

Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

### TEST REPORT

**ISSUED TO:** M/s. BIRLA CARBON INDIA PRIVATE LIMITED. **REPORT NO. :** UT/ELS/REPORT/3S14/05-2021  
**Unit:** "Patalaganga" **ISSUE DATE :** 27/05/2021  
**Village:** Lohop, Talvali, Patalganga, Tal.: Khalapur, **YOUR REF. :** 1300022569  
**Dist:** Raigad-410207, Maharashtra, India **REF. DATE :** 27/04/2021

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No. : 28-05/2021  
Date of Monitoring : 19/05/2021  
Ambient Temperature : 30.0 °C  
Wind Speed : 0.5 m/s  
Noise Source Details : D. G. Set of Capacity 250 KVA (River Side) with Acoustic Enclosure Mounted on Reinforced Concrete Cement Base

**SOURCE NOISE LEVEL QUALITY MONITORING**  
Sample Lab Code : UT/ELS/245/05-2021  
Survey Done By : ULTRATECH  
Relative Humidity : 48.0 %  
Weather Condition : Clear

**Make:** Kirlosker., **Model No.:** 250 DWS/2009/1694, **Sr. No.:** 8000002087-2092  
**Dimensions of D. G. Set:** 4.5 meter X 1.7 Meter X 2.5 Meter (L X B X H)  
**Fuel Used:** Diesel, **Fuel Consumption:** 25 liter/hours.

Sr. No.	Location	Noise Level Reading in dB(A)
1	Measurement Point No. 01 (in front of Northern Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.2
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	81.3
2	Measurement Point No. 02 (in front of Northern Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.2
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	82.0
3	Measurement Point No. 03 (in front of Western Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.0
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	83.1
4	Measurement Point No. 04 (in front of Southern Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.8
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	84.0
5	Measurement Point No. 05 (in front of Southern Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.2
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	81.2
6	Measurement Point No. 06 (in front of Eastern Face of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.9
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	82.1
7	Measurement Point No. 07 (On top of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.0
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	83.0
8	Measurement Point No. 08 (On top of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.9
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	82.3
9	Measurement Point No. 09 (in front of North-Eastern Corner of D. G. Set)	
	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.8



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**Unit:** "Patalaganga" **ISSUE DATE :** 27/05/2021  
**Village:** Lohop, Talvali, Patalganga, Tal.: Khalapur, **YOUR REF. :** 1300022569  
**Dist:** Raigad-410207, Maharashtra, India **REF. DATE :** 27/04/2021

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No. : 28-05/2021  
Date of Monitoring : 19/05/2021  
Ambient Temperature : 30.0 °C  
Wind Speed : 0.5 m/s  
Noise Source Details : D. G. Set of Capacity 250 KVA (River Side) with Acoustic Enclosure Mounted on Reinforced Concrete Cement Base  
**SOURCE NOISE LEVEL QUALITY MONITORING**  
Sample Lab Code : UT/ELS/245/05-2021  
Survey Done By : ULTRATECH  
Relative Humidity : 48.0 %  
Weather Condition : Clear  
Make: Kirlosker, Model No.: 250 DWS/2009/1694, Sr. No.: 8000002087-2092  
Dimensions of D. G. Set: 4.5 meter X 1.7 Meter X 2.5 Meter (L X B X H)  
Fuel Used: Diesel, Fuel Consumption: 25 liter/hours.

Sr. No.	Location	Noise Level Reading in dB(A)
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	81.6
	Measurement Point No. 10 (in front of North-Western Corner of D. G. Set)	
10	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	93.3
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	82.1
	Measurement Point No. 11 (in front of South-Western Corner of D. G. Set)	
11	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.2
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	83.3
	Measurement Point No. 12 (in front of South-Eastern Corner of D. G. Set)	
12	iii. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Opened)	94.4
	iv. At 0.5 meter distance from D. G. Set (When Acoustic Room Is Closed)	84.0
Average Noise Level of D. G. Set under study at 0.5 meter distance - While Acoustic Room opened		93.9
Average Noise Level of D. G. Set under study at 0.5 meter distance - While Acoustic Room closed		82.6

**Opinions / Interpretations:** The insertion loss of 11.3 dB(A) achieved at a distance 0.5 meter away from an Acoustic Room resulting in source noise level being reduced to 82.6 dB(A) from 93.9 dB(A) due to acoustic effect of a room which do not comply with standard requirement. [Refer Noise Limit for Generator Sets run with Diesel were notified by Environment (Protection) second Amendment Rules vide GSR 371(E), dated 17th May 2002 at serial no.94 and its amendments under the Environment (Protection) Act, 1986].

**Note:** 1. Monitoring area coming under Industrial Area.  
2. Reference parallelepiped method is used to measure noise level, detailed description of location and measurement points is presented in schematic diagram as Annexure-II

Sampling Equipment Details	Instrument Used	Make & Model	Calibration Status
	Sound Level Meter	Make - 3M SOLUTIONS; Model - SE-402 CLASS 2, Sr. No. SE40210809	Valid up to - 30/12/2021

