

SEIL P2/APPCB/BZA/2021/005 28th September 2021

To
The Member Secretary
Andhra Pradesh Pollution Control Board
D. No. 33-26-14 D/2, Near Sunrise Hospital
Pushpa Hotel Centre, Chelamavari Street
Kasturibaipet
Vijayawada— 520010.

Sembcorp Energy India Limited
CIN: U40103HR2008PLC095648
Regd. Office: 5th Floor, Tower C, Building No 8
DLF Cybercity, Gurgaon - 122002, Haryana, India
Tel (91) 124 389 6700 / 01
Fax (91) 124 389 6710
E-mail: cs.india@sembcorp.com
Website: www.sembcorpenergyindia.com

Sub.: Submission of Environment Statement for the year 2020-21 of Sembcorp Energy India Limited Project-2 (formerly known as Sembcorp Gayatri Power Limited – SGPL), Nellore.

Ref: CFO order issued to SGPL vide Ref: APPCB/HO/UH-IV/CFO: VJA/Auto Renewal-1/2017 – dated 29.01.2017 valid till 28.02.2022.

Dear Sir,

This has reference to captioned subject and the cited reference. Please find enclosed herewith Environment Statement of Sembcorp Energy India Limited Project-2 (formerly known as Sembcorp Gayatri Power Limited—SGPL), Nellore for the year 2020-21 duly filled in Form V.

Thanking you,

Yours faithfully,

For M/s. Sembcorp Energy India Limited

Pavan Kumar Rao V Head HSE- SEIL

Encl: Environment Statement in Form-V along with Annexures

Copy To: The Regional Officer, APPCB, Nellore

ENVIRONMENTAL STATEMENT FOR THE YEAR 2020-21

Of

2x660 MW Super Critical Coal Based Thermal Power Plant

Ananthavaram, Varakavipudi Villages
TP Gudur Mandal
SPSR Nellore District
Andhra Pradesh

Submitted By

Sembcorp Energy India Limited- Project-2

(Formerly known as Sembcorp Gayatri Power Limited)
SPSR NELLORE, ANDHRA PRADESH

September 2021

FORM V (See Rule 14)

Environmental Statement Report for the financial year ending the 31st March 2021

PART- A

(i) Name and adders of the : Mr. Ramesh Raman Owner/Occupier of the Industry, Plant Manager

Operation or process Sembcorp Energy India Limited

Project-2

(Formerly known as Sembcorp Gayatri

Power Limited)

Pyanampuram, Varakavipudi and

Sivarampuram Villages,

Muthukur Mandal, SPSR Nellore

524 344

0861-3052311 0861-3052309

(ii) Industry Category :

(Coal based thermal power plant)

(iii) Production capacity : 1320 MW (2X660 MW)

(iv) Year of Establishment : Unit#1 (Nov 2016) & Unit#2 (Feb 2017)

(V) Date of the last Environmental :

statement Submitted

13th May 2020

PART - B Water and Raw Material consumption

1. Water Consumption, m³/d:

Plant Process : 10,393 m³/Day Cooling : 1,65,907 m³/Day Potable : 32 m3/Day

Name of	Process Water Consumption per Unit of Product Output		
Product	During the Previous Financial	During the Current	
Product	Year (2019-20)	Financial Year (2020-21)	
Ele atribit.	0.512 m ³ /MWH	0.409 m³/MWH	
	(Excl. Cooling Tower makeup)	(Excl. Cooling Tower makeup)	
Electricity	6.99 m ³ /MWH	6.94 m ³ /MWH	
	(Incl. Cooling Tower makeup)	(Incl. Cooling Tower makeup)	

2. Raw Material Consumption

Nomeonf	Name of Name of Raw Unit Materials		Consumption of raw material per unit of output		
Products			During the Previous Financial year (2019-20)	During the current Financial year (2020-21)	
Electricity	Coal	MT/MWH	0.514	0.510	
Electricity	Furnace Oil	ML/KWH	0.286	0.113	

^{*}Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw material used.

PART— C
Pollution Discharged to Environment/Unit of Output
(Parameters as specified in the consent issued)

(i) Pollution Quantity of pollutants discharged Concentrations of pollutants in discharges (mass/volume) Percentage of variation from prescribed standards with reasons

a) Water Please refer Annexure-I (Effluent Water Quality third party Monitoring reports)

b) Air Please refer Annexure-II (Stack Emissions Quality third party Monitoring reports)

PART- D

Hazardous Wastes

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

(a) From Process:

		Total Quantity		
S.No.	Hazardous Wastes	During the Previous	During the Current	
3.110.	l lazardous wastes	Financial year	Financial year	
		(2019-20)	(2020-21)	
1	Expired Paints/ Paint Waste/		0.15 MT	
I	Empty Paint Cans	-	0.15 1011	
2	Expired Chemicals/ Chemical		0.16 MT	
2	Waste/ Empty Chemical	-	O. 16 IVI I	
3	Spent Ion Exchange Resins	-	0.26 MT	
4	Oil Soaked or Chemicals coated		0.38	
4	Cotton waste	-	0.36	
Е	Used Oil Filters/ Damaged		34 No ' s	
5	Filters	-	34 NO S	
6	ETP Sludge/ Oil Sludge	-	0	
7	Used Lubricant Oil	31.8 KL	17.755 MT	
8	Waste Oil from DG Sets	-	0	
9	Aerosol Cans	-	70 No ' s	

10	Used Empty Chemical Jar/ Bottles	-	67 No ' s
11	Used Empty PVC oil sample Bottles	-	0
12	Used Grease	-	9 No ' s
13	Lead Acid Batteries	60 No ' s	64 No ' s
14	E-Waste	6.83 MT	0.28 MT

PART- E **Solid Wastes**

(b) From pollution control facilities:

	Solid	Total Quantity		
S.No. Wates		During the Previous	During the Current	
		Financial year (2019-20)	Financial year (2020-21)	
1	Ash (Fly Ash+ Bottom Ash)	5,56,265	4,58,383	

(C)

(1) Quantity recycled or re-utilized with in the plant:

	Solid	Total Quantity		
S.No.	Wates	During the Previous	During the Current	
		Financial year (2019-20)	Financial year (2020-21)	
1	Ash (Fly Ash+ Bottom Ash)	70,136	3,24,355	

(2) Sold:

	Solid	Total Quantity		
S.No.	Wates	During the Previous	During the Current	
		Financial year (2019-20)	Financial year (2020-21)	
1	Ash (Fly Ash+ Bottom Ash)	9,00,880	10,65,368	

(3) Disposed:

	Solid	Total Quantity	
S.No.	Solid Wates	During the Previous	During the Current
	wates	Financial year (2019-20)	Financial year (2020-21)
	Ash		
1	(Fly Ash+	-	-
	Bottom Ash)		

PART- F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Characteristics of Solid Wastes

Fly Ash

Parameter	Unit	Fly Ash	
Chromium (as Cr ⁺⁶)	mg/kg	BDL (DL: 1.0)	
Chloride (as CI)	%(w/w)	0.06	
Arsenic (as As)	mg/kg	ND (DL: 0.5)	
Selenium (as Se)	mg/kg	ND (DL: 0.5)	
Lead (as Pb)	%(w/w)	0.0049	
Mercury (as Hg)	mg/kg	ND (DL: 0.1)	
1,4-Dioxane	mg/kg	BDL (DL: 1.0)	

<u>Disposal practice of Solid Waste:</u>

(a) Disposal Practice of Hazardous Waste:

S.No.	Name of Hazardous Waste	Disposal Practice
1	Expired Paints/ Paint Waste/ Empty Paint Cans	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
2	Expired Chemicals/ Chemical Waste/ Empty Chemical	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
3	Spent Ion Exchange Resins	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
4	Oil Soaked or Chemicals coated Cotton waste	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
5	Used Oil Filters/ Damaged Filters	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
6	ETP Sludge/ Oil Sludge	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
7	Used Lubricant Oil	Disposal to Authorized recyclers/ Reprocessors/ Incinerators/ Pre-processors
8	Waste Oil from DG Sets	Disposal to Authorized recyclers/ Reprocessors/ Incinerators/ Pre-processors
9	Aerosol Cans	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
10	Used Empty Chemical Jar/ Bottles	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
11	Used Empty PVC oil sample Bottles	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
12	Used Grease	Disposal to Authorized recyclers/ Reprocessors/ Incinerators
13	Lead Acid Batteries	Return to manufacturers/dealers on buyback basis/ Authorized recyclers
14	E-Waste	Authorized recyclers/ Reprocessors

(b) Disposal Practice of Solid Waste:

S.No.	Name of Solid Waste	Disposal Practice
1	Ash (Fly Ash+ Bottom Ash)	Utilization in Cement/ AAC blocks/ Brick Industry/ RMC/ Export to other countries/ Disposal in Ash pond/ Filling of Low lying Areas

PART- G

Impact of the pollution control measures on conservation of natural resources and on the cost of production.

 Bulk chemical storage areas are having dykes to handle any chemical leakages and avoid contamination to the ground.

Energy Conservation Initiatives

- 1. Replacement of existing lighting system with Energy efficient LED bulbs- 114 KW
- 2. Through Prudent O&M Practices like below the energy savings are up to 1.8 Kcal/Kwh
- a) Enhancement of Heat energy drain passing valves and thermal insulations
- 3. Heat rate reduction of Approx. 5 Kcal/Kwh because of SPARK (Smart Performance Analysis for Real-time KPI) Online cloud based performance monitoring system implemented to improve performance by tracking critical parameters like THR, Boiler Efficiency, GHR, Equipment performance and their loss breakups/gaps etc.,) and to control the various controllable losses on real time.
- 4. Boiler Computational Fluid Dynamics (CFD) modelling developed to analyze boiler performance and resulting in optimized performance.
- Field log sheets replaced by Mobile app in order to digitalize in our internal operations. This enhances reduction in paper consumption.
- A total of about Rs. 30 Lakh is spent on Environment monitoring, Waste disposal, Maintenance of Pollution Control Monitoring equipment like CEMS, CAAQMS & EQMS for the financial year 2020–21.
- Regular monitoring of Ambient Air Quality, Stack emissions and Effluent quality have been taken up to evaluate the efficiency of the pollution control systems and control measures. Both CEMS, CAAQMS & EQMS are connected to APPCB / CPCB websites and data is being transmitted on real time basis.

PART- H

Additional measures/ investment proposal for environmental protection including abatement of pollution, prevention of pollution

Capital investment on Energy conservation equipment

- a) Purchase of (Smart Performance Analysis for Real-time KPI) SPARK Online tool at a cost of Rs. 65,00,000.
- SEIL has erected the structural platform for container stuffing (jumbo bags stuffing into container) for export purpose of Ash.

SEIL has hired two JCBs for free loading of pond ash to supply customers.

- Bulk shipment and Break Bulk shipment done to USA around 70,000 MT (44K MT +26K MT)
- Exploring the international markets.
- Finding other modes of transportation of fly ash to the customers. (one Rake sent to Cement factory at Kerala around 3000 MT)
- R&D study conducted on boiler tube failure reduction, chemical regime improvement and Oxide growth & exfoliation reduction by M/s Structural Integrity Associates Incorporation, USA, cost incurred around Rs. 23,11,000.
- 407 acres of massive tree plantation done inside as well as outside of the Plant premises. Lawns/ gardens also are developed inside the plant premises to enhance aesthetics.
- Conocarpus plantation is done all around the coal stack area to suppress the wind borne coal dust.
- Upgraded DFDS System installed for dust suppression
- All internal roads are either concreted or black topped to reduce the fugitive dust emission inside the plant premises.
- Rainwater harvesting ponds are constructed in the site.
- Good Housekeeping practices and 5S system has been implemented in the company by deploying approx. 200 No. of manpower.

PART-I

Any other particulars for improving the quality of environment

- Sembcorp Energy India Limited certified with ISO 9001:2015 (QMS), ISO 14001:2015 (EMS) & ISO 45001:2018 (OHS)
- More than 350 acres of Greenbelt development completed inside & all along the periphery of the plant boundary
- World Environment Day celebrated to build up environmental awareness among employees and community

Pavan Kumar Rao Head-HSE On Behalf of Plant Head

Mr. Ramesh Raman Plant Manager Sembcorp Energy India Limited Date: 28-09-2021

ANNIEXURIE- I



(Environmental Engineers & Consultants in Pollution Control)

Corporate Office : Enviro House, B-1, Block-B, IDA, Autonagar, Visakhapatnam-530012 & **Laboratory** www.svenvirolabs.com, Ph:0891-2755528, Cell: +91 9440338628

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Branch Office: 2-53. Mahipala Street, Yanam - 533464.

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET





Ref. No: SVELC/SCEIL/20-04/06 Dated: 25-05-2020

ISSUED TO : M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE : TREATED EFFLUENT

DATE OF COLLECTION : April'20 – (21/04/2020)

DATE OF RECEIPT : April'20 – (24/04/2020)

SOURCE OF COLLECTION : ETP OUTLET

SAMPLE COLLECTED BY : SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S. No.	Parameters	Units	Results	Method	Standard
1.	pH at 25°C	-	7.57	APHA 23 rd Ed,2017, 4500 H+B	5.5-9.0
2.	Total Dissolved Solids – TDS	mg/l	1464	APHA 23 rd Ed,2017, 2540 C	2100
3.	Total Suspended Solids – TSS	mg/l	51.0	APHA 23 rd Ed,2017, 2540 D	200
4.	Chemical Oxygen Demand – COD	mg/l	148	APHA 23 rd Ed,2017, 5220 B	250
5.	Bio chemical Oxygen Demand – BOD 3days at 27°C	mg/l	44.0	IS: 3025 (Part- 44)-1993, reaffirmed 2009	100
6.	Oil & Grease	mg/l	1.5	APHA 23 rd Ed,2017, 5520 B	10

CHECKED BY





ISSUED TO

SV ENVIRO LABS & CONSULT

(Environmental Engineers & Consultants in Pollution Control)

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: 2-53, Mahipala Street, Yanam - 533464. **Branch Office**

:

:

:

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Ref. No: SVELC/SCEIL/20-04/07

Dated: 25-05-2020

M/s. SEMB CORP ENERGY INDIA LIMITED P-2, :

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

MARINE WATER

DATE OF COLLECTION

April'20 - (21/04/2020)

DATE OF RECEIPT

April'20 - (24/04/2020)

