



ನವ ಮಂಗಳೂರು ಬಂದರು ಮಂಡಳಿ  
ನವ ಮಂಗಳೂರು ಪತ್ತನ ನ್ಯಾಸ  
**NEW MANGALORE PORT TRUST**

ಭಾರತ ಸರ್ಕಾರ (ಪತ್ತನ, ಪೊತ ಪರಿವಹನ ಔರ ಜಲಮಾರ್ಗ ಮಂತ್ರಾಲಯ")  
Govt of India (Ministry of Ports, Shipping and Waterways)  
ಪಣಂಬೂರು ಪಣಂಬೂರು Panambur / ಮಂಗಳೂರು ಮಂಗಳೂರು Mangalore - 575 010



3/11/EMP/CE(C)/2020-21/TS/03

17-09-2021

To:

K.P.SINGH  
Regional Officer  
Ministry of Environment & Forests,  
Regional Office (South Zone), 4<sup>th</sup> Floor, E&F Wings,  
Kendriya Sadan, 17<sup>th</sup> Main Road, II Block,  
Koramangala,  
BANGALORE - 560 034.

Sir,

Sub: Submission of half yearly Compliance report from October 2020 to  
March-2021 -Environmental Clearance issued by the Ministry of  
Environment Forests & Climate-intimation -reg  
Ref: Your Letter No.EP/12.1/122/KAR/466 dated 23-08-2021

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With reference to the subject cited above, please find enclosed here with the revised half yearly Compliance report on stipulated environmental clearance terms and conditions along with tabulated test results on Air samples, Drinking water samples, Waste Water (STP), Noise level ,DG stack emission from **October 2020 to March-2021** for information.

The compliance report is submitted for the EC No: PD/26017/11//98-PDZ(CRZ) issued on 13-05-1999.The soft copy of same information is mailed to rosz.bng-mef@nic.in and roszmon@yahoo.in on 17-09-2021. The half yearly Compliance report from **October 2020 to March-2021** is uploaded in Port website www.newmangaloreport.gov.in

Thanking you,

Encl: As above

Yours faithfully,

Chief Engineer (Civil)

ದೂರವಾಣಿ : ಕಛೇರಿ : 0824 -2407341  
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**An ISO 9001:2015, 14001:2015 & ISPS Compliant Port**

**Stipulated Environmental Clearances Report as per as per the Letter No. F. No.  
EP/12.1/122/KAR/466 dated 23-08-2021.**

Sl. No	Specific Conditions:	Remarks
1	All construction design/drawings relating to construction activities must have the approval of the concerned State Govt. Departments/Agencies. Ground water should not be tapped for construction activities.	Statutory approval were obtained and work completed
2	Adequate provision for all infrastructural facilities such as water supply, fuel, sanitation etc. must be extended for labourers during the construction period in order to avoid damage to the environment.	During the project work provision for all infra structural facilities like water supply, Sanitation etc., was provided.
3	Dredging operations, if any, should be undertaken in consultation with either the Central Water and Power Research Station, Pune or the National Institute of Oceanography, Goa to ensure that dredging operations do not cause adverse impact on water quality and marine productivity in the vicinity. Dredging operation as far as possible should be kept to the minimum for avoiding any adverse impact on marine life.	Capital dredging operations conducted during the project work in consultation with CWPRS, Pune and all necessary precautions were taken to avoid any adverse impact on marine life
4	Disposal sites for excavated material should be so designed that the revised land use after dumping and changes in the land use pattern do not interfere with the natural damage.	The excavated material of the project work was used for Reclamation of Tannirbhavi beach and didn't interfere with natural damage
5	To meet any emergency situation, adequate foam containers should be kept ready with supporting fire fighting system and water pipeline.	Fire fighting system & water pipeline was provided at construction area <b>Annexure-I</b>
6	The staff posted in sensitive areas should be trained in implementation of the Crisis Management Plan already drawn by the authorities. Mock drill(s) for this purpose should be conducted on a regular basis. Provisions of Dock Safety Act and the guidelines issued by the DG,FASLI/CLI, Bombay for the safety and health of the dock workers should be followed.	During the project work safety and health of the dock workers was considered. In-house Medical facility was provided and regularly Mock drills for different situations was provided
7	For development of green buffer including mangroves wherever feasible, the authorities should start growing large nursery of multipurpose species such as Eucalyptus, Casurine, Dalbergia, Terminalia etc. The norm of about 2000-2500 trees per hectare maybe adopted for raising of green belt.	The Port developed 250 acre land near kudupu and Bondel quarry area for plantation Port has developed its own Nursery and many species such as Eucalyptus, Casurine, Dalbergia, Terminalia etc were planted near beach side Port has developed 30% Green



		belt area
		<b>Annexure-II</b>
8	To prevent discharge of sewage and other liquid wastes including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided to the satisfaction of Karnataka Pollution Control Board.	Sewage Treatment Plant with 1.2 MLD capacity was constructed to treat the sewage and other liquid waste including ballast as per the KSPCB
		<b>Annexure-III</b>
9	Adequate noise control measures must be provided to maintain noise level at various workplaces within the standard prescribed by the competent authorities. If need be, ear plugs and ear muffs should be provided to the workers in the port area.	Acoustic DG sets were used for the project work and the Noise level was maintained within the standard as per KSPCB
10	The quality of treated effluents, solid wastes and emissions must conform to the standards laid down by the competent authority including Central/State Pollution Control Boards.	Environmental Monitoring was conducted regularly through Third party and the reports were submitted to KSPCB & MOEF&CC
11	An Environmental Cell should be immediately made operational with adequate laboratory facilities, equipments and a mobile van for collecting air samples. The record and the data should be submitted with proper analysis and corrective measures required, if any, for maintaining the levels within the prescribed limits to the Regional Office of the ministry of Environment & Forests at Bangalore, which shall be monitoring these conditions stipulated for according the Environment approval. The Environmental Cell should coordinate and monitor environmental mitigative measures executed in the New Mangalore Port area.	An Environmental cell is functioned effectively to mitigate the Environmental pollution. Port is submitting the air and water quality reports to MOEF&CC and KSPCB
		<b>Annexure-IV</b>
12	Necessary leakage detection devices with early warning system must be provided at strategic locations.	Complied
13	Standby DG sets must be provided to ensure uninterrupted power supply to the pump house and the fire fighting system.	Acoustic DG sets were used for the project work to supply power
14	Third party inspection should be ensured during construction and operation phases with adequate insurance cover. The project authorities should confirm on regular intervals of six months to the Ministry about the implementation of the suggested safeguard measures and the data/report should be opened for inspection by the Team which would be constituted by the Ministry, if found necessary.	KSPCB and Director, MOEF&CC, Bangalore inspected the Port and verified the compliance reports maintained by the Ports From 26-11-2021 to 30-11-2020 a performance audit on conservation of Marine Ecosystems was conducted by Mr. Bala Ravi Senior audit officer, Accountant General AMG-I, Bangalore & Verifies

		MOEF&CC compliance report
15	Full support should be extended to the Regional Office of the Ministry of Environment & Forests at Bangalore during inspection of the project monitoring purposes by the project proponents by furnishing full details and action plans including action taken report on mitigative measures.	Complied
16	Adequate funding provisions, year-wise and item-wise, must be made for implementation of the above mentioned safeguard measures.	Complied
17	No other chemical product save those mentioned in the Annex III appended to Govt. of India Notification in the Ministry of Environment & Forests, S.O. No.494 (E) dated July 9, 1997 will be allowed to handle/store in any port area.	Complied
18	The project authorities would ensure that safety regulations and guidelines issued by Oil Safety Directorate in the Govt. of India, Ministry of Petroleum & Natural Gas are implemented.	Complying with all the stipulations
19	The approval of the Chief Controller of Explosives (CCO & E) shall be obtained for operational purpose before undertaking any storage/handling activity.	Complying with all the stipulations