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For ULTRATECH,

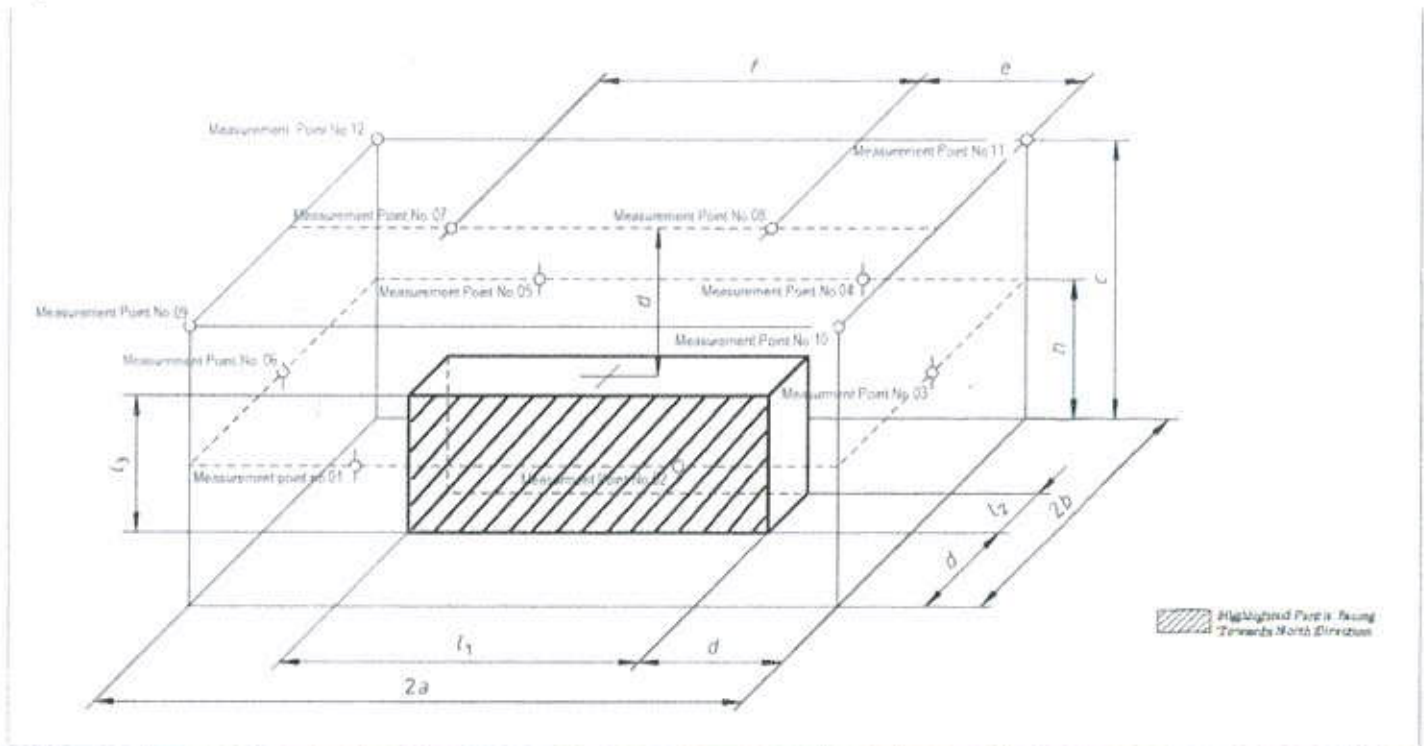


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## ANNEXURE-III

### DETAILED DESCRIPTION OF LOCATION AND MEASUREMENT POINTS



Dimensions of D. G. Set:  $L \times B \times H \sim l_1 \times l_2 \times l_3 = 4.5 \text{ meter} \times 1.7 \text{ Meter} \times 2.5 \text{ Meter}$

Distance in meter at measurement done from acoustic enclosure (d) in meters	Calculation of Dimension of Reference Parallelepiped & placement of Measurement points in meters			
	Length of Parallelepiped $(2a) = 2 \times \left[ \left( \frac{l_1}{2} \right) + d \right]$	Breadth of Parallelepiped $(2b) = 2 \times \left[ \left( \frac{l_2}{2} \right) + d \right]$	Height of Parallelepiped (c) = $l_3 + d$	Height of Measurement Point(h) = $\frac{c}{2}$
0.5	6.5	3.7	3.5	1.75



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## TEST REPORT

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**Unit:** "Patalaganga" **ISSUE DATE :** 27/05/2021  
**Village:** Lohop, Talvali, Patalganga, Tal.: Khalapur, **YOUR REF. :** 1300022569  
**Dist.:** Raigad-410207, Maharashtra, India **REF. DATE :** 27/04/2021

**SAMPLE PARTICULARS :**  
**Sampling Plan Ref. No. :** 28-05/2021  
**Sample Registration Date :** 20/05/2021  
**Date & Time of Sampling :** 19/05/2021 at 12:53Hrs  
**Analysis Starting Date :** 20/05/2021  
**Analysis Completion Date :** 26/05/2021  
**Sample Collected By :** ULTRA TECH  
**Sample Lab Code :** UT/ELS/237/05-2021

**WASTE WATER SAMPLE ANALYSIS**  
**Sample Type :** Untreated Effluent  
**Sample Location :** At Collection Tank  
**Sample Quantity & Packing Details :** 1L in Wide Mouth Glass Bottle for Oil and Grease, 500ml In Plastic Container for COD and 2L In Plastic Container for other parameters

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	pH	IS 3025 (Part 11) : 1983	8.7	-
2.	Temperature	IS 3025 (Part 09) : 1984	28.4	°C
3.	Total Dissolved Solids	IS 3025 (Part 16) : 1984	440	mg/L
4.	Total Suspended Solids	IS 3025 (Part 17) : 1984	61	mg/L
5.	Oil & Grease	IS 3025 (Part 39) : 1991	4	mg/L
6.	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44) : 1993	79	mg/L
7.	Chemical Oxygen Demand	IS 3025 (Part 58) : 2006	296	mg/L
8.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	APHA 23rdEd. 4500- SO42- E	23	mg/L
9.	Chlorides as Cl <sup>-</sup>	IS 3025 (Part 32) : 1988	391	mg/L
10.	Zinc as Zn	IS: 3025 (Part 49) : 1994	BDL[DL=0.03]	mg/L
11.	Copper as Cu	IS: 3025 (Part 42) : 1992	BDL[DL=0.03]	mg/L
12.	Iron as Fe	IS: 3025 (Part 53) : 2003	BDL[DL=0.09]	mg/L
13.	Phosphate as PO <sub>4</sub> <sup>3-</sup> -P	APHA 23rdEd. 4500 P D	BDL[DL=0.01]	mg/L
14.	Chromium as Cr	IS: 3025 (Part 52) : 2003	BDL[DL=0.18]	mg/L

DL- Detection Limit

BDL-Below Detection Limit

**Opinions / Interpretations:** NIL

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 4. This test report shall be referred along with Test Report No. UT/ELS/REPORT/3516/05-2021 Dated 27/05/2021 for final conclusion.