SOURCE OF COLLECTION

MARINE OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S.No	Parameter	Unit	Result	Standards
1.	рН	_	7.51	6.5-8.0
2.	Temperature Intake	°C	32.4	Shall not exceed 5°C above the
3.	Temperature Outfall	°C	34.4	receiving temperature
4.	Electrical Conductivity	ms/cm		-
5.	Turbidity	NTU	4.5	-
6.	Total Dissolved Solids	mg/l	22448	-
7.	Total Suspended Solids	mg/l	82.0	100
8.	Total Alkalinity as CaCO ₃	mg/l	638	_
9.	P-Alkalinity as CaCO ₃	mg/l	Nil	-
10.	Total Hardness as CaCO ₃	mg/l		_
11.	Calcium as Ca	mg/l	1210	_
12.	Magnesium as Mg	mg/l	895	
13.	Chlorides as Cl	mg/l	12614	•
14.	Fluorides as F	mg/l	0.76	100
15.	Nitrates as NO ₃	mg/l	1.21	••
16.	Sulphates as SO 4 25 & Co	mg/l	898	
17.	Sulphates as SO ₂ Silica as SiO ₂	mg/l	0.58	-



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18.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	< 0.005	_
19.	Sodium as Na	mg/l	5992	_
20.	Potassium as K	mg/l	218	_
21.	Carbonates as CaCO ₃	mg/l	Nil	_
22.	Bicarbonates as CaCO ₃	mg/l	638	_
23.	Iron as Fe	mg/l	2.8	-
24.	Copper as Cu	mg/l	0.64	_
25.	Manganese as Mn	mg/l	0.35	_
26.	Zinc as Zn	mg/l	0.63	-
27.	Boron as B	mg/l	0.02	_
28.	Selenium as Se	mg/l	< 0.005	-
29.	Cadmium as Cd	mg/l	< 0.001	2.0
30.	Cyanide as CN	mg/l	< 0.01	-
31.	Lead as Pb	mg/l	< 0.01	2.0
32.	Mercury as Hg	mg/l	< 0.001	0.01
33.	Hexavalent Chromium as Cr ⁺⁶	mg/l	< 0.001	1.0
34.	Total Arsenic as As	mg/l	< 0.01	0.2
35.	Chemical Oxygen Demand-COD	mg/l	67.8	250
36.	Bio-Chemical Oxygen Demand (27°C @ 3days)-BOD	mg/l	26.0	100
37.	Oil & Grease	mg/l	<1.0	20

Note: As per the above report, all the parameters are analyzed as per APHA, 23rd Ed,2017.

CHECKED BY

BS & C VISAKHAPATNAM



(Environmental Engineers & Consultants in Pollution Control)

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Ref. No: SVELC/SCEIL/20-04/08

Dated: 25-05-2020

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

SAMPLE PARTICULARS

•

:

MARINE WATER

SOURCE OF COLLECTION

MARINE OUTFALL

DATE OF COLLECTION

21-04-2020

SAMPLE PARTICULARS TEST SPECIES Zebra Fish	SOURCE OF ORGANISM Through vendors.	LENGTH & WEIGHT (For fish) 1.Length 4.6 (cm)	1.Fish were not fed yes
	_	fish)	
Zebra Fish	Through vendors.	1.Length <u>4.6 (cm)</u>	<u>yes</u>
Zebra Fish	Through vendors.	1.Length <u>4.6 (cm)</u>	
	_		2.Temperature range
		2.Weight <u>3.8(gm)</u>	in aquaria 25°c
	REFEREN	 NCE TEST DATA	<u></u>
Start Date :24-04-2020			
End Date: 28-04-2020			
COMMENTS:			TANK ME
RESULT: 100% survival of f	ish was noticed		
NSTRUMENTS USED:			
. pH meter.			
2. D.O meter.			
3. Thermometer.			
. Glass aquarium.			
. Low flow pump.			
.Aerator			
Balance & CO	*		
est conducted by. 10			
SHOW THE WAR ALL THE			



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Ref. No: SVELC/SCEIL/20-09/06

Dated: 10-10-2020

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M),

SPSR NELLORE DISTRICT, ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

TREATED EFFLUENT

DATE OF COLLECTION

September $^{\circ}20 - (18/09/2020)$

DATE OF RECEIPT

:

September'20 - (21/09/2020)

SOURCE OF COLLECTION

ETP OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S. No.	Parameters	Units	Results	Method	Standard
1.	pH at 25°C	-	7.59	APHA 23 rd Ed,2017, 4500 H+B	5.5-9.0
2.	Total Dissolved Solids – TDS	mg/l	1426	APHA 23 rd Ed,2017, 2540 C	2100
3.	Total Suspended Solids – TSS	mg/l	49.0	APHA 23 rd Ed,2017, 2540 D	200
4.	Chemical Oxygen Demand – COD	mg/l	132	APHA 23 rd Ed,2017, 5220 B	250
5.	Bio chemical Oxygen Demand – BOD 3days at 27°C	mg/l	37.0	IS: 3025 (Part- 44)-1993, reaffirmed 2009	100
6.	Oil & Grease	mg/l	1.5	APHA 23 rd Ed,2017, 5520 B	10

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Dated: 10-10-2020

ISSUED TO

:

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M),

SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

MARINE WATER

DATE OF COLLECTION

September 20 – (18/09/2020)

DATE OF RECEIPT

September'20 – (21/09/2020)

SOURCE OF COLLECTION

MARINE OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S.No	Parameter	Unit	Result	Standards
1.	рН	-	7.58	6.5-8.0
2.	Temperature Intake	°C	32.5	Shall not exceed 5°C above the
3.	Temperature Outfall	°C	34.2	receiving temperature
4.	Electrical Conductivity	ms/cm	37858	-
5.	Turbidity	NTU	6.5	-
6.	Total Dissolved Solids	mg/l	22413	_
7.	Total Suspended Solids	mg/l	81.0	100
8.	Total Alkalinity as CaCO ₃	mg/l	574	-
9.	P-Alkalinity as CaCO ₃	mg/l	Nil	-
10.	Total Hardness as CaCO ₃	mg/l	6753	_
11.	Calcium as Ca	mg/l	1210	_
12.	Magnesium as Mg	mg/l	906	_
13.	Chlorides as Cl	mg/l	10264	_
14.	Fluorides as F	mg/l	0.76	_
15.	Nitrates as NO33	mg/l	0.33	_
16.	Sulphates as \$04	mg/l	890	-
17.	Silica as SiO2	mg/l	0.52	_



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Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET







18.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	< 0.005	_
19.	Sodium as Na	mg/l	5228	_
20.	Potassium as K	mg/l	198	-
21.	Carbonates as CaCO ₃	mg/l	Nil	_
22.	Bicarbonates as CaCO ₃	mg/l	959	_
23.	Iron as Fe	mg/l	2.8	_
24.	Copper as Cu	mg/l	0.65	•
25.	Manganese as Mn	mg/l	0.39	De Constitution of the Con
26.	Zinc as Zn	mg/l	0.70	
27.	Boron as B	mg/l	0.02	_
28.	Selenium as Se	mg/l	< 0.005	_
29.	Cadmium as Cd	mg/l	< 0.001	2.0
30.	Cyanide as CN	mg/l	< 0.01	_
31.	Lead as Pb	mg/l	< 0.01	2.0
32.	Mercury as Hg	mg/l	< 0.001	0.01
33.	Hexavalent Chromium as Cr ⁺⁶	mg/l	< 0.001	1.0
34.	Total Arsenic as As	mg/l	< 0.01	0.2
35.	Chemical Oxygen Demand-COD	mg/l	69.2	250
36.	Bio-Chemical Oxygen Demand (27°C @ 3days)-BOD	mg/l	27.0	100
37.	Oil & Grease	mg/l	1.0	20
XT_4 A				

Note: As per the above report, all the parameters are analyzed as per APHA, 23rd Ed,2017.

CHECKED BY



(Environmental Engineers & Consultants in Pollution Control)

& Laboratory

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Branch Office

: 2-53, Mahipala Street, Yanam - 533464.

