B at Kakkunje</li> <li>2.85 km - 355.6 mm diameter, for zone-9B at Santhekatte</li> </ul>	
2	OHTs	<p>7 OHTs of total storage capacity 5.2 ml</p> <ul style="list-style-type: none"> <li>Zone 3 – 750 kl at Manipal</li> <li>Zone-5 – 300 kl at Manipal near Manapalla lake</li> <li>Zone 6B – 750 kl at Manchi</li> <li>Zone 7C – 300 kl near Kolambe</li> <li>Zone 8B – 1,000 kl at kakkunje</li> <li>Zone 8C – 500 kl at Indrali</li> <li>Zone 9B – 1,600 kl at Santhekatte</li> </ul>	For all 7 OHTs, government owned land parcels have been identified.
3	Distribution network	<p>358.16 km pipes of diameter 63 mm to 350 mm <b>High Density Poly Ethylene (HDPE) pipes</b></p> <ul style="list-style-type: none"> <li>63 mm dia - 294.4 km</li> <li>75 mm dia - 0.375 km</li> <li>90 mm dia - 0.796 km</li> <li>110 mm dia - 25.575 km</li> <li>160 mm dia - 3.336 km</li> <li>200 mm dia - 5.602 km</li> <li>250 mm dia - 13.824 km</li> <li>280 mm dia - 0.330 km</li> <li>315 mm dia - 0.291 km</li> </ul> <p><b>DI PIPES:</b></p> <ul style="list-style-type: none"> <li>150 mm dia - 0.252 km</li> <li>300 mm dia - 10.282 km</li> <li>350 mm dia- 3.098 km</li> </ul>	<p>Pipes will be laid along the public roads within the road right of way.</p> <p>Rider lines will be laid parallel to the existing pipes, and within the road right of way.</p> <p>Pipes will be mostly laid in earthen shoulder to avoid road cuttings</p>
4	House Service Connections	Replacement of non-functioning 16,870 water meters for existing connections and providing new water supply connections of 15,000 to un-covered households	At each household

#### **4 Environmental Management Plan.**

The environmental management plan (EMP) aims to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i) providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project; (iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with

<b>Karnataka Integrated Urban Water Management Investment Program</b>	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Improvements for 24 x 7 Water Supply System for City Municipal Council in Udupi	<b>Name of the Contractor:</b> Suez Civil Engineering Services Pvt, LTD & DRS Infra Tech Pvt, Ltd
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Udupi	<b>Name of SE/EE/AE Of concerned division PIU :-</b> Mr. Sudarshan, Sr.AE
<b>Date of monthly monitoring:</b> 21-01-2020	<b>Name of Environment, Health And Safety (EHS) Engineer :-</b> Mr. Pradeep Sheety

**Table 2: Status of implementation of Environmental Management Plan for Anticipated Impacts – Construction**

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds	Status of implementations
EMP Implementation Training	Impacts on the environment, workers, and community due to improper implementation of EMP	<p>1) Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.</p> <p>2) Appointment of Environment, Health and Safety (EHS) Engineer by contractor prior to start of work</p>	Construction Contractor / PIU / PMDCSC	<p>(i) Certificate of Completion (Safeguards Compliance Orientation)</p> <p>(ii) Posting of Certification of Completion at worksites</p> <p>(iii) Posting of EMP at worksites</p>	<p>Cost of EMP Implementation Orientation Training to contractor is responsibility of PMU.</p> <p>Other costs responsibility of contractor.</p>	<p>1) Spoil management submitted</p> <p>2) EHS Engineer appointed</p>

Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous	<p><b>3)</b> Consult with PIU/PMDCSC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</p> <p><b>4)</b> Damp down exposed soil and any stockpiled on site by spraying with water when necessary during dry weather;</p> <p><b>5)</b> Use tarpaulins to cover sand and other loose material when transported by trucks;</p> <p><b>6)</b> Clean wheels and undercarriage of vehicles prior to leaving construction site</p>	Construction Contractor	<p>(i) Location of stockpiles;</p> <p>(ii) Complaints from sensitive receptors;</p> <p>(iii) Heavy equipment and machinery with air pollution control devices;</p> <p>(iv) Certification that vehicles are compliant with Air Act</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>3)</b> Complied</p> <p><b>4)</b> Instructed contracting agency to spray water at commercial and residential areas if stock piled on-site.</p> <p><b>5)</b> Not complied</p> <p><b>6)</b> Complied</p>
	oxides, and hydrocarbons .	<b>7)</b> Fit all heavy equipment and machinery with air pollution control devices which are operating correctly.				<b>7)</b> Complied



Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during installation of pipelines can contaminate nearby surface water quality.	<p><b>8)</b> Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets.</p> <p><b>9)</b> Laying of pipelines during dry season and closing of all trenches before rainy season and avoid any chances of collecting the water in the trenches or pumping.</p> <p><b>10)</b> Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with Implementing Agency on designated disposal areas (Appendix 6).</p>	Construction Contractor	<p>(i) Areas for stockpiles, storage of fuels and lubricants and waste materials;</p> <p>(ii) Number of silt traps installed along trenches leading to water bodies;</p> <p>(iii) Records of surface water quality inspection;</p> <p>(iv) Effectiveness of water management measures;</p> <p>(v) No visible degradation to nearby drainages,</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>8)</b> Instructed contracting agency to use tarpaulins or sheets for Stockpiling during monsoon season</p> <p><b>9)</b> Instructed contracting agency to fill the excavated trenches at all locations before rainy season</p> <p><b>10)</b> Complied. Contracting agency dumping excess earth in CMC shown area but they contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p>
		<p><b>11)</b> Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies</p> <p><b>12)</b> Provide temporary bunds for stockpiles and materials</p> <p><b>13)</b> Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund</p> <p><b>14)</b> Dispose any wastes generated by construction activities in designated sites.</p>		nallahs or waterbodies due to civil works		<p><b>11)</b> No such water bodies found during site visit but instructed contracting agency to use silt trap if any water bodies found</p> <p><b>12)</b> Not complied</p> <p><b>13)</b> Contracting agency not using fuels and lubricants in bulk but instructed to provide separate room for bulk quantity</p> <p><b>14)</b> Complied. Contracting agency dumping excess earth in CMC shown area but the contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p>

		<b>15)</b> Conduct surface quality inspection and monitoring.				<b>15)</b> Not complied
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	<p><b>16)</b> Plan activities in consultation with PIU/PMDCSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <p><b>17)</b> Construction work shall be limited to day light hours (6 AM to 6 PM)</p> <p><b>18)</b> Provide prior information to the local public about the work schedule;</p> <p><b>19)</b> Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiseling;</p> <p><b>20)</b> Minimize noise from construction equipment/pneumatic drills by using silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and</p> <p><b>21)</b> Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.</p> <p><b>22)</b> Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Use of silencers in noise-producing equipment and sound barriers;</p> <p>(iii) Equivalent day and night time noise levels (See Appendix 3 of this IEE)</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>16)</b> Complied</p> <p><b>17)</b> Complied</p> <p><b>18)</b> Complied</p> <p><b>19)</b> No such old or sensitive building found which comes in work alignments. But instructed contracting agency to take safe precautions while executing the works</p> <p><b>20)</b> Complied</p> <p><b>21)</b> Complied</p> <p><b>22)</b> Complied</p>

Landscape and aesthetics	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<p><b>23)</b> Prepare and implement spoils management plan</p> <p><b>24)</b> Avoid stockpiling of excess excavated soils;</p> <p><b>25)</b> Coordinate with Udupi CMC for beneficial uses of excess excavated soils or immediately dispose to designated areas;</p> <p><b>26)</b> Recover used oil and lubricants and reuse or remove from the sites;</p> <p><b>27)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p><b>28)</b> Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p><b>29)</b> Request PMU/PMDCSC to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Worksite clear of hazardous wastes such as oil/fuel</p> <p>(iv) Worksite clear of any excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>23)</b> Spoil management plan is prepared (<b>attached in annexure 2a august 2019 but updation is to be done</b>).</p> <p><b>24)</b> Found no such surplus and stockpiling of soils found in sites</p> <p><b>25)</b> Contracting agency dumping excess earth in CMC shown area but the contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p> <p><b>26)</b> Used oil and lubricants not generated on site</p> <p><b>27)</b> Contracting agency reusing by backfilling and dumping excess solid waste to the designated areas</p> <p><b>28)</b> Complied</p> <p><b>29)</b> No such damages found during the site visits but instructed contracting agency to restore immediately and when work gets completed, joint site inspection will be conducted and report / letter will be issued.</p>
Existing Infrastructure and Facilities Accessibility	Disruption of service and damage to existing infrastructure at specified project	<p><b>30)</b> Obtain from PIU/PMDCSC the list of affected utilities and operators if any;</p> <p><b>31)</b> Prepare a contingency plan to include actions to be done in case of unintentional interruption of service</p>	Construction Contractor	Existing Utilities Contingency Plan	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>30)</b> No such utilities were shifted or damaged but Recommended Contractor to maintain list of utilities identified prior to start of work at</p>

	location Traffic problems and conflicts near project locations and haul road	<p><b>2)</b> (iii) The public should be given notice at least three days in advance and any accidental breaking should be rectified immediately.</p> <p><b>33)</b> Plan pipeline work in consultation with the traffic police</p> <p><b>34)</b> Plan work such that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</p> <p><b>35)</b> Provide for immediate consolidation of backfilling material to desired compaction – this will allow immediate road restoration and therefore will minimize disturbance to the traffic movement;</p> <p><b>36)</b> Schedule transport and hauling activities during non-peak hours;</p> <p><b>37)</b> Do not close the road completely, allow traffic to move on one line;</p> <p><b>38)</b> Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p><b>39)</b> In unavoidable circumstances of road closure, provide alternative routes, and ensure that public is informed about such traffic diversions;</p> <p><b>40)</b> At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing agency and contractor details; nature and schedule</p>				<p>any section.</p> <p><b>31)</b> Not complied</p> <p><b>32)</b> No accidental breaking of any properties yet recorded but instructed contracting agency to rectify immediately</p>
			Construction Contractor	<p>(i) Traffic route during construction works including number of permanent signages, barricades and flagmen on worksite (Appendix 7);</p> <p>(ii) Complaints from sensitive receptors;</p> <p>(iii) Number of signages placed at project location.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>33)</b> Contractor should inform and take permission from traffic police for any pipe line laying/execution on roads.</p> <p><b>34)</b> Complied</p> <p><b>35)</b> Instructed to contractor agency to backfill and restore the excavated area immediately to avoid traffic</p> <p><b>36)</b> Complied</p> <p><b>37)</b> Complied</p> <p><b>38)</b> Not Complied</p> <p><b>39)</b> Instructed contract agency to provide one separate person at site to give route information to public</p> <p><b>40)</b> Partially complied. Project information board should be both in Kannada and English format.</p>

		<p>of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints.</p> <p><b>41)</b> Keep the site free from all unnecessary obstructions;</p> <p><b>42)</b> Drive vehicles in a considerate manner;</p> <p><b>43)</b> Prepare a Traffic Management Plan – a template is provided for reference at Appendix 7.</p>				<p><b>41)</b> Complied</p> <p><b>42)</b> Complied</p> <p><b>43)</b> Traffic Management Plan is prepared by contracting agency <b>(attached in annexure 2b august 2019 but updation is to be done).</b></p>
Socio-Economic – Income.	Impede the access of residents and customers to nearby shops	<p><b>44)</b> Prepare and implement spoils management plan</p> <p><b>45)</b> Leave spaces for access between mounds of soil; and Provide walkways and metal sheets where required for people;</p> <p><b>46)</b> Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;</p> <p><b>47)</b> Consult businesses and institutions regarding operating hours and factoring this in work schedules; and</p> <p><b>48)</b> Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Spoils management plan</p> <p>(iii) Number of walkways, signages, and metal sheets placed at project location.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>44)</b> Spoil management plan is prepared <b>(attached in annexure 3c august 2019 but updation is to be done)</b></p> <p><b>45)</b> Complied</p> <p><b>46)</b> Complied</p> <p><b>47)</b> Complied</p> <p><b>48)</b> Complied</p>
Socio cultural resources	Disturbance to socio cultural resources	<p><b>48)</b> No material should be stocked close to these areas; material shall be</p>	Construction Contractor	(i) Visual site observations	Cost for implementation of mitigation	<p><b>48)</b> Complied</p>



	(religious, educational, health care etc.), access disruptions etc.,	<p>brought to the site as and when required.</p> <p><b>49)</b> Conduct work manually with small group of workers and less noise; minimize use of equipment and vehicles</p> <p><b>50)</b> No work should be conducted near the religious places during religious congregations</p> <p><b>51)</b> Material transport to the site should be arranged considering school timings; material should be in place before school starts;</p> <p><b>52)</b> Notify concerned schools, hospitals etc., 2 weeks prior to the work; conduct a 30-minute awareness program on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts</p> <p><b>53)</b> Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>		(i) Public complaints	measures responsibility of contractor.	<p><b>49)</b> Complied</p> <p><b>50)</b> Complied and instructed to follow</p> <p><b>51)</b> Complied and instructed to follow</p> <p><b>52)</b> Partially complied</p> <p><b>53)</b> Not complied</p>
Socio-Economic - Employment	Generation of contractual employment and increase in local revenue	<p><b>54)</b> Employ local labor force to the maximum extent, if manpower is available;</p> <p><b>55)</b> Comply with labor laws</p>	Construction Contractor	(i) Employment records; (ii) Records of sources of materials (iii) Compliance to core labor laws (See appendix 2 of this IEE)	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>54)</b> Register maintained by contractor</p> <p><b>55)</b> Contractor Obtained Labour license and Employees Compensation Insurances for Workers (Skilled and unskilled).</p>
Occupational Health and Safety	Occupational hazards which can arise during work	<p><b>56)</b> Comply with all national, state and local core labor laws (See Appendix 2 of this IEE)</p> <p><b>57)</b> Develop and implement site-specific occupational health and safety (OHS) Plan, and include in the Construction Management</p>	Construction Contractor	(i) Site-specific OHS Plan; (ii) Equipped first- aid stations; (iii) Medical insurance coverage	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>56)</b> Contractor following Company EHS Policy Site-specific OHS Plan Have to be prepared by Contractor.</p> <p><b>57)</b> Contractor following Company EHS Policy- PPE'S provided by</p>

		<p>plan. The OHS plan will include measures such as:</p> <p>(a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs; (c) OHS Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work- related accidents;</p> <p><b>58)</b> Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p><b>59)</b> Provide medical insurance coverage for workers;</p> <p><b>60)</b> Secure all installations from unauthorized intrusion and accident risks;</p> <p><b>61)</b> Provide supplies of potable drinking water;</p> <p><b>62)</b> Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</p>		<p>for workers;</p> <p>(iv) Number of accidents;</p> <p>(v) Supplies of potable drinking water;</p> <p>(vi) Clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(vii) record of health and safety orientation trainings</p> <p>(viii) personal protective equipment;</p> <p>(ix) % of moving equipment outfitted with audible back- up alarms;</p> <p>(xi) permanent sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.</p> <p>(xii) Compliance to core labor laws</p>		<p>Contractor .</p> <p><b>Annexure-1.f</b></p> <p><b>a) Complied</b></p> <p><b>b) Complied.</b> PPE'S provided by Contractor to workers</p> <p><b>c) Complied</b></p> <p><b>d) Not complied</b></p> <p><b>e) Accident and incident register maintained</b></p> <p><b>58)</b> Partially Complied. Instructed to keep first-aid box at each working sites separately</p> <p><b>59)</b> Not complied</p> <p><b>60)</b> Complied</p> <p><b>61)</b> Partially Complied</p> <p><b>62)</b> Not Complied</p>
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		<p><b>63)</b> Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p><b>64)</b> Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p><b>65)</b> Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p><b>66)</b> Ensure moving equipment is outfitted with audible back-up alarms;</p> <p><b>67)</b> Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p><b>68)</b> Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p> <p><b>69)</b> Overall, the contractor should comply with International Finance Corporation (IFC) EHS</p>	(See appendix 2 of this IEE)		<p><b>63)</b> Not complied. Instructed to Provide health and safety orientation training to all workers</p> <p><b>64)</b> Not complied</p> <p><b>65)</b> Complied</p> <p><b>66)</b> Complied</p> <p><b>67)</b> Complied</p> <p><b>68)</b> Not complied</p> <p><b>69)</b> Not complied</p>
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		Guidelines on Occupational Health and Safety				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<p><b>70)</b> Provide hard barricading for all deep excavations that may require especially for pipe lines; identify buildings at risk prior to start of excavation work and take necessary precautions for safe conduct of work</p> <p><b>71)</b> Plan material and waste routes to avoid times of peak-pedestrian activities</p> <p><b>72)</b> Liaise with Udupi CMC in identifying risk areas on route cards/maps</p> <p><b>73)</b> Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure</p> <p><b>74)</b> Provide road signs and flag persons to warn of dangerous conditions, for all work sites along the roads</p> <p><b>75)</b> Overall, the contractor should comply with IFC EHS Guidelines Community Health and Safety</p>	Construction Contractor	(i) Traffic Management Plan; (ii) Complaints from sensitive receptors	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>70)</b> No such deep trenches found during laying pipes. But instructed contracting agency to put hard barricading if trenches are more than 1.5m depth</p> <p><b>71)</b> Not complied</p> <p><b>72)</b> Not complied</p> <p><b>73)</b> Not complied</p> <p><b>74)</b> Complied</p> <p><b>75)</b> Not complied</p>

Work Camps and worksites	<p>Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers</p>	<p><b>76)</b> Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located at least 200 m from residential areas.</p> <p><b>77)</b> Minimize removal of vegetation and disallow cutting of trees</p> <p><b>78)</b> Living facilities shall be built with adequate materials, and should be in good condition and free from rubbish and other refuse</p> <p><b>79)</b> The camp site should be adequately drained to avoid the accumulation of stagnant water</p> <p><b>80)</b> Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 LPCD); all water storage structures must be cleaned regularly and covered properly to avoid any contamination</p> <p><b>81)</b> Provide separate facilities for men and women; sanitary facilities shall be properly build and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons</p> <p><b>82)</b> Train employees in the storage and handling of materials which can</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Drinking water and sanitation facilities for employees</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>76)</b> Not Complied Labour camp location was finalized but Letter has to be issued from PIU to contractors.</p> <p><b>77)</b> Removal of vegetation Minimize by selecting best alignment.</p> <p><b>78)</b> Instructed contracting agency to built labour shad with sheets with proper ventilation in clean hygienic area and drinking water.</p> <p><b>79)</b> Instructed contracting agency to built camp in dry and plan area where there is no water logging and must hygienic area.</p> <p><b>80)</b> Instructed contracting agency to provide drinking water as per the standards at camp</p> <p><b>81)</b> Instructed contracting agency to provide separate toilet facilities for men and women at camp and working sites</p> <p><b>82)</b> Instructed contracting agency to provide training of solid and liquid materials handling to the persons at camp carefully to avoid soil contamination</p>
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		<p>potentially cause soil contamination;</p> <p><b>83)</b> Recover used oil and lubricants and reuse or remove from the site;</p> <p><b>84)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p><b>85)</b> Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p><b>86)</b> Report in writing that the camp has been vacated and restored to pre- project conditions before acceptance of work.</p> <p><b>87)</b> The work camp details should be included in the Construction Management Plan.</p>				<p><b>83)</b> Instructed to contracting agency to train persons not to spill oil and lubricant and use carefully to avoid soil contamination</p> <p><b>84)</b> Instructed to contracting agency to follow at camp</p> <p><b>85)</b> Instructed to contracting agency to follow at camp</p> <p><b>86)</b> Construction work is in progress</p> <p><b>87)</b> Not complied</p>
Social and Cultural Resources	Risk of archaeological chance finds	<p><b>88)</b> Create awareness among the workers and supervisors about the chance finds during excavation work</p> <p><b>89)</b> Stop work immediately if any finds are suspected to allow further investigation</p> <p><b>90)</b> Inform archaeological agencies promptly if a find is suspected, and take any action they require to ensure its removal or protection in situ.</p> <p><b>91)</b> Adjacent to important religious sites, undertake excavation and Construction work in such a way that no structural damage is caused to the building.</p>	Construction Contractor	Records of chance finds	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>88)</b> Till now no such suspected items found nor recorded</p> <p><b>89)</b> Till now no such suspected items found nor recorded</p> <p><b>90)</b> Till now no such archaeological items recorded</p> <p><b>91)</b> No such damages recorded during the visit. But instructed to maintain if such damages happens.</p>

Submission of EMP implementation report	Unsatisfactory compliance to EMP	<p><b>92)</b> Appointment of EHS engineer to ensure EMP implementation</p> <p><b>93)</b> Timely submission of monitoring reports including pictures</p>	Construction contractor	<p>Availability and competency of appointed EHS engineer</p> <p>Monthly report</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>92)</b> EHS Engineer appointed</p> <p><b>93)</b> Complied <b>Annexure-4</b></p>
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	<p><b>94)</b> Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; and</p> <p><b>95)</b> All excavated roads shall be reinstated to original condition.</p> <p><b>96)</b> All disrupted utilities restored</p> <p><b>97)</b> All affected structures rehabilitated/compensated</p> <p><b>98)</b> The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up.</p> <p><b>99)</b> All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and regrassed using the guidelines set out in the revegetation specification that forms part of this document.</p>	Construction Contractor	<p>PMU/PMDCSC report in writing that (i) worksite is restored to original conditions; (ii) camp has been vacated and restored to pre-project conditions; (iii) all construction related structures not relevant to O&amp;M are removed; and (iv) worksite clean-up is satisfactory.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>94)</b> Complied</p> <p><b>95)</b> No such bitumen or concrete road damaged during site visit. But instructed to restore road same as it was before damage</p> <p><b>96)</b> If utilities are to be shifted contracting agency must take permission from concern authorities before start the work and restore it properly as it was before the damage</p> <p><b>97)</b> Till now no structures affected</p> <p><b>98)</b> Not complied Instructed contracting agency to properly clean surface area free of oil and paints for construction camp</p> <p><b>99)</b> Not complied</p>
		<p><b>100)</b> The contractor must arrange the cancellation of all temporary services.</p> <p><b>101)</b> Request PMU/PMDCSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>				<p><b>100)</b> Not complied</p> <p><b>101)</b> Construction work is in progress</p>

### Conclusion:-

Construction stage is in progress. Disposal yard is to be identified and consultations with PIU have to be taken. Health and HIV AIDS Awareness Training programme has to be conducted by Contractor. Proper Record maintenance should be improved by Contractor. Proper safety measures and register books should be maintained at all work sites. Contractor has to submit Site specific EMP of January 2020 as construction stage EMP present in IEE report, udupi.

### Recommendation:

S.No	Monitoring of Mitigation / Key Issues to be complied	Recommendation and Action Required by Contractor	Time line/Remarks
1.	Mobilization of Environment, Health And Safety(EHS)Engineer		Complied
2.	Submission of Site specific EMP		Comply with in 7 days
3.	Submission of monthly reports.	<ul style="list-style-type: none"> <li>Construction status or complacence report</li> </ul>	Contractor has to submit Site specific EMP of January 2020 as construction stage EMP present in IEE report, Udupi Comply with in 7 days
4.	Telephone lines, electric Poles and wires, water Lines within proposed project area	<ul style="list-style-type: none"> <li>List of utilities going to effect will be submit to PIU</li> </ul>	Comply with in 7 days
5.	Layout plan of overhead tanks (OHTs);		Comply with in 7 days
6.	Tree cutting/pruning permission; and	<ul style="list-style-type: none"> <li>If any tree affected are noted in survey permission have to be taken</li> </ul>	Comply with in 7 days
7.	Compensatory tree plantation as part of the project.		Comply with in 5 days
8.	List of selected sites for construction work camps, hot mix plants, stockpile areas, storage areas, and disposal Areas.	<ul style="list-style-type: none"> <li>Location most be identified and marked on google map and consult with PIU and after joint inspection with consideration of all given mitigation measure given.</li> </ul>	Comply with in 15 days
9.	Written consent of landowner/s (not lessee/s) for reuse of excess spoils to agricultural land	<ul style="list-style-type: none"> <li>If any private land is selected NOC from owner have to be taken</li> </ul>	Comply with in 5days
10	List of selected sites for disposal	<ul style="list-style-type: none"> <li>Location most be identified and marked on google map and consult with PIU and after joint inspection with consideration of all given mitigation measure given.</li> </ul>	Comply with in 5 days

		<ul style="list-style-type: none"> <li>If any private land is selected NOC from owner have to be taken</li> </ul>	
11	List of approved quarry Sites and Sources of materials; and		Comply with in 7 days
12	Bid document to include requirement for verification of suitability of sources and permit for additional quarry sites if necessary.		Comply with in 5 days
13	Method of statement in table format	<ul style="list-style-type: none"> <li>As mention in mitigation measures</li> </ul>	Comply with in 10 days
14	Spoil Management Plan	<p>Waste material brought up during the course of an excavation or a dredging or mining operation.</p> <ul style="list-style-type: none"> <li>Type and quantity of waste generated will be waste generated.</li> <li>Identify the impact</li> <li>Spoil Transportation Methodology</li> <li>Reuse of quantity of waste generated in any other projects or any other place</li> <li>Amount of waste disposed in identified disposal areas consultation with PIU</li> <li>If private land NOC from owner.</li> <li>Location of Waste disposal site mark on google map</li> </ul>	Draft copy shown and submitted and attached as <b>annexure 3a in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
15	Traffic management plan		Draft copy shown, submitted and attached as <b>annexure 3b in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
16	Environmental management plan		Draft copy shown, submitted and attached as <b>annexure 3c in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
17	Site specific OHS Plan	<ul style="list-style-type: none"> <li>Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall be provided in all work zones.</li> <li>Trained first aid personal will be available at the construction site.</li> <li>Emergency numbers will be displayed prominently at camp and construction site.</li> <li>Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can</li> </ul>	Comply with in 5 days

		<p>be used as ambulance, will be available at construction site.</p> <ul style="list-style-type: none"> <li>The contractor shall identify nearby hospital, which could be used in case of emergency.</li> </ul> <p>First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</p> <p>International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines on occupational health and safety <b>attached in june 2019 month</b></p>	
18	Equivalent day and night time noise levels	<ul style="list-style-type: none"> <li>During the construction phase, the contractor will carry out environmental monitoring noise levels by engaging NABL approved laboratory.</li> </ul>	Complied. Pre-construction test conducted in November 2019 and noise report attached as <b>annexure 5</b>
19	Records of Air quality inspection	<ul style="list-style-type: none"> <li>If contractor carrying out Construction activities near sensitive receptor( residential areas, temples, Hospitals, schools ) During the construction phase, the contractor will carry out Ambient Air quality monitoring by engaging NABL approved laboratory</li> </ul>	Complied. Pre-construction test conducted in November 2019 and air report attached as <b>annexure 5</b>

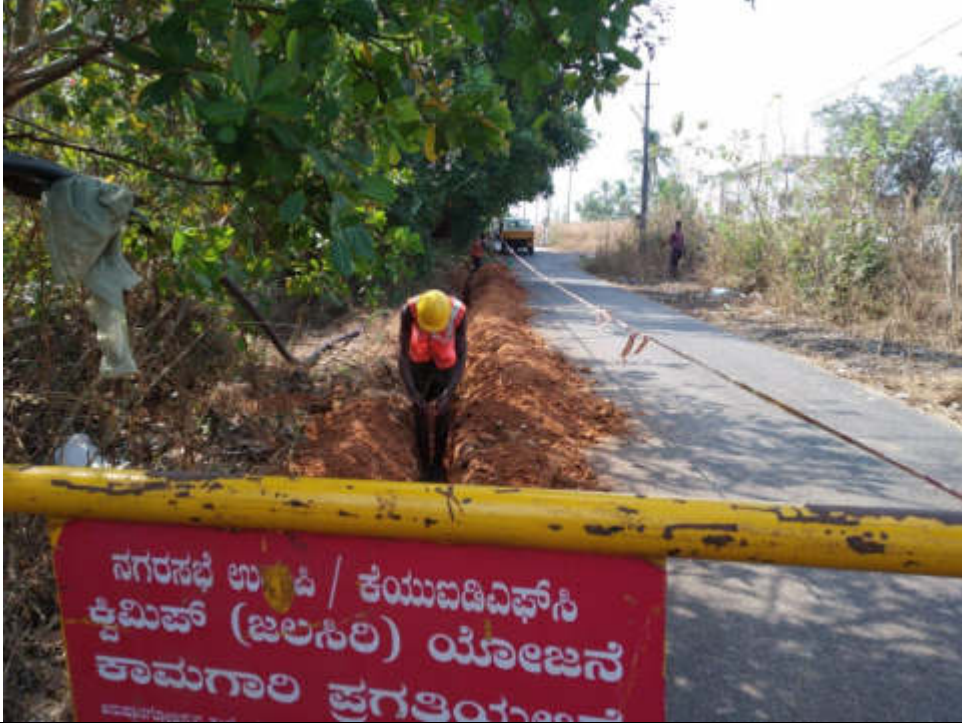


**Mahmad Raphiyoddin Shaphiyoddin Malik**  
**Environmental Specialist**  
**KIUWMIP – Tranche 2**



## Annexure 1

### Site visit observations of 21<sup>st</sup> January 2020

S.No	Observation		Recommendation
1	Sign board and flag man at site		Instructed contractors to provided cones, go slow boards and flag man at both the ends at all main road work places