  
 Dy. Manager Environment



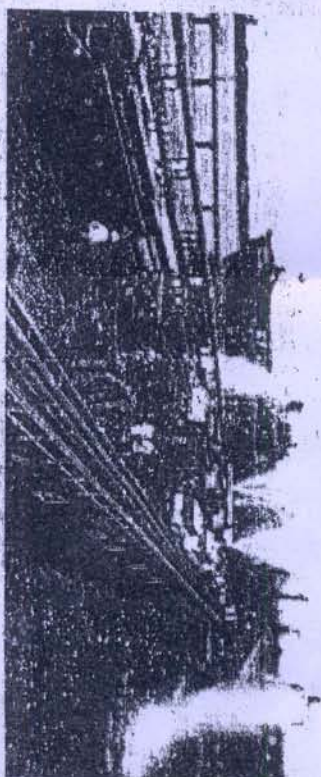
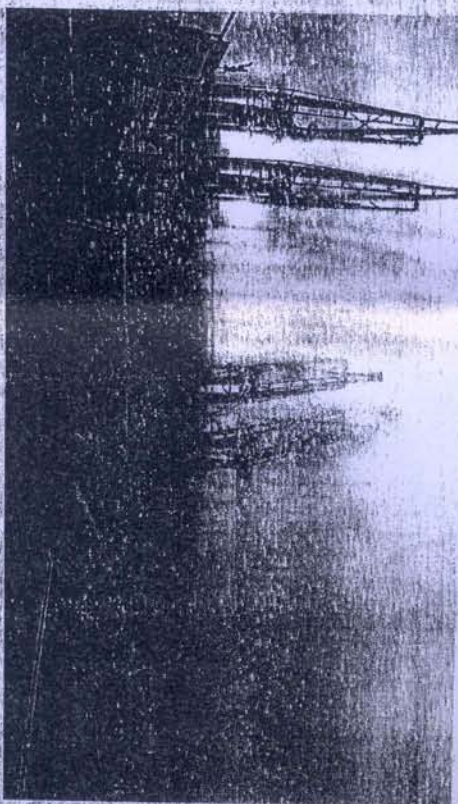
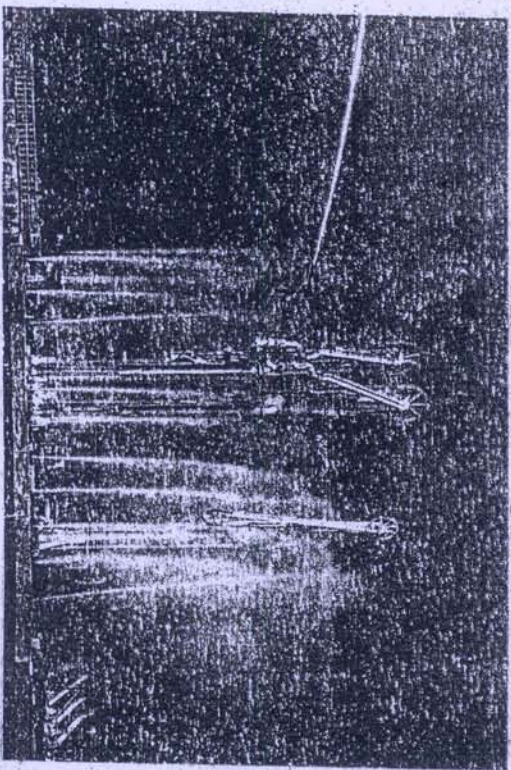
## FIRE FIGHTING SYSTEM DETAILS AT OIL BERTHS AT NMPT

Description	OISD Requirement	Berth 10	Berth 11	Berth 12	Berth 13
Fire water design requirement	600 m3/ hrs for water/ foam monitors ( 2 tower monitors X 5000 lpm)	Tower monitors (2 nos. x 5000 LPM) provided. 900 m3/hr pump is provided which is adequate and meets the OISD 156 requirement	Tower monitors ( 2 nos. X 6000 LPM) provided. 900 m3/hr pump is provided which is adequate and meets the OISD 156 requirement	Tower monitors ( 2 nos. X 6000 LPM) provided. 900 m3/hr pump is provided which is adequate and meets the OISD 156 requirement	Tower monitors ( 4 nos. X 6000 LPM) provided. 820 m3/hr pump is provided which is adequate and meets the OISD 156 requirement
	600 m3/ hrs for hydrant & water curtains ( 2 Jumbo nozzles X 5000 lpm)	8 x 1.5" (690 LPM each) and 9 x 1" (362 LPM each) 8778 LPM in all 900 m3/hr pump is provided which is adequate but the nozzle output is lesser by 1222 lpm as per the OISD 156 requirement	18 x 1" (362 LPM each) 6516 LPM in all. 900 m3/hr pump is provided which is adequate but the nozzle output is lesser by 3484 lpm as per the OISD 156 requirement	16 x 1" (362 LPM each) 5792 LPM in all 900 m3/hr pump is provided which is adequate but the nozzle output is lesser by 4208 lpm as per the OISD 156 requirement	6 x 1" ( 362 LPM) 820 m3/hr pump is provided which is adequate as per the OISD 156 requirement
Jockey pump capacity		25 m3/ hr	54 cu.m/hr	54 cu.m/hr	54 cu.m/hr
Foam System	2 X 5000 lpm Tower foam monitor + 2 X 2400 lpm base foam monitor  Foam calculation = 14800 X .03X 60 = 26640 litre	Tower monitors (2 nos. x 5000 LPM) Ground monitor (1 No.x5000 LPM)  As per calculation requirement is ( 15000 X .03 X 60 ) =27000 litre  Available = 15 cu.m tank which is lesser by 12 cu.m as per OISD 156	Tower monitors ( 2 nos. X 6000 LPM) Ground monitor (1 No.x 3000 LPM)  As per calculation requirement is ( 15000 X .03 X 60 ) =27000 litre  Available = 30 cu.m tank which meets OISD 156 requirement	Tower monitors ( 2 nos. X 6000 LPM) Ground monitor (1 No.x 3000 LPM).  As per calculation requirement is ( 15000 X .06 X 60 ) =54000 litre( since 6% foam is available) Available = 2 X 30 cu.m tank which meets OISD 156 requirement	Tower monitors ( 4 nos. X 6000 LPM) Ground monitor (2 No.x 3000 LPM)  As per calculation requirement is ( 15000 X .03 X 60 ) =32400 litre. Available = 35 cu.m tank which meets OISD 156 requirement
Foam Pump Capacity		54 Cu.m /hr @ 18 kg/cm2 X 2 nos pumps available  Adequate	27 Cu.m /hr @ 17 kg/cm2 X 2 nos pumps available  Adequate	54 Cu.m /hr @ 17 kg/cm2 X 2 nos pumps available  Adequate	28 Cu.m /hr @ 17 kg/cm2 X 2 nos pumps available  Adequate
Extinguishers	6x10 kg. DCP extinguisher  4x75 wheeled DCP	1 X 5 kg, 2 X 10 kg, 2 X 20 Kg  4 X 25 kg, 2 X 50 Kg	2 X 10 Kg, 2 X 20 Kg  4 X 25 Kg, 2 X 50 kg	4 X 10 kg, 2 X 20  4X 25 Kg, 5 X 75 kg	12 X 10 Kg, 4 X 5 Kg  4 X 75 Kg
Jockey pumps / Booster Pumps		2	2	2	2
International shore connection	minimum 1 per berth	1 No.	1 No.	1 No.	1 No
Hydrant	Single headed Double headed	2 16	3 16	3 12	9 16
Fixed water spray system	To be provided for all jetties handling more than 20,000 DWT		2 No.	2 No.	2 no.
Gas Detectors	as per requirement	4	4	4	4
Flame Detectors	as per requirement	10	10	10	10



## Trials & Mock drills

- Weekly trials of the fire fighting facilities is being carried out on a regular basis to ensure the system readiness for emergency.
- Mock drills are being carried out regularly with the participation of the user departments.