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Ref. No: SVELC/SCEIL/20-09/08

Dated: 10-10-2020

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M),

SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

SAMPLE PARTICULARS

MARINE WATER

SOURCE OF COLLECTION

MARINE OUTFALL

DATE (

SAMDI E DADTICIII ADC.		TOXICITY DATA SHEET	
SAMPLE PARTICULARS : TEST SPECIES	SOURCE OF ORGANISM	LENGTH & WEIGHT (For fish)	1.Fish were not fed
			yes
Mulloyidicthys flavolineatus (Goat fish)	Through vendors.	1.Length <u>4.6 (cm)</u>	2.Temperature range in aquaria 25°c
		2.Weight <u>3.8(gm)</u>	m uquana <u>23 0</u>
	REFEREN	ICE TEST DATA	
Start Date :21-09-2020 End Date : 25-09-2020			
COMMENTS:			

INSTRUMENTS USED:

RESULT: 100% survival of fish was noticed

1. pH meter.

- 2. D.O meter.
- 3. Thermometer.
- 4. Glass aquarium.
- 5. Low flow pump.
- 6.Aerator
- 7. Balance.

Test conducted by:





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& Laboratory

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Dated: 12-02-2021

Ref. No: SVELC/SCEIL/21-01/06

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT.

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

TREATED EFFLUENT

DATE OF COLLECTION

January'21 -(21/01/2021)

DATE OF RECEIPT

January'21 -(22/01/2021)

SOURCE OF COLLECTION

ETP OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S. No.	Parameters	Units	Results	Method	Standard
1.	pH at 25°C	-	7.62	APHA 23 rd Ed,2017, 4500 H+B	5.5-9.0
2.	Total Dissolved Solids – TDS	mg/l	1530	APHA 23 rd Ed,2017, 2540 C	2100
3.	Total Suspended Solids – TSS	mg/l	54	APHA 23 rd Ed,2017, 2540 D	200
4.	Chemical Oxygen Demand – COD	mg/l	156	APHA 23 rd Ed,2017, 5220 B	250
5.	Bio chemical Oxygen Demand – BOD 3days at 27°C	mg/l	48	IS: 3025 (Part- 44)-1993, reaffirmed 2009	100
6.	Oil & Grease	mg/l	1.7	APHA 23 rd Ed,2017, 5520 B	10







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Dated: 12-02-2021

Ref. No: SVELC/SCEIL/21-01/07

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M),

SPSR NELLORE DISTRICT.

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

MARINE WATER

DATE OF COLLECTION

January'21 -(21/01/2021)

DATE OF RECEIPT

:

January'21 -(22/01/2021)

SOURCE OF COLLECTION

MARINE OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST_REPORT

S.No	Parameter	Unit	Result	Standards
1.	рН	-	7.44	6.5-8.0
2.	Temperature Intake	⁰ C	32.7	Shall not exceed 5°C above the
3.	Temperature Outfall	⁰ C	34.6	receiving temperature
4.	Electrical Conductivity	ms/cm	39250	-
5.	Turbidity	NTU	5.0	-
6.	Total Dissolved Solids	mg/l	22752	-
7.	Total Suspended Solids	mg/l	88	100
8.	Total Alkalinity as CaCO ₃	mg/l	698	-
<u>9.</u>	P-Alkalinity as CaCO ₃	mg/l	Nil	_
10.	Total Hardness as CaCO ₃	mg/l	7039	_
11.	Calcium as Ca	mg/l	1275	_
12.	Magnesium as Mg	mg/l	936	-
13.	Chlorides as Cl	mg/l	12720	_
14.	Fluorides as F	mg/l	0.79	_
15.	Nitrates as NO ₃	mg/l	1.26	_
16.	Sulphates as SQ4	mg/l	920	_
17.	Silica as SiO ₂	\ mg/l	0.61	h



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1.0	P1 11 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C			
18.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	< 0.005	-
19.	Sodium as Na	mg/l	6096	_
20.	Potassium as K	mg/l	225	-
21.	Carbonates as CaCO ₃	mg/l	Nil	
22.	Bicarbonates as CaCO ₃	mg/l	698	_
23.	Iron as Fe	mg/l	3.0	_
24.	Copper as Cu	mg/l	0.67	_
25.	Manganese as Mn	mg/l	0.37	-
26.	Zinc as Zn	mg/l	0.66	-
27.	Boron as B	mg/l	0.03	_
28.	Selenium as Se	mg/l	< 0.005	-
29.	Cadmium as Cd	mg/l	< 0.001	2.0
30.	Cyanide as CN	mg/l	< 0.01	-
31.	Lead as Pb	mg/l	< 0.01	2.0
32.	Mercury as Hg	mg/l	< 0.001	0.01
33.	Hexavalent Chromium as Cr ⁺⁶	mg/l	< 0.001	1.0
34.	Total Arsenic as As	mg/l	<0.01	0.2
35.	Chemical Oxygen Demand-COD	mg/l	71.2	250
36.	Bio-Chemical Oxygen Demand (27°C @ 3days)-BOD	mg/l	28	100
37.	Oil & Grease	mg/l	<1.0	20

Note: As per the above report, all the parameters are analyzed as per APHA, 23rd Ed,2017.







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Dated: 12-02-2021

Ref. No: SVELC/SCEIL/21-01/08

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M),

SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

SAMPLE PARTICULARS

MARINE WATER

SOURCE OF COLLECTION

MARINE OUTFALL

DATE (

F COLLECTION	: 21-01-2	2021	
SAMPLE PARTICULARS		TOXICITY DATA SHEET	
TEST SPECIES	SOURCE OF ORGANISM	LENGTH & WEIGHT (For fish)	1.Fish were not fed
	_	1.Length 4.6 (cm)	yes 2.Temperature range
Zebra Fish	Through vendors.	2.Weight <u>3.8(gm)</u>	in aquaria 25°c
	REFEREN	I NCE TEST DATA	J
The test species was undergood RESULT: 100% survival of f INSTRUMENTS USED:	•	at Johns.	
1. pH meter. 2. D.O meter. 3. Thermometer. 4. Glass aquarium. 5. Low flow pump. 6. Aerator	SS & CO		



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Dated: 30-03-2021

Ref. No: SVELC/SCEIL/21-03/06

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

TREATED EFFLUENT

DATE OF COLLECTION

March'21 - (18/03/2021)

DATE OF RECEIPT

March'21 - (19/03/2021)

SOURCE OF COLLECTION

ETP OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S. No.	Parameters	Units	Results	Method	Standard
1.	pH at 25°C	_	7.66	APHA 23 rd Ed,2017, 4500 H+B	5.5-9.0
2.	Total Dissolved Solids – TDS	mg/l	1622	APHA 23 rd Ed,2017, 2540 C	2100
3.	Total Suspended Solids – TSS	mg/l	58	APHA 23 rd Ed,2017, 2540 D	200
4.	Chemical Oxygen Demand – COD	mg/l	164	APHA 23 rd Ed,2017, 5220 B	250
5.	Bio chemical Oxygen Demand – BOD 3days at 27°C	mg/l	51.0	IS: 3025 (Part- 44)-1993, reaffirmed 2009	100
6.	Oil & Grease	mg/l	1.5	APHA 23 rd Ed,2017, 5520 B	10

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Ref. No: SVELC/SCEIL/21-03/07

Dated: 30-03-2021

ISSUED TO : M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE : MARINE WATER

DATE OF COLLECTION : March'21 - (18/03/2021)