**- END OF REPORT -**

For ULTRA TECH  
  
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## TEST REPORT

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Unit: "Patalaganga" ISSUE DATE : 27/05/2021  
Village: Lohop, Talvali, Patalganga, Tal.: Khalapur, YOUR REF. : 1300022569  
Dist.: Raigad-410207, Maharashtra, India REF. DATE : 27/04/2021

SAMPLE PARTICULARS :		WASTE WATER SAMPLE ANALYSIS	
Sampling Plan Ref. No.	: 28-05/2021	Sample Type	: Untreated Effluent
Sample Registration Date	: 20/05/2021	Sample Location	: At Collection Tank
Date & Time of Sampling	: 19/05/2021 at 12:53Hrs		
Analysis Starting Date	: 20/05/2021		
Analysis Completion Date	: 26/05/2021	Sample Quantity &	: 2L In Plastic Container
Sample Collected By	: ULTRA TECH	Packing Details	
Sample Lab Code	: UT/ELS/237/05-2021		

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	Residual Chlorine	IS: 3025 (Part 26) : 1986	BDL [DL=0.1]	mg/L
DL- Detection Limit			BDL-Below Detection Limit	

Opinions / Interpretations: NIL

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- END OF REPORT -



For ULTRA TECH

*Bhagat*

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## TEST REPORT

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**Unit:** "Patalaganga" **ISSUE DATE :** 27/05/2021  
**Village:** Lohop, Talvali, Patalganga, Tal.: Khalapur, **YOUR REF. :** 1300022569  
**Dist:** Raigad-410207, Maharashtra, India **REF. DATE :** 27/04/2021

<b>SAMPLE PARTICULARS :</b>	<b>WASTE WATER SAMPLE ANALYSIS</b>
<b>Sampling Plan Ref. No. :</b> 28-05/2021	<b>Sample Type :</b> Treated Effluent
<b>Sample Registration Date :</b> 20/05/2021	<b>Sample Location :</b> After Carbon Filter
<b>Date &amp; Time of Sampling :</b> 19/05/2021 at 13:10Hrs	
<b>Analysis Starting Date :</b> 20/05/2021	
<b>Analysis Completion Date :</b> 26/05/2021	<b>Sample Quantity &amp; Packing Details :</b> 1L in Wide Mouth Glass Bottle for Oil and Grease, 500ml in Plastic Container for COD and 2L in Plastic Container for other parameters
<b>Sample Collected By :</b> ULTRA TECH	
<b>Sample Lab Code :</b> UT/ELS/238/05-2021	

Sr. No.	Test Parameter	Test Method	Test Result	Unit
15.	pH	IS 3025 (Part 11) : 1983	6.6	-
16.	Temperature	IS 3025 (Part 09) : 1984	28.4	°C
17.	Total Dissolved Solids	IS 3025 (Part 16) : 1984	144	mg/L
18.	Total Suspended Solids	IS 3025 (Part 17) : 1984	8	mg/L
19.	Oil & Grease	IS 3025 (Part 39) : 1991	BDL[DL=2]	mg/L
20.	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44) : 1993	10	mg/L
21.	Chemical Oxygen Demand	IS 3025 (Part 58) : 2006	40	mg/L
22.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	APHA 23rdEd. 4500- SO <sub>4</sub> <sup>2-</sup> E	31	mg/L
23.	Chlorides as Cl <sup>-</sup>	IS 3025 (Part 32) : 1988	25	mg/L
24.	Zinc as Zn	IS: 3025 (Part 49) : 1994	BDL[DL=0.03]	mg/L
25.	Copper as Cu	IS: 3025 (Part 42) : 1992	BDL[DL=0.03]	mg/L
26.	Iron as Fe	IS: 3025 (Part 53) : 2003	BDL[DL=0.09]	mg/L
27.	Phosphate as PO <sub>4</sub> <sup>3-</sup> -P	APHA 23rdEd. 4500 P D	BDL[DL=0.01]	mg/L
28.	Chromium as Cr	IS: 3025 (Part 52) : 2003	BDL[DL=0.18]	mg/L

DL- Detection Limit

BDL-Below Detection Limit

**Opinions / Interpretations:** NIL

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**- END OF REPORT -**



For ULTRA TECH

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## TEST REPORT

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Unit: "Patalaganga" ISSUE DATE : 27/05/2021  
Village: Lohop, Talvali, Patalganga, Tal.: Khalapur, YOUR REF. : 1300022569  
Dist.: Raigad-410207, Maharashtra, India REF. DATE : 27/04/2021

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No. : 28-05/2021  
Sample Registration Date : 20/05/2021  
Date & Time of Sampling : 19/05/2021 at 13:10Hrs  
Analysis Starting Date : 20/05/2021  
Analysis Completion Date : 26/05/2021  
Sample Collected By : ULTRA TECH  
Sample Lab Code : UT/ELS/238/05-2021

**WASTE WATER SAMPLE ANALYSIS**  
Sample Type : Treated Effluent  
Sample Location : After Carbon Filter  
Sample Quantity & Packing Details : 2L In Plastic Container

Sr. No.	Test Parameter	Test Method	Test Result	Unit
2.	Residual Chlorine	IS: 3025 (Part 26) : 1986	BDL [DL=0.1]	mg/L
DL- Detection Limit			BDL-Below Detection Limit	