**Green Belt at NMPT**

Port in its Endeavour to develop Green Belt has already provided a green cover of more than 33% with 95% survival of plants. Even though the Port is categorized as a service oriented organization, it has complied with the stipulations of an industry. The initiative for the greenery in the estate, include the operational and non operational area within the Port limits to control pollution mitigate emission of dust , air and water contamination. The Port, in its Endeavour has planted more than 2lakhs saplings of both endemic and non-endemic species .

The Ports a generally associated with cargo. It is unbelievable that New Mangalore Port Trust apart from its thriving business is also a natural heaven for the bird population. The species existing in the Port varies from Peacocks to Plovers and Pythons to Flower Peckers, Jackals, Mongoose, Jungle Fowls etc. At present, the bird population has increased to nearly 100 varieties. The relentless efforts taken by the Management has ushered the growth of butterflies also. Butterflies are the indicators of best ecological system. New Mangalore Port Trust houses immovable butterflies. At present, New Mangalore Port Trust is the only Port in the country that maintain the best ecological balance in the midst of its business activity without compromising its Environment.

The presence of beautiful garden and parks indicate the maturity of civilized society. They are not only provide soothness to the eyes , but act as bio-diversity engines. New Mangalore Port Trust has more than 10 beautiful parks, three inside the colony area and rest inside the wharf. Each park is distinct in supporting the environment with endemic species and exotic sapplings. These parks are under 24/7 supervision and they are well maintained. All the parks exhibit different hue during the spring time to invoke the colours of rainbow.



### Green Belt at NMPT





**1.2 MLD Sewage Treatment Plant at NMPT**

New Mangalore Port Trust has commissioned 1.2 MLD Sewage Treatment Plant with SBR Technology, it consumes 329 KW power/day for treating 0.75 MLD water/day.

The domestic sewage emanated from the NMPT township containing floating matter and solids both inorganic and organic matter will be treated in the STP and reused for irrigating the Green Belt after ensuring its suitability. Periodic inspection and maintenance is carried out by Engineers and monitored by the Environment Cell of the Port.

NMPT has achieved the Zero Discharge as NMPT is re using the entire quantity of treated water for **green belts** created inside the Port in order to reduce the burden on water resources. Besides, it is also used for sprinkling inside the wharf to suppress the dust emanating out of cargo handling.

There is a scientific monitoring system in place in the Port. The monitoring process is carried out through established NABL and MOEF&CC certified laboratory regularly and taken both preventive and corrective actions which results in very low BOD and Zero Turbidity. The Port has been fully complying with the statutory requirements.



#### **Annexure-IV**

**Environmental Monitoring System:** There is a scientific monitoring system in place in the Port. The monitoring process is carried out through NABL aggregated established laboratories having resources and spare capacity. NMPT monitors air and water qualities through third party authorised from KSPCB, MOEF&CC, regularly and taken both preventive and corrective actions. This Environmental Management System improves the environmental conditions in general and public health of its employees in particular. The treated water out of Sewage Treatment Plant is used for the green belts created inside the Port in order to reduce the burden on water resources. Besides, it is also used for sprinkling inside the wharf to suppress the dust emanating out of cargo handling.

The Port is an ISO 14001:2015 certified since 2011 and it demands various Compliances to protect the Environment. The Port has successfully complied the standards



# Hubert Enviro Care Systems (P) Ltd.

C-45, Industrial Estate, Baikampady, Mangalore, Karnataka - 575011.

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## Laboratory Services Division

(Chemical & Biological Testing)

Recognized by MoEF, BIS

FSSAI Notified Laboratory

ISO 9001, 14001 & OHSAS 18001 Certified.

Certificate No. TC-7920

### TEST REPORT

Page No. 1 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA Silent DG Set
Sampling Location	Switch Gear Building
Model Family No.	CP500D5P/F48
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876
Sample Description	Manual Stack Emission Monitoring
Sampling Date	29.03.2021
Sample Received Date	29.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	29.03.2021
Completed On	03.04.2021
Report Date	05.04.2021
Report No	HECS/ST/001/290321

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	93 °C
Total Stack Height	22 meters
Height of the port hole	20 meters
Diameter	0.3 meters
Discharge Rate	805.132 Nm <sup>3</sup> /hr
Velocity	4.1 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	16.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	30.5 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	27.4 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager Authorized Signatory



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**TEST REPORT**

Page No. 2 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 D5P and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	29.03.2021
Sample Received Date	29.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	29.03.2021
Completed On	03.04.2021
Report Date	05.04.2021
Report No	HECS/ST/002/290321

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	82 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	341.92 Nm <sup>3</sup> /hr
Velocity	3.8 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	13.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	19.3 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	15.1 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager





**TEST REPORT**

Page No. 3 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.03.2021
Sample Received Date	30.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.03.2021
Completed On	05.04.2021
Report Date	06.04.2021
Report No	HECS/ST/003/290321

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	103 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	993.59 Nm <sup>3</sup> /hr
Velocity	5.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	15.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	30.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	26.9 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager





**TEST REPORT**

Page No. 4 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune – 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.03.2021
Sample Received Date	30.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.03.2021
Completed On	05.04.2021
Report Date	06.04.2021
Report No	HECS/ST/004/290321

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	106 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	1004.71 Nm <sup>3</sup> /hr
Velocity	5.3 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	15.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	26.9 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	25.1 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager Authorized Signatory



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Certificate No. TC-7920

**TEST REPORT**

Page No. 5 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.03.2021
Sample Received Date	30.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.03.2021
Completed On	05.04.2021
Report Date	06.04.2021
Report No	HECS/ST/005/290321

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	93 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	366.41 Nm <sup>3</sup> /hr
Velocity	4.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	16.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	27.6 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Management Authorized Signatory

1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless or otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items. 6. # not under scope of accreditation.

HECS/Q/FMT/50



**Hubert Enviro Care Systems (P) Ltd.**

, Industrial Estate, Baikampady, Mangalore, Karnataka - 575011.  
 : 0824 - 2408111, Email: kro@hecs.in, Website: www.hecs.in  
 A.O.: # 18, 92nd Street, Ashok Nagar, Chennai - 600 083.  
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**Laboratory Services Division**

(Chemical & Biological Testing)  
 Recognized by MoEF, BIS  
 FSSAI Notified Laboratory  
 ISO 9001, 14001 & OHSAS 18001 Certified.

Certificate No. TC-7920

**TEST REPORT**

Page No. 6 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	125 kVA Fire Pump
Sampling Location	Fire Pump House
Model Family No.	-
Manufacturer	Banco Products
Model and Sr. No.	6 RTA / 125 kVA and 2018 10 16
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.03.2021
Sample Received Date	30.03.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.03.2021
Completed On	05.04.2021
Report Date	06.04.2021
Report No	HECS/ST/006/290321

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	90 °C
Total Stack Height	13 meters
Height of the port hole	5 meters
Diameter	0.2 meters
Discharge Rate	395.97 Nm <sup>3</sup> /hr
Velocity	4.5 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	27.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	39.5 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	42.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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(Dr K GANESAN)  
 Laboratory and Quality Manager, Authorized Signatory

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**TEST REPORT**

Page No. 1 of 2

Name of the Customer	<b>M/s. Mangalore Coal Terminal Private Limited</b>
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	<b>Ambient Noise levels observed during day time</b>
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	29.03.2021
Report Date	01.04.2021
Report No	HECS/N/001-006/290321