DATE OF RECEIPT : March'21 - (19/03/2021)

SOURCE OF COLLECTION : MARINE OUTLET

SAMPLE COLLECTED BY : SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S.No	Parameter	Unit	Result	Standards
1.	pH	-	7.46	6.5-8.0
2.	Temperature Intake	⁰ C	32.6	Shall not exceed 5°C
3.	Temperature Outfall	°C	34.3	above the receiving temperature
4.	Electrical Conductivity	ms/cm	39056	-
5.	Turbidity	NTU	4.9	_
6.	Total Dissolved Solids	mg/l	22358	_
7.	Total Suspended Solids	mg/l	81	100
8.	Total Alkalinity as CaCO ₃	mg/l	674	_
9.	P-Alkalinity as CaCO ₃	mg/l	Nil	_
10.	Total Hardness as CaCO ₃	mg/l	6778	_
11.	Calcium as Ca	mg/l	1206	_
12.	Magnesium as Mg	mg/l	912	_
13.	Chlorides as Cl	mg/l	12484	_
14.	Fluorides as F	mg/l	0.77	_
15.	Nitrates as NO ₃ 8 COA	mg/l	1.30	_
16.	Sulphates as SQ	mg/l	914	
17.	Silica as SiO ₂	$\frac{1}{mg/l}$	0.57	



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18.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	< 0.005	
19.	Sodium as Na	mg/l	5824	
20.	Potassium as K	mg/l	206	194
21.	Carbonates as CaCO ₃	mg/l	Nil	-
22.	Bicarbonates as CaCO ₃	mg/l	674	
23.	Iron as Fe	mg/l	2.6	
24.	Copper as Cu	mg/l	0.65	_
25.	Manganese as Mn	mg/l	0.32	_
26.	Zinc as Zn	mg/l	0.63	
27.	Boron as B	mg/l	0.02	_
28.	Selenium as Se	mg/l	< 0.005	_
29.	Cadmium as Cd	mg/l	< 0.001	2.0
30.	Cyanide as CN	mg/l	< 0.01	
31.	Lead as Pb	mg/l	< 0.01	2.0
32.	Mercury as Hg	mg/l	< 0.001	0.01
33.	Hexavalent Chromium as Cr ⁺⁶	mg/l	< 0.001	1.0
34.	Total Arsenic as As	mg/l	< 0.01	0.2
35.	Chemical Oxygen Demand-COD	mg/l	69.2	250
36.	Bio-Chemical Oxygen Demand (27°C @ 3days)-BOD	mg/l	27.0	100
37.	Oil & Grease	mg/l	<1.0	20

Note: As per the above report, all the parameters are analyzed as per APHA, 23rd Ed,2017.

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Dated: 30-03-2021

Ref. No: SVELC/SCEIL/21-03/08

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

SAMPLE PARTICULARS

MARINE WATER

SOURCE OF COLLECTION

MARINE OUTFALL

DATE OF COLLECTION

SAMPLE PARTICULARS	S. GOARD POND E	TOXICITY DATA SHEET	
TEST SPECIES	SOURCE OF ORGANISM	LENGTH & WEIGHT (For fish)	
		nsn)	1.Fish were not fed yes
Zebra Fish	Through vendors.	1.Length <u>4.6 (cm)</u>	2.Temperature range
		2.Weight <u>3.8(gm)</u>	in aquaria 25°c
	REFEREN	NCE TEST DATA	
he test species was undergon		t 96hrs.	
ESULT: 100% survival of fis	h was noticed		
ISTRUMENTS USED: pH meter.			
D.O meter.			
Thermometer.			
Glass aquarium.			
Low flow pump.			
Aerator Balance.			
t conducted by:			
De Town			
the feel of			



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Ref. No: SVELC/SCEIL/21-03/26

Dated: 30-03-2021

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M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V), Muthukur (M), SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF SAMPLE

WASTE WATER

DATE OF COLLECTION

March'21 -(18/03/2021)

DATE OF RECEIPT

March'21 - (19/03/2021)

SOURCE OF COLLECTION

ASH POND OUTLET

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS,

Visakhapatnam

TEST REPORT

S.No	Parameter	Unit	Result	Acceptable Limit	Permissible Limit
1.	pH	-	7.56	6.5-8.0	No Relaxation
2.	Color	Hazen	1.4	5	15
3.	Odor	-	Agreeable	Agreeable	Agreeable
4.	Electrical Conductivity	ms/cm	934	-	
5.	Turbidity	NTU	1.1	1.0	5
6.	Total Dissolved Solids	mg/l	552	500	2000
7.	Total Suspended Solids	mg/l	10	1000	
8.	Total Alkalinity as CaCO ₃	mg/l	194	200	600
9.	P-Alkalinity as CaCO ₃	mg/l	Nil		
10.	Total Hardness as CaCO ₃	mg/l	217	200	600
11.	Calcium as Ca	mg/l	60.4	75	200
12.	Magnesium as Mg	mg/l	16.1	30	100
13.	Chlorides as Cl	mg/l	176	250	1000
14.	Fluorides as F	mg/l	0.52	1.0	1.5
15.	Nitrates as NO ⁻ 3	mg/l	0.60	45	No Relaxation
16.	Sulphates as SO ₄	mg/l	75.3	200	No Relaxation
17.	Silica as SiO ₂	mg/l	0.33	0.05	-
18.	Phenolic Compounds as C ₆ H ₅ OH	mg/l	<0.001	0.001	0.002
19.	Codium og Ma	mg/l	84	0.001	0.002
20.	Potassium as K	$\frac{mg/l}{mg/l}$	0.58		-





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21.	Iron as Fe	ma/l	1.00		
22.	Copper as Cu	mg/l	1.92	0.3	No Relaxation
		mg/l	0.58	0.05	1.5
23.	Manganese as Mn	mg/l	0.34	0.1	0.3
24.	Zinc as Zn	mg/l	0.57	5	
25.	Boron as B	mg/l	0.03		15
26.	Selenium as Se			0.5	1.0
27.	Cadmium as Cd	mg/l	< 0.005	0.01	No Relaxation
		mg/l	< 0.001	0.003	No Relaxation
28.	Cyanide as CN	mg/l	< 0.01	0.05	No Relaxation
29.	Lead as Pb	mg/l	< 0.01	0.01	
30.	Mercury as Hg				No Relaxation
31.	Hexavalent Chromium as Cr ⁺⁶	mg/l	< 0.001	0.001	No Relaxation
		mg/l	< 0.001	0.005	1.0
32.	Total Arsenic as As	mg/l	< 0.01	_	0.2
33.	Phosphate as PO ₄	mg/l	0.49		0.2
Note:	As per the above report, all the pare	motors -	1 1	Day 1 and 1	•

Note: As per the above report, all the parameters are analyzed as per APHA, 23rd Ed, 2017.