Opinions / Interpretations: NIL

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**Unit:** "Patalaganga" **ISSUE DATE :** 27/05/2021  
**Village:** Lohop, Talvali, Patalganga, Tal.: Khalapur, **YOUR REF. :** 1300022569  
**Dist:** Raigad-410207, Maharashtra, India **REF. DATE :** 27/04/2021

**SAMPLE PARTICULARS :** **WASTE WATER SAMPLE ANALYSIS**  
**Sampling Plan Ref. No. :** 28-05/2021 **Sample Type :** Untreated Sewage  
**Sample Registration Date :** 20/05/2021 **Sample Location :** At Collection Tank  
**Date & Time of Sampling :** 19/05/2021 at 12:45Hrs  
**Analysis Starting Date :** 20/05/2021 **Sample Quantity & Packing Details :** 1L in Wide Mouth Glass Bottle for Oil and Grease and 2L in Plastic Container for other parameters.  
**Analysis Completion Date :** 24/05/2021  
**Sample Collected By :** ULTRA TECH  
**Sample Lab Code :** UT/ELS/235/05-2021

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	pH	IS 3025 (Part 11) : 1983	6.3	-
2.	Total Dissolved Solids	IS 3025 (Part 16) : 1984	211	mg/L
3.	Total Suspended Solids	IS 3025 (Part 17) : 1984	44	mg/L
4.	Oil & Grease	IS 3025 (Part 34) : 1988	BDL [DL=2]	mg/L
5.	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 39) : 1991	79	mg/L
6.	Chemical Oxygen Demand	IS 3025 (Part 43) : 1992	296	mg/L

**DL- Detection Limit** **BDL-Below Detection Limit**

**Opinions / Interpretations:** NIL

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For ULTRA TECH

*R. Shagat*

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Village: Lohop, Talvali, Patalganga, Tal.: Khalapur,  
Dist.: Raigad-410207, Maharashtra, India

**REPORT NO. :** UT/ELS/REPORT/3520/05-2021  
**ISSUE DATE :** 27/05/2021  
**YOUR REF. :** 1300022569  
**REF. DATE :** 27/04/2021

**SAMPLE PARTICULARS :**

Sampling Plan Ref. No. : 28-05/2021  
Sample Registration Date : 20/05/2021  
Date & Time of Sampling : 19/05/2021 at 12:50Hrs  
Analysis Starting Date : 20/05/2021  
Analysis Completion Date : 24/05/2021  
Sample Collected By : ULTRA TECH  
Sample Lab Code : UT/ELS/236/05-2021

**WASTE WATER SAMPLE ANALYSIS**

Sample Type : Treated Sewage  
Sample Location : After Carbon Filter

Sample Quantity & Packing Details : 1L in Wide Mouth Glass Bottle for Oil and Grease and 2L in Plastic Container for other parameters.

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	pH	IS 3025 (Part 11) : 1983	6.8	-
2.	Total Dissolved Solids	IS 3025 (Part 16) : 1984	204	mg/L
3.	Total Suspended Solids	IS 3025 (Part 17) : 1984	9	mg/L
4.	Oil & Grease	IS 3025 (Part 34) : 1988	BDL[DL=2]	mg/L
5.	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 39) : 1991	5.7	mg/L
6.	Chemical Oxygen Demand	IS 3025 (Part 43) : 1992	24	mg/L

DL- Detection Limit

BDL-Below Detection Limit

**Opinions / Interpretations:** NIL

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**Sampling Plan Ref. No. :** 28-05/2021  
**Sample Registration Date :** 20/05/2021  
**Date & Time of Sampling :** 19/05/2021 at 13:20Hrs  
**Analysis Starting Date :** 20/05/2021  
**Analysis Completion Date :** 24/05/2021  
**Sample Collected By :** ULTRA TECH  
**Sample Lab Code :** UT/ELS/239/05-2021

**WASTE WATER SAMPLE ANALYSIS**

**Sample Type :** Treated Effluent  
**Sample Location :** Settling pond outlet  
**Sample Quantity & Packing Details :** 1L in Wide Mouth Glass Bottle for Oil and Grease and 2L in Plastic Container for other parameters.

Sr. No.	Test Parameter	Test Method	Test Result	Unit
1.	pH	IS 3025 (Part 11) : 1983	7.7	-
2.	Total Dissolved Solids	IS 3025 (Part 16) : 1984	265	mg/L
3.	Total Suspended Solids	IS 3025 (Part 17) : 1984	9	mg/L
4.	Oil & Grease	IS 3025 (Part 34) : 1988	BDL[DL=2]	mg/L
5.	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 39) : 1991	66	mg/L
6.	Chemical Oxygen Demand	IS 3025 (Part 43) : 1992	221	mg/L

**DL- Detection Limit****BDL-Below Detection Limit****Opinions / Interpretations: NIL**

**Note:** 1. This test report refers only to the sample tested.  
2. This test report may not be reproduced in part, without the permission of this laboratory.  
3. Any correction invalidates this test report.

**- END OF REPORT****For ULTRA TECH****(Authorized Signatory)**



सं. ११०११/३५/२००७-१५१ (१)  
२००७-०८

सं. ११०११/३५/२००७-१५१ (१)  
२००७-०८

सं. ११०११/३५/२००७-१५१ (१)

आचार्य

आचार्य

सं. ११०११/३५/२००७-१५१ (१)