2	Excavated earth at work site		<p>Instructed contractor agency to immediately reuse the loose stored earth at site and dispose the remaining earth to dumping yard after the pipe laying</p> <p>And to sprinkle water by water tank to avoid dust generation near residential and commercial areas</p>
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3	Aggregates, sand and excavated earth Material stored at santtekatti OHT site		<p>Instructed contracting agency to make bunds for sand and aggregates storage to avoid flow and mix</p> <p>Instructed to remove steel rods used for sheet support And dispose loose earth stored at site to dumping yard</p>
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<b>4</b>	Water tank at santekatte OHT for worker usage		Instructed contracting agency to provide separate water can for drinking purpose and to use present tank for other usage
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5	Housekeeping at santekatte OHT for work site			<p>Proper housekeeping should be done at work site</p> <p>Instructed not use fire wood burning for cooking and other purpose at work site place</p>
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6	Excavation work in front of residential house		Instructed contracting agency to immediately restore the excavated area or else to provide wooden or steel pedestrians if work delayed for next day
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## Annexure 2

### Status of Site visit observations of 18<sup>th</sup> December 2019

S.No	Observation		Recommendation	Status of observation
1	Project Information Board and barricading at Doddegudde and Parakala site		<p>Project information board is provided by the contractor agency both in English and Kannada language</p> <p>Instructed to put sign boards like go slow, deep excavation boards on work sites</p>	Partially complied

				
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2	PPEs and Sign boards at work places	 <p>Latitude: 13.387391 Longitude: 74.741205 Accuracy: 2500.0m Time: 18-12-2019 12:27 Note: Santhekatt OHT</p> <p>Latitude: 13.3721 Longitude: 74.799962 Elevation: 102.91m Accuracy: 3.0m Time: 18-12-2019 15:23 Note: Parkala Pipe Laying</p>	Workers wearing PPEs at work place at sattekatti OHT construction site and parakala site during pipe laying excavation	Complied
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3	Stock Yard at Santhekatte fully barricaded on all sides.		Stock Yard at Santhekatte must be hard barricaded and provide proper sign boards	Complied
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4	Sign boards at santekatte stock yard	 <p>Latitude: 13.390127 Longitude: 74.739603 Accuracy: 87.6m Time: 18-12-2019 15:52 Note: Santhekatte Store Yard</p> <p>Powered by NoteCam</p>	Project information board is provided by the contractor agency both in English and Kannada language at santekatte stock yard	Complied
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5	Drinking water facility at sattekatte OHT site for workers	 <p>Latitude: 13.387533 Longitude: 74.738217 Elevation: 106.54m Accuracy: 1.8m Time: 18-12-2019 12:37 Note: Santhekattid OHT</p> <p>Powered by NoteCam</p>	Instructed Contractor agency to provide 60 liter can at for drinking and cooking purpose. There may possibility for the of bacteria at the bottom of tank provided	Not complied
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6	Waste debris and materials at work sites	 <p>Latitude: 13.387497 Longitude: 74.738547 Elevation: 111.65m Accuracy: 3.9m Time: 18-12-2019 12:17 Note: Santhekatt OHT</p> <p>Powered by NoteCam</p>	<p>Instructed contracting agency to remove or dump debris and loose materials in dumping yard from work site</p> <p>Project information board is not provided by the contractor agency both in English and Kannada language at santtekatte OHT site</p> <p>Instructed to put sign boards like go slow, work in progress, deep excavation boards on work sites</p>	Not complied
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7	Steel stocked at santtekatte site	 <p>Latitude: 13.387535 Longitude: 74.73807 Elevation: 100.44m Accuracy: 4.2m Time: 18-12-2019 12:36 Note: Santhekattid OHT</p> <p>Latitude: 13.387577 Longitude: 74.738073 Elevation: 129.55m Accuracy: 5.0m Time: 18-12-2019 13:04 Note: Santhekattid OHT</p>	<p>Recommended Contractor agency to provide sheet fencing and instructed to remove steels bars used for fencing</p> <p>And to constructed metal sheet gate from the entry to avoid entrance of unknown person which may cause any injury or harm</p>	Not complied
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**Annexure – 3**

**Labour Register for the month of  
January 2020**



S.No.	Date	Labour Name	Father name	Age	Sex	check in time	check out time	Labour sign	Engineer sign	Remarks
1	1/01/2020	Swami	Ramappa	23	Male	8:30 AM	5:30 PM	Swami		
2	1/01/20	Ravi	Sidappa	31	male	8:30 AM	5:30 PM	Ravi		
3	1/01/20	Ravikanth	Basava	30	male	8:30 AM	5:30 PM	Swami		
4	1/01/20	Balakrishna	Murali Rao	28	male	8:30 AM	5:30 PM	Swami		
1	2/01/20	Swami	Ramappa	23	male	8:30 AM	6:20 PM	Swami		
2	2/01/20	Ravi	Sidappa	31	male	8:30 AM	6:20 PM	Ravi		
3	2/01/20	Ravikanth	Basava	30	male	8:30 AM	6:20 PM	Swami		
4	2/01/20	Balakrishna	Murali Rao	28	Male	8:30 AM	6:20 PM	Swami		
1	3/01/20	Swami	Ramappa	23	male	8:30 AM	5:30 PM	Swami		
2	3/01/20	Ravi	Sidappa	31	male	8:30 AM	5:30 PM	Ravi		
3	3/01/20	Ravikanth	Basava	30	male	8:30 AM	5:30 PM	Swami		
4	3/01/20	Balakrishna	Murali Rao	28	male	8:30 AM	5:30 PM	Swami		
1	4/01/20	Swami	Ramappa	23	male	8:30 AM	5:30 PM	Swami		
2	4/01/20	Ravi	Sidappa	31	male	8:30 AM	5:30 PM	Ravi		
3	4/01/20	Ravikanth	Basava	30	male	8:30 AM	5:30 PM	Swami		
4	4/01/20	Balakrishna	Murali Rao	28	male	8:30 AM	5:30 PM	Swami		
1	6/01/20	Swami	Ramappa	23	Male	8:30 AM	6:20 PM	Swami		
2	6/01/20	Ravi	Sidappa	31	Male	8:30 AM	6:20 PM	Ravi		
3	6/01/20	Ravikanth	Basava	30	Male	8:30 AM	6:20 PM	Swami		
4	6/01/20	Balakrishna	Murali Rao	28	Male	8:30 AM	6:20 PM	Swami		
1	7/01/20	Swami	Ramappa	23	Male	8:30 AM	5:30 PM	Swami		
2	7/01/20	Ravi	Sidappa	31	male	8:30 AM	5:30 PM	Ravi		
3	7/01/20	Ravikanth	Basava	30	male	8:30 AM	5:30 PM	Swami		
4	7/01/20	Balakrishna	Murali Rao	28	male	8:30 AM	5:30 PM	Swami		



S.No	Date	Labour Name	Father Name	Age	Sex
1	01/01/20	Swami	Ramappa	27	Male
2	01/01/20	Parikuntla	Siddappa	21	Male
3	01/01/20	Parikuntla	Rajava	30	Male
4	01/01/20	Balakuntla	Murali Rao	28	Male
1	10/01/20	Swami	Ramappa	27	Male
2	10/01/20	Parikuntla	Siddappa	21	Male
3	10/01/20	Parikuntla	Rajava	30	Male
4	10/01/20	Balakuntla	Murali Rao	28	Male
1	11/01/20	Swami	Ramappa	27	Male
2	11/01/20	Parikuntla	Siddappa	21	Male
3	11/01/20	Parikuntla	Rajava	30	Male
4	11/01/20	Balakuntla	Murali Rao	28	Male
1	12/01/20	Swami	Ramappa	27	Male
2	12/01/20	Parikuntla	Siddappa	21	Male
3	12/01/20	Parikuntla	Rajava	30	Male
4	12/01/20	Balakuntla	Murali Rao	28	Male
1	14/01/20	Swami	Ramappa	27	Male
2	14/01/20	Parikuntla	Siddappa	21	Male
3	14/01/20	Parikuntla	Rajava	30	Male
4	14/01/20	Balakuntla	Murali Rao	28	Male
1	15/01/20	Swami	Ramappa	27	Male
2	15/01/20	Parikuntla	Siddappa	21	Male
3	15/01/20	Parikuntla	Rajava	30	Male
4	15/01/20	Balakuntla	Murali Rao	28	Male

Check in time	Check out time	Labour type	Engineer	Remarks
8:30 AM	5:30 PM	Driver	Surya	
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	6:30 PM	Driver	Surya	
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	5:30 PM	Driver	Surya	
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	6:30 PM	Driver	Surya	
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	5:30 PM	Driver	Surya	
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	6:30 PM	Driver	Surya	
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	5:30 PM	Driver	Surya	
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	5:30 PM	Driver		
8:30 AM	6:30 PM	Driver	Surya	
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		
8:30 AM	6:30 PM	Driver		



S.No	Date	Labour name	Father's name	Age	Sex
1	15/01/20	Pari	Siddappa	21	male
2	16/01/20	Swami	Ramappa	23	male
3	16/01/20	Pavikanth	Basava	30	male
4	16/01/20	Balakrishna	Murali Rao	28	male
1	17/01/20	Baswami	Ramappa	23	male
2	17/01/20	Pari	Siddappa	21	male
3	17/01/20	Pavikanth	Basava	30	male
4	18/01/20	Balakrishna	Murali Rao	28	male
1	18/01/20	Swami	Ramappa	23	male
2	18/01/20	Pari	Siddappa	21	male
3	18/01/20	Pavikanth	Basava	30	male
4	18/01/20	Balakrishna	Murali Rao	28	male
1	20/01/20	Swami	Ramappa	23	male
2	20/01/20	Pari	Siddappa	21	male
3	20/01/20	Pavikanth	Basava	30	male
4	20/01/20	Balakrishna	Murali Rao	28	male
1	20/01/20	Swami	Ramappa	23	male
2	20/01/20	Pari	Siddappa	21	male
3	20/01/20	Pavikanth	Basava	30	male
4	20/01/20	Balakrishna	Murali Rao	28	male
1	22/01/20	Swami	Ramappa	23	male
2	22/01/20	Pari	Siddappa	21	male
3	22/01/20	Pavikanth	Basava	30	male
4	22/01/20	Balakrishna	Murali Rao	28	male

Check in time	Check out time	Labour sign	Engineer sign	Penalty
8:30 AM	5:30 PM	Swami		
8:30 AM	5:30 PM	Pari		
8:30 AM	5:30 PM	Pavikanth		
8:30 AM	5:30 PM	Balakrishna		
8:30 AM	6:30 PM	Swami		
8:30 AM	6:30 PM	Pari		
8:30 AM	6:30 PM	Pavikanth		
8:30 AM	6:30 PM	Balakrishna		
8:30 AM	5:30 PM	Swami		
8:30 AM	5:30 PM	Pari		
8:30 AM	6:30 PM	Pavikanth		
8:30 AM	6:30 PM	Balakrishna		
8:30 AM	5:30 PM	Swami		
8:30 AM	5:30 PM	Pari		
8:30 AM	5:30 PM	Pavikanth		
8:30 AM	5:30 PM	Balakrishna		
8:30 AM	6:30 PM	Swami		
8:30 AM	6:30 PM	Pari		
8:30 AM	6:30 PM	Pavikanth		
8:30 AM	6:30 PM	Balakrishna		
8:30 AM	5:30 PM	Swami		
8:30 AM	5:30 PM	Pari		
8:30 AM	5:30 PM	Pavikanth		
8:30 AM	5:30 PM	Balakrishna		
8:30 AM	6:30 PM	Swami		
8:30 AM	6:30 PM	Pari		
8:30 AM	6:30 PM	Pavikanth		
8:30 AM	6:30 PM	Balakrishna		



S.No	Date	Laboal name	Pathef Name	Age	Sex
1	22/01/20	Swami	Pamappa	21	male
2	22/01/20	Pavi	Siddappa	22	male
3	22/01/20	Pavithanth	Basava	20	male
4	22/01/20	Balak Kumar	Mulali Rao	28	male
1	24/01/20	Swami	Pamappa	21	male
2	24/01/20	Pavi	Siddappa	22	male
3	24/01/20	Pavithanth	Basava	20	male
4	24/01/20	Balak Kumar	Mulali Rao	28	male
1	25/01/20	Swami	Pamappa	21	male
2	25/01/20	Pavi	Siddappa	22	male
3	25/01/20	Pavithanth	Basava	20	male
4	25/01/20	Balak Kumar	Mulali Rao	28	male
1	27/01/20	Swami	Pamappa	21	male
2	27/01/20	Pavi	Siddappa	22	male
3	27/01/20	Pavithanth	Basava	20	male
4	27/01/20	Balak Kumar	Mulali Rao	28	male
1	28/01/20	Swami	Pamappa	21	male
2	28/01/20	Pavi	Siddappa	22	male
3	28/01/20	Pavithanth	Basava	20	male
4	28/01/20	Balak Kumar	Mulali Rao	28	male
1	29/01/20	Swami	Pamappa	21	male
2	29/01/20	Pavi	Siddappa	22	male
3	29/01/20	Pavithanth	Basava	20	male
4	29/01/20	Balak Kumar	Mulali Rao	28	male

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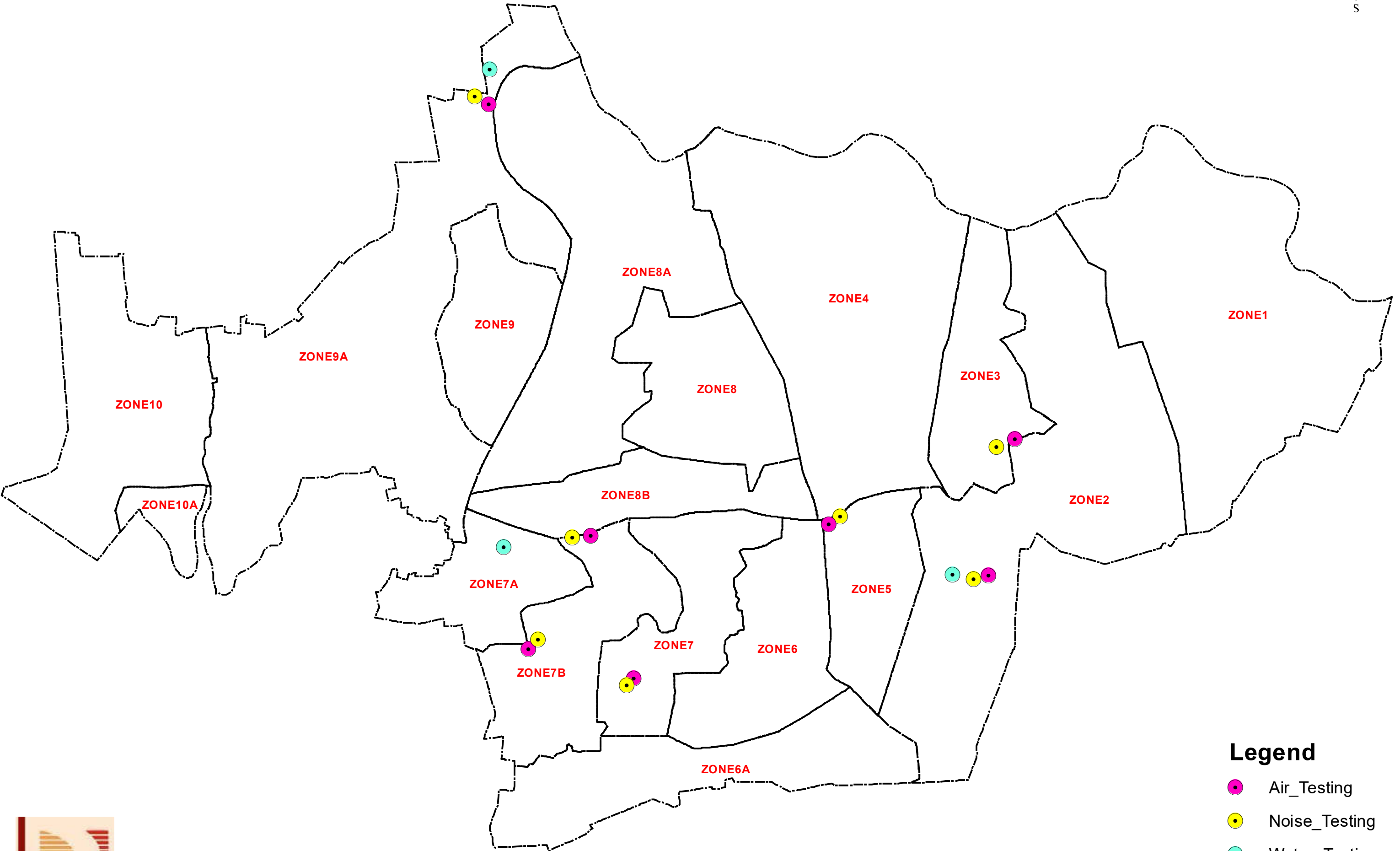


SNo	Date	Labore name	Father's Name	Age	Sex
1	30/01/20	Swami	Ramappa	21	Male
2	30/01/20	Pavi	Sidappa	22	Male
3	30/01/20	Pavithra	Rajava	20	Male
4	30/01/20	Palaki Bunt	Mulali Rao	28	Male
1	31/01/20	Swami	Ramappa	21	Male
2	31/01/20	Pavi	Sidappa	22	Male
3	31/01/20	Pavithra	Rajava	20	Male
4	31/01/20	Palaki Bunt	Mulali Rao	28	Male

check in time	check out time	Labour sign	Engineer sign	Penalty
8:30 AM	5:30 PM	Swami		
8:30 AM	5:30 PM	Pavi		
8:30 AM	5:30 PM	Pavithra		
8:30 AM	5:30 PM	Palaki Bunt		
8:30 AM	6:30 PM	Swami		
8:30 AM	6:30 PM	Pavi		
8:30 AM	6:30 PM	Pavithra		
8:30 AM	6:30 PM	Palaki Bunt		



Environmental Monitoring Survey-UDUPI



Legend

- Air\_Testing
- Noise\_Testing
- Water\_Testing
- Zone\_Boundary





0/0



Ref: SPPL/SIPL/DRS JV /KUIDFC /UCMC/0116/2019-20

Date: - 20<sup>th</sup> November -2019

To  
The Executive Engineer  
KUIDFC-KIUWMIP, Jalasiri Tranch-2  
PIU-Udupi

**Sub:** KUIDFC-KIUWMIP-construction work of services for operation and management of 24x7 water supply system for Udupi city -package No 02UDP01"-Submission of Environmental monitoring test report.

Ref: 1.LOA letter no UCMC/UDUPI/KUIDFC/ADB/udp03/2018-19/Dated 10.10.2018

2.Contract Agreement Dated 16.11.2018

Dear Sir,

In view of the above subject, we hear by submit the Environmental monitoring test report for Noise pollution, Air pollution and water tests conducted during Oct 2019. For your information.

Thanking you and assuring you our best services at all times.

For SPPL-SIPL-DRS JV

Authorized Signatory



Encl: Report enclosed

- CC: 1. Deputy Project Director, KUIDFC-KIUWMIP, Jalasiri Tranch-2, RPMU, Mangaluru  
2.The Commissioner, City Municipal Council, Udupi  
3.Team Leader -Egis India Consulting Engineers Pvt Ltd, Mangaluru





**National Accreditation Board for  
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## **CERTIFICATE OF ACCREDITATION**

### **MSV ANALYTICAL LABORATORIES**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2005**

**"General Requirements for the Competence of Testing & Calibration Laboratories"**

for its facilities at

C.M.C Ward No. 18 & C.T.C W.No. 16, T.S No. 695/A/32/B1,  
Block No. 19 (1st & 2nd Floor), Sanganakallu Road, KEB Circle,  
Bellari, Karnataka

in the field of

**TESTING**

**Certificate Number** TC-7207 (in lieu of T-2789)

**Issue Date** 12/04/2018

**Valid Until** 11/04/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Signed for and on behalf of NABL



89076970100030001330

**Anil Relia**  
Chief Executive Officer





# National Accreditation Board for Testing and Calibration Laboratories

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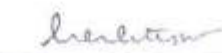
Last Amended on 26.04.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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### BIOLOGICAL TESTING

I.	FOOD & AGRICULTURAL PRODUCTS			
1.	Fruits & Vegetables	Enumeration of micro-organism	IS 5402 (RA 2012)	$\geq 10\text{CFU/gm}$
		Coliforms	IS 5401 (Part 1): 2012	$\geq 10\text{CFU/gm}$
		Yeast and mould count	IS 5403:1999 (RA 2005)	$\geq 10\text{CFU/gm}$
2.	Food and Stuffs	Yeast and mould count	IS 5403:1999 (RA 2005)	$\geq 10\text{CFU/gm}$
		Coliforms	IS 5401 (Part 1): 2012	$\geq 10\text{CFU/ml}$
3.	Sugar & Sugar Products	Aerobic microbial count	IS 5402:2012	$\geq 10\text{CFU/gm}$
		Coliforms	IS 5401 (Part 1) (RA 2012)	$\geq 10\text{CFU/gm}$
4.	Milk & Milk Products	Coliforms	IS 5401(Part 1) (RA 2012)	$\geq 10\text{CFU/ml}$
		Enumeration of micro-organism	IS 5402:2012	$\geq 10\text{CFU/gm}$
		Yeast and mould count	IS 5403:1999 (RA 2005)	$\geq 10\text{CFU/gm}$
5.	Maida Atta	Enumeration of micro-organism	IS 5402:2012	$\geq 10\text{CFU/gm}$
		Coliform	IS 5401(Part 1): 2012	$\geq 10\text{CFU/gm}$
6.	Meat and Meat Products	Enumeration of micro-organism	IS 5402:2012	$\geq 10\text{CFU/gm}$
		Coli forms	IS 5401(Part 1): 2012	$\geq 1\text{CFU/ml}$
		Yeast and mould count	IS 5403:1999 (RA 2005)	$\geq 10\text{CFU/gm}$
II.	WATER			
1.	Package Drinking Water	Enumeration of micro-organism	IS 5402:2012	$\geq 1\text{CFU/ml}$
		Yeast and mould count	IS 13428:2005	Present / Absent per 250 ml
		Pseudomonas Aeruginosa	IS 13428 (Annexure D)	Present / Absent per 250 ml

  
Ashok Kumar  
Convenor

  
N. Venkateswaran  
Program Director



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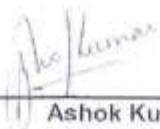
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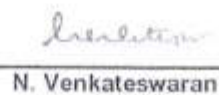
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphate reducing anaerobes	IS 13428 (Annexure C)	Present / Absent per 250 ml
		Coli forms	IS 15185:2002	Present / Absent per 50 ml
2.	Waste Water	Coliforms by multiple tube dilution method	IS 1622:1981 (RA 1996)	>1 MPN/100 ml
		Intestinal enterococci	IS 15186:2002 (RA 2009)	Absent/Present per 100 ml

  
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### CHEMICAL TESTING

I.	FOOD & AGRICULTURAL PRODUCTS			
1.	Fruits & Vegetable	Titration Acidity (as Citric Acid)	IS 13844:2003	0.1 % to 10 %
		Soluble Solids	IS 13815:1993(RA 2003)	1 % to 80 %
		Calcium	IS 2860:1964(RA 2008)	5 mg/kg to 500 mg/kg
		Salt as NaCl	IS 2860:1964(RA 2008)	0.1 % to 25 %
		Moisture	IS 3543:1966(RA 2001)	1 % to 10 %
		Total Ash	IS 3543: 1966 (RA 2001)	1 % to 11 %
		Sulphur Dioxide	IS 4706 (Part 2): 1978 (RA 2005)	10 mg/kg to 5000 mg/kg
		Reducing Sugars	IS 6287:1985 (RA 1999)	0.1% to 60%
		Sucrose	IS 6287:1985 (RA 1999)	0.1% to 95%
		Acid Insoluble Ash	IS 3543:1966 (RA 2001)	0.1% to 1.0 %
		Alcoholic Soluble Extract	IS 3543:1966 (RA 2001)	1 % to 30%
		Ether Soluble Extract	IS 3543:1966 (RA 2001)	1 % to 8 %
		pH	IS 2860:1964 (RA 2008)	1 to 14
		Vitamin C	IS 2860:1964 (RA 2008)	0.01 % to 10 %
		Specific Gravity	IS 2860:1964 (RA 2008)	0.1 to 10
2.	Skimmed Milk Products	Fat	IS 11766:2013	0.1 % to 20 %
		Total Ash	IS 13334	0.1 % to 5 %
		Total Solids	IS 13334	0.1 % to 5 %
		Total Acidity	IS 11766:2013	0.1% to 5 %
		Total Nitrogen	IS 13334	0.1 % to 10 %
		Crude fiber	IS 13334	0.1 % to 10 %
		Total Protein	IS 13334	1 % to 50 %
3.	Butter	Moisture	IS 3507:1966 Clause 4	1 % to 20 %
		Total Acidity	IS 3507:1966 Clause 8	0.1 % to 5 %
		Fat	IS 3507:1966 Clause 6	1 % to 90 %

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		Salt as NaCl	IS 13690	0.1 % to 25 %
4.	Dairy Cream	Fat	IS 3509:1966 Clause 4	0.1 % to 50 %
		Total Acidity	IS 3509:1966 Clause 5	0.1 % to 1 %
5.	Sugar	Moisture	IS 1151:2003	0.1 % to 5 %
		Loss on dry	FSSAI MANUAL	1 % to 100 %
		Conductivity	IS 1151:2003	0.5 umhos to 100 umhos
		Reducing Sugars	IS 1151:2003	1 % to 90 %
		Sulphur Dioxide	IS 6287:1985	1 mg/kg to 1500 mg/kg
6.	Sugar Boiled Confectionary	Moisture	IS 6287:1985 (RA 1999) Clause 5	0.1 % to 10 %
		Sulphated Ash	IS 6287:1985 (RA 1999) Clause 6	0.1 % to 5 %
		Acid insoluble Ash	IS 6287:1985 (RA 1999) Clause 7	0.01 % to 1 %
		Total protein	IS 6287:1985 (RA 1999) Clause 11	0.1 % to 20 %
		Fat	IS 1163:1971 (RA 2002) Annexure.C-1	0.1 % to 40 %
		Sucrose	IS 4079:1967 (RA 2002) Annexure.C-2	0.1 % to 10 %
7.	Spices	Moisture	IS 1797:1985 (RA 2017)	0.2 % to 20 %
		Volatile Oil	IS 1797:1985 (RA 2017)	0.1 % to 5.0 %
		T-Ash	IS 1797:1985 (RA 2017)	0.1 % to 10 %
		Acid insoluble ash	IS 1797:1985 (RA 2017)	0.1 % to 5.0 %
		Crude Fiber	IS 1797:1985 (RA 2017)	0.1 % to 30 %
		Salt as NaCl (D.B)	IS 1797:1985 (RA 2017)	0.1 % to 10 %
8.	Maida and Wheat	Ash	IS 1155:1968 (RA 2015)	0.01 % to 10 %
		Moisture	IS 1009:1979 (RA 2015)	0.5 % to 50 %
		Acid insoluble ash	IS 1009:1979 (RA 2015)	0.01 % to 5 %
		Protein	IS 1009:1979 (RA 2015)	0.1 % to 40 %
		Gluten	IS 1009:1979 (RA 2015)	1 % to 25 %
9.	Meat and Meat Products	Moisture	IS 5960 (Part 5): 2001	0.1 % to 50 %

  
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		Crude Protein	IS 9808 :1981 (RA 2011)	0.1 % to 50 %
		Crude Fat	IS 9808 :1981 (RA 2011)	5 % to 100 %
		Total Ash	IS 9808 :1981 (RA 2011)	0.1 % to 10 %
		Acid Insoluble ash	IS 9808 :1981 (RA 2011)	0.01 % to 5 %
		Total Fat	IS 5960 (Part 3): 1970 (RA 1999)	0.1 % to 30 %
		Sodium Chloride	IS 5960 (Part 3): 1970 (RA 1999)	0.1 % to 10 %
		Nitrogen (as N)	IS 5960 (Part 1): 1976 (RA 2001)	0.1 % to 5 %
10.	Oils & Fat	Refractive Index	IS 548 (Part 1)	1.300 to 1.700
		Iodine Value	IS 548 (Part 1)	1 to 90
		Saponification Value	IS 548 (Part 1)	1 to 300
		Peroxide Value	IS 548 (Part 1)	0.01 to 10
		Free Fatty Acid	IS 548 (Part 1)	0.01 % to 75 %
		Volatile Oil	IS 548 (Part 1)	Qualitative (Absent/Present)
		Sesame Oil	IS 548 (Part 2)	Qualitative (Absent/Present)
		Cottonseed Oil	IS 548 (Part 2)	Qualitative (Absent/Present)
		Karanja Oil	IS 548 (Part 2)	Qualitative (Absent/Present)
		Castor oil	IS 548 (Part 2)	Qualitative (Absent/Present)
		Neem Oil	IS 548 (Part 2)	Qualitative (Absent/Present)
		Linseed Oil	IS 548 (Part 2)	Qualitative (Absent/Present)
II.	ORES & MINERALS			
1.	Iron Ore	Total Fe	IS 1493 (Part 1): 1981 (RA 2001)	10 % to 70 %