**RESULTS: AMBIENT NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	11.55 PM	64.0
2.	JNT-4	12.25 PM	64.8
3.	SUL-2	12.40 PM	68.8
4.	SUL-1	01.10PM	67.9
5.	WLS	01.40 PM	59.4
6.	Fire Pump House	02.10 PM	63.4

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

Laboratory and Quality Manager





**Hubert Enviro Care Systems (P) Ltd.**

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**TEST REPORT**

Page No. 2 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	29.03.2021
Report Date	01.04.2021
Report No	HECS/N/007-012/290321

**RESULTS: ACOUSTIC NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	11.45 PM	64.2	71.6
2.	JNT-4	12.15 PM	67.9	73.5
3.	SUL-2	12.30 PM	68.4	72.8
4.	SUL-1	01.00 PM	69.1	71.9
5.	WLS	01.30 PM	61.3	72.0
6.	Fire Pump House	02.00 PM	65.2	71.1

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

Laboratory and Quality Manager, Authorized Signatory





KARNATAKA VETERINARY, ANIMAL & FISHERIES SCIENCES UNIVERSITY  
DEPARTMENT OF AQUATIC ANIMAL HEALTH MANAGEMENT  
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Professor & Head

Phone No. : 0824-2246384.  
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NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/74

24.03.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	NMPT HOSPITAL PREMISES ( Ref : NMPT/Civil/Water Testing/2021, dt. 12.03.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	17.03.2021	TEST COMPLETED ON	23.03.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

Sl. No.	Parameters	Units	Result	Acceptable Limit (IS 10500 : 2012)
1.	pH	-	5.7	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0	Max - 5
4.	Turbidity	NTU	0	Max - 1
5.	Conductivity	µS/cm	164	200 - 800
6.	Total Hardness	mg/l	75	Max - 200
7.	Total Dissolved Solids	mg/l	96	Max - 500
8.	Chloride	mg/l	46	Max - 250
9.	Sulphate	mg/l	14.8	Max - 200
10.	Iron	mg/l	0.11	Max – 0.3
11.	Total Phosphate	mg/l	0.02	< 0.15
12.	Bacterial Count	CFU/ml	Est. <1x10 <sup>2</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

**Professor & Head**

Department of Aquatic Animal Health Management  
Karnataka Veterinary, Animal & Fisheries Sciences University  
College of Fisheries, Mangalore – 575 002

Note: This report of analysis is for your information and guidance only and not valid for

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Email : fishmicrobiolmangalore@gmail.com

NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/76

24..03.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	WHARF CANTEEN ( Ref : NMPT/Civil/Water Testing/2021, dt. 12.03.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	17.03.2021	TEST COMPLETED ON	23.03.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

<u>Sl. No.</u>	<u>Parameters</u>	<u>Units</u>	<u>Result</u>	<u>Acceptable Limit</u> (IS 10500 : 2012)
1.	pH	-	6.0	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0	Max - 5
4.	Turbidity	NTU	0	Max - 1
5.	Conductivity	μS/cm	38	200 - 800
6.	Total Hardness	mg/l	10.0	Max - 200
7.	Total Dissolved Solids	mg/l	54	Max - 500
8.	Chloride	mg/l	30	Max - 250
9.	Sulphate	mg/l	3.9	Max - 200
10.	Iron	mg/l	0.26	Max – 0.3
11.	Total Phosphate	mg/l	0.02	< 0.15
12.	Bacterial Count	CFU/ml	Est. <1x10 <sup>2</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

Professor & Head

Department of Aquatic Animal Health Management

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NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/77

24.03.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	RAILWAY MARSHALLING YARD OUTLET POINT Ref : NMPT/Civil/Water Testing/2021, dt. 13.01.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	17.03.2021	TEST COMPLETED ON	23.03.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

<u>Sl. No.</u>	<u>Parameters</u>	<u>Units</u>	<u>Result</u>	<u>Acceptable Limit</u> (IS 10500 : 2012)
1.	pH	-	5.6	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0.1	Max - 5
4.	Turbidity	NTU	1	Max - 1
5.	Conductivity	µS/cm	159	200 - 800
6.	Total Hardness	mg/l	40	Max - 200
7.	Total Dissolved Solids	mg/l	58	Max - 500
8.	Chloride	mg/l	53	Max - 250
9.	Sulphate	mg/l	13.5	Max - 200
10.	Iron	mg/l	0.2	Max - 0.3
11.	Total Phosphate	mg/l	0.03	< 0.15
12.	Bacterial Count	CFU/ml	1.4x10 <sup>3</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

*[Signature]*

Professor & Head

Department of Aquatic Animal Health Management

Karnataka Veterinary, Animal & Fisheries Sciences University, Mangalore  
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### TEST REPORT

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited	Page No. 1 of 6
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.	
Stack ID	500 kVA Silent DG Set	
Sampling Location	Switch Gear Building	
Model Family No.	CP500D5P/F48	
Manufacturer	Cummins - Powerica Ltd, Mumbai	
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876	
Sample Description	Manual Stack Emission Monitoring	
Sampling Date	27.02.2021	
Sample Received Date	27.02.2021	
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,	
Analysis Commenced On	27.02.2021	
Completed On	06.03.2021	
Report Date	08.03.2021	
Report No	HECS/ST/001/270221	

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	95 °C
Total Stack Height	22 meters
Height of the port hole	20 meters
Diameter	0.3 meters
Discharge Rate	761.69 Nm <sup>3</sup> /hr
Velocity	3.9 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	13.8 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	29.1 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	26.4 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager (Dr K GANESAN) Authorized Signatory



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**TEST REPORT**

Page No. 2 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 D5P and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	26.02.2021
Sample Received Date	26.02.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	26.02.2021
Completed On	05.03.2021
Report Date	06.03.2021
Report No	HECS/ST/002/260221

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	85 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	339.06 Nm <sup>3</sup> /hr
Velocity	3.8 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.5 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	18.6 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	14.2 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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 (Dr. ANANESAN)  
 Laboratory and Quality Manager - Authorized Signatory



**TEST REPORT**

Page No. 3 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	26.02.2021
Sample Received Date	26.02.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	26.02.2021
Completed On	05.03.2021
Report Date	06.03.2021
Report No	HECS/ST/003/260221

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	105 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	950.69 Nm <sup>3</sup> /hr
Velocity	5.0 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	13.5 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	29.6 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	25.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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### TEST REPORT

Page No. 4 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	26.02.2021
Sample Received Date	26.02.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	26.02.2021
Completed On	05.03.2021
Report Date	06.03.2021
Report No	HECS/ST/004/260221

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	107 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	964.60 Nm <sup>3</sup> /hr
Velocity	5.1 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	25.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	23.9 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 5 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	27.02.2021
Sample Received Date	27.02.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	27.02.2021
Completed On	06.03.2021
Report Date	08.03.2021
Report No	HECS/ST/005/270221

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	87 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	354.92 Nm <sup>3</sup> /hr
Velocity	4 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	13.5 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	26.1 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	23.3 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager - Authorized Signatory


**TEST REPORT**

Page No. 6 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	125 kVA Fire Pump
Sampling Location	Fire Pump House
Model Family No.	-
Manufacturer	Banco Products
Model and Sr. No.	6 RTA / 125 kVA and 2018 10 16
Sample Description	Manual Stack Emission Monitoring
Sampling Date	27.02.2021
Sample Received Date	27.02.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	27.02.2021
Completed On	06.03.2021
Report Date	08.03.2021
Report No	HECS/ST/006/270221

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	88 °C
Total Stack Height	13 meters
Height of the port hole	5 meters
Diameter	0.2 meters
Discharge Rate	389.33 Nm <sup>3</sup> /hr
Velocity	4.4 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	25.8 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	38.4 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	41.3 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Laboratory and Quality Manager, Authorized Signatory





**TEST REPORT**

Page No. 1 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Ambient Noise levels observed during day time
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	26.02.2021
Report Date	01.03.2021
Report No	HECS/N/001-006/260221