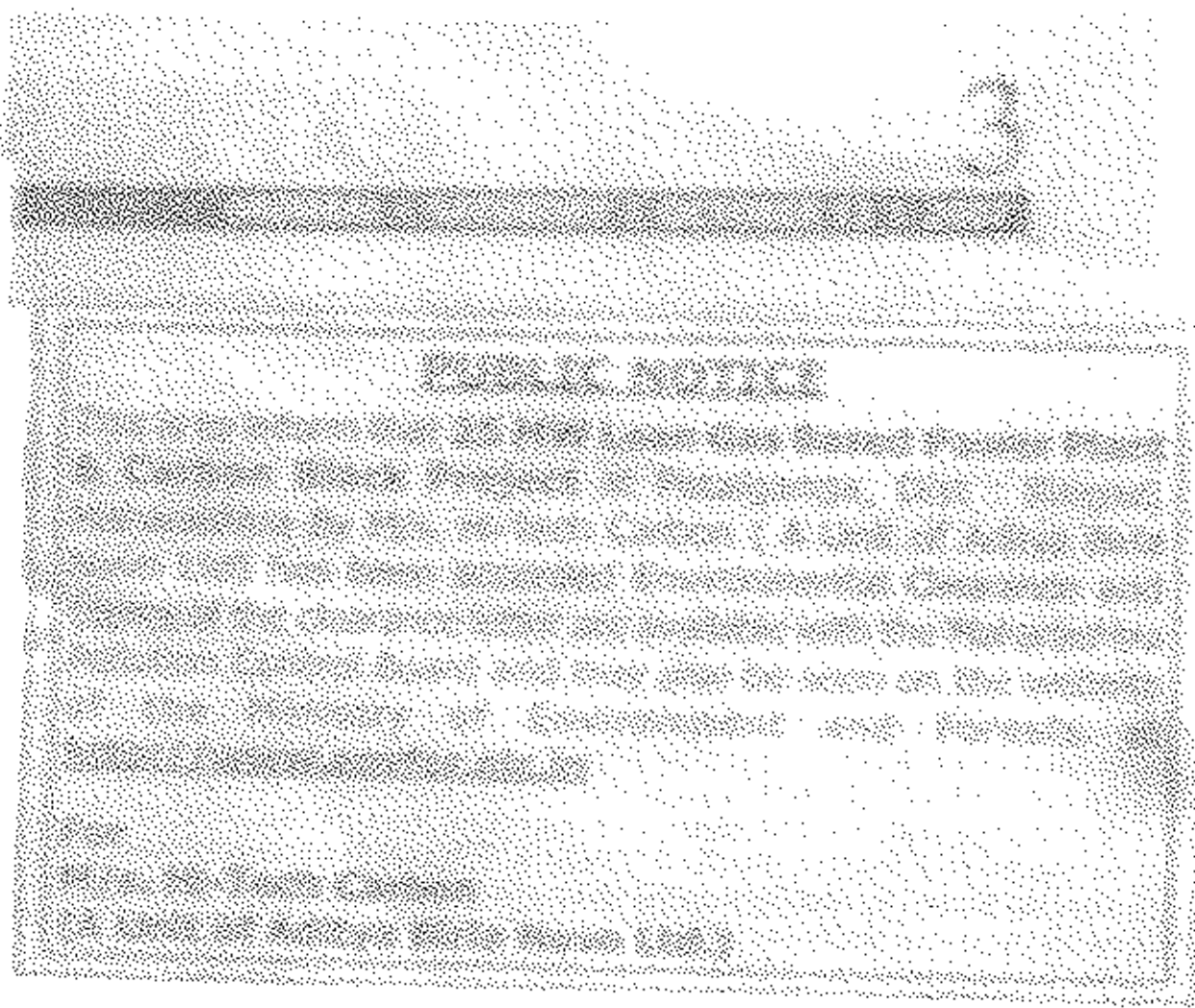
आचार्य

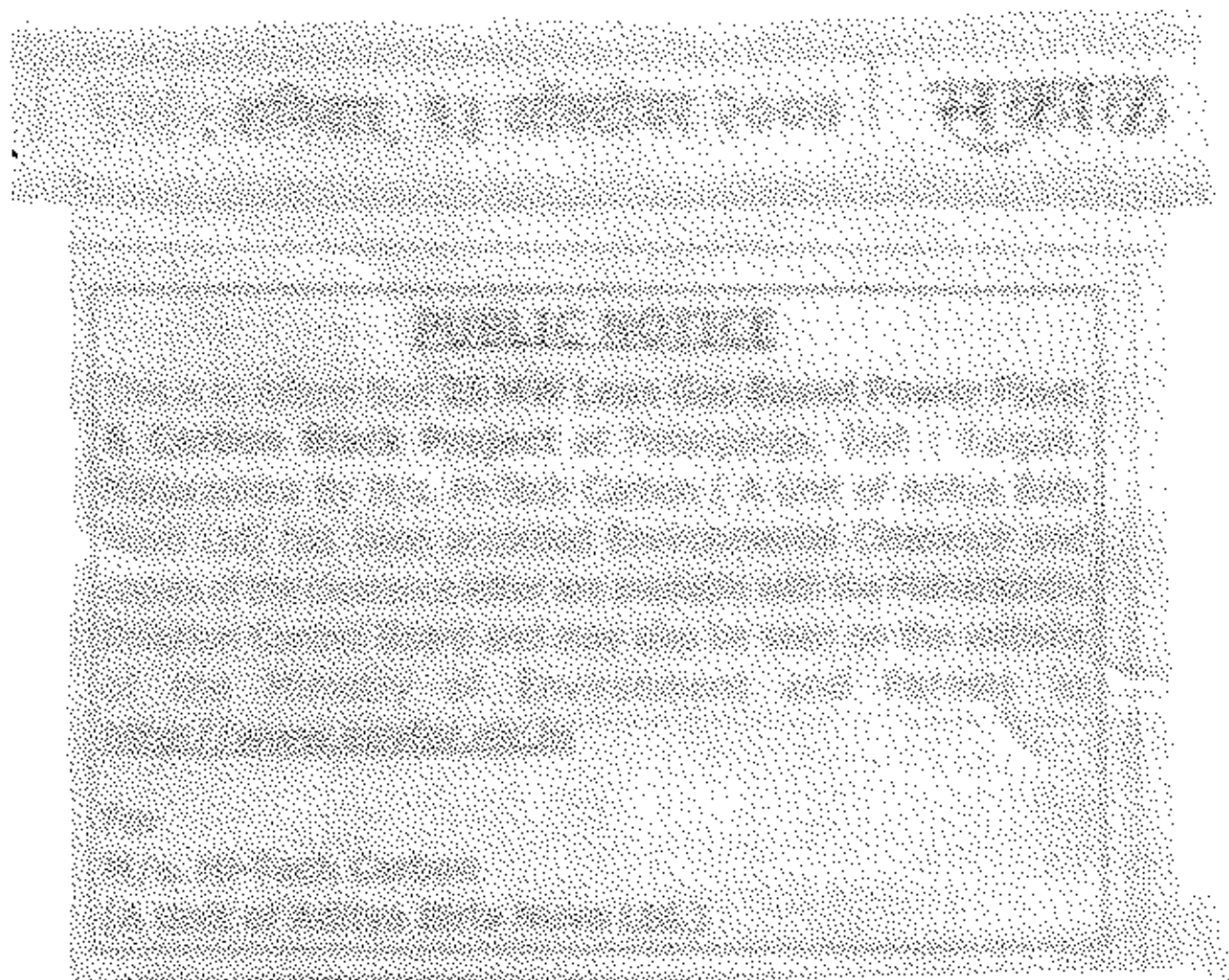
आचार्य

सं. ११०११/३५/२००७-१५१ (१)

आचार्य









## PART II

### ENVIRONMENTAL MANAGEMENT PLAN AND DISASTER MANAGEMENT PLAN

#### A. ENVIRONMENTAL MANAGEMENT PLAN:

Every plant after a commissioning phase requires a Health, Safety and Environmental Control mission to be set up with proper implementation. An organization chart covering responsibilities of various officials is formulated, reviewed periodically and updated. Being existing plant site, Environmental management planning has been already done. The details of the same are as follows:

#### ORGANISATION CHART:

- i) Location Head
- ii) Group Leader (Operations)
- iii) Group Leader (Engineering Services)
- iv) Group Leader (Environment)
- v) Group Leader (Quality Assurance)
- vi) Group Leader (Management Services)
- vii) Emergency Control Room

Environmental management plan includes following:

- 1) Operation of plants/ Facilities
  - Process water supply.
  - Waste water control system
  - Air pollution control system.
  - Solid waste management system.
- 2) Laboratory Facilities including routine monitoring.
- 3) Equipment and Instrumentation control
  - Periodic and systematic testing and control.
  - Repairing.
- 4) Data Handling
  - Data collection.
  - Reporting and storage of data
  - Maintaining track of discussions.
- 5) Disaster Planning
  - Disaster management team
  - Rescue and rehabilitation.
- 6) Manpower for Environmental management.

## **B. DISASTER MANAGEMENT PLANNING:**

Disaster Management planning includes anticipatory action for disaster, stream lining of preparedness, assembly and coordination of disaster management team and quick mobilization of all the forces to face the situation.

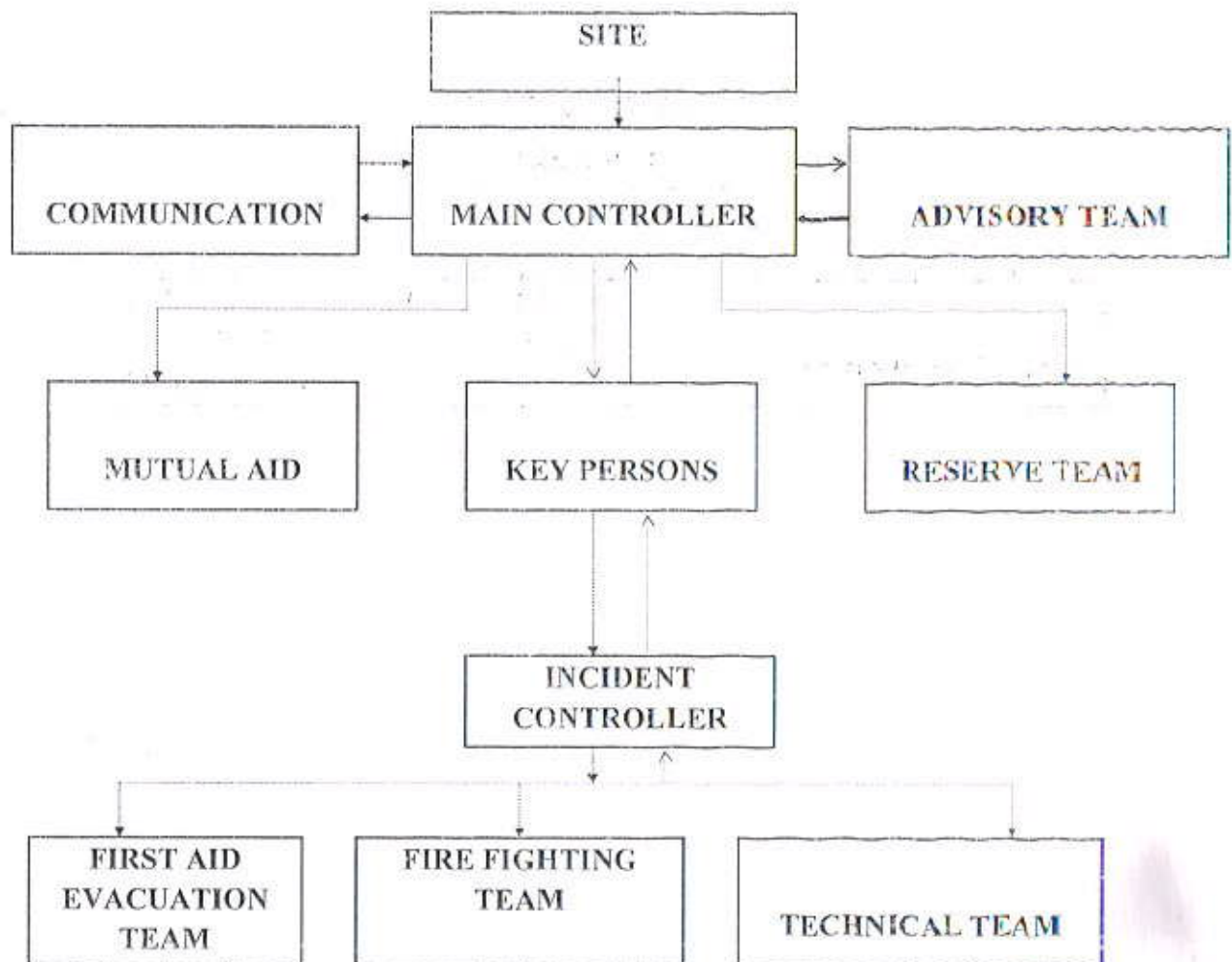
Salient features of planning are;