  
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		SiO <sub>2</sub>	IS 1493 (Part 1): 1981 (RA 2001)	0.5 % to 25 %
		Al <sub>2</sub> O <sub>3</sub>	IS 1493 (Part 1): 1981 (RA 2001)	0.5 % to 20 %
		P	IS 1493 (Part 1): 1981 (RA 2001)	0.003 % to 0.100 %
		S	IS 1493 (Part 1): 1981 (RA 2001)	0.003 % to 0.01 %
		Loss On Ignition	IS 1760 (Part): 1991 (RA 2001)	0.5 % to 15 %
2.	Manganese Ore	Mn	IS 1473:2004 (RA 2008)	5 % to 50 %
		SiO <sub>2</sub>	IS 1473:2004 (RA 2008)	0.5 % to 15 %
		Fe	IS 1473:2004 (RA 2008)	1 % to 40 %
		Al <sub>2</sub> O <sub>3</sub>	IS 1473:2004 (RA 2008)	0.5 % to 10 %
		P	IS 1473:2004 (RA 2008)	0.005 % to 0.100 %
		S	IS 1473:2004 (RA 2008)	0.005 % to 0.01 %
3.	Limestone & Dolomite	Loss on Ignition	IS 1760 (Part 1): 1991 (RA 2001)	1 % to 50 %
		SiO <sub>2</sub>	IS 1760 (Part 2): 1991 (RA 2001)	0.5 % to 15 %
		CaO	IS 1760 (Part 3): 1991 (RA 2001)	0.5 % to 60 %
		MgO	IS 1760 (Part 3): 1991 (RA 2001)	0.2 % to 40 %
		Al <sub>2</sub> O <sub>3</sub>	IS 1760 (Part 3): 1991 (RA 2001)	0.2 % to 2 %
III.	SOLID FUELS			
1.	Coal & Coke	Moisture	IS 1350 (Part 1): 1984	0.2 % to 50 %
		Ash Content	IS 1350 (Part 1): 1984	0.5 % to 60 %
		Volatile Matter	IS 1350 (Part 1): 1984	0.5 % to 30 %
		Fixed Carbon	IS 1350 (Part 1): 1984	1 % to 70 %

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		Sulphur	IS 1350 (Part 3): 1969 (RA 2000)	0.1 % to 10 %
		Grass Colorific Value	IS 1350 (Part 2): 1970 (RA 2000)	30 Kcal to 10000 Kcal
<b>IV. ATMOSPHERIC POLLUTION</b>				
<b>1. Ambient Air Quality Monitoring</b>		Particulate matter less than 2.5µg(PM <sub>2.5</sub> )	MSVAL/SOP/A/005 Dated 02.07.2012	1 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
		Particulate matter less than 10µg (PM <sub>10</sub> )	IS 5182 (Part 23): 2006 (RA 2017)	1 µg/m <sup>3</sup> to 10000 µg/m <sup>3</sup>
		Oxide of Nitrogen	IS 5182 (Part 6): 2006	3.0 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		Sulphur dioxide	IS 5182 (Part 2): 2001	3.0 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		Ammonia as NH <sub>3</sub>	Lab SOP No. MSVAL/SOP/A/006 Dated: 02.07.2012	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Ozone as O <sub>3</sub>	IS 5182 (Part 9): 1974 (RA 2014)	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Carbon Monoxide	CO Analyzer method based on electrochemical method (Lab SOP: MSVAL/ SOP/ A/ 007 Dated: 02.07.2012)	1.5 µg/m <sup>3</sup> to 40 µg/m <sup>3</sup>
		Lead as Pb	IS 5182 (Part 22): 2004 (RA 2014)	0.04 µg/m <sup>3</sup> to 10 µg/m <sup>3</sup>
		Nickel as Ni	Lab SOP No. MSVAL/ SOP/ A/008 : Dated: 02.07.2012	10 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
<b>2. Stack Emission Monitoring</b>		Velocity	IS 11255 (Part 3): 2008	1 m/s to 60 m/s
		Volume of gas discharge	IS 11255 (Part 3): 2008	20 Nm <sup>3</sup> /hr to 100000 Nm <sup>3</sup> /hr
		Particulate matter	IS 11255 (Part 1): 1985 (RA 2003 & RA2014)	1 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>
		Sulphur dioxide	IS 11255 (Part 2): 1985 (RA 2003 & RA 2014)	3 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>

  
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		Oxides of Nitrogen	IS 11255 (Part 7): 2005 (RA 2012 & RA 2017)	2 mg/Nm <sup>3</sup> to 500 mg/Nm <sup>3</sup>
		Carbon Monoxide	IS 13270:1992 Orsat Apparatus USEPA 3A:1989	1 % to 20 %
		Carbon Dioxide as CO <sub>2</sub>	IS 13270:1992 Orsat Apparatus USEPA 3A:1989	1 % to 20 %
		Oxygen as O <sub>2</sub>	IS 13270:1992 Orsat Apparatus USEPA 3A:1989	1 % to 25 %
		Ammonia	IS 11255 (Part 6): 1999 (RA 2014)	1.0 mg/Nm <sup>3</sup> to 20 mg/Nm <sup>3</sup>
		Moisture	IS 11255 (Part 3): 2008	1 % to 100 %
		Temperature	IS 11255 (Part 3): 2008	(-)10 °C to 1800 °C
		Acid mist	Lab SOP No. MSVAL/ SOP/ SE/002/Dated 02.07.2012	1 mg/Nm <sup>3</sup> to 500 mg/Nm <sup>3</sup>
3.	Indoor Air Quality	PM10	Lab SOP No. MSVAL/SOP/IAQ/005 Dated 06.04.2018	0.1 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		PM2.5	Lab SOP NO MSVAL/SOP/IAQ/005 Dated 06.04.2018 IS 5182 (Part 23): 2006	0.1 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
		SO <sub>2</sub>	Instrument Manual Method Lab SOP No. MSVAL/SOP/IAQ/004 Dated 06.04.2018	0.1 mg/kg to 1000 mg/kg
		NO <sub>x</sub>	Instrument Manual Method Lab SOP No. MSVAL/SOP/IAQ/004 Dated 06.04.2018	0.1 mg/kg to 1000 mg/kg
		CO	Instrument Manual Method Lab SOP No. MSVAL/SOP/IAQ/007 Dated 06.04.2018	0.1 mg/kg to 1000 mg/kg

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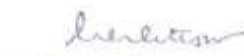
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ammonia	Instrument Manual Method Lab SOP No. MSVAL/SOP/IAQ/004	0 to 100 mg/kg
		VOC	Instrument Manual Method Lab SOP No. MSVAL/SOP/IAQ/005 Dated 06.04.2018	0 to 100 mg/kg
5.	Meteorological Studies	Temperature	MSVAL/SOP/M-01 by Automatic Weather Monitoring Station. Prepared based on EPA-454/R-99-005:2000 and manual of automatic weather station. Dated 06.04.2018	-10 to +60 °C
		Barometric Pressure		25 atm to 70 atm
		Humidity		0 to 100 %
		Rain Fall		0.1 to 10
		Wind Direction		0 to 360 degrees
		Wind Speed		0.5 m/s to 50 m/s
		Illumination	IS 3646-1:1992 by illumination	1 LUX to 50,000 LUX
6.	Ambient Noise	Ambient Noise	IS 9989:1981	30 dB(A) to 130 dB(A)
V.	SOIL AND ROCK			
1.	Soil	pH value	IS 2720 (Part 26): 1987 (RA 1997)	1 to 14
		Specific Electrical Conductivity@ 25 °C	IS 14767:2000	1 µS/cm to 500 µS/cm
		Organic matter	IS 2720 (Part 23): 1972 (RA 2010)	0.10 % to 10.0 %
		Water (Moisture) Content	IS 2720 (Part 2): 1973 (RA 2010)	0.1 % to 10 %
		Water Holding Capacity	Lab SOP No: MSVL/SOP/S-04 Dated 05.01.2018	1 % to 100 %

  
Ashok Kumar  
Convenor

  
N. Venkateswaran  
Program Director





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		Manganese	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	1 µg/g to 10 µg/g
VI.	WATER			
1.	Surface Water/ Ground Water/ Portable Water	Color, color units	IS 3025 (Part 4): 1983 (RA 2017)	2 to 100
		Odour	IS 3025 (Part 5): 1983 (RA 2017)	Qualitative Agreeable/Disagreeable
		Taste	IS 3025 (Part 8): 1983 (RA 2017)	Qualitative Agreeable/Disagreeable
		Acidity (as CaCO <sub>3</sub> )	2310 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 23): 1986 (RA 2009)	1 mg/l to 200 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	2320 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 23): 1986 (RA 2009)	1 mg/l to 500 mg/l
		Nitrate as NO <sub>3</sub>	4500-NO <sub>3</sub> B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 100 mg/l
		Nitrite as NO <sub>2</sub>	4500-NO <sub>2</sub> B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 34): 1998 (RA 2009)	0.01 mg/l to 5 mg/l
		Boron as B	4500-B, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 57): 2005 (RA 2010)	0.1 mg/l to 100 mg/l
		Chloride as Cl	4500-Cl, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 32): 1988 (RA 2009)	1 mg/l to 5000 mg/l

*Ashok Kumar*

Ashok Kumar  
Convenor

*N. Venkateswaran*

N. Venkateswaran  
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		Hexavalent Chromium as Cr <sup>6+</sup>	3500-Cr, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 52): 1988 (RA 2009)	0.03 mg/l to 1 mg/l
		Electrical conductivity @25°C	2510 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 14): 2013	1 µs/cm to 10000 µs/cm
		Dissolved Oxygen	4500-O, C-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 8 mg/l
		Fluoride as F	4500-F, D-APHA 23 <sup>rd</sup> Edn 2017	0.1 mg/l to 100 mg/l
		Calcium as Ca	3500 Ca, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 40): 1991 (RA 2009)	1 mg/l to 1000 mg/l
		Total Hardness as (as CaCO <sub>3</sub> )	2340 C-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 21): 2009	1 mg/l to 1000 mg/l
		Iron as Fe	3500-Fe, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 53): 2003 (RA 2009)	0.05 mg/l to 10 mg/l
		Magnesium as Mg	3500-Mg, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 46): 1994 (RA 2009)	1 mg/l to 500 mg/l
		Oil & Grease	5520 D-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 39): 1991 (RA 2009)	1 mg/l to 100 mg/l
		pH @25°C	4500 H <sup>+</sup> , B-APHA 23 <sup>rd</sup> Edn 2017/IS 3025 (Part 11): 1983 (RA 2017)	1 to 14

Ashok Kumar  
Convenor

N. Venkateswaran  
Program Director





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		Dissolved Phosphate as P	4500-P, D-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 31): 1988 (RA 2003)	0.05 mg/l to 50 mg/l
		Potassium as K	3500-K-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 45): 1993 (RA 2009)	1 mg/l to 500 mg/l
		Sodium as Na	3500-Na, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 45): 1993 (RA 2009)	1 mg/l to 500 mg/l
		Total Dissolved Solids	2540 C- APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 16): 1993 (RA 2017)	1 mg/l to 5000 mg/l
		Sulphate as SO <sub>4</sub>	4500-SO <sub>4</sub> <sup>2-</sup> -APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Temperature	2550 B-APHA 23 <sup>rd</sup> Edn 2017	Ambient - 50 °C
		Turbidity	2530 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 10): 1984 (RA 2017)	1 NTU to 100 NTU
2.	Package Drinking Water	Color, color units	IS 3025 (Part 4): 1983 (RA 2017)	2 to 100
		Odour	IS 3025 (Part 5): 1983 (RA 2017)	Qualitative Agreeable/Disagreeable
		Taste	3025(part 8): 1984, Reaffirmed 2017	Qualitative Agreeable/Disagreeable
		Turbidity	2530 B-APHA 23 <sup>rd</sup> Edn 2017/IS 3025 (Part 10): 1984 (RA 2017)	1-100 NTU

  
Ashok Kumar  
Convenor

  
N. Venkateswaran  
Program Director



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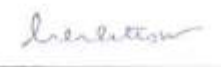
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		Total Dissolved Solids	2540 C- APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 16): 1993 (RA 2017)	1 mg/l to 5000 mg/l
		pH @25°C	4500 H <sup>+</sup> , B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 11): 1983 (RA 2017)	1 to 14
		Iron as Fe	3500-Fe, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 53): 2003 (RA 2014)	0.05 mg/l to 5 mg/l
		Manganese (as Mn)	IS 3025 (Part 59) (RA 2016)	0.05 to 10 mg/l
		Nitrate as NO <sub>3</sub>	IS 3025 (Part 34)	0.1 mg/l to 100 mg/l
		Nitrite as NO <sub>2</sub>	4500-NO <sub>2</sub> , B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 34): 1998 (RA 2014)	0.01 mg/l to 10 mg/l
		Fluoride as F	IS 3025 (Part 60)	0.01 mg/l to 1.5 mg/l
		Zinc (As Zn)	IS 3025 (Part 49)	0.05 mg/l to 5 mg/l
		Chloride as Cl	IS 3025 (Part 32) IS 3025 (Part 32): 1988 (RA 2014)	5 mg/l to 1000 mg/l
		Sulphate as SO <sub>4</sub>	IS 3025 (Part 24) 4500-SO <sub>4</sub> <sup>2-</sup> -APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	2320 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 23): 1986 (RA 2014)	1 mg/l to 1000 mg/l
		Calcium as Ca	3500 Ca, B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 40): 1991 (RA 2014)	1 mg/l to 1000 mg/l

  
Ashok Kumar  
Convenor

  
N. Venkateswaran  
Program Director





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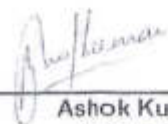
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		Magnesium as Mg	3500-Mg, B-APHA 23 <sup>rd</sup> Edn 2017/IS 3025 (Part 46): 1994 (RA 2014)	1 mg/l to 1000 mg/l
		Sodium as Na	3500-Na, B-APHA 23 <sup>rd</sup> Edn 2017/IS 3025 (Part 45): 1993 (RA 2014)	1 mg/l to 1000 mg/l
		Residual Free Chlorine	IS 3025 (Part 26): 1986/ APHA (22 <sup>nd</sup> Edition) 4500-Cl G: 2012	0.05 mg/l to 10 mg/l
		Phenolic Compounds as phenols	IS 3025 (Part 43): 1992 (RA 2014)	0.001 mg/l to 1 mg/l
		Mercury (as Hg)	IS 3025 (Part 48) SOP No: MSVL/SOP/W-01 ;Dated 05.01.2018	0.001 mg/l to 0.1 mg/l
		Cadmium	IS 3025 (Part 41) 3111B-Mn, APHA 23 <sup>rd</sup> Edition, 2017	0.025 mg/l to 5 mg/l
		Lead	IS 3025 (Part 47) 3111B-Mn, APHA 23 <sup>rd</sup> Edition, 2017	0.5 mg/l to 10 mg/l
		Chromium	IS 3025 (Part 52) 3111B-Mn, APHA 23 <sup>rd</sup> Edition, 2017	0.1 mg/l to 50 mg/l
		Nickel as Ni	IS 3025 (Part 54) 3111B-Mn, APHA 23 <sup>rd</sup> Edition, 2017	0.1 mg/l to 50 mg/l
		Copper	IS 3025 (Part 42) 3111B-Mn, APHA 23 <sup>rd</sup> Edition, 2017	0.1 mg/l to 50 mg/l
		Temperature	2550 B-APHA 23 <sup>rd</sup> Edn 2017 Dated 02.07.2012	1 °C to 100 °C
<b>VII.</b>	<b>POLLUTION &amp; ENVIRONMENT</b>			
<b>1.</b>	<b>Waste Water</b>	Acidity (as CaCO <sub>3</sub> )	2310 B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 200 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (Part 23) 2320 B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l

  
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Convenor

  
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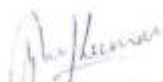
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ammonical Nitrogen as N	4500-NH <sub>3</sub> , B, C-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Nitrite as NO <sub>2</sub>	4500-NO <sub>2</sub> B-APHA 23 <sup>rd</sup> Edn 2017	0.01 mg/l to 5 mg/l
		Total kjeldhal Nitrogen as N	4500-N org, B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		BOD at 27°C for 3days	IS 3025 (Part 44): 1993 (RA 2009)	2 mg/l to 5000 mg/l
		Chemical oxygen Demand	5230 B-APHA 23 <sup>rd</sup> Edn 2017 IS 3025 (Part 58): 2006	4 mg/l to 10000 mg/l
		Chloride as Cl	4500-Cl, B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 5000 mg/l
		Chlorine Residual	4500-Cl, I-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 50 mg/l
		Hexavalent Chromium as Cr <sup>+6</sup>	3500-Cr, B-APHA 23 <sup>rd</sup> Edn 2017	0.03 mg/l to 10 mg/l
		Electrical conductivity @25°C	2510 B-APHA 23 <sup>rd</sup> Edn 2017	1 to 10000 µs/cm
		Dissolved Oxygen	4500-O, C-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 7 mg/l
		Fluoride as F	4500-F, B, D-APHA 23 <sup>rd</sup> Edn 2017	0.1 mg/l to 100 mg/l
		Calcium as Ca	3500 Ca - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 1000 mg/l
		Total Hardness as CaCO <sub>3</sub>	2340 C - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 1000 mg/l
		Iron as Fe	3500-Fe, B - APHA 23 <sup>rd</sup> Edn 2017	0.05 mg/l to 10 mg/l
		Magnesium as Mg	3500-Mg, B - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 1000 mg/l
		Oil & Grease	5520 D - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 100 mg/l



Ashok Kumar  
Convenor



N. Venkateswaran  
Program Director





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		pH@25°C	4500 H <sup>+</sup> , B-APHA 23 <sup>rd</sup> Edn 2017	1 to 14
		Dissolved Phosphate as P	4500-P,B,D-APHA 23 <sup>rd</sup> Edn 2017	0.05 mg/l to 50 mg/l
		Potassium	3500-K -APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Sodium	3500-Na,B-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Total Dissolved Solids	2540 C- APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 5000 mg/l
		Sulphate	4500-SO <sub>4</sub> <sup>2-</sup> - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 500 mg/l
		Total Solids	2540 B - APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 5000 mg/l
		Total Suspended Solids	2540 F-APHA 23 <sup>rd</sup> Edn 2017	1 mg/l to 1000 mg/l
		Turbidity	2530 B-APHA 23 <sup>rd</sup> Edn 2017	1 NTU to 100 NTU

Ashok Kumar  
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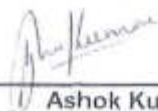
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		Cation Exchange capacity	Lab SOP No: MSVL/SOP/S-03; Dated 05.01.2018	0.2 meq/l to 50 meq/l
		Total Soluble Sulphate	Lab SOP No: MSVL/SOP/S-05; Dated 05.01.2018	5 mg/kg to 1000 mg/kg
		Available Phosphorous	Lab SOP No: MSVAL/SOP/S-06; Dated 05.01.2018	5 mg/kg to 1000 mg/kg
		Available Nitrogen	Lab SOP No: MSVAL/SOP/S-07; Dated 05.01.2018	1 mg/kg to 1000 mg/kg
		Ca in Soil saturation extract	Lab SOP No: MSVAL/SOP/S-08; Dated 05.01.2018	5 mg/kg to 5000 mg/kg
		Mg in Soil saturation extract	Lab SOP No: MSVAL/SOP/S-09; Dated 05.01.2018	5 mg/kg to 2000 mg/kg
		Lead	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	0.1 µg/g to 5 µg/g
		Copper	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	0.1 µg/g to 10 µg/g
		Zinc	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	0.05 µg/g to 5 µg/g
		Cadmium	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	0.1 µg/g to 5 µg/g
		Iron	Lab SOP No: MSVAL/SOP/S-10; Dated 05.01.2018	1 µg/g to 10 µg/g



Ashok Kumar  
Convenor



N. Venkateswaran  
Program Director



# Monthly Environmental Monitoring Report

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Project Number: 43253-027  
February 2020

IND: Karnataka Integrated Urban Water Management  
Investment Program (Tranche 2) – Improvements for  
24 x 7 Water Supply System for City Municipal Council  
in Udupi

Package No. 02UDP01

Prepared by



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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udupi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur and Udupi) improved. The outputs are (i) UWSS infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) institutional capacity of KUIDFC and ULBs strengthened capacity. This initial environmental examination (IEE) is based on an water supply projects within the project area i.e. Udupi

### 2 Need for Infrastructure Improvement in Udupi

A detailed assessment of existing situation was carried out and it concludes that the present water production of 27.24 million liters per day (MLD), is insufficient to meet water demand of Udupi till the year 2031 as per national standards. Besides Udupi town, this subproject investment also need to provide water supply covering 5 en-route villages, 5 outgrowth villages and 7 adjacent villages.

The present inadequacy in the water supply system, is due to

- (i) mainly shortage in water source in summer season;
- (ii) increased water demand; and
- (iii) old and leaking distribution system, along with weak management system.

In order to meet required water demand of Udupi, an alternate water source from River Varahi is proposed under a government funded bulk water supply project. The necessary improvements and augmentation in water distribution system is proposed under the ADB funded KIUWMIP Tranche 2

### 3 The proposed subproject:

Subproject includes the following components:

- (i) clear water feeder mains of 7.47 kilometer (km) of diameter 150 millimeters (mm) to 355 mm to feed tonew overhead tanks (OHTs);
- (ii) 7 OHTs of total storage capacity 5.2 ml;
- (iii) distribution network of 358.17 km (diameter 150 mm to 355 mm); and,
- (iv) Replacement of 16,870 existing meters and providing new metered house service connections of 15,000 for uncovered households. Distribution network pipes will be laid along existing road right-of-way (ROW) and OHTs will be constructed in government-owned lands. New water source from river Varahi about 38.5 kms from Udupi has been selected to meet shortage of water for summer four months. RCC Intake well, RCC Jackwell cum pump house and raw water pipe line for 38.5 Kms is proposed under AMRUTH Scope. Also it is proposed 30 MLD WTP at Baje to meet additional demand of Udupi under State fund.

Table 1 provides details of the KIUWMIP Tranche 2 subproject components in Udupi based on the detailed engineering design of the subproject

**Table 1: Proposed Subproject Components**

No.	Component	Details	Location
1	Clear water feeder main to feed treated water to overhead tanks (OHTs)	<p>7.47 km length 150 mm – 355 mm diameter <b>Ductile Iron Pipes</b></p> <ul style="list-style-type: none"> <li>□ 1.50 km - 150 mm diameter from ground level service reservoir (GLSR) at Manipal to OHT for Zone 5 at Manipal near Manapalla lake</li> <li>□ 0.5 km - 200 mm diameter from GLSR at Manipal to zone-3 OHT at Manipal</li> </ul> <p><b>Mild Steel Pipes</b></p> <ul style="list-style-type: none"> <li>□ 60 m - 219 mm diameter for zone -7C OHT at Kolambe</li> </ul>	Along the public roads within the road right of way
		<ul style="list-style-type: none"> <li>□ 45 m - 219 mm diameter for zone -8C OHT at Indrali</li> <li>□ 1.7 km - 273.1 mm diameter for zone-6B OHT at Manchi</li> <li>□ 815 m - 323.90 mm diameter for zone-8B at Kakkunje</li> <li>□ 2.85 km - 355.6 mm diameter, for zone-9B at Santhekatte</li> </ul>	
2	OHTs	<p>7 OHTs of total storage capacity 5.2 ml</p> <ul style="list-style-type: none"> <li>□ Zone 3 – 750 kl at Manipal</li> <li>□ Zone-5 – 300 kl at Manipal near Manapalla lake</li> <li>□ Zone 6B – 750 kl at Manchi</li> <li>□ Zone 7C – 300 kl near Kolambe</li> <li>□ Zone 8B – 1,000 kl at kakkunje</li> <li>□ Zone 8C – 500 kl at Indrali</li> <li>□ Zone 9B – 1,600 kl at Santhekatte</li> </ul>	For all 7 OHTs, government owned land parcels have been identified.
3	Distribution network	<p>358.16 km pipes of diameter 63 mm to 350 mm <b>High Density Poly Ethylene (HDPE) pipes</b></p> <ul style="list-style-type: none"> <li>□ 63 mm dia - 294.4 km</li> <li>□ 75 mm dia - 0.375 km</li> <li>□ 90 mm dia - 0.796 km</li> <li>□ 110 mm dia - 25.575 km</li> <li>□ 160 mm dia - 3.336 km</li> <li>□ 200 mm dia - 5.602 km</li> <li>□ 250 mm dia - 13.824 km</li> <li>□ 280 mm dia - 0.330 km</li> <li>□ 315 mm dia - 0.291 km</li> </ul> <p><b>DI PIPES:</b></p> <ul style="list-style-type: none"> <li>□ 150 mm dia - 0.252 km</li> <li>□ 300 mm dia - 10.282 km</li> <li>□ 350 mm dia - 3.098 km</li> </ul>	<p>Pipes will be laid along the public roads within the road right of way.</p> <p>Rider lines will be laid parallel to the existing pipes, and within the road right of way.</p> <p>Pipes will be mostly laid in earthen shoulder to avoid road cuttings</p>
4	House Service Connections	Replacement of non-functioning 16,870 water meters for existing connections and providing new water supply connections of 15,000 to un-covered households	At each household



#### **4 Environmental Management Plan.**

The environmental management plan (EMP) aims to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i) providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project; (iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with

Karnataka Integrated Urban Water Management Investment Program	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Improvements for 24 x 7 Water Supply System for City Municipal Council in Udupi	<b>Name of the Contractor:</b> Suez Civil Engineering Services Pvt, LTD & DRS Infra Tech Pvt, Ltd
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Udupi	<b>Name of SE/EE/AE Of concerned division PIU :-</b> Mr. Sudarshan, Sr.AE
<b>Date of monthly monitoring:</b> 27-02-2020	<b>Name of Environment, Health And Safety (EHS) Engineer :-</b> Mr. Pradeep Sheety

**Table 2: Status of implementation of Environmental Management Plan for Anticipated Impacts – Construction**

Field	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and Source of Funds	Status of implementations
EMP Implementation Training	Impacts on the environment, workers, and community due to improper implementation of EMP	<p>1) Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.</p> <p>2) Appointment of Environment, Health and Safety (EHS) Engineer by contractor prior to start of work</p>	Construction Contractor / PIU / PMDCSC	<p>(i) Certificate of Completion (Safeguards Compliance Orientation)</p> <p>(ii) Posting of Certification of Completion at worksites</p> <p>(iii) Posting of EMP at worksites</p>	<p>Cost of EMP Implementation Orientation Training to contractor is responsibility of PMU.</p> <p>Other costs responsibility of contractor.</p>	<p>1) Spoil management submitted</p> <p>2) EHS Engineer appointed</p>

Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous	<p><b>3)</b> Consult with PIU/PMDCSC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</p> <p><b>4)</b> Damp down exposed soil and any stockpiled on site by spraying with water when necessary during dry weather;</p> <p><b>5)</b> Use tarpaulins to cover sand and other loose material when transported by trucks;</p> <p><b>6)</b> Clean wheels and undercarriage of vehicles prior to leaving construction site</p>	Construction Contractor	(i) Location of stockpiles; (ii) Complaints from sensitive receptors; (iii) Heavy equipment and machinery with air pollution control devices; (iv) Certification that vehicles are compliant with Air Act	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>3)</b> Complied</p> <p><b>4)</b> Instructed contracting agency to spray water at commercial and residential areas if stock piled on-site.</p> <p><b>5)</b> Not complied</p> <p><b>6)</b> Complied</p>
	oxides, and hydrocarbons .	<b>7)</b> Fit all heavy equipment and machinery with air pollution control devices which are operating correctly.				<b>7)</b> Complied

Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during installation of pipelines can contaminate nearby surface water quality.	<p><b>8)</b> Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets.</p> <p><b>9)</b> Laying of pipelines during dry season and closing of all trenches before rainy season and avoid any chances of collecting the water in the trenches or pumping.</p> <p><b>10)</b> Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with Implementing Agency on designated disposal areas (Appendix 6).</p>	Construction Contractor	<p>(i) Areas for stockpiles, storage of fuels and lubricants and waste materials;</p> <p>(ii) Number of silt traps installed along trenches leading to water bodies;</p> <p>(iii) Records of surface water quality inspection;</p> <p>(iv) Effectiveness of water management measures;</p> <p>(v) No visible degradation to nearby drainages,</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>8)</b> Instructed contracting agency to use tarpaulins or sheets for Stockpiling during monsoon season</p> <p><b>9)</b> Instructed contracting agency to fill the excavated trenches at all locations before rainy season</p> <p><b>10)</b> Complied. Contracting agency dumping excess earth in CMC shown area but they contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p>
		<p><b>11)</b> Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies</p> <p><b>12)</b> Provide temporary bunds for stockpiles and materials</p> <p><b>13)</b> Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund</p> <p><b>14)</b> Dispose any wastes generated by construction activities in designated sites.</p>		nallahs or waterbodies due to civil works		<p><b>11)</b> No such water bodies found during site visit but instructed contracting agency to use silt trap if any water bodies found</p> <p><b>12)</b> Not complied</p> <p><b>13)</b> Contracting agency not using fuels and lubricants in bulk but instructed to provide separate room for bulk quantity</p> <p><b>14)</b> Complied. Contracting agency dumping excess earth in CMC shown area but the contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p>