CHECKED BY



Certified by ISO 9001: 2015 and OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0420

Date: 10-04-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

S.T.P Outlet

Date of collection :

03-04-2020

Date of Analysis :

03-04-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.24	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	598	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	14.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10

Analyst

Authorized Signatory

178 Ramakrishna Nagar, Opp. IOCL. Chengicherla, Hyderabad - 500 039. Ph. 040 - 2763 3361, e-mail: uea123/a/gmail.com/ www.universalenviro.in



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0420

Date: 17-04-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars : Date of collection :

S.T.P Outlet

Date of Analysis

10-04-2020 10-04-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.32	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	654	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	15.7	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst

Authorized Signatory

T. William

= 178, Ramakrishna Nagar, Opp. IOCL, Chengicherla, Hyderabad - 500 039 Ph: 040 - 2763 3361, e-mail: uea123/a gmail.com, www.universalenviro.in



Certified by ISO 9001: 2015 and OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0420

Date: 24-04-20

WASTEWATER ANALYSIS

Name of the Industry &:

Address

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars : Date of collection : S.T.P Outlet

Date of Analysis

17-04-2020 17-04-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.23	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	659	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

To krughman. Authorized Signatory



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0420

Date: 30-04-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection
Date of Analysis

24-04-2020 24-04-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.41	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	650	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.6	100
6	Oil & Grease	mg/L	APHA 23rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23rd Edition,2017: 4500 Cl ⁻ B	0.5	-
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	22
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.12	<1.0

Analyst

T polifical

Authorized Signatory

178, Ramakrishna Nagar, Opp. IOCL, Chengicheria, Hyderabad - 500 039. Ph. 040 - 2763-3361, e-mail: uea123/a/gmail.com, www.uaiversalenviro.in

WTP, STP, ETP & ZLD (Supply, O&M) | POLLUTION TESTING & ANALYSIS | ENV. AUDIT | OTHER ENV. SERVICES



Certified by ISO 9001: 2015 and OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0520

Date: 11-05-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

:

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

04-05-2020

Date of Analysis

04-05-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.12	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	606	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	13.8	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1,1	10

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TEST REPORT

REF.NO: UEA/SGPL/R2/0520

Date: 18-05-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

11-05-2020

Date of Analysis

11-05-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.26	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	648	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	16.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	58	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	16.6	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.2	10

Analyst

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Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0520

Date: 26-05-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

18-05-2020

Date of Analysis

18-05-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.13	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	662	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.8	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	61	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.2	10

Analyst

T. Yrighma:
Authorized Signatory

178, Ramakrishna Nagar, Opp. IOCL, Chengicherla, Hyderabad - 500 039. Ph: 040 - 2763 3361, e-mail: uea123@gmail.com, www.universalenviro.in



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0520

Date: 01-06-20

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

26-05-2020

Date of Analysis

26-05-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.36	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	641	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	58	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.2	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1,1	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.6	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.10	<1.0



T. prylina **Authorized Signatory**

178, Ramakrishna Nagar, Opp. IOCL, Chengicherla, Hyderabad - 500 039. Ph: 040 - 2763 3361, e-mail: uea123@gmail.com, www.universalenviro.in



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0620

Date: 12-06-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection

05-06-2020

Date of Analysis

05-06-2020

.

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.24	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	598	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	14.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	15.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10

Analyst A

Authorized Signatory

178, Ramakrishna Nagar, Opp. IOCL, Chengicherla, Hyderabad - 500 039. Ph: 040 - 2763 3361, e-mail: uea123@gmail.com, www.universalenviro.in



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0620

Date: 19-06-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection

12-06-2020

:

:

Date of Analysis

12-06-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.32	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	654	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	15.7	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	14.9	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst AM



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TEST REPORT

REF.NO: UEA/SGPL/R2/0620

Date: 26-06-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

19-06-2020

Date of Analysis

19-06-2020

:

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.23	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	659	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	16.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst Analyst



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TEST REPORT

REF.NO: UEA/SGPL/R2/0620

Date: 01-07-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

26-06-2020

Date of Analysis

26-06-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.41	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	650	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.12	<1.0

Analyst A

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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0720

Date: 14-07-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection :

07-07-2020

Date of Analysis

07-07-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	6.98	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	605	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	61	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	17.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10





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TEST REPORT

REF.NO: UEA/SGPL/R2/0720

Date: 21-07-2020

WASTEWATER ANALYSIS

Name of the Industry &:

Address

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Ananthavaram (V),

TP Gudur (M), SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection :

Date of Analysis

: 14-07-2020 : 14-07-7

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.30	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	645	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	14.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.1	10





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OHSAS 18001: 2007

TEST REPORT

Date: 28-07-2020

WASTEWATER ANALYSIS

Name of the Industry &:

Address

REF.NO: UEA/SGPL/R2/0720

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

21-07-2020

Date of Analysis

21-07-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.35	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	651	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	61	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	17.9	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10





REF.NO: UEA/SGPL/R2/0720

Recognised by NABL and MoEF & CC, GOI, New Delhi.

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OHSAS 18001: 2007

TEST REPORT

Date: 01-08-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

28-07-2020

Date of Analysis

28-07-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.40	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	632	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.2	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.1	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.14	<1.0





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TEST REPORT

REF.NO: UEA/SGPL/R2/0820

Date: 13-08-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

06-08-2020

Date of Analysis

06-08-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C	- 	APHA 23 rd Edition,2017, 4500 H+ B	7.23	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	623	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.5	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.7	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10





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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0820

Date: 23-08-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

13-08-2020

Date of Analysis

13-08-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.47	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	658	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	64	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.2	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10



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OHSAS 18001: 2007

REF.NO: UEA/SGPL/R2/0820

TEST REPORT

Date: 27-08-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

23-08-2020

Date of Analysis

23-08-2020

S No	Parameter	Units	Method	Result	Standards
1	рН @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.50	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	596	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	13.6	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	62	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10



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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0820

Date: 01-09-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

27-08-2020

Date of Analysis

27-08-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.44	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	586	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.7	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.3	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	1
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.12	<1.0





Certified by ISO 9001: 2015 and OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0920

Date: 11-09-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

04-09-2020

Date of Analysis

04-09-2020

:

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.25	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	654	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.6	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	67	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0920

Date: 18-09-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection :

11-09-2020

Date of Analysis

11-09-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.12	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	655	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.6	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0920

Date: 25-09-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

18-09-2020

Date of Analysis

18-09-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.36	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	602	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.7	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0920

Date: 29-09-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

25-09-2020

Date of Analysis

25-09-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.48	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	581	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.7	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.7	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	7-6
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.08	<1.0



T. Kriftima.



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1119

Date:15-10-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

08-10-2020

Date of Analysis

08-10-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.33	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	678	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.9	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	69	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.7	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1119

Date:22-10-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

15-10-2020

Date of Analysis :

15-10-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.25	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	726	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.8	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	66	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1119

Date:29-10-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

22-10-2020

Date of Analysis

22-10-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.45	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	657	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	68	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.5	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst

Authorized Signatory



Certified by ISO 9001: 2015 and OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1119

Date:02-11-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

S.T.P Outlet

Date of collection

29-10-2020

Date of Analysis

29-10-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.49	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	651	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.9	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	68	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.9	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	<0.1	<1.0

Analyst

Authorized Signatory



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1120

Date: 12-11-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

05-11-2020

Date of Analysis

05-11-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.38	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	657	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	13.6	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	63	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.7	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.8	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1120

Date: 19-11-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection :

12-11-2020

Date of Analysis : 12-11-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.14	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	712	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.6	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	66	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10



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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1120

Date: 24-11-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

19-11-2020

Date of Analysis

19-11-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.09	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	654	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	67	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.3	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1120

Date: 01-12-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection

24-11-2020

Date of Analysis

24-11-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.24	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	657	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.2	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN ⁻	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.07	<1.0

Analyst

T. William Authorized Signatory



Certified by ISO 9001: 2015 and

OHSAS 18001:2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1220

Date: 10-12-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection

03-12-2020

Date of Analysis

03-12-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.39	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	665	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	62	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10

Analyst

Authorized Signatory



Certified by ISO 9001: 2015 and

OHSAS 18001:2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1220

Date: 17-12-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection

10-12-2020

Date of Analysis :