1. Preparation of an Organizational Chart identifying personnel to coordinate and take charge of various functions.
2. To train concerned personnel in safety measures required in event of disaster.
3. To identify communication link that can be established with local and state authorities to meet the challenges of disaster and to ensure reliability of communication system.
4. Identify nearby industries to muster help in case of emergency.
5. To ensure adequacy and efficiency of fire fighting system.
6. To ensure that necessary applications like boots, gas masks, protective wears, gloves, goggles, ear muffs, anti-vibration pads etc. are readily accessible.
7. To ensure reliability of gas leak detection system.
8. To prepare clear map of plant area indicating position of gates, various units, approach roads, emergency exits, etc.
9. To maintain adequate inventory of first-aid kits, antidotes, essential drugs.
10. To maintain a meteorological data of site especially giving wind direction in each season, in case, evacuation becomes necessary.
11. Immediate precaution like providing wet towels, gas masks or respirators shall be undertaken. Awareness has to be created to avoid panic on eventualities. The safety coordinator should do the needful to restore normalcy, whereas, medical coordinator shall attend to the casualties.
12. If required plant shall be shutdown and the entire area sealed off till trained personnel restore normalcy.
13. Environmental decontamination measures to be undertaken by physical, chemical or biological approaches as required.
14. Rescue and Rehabilitation :  
The rescue operation consists of removing operating personnel trapped in disaster /emergency area and shifting them to hospitals /nursing homes after first aid. A large number of ambulances may be required and should be summoned from various sources, like nearby industries, hospitals, voluntary organizations, etc. All the casualties should be identified and relatives should be informed, if possible.
15. The rescue operation will be initiated immediately after the disaster has occurred though relief may take some more time (few hours to couple of days). Depending upon severity of disaster, external help may be sought (to provide evacuation, medical help etc.) till normalcy is restored.
16. Rehabilitation will include taking adequate care of casualties, providing necessary help for the victim. It will also include rebuilding damaged plant, machinery and building, estimation of damage, compensation payment etc.

The following chart reveals the co-ordination of Emergency organization during emergency situations.



## EMERGENCY CONTROL ORGANISATION



The duties performed by the personnel of emergency organization team are as follows:

***First Observer:***

He is a person who observes the emergency at the first sight. He will try to handle the emergency with the immediately available facilities to him. If he feels that it is beyond his control, he will press hooter button nearby and inform immediately to his shift in-charge. If shift in-charge is not available in the vicinity, he can directly phone to security. He will give the information like type of emergency, location and his name. After that he will contact to his staff in-charge and will give all details. Then he will act as per the instructions of the shift in-charge (Refer Emergency Organization).

***Incident Controller.***

The shift engineer of the plant/ officer of the dept. in which the emergency arose is considered as incident controller.

1. He will receive the information from first observer and reach to the spot of the emergency.
2. He will assess the emergency and instruct to subordinates to bring the running plant operations in shutdown mode.
3. He will direct fire fighters, first aiders and technical team.
4. He will seek help from the key person.
5. He will give continuous feed back to the main controller and receive his instructions.
6. Once the emergency is brought under control, he will inform to the main controller.

***Main Controller:***

1. On hearing siren and instructions on public address system, he will reach near the site and take over the charge of the situation.
2. He will communicate with the incident controller and will assess the situation.
3. He will instruct the incident controller, communication team.
4. He will take advice from the advisory team if required.
5. He will give feedback to the site controller during or after the emergency brought under control.
6. Once the emergency is brought under control, he will instruct communication team to declare all clear by sounding all clear siren.
7. Organize investigation after bringing emergency under control.
8. Incorporate corrective measures to avoid further accident/ incident.



#### ***Advisory Team:***

1. All advisory Team members should assemble at **Emergency Control Centre**.
2. They will provide essential information to the Main Controller on his demand.
3. If the Main Controller doesn't require any advice from the team, he can delegate any other jobs which may be more important at the time of emergency.

#### ***Communication Team:***

1. On hearing siren they will take position in Security dept.
2. They will inform about their positions to the main controller.
3. They will receive instructions from the main controller and communicate internal personnel as well as outside agencies, authorities (fire brigade, ambulance, hospitals, and site controller) and government officials.
4. To restrict the vehicles from coming inside the factory except the vehicles of the emergency organization members. Also to remove the vehicles, if required from inside.
5. Keep the entrance road clear for emergency vehicles.
6. On the instructions from the main controller open the emergency exits.
7. To arrange for the ambulance car or vehicles.
8. As per the instructions of the main controller, they will inform about status of emergency to all people present in the premises.
9. They will sound all clear sirens once they get signal from the main controller.

#### ***Emergency Handling Team (Fire Fighting Team):***

1. After hearing the information's about the emergency on **Emergency Alarm System**, they will reach at the spot of emergency. **Before this, they will give** charge of their jobs to the responsible person as per the instructions.
2. After reaching on the spot, they will act as per the instructions of the incident controller.
3. After handling the emergency they will be engaged in salvage operation if required, otherwise in normal case they will go back to the plant and will resume the work.