		<b>15)</b> Conduct surface quality inspection and monitoring.				<b>15)</b> Not complied
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	<p><b>16)</b> Plan activities in consultation with PIU/PMDCSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <p><b>17)</b> Construction work shall be limited to day light hours (6 AM to 6 PM)</p> <p><b>18)</b> Provide prior information to the local public about the work schedule;</p> <p><b>19)</b> Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiseling;</p> <p><b>20)</b> Minimize noise from construction equipment/pneumatic drills by using silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and</p> <p><b>21)</b> Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.</p> <p><b>22)</b> Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Use of silencers in noise-producing equipment and sound barriers;</p> <p>(iii) Equivalent day and night time noise levels (See Appendix 3 of this IEE)</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>16)</b> Complied</p> <p><b>17)</b> Complied</p> <p><b>18)</b> Complied</p> <p><b>19)</b> No such old or sensitive building found which comes in work alignments. But instructed contracting agency to take safe precautions while executing the works</p> <p><b>20)</b> Complied</p> <p><b>21)</b> Complied</p> <p><b>22)</b> Complied</p>

Landscape and aesthetics	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<p><b>23)</b> Prepare and implement spoils management plan</p> <p><b>24)</b> Avoid stockpiling of excess excavated soils;</p> <p><b>25)</b> Coordinate with Udupi CMC for beneficial uses of excess excavated soils or immediately dispose to designated areas;</p> <p><b>26)</b> Recover used oil and lubricants and reuse or remove from the sites;</p> <p><b>27)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p><b>28)</b> Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p><b>29)</b> Request PMU/PMDCSC to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Worksite clear of hazardous wastes such as oil/fuel</p> <p>(iiv) Worksite clear of any excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>23)</b> Spoil management plan is prepared (<b>attached in annexture 2a august 2019 but updation is to be done</b>).</p> <p><b>24)</b> Found no such surplus and stockpiling of soils found in sites</p> <p><b>25)</b> Contracting agency dumping excess earth in CMC shown area but the contractor don't have authorized letter from PIU or CMC. Recommended contractor to get letter from PIU or CMC</p> <p><b>26)</b> Used oil and lubricants not generated on site</p> <p><b>27)</b> Contracting agency reusing by backfilling and dumping excess solid waste to the designated areas</p> <p><b>28)</b> Complied</p> <p><b>29)</b> No such damages found during the site visits but instructed contracting agency to restore immediately and when work gets completed, joint site inspection will be conducted and report / letter will be issued.</p>
Existing Infrastructure and Facilities Accessibility	Disruption of service and damage to existing infrastructure at specified project	<p><b>30)</b> Obtain from PIU/PMDCSC the list of affected utilities and operators if any;</p> <p><b>31)</b> Prepare a contingency plan to include actions to be done in case of unintentional interruption of service</p>	Construction Contractor	Existing Utilities Contingency Plan	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>30)</b> No such utilities were shifted or damaged but Recommended Contractor to maintain list of utilities identified prior to start of work at</p>

	location Traffic problems and conflicts near project locations and haul road	<p><b>2)</b> (iii) The public should be given notice at least three days in advance and any accidental breaking should be rectified immediately.</p> <p><b>33)</b> Plan pipeline work in consultation with the traffic police</p> <p><b>34)</b> Plan work such that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</p> <p><b>35)</b> Provide for immediate consolidation of backfilling material to desired compaction – this will allow immediate road restoration and therefore will minimize disturbance to the traffic movement;</p> <p><b>36)</b> Schedule transport and hauling activities during non-peak hours;</p> <p><b>37)</b> Do not close the road completely, allow traffic to move on one line;</p> <p><b>38)</b> Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p><b>39)</b> In unavoidable circumstances of road closure, provide alternative routes, and ensure that public is informed about such traffic diversions;</p> <p><b>40)</b> At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing agency and contractor details; nature and schedule</p>				<p>any section.</p> <p><b>31)</b> Not complied</p> <p><b>32)</b> No accidental breaking of any properties yet recorded but instructed contracting agency to rectify immediately</p>
			Construction Contractor	<p>(i) Traffic route during construction works including number of permanent signages, barricades and flagmen on worksite (Appendix 7);</p> <p>(ii) Complaints from sensitive receptors;</p> <p>(iii) Number of signages placed at project location.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>33)</b> Contractor should inform and take permission from traffic police for any pipe line laying/execution on roads.</p> <p><b>34)</b> Complied</p> <p><b>35)</b> Instructed to contractor agency to backfill and restore the excavated area immediately to avoid traffic</p> <p><b>36)</b> Complied</p> <p><b>37)</b> Complied</p> <p><b>38)</b> Not Complied</p> <p><b>39)</b> Instructed contract agency to provide one separate person at site to give route information to public</p> <p><b>40)</b> Partially complied. Project information board should be both in Kannada and English format.</p>

		<p>of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints.</p> <p><b>41)</b> Keep the site free from all unnecessary obstructions;</p> <p><b>42)</b> Drive vehicles in a considerate manner;</p> <p><b>43)</b> Prepare a Traffic Management Plan – a template is provided for reference at Appendix 7.</p>				<p><b>41)</b> Complied</p> <p><b>42)</b> Complied</p> <p><b>43)</b> Traffic Management Plan is prepared by contracting agency <b>(attached in annexure 2b august 2019 but updation is to be done).</b></p>
Socio-Economic – Income.	Impede the access of residents and customers to nearby shops	<p><b>44)</b> Prepare and implement spoils management plan</p> <p><b>45)</b> Leave spaces for access between mounds of soil; and Provide walkways and metal sheets where required for people;</p> <p><b>46)</b> Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;</p> <p><b>47)</b> Consult businesses and institutions regarding operating hours and factoring this in work schedules; and</p> <p><b>48)</b> Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p>	Construction Contractor	<p>(i) Complaints from sensitive receptors;</p> <p>(ii) Spoils management plan</p> <p>(iii) Number of walkways, signages, and metal sheets placed at project location.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>44)</b> Spoil management plan is prepared <b>(attached in annexure 3c august 2019 but updation is to be done)</b></p> <p><b>45)</b> Complied</p> <p><b>46)</b> Complied</p> <p><b>47)</b> Complied</p> <p><b>48)</b> Complied</p>
Socio cultural resources	Disturbance to socio cultural resources	<p><b>48)</b> No material should be stocked close to these areas; material shall be</p>	Construction Contractor	(i) Visual site observations	Cost for implementation of mitigation	<p><b>48)</b> Complied</p>



	(religious, educational, health care etc.), access disruptions etc.,	<p>brought to the site as and when required.</p> <p><b>49)</b> Conduct work manually with small group of workers and less noise; minimize use of equipment and vehicles</p> <p><b>50)</b> No work should be conducted near the religious places during religious congregations</p> <p><b>51)</b> Material transport to the site should be arranged considering school timings; material should be in place before school starts;</p> <p><b>52)</b> Notify concerned schools, hospitals etc., 2 weeks prior to the work; conduct a 30-minute awareness program on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts</p> <p><b>53)</b> Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>		(i) Public complaints	measures responsibility of contractor.	<p><b>49)</b> Complied</p> <p><b>50)</b> Complied and instructed to follow</p> <p><b>51)</b> Complied and instructed to follow</p> <p><b>52)</b> Partially complied</p> <p><b>53)</b> Not complied</p>
Socio-Economic - Employment	Generation of contractual employment and increase in local revenue	<p><b>54)</b> Employ local labor force to the maximum extent, if manpower is available;</p> <p><b>55)</b> Comply with labor laws</p>	Construction Contractor	(i) Employment records; (ii) Records of sources of materials (iii) Compliance to core labor laws (See appendix 2 of this IEE)	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>54)</b> Register maintained by contractor</p> <p><b>55)</b> Contractor Obtained Labour license and Employees Compensation Insurances for Workers (Skilled and unskilled).</p>
Occupational Health and Safety	Occupational hazards which can arise during work	<p><b>56)</b> Comply with all national, state and local core labor laws (See Appendix 2 of this IEE)</p> <p><b>57)</b> Develop and implement site-specific occupational health and safety (OHS) Plan, and include in the Construction Management</p>	Construction Contractor	(i) Site-specific OHS Plan; (ii) Equipped first-aid stations; (iii) Medical insurance coverage	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>56)</b> Contractor following Company EHS Policy Site-specific OHS Plan Have to be prepared by Contractor.</p> <p><b>57)</b> Contractor following Company EHS Policy-PPE'S provided by</p>

		<p>plan. The OHS plan will include measures such as:</p> <p>(a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs; (c) OHS Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work- related accidents;</p> <p><b>58)</b> Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p><b>59)</b> Provide medical insurance coverage for workers;</p> <p><b>60)</b> Secure all installations from unauthorized intrusion and accident risks;</p> <p><b>61)</b> Provide supplies of potable drinking water;</p> <p><b>62)</b> Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</p>		<p>for workers;</p> <p>(iv) Number of accidents;</p> <p>(v) Supplies of potable drinking water;</p> <p>(vi) Clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(vii) record of health and safety orientation trainings</p> <p>(viii) personal protective equipment;</p> <p>(ix) % of moving equipment outfitted with audible back- up alarms;</p> <p>(xi) permanent sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.</p> <p>(xii) Compliance to core labor laws</p>		<p>Contractor .</p> <p><b>a) Complied</b></p> <p><b>b) Complied.</b> PPE'S provided by Contractor to workers</p> <p><b>c) Complied</b></p> <p><b>d) Not complied</b></p> <p><b>e) Accident and incident register maintained</b></p> <p><b>58)</b> Partially Complied. Instructed to keep first-aid box at each working sites separately</p> <p><b>59)</b> Not complied</p> <p><b>60)</b> Complied</p> <p><b>61)</b> Partially Complied</p> <p><b>62)</b> Not Complied</p>
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		<p><b>63)</b> Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p><b>64)</b> Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p><b>65)</b> Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p><b>66)</b> Ensure moving equipment is outfitted with audible back-up alarms;</p> <p><b>67)</b> Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p><b>68)</b> Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p> <p><b>69)</b> Overall, the contractor should comply with International Finance Corporation (IFC) EHS</p>	(See appendix 2 of this IEE)		<p><b>63)</b> Not complied. Instructed to Provide health and safety orientation training to all workers</p> <p><b>64)</b> Not complied</p> <p><b>65)</b> Complied</p> <p><b>66)</b> Complied</p> <p><b>67)</b> Complied</p> <p><b>68)</b> Not complied</p> <p><b>69)</b> Not complied</p>
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		Guidelines on Occupational Health and Safety				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<p><b>70)</b> Provide hard barricading for all deep excavations that may require especially for pipe lines; identify buildings at risk prior to start of excavation work and take necessary precautions for safe conduct of work</p> <p><b>71)</b> Plan material and waste routes to avoid times of peak-pedestrian activities</p> <p><b>72)</b> Liaise with Udupi CMC in identifying risk areas on route cards/maps</p> <p><b>73)</b> Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure</p> <p><b>74)</b> Provide road signs and flag persons to warn of dangerous conditions, for all work sites along the roads</p> <p><b>75)</b> Overall, the contractor should comply with IFC EHS Guidelines Community Health and Safety</p>	Construction Contractor	(i) Traffic Management Plan; (ii) Complaints from sensitive receptors	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>70)</b> No such deep trenches found during laying pipes. But instructed contracting agency to put hard barricading if trenches are more than 1.5m depth</p> <p><b>71)</b> Not complied</p> <p><b>72)</b> Not complied</p> <p><b>73)</b> Not complied</p> <p><b>74)</b> Complied</p> <p><b>75)</b> Not complied</p>



<p>Work Camps and worksites</p>	<p>Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers</p>	<p><b>76)</b> Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located at least 200 m from residential areas.</p> <p><b>77)</b> Minimize removal of vegetation and disallow cutting of trees</p> <p><b>78)</b> Living facilities shall be built with adequate materials, and should be in good condition and free from rubbish and other refuse</p> <p><b>79)</b> The camp site should be adequately drained to avoid the accumulation of stagnant water</p> <p><b>80)</b> Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 LPCD); all water storage structures must be cleaned regularly and covered properly to avoid any contamination</p> <p><b>81)</b> Provide separate facilities for men and women; sanitary facilities shall be properly build and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons</p> <p><b>82)</b> Train employees in the storage and handling of materials which can</p>	<p>Construction Contractor</p>	<p>(i) Complaints from sensitive receptors; (ii) Drinking water and sanitation facilities for employees</p>	<p>Cost for implementation of mitigation measures responsibility of contractor.</p>	<p><b>76)</b> Not Complied Labour camp location was finalized but Letter has to be issued from PIU to contractors.</p> <p><b>77)</b> Removal of vegetation Minimize by selecting best alignment.</p> <p><b>78)</b> Instructed contracting agency to built labour shad with sheets with proper ventilation in clean hygienic area and drinking water.</p> <p><b>79)</b> Instructed contracting agency to built camp in dry and plan area where there is no water logging and must hygienic area.</p> <p><b>80)</b> Instructed contracting agency to provide drinking water as per the standards at camp</p> <p><b>81)</b> Instructed contracting agency to provide separate toilet facilities for men and women at camp and working sites</p> <p><b>82)</b> Instructed contracting agency to provide training of solid and liquid materials handling to the persons at camp carefully to avoid soil contamination</p>
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		<p>potentially cause soil contamination;</p> <p><b>83)</b> Recover used oil and lubricants and reuse or remove from the site;</p> <p><b>84)</b> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p><b>85)</b> Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p><b>86)</b> Report in writing that the camp has been vacated and restored to pre- project conditions before acceptance of work.</p> <p><b>87)</b> The work camp details should be included in the Construction Management Plan.</p>				<p><b>83)</b> Instructed to contracting agency to train persons not to spill oil and lubricant and use carefully to avoid soil contamination</p> <p><b>84)</b> Instructed to contracting agency to follow at camp</p> <p><b>85)</b> Instructed to contracting agency to follow at camp</p> <p><b>86)</b> Construction work is in progress</p> <p><b>87)</b> Not complied</p>
Social and Cultural Resources	Risk of archaeological chance finds	<p><b>88)</b> Create awareness among the workers and supervisors about the chance finds during excavation work</p> <p><b>89)</b> Stop work immediately if any finds are suspected to allow further investigation</p> <p><b>90)</b> Inform archaeological agencies promptly if a find is suspected, and take any action they require to ensure its removal or protection in situ.</p> <p><b>91)</b> Adjacent to important religious sites, undertake excavation and Construction work in such a way that no structural damage is caused to the building.</p>	Construction Contractor	Records of chance finds	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>88)</b> Till now no such suspected items found nor recorded</p> <p><b>89)</b> Till now no such suspected items found nor recorded</p> <p><b>90)</b> Till now no such archaeological items recorded</p> <p><b>91)</b> No such damages recorded during the visit. But instructed to maintain if such damages happens.</p>

Submission of EMP implementation report	Unsatisfactory compliance to EMP	<p><b>92)</b> Appointment of EHS engineer to ensure EMP implementation</p> <p><b>93)</b> Timely submission of monitoring reports including pictures</p>	Construction contractor	<p>Availability and competency of appointed EHS engineer</p> <p>Monthly report</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>92)</b> EHS Engineer appointed</p> <p><b>93)</b> Complied <b>Annexure-4</b></p>
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	<p><b>94)</b> Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; and</p> <p><b>95)</b> All excavated roads shall be reinstated to original condition.</p> <p><b>96)</b> All disrupted utilities restored</p> <p><b>97)</b> All affected structures rehabilitated/compensated</p> <p><b>98)</b> The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up.</p> <p><b>99)</b> All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and regrassed using the guidelines set out in the revegetation specification that forms part of this document.</p>	Construction Contractor	<p>PMU/PMDCSC report in writing that (i) worksite is restored to original conditions; (ii) camp has been vacated and restored to pre-project conditions; (iii) all construction related structures not relevant to O&amp;M are removed; and (iv) worksite clean-up is satisfactory.</p>	Cost for implementation of mitigation measures responsibility of contractor.	<p><b>94)</b> Complied</p> <p><b>95)</b> No such bitumen or concrete road damaged during site visit. But instructed to restore road same as it was before damage</p> <p><b>96)</b> If utilities are to be shifted contracting agency must take permission from concern authorities before start the work and restore it properly as it was before the damage</p> <p><b>97)</b> Till now no structures affected</p> <p><b>98)</b> Not complied Instructed contracting agency to properly clean surface area free of oil and paints for construction camp</p> <p><b>99)</b> Not complied</p>
		<p><b>100)</b> The contractor must arrange the cancellation of all temporary services.</p> <p><b>101)</b> Request PMU/PMDCSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>				<p><b>100)</b> Not complied</p> <p><b>101)</b> Construction work is in progress</p>

### Conclusion:-

Construction stage is in progress. Disposal yard is to be identified and consultations with PIU have to be taken. Health and HIV AIDS Awareness Training programme has to be conducted by Contractor. Proper Record maintenance should be improved by Contractor. Proper safety measures and register books should be maintained at all work sites. Contractor has to submit Site specific EMP of January 2020 as construction stage EMP present in IEE report, udupi.

### Recommendation:

S.No	Monitoring of Mitigation / Key Issues to be complied	Recommendation and Action Required by Contractor	Time line/Remarks
1.	Mobilization of Environment, Health And Safety(EHS)Engineer		Complied
2.	Submission of Site specific EMP		Comply with in 7 days
3.	Submission of monthly reports.	<ul style="list-style-type: none"> <li>Construction status or complacence report</li> </ul>	Contractor has to submit Site specific EMP of January 2020 as construction stage EMP present in IEE report, Udupi Comply with in 7 days
4.	Telephone lines, electric Poles and wires, water Lines within proposed project area	<ul style="list-style-type: none"> <li>List of utilities going to effect will be submit to PIU</li> </ul>	Comply with in 7 days
5.	Layout plan of overhead tanks (OHTs);		Comply with in 7 days
6.	Tree cutting/pruning permission; and	<ul style="list-style-type: none"> <li>If any tree affected are noted in survey permission have to be taken</li> </ul>	Comply with in 7 days
7.	Compensatory tree plantation as part of the project.		Comply with in 5 days
8.	List of selected sites for construction work camps, hot mix plants, stockpile areas, storage areas, and disposal Areas.	<ul style="list-style-type: none"> <li>Location most be identified and marked on google map and consult with PIU and after joint inspection with consideration of all given mitigation measure given.</li> </ul>	Comply with in 15 days
9.	Written consent of landowner/s (not lessee/s) for reuse of excess spoils to agricultural land	<ul style="list-style-type: none"> <li>If any private land is selected NOC from owner have to be taken</li> </ul>	Comply with in 5days
10	List of selected sites for disposal	<ul style="list-style-type: none"> <li>Location most be identified and marked on google map and consult with PIU and after joint inspection with consideration of all given mitigation measure given.</li> </ul>	Comply with in 5 days



		<ul style="list-style-type: none"> <li>If any private land is selected NOC from owner have to be taken</li> </ul>	
11	List of approved quarry Sites and Sources of materials; and		Comply with in 7 days
12	Bid document to include requirement for verification of suitability of sources and permit for additional quarry sites if necessary.		Comply with in 5 days
13	Method of statement in table format	<ul style="list-style-type: none"> <li>As mention in mitigation measures</li> </ul>	Comply with in 10 days
14	Spoil Management Plan	<p>Waste material brought up during the course of an excavation or a dredging or mining operation.</p> <ul style="list-style-type: none"> <li>Type and quantity of waste generated will be waste generated.</li> <li>Identify the impact</li> <li>Spoil Transportation Methodology</li> <li>Reuse of quantity of waste generated in any other projects or any other place</li> <li>Amount of waste disposed in identified disposal areas consultation with PIU</li> <li>If private land NOC from owner.</li> <li>Location of Waste disposal site mark on google map</li> </ul>	Draft copy shown and submitted and attached as <b>annexure 3a in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
15	Traffic management plan		Draft copy shown, submitted and attached as <b>annexure 3b in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
16	Environmental management plan		Draft copy shown, submitted and attached as <b>annexure 3c in Aug 2019 report</b> and informed contractor to update plan once construction phase starts
17	Site specific OHS Plan	<ul style="list-style-type: none"> <li>Readily available first aid box including an adequate supply of sterilized dressing materials and appliances as per rules shall be provided in all work zones.</li> <li>Trained first aid personal will be available at the construction site.</li> <li>Emergency numbers will be displayed prominently at camp and construction site.</li> <li>Availability of suitable transport at all times to take injured or sick person(s) to the nearest hospital. Designated vehicle, which can</li> </ul>	Comply with in 5 days

		<p>be used as ambulance, will be available at construction site.</p> <ul style="list-style-type: none"> <li>The contractor shall identify nearby hospital, which could be used in case of emergency.</li> </ul> <p>First aid facilities and free emergency care shall be provided to all workforce and third party and no cost shall be recovered from them on this account.</p> <p>International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines on occupational health and safety <b>attached in june 2019 month</b></p>	
18	Equivalent day and night time noise levels	<ul style="list-style-type: none"> <li>During the construction phase, the contractor will carry out environmental monitoring noise levels by engaging NABL approved laboratory.</li> </ul>	Complied. Construction test conducted in <b>Jan 2020</b> and noise report attached as <b>annexure 5</b>
19	Records of Air quality inspection	<ul style="list-style-type: none"> <li>If contractor carrying out Construction activities near sensitive receptor( residential areas, temples, Hospitals, schools ) During the construction phase, the contractor will carry out Ambient Air quality monitoring by engaging NABL approved laboratory</li> </ul>	Complied. Construction test conducted in <b>Jan 2020</b> and air report attached as <b>annexure 5</b>



**Mahammad Raphiyoddin Shaphiyoddin Malik**  
**Environmental Specialist**  
**KIUWMIP – Tranche 2**

## Annexure 1

### Site visit observations of 27<sup>th</sup> Feb 2020


S.No	Observation		Recommendation
1	Project Information Board and barricading at work site		<p>Project information board is provided by the contractor agency both in English and Kannada language</p> <p>Instructed to put sign boards like go slow, deep excavation boards on work sites</p>





2	PPEs and Sign boards at work places	 <p>Latitude: 13.367397 Longitude: 74.7496 Elevation: 32.59m Accuracy: 3.2m Time: 02-27-2020 13:24 Note: 250mm dia HDPE Pipe laying at sattekatti location update</p>	<p>Workers wearing PPEs at work place at sattekatti OHT construction site and parakala site during pipe laying excavation</p>
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3	Worker sheds at santtekatte OHT site	 <p>Latitude: 13.387508 Longitude: 74.738172 Elevation: 33.54m Accuracy: 3.2m Time: 02-27-2020 13:44 Note: OHT at santtekatte location, udipi</p>	Instructed contracting agency to provide proper shelter sheds to worker for resting and also to provide proper toilets sheds.
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5	Drinking water facility at sattekatte OHT site for workers	 <p>Latitude: 13.387481 Longitude: 74.738252 Elevation: 31.46m Accuracy: 3.2m Time: 02-27-2020 13:44 Note: OHT at santtekatte location. Dupl</p> <p>Downloaded by M</p>	Instructed Contractor agency to provide 60 liter can at for drinking and cooking purpose. There may possibility for the of bacteria at the bottom of tank provided
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6	Project information board, Barricading at all OHT sites	 <p>Latitude: 13.323179 Longitude: 74.772365 Elevation: 29.18m Accuracy: 3.2m Time: 02-27-2020 11:38 Note: OHT site at manchi location,udupi</p> <p>Latitude: 13.323057 Longitude: 74.77249 Elevation: 33.4m Accuracy: 3.2m Time: 02-27-2020 11:38 Note: OHT site at manchi location,udupi</p>	<p>Instructed contracting agency to remove or dump debris and loose materials in dumping yard from OHT site</p> <p>Project information board is not provided by the contractor agency both in English and Kannada language at all OHT sites</p> <p>Instructed to put sign boards like go slow, work in progress, deep excavation boards on OHT sites</p>
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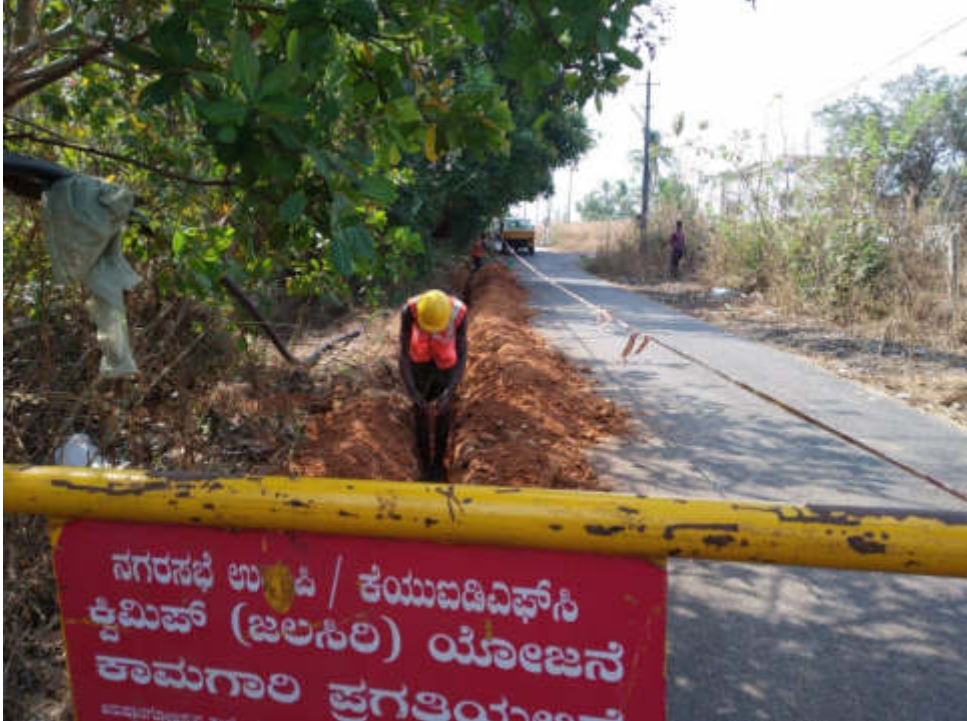


7	Steel stock at santtekatte site	 <p>Latitude: 13.387454 Longitude: 74.737947 Elevation: 26.81m Accuracy: 3.2m Time: 02-27-2020 13:43 Note: OHT at santtekatte location,udupi</p> <p>Latitude: 13.387493 Longitude: 74.737977 Elevation: 27.9m Accuracy: 3.2m Time: 02-27-2020 13:43 Note: OHT at santtekatte location,udupi</p>	<p>Recommended Contractor agency to provide sheet fencing and instructed to remove steels bars used for fencing</p> <p>And to constructed metal sheet gate from the entry to avoid entrance of unknown person which may cause any injury or harm</p>
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## Annexure 2

### Site visit observations of 21<sup>st</sup> January 2020

S.No	Observation		Recommendation	Status
1	Sign board and flag man at site		Instructed contractors to provide cones, go slow boards and flag man at both the ends at all main road work places	Partially complied

2	Excavated earth at work site		<p>Instructed contractor agency to immediately reuse the loose stored earth at site and dispose the remaining earth to dumping yard after the pipe laying</p> <p>And to sprinkle water by water tank to avoid dust generation near residential and commercial areas</p>	Partially complied
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3	Aggregates, sand and excavated earth Material stored at santtekatti OHT site		<p>Instructed contracting agency to make bunds for sand and aggregates storage to avoid flow and mix</p> <p>Instructed to remove steel rods used for sheet support And dispose loose earth stored at site to dumping yard</p>	Not complied
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4	Water tank at santekatte OHT for worker usage		Instructed contracting agency to provide separate water can for drinking purpose and to use present tank for other usage	Not complied
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5	Housekeeping at santekatte OHT for work site		<p>Proper housekeeping should be done at work site</p> <p>Instructed not use fire wood burning for cooking and other purpose at work site place</p>	Not complied
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6	Excavation work in front of residential house		Instructed contracting agency to immediately restore the excavated area or else to provide wooden or steel pedestrians if work delayed for next day	Partially Complied. Contractors informing to house owners regarding excavation and refilling the earth same day.
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## Annexure 3

### Status of Site visit observations of 18<sup>th</sup> December 2019

S.No	Observation		Recommendation	Status of observation
1	Project Information Board and barricading at Doddegudde and Parakala site		<p>Project information board is provided by the contractor agency both in English and Kannada language</p> <p>Instructed to put sign boards like go slow, deep excavation boards on work sites</p>	Partially complied

				
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2	PPEs and Sign boards at work places	 <p>Latitude: 13.387391 Longitude: 74.741205 Accuracy: 2500.0m Time: 18-12-2019 12:27 Note: Santhekattt OHT</p> <p>Latitude: 13.3721 Longitude: 74.799962 Elevation: 102.91m Accuracy: 3.0m Time: 18-12-2019 15:23 Note: Parkala Pipe Laying</p>	Workers wearing PPEs at work place at sattekatti OHT construction site and parakala site during pipe laying excavation	Complied
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3	Stock Yard at Santhekatte fully barricaded on all sides.		Stock Yard at Santhekatte must be hard barricaded and provide proper sign boards	Complied
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4	Sign boards at santekatte stock yard	 <p>Latitude: 13.390127 Longitude: 74.739603 Accuracy: 87.6m Time: 18-12-2019 15:52 Note: Santhekatte Store Yard</p> <p>Powered by NoteCam</p>	Project information board is provided by the contractor agency both in English and Kannada language at santekatte stock yard	Complied
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5	Drinking water facility at sattekatte OHT site for workers	 <p>Latitude: 13.387533 Longitude: 74.738217 Elevation: 106.54m Accuracy: 1.8m Time: 18-12-2019 12:37 Note: Santhekattid OHT</p> <p>Powered by NoteCam</p>	Instructed Contractor agency to provide 60 liter can at for drinking and cooking purpose. There may possibility for the of bacteria at the bottom of tank provided	Not complied
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6	Waste debris and materials at work sites	 <p>Latitude: 13.387497 Longitude: 74.738547 Elevation: 111.65m Accuracy: 3.9m Time: 18-12-2019 12:17 Note: Santhekatt OHT</p> <p>Powered by NoteCam</p>	<p>Instructed contracting agency to remove or dump debris and loose materials in dumping yard from work site</p> <p>Project information board is not provided by the contractor agency both in English and Kannada language at santtekatte OHT site</p> <p>Instructed to put sign boards like go slow, work in progress, deep excavation boards on work sites</p>	Not complied
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7	Steel stocked at santtekatte site	 <p>Latitude: 13.387535 Longitude: 74.73807 Elevation: 100.44m Accuracy: 4.2m Time: 18-12-2019 12:36 Note: Santhekattid OHT</p> <p>Latitude: 13.387577 Longitude: 74.738073 Elevation: 129.55m Accuracy: 5.0m Time: 18-12-2019 13:04 Note: Santhekattid OHT</p>	<p>Recommended Contractor agency to provide sheet fencing and instructed to remove steels bars used for fencing</p> <p>And to constructed metal sheet gate from the entry to avoid entrance of unknown person which may cause any injury or harm</p>	Not complied
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SPPL-SIPL-DRS JV/KUIDFC/ UCMC/216/2019-20



20, March, 2020

To,  
The Executive Engineer,  
KUIDFC-KIUWMIP-PIU,  
Tranche-2, Udupi.