10-12-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C	***	APHA 23 rd Edition,2017, 4500 H+ B	7.28	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	689	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.9	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	65	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	21.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.1	10

Analyst

Authorized Signatory



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1220

Date: 23-12-2020

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars : STP Outlet Date of collection : 17-12-2020 Date of Analysis

17-12-2020

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C	-	APHA 23 rd Edition,2017, 4500 H+ B	7.24	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	675	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	68	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	20.3	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.8	10





Certified by ISO 9001: 2015 and

OHSAS 18001:2007

TEST REPORT

REF.NO: UEA/SGPL/R2/1220

Date: 01-01-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection
Date of Analysis

23-12-2020 23-12-2020

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S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.18	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	675	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	13.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	64	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	22.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.08	<1.0

Analyst

Authorized Signatory



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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0121

Date: 13-01-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

06-01-2021

Date of Analysis

06-01-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.30	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	665	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	56	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10





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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0121

Date: 20-01-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

13-01-2021

:

Date of Analysis

13-01-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.41	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	646	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	54	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	17.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.1	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0121

Date: 27-01-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

20-01-2021

Date of Analysis

20-01-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.30	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	675	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	10.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	52	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	18.6	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.7	10



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Additional organically



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OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0121

Date: 01-02-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection
Date of Analysis

27-01-2021 27-01-2021

:

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.36	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	648	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	11.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	54	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	16.3	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.07	<1.0

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001:2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0221

Date: 11-02-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

04-02-2021

Date of Analysis

04-02-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.36	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	648	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	60	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.4	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0221

Date: 19-02-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

11-02-2021

Date of Analysis

11-02-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.04	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	790	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	14.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	59	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	16.9	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0221

Date: 24-02-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection :

19-02-2021

Date of Analysis

19-02-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.15	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	941	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	60	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	19.7	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.7	10

Analyst



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0221

Date: 01-03-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

24-02-2021

Date of Analysis

24-02-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.04	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	861	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.1	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	59	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	17.2	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.08	<1.0





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0321

Date: 10-03-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

03-03-2021

Date of Analysis

03-03-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.12	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	947	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	9.4	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	51	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	17.6	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.9	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0321

Date: 17-03-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

:

STP Outlet

Date of collection

10-03-2021

Date of Analysis

10-03-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.04	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	790	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	14.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	48	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	14.6	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	1.0	10



Authorized Signatory

T. Callema.



Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0321

Date: 24-03-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V), TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars

STP Outlet

Date of collection

17-03-2021

Date of Analysis

17-03-2021

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B		5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	669	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.3	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	42	250
5	Bio Chemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	13.8	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.7	10





Certified by ISO 9001: 2015 and

OHSAS 18001: 2007

TEST REPORT

REF.NO: UEA/SGPL/R2/0321

Date: 01-04-2021

WASTEWATER ANALYSIS

Name of the Industry &:

M/s. SEMBCORP ENERGY INDIA LTD. (PROJECT-2),

Address

Ananthavaram (V),

TP Gudur (M),

SPSR Nellore Dt., Andhra Pradesh.

Sample Particulars :

STP Outlet

Date of collection : Date of Analysis

24-03-2021

24-03-2021

:

S No	Parameter	Units	Method	Result	Standards
1	pH @ 25.0°C		APHA 23 rd Edition,2017, 4500 H+ B	7.14	5.5-9.0
2	Total Dissolved Solids	mg/L	APHA 23 rd Edition,2017, 2540 C	885	2100
3	Total Suspended Solids	mg/L	APHA 23 rd Edition,2017, 2540 D	12.2	100
4	Chemical Oxygen Demand	mg/L	APHA 23 rd Edition,2017: 5220 B	48	250
5	Biochemical Oxygen Demand (27°C@ 3 Days)	mg/L	IS: 3025 (Part-44)-1993, reaffirmed 2009	15.1	100
6	Oil & Grease	mg/L	APHA 23 rd Edition,2017: 5520 B	0.8	10
7	Free Residual Chlorine	mg/L	APHA 23 rd Edition,2017: 4500 Cl ⁻ B	0.5	
8	Fecal Coilforms per 100ml	MPN/ 100 ml	IS:1622:1981	Absent	
9	Arsenic as As	mg/L	APHA 23 rd Edition,2017: 3114 As	BDL	<0.2
10	Cyanide as CN	mg/L	APHA 23 rd Edition,2017: 4500 CN ⁻	BDL	<0.2
11	Total Copper	mg/L	APHA 23 rd Edition,2017: 3500 Cu	BDL	<1.0
12	Total Iron	mg/L	APHA 23 rd Edition,2017: 3500 Fe	0.08	<1.0



Authorized Signatory

ANNIEXURIE- III



SV ENVIRO LABS & CONSULTANTS

(Environmental Engineers & Consultants in Pollution Control)

Corporate Office: Enviro House, B-1, Block-B, IDA, Autonagar, Visakhapatnam-530012

& Laboratory www.svenvirolabs.com, Ph:0891-2755528, Cell: +91 9440338628

info@svenvirolabs.com, svenviro_labs@yahoo.co.in

Branch Office: 2-53, Mahipala Street, Yanam - 533464.

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET



Dated: 25-04-2020

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V) Muthukur (M),

SPSR NELLORE DISTRICT,

ANDHRA PRADESH.

DESCRIPTION OF WORK

STACK MONITORING

:

MONTH OF MONITORING

April'20 - (21/04/2020)

PARAMETERS REQUIRED

PM, SO2, NOx and Hg

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS, Visakhapatnam

Instrument Used	Stack Monitoring Kit	Flue Gas Analyser
Instrument Sl. Number	109-DTI-2018	054518373
Date of Calibration	12.07.2019	20.11.2019
Next Calibration Due	11.07.2020	21.11.2020

TEST REPORT

S. No.	Parameters	Standards	Resi	ılts	Methods
		Details of th	e Source		
1.	Stack attached to	-	UNIT-I (660 MW)	UNIT-II (660 MW)	-
2.	Stack Diameter (m)	-	6.9	6.9	-
3.	Stack Crossectional Area (sq.m)	-	37.37	37.37	-
4.	Load of the Unit (MW)	-	630	650	
		Ilue Gas Char	acteristics		
5	Time of Monitoring	-	13.30	15.30	_
6.	Temperature (Kelvin)	-	398	408	IS:11255(P-1)1985
7.	Velocity (m/s)	-	18.3	17.7	IS:11255(P-1)1985
8.	Volumetric Flow Rate (Nm³/Hr)	-	1831420	1727958	IS:11255(P-1)1985
9.	CO in ppm	-	15.3	12.1	Flue Gas Analyzer
		Emission	Rates		
10.	Particulate Matter in mg/Nm ³	50	38.4	40.6	IS:11255(P-1)1985
11.	Sulphur dioxide in mg/Nm ³	_	968	940	IS:11255(P-II)1985
12.	Oxides of Nitrogen in mg/Nm ³	-	410	365	IS:11255(P-7)2005
13.	Mercury as Hg in mg/Nm ³	0.03	< 0.01	< 0.01	CPCB Guidelines

Note: The above results are corrected to 6% O₂.

CHECKED BY

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SV ENVIRO LABS & CONSULTANTS

(Environmental Engineers & Consultants in Pollution Control)

Corporate Office: Enviro House, B-1, Block-B, IDA, Autonagar, Visakhapatnam-530012

& **Laboratory** www.svenvirolabs.com, Ph:0891-2755528, Cell: +91 9440338628

info@svenvirolabs.com, svenviro labs@yahoo.co.in

Branch Office : 2-53, Mahipala Street, Yanam - 533464.