**RESULTS: AMBIENT NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	12.20 PM	65.2
2.	JNT-4	12.50 PM	63.6
3.	SUL-2	01.20 PM	67.4
4.	SUL-1	01.50 PM	66.7
5.	WLS	02.20 PM	58.2
6.	Fire Pump House	02.50 PM	64.8

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

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**TEST REPORT**

Page No. 2 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	26.02.2021
Report Date	01.03.2021
Report No	HECS/N/007-012/260221

**RESULTS: ACOUSTIC NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	12.10 PM	65.3	73.2
2.	JNT-4	12.40 PM	66.5	71.8
3.	SUL-2	01.10 PM	67.3	71.2
4.	SUL-1	01.40 PM	68.6	70.8
5.	WLS	02.10 PM	60.6	70.9
6.	Fire Pump House	02.40 PM	66.8	72.3

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

Laboratory and Quality Manager - Authorized Signatory







## TEST REPORT

Page No. 1 of 1

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Treated Sewage Effluent
Sample Mark	WW-1
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	27.02.2021
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	27.02.2021
Analysis Commenced On	27.02.2021
Completed On	06.03.2021
Report No	HECSM/WW/005/270221
Report Date	08.03.2021

## RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std.
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	7.56	6.5-9.0
2.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	3.8	≤ 10
3.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	23.2	≤ 50
4.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	BDL (DL 4)	≤ 20
5.	Total Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	14.6	≤ 100
6.	Ammonical Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	8.9	≤ 50
7.	Faecal Coliforms	IS1622:1981 (R.aff 2009)	MPN/100 mL	< 2	Not Detectable

Note: mg/L - Milligrams per Liter; MPN - Most Probable Number; Less than 2 considered as absent;

KSPCB - Karnataka State Pollution Control Board

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

## INFERENCE

As per KSPCB standards,  
The analysed parameters are within the prescribed limit.

Laboratory and Quality Manager, Authorized Signatory



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### TEST REPORT

Page No. 1 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA Silent DG Set
Sampling Location	Switch Gear Building
Model Family No.	CP500D5P/F48
Manufacturer	Cummins – Powerica Ltd, Mumbai
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.01.2021
Sample Received Date	30.01.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.01.2021
Completed On	08.02.2021
Report Date	09.02.2021
Report No	HECS/ST/001/300121

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	94 °C
Total Stack Height	22 meters
Height of the port hole	20 meters
Diameter	0.3 meters
Discharge Rate	967.78 Nm <sup>3</sup> /hr
Velocity	4.4 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	16.5 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	30.2 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	27.6 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 2 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 DSP and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.01.2021
Sample Received Date	30.01.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.01.2021
Completed On	08.02.2021
Report Date	09.02.2021
Report No	HECS/ST/002/300121

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	77 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	371.3 Nm <sup>3</sup> /hr
Velocity	4.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	14.1 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	19.6 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	15.8 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup> : milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

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**TEST REPORT**

Page No. 3 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.01.2021
Sample Received Date	30.01.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.01.2021
Completed On	08.02.2021
Report Date	09.02.2021
Report No	HECS/ST/003/300121

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

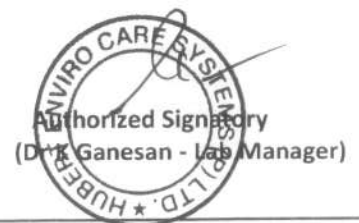
General Details	
Source of Fuel	Diesel
Ambient temperature	37 °C
Flue Gas Temperature	97 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	904.14 Nm <sup>3</sup> /hr
Velocity	4.8 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	10.3 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	28.4 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.2 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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### TEST REPORT

Page No. 4 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.01.2021
Sample Received Date	30.01.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.01.2021
Completed On	08.02.2021
Report Date	09.02.2021
Report No	HECS/ST/004/300121

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	36 °C
Flue Gas Temperature	99 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	862.12 Nm <sup>3</sup> /hr
Velocity	4.6 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	9.8 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	24.8 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	22.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 5 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.01.2021
Sample Received Date	30.01.2021
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	30.01.2021
Completed On	08.02.2021
Report Date	09.02.2021
Report No	HECS/ST/005/300121

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	87 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	358.15 Nm <sup>3</sup> /hr
Velocity	4.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	15.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	27.9 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.8 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
(Dr. R. Ganesan - Lab. Manager)

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**TEST REPORT**

Page No. 1 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Ambient Noise levels observed during day time
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	30.01.2021
Report Date	01.02.2021
Report No	HECS/N/001-006/300121

**RESULTS: AMBIENT NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	12.40 PM	64.3
2.	JNT-4	01.10 PM	62.5
3.	SUL-2	01.40 PM	68.1
4.	SUL-1	02.10 PM	68.3
5.	WLS	02.40 PM	57.8

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

  
Authorized Signatory  
(Dr K Ganesan - Lab Manager)

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### TEST REPORT

Page No. 2 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	30.01.2021
Report Date	01.02.2021
Report No	HECS/N/007-012/300121

### RESULTS: ACOUSTIC NOISE MONITORING

S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	12.20 PM	64.6	72.1
2.	JNT-4	12.50 PM	65.2	70.6
3.	SUL-2	01.20 PM	68.4	72.5
4.	SUL-1	01.50 PM	69.3	72.6
5.	WLS	02.20 PM	59.6	69.8

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

Authorized Signatory  
(Dr K Ganesan - Lab Manager)

# Hubert Enviro Care Systems (P) Ltd.

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Ph: 0824 - 2408111, Email: kro@hecs.in, Website: www.hecs.in

H.O.: # 18, 92nd Street, Ashok Nagar, Chennai - 600 083.

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## Laboratory Services Division

(Chemical & Biological Testing)

Recognized by MoEF, BIS

FSSAI Notified Laboratory

ISO 9001, 14001 & OHSAS 18001 Certified.

Certificate No. TC-7920

### TEST REPORT

Page No. 1 of 1

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Treated Sewage Effluent
Sample Mark	WW-1
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	02.02.2021
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	02.02.2021
Analysis Commenced On	02.02.2021
Completed On	08.02.2021
Report No	HECSM/WW/002/020221
Report Date	09.02.2021

### RESULTS OF TREATED SEWATER WATER

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std.
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	6.69	6.5-9.0
2.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	BDL (DL 2)	≤ 10
3.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	14.9	≤ 50
4.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	BDL (DL 4)	≤ 20
5.	Total Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	13.1	≤ 100
6.	Ammonical Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	7.6	≤ 50
7.	Faecal Coliforms	IS1622:1981 (R.aff 2009)	MPN/100 mL	< 2	Not Detectable

Note: mg/L - Milligrams per Liter; MPN - Most Probable Number; Less than 2 considered as absent;

KSPCB - Karnataka State Pollution Control Board

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

INFERENCE	As per KSPCB standards, The analysed parameters are within the prescribed limit.
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Authorized Signatory  
(Dr K Ganesan - Lab Manager)



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### TEST REPORT

Page No. 1 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA Silent DG Set
Sampling Location	Switch Gear Building
Model Family No.	CP500D5P/F48
Manufacturer	Cummins – Powerica Ltd, Mumbai
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/001/301220

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	92 °C
Total Stack Height	22 meters
Height of the port hole	20 meters
Diameter	0.3 meters
Discharge Rate	726.0 Nm <sup>3</sup> /hr
Velocity	3.8 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	28.1 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	25.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
Dr K Ganesan - Lab Manager

**Enviro Care Systems (P) Ltd.**

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**TEST REPORT**

Page No. 2 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 D5P and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/002/301220

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	80 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	351.0 Nm <sup>3</sup> /hr
Velocity	4.0 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	11.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	18.2 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	14.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 3 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/003/301220

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	100 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	926 Nm <sup>3</sup> /hr
Velocity	4.95 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	29.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	25.8 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
 (Dr K Ganeshan - Lab Manager)

1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless or otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items. 6. # not under scope of accreditation.