Sub.: KUIDFC & KIUWMIP – “Construction of Distribution System for 24x7 Water Supply including Services for Operation and Management for Udupi City- Package No.02UDP01”: **Submission of EMP Reports, Udupi.**

Ref.: 1. LOA Letter No: UCMC/Udupi/KUIDFC/ADB/UDP03/2017-18 Dated 10th October 2018.  
2. Contract Agreement for Package No. 02UDP01 Dated 16th November 2018.

Dear Sir,

With reference to the above subject, we are submitting the “Environmental Monitoring Plans (EMP) Reports” as follows month of February 2020 for your reference and needful records.

1. Environmental Monitoring Test Reports with Location Map.
2. Accident Records and Grievance Register Copy.
3. Induction and Tool Box Training Attendance Sheet.
4. Monthly Manpower Report.
5. PUC Certificates.
6. Employee Compensation Insurance Policy.
7. Dumping Yard Permission from Authorities.

Thanking you and assuring you of our best services at all times.

For SPPL-SIPL-DRS JV

(Authorized Signatory)

Encl: Attached Reports.

CC:

- 1) Deputy Project Director, KUIDFC, Mangaluru for kind information.
- 2) The Commissioner, City Municipal Council, Udupi for Kind information.
- 3) Team Leader, Egis India Consulting Engineers Pvt Ltd, Mangaluru.



## Monthly Environmental Monitoring Report

Document stage: Draft for Consultation Project Number: 43253-027 May 2018

IND: Karnataka Integrated Urban Water Management Investment Program  
(Tranche 2) – Improvements for 24x7 Water Supply System – Distribution  
System for City Municipal Council, Udupi

Package No: 02UDP01



<b>Karnataka Urban Infrastructure Development and Finance Corporation, Government of Karnataka for the Asian Development Bank.</b>	
<b>Name of the Work: Improvements for 24x7 Water Supply System – Distribution System for City Municipal Council, Udupi</b>	<b>Name of the Contractor: SPPL-SIPL DRS INFRA JV</b>
<b>Package No: 02UDP01</b>	
<b>Name of the city: UDUPI</b>	<b>Name of SE/EE/AE Of concerned division PIU:- EE – Umashankar rao</b>
<b>Date of monitoring: 24/12/2019</b>	<b>Name of Environment, Health and Safety (EHS)- Mr. Pradeep Shetty</b>

REV	Date	Prepared By	Checked By	For Approval
00		Pradeep shetty	Ramesh Patil	Submission Purpose

**Status of implementation of Environmental Management Plan for Anticipated Impacts –Construction– Udupi**

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
EMP Implementation Training	Impacts on the environment, workers, and community due to improper implementation	<ol style="list-style-type: none"> <li>1. Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.</li> <li>2. appointment of Environment, Health and Safety (EHS) Engineer by contractor prior to start of work.</li> </ol>	Construction Contractor / PIU /PMDSC	<p>1.Adopted</p> <p>2.Adopted</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<ol style="list-style-type: none"> <li>3. Consult with PIU/PMDCSC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials</li> <li>4. Damp down exposed soil and any stockpiled-on site by spraying with water when necessary during dry weather;</li> <li>5. Use tarpaulins to cover sand and other loose material when transported by trucks; . Clean wheels and undercarriage of vehicles prior to leaving construction site.</li> <li>6. Fit all heavy equipment and machinery with air pollution control devices which are operating correctly.</li> </ol>	Construction Contractor	<p>3. Adopted</p> <p>4. Adopted</p> <p>5. Adopted</p> <p>6. PUC test done and certificate also available for all machinery and vehicles.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during installation of pipelines can contaminate nearby surface water quality	<p>7. Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets.</p> <p>8. Lay pipelines during dry season and closing of all trenches before rainy season and avoid any chances of collecting the water in the trenches or pumping</p> <p>9. Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with Implementing Agency on designated disposal areas (Appendix 6).</p> <p>10. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.</p> <p>11. Provide temporary bunds for stockpiles and materials.</p> <p>12. Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund.</p> <p>13. Dispose any wastes generated by construction activities in designated sites. 15. Conduct surface quality inspection and monitoring</p>	Construction Contractor	<p>7. Not Applicable now.</p> <p>8. Adopted</p> <p>9. Adopted</p> <p>10. Adopted</p> <p>11. Not Applicable</p> <p>12. Not Applicable</p> <p>13. Adopted</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Noise Levels	Increase in noise level due to earthmoving and excavation equipment, and the transportation of equipment, materials, and people	<p>14. Plan activities in consultation with PIU/PMDSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.</p> <p>15. Construction work shall be limited to day light hours (6 AM to 6 PM).</p> <p>16. Provide prior information to the local public about the work schedule.</p> <p>17. Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiseling.</p> <p>18. Minimize noise from construction equipment/ pneumatic drills by using silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor.</p> <p>19. Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicles.</p> <p>20. Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach.</p>	Construction Contractor	<p>15. Adopted</p> <p>16. Adopted</p> <p>17. Not Applicable</p> <p>18. Not Applicable</p> <p>19. Adopted</p> <p>20. Adopted</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Landscape and aesthetics	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items	21. Prepare and implement spoils management plan; 22. Avoid stockpiling of excess excavated soils; 23. Coordinate with Udupi CMC for beneficial uses of excess excavated soils or immediately dispose to designated areas 24. Recover used oil and lubricants and reuse or remove from the sites; 25. Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; 26. Remove all wreckage, rubbish, or temporary structures which are no longer required; 27. Request PMU/PMDSC to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.	Construction Contractor	21. Already submitted 22. Adopted 23. Debris disposed specified place, <b>Attached Annexure</b> 24. Adopted 25. Excavated soil is disposed Alevoor solid waste management with direction of PIU. 26. Adopted 27. Adopted

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Existing Infrastructure and Facilities	Disruption of service and damage to existing infrastructure at specified project location	<p>28. Obtain from PMU/PMDSC the list of affected utilities and operators if any.</p> <p>29. Prepare a contingency plan to include actions to be done in case of unintentional interruption of service;</p> <p>30. The public should be given notice at least three days in advance and any accidental breaking should be rectified immediately.</p>	Construction Contractor	<p>28. Adopted</p> <p>29. Primary utility identifies properly conducted one weeks before start the work.</p> <p>30. Each department and public communication letter properly maintained.</p>
Accessibility	Traffic problems and conflicts near projections and haul road	<p>31. Plan work such that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time;</p> <p>32. Plan pipeline work in Consultation with the traffic police.</p> <p>33. Provide for immediate consolidation of backfilling material to desired compaction – this will allow immediate road restoration and therefore will minimize disturbance to the traffic movement;</p> <p>34. Schedule transport and hauling activities during non-peak hours;</p> <p>35. Do not close the road completely, allow traffic to move on one line;</p> <p>36. Plan transportation routes so that heavy vehicles do not use</p>	Construction Contractor	<p>31. Traffic management plan prepared</p> <p>32. Each department and public communication letter properly maintained.</p> <p>33. Adopted <b>Attached Annexure 10</b></p> <p>34. Adopted</p> <p>35. <b>Attached Annexure</b></p>

		<p>narrow local roads, except in the immediate vicinity of delivery sites.</p> <p>37. In unavoidable circumstances of road closure, provide alternative routes, and ensure that public is informed about such traffic diversions;</p> <p>38. At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing agency and contractor details; nature and schedule of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints;</p> <p>39. Keep the site free from all unnecessary obstructions;</p> <p>40. Keep the site free from all unnecessary obstructions;</p> <p>41. Drive vehicles in a considerate manner;</p> <p>42. Prepare a Traffic Management Plan – a template is provided for reference at Appendix.</p>	<p>36. Adopted</p> <p>37. <b>Adopted Attached Annexure</b></p> <p>38. provided the project information board <b>Attached Annexure 05</b></p> <p>39. Adopted</p> <p>41. Adopted</p> <p>42. Traffic management plan prepared</p>
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Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Socioeconomic – Income	Impede the access of residents and customers to nearby shops	<p>43.Prepare and implement spoils management plan</p> <p>44. Leave spaces for access between mounds of soil;</p> <p>45.Provide walkways and metal sheets where required for people;</p> <p>46. Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;</p> <p>47. Consult businesses and institutions regarding operating hours and factoring this in work schedules;</p> <p>48. Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints</p>	PMDSC/PIU/ RPMU/PMU/ULB	<p>43.prepered spoil management plan.</p> <p>45.Adopted</p> <p>46. Adopted</p> <p>47. Adopted</p> <p>48.provided project details board</p>

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Socio cultural resources	Disturbance to socio cultural resources (religious, educational, health care etc.), access disruptions etc.,	<p>49.No material should be stocked close to these areas; material shall be brought to the site as and when required.</p> <p>50.Conduct work manually with small group of workers and less noise; minimize use of equipment and vehicles</p> <p>51. No work should be conducted near the religious places during religious congregations</p> <p>52 Material transport to the site should be arranged considering school timings; material should be in place before school starts;</p> <p>53.Notify concerned schools, hospitals etc., 2 weeks prior to the work; conduct a 30-minute awareness program on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts</p> <p>54. Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>		
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Socio-economic Employment	Generation of contractual employment and increase in local revenue	55. Employ local labor force to the maximum extent, if manpower is available;  56. Comply with labor laws	PMDSC/PIU/ RPMU/PMU/U LB	55. Adopted  56. Adopted
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Occupational Health and Safety	Occupational hazards which can arise during work	<p>57 Comply with all national, state and local core labor laws (See Appendix 2 of this IEE);</p> <p>58 Develop and implement site-specific occupational health and safety (OHS) Plan and include in the Construction Management plan.</p> <p>59 The OHS plan will include measures such as:</p> <ul style="list-style-type: none"> <li>(a) excluding public from the site;</li> <li>(b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs;</li> <li>(c) OHS Training for all site personnel;</li> <li>(d) documented procedures to be followed for all site activities; and</li> <li>(e) documentation of work-related accidents;</li> <li>(f) 60. Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</li> </ul> <p>60 Provide medical insurance coverage for workers;</p> <ul style="list-style-type: none"> <li>(a) Secure all installations from unauthorized intrusion and accident</li> </ul>	Construction Contractor	<p>57. Adopted</p> <p>58. Adopted</p> <p>59. Adopted</p> <p>60. Attached Annexure</p>
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		risks;		
		61 63. Provide supplies of potable drinking water;		61. <b>Attached Annexure 07</b>
		62 64. Provide clean eating areas where workers are not exposed to hazardous or noxious substances;		62. Adopted
		63 Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;		63. <b>Attached Annexure</b>
		64. Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted		64. Adopted
		65. Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;		65. Adopted
		66. Ensure moving equipment is outfitted with audible back-up alarms;		66. Adopted
		67. Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for		67. <b>Attached Annexure 08</b>

9JV

		<p>storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate;</p> <p>68. Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively;</p> <p>69. Overall, the contractor should comply with International Finance Corporation (IFC) EHS Guidelines on Occupational Health and Safety</p>		<p>68. Adopted</p> <p>69. Adopted</p>
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9JV

Community Health and Safety	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	<p>69. Provide hard barricading for all deep excavations that may require especially for pipe lines; identify buildings at risk prior to start of excavation work and take necessary precautions for safe conduct of work</p> <p>70. Plan material and waste routes to avoid times of peak pedestrian activities;</p> <p>71. Liaise with Udupi CMC in identifying risk areas on route cards/maps;</p> <p>72. Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p> <p>73. Provide road signs and flag persons to warn of dangerous conditions, for all work sites along the roads; and</p> <p>74. Overall, the contractor should comply with IFC EHS Guidelines Community Health and Safety</p>		<p>69. Adopted</p> <p>70. Adopted</p> <p>71. Adopted</p> <p>73. Provided and adopted</p> <p>74. Adopted all IFC and EHS Guidelines.</p>
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Work Camps and worksites	<p>Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers</p>	<p>75. Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located at least 200 m from residential areas;</p> <p>76. Minimize removal of vegetation and disallow cutting of trees;</p> <p>77. Living facilities shall be built with adequate materials, and should be in good condition and free from rubbish and other refuge;</p> <p>78. The camp site should be adequately drained to avoid the accumulation of stagnant water;</p> <p>79. Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 LPCD); all water storage structures must be cleaned regularly and covered properly to avoid any contamination;</p> <p>80. Provide separate facilities for men and women; sanitary facilities shall be properly built and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons;</p> <p>81. Train employees in the</p>	Construction Contractor	<p>75. Yes Adopted and Consulted.</p> <p>76. We maximum avoided removal of vegetation and disallow cutting of tree.</p> <p>77. Adopted</p> <p>78. Adopted.</p> <p>79. Adopted.</p> <p>80. Adopted.</p> <p>81. Adopted</p>
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		<p>storage and handling of materials which can potentially cause soil contamination;</p> <p>82. Recover used oil and lubricants and reuse or remove from the site;</p> <p>83. Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; 85 Remove all wreckage, rubbish, or temporary structures which are no longer required;</p> <p>84. Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work; and 87 The work camp details should be included in the Construction Management Plan</p>		<p>82. Adopted</p> <p>83. Adopted</p>
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Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints
Social and Cultural Resources	Risk of archaeological chance finds	<p>85. Create awareness among the workers and supervisors about the chance finds during excavation work;</p> <p>86. Stop work immediately if any finds are suspected to allow further investigation;</p> <p>87. Inform archaeological agencies promptly if a find is suspected, and take any action they require to ensure its removal or protection in situ; and</p> <p>88. Adjacent to important religious sites, undertake excavation and construction work in such a way that no structural damage is caused to the building</p>	Construction Contractor	88. conduct public consultation before work starts <b>Attached Annexure</b>
Submission of EMP implementation report	Unsatisfactory compliance to EMP	<p>89. Appointment of EHS engineer to ensure EMP implementation</p> <p>90. (ii) Timely submission of monitoring reports including pictures</p>	PMDSC/PIU/ RPMU/PMU/ULB	

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Status of Complaints	
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	<p>91. Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required;</p> <p>92. All excavated roads shall be reinstated to original condition;</p> <p>93. All disrupted utilities restored;</p> <p>94. All affected structures rehabilitated/compensated;</p> <p>95. The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up;</p> <p>96. All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be topsoiled and regressed using the guidelines set out in the revegetation specification that forms part of this document;</p> <p>97. The contractor must arrange the cancellation of all temporary</p>	Construction Contractor	<p>92. <b>Attached Annexure 10</b></p> <p>93. not applicable</p> <p>94. not applicable</p>	

		<p>services;</p> <p>98. Request PMU/PMDSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>			
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# MSV Analytical Laboratories

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,

E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No : TC720720000001490F

Issue Date : 27.01.2020

1. Name of the client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary
5. Name of the sample location : Near Al Ibaadah Indian School, Permpalli
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	76.3	75.7	74.2	µg / m <sup>3</sup>	75.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	27.6	26.8	25.3	µg / m <sup>3</sup>	26.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	15.5	15.1	14.7	µg / m <sup>3</sup>	15.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) – 2006	20.8	20.1	19.3	µg / m <sup>3</sup>	20.0	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001491F

Issue Date : 27.01.2020

1. Name of the client : Suez Project Pvtltd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Indira Nagar Church, Indira Nagar
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	68.7	67.6	66.8	µg / m <sup>3</sup>	67.7	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	25.7	24.3	23.4	µg / m <sup>3</sup>	24.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	12.2	11.7	11.3	µg / m <sup>3</sup>	11.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	17.0	16.2	µg / m <sup>3</sup>	17.0	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note : 1. The results listed only to the tested samples & applicable parameters,

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001492F

Issue Date : 25.01.2020

1. Name of the client : **Suez Project Pvtltd, Suez India Pvt ltd, DRS Infratech (JV)**
2. Name of The Work : **Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
3. Name Of The Project : **KIUWMIP**
4. Sample Collected By : **MSV Analytical Laboratories, Bellary.**
5. Name of the sample location : **Subramanya Temple, Manchi.**
6. Particulars of the sample collected : **Sample collected with FDS & RDS 460BL**
7. Date of Sample Receipt : **20.01.2020**
8. Analysis Starting Date : **21.01.2020**
9. Analysis Completion Date : **25.01.2020**
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	70.4	69.6	68.4	µg / m <sup>3</sup>	69.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	25.7	24.7	23.7	µg / m <sup>3</sup>	24.7	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	13.0	12.6	12.1	µg / m <sup>3</sup>	12.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	17.0	16.3	µg / m <sup>3</sup>	17.0	80

### INFERENCE

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001493F

Issue Date : 25.01.2020

1. Name of the client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Parkala OHT, Parkala.
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	75.3	73.6	72.6	µg / m <sup>3</sup>	73.8	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	27.5	26.6	25.4	µg / m <sup>3</sup>	26.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	13.8	13.4	12.5	µg / m <sup>3</sup>	13.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	20.2	19.3	18.6	µg / m <sup>3</sup>	19.3	80

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001494F

Issue Date : 25.01.2020

1. Name of the client : Suez Project Pvtltd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Govt Polytechnic , Ananatha Nagar,
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	74.4	73.7	72.2	µg / m <sup>3</sup>	73.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	28.2	27.6	26.8	µg / m <sup>3</sup>	27.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	15.1	14.7	14.2	µg / m <sup>3</sup>	14.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	19.3	18.6	17.8	µg / m <sup>3</sup>	18.5	80

### INFERENCE

As per NAAQS Standards

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Verified by

Authorized Signature



Note : 1. The results listed only to the tested samples & applicable parameters.

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# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Cert. No. T7207)

(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No :** Mob : 94498 03895, (O) : 08392-255169,

**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001495F

Issue Date : 25.01.2020

1. Name of the client : **Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)**
2. Name of The Work : **Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
3. Name Of The Project : **KIUWMIP**
4. Sample Collected By : **MSV Analytical Laboratories, Bellary.**
5. Name of the sample location : **Near Anganawadi proposed OHT, Manipal**
6. Particulars of the sample collected : **Sample collected with FDS & RDS 460BL**
7. Date of Sample Receipt : **20.01.2020**
8. Analysis Starting Date : **21.01.2020**
9. Analysis Completion Date : **27.01.2020**
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	72.6	71.2	70.8	µg / m <sup>3</sup>	71.5	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	28.5	27.3	26.7	µg / m <sup>3</sup>	27.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	13.4	12.5	12.0	µg / m <sup>3</sup>	12.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	18.6	17.8	17.0	µg / m <sup>3</sup>	17.8	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by



Authorized Signature

Note : 1. The results listed only to the tested samples & applicable parameters,

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001496F

Issue Date : 25.01.2020

1. Name of the client : Suez Project PvtLtd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Santhekatte Proposed OHT
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	77.2	76.7	75.3	µg / m <sup>3</sup>	76.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	29.5	28.4	27.5	µg / m <sup>3</sup>	28.4	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	15.3	14.4	13.5	µg / m <sup>3</sup>	14.4	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	19.3	18.6	17.7	µg / m <sup>3</sup>	18.5	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by



Authorized Signature

Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : TC720720000001569P

Issued Date : 27.01.2020

1. Name of the Client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Name of the Sample : well water at Near Santhekatte Proposed OHt, Veerabhadreshwara Temple
5. Sample Collected By : MSV Analytical Laboratories, Bellary
6. Particulars of Sample Collected : Grab sample
7. Sample Quantity : 2 Liters
8. Sample Description/condition : Good Satisfactory
9. Date of sample Receipt : 21.01.2020
10. Analysis Starting Date : 22.01.2020
11. Analysis Completion Date : 27.01.2020
12. Sample Tested as Received

IS 10500-2012						
S.No	Parameters	Protocol	Unit	Result	Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	6.64	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	0.82	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	64	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	82	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	82.3	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	16.3	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	10.0	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	1.36	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	36.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	0.98	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.26	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.004)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.005)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.006)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.003)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.003)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.016)	0.05	No Relaxation
21	Selenium	Is : 3025(PART-56) or IS -15303	mg/L	BDL(0.002)	0.01	No Relaxation

Note : 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

22	Zinc	Is : 3025(PART-49)	mg/L	BDL(0.004)	5	15
23	Phenols	Is : 3025(PART-43)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	0.001	0.01	0.05
25	Silica*	IS : 3025(part-35)	mg/L	BDL(0.002)	---	---
26	phosphorus	IS : 3025(part-31)	mg/L	0.5	---	---
<b>Biological Parameters</b>						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

## INFERENCE

IS 10500 – 2012 Standards

BDL – Below Detectable Limit

Report Status :- The analyzed values for above measured parameters has been within the acceptable limits

Verified by

Authorized Saignature



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified, ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : TC720720000001570P

Issued Date : 27.01.2020

1. Name of the Client :
2. Name of The Work : **Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)**
3. Name Of The Project : **Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
4. Name of the Sample : **Open well water near subramanya temple, Manchi**
5. Sample Collected By : **MSV Analytical Laboratories, Bellary**
6. Particulars of Sample Collected : **Grab sample**
7. Sample Quantity : **2 Liters**
8. Sample Description/condition : **Good Satisfactory**
9. Date of sample Receipt : **21.01.2020**
10. Analysis Starting Date : **22.01.2020**
11. Analysis Completion Date : **27.01.2020**
12. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	7.14	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	0.64	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	220	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	580	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	284.6	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	44.8	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	41.7	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	36.2	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	102.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	4.1	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.44	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.012)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.004)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.005)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.003)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.003)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.002)	0.05	No Relaxation
21	Selenium	Is : 3025(PART-56) or IS-15303	mg/L	BDL	0.01	No Relaxation
22	Zinc	Is : 3025(PART-49)	mg/L	BDL	5	15
23	Phenols	Is : 3025(PART-43)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	BDL(0.002)	0.01	0.05

Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

25	Silica*	IS : 3025(part-35)	mg/L	BDL(0.001)	---	---
26	phosphorus	IS : 3025(part-31)	mg/L	0.46	---	---
Biological Parameters						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

INFERENCE	IS 10500 – 2012 Standards BDL – Below Detectable Limit Report Status :- The analyzed values for above measured parameters has been within the Permissible limits .
-----------	--

Verified by



Authorized Saignature

- Note :
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  2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : TC720720000001571P

Issued Date : 27.01.2020

1. Name of the Client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Name of the Sample : Well water Near Indira Nagar Church.
5. Sample Collected By : MSV Analytical Laboratories, Bellary
6. Particulars of Sample Collected : Grab sample
7. Sample Quantity : 2 Liters
8. Sample Description/condition : Good Satisfactory
9. Date of sample Receipt : 21.01.2020
10. Analysis Starting Date : 22.01.2020
11. Analysis Completion Date : 27.01.2020
12. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	6.92	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	1.12	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	214.7	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	614	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	312.6	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	62.6	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	37.9	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	62.3	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	112.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	4.8	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.48	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.008)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.003)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.002)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.005)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.001)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.002)	0.05	No Relaxation
21	Selenium*	Is : 3025(PART-56) or IS -15303	mg/L	BDL(0.001)	0.01	No Relaxation
22	Zinc	Is : 3025(PART-49)	mg/L	BDL	5	15
23	Phenols	Is : 3025(PART-44)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	BDL	0.01	0.05
25	Silica*	Is : 3025(PART-35)	mg/L	BDL(0.001)	---	---

Note : 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Thin plates will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

26	phosphorus	IS : 3025(part-31)	mg/L	0.65	---	---
Biological Parameters						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

INFERENCE	IS 10500 – 2012 Standards BDL – Below Detectable Limit Report Status :- The analyzed values for above measured parameters has been within the acceptable limits .
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Verified by

Authorized Saignature



Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.  
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.  
5. Sampling is not done by us unless otherwise specified, 6. The tests and/or calibrations marked with an are not accredited by NABL.



# MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Cert. No. T7207)

(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Bellary - 583103 **Contact No** : Mob : 94498 03895, (0) : 08392-255169,

**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvalbellary.com

MSVAL/W/F/13/04

## NOISE LEVEL MONITORING REPORT

Test Report No : TC720720000001497F

Issue Date : 25.01.2020

1. **Name of the Client** : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. **Name of The Work** : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. **Name Of The Project** : KIUWMIP
4. **Sample Collected By** : MSV Analytical Laboratories, Bellary
5. **Date of Monitoring** : 20.01.2020
6. **Report Date** : 25.01.2020
7. **Particulars of Sample Collected** : Noise meter
8. **Method Adopted** : Instrument Manual Method

Method Adopted		Instrument Used		Result		
S.No	Sample Location	Time Frequency	Max. in dB(A) Leq	Min in dB(A) Leq	Avg. in dB(A) Leq	Permissible limits in dB(A) Leq
1	Near Al Ibaadah Indian School, Permpalli.	6.00AM to 6.00PM	50.6	46.2	48.4	75
2	Near Indira Nagar Church, Indira Nagar		53.2	50.1	51.7	
3	Subramanya Temple, Manchi.		48.8	44.4	46.6	
4	Near Parkala OHT, Parkala.		45.2	41.8	43.5	
5	Near Govt Polytechnic , Ananatha Nagar		45.1	51.7	48.4	
6	Near Anganawadi proposed OHT, Manipal		46.4	42.2	44.3	
7	Near Santhekatte Proposed OHT		51.2	47.8	49.5	
Night Time						
1	Near Al Ibaadah Indian School, Permpalli.	6.00PM to 6.00AM	47.8	44.4	46.1	70
2	Near Indira Nagar Church, Indira Nagar		44.2	40.5	42.1	
3	Subramanya Temple, Manchi.		40.2	36.0	38.1	
4	Near Parkala OHT, Parkala.		38.5	34.7	36.6	
5	Near Govt Polytechnic , Ananatha Nagar		35.8	31.2	33.5	
6	Near Anganawadi proposed OHT, Manipal		38.8	34.1	36.5	
7	Near Santhekatte Proposed OHT		41.2	36.9	39.1	

### INFERENCE

As per KSPCB Standards,

Report Status :- In the all locations Noise level is within the limits.