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET

Ref. No: SVELC/SCEIL/20-09/01

Dated: 10-10-2020

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V) Muthukur (M),

SPSR NELLORE DISTRICT.

ANDHRA PRADESH.

DESCRIPTION OF WORK

STACK MONITORING

MONTH OF MONITORING

September 20 - (18/09/2020)

PARAMETERS REQUIRED

PM, SO2, NOx and Hg

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS, Visakhapatnam

Instrument Used	Stack Monitoring Kit	Flue Gas Analyser
Instrument Sl. Number	109-DTI-2018	054518373
Date of Calibration	11.07.2020	21.11.2019
Next Calibration Due	10.07.2021	20.11.2020

TEST REPORT

S. No.	Parameters	Standards	Resi	ults	Methods		
Details of the Source							
1.	Stack attached to		UNIT-I (660 MW)	UNIT-II (660 MW)			
2.	Stack Diameter (m)		6.9	6.9	74.		
3.	Stack Crossectional Area (sq.m)	-	37.37	37.37			
4.	Load of the Unit (MW)	-	630	650			
		Ilue Gas Char	acteristics				
5.	Time of Monitoring		13.30	15.30			
6.	Temperature (Kelvin)	-	386	394	IS:11255(P-1)1985		
7.	Velocity (m/s)		16.7	16.5	IS:11255(P-1)1985		
8.	Volumetric Flow Rate (Nm³/Hr)		1724258	1667902	IS:11255(P-1)1985		
9.	CO in ppm	-	14.6	10.7	Flue Gas Analyzer		
		Emission 1	Rates		•		
10.	Particulate Matter in mg/Nm ³	50	28.9	32.1	IS:11255(P-1)1985		
11.	Sulphur dioxide in mg/Nm ³	8	824	786	IS:11255(P-II)198:		
12,	Oxides of Nitrogen in mg/Nm ³		372	299	IS:11255(P-7)2005		
13.	Mercury as Hg in mg/Nm ³	0.03	< 0.01	< 0.01	CPCB Guidelines		

Note: The above results are corrected to 6% O2.

CHECKER BY

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SV ENVIRO LABS & CONSULTANTS

(Environmental Engineers & Consultants in Pollution Control)

Corporate Office: Enviro House, B-1, Block-B, IDA, Autonagar, Visakhapatnam-530012

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info@svenvirolabs.com, svenviro labs@yahoo.co.in

Branch Office : 2-53, Mahipala Street, Yanam - 533464.

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET

Ref. No: SVELC/SCEIL/21-01/01

Dated: 12-02-2021

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V) Muthukur (M),

SPSR NELLORE DISTRICT.

ANDHRA PRADESH.

DESCRIPTION OF WORK

STACK MONITORING

:

MONTH OF MONITORING

January'21 - (21/01/2021)

PARAMETERS REQUIRED

PM, SO2, NOx and Hg

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS, Visakhapatnam

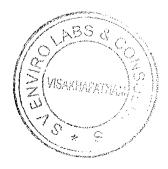
Instrument Used	Stack Monitoring Kit	Flue Gas Analyser
Instrument Sl. Number	109-DTI-2018	054518373
Date of Calibration	11.07.2020	19.11.2020
Next Calibration Due	10.07.2021	18.11.2021

TEST REPORT

S. No.	Parameters	Standards	Resi	ults	Methods		
Details of the Source							
1.	Stack attached to	-	UNIT-I (660 MW)	UNIT-II (660 MW)	-		
2.	Stack Diameter (m)	-	6.9	6.9	-		
3.	Stack Crossectional Area (sq.m)	-	37.37	37.37			
4.	Load of the Unit (MW)	-	630	650			
Flue Gas Characteristics							
5.	Time of Monitoring	-	13.45	15.45	_		
6.	Temperature (Kelvin)	-	392	402	IS:11255(P-1)1985		
7.	Velocity (m/s)	-	17.8	17.2	IS:11255(P-1)1985		
8.	Volumetric Flow Rate (Nm³/Hr)	-	1808647	1704207	IS:11255(P-1)1985		
9.	CO in ppm	-	14.9	11.2	Flue Gas Analyzer		
		Emission]	Rates		<u>, , , , , , , , , , , , , , , , , , , </u>		
10.	Particulate Matter in mg/Nm ³	50	32.4	34.5	IS:11255(P-1)1985		
11.	Sulphur dioxide in mg/Nm ³	-	890	825	IS:11255(P-II)1985		
12.	Oxides of Nitrogen in mg/Nm ³	-	388	320	IS:11255(P-7)2005		
13.	Mercury as Hg in mg/Nm ³	0.03	< 0.01	< 0.01	CPCB Guidelines		

Note: The above results are corrected to 6% O2.

CHECKED BY .





SV ENVIRO LABS & CONSULT

(Environmental Engineers & Consultants in Pollution Control)

& Laboratory

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Branch Office

: 2-53, Mahipala Street, Yanam - 533464.

Recognized by Govt.of India-MoEF & CC, New Delhi, Accredited by: NABL & NABET



Dated: 30-03-2021

Ref. No: SVELC/SCEIL/21-03/01

ISSUED TO

M/s. SEMB CORP ENERGY INDIA LIMITED P-2,

Painampuram (V) Muthukur (M),

SPSR NELLORE DISTRICT.

ANDHRA PRADESH.

DESCRIPTION OF WORK

:

:

STACK MONITORING

MONTH OF MONITORING

March'21 - (18/03/2021)

PARAMETERS REQUIRED

PM, SO2, NOx and Hg

SAMPLE COLLECTED BY

SV ENVIRO LABS & CONSULTANTS, Visakhapatnam

Instrument Used	Stack Monitoring Kit	Flue Gas Analyser
Instrument Sl. Number	109-DTI-2018	054518373
Date of Calibration	11.07.2020	19.11.2020
Next Calibration Due	10.07.2021	18.11.2021

TEST REPORT

S. No.	Parameters	Standards	Resi	ults	Methods
		Details of th			1,1,0011043
1.	Stack attached to	~	UNIT-I (660 MW)	UNIT-II (660 MW)	-
2.	Stack Diameter (m)	-	6.9	6.9	-
3.	Stack Crossectional Area (sq.m)	-	37.37	37.37	_
<u>4.</u>	Load of the Unit (MW)	-	630	650	
]	Flue Gas Char	acteristics		
5	Time of Monitoring	-	14.00	16.00	_
6.	Temperature (Kelvin)	-	410	424	IS:11255(P-1)1985
7.	Velocity (m/s)	-	19.8	19.5	IS:11255(P-1)1985
8.	Volumetric Flow Rate (Nm³/Hr)	-	1923342	1831656	IS:11255(P-1)1985
9.	CO in ppm	800	14.9	11.2	Flue Gas Analyzer
		Emission]	Rates		, , , , , , , , , , , , , , , , , , , ,
10.	Particulate Matter in mg/Nm ³	50	35.1	36.9	IS:11255(P-1)1985
11.	Sulphur dioxide in mg/Nm ³	-	911	836	IS:11255(P-II)1985
12.	Oxides of Nitrogen in mg/Nm ³	-	376	352	IS:11255(P-7)2005
13.	Mercury as Hg in mg/Nm ³	0.03	< 0.01	< 0.01	CPCB Guidelines

Note: The above results are corrected to 6% O₂.

CHECKED BY

VISAKHAPATN