HECS/Q/FMT/50



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### TEST REPORT

Page No. 4 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/004/301220

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	178 °C
Total Stack Height	5 meters
Height of the port hole	5 meters
Diameter	0.3 meters
Discharge Rate	922.0 Nm <sup>3</sup> /hr
Velocity	4.9 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	26.3 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	23.5 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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### TEST REPORT

Page No. 5 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins – Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/005/301220

### EMISSION AIR FROM STACK / CHIMNEY MONITORING

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	86 °C
Total Stack Height	11 meters
Height of the port hole	10 meters
Diameter	0.2 meters
Discharge Rate	322 Nm <sup>3</sup> /hr
Velocity	3.8 m/s

### RESULTS

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	12.3 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	26.3 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	23.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 6 of 6

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	125 kVA Fire Pump
Sampling Location	Fire Pump House
Model Family No.	-
Manufacturer	Banco Products
Model and Sr. No.	6 RTA / 125 kVA and 2018 10 16
Sample Description	Manual Stack Emission Monitoring
Sampling Date	30.12.2020
Sample Received Date	31.12.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	31.12.2020
Completed On	07.01.2021
Report Date	08.01.2021
Report No	HECS/ST/006/301220

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	35 °C
Flue Gas Temperature	83 °C
Total Stack Height	13 meters
Height of the port hole	5 meters
Diameter	0.2 meters
Discharge Rate	361.0 Nm <sup>3</sup> /hr
Velocity	4.15 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std.	Test Method Followed
PM	22.8 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	37.5 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	40.6 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million; KSPCB - Karnataka State Pollution Control Board

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
 Dr K Ganesan (Lab Manager)



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### TEST REPORT

Page No. 1 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Ambient Noise levels observed during day time
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	30.12.2020
Report Date	01.01.2021
Report No	HECS/N/001-006/301220

### RESULTS: AMBIENT NOISE MONITORING

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	12.55 PM	63.8
2.	JNT-4	01.30 PM	61.5
3.	SUL-2	02.00 PM	69.4
4.	SUL-1	02.20 PM	69.9
5.	WLS	02.50 PM	56.5
6.	Fire Pump House	03.10 PM	63.6

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

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

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### TEST REPORT

Page No. 2 of 2

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	30.12.2020
Report Date	01.01.2021
Report No	HECS/N/007-012/301220

### RESULTS: ACOUSTIC NOISE MONITORING

S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	12.35 PM	63.8	71.5
2.	JNT-4	01.05 PM	64.9	69.7
3.	SUL-2	01.30 PM	69.1	73.5
4.	SUL-1	02.00 PM	70.2	73.6
5.	WLS	02.25 PM	58.9	68.5
6.	Fire Pump House	03.05 PM	65.7	71.4

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986**

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

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**TEST REPORT**

Page No. 1 of 1

Name of the Customer	M/s. Mangalore Coal Terminal Private Limited (MCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Treated Sewage Effluent
Sample Mark	WW-1
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	31.12.2020
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	31.12.2020
Analysis Commenced On	01.01.2021
Completed On	08.01.2021
Report No	HECSM/WW/002/311220
Report Date	09.01.2021

**RESULTS OF TREATED SEWATER WATER**

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std.
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	7.02	6.5-9.0
2.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	2.4	≤ 10
3.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	15.9	≤ 50
4.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	BDL (DL 4)	≤ 20
5.	Total Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	12.4	≤ 100
6.	Ammonical Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	6.8	≤ 50
7.	Faecal Coliforms	IS1622:1981 (R.aff 2009)	MPN/100 mL	< 2	Not Detectable

Note: mg/L - Milligrams per Liter; MPN - Most Probable Number; Less than 2 considered as absent;

KSPCB - Karnataka State Pollution Control Board

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

<b>INFERENCE</b>	As per KSPCB standards, The analysed parameters are within the prescribed limit.
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Authorized Signatory  
 (Dr. Ganesan - Lab Manager)



NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/116

27.01.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	NMPT HOSPITAL PREMISES ( Ref : NMPT/Civil/Water Testing/2021, dt. 13.01.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	21.01.2021	TEST COMPLETED ON	27.01.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

<u>Sl. No.</u>	<u>Parameters</u>	<u>Units</u>	<u>Result</u>	<u>Acceptable Limit</u> (IS 10500 : 2012)
1.	pH	-	5.89	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0	Max - 5
4.	Turbidity	NTU	0	Max - 1
5.	Conductivity	μS/cm	143	200 - 800
6.	Total Hardness	mg/l	40	Max - 200
7.	Total Dissolved Solids	mg/l	58	Max - 500
8.	Chloride	mg/l	40	Max - 250
9.	Sulphate	mg/l	14.4	Max - 200
10.	Iron	mg/l	0.16	Max – 0.3
11.	Total Phosphate	mg/l	0	< 0.15
12.	Bacterial Count	CFU/ml	Est.<1 x10 <sup>2</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

  
Professor & Head  
Professor and Head

Department of Aquatic Animal Health Management

Karnataka Veterinary, Animal & Fisheries Sciences University, Bidar  
Note: This report of analysis is for your information and guidance only and not valid for  
College of Fisheries, Mangalore, 575 002  
Commercial or legal purposes



Dr. K.S. Ramesh  
Professor & Head

KARNATAKA VETERINARY, ANIMAL & FISHERIES SCIENCES UNIVERSITY  
DEPARTMENT OF AQUATIC ANIMAL HEALTH MANAGEMENT  
COLLEGE OF FISHERIES  
Mangalore – 575 002, India



NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/118

27.01.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	WHARF CANTEEN ( Ref : NMPT/Civil/Water Testing/2021, dt. 13.01.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	21.01.2021	TEST COMPLETED ON	27.01.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

<u>Sl. No.</u>	<u>Parameters</u>	<u>Units</u>	<u>Result</u>	<u>Acceptable Limit</u> (IS 10500 : 2012)
1.	pH	-	5.10	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0	Max - 5
4.	Turbidity	NTU	0	Max - 1
5.	Conductivity	µS/cm	37	200 - 800
6.	Total Hardness	mg/l	10	Max - 200
7.	Total Dissolved Solids	mg/l	40	Max - 500
8.	Chloride	mg/l	24	Max - 250
9.	Sulphate	mg/l	2.5	Max - 200
10.	Iron	mg/l	0.07	Max – 0.3
11.	Total Phosphate	mg/l	0.01	< 0.15
12.	Bacterial Count	CFU/ml	Est.<1 x10 <sup>2</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

  
Professor & Head

Department of Aquatic Animal Health Management

Karnataka Veterinary, Animal & Fisheries Sciences University, Bidar  
College of Fisheries, Mangalore - 575 002

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NO. FCM/AAHM/Rev.Fund/Analysis/2020-21/119

27.01.2021

**SAMPLE DETAILS**

SAMPLE SUBMITTED BY	NEW MANGALORE PORT TRUST, GOVT. OF INDIA (MINISTRY OF SHIPPING), PANAMBURU, MANGALURU – 575 010		
TYPE OF SAMPLE	RAILWAY MARSHALLING YARD OUTLET POINT Ref : NMPT/Civil/Water Testing/2021, dt. 13.01.2021)		
ANALYSIS REQUIRED	CHEMICAL AND MICROBIOLOGICAL ANALYSIS		
SAMPLE GIVEN BY CUSTOMER/SAMPLE COLLECTED BY LAB	CONDITION OF SAMPLE	-	
SAMPLE RECEIVED ON	21.01.2021	TEST COMPLETED ON	27.01.2021
REFERENCE STANDARD	IS 10500 : 2012		