Verified by

Authorized Signature

Note: 1. The results are only for the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Membranes will be destroyed 6 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

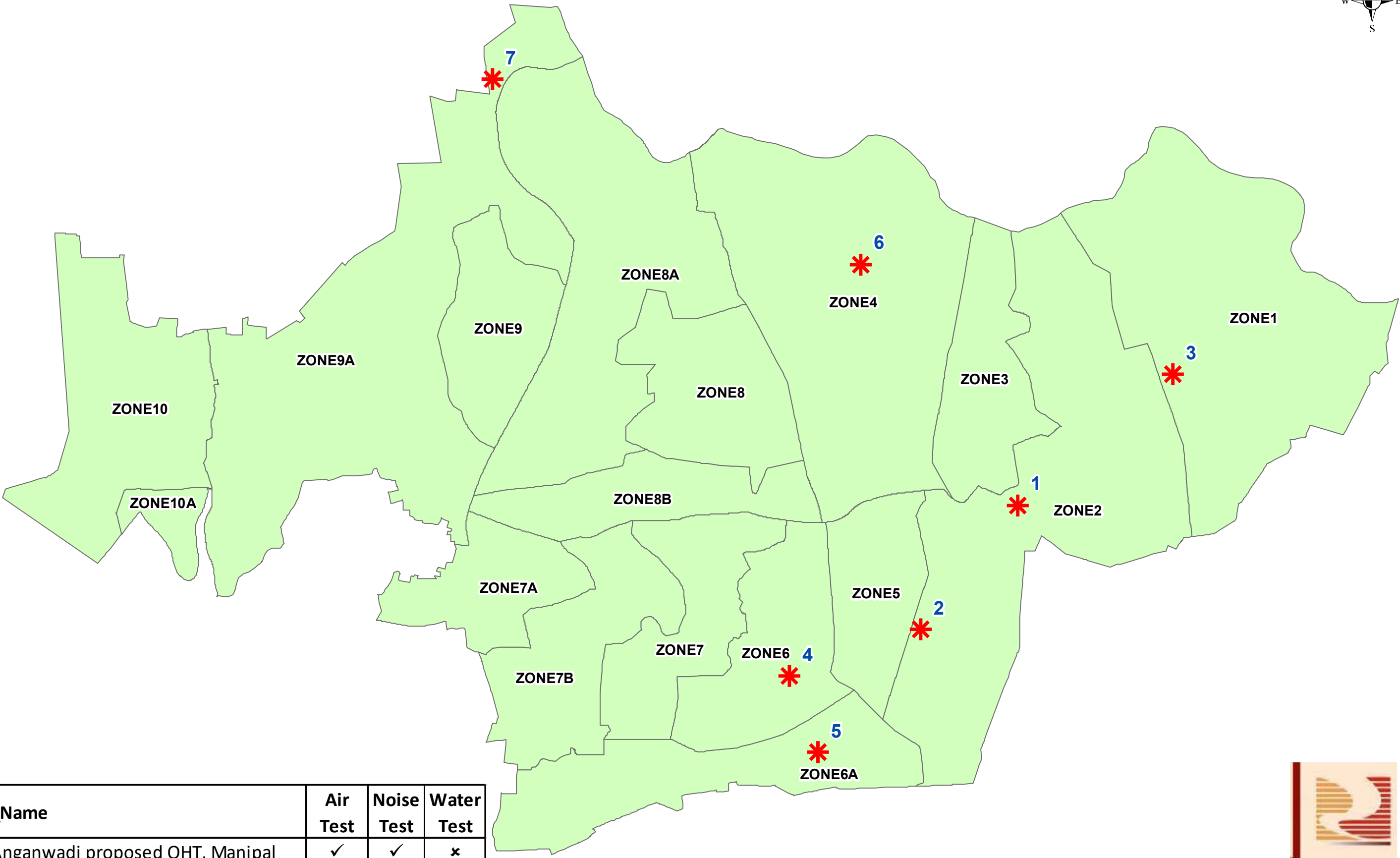
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



Environmental Monitoring Survey-UDUPI



Sl,No	Place_Name	Air Test	Noise Test	Water Test
1	Near Anganwadi proposed OHT, Manipal	✓	✓	✗
2	Near Govt Polytechnic , Ananatha nagara	✓	✓	✗
3	Near Parkala OHT , Parkala	✓	✓	✗
4	Near Indiranagara church , Indira nagara	✓	✓	✓
5	Subramanya Temple, Manchi	✓	✓	✓
6	Near Al Ibaadah Indian School, Perampalli	✓	✓	✗
7	Near Santhekatte proposed OHT	✓	✓	✓

Legend

\*

Environmental Test

Zone\_Boundaries



# Package: 02-UDP-01 ANALYSIS OF ACCIDENT

MONTH:-February -2020

SL.NO	DATE	NAME OF PERSON	SEX	AGE	TIME	DESIGNATION	COMP ANY/ SUB- CONT RAOR	AGENCY	TYPE OF ACCIDENT	NATURE OF INJURY	LOCATION OF INJURY	ROOT CAUSE	ACTION TAKEN
01	17/02/20	Sai Krishna	male	32	10:30 A.M	Helper	SUEZ	Sri Manjunath	First aid	Right hand Deep scratch on during excavation work	perampalli	Not wearing hand gloves	Provide hand gloves

Note:-Agency is the object or substance which is most closely associated with the accident causing the injury like machines,

equipment's, vehicles, hand tools,ladders,scaffolds,explosive,dust,gases,chemical,radiations,fire,water,floor, roof, animals & insects  
etc.

Name.....*Pandey Shakti*.....

Person completing from.....

Location-

*UPUR*

Signature.....

Date.....

*18/02/2020*



NOVEMBER - 2019

6

7

Sl. No.	Complaint Date	Complainor Name	Contact No.	Address	Complaint	Zone/Ward	Site observation / Comments	Site Engg. Name	Repair/Replace	Site Engg. Sign	Resolved Date	Status
01	13/11/2019	Mr. Ramson	9901289302	Near Veerabhadra Temple, Santekatte.	HSC pipe damaged	9A	PVC-HSC pipe broken @ OHT site.	Pramod	Repaired	<i>[Signature]</i>	14/11/19	Repaired
02	20/11/19	Vedavas	8310871847	Near Purgaparameshwari Temple, Puttur.	Drain water pipe damaged	9	Drain pipe broken.	Pramod		<i>[Signature]</i>		
03	25/11/19	Shrinath	8123374125	Near Marikamba Temple, Puttur	BSNL Cable has been damaged	9A	BSNL broadband Cable damaged	Pramod	Repaired	<i>[Signature]</i>	28/11/19	Repaired






Sl. No.	Complaint Date.	Complainer Name	Contact No.	Address	Complaint	Zone / Ward	Site observation / Comments	Site Engr. Name	Repair / Replaced	Site Engr. Sign.	Resolved Date.	Status
N/A												



JANUARY - 2020

11

10



Sl. No.	Complaint Date.	Complainer Name.	Contact No.	Address	Complaint	Zone / Ward	Site observation / comments	Site Engg Name.	Repair / Replaced	Site Engg Sign.	Resolved Date	Status
01	09/01/2020	Shrisha	9448501296	5th cross, Mudabettu	HSC pipe damaged	9A	PVC-HSC pipe broken @ 5th cr.	Pramod	Repaired		10/01/2020	Repaired

Vivid Colours: Richer, brighter images & graphics.

Excellent for double side printing





SI No.	Complaint Date	Complainer Name	Contact No.	Address	Complaint	Zone/Ward	Site observation / comments	Site Engg. Name	Repair / Replaced	Site Engg. Sign	Resolved Date	Status
01	04/02/2020	Shrisha	9448501236	Mudubettu.	HSC pipe broken @ Mudubettu.	9A	HSC - PVC pipe damaged.	Pranod	Repaired		05/02/2020	Repaired
02	25/02/2020	Umerh	7892354608	Pachamane road, Nagarebettu, Parkala.	PVC - HSC pipe damaged while piling pipeline.	2	HSC - PVC pipe broken.	Sushanth Shetty	Repaired		25/02/2020	Repaired





**24x7 Water Supply Project Udupi**

February -2020

<b>HSE Indicators</b>			
Average No. of employees		24	
Total Man Hours Worked		4800	
Average No. of employees (Subcontractor)		55	
Total Man Hours Worked (Subcontractor)		11000	
Total Man Hrs worked ( Staff+Subs)	0	<b>15800</b>	<b>0</b>
HSE Training hours per year	573	24	
TBT / Vigumminute	47	5	


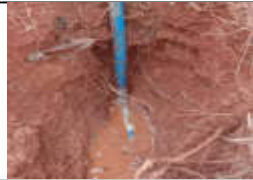
### MONTHLY REPORT ON GRIEVANCE REDDRESSAL

Name of the ULB : City Municipal Council, Udupi.

Project : 24x7 Water Supply Project for Udupi.

Contractor : SPPL-SIPL-DRS Infratech JV

Month : February - 2020

Sl.No	Date	Name and address of the Complainer	Contact No	Complaint Details	Details of Action taken by Contractor/PIU/PMDSC/ULB	Action taken Date	Remarks	Photograph of pre & post Action Taken
1	04-02-2020	Mr Shrisha	9448501296	While excavating in moodubettu (zone 9A) the HSC has been damaged so they complained us.	HSC Repaired.	05-02-2020	Repaired	
2	25-02-2020	Mr. Umesh	7892354605	While excavating in Pademane road, Nagarebettu, Parkala (zone 2) the HSC has been damaged so they complained us.	HSC Repaired.	25-02-2020	Repaired	
3								

# COMPUTERISED POLLUTION UNDER CHECK CENTERS

(Rule 231(B)(8) of KMV Rules 1989)

Licence No : 1488/2015-16

Center Name : Mahakali Emission Testing Center

Near Chalukya

Center Bar, Ambagilu, Shivalli  
Address : Grama, Udapi Dist, Mobil-  
8970606777

Customer Name : JOSEPH PRAVEEN PRAKASH

Customer Mobile : 9900655236

Pucc No : D1008KA100817

Vehicle No : KA19AC3487

Year of Regn : 16-02-2018

Type of Vehicle : CAR

Make : TOYOTA

Model : ETIOS

Test Date : 15-02-2020

Time : 10:10

Valid UpTo : 14-02-2021

Photo of Vehicle



Hologram Sticker

## Test Data

Flushing Cycle			
Avg	RPM Min	RPM Max	Temp
	785	2457	61

Srno	RPM Min	RPM Max	Km	HSU%	Temp
1	967	2457	0.59	22.7	61
2	785	2457	0.59	22.7	61
3	785	2457	0.60	22.8	61
Mean			0.57	22.7	

Certificate is not acceptable without Hologram Sticker & Get  
Renewed the Certificate within the Expiry Date.

Certificate price: ₹ 125

Pres Limit for Diesel vehicle	K(Light Absorption Co-efficient)	Harridge Units %
Free Acceleration	2.45	65

This Vehicle meets Emission Standards Prescribed by Rule 115(2) of CMVR 1989. Certificate is All India valid, Six Months for Bharat Stage III or below and one year for Bharat Stage IV vehicles.

Seal of Testing Station	Testing Station Code <b>D1008</b>	Authorised Signatory
<p>KINDLY DESTROY THE OLD CERTIFICATE &amp; DO NOT HAND OVER TO ETC IN ANY CIRCUMSTANCES.</p> <p>Penalty for "Air Pollution" Not exceeding for Rs. 1000 for the 1st offence and Not exceeding for Rs. 2000 for the 2nd &amp; subsequent offence.</p>		





**ನಗರಸಭಾ ಕಾರ್ಯಾಲಯ, ಉಡುಪಿ**  
**ಉಡುಪಿ ಜಿಲ್ಲೆ - 576101**

E-MAIL : [itstaff\\_ulb\\_udupi@yahoo.com](mailto:itstaff_ulb_udupi@yahoo.com)

ಕವಿ ಮುದ್ದಣ್ಣ ಮಾರ್ಗ  
ಉಡುಪಿ - 576 101  
ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 0820-2520306  
: 0820-2520446  
ಫ್ಯಾಕ್ಸ್ : 0820-2524236

Website : [www.udupicity.mrc.gov.in](http://www.udupicity.mrc.gov.in)

ಸಂಖ್ಯೆ: ಉನಸ.ಬಿ4.ಕುನೀ.ಸಿಆರ್.7862/2019-20

ದಿನಾಂಕ 30.01.2020

ರಿಗೆ :

- 1) ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು  
ಕರ್ನಾಟಕ ನಗರ ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ ಮತ್ತು  
ಹಣಕಾಸು ನಿಗಮ ನಿಯಮಿತ  
" ರಜತಾದ್ರಿ "  
ಜಿಲ್ಲಾಧಿಕಾರಿಗಳ ಕಛೇರಿ ಸಂಕೀರ್ಣ  
ಮಣಿಪಾಲ, ಉಡುಪಿ.
- 2) Project Manager  
M/s SUEZ Project Private Limited-  
SUEZ India Pvt Ltd-DRS Infratech Pvt Ltd  
Adiudupi, Udupi.

ಮಾನ್ಯರೇ,

ವಿಷಯ: KUIDFC & KIUWMIP –" Construction of distribution System  
for 24x7 Water Supply including Services for Operation  
and Management for Udupi City-Package No. 02UDP01 "  
Dumpling yard for disposal of surplus earthworks.

- ಉಲ್ಲೇಖ: 1) LOA Letter No. UCMC/Udupi/KUIDPF/ADB/UDP03/  
2017-18 Dated 10.10.2018  
2) Contract Agreement for Package No. 02UDP01 Dated  
16.11.2018  
3) Your Letter No. SPPL-SIPL-JV/KUIDFC/UCMC/093/  
2019-20 Dated 14.10.2019

== ==

ಮೇಲಿನ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖ (3)ರ ಪತ್ರದಲ್ಲಿ, ಉಡುಪಿ ನಗರಸಭಾ  
ವ್ಯಾಪ್ತಿಗೆ 24 x 7 ನೀರು ಸರಬರಾಜು ವಿತರಣಾ ಯೋಜನೆ ಕಾಮಗಾರಿ ನಡೆಯುವಾಗ ಹೆಚ್ಚುವರಿ  
ಮಣ್ಣು ಮತ್ತು ಒಡೆದು ಹಾಕಿದ ಅವಶೇಷಗಳ ಪರಿಮಾಣವನ್ನು ವಿಲೇವಾರಿ ಮಾಡಲು ಸ್ಥಳ  
ಒದಗಿಸುವಂತೆ ಕೋರಿದ್ದು, ಅಲೆವೂರು ಘನತ್ಯಾಜ್ಯ ಸಂಸ್ಕರಣಾ ಘಟಕದಲ್ಲಿ debris ಹಾಕಲು ಈ  
ಮೂಲಕ ಅನುಮತಿ ನೀಡಲಾಗಿದೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

ಪೌರಾಯುಕ್ತರು

ಉಡುಪಿ ನಗರಸಭೆ



**ADDITIONAL ENDORSEMENT DOCUMENT**  
**EMPLOYEES COMPENSATION Insurance Policy**

<b>Insured Name</b>	: SUEZ PROJECTS PVT. LTD., SUEZ INDIA PVT. LTD.	<b>Insurer Office Code</b>	: Delhi LCO 930000 (930000)
<b>Address</b>	: DRS INFRATECH PVT. LTD. JV 1ST FLOOR, 18 CSI COMPOUND, 2ND CROSS, MISSION ROAD, BANGALURU, BENGALURU URBAN, KARNATAKA BANGALORE, KARNATAKA, 560027	<b>Address</b>	: 301, R.G. CITY CENTER LSC, BLOCK B, LAWRENCE ROAD NEW DELHI, 110035
<b>Telephone</b>	: //9871459093	<b>Telephone</b>	: 27196509 / 27196510
<b>Fax</b>	:	<b>Fax</b>	: 27196515
<b>Email</b>	:	<b>Email</b>	: nia.930000@newindia.co.in
<b>GSTIN</b>	: 29ABBAS5237LIZI	<b>GSTIN</b>	: 07AAACN4165C1ZT
<b>UIN</b>	: NA	<b>SAC</b>	: 997139 (Other non-life insurance services excl RI)

Endorsement attached to forming part of Policy Number			: 93000036190100000031
Department	: Liability Insurance	Cover	Workmen's CompensationPolicy
Period of Insurance	: From 05/07/2019 12:00:01 AM To 04/07/2020 11:59:59 PM	Endorsement No	: 93000036190183000006
		Effective Date	: 18 February 2020
Date Signed	: 21/02/2020	Sum Insured₹	: 21,294,192.00
Additional Premium ₹	: 4,432.00	Additional GST ₹	: 798
Refund Premium ₹	: N/A	Refund ST/GST. ₹	: N/A
Policy Duration	: 1 Years		

**Change in Policy Attributes**

Parameter Name	Changed Value	Old Value
Policy Status	06	
Is this risk located in SEZ Zone?	NO	
getSecndOption	100	00

**Change in Policy Risk Attributes**

Risk Number	Parameter Name	Changed Value	Old Value
1	Special Conditions1	SKILLED - 18 (₹ 11544/- PM) SEMI SKILLED-39 (₹ 11154/- PM) UNSKILLED - 97 (₹ 10894/- PM) HIGHLY SKILLED - 3 (RS. 25000/- PM)	SKILLED - 18 (₹ 11544/- PM) SEMI SKILLED-39 (₹ 11154/- PM) UNSKILLED - 97 (₹ 10894/- PM)
1	Sum Insured	21294192	20394192

It is hereby understood and agreed that the endorsement on policy 93000036190100000031 will be in effect from 18 February 2020.

<b>Reason</b>	Notwithstanding anything herein contained to the contrary it is hereby agreed and declared that at the request of insured 3 employees are added under the said policy w.e.f. 18.2.2020.  Details of Additional Premium as under: Sum Insured Premium Additions of 3 ₹ 3.0 Lac per employee ₹ 4432/- + GST extra. (Highly skilled employees)  All other terms and conditions remain unaltered
---------------	---

**Premium and GST Details**

**Premium**  
Verified  
Digitally signed  
by Srinivasan  
Vaideswaran  
Date: 2020.02.21  
16:49:44 IST

**Rate of Tax**

**Amount**

4,432.00

**Policy No. : 93000036190100000031 Document generated by 33309 at 21/02/2020 16:49:43 Hours.**

**Regd. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 1415.**



SGST	0	0
CGST	0	0
IGST	18	798
TOTAL PAYABLE	:	5230
TOTAL PAYABLE (In words)	:	RUPEES FIVE THOUSAND TWO HUNDRED THIRTY ONLY

IN WITNESS WHEREOF THIS POLICY has been signed at \_\_\_\_\_ this 21-Feb-20.

**Extension Details :**

Period of extension	Modified Expiry date
	04-JUL-20

Place :BLOCK B, LAWRENCE ROAD,  
NEW DELHI,110035  
Date :21-Feb-20

For and on behalf of  
The New India Assurance Company Limited  
Authorized Signatory

Tax Invoice No : 93000019E0022246

**IRDA Registration Number: 190**

SUEZ	SUEZ PROJECTS PVT. LTD.	No.
	Udupi	Rev.000
	Training Attendance Sheet	Date. Jan' 2019 Page. 1 of 1

Training program: TBT Training

Date: 20/02/2022 Time: 10:30 to 11:00 AM Conducted by: Pradeep

Topics Covered:  
crawber using  
PPE using

I ACKNOWLEDGE THAT I HAVE UNDERSTOOD THE ABOVE MENTIONED TOPICS

S/N	NAME	COMPANY / DEPTT.	DESIGNATION	SIGNATURE
1.	Ram	Krishnamad	Supervisd.	രാമൻ
2.	Omkan	"	Helper	OMKAN
3.	Kumar	"	"	കുമാർ
4.	Devaraj	"	"	ദേവരാജ്
5.	manju	"	"	മാനു
6.	Suresh	"	"	Suresh S.
7.	Raju	"	"	Rajee
8.	Sandarama	"	"	സാദരം
9.	hagendra	"	"	ഹാഗെന്ദ്ര
10.	Shobha	"	"	ശോഭ
11.	Sonitha	"	"	സോണിത
12.	Hanumatha	"	"	ഹനുമത്ത്
13.	Hanumontha	"	"	ഹനുമത്ത്
14.	Girija	"	"	ഗിരിജ
15.				


Man Hours:

Sign of Trainer:



14x30 = 840 minutes  
14x20



	SUEZ PROJECTS PVT. LTD.	No.
	udupi	Rev.000
	Training Attendance Sheet	Date. Jan' 2019 Page. 1 of 1

Training program: *Safety meeting.*

Date: *29/12/2020* Time: *9:00 to 10:05 a.m*

Conducted by: *Pradeep Shetty*

Topics Covered:

I ACKNOWLEDGE THAT I HAVE UNDERSTOOD THE ABOVE MENTIONED TOPICS


S/N	NAME	COMPANY / DEPTT.	DESIGNATION	SIGNATURE
1.	<i>Chaitanya. v. I</i>	<i>SPPL/EPC</i>	<i>Network Asst</i>	<i>[Signature]</i>
2.	<i>PRAMOD</i>	<i>SPPL/EPC</i>	<i>Network assistant</i>	<i>[Signature]</i>
3.	<i>SURAJ HEBBAR</i>	<i>SPPL/EPC</i>	<i>Network Assistant</i>	<i>[Signature]</i>
4.	<i>Vishnu . B</i>	<i>SPPL/EPC</i>	<i>Installation Engineer</i>	<i>[Signature]</i>
5.	<i>Sushanth Shetty</i>	<i>SPPL/EPC</i>	<i>Network Asst</i>	<i>[Signature]</i>
6.	<i>JAGADEESH. JS</i>	<i>SPPL/EPC</i>	<i>STORE KEEPER</i>	<i>[Signature]</i>
7.	<i>Gajendra Prasad</i>	<i>SPPL/EPC</i>	<i>Engineer</i>	<i>[Signature]</i>
8.	<i>Ankith Shetty</i>	<i>SPPL/EPC</i>	<i>Network Assistant</i>	<i>[Signature]</i>
9.	<i>Nithin Shetty R</i>	<i>SPPL/EPC</i>	<i>Network Assistant</i>	<i>[Signature]</i>
10.	<i>Mithun Kumar</i>	<i>SPPL/EPC</i>	<i>Network Assistant</i>	<i>[Signature]</i>
11.	<i>Shrikanth patil</i>	<i>SPPL/EPC</i>	<i>Network Asst</i>	<i>[Signature]</i>
12.				
13.				
14.				
15.				

Man Hours:

Sign of Trainer:

*[Signature]*

*11x 45 = 495 minutes*

 <b>suez</b>	SUEZ PROJECTS PVT. LTD.	No.
	udupi	Rev.000
	Training Attendance Sheet	Date. Jan' 2019 Page. 1 of 1

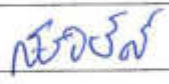
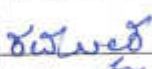

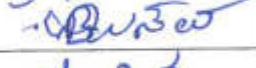
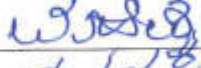
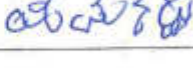
Training program:

Date: 4/02/2020 Time: 10:35 to 11:15 A.M.

Conducted by: Pradeep Shetty

Topics Covered: work at height  
Excavation Safety

I ACKNOWLEDGE THAT I HAVE UNDERSTOOD THE ABOVE MENTIONED TOPICS


S/N	NAME	COMPANY / DEPTT.	DESIGNATION	SIGNATURE
1.	Nathan		Helper	
2.	Yamunappa		"	Y.S. mabari
3.	Kamappa		"	
4.	Rajabu		"	
5.	Babava		"	
6.	maresh		"	
7.	Yamunappa		"	
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Man Hours:

Sign of Trainer:














7X25 = 175



	SUEZ PROJECTS PVT. LTD.	No.
	UDUPI	Rev.0001
	Meeting Attendance Sheet	Date. Jan' 2019
		Page. 1 of 1


Date: 6/2/2020

Time: 9:15 A.M

S/N	NAME	COMPANY / DEPTT.	DESIGNATION	SIGNATURE
1.	Suraj Hebban	SUEZ / <del>WDR</del>	NETWORK ASSISTANT	
2.	Sushanth Shetty	SUEZ	Network Assistant	
3.	Chaitanya V. E	SUEZ	Network Assistant	
4.	Ankith Shetty	SUEZ	Network Assistant	
5.	B. Vishnu	SUEZ/EPC	Installation Engineer	
6.	SAPAD EESL. Y.S	SUEZ	STORE KEEPER	
7.	Sheshant patil.	Suez	Networks Asst	
8.	Nithin Shetty R	Suez	Network Assistant	
9.	Mithun Kumar	Suez	Network assistant	
10.	Pramod	Suez	Network assistant	
11.	Magmeor Ahmed Khan	Suez	Engg	
12.	Bharanraj H.K	SUEZ	C.S	
13.	Gajendra Prasad	Suez	Engineer.	
14.				
15.				

  
Prasad



 <b>SUEZ</b>	SUEZ PROJECTS PVT. LTD.	No.
	Udupi	Rev.000
	Training Attendance Sheet	Date. Jan' 2019 Page. 1 of 1

Training program: *First aid & Fire fighting*

Date: *12/02/2020* Time: *5:30 to 6:30*

Conducted by: *Pradeep Shetty*

Topics Covered:

- 1. First aid dressing.
- 2. Fire Extinguisher operating.

I ACKNOWLEDGE THAT I HAVE UNDERSTOOD THE ABOVE MENTIONED TOPICS

S/N	NAME	COMPANY / DEPTT.	DESIGNATION	SIGNATURE
1.	<i>Hemant D Reddy</i>	<i>Security</i>	<i>Security guard</i>	<i>[Signature]</i>
2.	<i>R manikumar</i>		"	<i>RmRao</i>
3.	<i>prabhakar</i>		"	<i>[Signature]</i>
4.	<i>pawan.v</i>		"	<i>[Signature]</i>
5.	<i>Pratek Rabi das</i>		"	<i>[Signature]</i>
6.	<i>Mangamath</i>			<i>[Signature]</i>
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Man Hours: *6x1 = 6 hours.*  
*360 min*

Sign of Trainer: *[Signature]*



# **Safety Training and Good Practices Photos-February 2020**

ready for the resource revolution



# Safety Training and meeting for Staff





# Safety Training for Workers



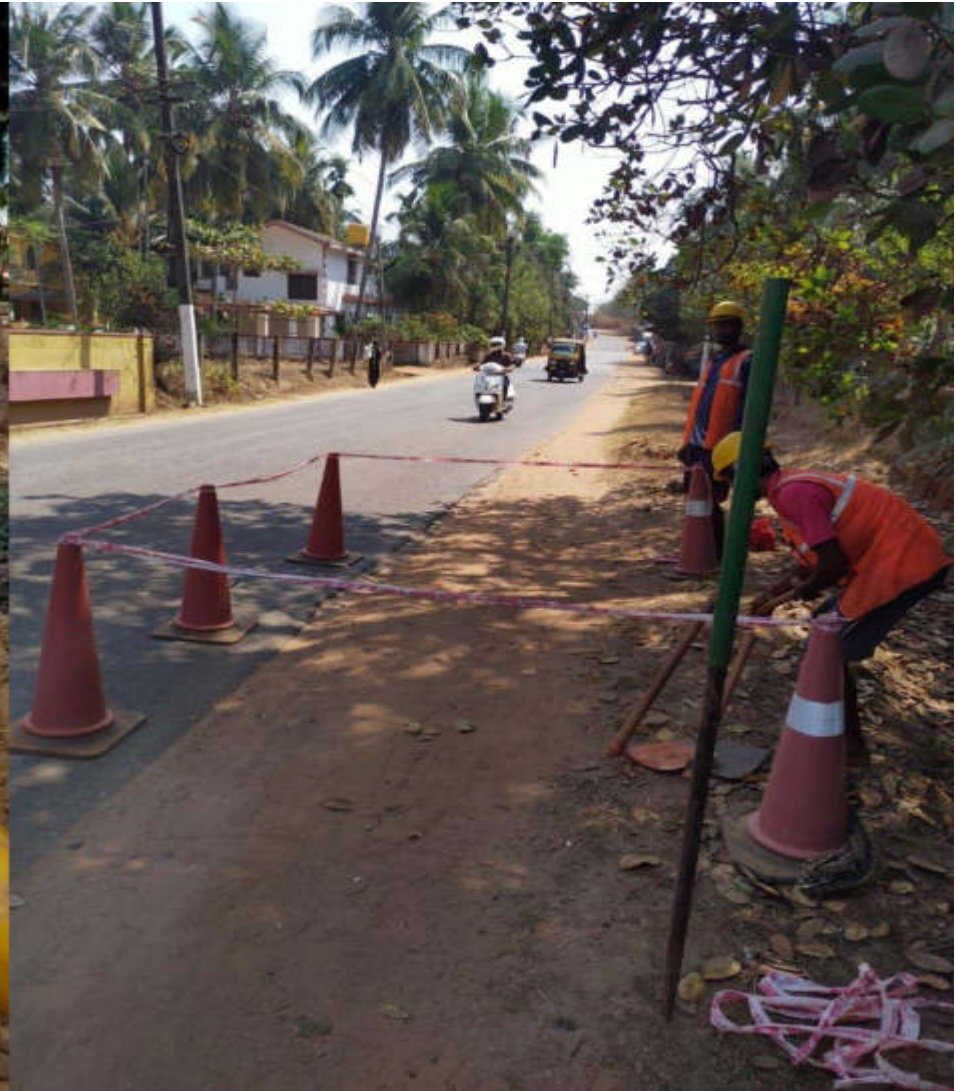


# Fire Fighting and First Aid Training For Security Guard





# Work Site Photos





## Work Site Photos





## Annexure 07



## Annexure 03





## Annexure 08



## Annexure 05



## Annexure 09



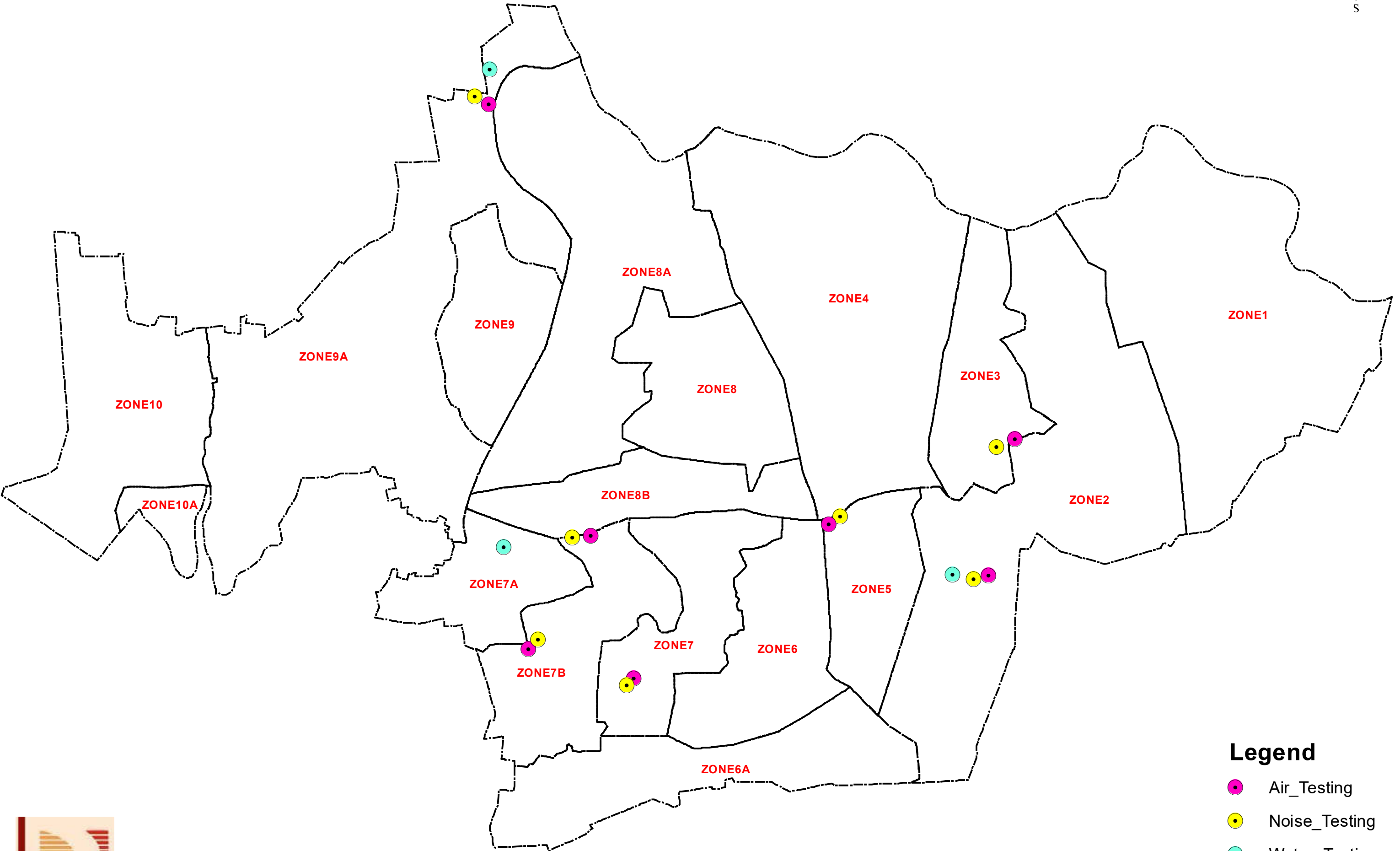


## Annexure 10









Environmental Monitoring Survey-UDUPI



Legend

-  Air\_Testing
-  Noise\_Testing
-  Water\_Testing
-  Zone\_Boundary





# MSV Analytical Laboratories

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,

E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No : TC720720000001490F

Issue Date : 27.01.2020

1. Name of the client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary
5. Name of the sample location : Near Al Ibaadah Indian School, Permpalli
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	76.3	75.7	74.2	µg / m <sup>3</sup>	75.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	27.6	26.8	25.3	µg / m <sup>3</sup>	26.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	15.5	15.1	14.7	µg / m <sup>3</sup>	15.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) – 2006	20.8	20.1	19.3	µg / m <sup>3</sup>	20.0	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