#### ***First Aid Team:***

1. After receiving the information, the doctor and nurse will remain in occupational health centre only.
2. First aider will go to the site. They will remove the casualties from the place and will give them first aid treatment with help of a doctor/ nurse.

#### ***Evacuation Team:***

1. Identify the wind direction.
2. Evacuate people from emergency location.
3. Guide them toward the assembly points.
4. Carry out head count operations.
5. Give feed to main controller.
6. In case of off-site implications, they will carry megaphone and evacuate neighbouring villages with help of police.

#### ***Technical Team:***

1. Mechanical Engineer/ Utility operator to ensure that all water tanks are full and hydrant system is ready to use.
2. Electrical engineer/ Electricians: If required they will cut off electric supply of that area on the instructions of incident/ main controller and provide portable lights/ extension lights.
3. Instrumentation Engineer/ Technicians: To act as per the instructions given by incident / main controller.

#### **C. ORGANISATIONAL SET-UP FOR POLLUTION CONTROL:**

Pollution control systems will be looked after by a team of professional people headed by Manager. In general he will co-ordinate the operation and maintenance staff for control system.

#### ***Operation and maintenance of effluent treatment plant / water treatment plant:***

ETP shall be operated & maintained by a team which consists of:

- |                      |   |
|----------------------|---|
| a. Plant In-Charge : | 1 |
| b. Shift In-Charge : | 1 |
| c. Supervisors :     | 1 |
| d. Operators :       | 1 |
| e. Helpers :         | 1 |

#### **D. GENERAL SAFETY PRECAUTIONS & INDUSTRIAL HYGIENE :**

1. Ventilation is provided by plenty of openings.
2. Adequate platforms are provided for manual operations. Free space for movements and carrying the material is provided.
3. Adequate number of fire extinguishers is provided.
4. All workers are provided with hand-gloves, goggles, footwear's, aprons, masks, hard hats etc. for protection.
5. There is no manual handling of liquids like Acids, Caustic Soda Lye etc. These liquids are always flow through pipe lines.
6. All steam pipe lines and steam heated vessels are provided with adequate insulation, All high pressure steam lines are IBR approved.
7. Safety relief valves are provided wherever necessary.
8. Routine medical attention is given to workers.
9. Company has provided a full fledged fire hydrant system for fire fighting. The system is constructed as per the TAC norms and necessary approval from TAC authority has been obtained.
10. Petrochemical products are being stored in petroleum tank farm licensed by Explosive



Department.

11. Portable fire extinguishers are provided throughout the plant as per the norms.
12. Process plant is controlled through Distributed Control System DCS operated instrument network to minimize the exposure of raw material to operating persons.
13. Plant layout and detailing is done by renowned professionals, viz. M/s. Davy Power Gas Consultants and process plants are provided with most modern Distributed Control System (DCS) with inbuilt safety features such as alarms, trips, pressure release system, etc.
14. Company will provide a full fledged fire hydrant system, designed as per statutory requirements.

The system is designed to adequately protect the buildings, equipment, storage facilities, utility plants & other installations by providing hydrants and water monitors around the areas.

The system mains are comprised of pressurized underground ring main of carbon steel pipes suitably waited & wrapped with hydrant points as required as per statutory norms. The installation is provided with sluice valves & suitable sizes at suitable points to facilitate isolation of ring mains, if required, during fire & maintenance.

#### Water Storage:

Water storage Tank of 10000 m<sup>3</sup> capacity is provided.

#### Pumps & Pump House:

A separate pump house is constructed. The pumping system consists of the following pumps.

DESCRIPTION	CAPACITY	NORMAL DISCHARGE PRESSURE
Electrical Driven Pump 1 no. (Working)	171 m <sup>3</sup> /hr.	88 Meters head
Diesel Driven Pump 1 no. (Standby)	171 m <sup>3</sup> /hr.	88 Meters head
Jockey Pump 1 no.	10.8 m <sup>3</sup> /hr.	88 Meters head

15. The pumps are provided with automatic starting devices as per statutory norms. In addition manual starting device is provided for all the pumps.

#### Hydrants:

Sr. No.	DESCRIPTION	QUANTITY
1.	S.S. Hydrant valve as per IS 5290	45 Nos.
2.	S.S. Fire Escape Hydrant valve as per IS 5290	8 Nos.
3.	ABC Type extinguisher - 5 Kg	27 Nos.
4.	CO2 extinguishers - 4.5 Kg	23 Nos.





PART II

DETAILS OF THE EXPENDITURE FOR THE ENVIRONMENTAL MANAGEMENET PLAN

Sr. No	Descriptions	Cost (Crores)
1	Air pollution Control Equipment (Heat recovery boilers)	23.25
2	ETP/STP	4.05
3	Green Belt	1.89
4	O & M and Monitoring	0.9581
	<b>Total</b>	<b>30.148</b>



**Mumbai Waste Management Ltd.**

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www.mumbaiwastemanagement.com

CIN: U90001TG-2001PLC037829

4<sup>th</sup> June 2020

M/s. Birla Corbon India Pvt. Ltd.  
Village Lohop, Talavali, Patalganga,  
Tal- Khalapur, Dist- Raigad-410 207, Maharashtra

Mem. No. MWML- HzW – PTG-2907

Kind Attn.: Mr. Parag Bane

Dear Sir,

We are pleased to extend your Membership Registration up to 31<sup>st</sup> March 2021

Kindly complete all the pending formalities to enable waste collection logistics within this period.

Please do contact us for any further details.

Thanks & Best Regards,  
for Mumbai Waste Management Ltd.

*Onkar Kulkarni*  
24/6/2020

Onkar Kulkarni  
Manager - MBD

Certified by

**bsi**

NABL Certificate No.: TC-7166

ISO 9001:2015 | ISO 14001:2015 | OHSAS 18001:2007  
C. No. FS 570487 | C. No. EMS 570497 | C. No. OHS 570500

Corporate Office:

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