**TEST REPORT**

Sl. No.	Parameters	Units	Result	Acceptable Limit (IS 10500 : 2012)
1.	pH	-	6.78	6.5 – 8.5
2.	Odour	-	Agreeable	Agreeable
3.	Colour	Hazzen Units	0.10	Max - 5
4.	Turbidity	NTU	1	Max - 1
5.	Conductivity	μS/cm	120	200 - 800
6.	Total Hardness	mg/l	30	Max - 200
7.	Total Dissolved Solids	mg/l	30	Max - 500
8.	Chloride	mg/l	38	Max - 250
9.	Sulphate	mg/l	10.10	Max - 200
10.	Iron	mg/l	0.23	Max - 0.3
11.	Total Phosphate	mg/l	0	< 0.15
12.	Bacterial Count	CFU/ml	Est.<1 x10 <sup>2</sup>	< 500
13.	Total coliform count	MPN/100 ml	<2	Shall not be detectable in any 100 ml sample
	Faecal coliform count	MPN/100 ml	Nil	

Note : Est. – Estimated

CFU – Colony forming unit

COMMENT: BACTERIOLOGICALLY, THE WATER SAMPLE IS OF POTABLE QUALITY.  
(SAFE FOR DIRECT DRINKING)

  
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**TEST REPORT**

Page No. 1 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA Silent DG Set
Sampling Location	Switch Gear Building
Model Family No.	CP500D5P/F48
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/001/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	182 °C
Total Stack Height	6 meters
Height of the port hole	4.0 meters
Diameter	0.3 meters
Discharge Rate	795.5 Nm <sup>3</sup> /hr
Velocity	11.3 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.8 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	27.5 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	25.2 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
(Dr K Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 2 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	40 kVA Silent DG Set
Sampling Location	Outside of Switch Gear Building
Model Family No.	DS40SL/F11
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 40 D5P and 01/12/06/1697
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/002/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	170 °C
Total Stack Height	3.5 meters
Height of the port hole	2.2 meters
Diameter	0.1 meters
Discharge Rate	282.3 Nm <sup>3</sup> /hr
Velocity	9.7 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	9.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	21.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	15.5 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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(Dr K Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 3 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 D5P and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/003/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	171 °C
Total Stack Height	11 meters
Height of the port hole	7.5 meters
Diameter	0.1 meters
Discharge Rate	485.5 Nm <sup>3</sup> /hr
Velocity	11.5 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.6 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	17.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	14.1 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory

(Dr K Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 4 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/004/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	193 °C
Total Stack Height	5 meters
Height of the port hole	2.5 meters
Diameter	0.2 meters
Discharge Rate	897.3 Nm <sup>3</sup> /hr
Velocity	12.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	11.3 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	28.4 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.8 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 5 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/005/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	178 °C
Total Stack Height	5 meters
Height of the port hole	2.5 meters
Diameter	0.2 meters
Discharge Rate	887.4 Nm <sup>3</sup> /hr
Velocity	12.4 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	25.1 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	22.4 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory

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**TEST REPORT**

Page No. 6 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/006/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	187 °C
Total Stack Height	10 meters
Height of the port hole	5.0 meters
Diameter	0.2 meters
Discharge Rate	879.4 Nm <sup>3</sup> /hr
Velocity	13.3 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	11.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	25.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	22.9 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 7 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	125 kVA Fire Pump
Sampling Location	Fire Pump House
Model Family No.	-
Manufacturer	Banco Products
Model and Sr. No.	6 RTA / 125 kVA and 2018 10 16
Sample Description	Manual Stack Emission Monitoring
Sampling Date	09.11.2020
Sample Received Date	10.11.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report Date	20.11.2020
Report No	HECS/ST/007/091120

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	167 °C
Total Stack Height	13 meters
Height of the port hole	9.5 meters
Diameter	0.2 meters
Discharge Rate	1731.2 Nm <sup>3</sup> /hr
Velocity	11.5 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	20.5 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	36.4 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	39.9 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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(Dr K Ganesan - Lab Manager)

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Certificate No. TC-7920

**TEST REPORT**

Page No. 1 of 2

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	<b>Ambient Noise levels observed during day time</b>
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd .
Sampling Date	09.11.2020
Report Date	20.11.2020
Report No	HECS/N/001-007/091120

**NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	12.45 PM	63.8
2.	Outside of Switch Gear Building	01.05 PM	67.3
3.	JNT-4	01.30 PM	61.5
4.	SUL-2	02.00 PM	69.4
5.	SUL-1	02.20 PM	69.9
6.	WLS	02.50 PM	56.5
7.	Fire Pump House	03.10 PM	63.6

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE:** The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986



Authorized Signatory  
K Ganesan - Lab Manager

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**Hubert Enviro Care Systems (P) Ltd.**

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**TEST REPORT**

Page No. 2 of 2

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	09.11.2020
Report Date	20.11.2020
Report No	HECS/N/008-014/091120

**NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	12.35 PM	62.9	70.7
2.	Outside of Switch Gear Building	12.40 PM	66.8	71.6
3.	JNT-4	01.05 PM	60.8	68.5
4.	SUL-2	01.30 PM	68.9	72.9
5.	SUL-1	02.00 PM	68.5	72.7
6.	WLS	02.25 PM	55.9	67.8
7.	Fire Pump House	03.05 PM	62.7	70.8

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE:** The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986

Authorized Signatory  
(Dr K Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 1 of 1

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Treated Sewage Effluent
Sample Mark	WW-1
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	09.11.2020
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	09.11.2020
Analysis Commenced On	10.11.2020
Completed On	20.11.2020
Report No	HECSM/WW/004/091120
Report Date	20.11.2020

**RESULTS OF TREATED SEWATER WATER**

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std Limit
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	8.01	6.5-9.0
2.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	8.6	≤ 10
3.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	26.2	≤ 50
4.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	7.2	≤ 20
5.	Total Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	16.3	≤ 100
6.	Ammonical Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	8.1	≤ 50
7.	Faecal Coliforms	IS1622:1981 (R.aff 2009)	MPN/100 mL	< 2	Not Detectable

Note: mg/L - Milligrams per Liter; MPN - Most Probable Number; Less than 2 considered as absent

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

<b>INFERENCE</b>	As per KSPCB standards, The analysed parameters are within the prescribed limit.
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**TEST REPORT**

Page No. 1 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA Silent DG Set
Sampling Location	Switch Gear Building
Model Family No.	CP500D5P/F48
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 500 D5P and 01/19/01/1901010876
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/002/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	179 °C
Total Stack Height	6 meters
Height of the port hole	4.0 meters
Diameter	0.3 meters
Discharge Rate	782.1 Nm <sup>3</sup> /hr
Velocity	11.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	26.9 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.5 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
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**TEST REPORT**