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Sanganakallu Road, KEB Circle, Bellary - 583103 **Contact No :** Mob : 94498 03895, (0) : 08392-255169,

**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001491F

Issue Date : 27.01.2020

1. Name of the client : Suez Project Pvtltd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Indira Nagar Church, Indira Nagar
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	68.7	67.6	66.8	µg / m <sup>3</sup>	67.7	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	25.7	24.3	23.4	µg / m <sup>3</sup>	24.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	12.2	11.7	11.3	µg / m <sup>3</sup>	11.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	17.0	16.2	µg / m <sup>3</sup>	17.0	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001492F

Issue Date : 25.01.2020

1. Name of the client : **Suez Project Pvtld, Suez India Pvt ltd, DRS Infratech (JV)**
2. Name of The Work : **Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
3. Name Of The Project : **KIUWMIP**
4. Sample Collected By : **MSV Analytical Laboratories, Bellary.**
5. Name of the sample location : **Subramanya Temple, Manchi.**
6. Particulars of the sample collected : **Sample collected with FDS & RDS 460BL**
7. Date of Sample Receipt : **20.01.2020**
8. Analysis Starting Date : **21.01.2020**
9. Analysis Completion Date : **25.01.2020**
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	70.4	69.6	68.4	µg / m <sup>3</sup>	69.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	25.7	24.7	23.7	µg / m <sup>3</sup>	24.7	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	13.0	12.6	12.1	µg / m <sup>3</sup>	12.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	17.0	16.3	µg / m <sup>3</sup>	17.0	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note: 1. The results listed only to the tested samples & applicable parameters.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001493F

Issue Date : 25.01.2020

1. Name of the client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Parkala OHT, Parkala.
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	75.3	73.6	72.6	µg / m <sup>3</sup>	73.8	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	27.5	26.6	25.4	µg / m <sup>3</sup>	26.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	13.8	13.4	12.5	µg / m <sup>3</sup>	13.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	20.2	19.3	18.6	µg / m <sup>3</sup>	19.3	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001494F

Issue Date : 25.01.2020

1. Name of the client : Suez Project PvtLtd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Govt Polytechnic , Ananatha Nagar,
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	74.4	73.7	72.2	µg / m <sup>3</sup>	73.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	28.2	27.6	26.8	µg / m <sup>3</sup>	27.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2) – 2001	15.1	14.7	14.2	µg / m <sup>3</sup>	14.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	19.3	18.6	17.8	µg / m <sup>3</sup>	18.5	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature



Note : 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001495F

Issue Date : 25.01.2020

1. Name of the client : **Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)**
2. Name of The Work : **Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
3. Name Of The Project : **KIUWMIP**
4. Sample Collected By : **MSV Analytical Laboratories, Bellary.**
5. Name of the sample location : **Near Anganawadi proposed OHT, Manipal**
6. Particulars of the sample collected : **Sample collected with FDS & RDS 460BL**
7. Date of Sample Receipt : **20.01.2020**
8. Analysis Starting Date : **21.01.2020**
9. Analysis Completion Date : **27.01.2020**
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	72.6	71.2	70.8	µg / m <sup>3</sup>	71.5	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	28.5	27.3	26.7	µg / m <sup>3</sup>	27.5	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	13.4	12.5	12.0	µg / m <sup>3</sup>	12.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	18.6	17.8	17.0	µg / m <sup>3</sup>	17.8	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by



Authorized Signature

Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No :TC720720000001496F

Issue Date : 25.01.2020

1. Name of the client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction Of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Sample Collected By : MSV Analytical Laboratories, Bellary.
5. Name of the sample location : Near Santhekatte Proposed OHT
6. Particulars of the sample collected : Sample collected with FDS & RDS 460BL
7. Date of Sample Receipt : 20.01.2020
8. Analysis Starting Date : 21.01.2020
9. Analysis Completion Date : 27.01.2020
10. Sample tested as received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub> µg/m <sup>3</sup>	IS-5182(Part-23) – 2006	77.2	76.7	75.3	µg / m <sup>3</sup>	76.4	100
2	Particulate Matter or PM <sub>2.5</sub> µg/m <sup>3</sup>	Instrument Manual Method	29.5	28.4	27.5	µg / m <sup>3</sup>	28.4	60
3	Sulphur Dioxide as SO <sub>x</sub>	IS-5182(Part-2) – 2001	15.3	14.4	13.5	µg / m <sup>3</sup>	14.4	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	19.3	18.6	17.7	µg / m <sup>3</sup>	18.5	80

### INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by



Authorized Signature

Note : 1. The results listed only to the tested samples & applicable parameters,

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(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (0) : 08392-255169,

**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : TC720720000001569P

Issued Date : 27.01.2020

1. Name of the Client : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. Name of The Work : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Name of the Sample : well water at Near Santhekatte Proposed OHt, Veerabhadreshwara Temple
5. Sample Collected By : MSV Analytical Laboratories, Bellary
6. Particulars of Sample Collected : Grab sample
7. Sample Quantity : 2 Liters
8. Sample Description/condition : Good Satisfactory
9. Date of sample Receipt : 21.01.2020
10. Analysis Starting Date : 22.01.2020
11. Analysis Completion Date : 27.01.2020
12. Sample Tested as Received

IS 10500-2012						
S.No	Parameters	Protocol	Unit	Result	Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	6.64	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	0.82	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	64	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	82	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	82.3	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	16.3	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	10.0	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	1.36	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	36.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	0.98	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.26	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.004)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.005)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.006)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.003)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.003)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.016)	0.05	No Relaxation
21	Selenium	Is : 3025(PART-56) or IS -15303	mg/L	BDL(0.002)	0.01	No Relaxation

Note : 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

22	Zinc	Is : 3025(PART-49)	mg/L	BDL(0.004)	5	15
23	Phenols	Is : 3025(PART-43)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	0.001	0.01	0.05
25	Silica*	IS : 3025(part-35)	mg/L	BDL(0.002)	---	---
26	phosphorus	IS : 3025(part-31)	mg/L	0.5	---	---
<b>Biological Parameters</b>						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

## INFERENCE

IS 10500 – 2012 Standards

BDL – Below Detectable Limit

Report Status :- The analyzed values for above measured parameters has been within the acceptable limits

Verified by

Authorized Saignature



Note: 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified, ILC sample will be destroyed after 1 month from the date of test certificate issue.

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No :** Mob : 94498 03895, (0) : 08392-255169,

**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : TC720720000001570P

Issued Date : 27.01.2020

1. Name of the Client :
2. Name of The Work : **Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)**
3. Name Of The Project : **Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.**
4. Name of the Sample : **Open well water near subramanya temple, Manchi**
5. Sample Collected By : **MSV Analytical Laboratories, Bellary**
6. Particulars of Sample Collected : **Grab sample**
7. Sample Quantity : **2 Liters**
8. Sample Description/condition : **Good Satisfactory**
9. Date of sample Receipt : **21.01.2020**
10. Analysis Starting Date : **22.01.2020**
11. Analysis Completion Date : **27.01.2020**
12. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	7.14	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	0.64	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	220	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	580	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	284.6	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	44.8	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	41.7	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	36.2	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	102.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	4.1	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.44	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.012)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.004)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.005)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.003)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.003)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.002)	0.05	No Relaxation
21	Selenium*	Is : 3025(PART-56) or IS-15303	mg/L	BDL	0.01	No Relaxation
22	Zinc	Is : 3025(PART-49)	mg/L	BDL	5	15
23	Phenols	Is : 3025(PART-43)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	BDL(0.002)	0.01	0.05

Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

25	Silica*	IS : 3025(part-35)	mg/L	BDL(0.001)	---	---
26	phosphorus	IS : 3025(part-31)	mg/L	0.46	---	---
Biological Parameters						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

INFERENCE	IS 10500 – 2012 Standards BDL – Below Detectable Limit Report Status :- The analyzed values for above measured parameters has been within the Permissible limits .
-----------	--

Verified by



Authorized Saignature

- Note :
1. The results listed only to the tested samples & applicable parameters.
  2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No :TC720720000001571P

Issued Date : 27.01.2020

1. Name of the Client : Suez Project Pvtltd, Suez India Pvt ltd, DRS Infratech (JV)
2. Name of The Work : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. Name Of The Project : KIUWMIP
4. Name of the Sample : Well water Near Indira Nagar Church.
5. Sample Collected By : MSV Analytical Laboratories, Bellary
6. Particulars of Sample Collected : Grab sample
7. Sample Quantity : 2 Liters
8. Sample Description/condition : Good Satisfactory
9. Date of sample Receipt : 21.01.2020
10. Analysis Starting Date : 22.01.2020
11. Analysis Completion Date : 27.01.2020
12. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	Is : 3025(PART-4)	---	Colorless	5	15
2	Odor	Is : 3025(PART-5)	---	Agreeable	Agreeable	Agreeable
3	pH	Is : 3025(PART-11)	---	6.92	6.5-8.5	No Relaxation
4	Turbidity	Is : 3025(PART-10)	NTU	1.12	1	5
Chemical parameters						
5	Alkalinity	Is : 3025(PART-23)	mg/L	214.7	200	600
6	Total Dissolved Solids	Is : 3025(PART-16)	mg/L	614	500	2000
7	Total Hardness as CaCO <sub>3</sub>	Is : 3025(PART-21)	mg/L	312.6	200	600
8	Calcium as Ca	Is : 3025(PART-40)	mg/L	62.6	75	200
9	Magnesium as Mg	Is : 3025(PART-46)	mg/L	37.9	30	100
10	Sulphate as SO <sub>4</sub>	Is : 3025(PART-24)	mg/L	62.3	200	400
11	Chloride as Cl	Is : 3025(PART-32)	mg/L	112.9	250	1000
12	Nitrate as NO <sub>3</sub>	Is : 3025(PART-34)	mg/L	4.8	45	No Relaxation
13	Iron as Fe	Is : 3025(PART-53)	mg/L	BDL	0.3	No Relaxation
14	Fluoride as F	Is : 3025(PART-60)	mg/L	0.48	1.0	1.5
15	Copper	Is : 3025(PART-42)	mg/L	BDL(0.008)	0.05	1.5
16	Manganese	Is : 3025(PART-59)	mg/L	BDL(0.003)	0.1	0.3
17	Mercury	Is : 3025(PART-48)	mg/L	BDL(0.002)	0.001	No Relaxation
18	Cadmium	Is : 3025(PART-41)	mg/L	BDL(0.005)	0.01	No Relaxation
19	Lead	Is : 3025(PART-47)	mg/L	BDL(0.001)	0.05	No Relaxation
20	Chromium	Is : 3025(PART-52)	mg/L	BDL(0.002)	0.05	No Relaxation
21	Selenium*	Is : 3025(PART-56) or IS -15303	mg/L	BDL(0.001)	0.01	No Relaxation
22	Zinc	Is : 3025(PART-49)	mg/L	BDL	5	15
23	Phenols	Is : 3025(PART-44)	mg/L	BDL(0.002)	0.001	0.002
24	Arsenic as As*	Is : 3025(PART-37)	mg/L	BDL	0.01	0.05
25	Silica*	Is : 3025(PART-35)	mg/L	BDL(0.001)	---	---

Note : 1. The results listed only to the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Thin plates will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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**E-mail :** msv.lab01@gmail.com, labmsv@gmail.com, **Website :** www.msvlabellary.com

26	phosphorus	IS : 3025(part-31)	mg/L	0.65	---	---
Biological Parameters						
27	Total Coliform	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--
28	E-coli	IS 1622:1981	Present/Absent	Absent	MPN/100ml	--

INFERENCE	IS 10500 – 2012 Standards BDL – Below Detectable Limit Report Status :- The analyzed values for above measured parameters has been within the acceptable limits .
-----------	---

Verified by

Authorized Saignature



Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvalbellary.com

MSVAL/W/F/13/04

## NOISE LEVEL MONITORING REPORT

Test Report No : TC720720000001497F

Issue Date : 25.01.2020

1. **Name of the Client** : Suez Project Pvt Ltd, Suez India Pvt Ltd, DRS Infratech (JV)
2. **Name of The Work** : Construction of Distribution System For 24x7 Water Supply Including Services For Operation And Management For Udupi City.
3. **Name Of The Project** : KIUWMIP
4. **Sample Collected By** : MSV Analytical Laboratories, Bellary
5. **Date of Monitoring** : 20.01.2020
6. **Report Date** : 25.01.2020
7. **Particulars of Sample Collected** : Noise meter
8. **Method Adopted** : Instrument Manual Method

Method Adopted		Instrument Used		Result		
S.No	Sample Location	Time Frequency	Max. in dB(A) Leq	Min in dB(A) Leq	Avg. in dB(A) Leq	Permissible limits in dB(A) Leq
1	Near Al Ibaadah Indian School, Permpalli.	6.00AM to 6.00PM	50.6	46.2	48.4	75
2	Near Indira Nagar Church, Indira Nagar		53.2	50.1	51.7	
3	Subramanya Temple, Manchi.		48.8	44.4	46.6	
4	Near Parkala OHT, Parkala.		45.2	41.8	43.5	
5	Near Govt Polytechnic , Ananatha Nagar		45.1	51.7	48.4	
6	Near Anganawadi proposed OHT, Manipal		46.4	42.2	44.3	
7	Near Santhekatte Proposed OHT		51.2	47.8	49.5	
Night Time						
1	Near Al Ibaadah Indian School, Permpalli.	6.00PM to 6.00AM	47.8	44.4	46.1	70
2	Near Indira Nagar Church, Indira Nagar		44.2	40.5	42.1	
3	Subramanya Temple, Manchi.		40.2	36.0	38.1	
4	Near Parkala OHT, Parkala.		38.5	34.7	36.6	
5	Near Govt Polytechnic , Ananatha Nagar		35.8	31.2	33.5	
6	Near Anganawadi proposed OHT, Manipal		38.8	34.1	36.5	
7	Near Santhekatte Proposed OHT		41.2	36.9	39.1	

### INFERENCE

As per KSPCB Standards,

Report Status :- In the all locations Noise level is within the limits.

Verified by

Authorized Signature

Note: 1. The results are valid only for the tested samples & applicable parameters.

2. Water samples will be destroyed after 10 days. Filter papers & Membranes will be destroyed 6 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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# Monthly Environmental Monitoring Report

---

Project Number: 43253-027  
February 2020

IND: Karnataka Integrated Urban Water  
Management Investment Program (Tranche 2) –  
Replacement of Old Sewerage Pumping Mains for  
Mangalore City

Package No. 02MNG02

Prepared by





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## INTRODUCTION

### 1. Background

The Karnataka Integrated Urban Water Management Investment Program (KIUWMIP, the Program) aims to improve water resource management in urban areas in a holistic and sustainable manner. Investment support will be provided to modernize and expand urban water supply and sanitation (UWSS) while strengthening relevant institutions to enhance efficiency, productivity and sustainability in water use. The Program focuses on priority investments and institutional strengthening in water supply and sanitation within an integrated water resource management (IWRM) context.

The executing agency is the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and implementing agencies for the Investment Program will be respective urban local bodies (ULBs). Kundapura, Mangalore, Puttur, and Udupi are the four towns chosen to benefit from the Tranche 2 of the investment.

The expected outcome will be urban water resource management in four coastal towns (Kundapura, Mangalore, Puttur, and Udupi) improved. The outputs are (i) UWSS infrastructure expanded and upgraded; (ii) water resource planning, monitoring and service delivery improved; and (iii) project management capacity of KUIDFC and ULBs strengthened capacity. This initial environmental examination (IEE) is based on an assessment sewerage projects within the project area, i.e., Mangalore.

### 2. Existing Sewerage System in Mangalore

The first sewerage system in Mangalore was built in 1961 and was designed for an ultimate flow of 27.04 million liters per day (MLD) estimated for a design population of 200,000 of the year 1991. This scheme was implemented by Public Health Department. The total area covered by the sewerage network is about 25 km<sup>2</sup> with two sewerage districts and seven zones. Total length of sewerage network constructed was about 250 km with pipe diameter varying from 150mm to 600mm with 7,000 manholes

and eight wet wells-cum-pump houses. In 1974, Karnataka Urban Water Supply and Sewerage Board (KUWSDB) extended the sewerage networks within the existing 25 km<sup>2</sup> area by another 245 km with 8,000 units of manholes.

The second scheme was established in 2003 under the ADB funded Karnataka Urban Development and Coastal Environmental Management Project (KUDCEMP) and commissioned in 2007-2008 and the sewerage system was upgraded for an ultimate flow of 88.75MLD for a design population of 624,432.

Sewerage network extended to adjoining areas of old city and to other areas in Mangalore City Corporation (MCC) boundary covering 50.60 km<sup>2</sup>. Overall 60% of Mangalore, 75.60 km<sup>2</sup>, is covered with sewerage systems.

Mangalore city is divided into two parts as Surathkal and Mangalore, further subdivided into seven sewerage districts. Each district has one STP. The total length of sewerage network is about 360 km including 14,875 Manholes with pipe diameter varying from 150 mm to 900 mm, and 22 wetwells.

North District consists of 10 zones (complete Surathkal area) covers about 25 km<sup>2</sup>. West district consists of 6 zones (city center of Mangalore) covers 30.82 km<sup>2</sup>. South district consists of 3 zones (Jeppinamogaru, Bajal, Padil) covers 19.66 km<sup>2</sup>. East district consists of 1 zone (Pachanady, Bondel and Shakatinagara) covers 18.78 km<sup>2</sup>.

**Table 1: Salient Features of Existing Sewerage System in Mangalore**

Location	12°87'N Latitude 74°88'E Longitude
Area	132.45 km <sup>2</sup>
Population 2011	488,487
Number of households	115,036
Road length	1,134 km
Projected population for the year 2016	554,183
Projected population for the year 2031	756,903
Projected population for the year 2046	1,033,778
<b>Existing Underground Drainage (1961 Scheme) by Public Health Department</b>	
Underground drainage Network	250 km (diameter varying from 150 mm to 750 mm) Sewers of stoneware pipes
Total Number of Manholes	8000
Total Number of Wet Wells	8
Total area covered	25 km <sup>2</sup>
Designed Population	2,00,000 for the year 1991
<b>Extension of Underground drainage system (1974) by KUWSDB and MCC</b>	
Underground drainage Network	245 km
Total Number of Manholes	8000
<b>Underground drainage system (2005) under KUDCEMP by KUIDFC</b>	
No. of Sewerage Catchments	24
Underground drainage Network	360 km - diameter varying from 150 mm to 900 mm
Total Number of Manholes	14,815
Total Number of Wet Wells	22
Total Area Covered	70%
Designed Population	624,432
Capacity and Technology of STP	
• STP at Kavour	43.5 MLD UASB
• STP at Pachanady	8.75 MLD ASP
• STP at Bajal	20 MLD ASP
• STP at Surathkal	16 MLD ASP
Total Number of House ServiceConnections	45,000

ASP = activated sludge process, km = kilometer, KUDCEMP = Karnataka Urban Development and Coastal Environment Management Project, KUIDFC = Karnataka Urban Infrastructure Development and Finance Corporation, KUWSDB=Karnataka Urban Water Supply and Drainage Board, MCC = Mangalore City Corporation, mm = millimeter, MLD = million liters per day, STP = sewage treatment plant, km<sup>2</sup> = square kilometer, UASB = up-flow anaerobic sludge blanket.

### 3. The proposed subproject:

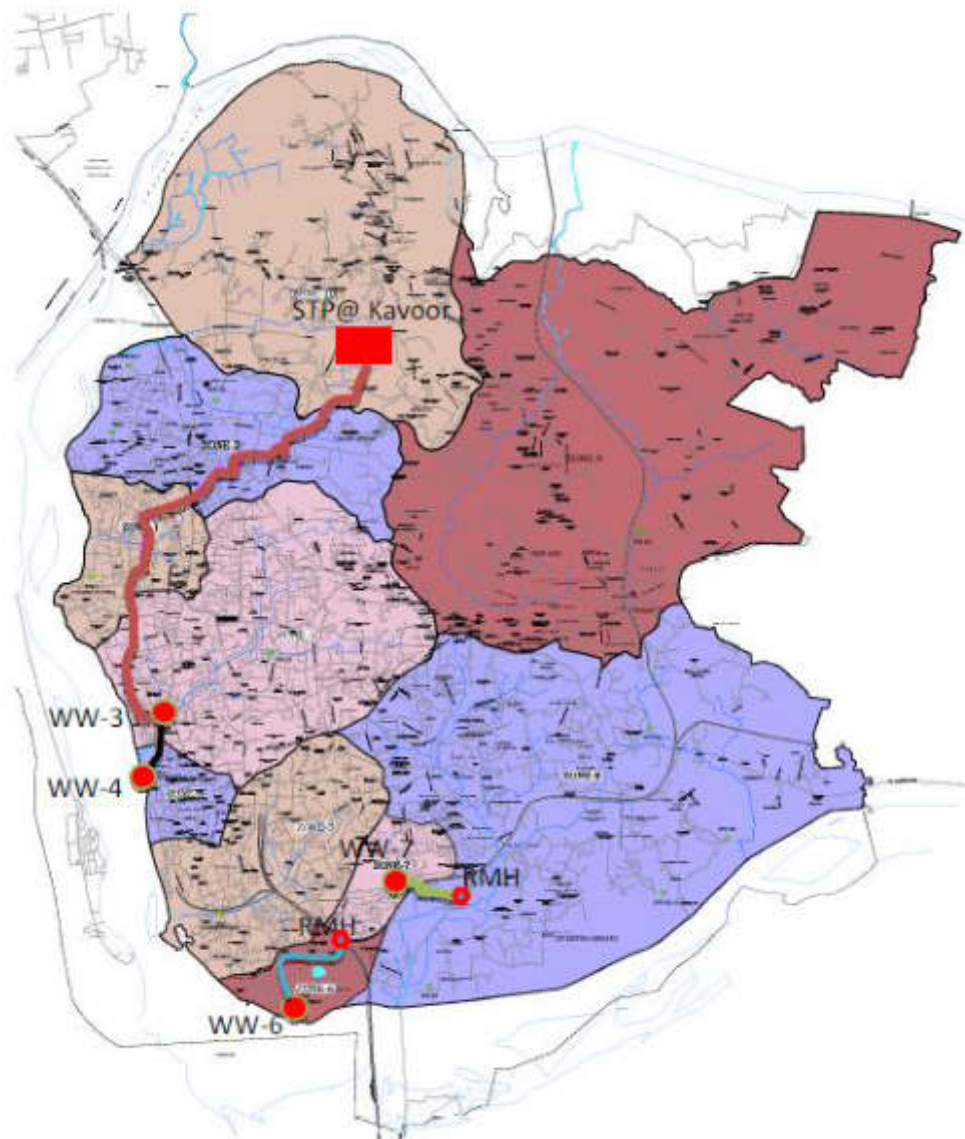
Under this subproject, it is proposed to replace existing sewage pumping mains, which are damaged, undersized and/or choked up in sewerage zones 3, 4, 6 and 7.

The subproject include providing following sewage mains:

- 7.65 kilometer (km) length 1,100 millimeter (mm) diameter sewer pumping main from Kudroli wet well no.-3 to Kavour sewage treatment plant (STP);
- 0.95 km length 900 mm diameter main from Kandathpalli wet well no.-4 to Kudroli wet well no.3;
- 1.7 km length 450 mm diameter main from Mulihitilu wet well no.-6 to Ridge Manhole near Morgans gate; and
- 1.1 km length 450 mm diameter main from JeppuBappal wet well no.7 to ridge manhole near Yekkur, inside old sewage treatment plant (STP).

includes of replacement of sewerage pumping mains from wet wells to the STP. Table 2 shows the nature and size of the various components of the subproject, based on the detailed engineering design of the subproject. Figure 1 shows the location of four proposed pumping main sections in Mangalore City.

**Figure 1 Key Plan Showing Pumping Main Alignments**





**Table 2: Proposed Subprojectand Components**

Infrastructure	Function	Description	Location
Pumping Mains	Convey the collected sewage from wet well to the STP	<p>Replacement of old pumping main of total length 11.4 km with new mains of ductile iron pipes at following section:</p> <ul style="list-style-type: none"> <li>(i) From Kudroli wet well 3 to Kavoor STP: 7.65 km length and 1,100 mm diameter</li> <li>(ii) From Kandathpalli wet well 4 to Kudroli wet well 3: 0.95 km length and 900 mm diameter</li> <li>(iii) From Mulihitlu wet well 6 to Ridge manhole near Morgans gate: 1.7 km length and 450 mm diameter</li> <li>(iv) From Jeppu Bappal wet well 7 to Ridge manhole near Yekkur, inside old STP: 1.1 km length and 450 mm diameter</li> </ul>	<p>New pumping mains will be laid along the public roads – in the vacant earthen shoulder where it is available, or in the tarmac portion, where there is no vacant land. New pipeline will be mostly laid adjacent to the existing ones which are currently in operation:</p> <p>Road width varies from 3.5 m to 8 m. List of roads and alignment details of each pipeline section is provided in Table 11.</p>

km = kilometer, mm = millimeter, STP = sewage treatment plant.

#### 4. Environmental Management Plan

An environmental management plan (EMP) is included as part of this IEE, which includes: (i) mitigation measures for environmental impacts during implementation; (ii) an environmental monitoring program, and the responsible entities for mitigating, monitoring, and reporting; (iii) public consultation and information disclosure; and (iv) a grievance redress mechanism. A number of impacts and their significance have already been reduced by amending the designs.

<b>Karnataka Integrated Urban Water Management Investment Program</b>	
<b>Name of the Work:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2) – Replacement of Old Sewerage Pumping Mains for Mangalore City	<b>Name of the Contractor:</b> DRS Infra Tech Pvt, Ltd.,
<b>Package No:</b> Karnataka Integrated Urban Water Management Investment Program (Tranche 2)	
<b>Name of the city :</b> Mangalore	<b>Name of SE/EE/AE Of concerned division PIU :-</b> AE - Mr. Shiv Kumar
<b>Date of monitoring:</b> 29/02/2020	<b>Name of Environment, Health And Safety (EHS) Engineer :-</b> Mr. Madukar

**Status of implementation of Environmental Management Plan for Anticipated Impacts –Construction– Mangalore**

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Construction Impacts	<ul style="list-style-type: none"> <li>Impacts due to excess excavated earth, excess construction materials, solid waste etc.; and</li> <li>Occupational hazards which can occur to workers and public during work.</li> </ul>	<p>Prepare and submit a Method Statement for pumping main pipeline works in a table format with appended site layout map and cover the following:</p> <ol style="list-style-type: none"> <li>Work description; No. of workers (skilled and unskilled); Details of Plant, equipment and machinery, vehicles;</li> <li>Work duration (total, and activity-wise, for example for pipe laying, from excavation to road resurfacing/testing);</li> <li>Personal Protection Equipment (PPE) (helmet, gloves, boots, etc.) details for each type of work;</li> <li>Details of materials at each site (type and quantity);</li> </ol>	Construction Contractor	<ul style="list-style-type: none"> <li>Site inspection and record verification; - Done.</li> <li>Appointment of Environmental, Health and Safety (EHS) Engineer by contractor prior to start of work - Done</li> <li>Site specific Occupational Health and Safety (OHS) plan;</li> <li>Spoil and waste management plan; and</li> <li>Complaints from sensitive receptors and public.</li> </ul>	Good construction practice to be followed by contractor – no additional costs	<ol style="list-style-type: none"> <li>Maintaining daily work records <b>Attached in Jan 2020 annexure 5 a &amp; b</b></li> <li>Complied. <b>Attached in Sep 2019 annexure 3</b></li> <li>Complied and PPEs are provided to workers on site. <b>Attached in annexure Sep 2019 1.v</b></li> <li>Contractor maintained registers for</li> </ol>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>5. Risks/hazards associated with the work (for example, Trench excavation will have risks such as trench collapse, persons/vehicles falling into trench, structural risk to nearby buildings, damage to buildings, infrastructure etc.);</p> <p>6. Construction waste/debris generated (details and quantity);</p> <p>7. Detail the sequence of work process (step-by- step) including specific details of each work;</p> <p>8. Contractor's supervision and management arrangements for the work; Emergency: Designate (i) Responsible person on site, and (ii) first aider; and (iii) Typical site layout plan including pipe trenching, placement of material, excavated earth, barricading, etc.</p> <p>9. The pumping main lines are to be laid along the roads, Roads are provided with side drains to carry rain water. The excavated soil, placed along the trench may get disturbed due to wind, rain water and the movement of</p>				<p>pumping main sites and recommended to maintain for each site</p> <p>5. Building and infrastructure were not found near excavation area. And instructed contracting agency to put hard barricades.</p> <p>6. Contractor maintained register for damaged infrastructure. Attached as <b>Annexure-11</b> in <b>May - 2019 report</b>. Recommended contracting agency to Updated work record monthly</p> <p>7. Not complied. Work plan has to be prepared.</p> <p>8. Not Complied. First aider not</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>workers, vehicles and pedestrians, and spill onto road way – disturbing road users, creating dust, road safety issues, etc., and also into nearby open drains.</p> <p><b>The following should be included in the site layout plan:</b></p> <ul style="list-style-type: none"> <li>a) Provide barricading/security personnel at the site to prevent entry/trespassing of pedestrian/vehicles into the work zone;</li> <li>b) Location of temporary stockpiles and provision of bunds;</li> <li>c) Separation of stockpiles areas with workers/vehicle movement paths to avoid disturbing the stockpiled soil;</li> <li>d) Wetting of soil to arrest dust generation by sprinkling water; and</li> <li>e) Waste/surplus soil utilization and disposal plan – indicate expected duration of temporary stockpiling along the trench at each site and identify final surplus soil utilization/disposal site in consultation with program implementation unit (PIU).</li> </ul>				<p>provided.</p> <p>9. Typical site layout plan not prepared</p> <p>a) Barricading and security personals are provided on working site.</p> <p>b) Contractor is dumping surplus soil in the Pachanady Solid waste management with permission of PIU.</p> <p>c) Contractor is dumping surplus soil in the Pachanady Solid waste management.</p> <p>d) Complied.</p> <p>e) Site layout plan Not prepared as per given mitigation Measures.</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Utilities	Disturbance/ damage to existing utilities on the sites  (Telephone lines, electric poles and wires, water lines within proposed project sites)	<p>10. At least two-weeks prior to start of work at any section, Identify utilities that will be required to be temporarily disturbed / shifted for the construction work;</p> <p>11. Liaise with the respective utility department, provide prior information to the affected public and restore the utilities as soon as the work is complete</p> <p>12. Provide contingency services where required (temporary diversion of drains, provision of water supply by tankers, etc.,)</p> <p>13. Coordinate with the respective department and ensure that</p>	Construction Contractor and PIU	<p>Section-wise list of utilities to be shifted / disturbed to be submitted to PIU two-weeks prior to start of work at that section along with a plan to shift and contingency steps to be taken</p> <p>Record to confirm that contingency services are provided and all damaged utilities are restored after the work</p>	Part of project cost	<p>10 Complied-Recommended Contractor to maintain list of utilities identified prior to start of work at any section.</p> <p><b>11</b> Proper record of restoration of the utilities and letter of communication with Different departments and Public is available and Copy should be maintained by Contractor. <b>Attached as Annexures-2, 3, 4 &amp; 5 in May - 2019 report</b></p> <p>12 Work is in progress and Recommended contractors to provide diversion of drains and provision of water tanker</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>electricity and telephone services are restored quickly</p> <p>14. Reconstruct the damaged compound walls, culverts and drains immediately after the completion of pipeline work in that particular section</p>				<p>whenever and wherever required on site.</p> <p>13 Work in progress and no such damage and restoration found in this month during site visit.</p> <p>14 Work in progress and no such damage and restoration happened in this month.</p> <p>List of identified damaged compound walls, culverts and drains for reconstruction have to be maintained. Record of before and after Condition also to be maintained at site by contractor.</p>
Construction work camps, stockpile areas, storage areas, and disposal areas	Disruption to traffic flow and sensitive areas and receptors	<p>15. Prioritize areas within or nearest possible vacant space in the subproject location;</p> <p>16. Avoid locating construction work camps close (100 m away) to residential areas;</p>	Construction Contractor	List of selected sites for construction work camp, storage area and disposal area.	Good construction practice to be followed by contractor –no additional costs	<p>15 Compiled</p> <p>16 Compiled – Advised contractor to mark dumping yard location on</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>17. Do not consider residential areas; for stockpiling the waste/surplus soil; and</p> <p>18. Material stockpiles shall be protected by bunds during the monsoon to arrest the silt laden runoff into drains.</p>		Complaints from sensitive receptors		<p>google map which is complied. <b>Attached in Sep 2019 annexure 4</b></p> <p>17 Complied- Contractor Dumping surplus soil in the Pachanady Solid waste management treatment plant. Location is marked on Google map. <b>Attached in Sep 2019 annexure 4</b></p> <p>18 Instructed contracting agency, if any stockpiles have been stored temporarily in working site must be provided by bunds or dumped in the stock yard. <b>Attached in Jan 2020 in</b></p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
						<b>annexure 4</b>
Source of construction materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution	<p>19. Contractor should obtain material from existing mines approved/licensed by Mines and Geology Department/ Revenue Department only;</p> <p>20. Verify suitability of all material sources and obtain approval of implementing agency;</p> <p>21. No new quarry sites shall be developed for the subproject purpose; and</p> <p>22. Submit a monthly statement of construction material procured indicating material type, source and quantity.</p>	Construction Contractor	Check Sources and approval	Good construction practice to be followed by contractor –no additional costs	<p>19 Contractor obtained material from authorised agency but no supporting documents maintained by Contractor.</p> <p>20 Contractor has been recommended to maintain the Proper Documentation.</p> <p>21 Complied - No new quarry sites developed by contractor for this project</p> <p>22 Complied</p>
Air quality	Dust and emissions from construction activity may de-grade the air quality	<p>23. Consult with PIU on the designated areas for stockpiling of clay, soils, gravel, and other construction materials;</p> <p>24. Damp down exposed soil and any stockpiled on site by spraying with water when</p>	Construction Contractor	Site observations Informal Ambient air quality monitoring (4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months, parameters - SPM, RSPM, SOx, NOx)	<p>Good construction practice to be followed by contractor</p> <p>Contractor's cost – air quality monitoring (4 locations x 9 samples</p>	<p>23 Complied- Recommended contractor to maintain the copy of Document.</p> <p>24 No such exposed soil and</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>necessary during dry weather;</p> <p>25. Bring materials (aggregates, sand, etc. gravel) as and when required;</p> <p>26. Use tarpaulins to cover sand and other loose material when transported by vehicles;</p> <p>27. Stockpile sand and other loose material only in barricaded area and protect/cover by tarpaulins to avoid dust generation</p> <p>28. Clean wheels and undercarriage of vehicles prior to leaving construction site;</p> <p>29. Fit all heavy equipment and machinery with air pollution control devices which are operating correctly; ensure valid Pollution Under Control (PUC) Certificates for all vehicles and equipment used in the construction activity; and</p> <p>30. Carry out air quality monitoring.</p>			in construction x 5000 = INR 1,80,000)	<p>stockpiled were found but instructed contracting agency must spray water wherever necessary.</p> <p>25 Complied</p> <p>26 Complied</p> <p>27 Stockpile, sand and other loose material are kept in barricaded areas.</p> <p>28 Complied</p> <p>29 Not Complied.</p> <p>Recommended to Contractor to maintain Pollution under Control (PUC) Certificates for all vehicles and equipments used in the construction.</p> <p>30 Air, Noise and</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
						Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter.
Noise Level	High noisy construction activities may have adverse impacts on sensitive receptors and structures	<p>31. Plan activities in consultation with the PIU so that activities with the greatest potential to generate noise (road cutting activity) are conducted during periods of the day which will result in least disturbance;</p> <p>32. Construction work shall be limited to day light hours (6 AM to 6 PM) for all the works located within the town; Provide prior information to the local public about the work schedule;</p> <p>33. Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiselling;</p> <p>34. Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and</p>	Construction Contractor	<p>Complaints from sensitive receptors</p> <p>Site observations</p> <p>Ambient noise monitoring (day and night time / 24 hours monitoring at 4 locations, frequency – quarterly - 4 times a year, 9 times in 24 months)</p>	<p>Good construction practice to be followed by contractor</p> <p>Contractor's cost – noise level monitoring (4 locations x 9 samples in construction x 2500 = ₹90.000)</p>	<p>31 Complied.</p> <p>32 Complied.</p> <p>33 Till now such buildings are not found and will be complied when such sensitive buildings observed.</p> <p>34 However; noise will be minimized by using construction equipment by</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		35. Maintain maximum sound levels not exceeding 80 decibels (dB) when measured at a distance of 10 m or more from the vehicles				<p>using vehicle silencers.</p> <p>Recommended to fit jackhammers with noise-reducing mufflers, and portable street barriers at sensitive receptors.</p> <p>35 Air, Noise and Water monitoring tests has been conducted by Contractor on December 2019 but report yet to be submitted with PIU letter</p>
Water Quality	Impacts on surface drainage and water quality due to contaminated runoff from construction areas in monsoon	<p>36. Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</p> <p>37. Stockpiles shall be provided with temporary bunds;</p>	Construction Contractor	Site observations	Good construction practice to be followed by contractor –no additional costs	<p>36 Contractor not carried out Major Construction works during monsoon season. Stockpiling of earth fill not observed during site visit.</p> <p>37 Work in progress and no such stockpiles found</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>38. Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with Implementing Agency on designated disposal areas;</p> <p>39. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</p> <p>40. Place storage areas for fuels and lubricants away from any drainage leading to water bodies. Storage structure should consider 110% capacity bund;</p> <p>41. Dispose any wastes generated by construction activities in designated sites; and,</p> <p>42. Ensure that there is no spill over of excavated earth, construction materials like cement concrete into the drain near wet well no. 3; also ensure that the drain flow</p>				<p>on work site.</p> <p>38 Complied- Contractor Dumping surplus soil in the Pachanady Solid waste management treatment plant</p> <p>39 NA - Surface water bodies not observed along the Project alignment.</p> <p>40 Complied. Contractor not using fuels and lubricants in bulk. Whenever required fuel used on particular day onsite. But instructed contracting agency to provide storage yard if fuel stored in bulk.</p> <p>41 Complied Followed by contracting</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		is not blocked / disturbed during the work				agency  42 Complied  Followed by contracting agency
Landscape and aesthetics	Impacts on landscape and aesthetics due to construction activity	<p>43. Manage surplus soil, construction debris and solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>44. Coordinate with PIU / MCC for beneficial uses of road debris and surplus soils in on-going construction works or for temporary storage for future use or disposal in landfill</p> <p>45. In unavoidable case of disposal, debris shall be disposed at landfill site or site approved by PIU / MCC; waste shall not be disposed in the forest areas and in or near water bodies/ rivers;</p> <p>46. Prepare and implement Waste Management Plan – it should present how the surplus waste generated will temporarily stocked at the site, transported, reused and disposed properly;</p> <p>47. Surplus soil and debris from work</p>	Construction Contractor	<p>Work site inspection</p> <p>Complaints from public</p>	Good construction practice to be followed by contractor – no additional costs	<p>43 Complied</p> <p>44 Complied-disposed in the Pachanady Solid waste management treatment plant</p> <p>45 No such activities observed at the time of inspection</p> <p>46 Partially Complied-Waste Management Plan prepared by contractor needs to be updated.</p> <p>47 Complied</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>site shall be removed / cleared at the end of each day of work; there shall be no stock piling of debris / surplus soil at the site</p> <p>48. Recover used oil and lubricants and reuse or remove from the sites;</p> <p>49. Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p>50. Request program implementation unit (PIU)/ project management, design and construction supervision consultant (PMDSC) to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>				<p>Followed by contracting agency</p> <p>48 Complied</p> <p>49 Complied</p> <p>50 Construction work is in progress.</p>
Construction works	Hindrance to traffic movement / accessibility	<p>51. Plan pipeline work in consultation with the traffic police; Prepare a Traffic Management Plan – a template is provided for reference at Appendix 8.</p> <p>52. Strictly follow the pipe laying method presented in Table 13 so that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time</p> <p>53. Provide for immediate consolidation of backfilling material to desired compaction – this will allow immediate road restoration and therefore will</p>	Construction Contractor	Work Program Review	Good construction practice to be followed	<p>51 Traffic Management Plan prepared by Contractor and it needs to be updated again.</p> <p>52 Complied</p> <p>53 Complied.</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>minimise disturbance to the traffic movement;</p> <p>54. Do not close the road completely, ensure that work is conducted onto edge of the road; allow traffic to move on one line;</p> <p>55. In narrow roads with considerable traffic (Jama Masjid- Road, Ashok Nagara road, and old port / Kandathapalli Road), work shall be undertaken between two intersections and diverting traffic in that section to a parallel road, so that through traffic is not blocked fully.</p> <p>56. In some sections on Jama Masjid- Road, Old Port Road and Kandathapalli Road there are no parallel roads to divert traffic; in those sections work shall be conducted in the nights or in low traffic hours in day time; but in case of day-time work traffic shall not be blocked for more than 2-3 hours at a stretch; prior information shall be provided to public – a week before and a day before work, about the schedule of the work and temporary road closure; proper signage shall be provided</p> <p>57. Maintain safe pedestrian access at all times to the houses along the work site</p> <p>58. At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name,</p>				<p>54 Complied.</p> <p>55 Complied. <b>(Attached in june 2019)</b></p> <p>56 Complied.</p> <p>Work is carried out in low traffic hours in day time and; prior information given about the schedule of the work.</p> <p>57 Complied <b>(Attached in June 2019) and</b> no such work are executing near residential areas during site visit</p> <p>58 Caution board provided at work site. Entry restriction information; competent</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		<p>cost and schedule; executing agency and contractor details; nature and schedule of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints.</p> <p>59. In densely populated areas like market place or layouts, roads with heavy traffics additional care has to be taken.</p> <p>60. Hard barricades should be mandatorily provided along with caution board and traffic diversion boards. Some of the densely populated area identified in project area are Old Port Road, Jeppubappal to Suterpete</p>				<p>official's name and contact for public complaints provided. Recommended all sign board must be Retro reflective <b>(Attached in Sep 2019 annexure 4 g, h, i, j, k and l)</b></p> <p>59 Respective Engineers present on the site for continuous monitoring</p> <p>60 Traffic diversion boards, hard barricading and Caution boards provided. Recommended all sign board must be Retro reflective <b>(Attached in Sep 2019 annexure 4 g, h, i, j, k and l)</b></p>
Nuisance/ disturbance to sensitive areas	Schools, hospitals and religious places) due construction work in the proximity (within 250 m	<p>61. No material should be stocked in this area; material shall be brought to the site as and when required</p> <p>62. Conduct work manually with</p>	Construction Contractor	Complaints from sensitive receptors  Work program	Good construction practice to be followed by contractor – no	61 Complied  Followed by contracting



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
	of such place)	<p>small group of workers and less noise; minimize use of equipment and vehicles</p> <p>63. No work should be conducted near the religious places during religious congregations</p> <p>64. Material transport to the site should be arranged considering school timings; material should be in place before school starts;</p> <p>65. Notify concerned schools, hospitals, etc. 2 weeks prior to the work; conduct a 30 minutes awareness program at on nature of work, likely disturbances and risks and construction work, mitigation measures in place, entry restrictions and dos and don'ts Implement all measures suggested elsewhere in this report – dust and noise control, public safety, traffic management, strictly at the sites.</p>			additional costs	<p>agency</p> <p>62 Complied</p> <p>Followed by contracting agency</p> <p>63 Followed by contracting agency</p> <p>64 Complied</p> <p>Followed by contracting agency</p> <p>65 Complied – Recommended to maintain documentary Evidence</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Socio-Economic-Livelihood Impediment of access to houses and business	Impediment of access to houses and business	66. Leave space for access between mounds of excavated soil, where required	Construction Contractor	<ul style="list-style-type: none"> <li>• Number of walkways, wooden planks and foot bridges;</li> <li>• Complaints from public;</li> <li>• Spoil Management Plan; and</li> <li>• Traffic Management plan.</li> </ul>	Good construction practice to be followed by contractor – no additional costs	66 Complied.
		67. Provide wooden planks/footbridges for pedestrians and metal sheets for vehicles to allow access across trenches to premises where required.				67 Complied – access provided by contractor. <b>(Attached in june 2019 )</b>
		68. Consult affected business people to inform them in advance when work will occur				68 Complied - Public Consultation were conducted for the affected people to provide prior information about the work.
		69. Address livelihood issues, if any; implement the Resettlement Plan to address these issues				69 Complied implementation Resettlement Plan to address these issues in progress <b>(Attached in June 2019)</b>
		70. Provide sign/caution/warning boards at work site indicating work schedule and traffic information; prevent public entry into work sites through barricading and security; and				70 Complied -

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		<p>71. Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p> <p>72. Prepare a Traffic Management Plan – a template is provided for reference at Appendix 8. The site-specific traffic management plan should be part of the Construction Management Plan.</p>				<p>Traffic diversion boards, Hard barricading and Caution boards provided(<b>Attached in June 2019</b>) work schedule not provided.</p> <p>71 Complied. Recommended all project information board and sign board must be Retro reflective (<b>Attached in annexure 4 g, h, i, j, k and l</b>)</p> <p>72 Site-Specific Traffic Management Plan Prepared by contractor is not adequate and to get it updated again. <b>Recommended to comply (Attached in June 2019)</b></p>
Socio-Economic Employment	Impact on local employment generation	73. Employ local labour force to the maximum extent, if manpower is available	Construction Contractor	Employment Records Compliance to labour laws	NA	73 Complied
Occupational Health and Safety	Workers occupational health and safety	74. Develop and implement site-specific Health and Safety (H&S) Plan which will include measures such as: (a) excluding public from the	Construction Contractor	Site specific OHSEquipped first aid station.	Good construction practice to be followed by contractor – no	74 Complied Site-specific Health and Safety (H&S) Plan prepared by

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		<p>site; (b) ensuring all workers are provided with and use Personal Protective Equipment (PPE); (c) H&amp;S Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</p> <p>75. All trenches in sandy and mixed sandy soils irrespective of depth and trenches deeper than 2m (or less, if designed by the engineer) in other soils shall be protected against collapse to avoid safety risks to workers, public and nearby buildings/structures; provision has been made for well point type dewatering, sheet piling for shoring and strutting etc., precaution shall be taken at the time of execution;</p> <p>76. Take all necessary precaution during isolation and blocking of existing pumping main and connecting the new main to the existing system. Skilled supervision, appropriate apparatus and PPEs must be used;</p> <p>77. Extreme care shall be taken while working on existing sewer lines/ manholes, where they are required to be shifted, to safeguard the workers against the gaseous emissions and</p>		<p>Potable water supply and clean eating area.</p> <p>PPE and medical insurance</p>	<p>additional costs</p>	<p>contractor. Proper implementation required.</p> <p>75 Not Complied.</p> <p>76 Complied. PPEs like nose masks, oxygen masks for emergency, ear plugs and Hand gloves are provided. (<b>Attached Sep 2019 in annexure 1.v</b>)</p> <p>77 PPEs like nose masks, oxygen masks for emergency, ear plugs and Hand gloves are provided</p>



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		<p>hazardous working conditions</p> <p>78. Create awareness among all workers, supervisors and site engineers on potential hazard conditions and safety risks in working with existing/old sewer lines; working conditions may be hazardous with harmful gaseous emissions (hydrogen sulphide, carbon monoxide, methane, etc.) and oxygen deficiency;</p> <p>79. Provide all necessary personnel protection equipment; including oxygen masks for emergency use;</p> <p>80. Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p>81. Provide medical insurance coverage for workers;</p> <p>82. Secure all installations from unauthorized intrusion and</p>				<p>78 Complied</p> <p>79 Oxygen masks for emergency not provided PPEs are provided</p> <p>80 Not Complied</p> <p>81 Employees Compensation Insurances taken for 40 Unskilled and for 10 semiskilled workers</p>

Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
		accident risks; 83. Provide supplies of potable drinking water; 84. Provide clean eating areas where workers are not exposed to hazardous or noxious substances; 85. Provide H & S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;				82 Complied.
						83 Complied.
						84 Specific eating area not provided.
						85 Safety and Tool box meeting conducted. (Attached in Sep 2019 annexure 1.u)
		86. Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;				86 Not Complied
		87. Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;				87 Complied.
		88. Ensure moving equipment is outfitted with audible back-up alarms;				88 Compiled
		89. Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.				89 Not Complied.
		90. Signage shall be in accordance				90 Signage are

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		<p>with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate;</p> <p>91. Disallow worker exposure to noise level greater than 85 dB for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively; and</p> <p>92. Overall, the contractor should comply with IFC EHS Guidelines on Occupational Health and Safety (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2BAnd%2BSafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2BAnd%2BSafety.pdf?MOD=AJPERES</a>).</p>				<p>Provided but not in accordance with international standards</p> <p>91. Duration of working hours- 8 hours per day. Hearing protection is provided by contractor. <b>(Attached in Sep 2019 annexure 1.v)</b></p> <p>92. Not Complied</p>
Community Health and Safety	Danger due to deep excavations, hindrance to traffic and chances of accident,	<p>93. All trenches in sandy and mixed sandy soils irrespective of depth, and trenches deeper than 2m (or less, if desired by engineer) shall be protected against collapse to avoid safety risks to workers, public and nearby buildings/structures; provision has been made for well point type dewatering, sheet piling for shoring and strutting etc., precaution shall be taken at the time of execution;</p> <p>94. Plan material and waste routes to avoid times of peak-</p>	Construction Contractor	<ul style="list-style-type: none"> <li>Traffic Management Plan</li> <li>Complaints from public</li> </ul>	Good construction practice to be followed by contractor – no additional costs	<p><b>93 Traffic Management Plan submitted by contractor is not sufficient and it needs updation.</b></p> <p>No such deep trench found during site visit but instructed contracting agency to Provide sheet piling for shoring and strutting if depth is more than 2m.</p> <p>94 Partially</p>

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		<p>pedestrian activities;</p> <p>95. One week prior to start of work at any section, a joint inspection shall be conducted along with PIU and MCC to identify risk areas and buildings and take necessary precautions for safe conduct of work;</p> <p>96. Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p> <p>97. Provide road signs and flag persons to warn of dangerous conditions, for all the sites along the roads; and</p> <p>98. Overall, the contractor should comply with IFC EHS Guidelines Community Health and Safety (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2BCommunity%2Bhealth%2Band%2BSafety.pdf?MOD=AJPERES">http://www1.ifc.org/wps/wcm/connect/dd673400488559ae83c4d36a6515bb18/3%2BCommunity%2Bhealth%2Band%2BSafety.pdf?MOD=AJPERES</a>).</p>				<p>Complied – waste management plan not prepared</p> <p>95 Complied. Joint inspection conducted along with PIU and MCC to identify risk areas and buildings to take necessary precautions <b>but not maintained record of joint inspection.</b></p> <p>96 Complied</p> <p>97 Complied Followed by contracting agency</p> <p>98 Contractor Not Complied with IFC EHS Guidelines Community Health and Safety Recommended and attached as</p>



Field	Anticipated Impact	Mitigation Measures	Responsible for Implementation	Monitoring of Mitigation	Cost and Source of Fund	Status of Implementation
Worker Camps	Temporary worker camps	<p>99 The contractor should operate the temporary worker camps in compliance with IFC EHS Guidelines specific to workers accommodation (this can be downloaded from <a href="http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_gpn_workers_accommodation">http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_gpn_workers_accommodation</a>), including the following:</p> <p>100 Consult with PIU before locating workers camps/sheds, and construction plants; as far as possible located within reasonable distance of work site;</p> <p>101 Minimize removal of vegetation and disallow cutting of trees;</p> <p>102 Labour camps shall include accommodation for workers/labourers along with other basic amenities such as kitchen, potable water supply, sanitation (toilets, bathrooms, washing areas and water supply for such needs), first aid room as well as garbage collection and disposal facility.</p> <p>103 The roof height of the worker's and labour camp shall not be less than 3 m from floor level to the lowest part of the roof.</p> <p>104 The camps shall be floored with concrete, shall be kept clean, and with proper cross ventilation, and the space provided shall be on the basis of one sq.mt per head or as per the relevant</p>	Construction Contractor	<p>List of selected sites. Written consent of land owner</p> <p>Waste Management plan</p>	Good construction practice to be followed by contractor – no additional costs	<p>99. Contractor Not operating the temporary worker camps in compliance with IFC EHS Guidelines specific to workers accommodation.</p> <p>100 Complied.</p> <p>101 Complied.</p> <p>102 Proper Kitchen, bathrooms garbage room yet to be provided.</p> <p>103 Complied.</p> <p>104 Not Complied</p>

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		<p>regulation, whichever is higher.</p> <p>105 Fire and electrical safety pre-cautions shall be adhered to.</p> <p>106 Cooking, sanitation and washing areas shall be provided separately.</p> <p>107 The Contractor shall maintain necessary living accommodation and ancillary facilities (including provision of clean fuel to prevent damage to forests and to prevent fuel wood cutting and burning by labor) in functional and hygienic manner.</p> <p>108 The site must be graded and rendered free from depressions such that water does not get stagnant anywhere.</p> <p>109 The entire boundary of the site should be fenced all around with barbed wire so as to prevent the trespassing of humans and animals.</p> <p>110 Provide water and sanitation facilities; water, meeting Indian drinking water standards shall be provided, in adequate quantities (supply of 60- 80 lpcd); all water storage structures must be cleaned regularly and covered properly to avoid any contamination;</p> <p>111 Provide separate facilities for men and women; sanitary facilities shall be properly build and well maintained; toilet and bath facilities should be provided on basis of 1 per 15 or less persons;</p>				<p>105. Not Complied.</p> <p>106. Separate Cooking area yet to be provided by Contractor. Washing area is not proper as per the stipulated norms.</p> <p>107. Partially Complied</p> <p>108. Such depressions not found during site visit</p> <p>109. Not complied.</p> <p>110. Complied.</p> <p>111. Complied.</p>

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		<p>112 Train employees in the storage and handling of materials which can potentially cause soil contamination;</p> <p>113 Recover used oil and lubricants and reuse or remove from the site;</p> <p>114 Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>115 Remove all wreckage, rubbish, or temporary structures which are no longer required; and</p> <p>116 Report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.</p>				<p>112. Complied.</p> <p>113. Reused.</p> <p>114. Complied.</p> <p>115. Complied.</p> <p>116. Work is in progress.</p>