Page No. 2 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	40 kVA Silent DG Set
Sampling Location	Outside of Switch Gear Building
Model Family No.	DS40SL/F11
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 40 D5P and 01/12/06/1697
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/003/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	162 °C
Total Stack Height	3.5 meters
Height of the port hole	2.2 meters
Diameter	0.1 meters
Discharge Rate	295.4 Nm <sup>3</sup> /hr
Velocity	9.8 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	8.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	20.6 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	14.9 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 3 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	160 kVA Silent DG Set
Sampling Location	JNT-4
Model Family No.	CP160D5P/F42
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CP 160 D5P and 01/19/02/1901011161
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/004/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	30 °C
Flue Gas Temperature	177 °C
Total Stack Height	11 meters
Height of the port hole	7.5 meters
Diameter	0.1 meters
Discharge Rate	478.6 Nm <sup>3</sup> /hr
Velocity	11.7 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.2 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	17.1 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	14.7 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 4 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-2
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800013
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/005/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	30 °C
Flue Gas Temperature	182 °C
Total Stack Height	5 meters
Height of the port hole	2.5 meters
Diameter	0.2 meters
Discharge Rate	883.2 Nm <sup>3</sup> /hr
Velocity	12.4 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	27.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	24.1 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
 Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 5 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	500 kVA DG Set
Sampling Location	SUL-1
Product Code	DVO. 5026
Manufacturer	Kirloskar Oil Engines Ltd., Khadki, Pune - 411 003
Model and Sr. No.	KG1-500WS4/ 500kVA and 14-07-2018/ 1800014
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/006/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	170 °C
Total Stack Height	5 meters
Height of the port hole	2.5 meters
Diameter	0.2 meters
Discharge Rate	874.1 Nm <sup>3</sup> /hr
Velocity	12.2 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.4 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	25.9 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	21.8 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 6 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	400 kVA Silent DG Set
Sampling Location	WLS
Model Family No.	CP400D5P/F45
Manufacturer	Cummins - Powerica Ltd, Mumbai
Model and Sr. No.	CPP400D5P and 01/19/01/1901010947
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/007/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	182 °C
Total Stack Height	10 meters
Height of the port hole	5.0 meters
Diameter	0.2 meters
Discharge Rate	895.7 Nm <sup>3</sup> /hr
Velocity	13.6 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	10.9 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	24.9 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	22.5 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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**TEST REPORT**

Page No. 7 of 7

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Stack ID	125 kVA Fire Pump
Sampling Location	Fire Pump House
Model Family No.	-
Manufacturer	Banco Products
Model and Sr. No.	6 RTA / 125 kVA and 2018 10 16
Sample Description	Manual Stack Emission Monitoring
Sampling Date	10.10.2020
Sample Received Date	12.10.2020
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report Date	26.10.2020
Report No	HECS/ST/008/101020

**EMISSION AIR FROM STACK / CHIMNEY MONITORING**

General Details	
Source of Fuel	Diesel
Ambient temperature	31 °C
Flue Gas Temperature	159 °C
Total Stack Height	13 meters
Height of the port hole	9.5 meters
Diameter	0.2 meters
Discharge Rate	1754.5 Nm <sup>3</sup> /hr
Velocity	11.6 m/s

**RESULTS**

Parameter monitored	Results obtained	KSPCB Std. Limit	Test Method Followed
PM	19.7 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	IS 11255: (Part 1): 1985 (RA 2003)
SO <sub>2</sub>	35.7 ppm	100 ppm	IS 11255: (Part 2): (RA 2003)
NO <sub>x</sub>	39.1 ppm	50 ppm	IS 11255: (Part 7): (RA 2003)

Note: mg/Nm<sup>3</sup>: milligram per normal cubic meter; PM: Particulate Matter; ppm: Parts per Million  
Nm<sup>3</sup>/hr - Normal cubic meter per hour; ppm - parts per million

INFERENCE	As per KSPCB Standards, All the parameters are within the limits
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Authorized Signatory  
(Dr K Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 1 of 2

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	<b>Ambient Noise levels observed during day time</b>
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	10.10.2020
Report Date	26.10.2020
Report No	HECS/N/001-007/101020

**NOISE MONITORING**

S.No.	Sampling Location	Time of Monitoring	Average Noise level in dB
1.	Switch Gear Building	12.30 PM	63.2
2.	Outside of Switch Gear Building	12.50 PM	66.7
3.	JNT-4	01.15 PM	60.8
4.	SUL-2	01.45 PM	68.9
5.	SUL-1	02.05 PM	69.3
6.	WLS	02.35 PM	55.7
7.	Fire Pump House	02.55 PM	62.8

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE:** The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986



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(Dr K. K. Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 2 of 2

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Acoustic Noise levels observed during DG operation
Sample Drawn by	Hubert Enviro Care Systems (P) Ltd
Sampling Date	10.10.2020
Report Date	26.10.2020
Report No	HECS/N/008-014/101020

**NOISE MONITORING**

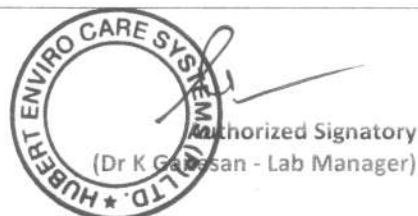
S.No.	Sampling Location	Time of Monitoring	When DG is not in operation (background level)	While DG in operation
1.	Switch Gear Building	12.35 PM	62.2	70.4
2.	Outside of Switch Gear Building	12.40 PM	66.3	70.1
3.	JNT-4	01.05 PM	59.9	68.1
4.	SUL-2	01.30 PM	68.1	72.6
5.	SUL-1	02.00 PM	67.8	71.9
6.	WLS	02.25 PM	56.4	68.3
7.	Fire Pump House	03.05 PM	62.3	69.1

Note: dB: Decibel

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: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

**INFERENCE:** The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986



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**TEST REPORT**

Page No. 1 of 1

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	Treated Sewage Effluent
Sample Mark	WW-1
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	10.10.2020
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	10.10.2020
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report No	HECSM/WW/003/101020
Report Date	26.10.2020

**RESULTS OF TREATED SEWATER WATER**

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std Limit
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	7.8	6.5-9.0
2.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	7.1	≤ 10
3.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	21.8	≤ 50
4.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	6.8	≤ 20
5.	Total Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	15.5	≤ 100
6.	Ammonical Nitrogen	IS 3025: (Pt 34): 1988 (RA 2013)	mg/L	7.9	≤ 50
7.	Faecal Coliforms	IS1622:1981 (R.aff 2009)	MPN/100 mL	< 2	Not Detectable

Note: mg/L - Milligrams per Liter; MPN - Most Probable Number; Less than 2 considered as absent

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

<b>INFERENCE</b>	As per KSPCB standards, The analysed parameters are within the prescribed limit.
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Authorized Signatory  
(Dr. K. Ganesan - Lab Manager)

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**TEST REPORT**

Page No. 1 of 1

Name of the Customer	M/s. Chettinad Mangalore Coal Terminal Private Limited (CMCPTL)
Address of the Customer	Berth No. 16, NMPT, Panambur, Mangalore - 575 010.
Sample Description	<b>DISCHARGE OF TREATED SURFACE RUNOFF</b>
Sample Mark	WW-2
Sample Drawn by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	10.10.2020
Qty. of sample received	2 L in HDPE Can and 1 L in Amber bottle
Date of Sample Receipt	10.10.2020
Analysis Commenced On	12.10.2020
Completed On	26.10.2020
Report No	HECSM/WW/004/101020
Report Date	26.10.2020

**RESULTS – OCTOBER 2020**

S.No.	Parameters monitored	Test method followed	Units	Results	KSPCB Std Limit
1.	pH (at 25°C)	IS 3025 (Part-11) 1983	-	7.5	6.5-9.0
2.	Total Suspended Solids (TSS)	2540 D APHA 23 <sup>rd</sup> Edn., 2017	mg/L	8.7	≤ 20
3.	Oil and Grease	IS 3025 (Pt 39): 2000 (RA 2014)	mg/L	BDL (DL 2)	≤ 10
4.	BOD, 3 days @ 27°C as O <sub>2</sub>	IS:3025 (Pt 44)1993(RA 2009)	mg/L	6.7	≤ 10
5.	Chemical Oxygen Demand	IS 3025 (Pt 58): 2006 (RA 2017)	mg/L	20.5	≤ 50
6.	Phenolic content as C <sub>6</sub> H <sub>5</sub> OH	IS 3025 (Pt 43): 1992 (RA 2013)	mg/L	BDL (DL 0.001)	≤ 1.0

Note: mg/L - Milligrams per Liter

<b>INFERENCE</b>	As per KSPCB standards, The analysed parameters are within the prescribed limit.
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\*\*\*End of Report\*\*\*

Authorized Signatory  
(Dr K Ganesan - Lab Manager)