

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE
BENCH AT CHENNAI**

**ORIGINAL APPLICATION No. 227 of 2021
IN THE MATTER OF**

BATTU SATISH REDDY

H.No. 5-55, Pittavani Palem, Kalapaka
Pedgantyada, Visakhapatnam District
Andhra Pradesh-530031
Mobile No. 9666391895
Mail id: advsravan@gmail.com

..... Applicant

Versus

NATIONAL THERMAL POWER CORPORATION LTD SIMHADRI PLANT

Rep by its Plant In-charge Near Pittavani Palem Village
Simhadri Post 531020
Vishakapatnam, Andhra Pradesh
& 5 Others

..... Respondents

LETTER FILED BY THE 5TH RESPONDENT APPCB

DATE-19-12-2022



**M/s MADHURI DONTI REDDY
ADVOCATE**

**STANDING COUNSEL FOR GOVERNMENT OF ANDHRA PRADESH
A.P. POLLUTION CONTROL BOARD
T.T.D. SUPREME COURT OF INDIA**

#26, S2, Royal Castle, Gill Nagar Extension, Choolaimedu, Chennai – 600 094.
Mobile: 98407 98460 / 63831 21322, Email: rednymadhuri09@gmail.com

COUNSEL FOR 5TH Respondent APPCB

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE
BENCH AT CHENNAI**

**ORIGINAL APPLICATION No. 227 of 2021
IN THE MATTER OF**

BATTU SATISH REDDY

H.No. 5-55, Pittavani Palem, Kalapaka
Pedgantyada, Visakhapatnam District
Andhra Pradesh-530031
Mobile No. 9666391895
Mail id: advsravan@gmail.com

..... Applicant

Versus

NATIONAL THERMAL POWER CORPORATION LTD SIMHADRI PLANT

Rep by its Plant In-charge Near Pittavani Palem Village
Simhadri Post 531020
Vishakapatnam, Andhra Pradesh
& 5 Others

..... Respondents

INDEX

Sl.No.	Date	Description of the Document	Page No.
1.	12-12-2022	5TH Respondent APPCB LETTER	1-2
2.	5-01-2022	Annexure 1 Action taken report filed by APPCB	3-18
3.	19-10-2022	Annexure 2 RENEWAL OF CONSENT & AUTHORIZATION ORDER Consent Order No: APPCB/VSP/12334/HO/CFO/2002-	19-28
4.	03-11-2022	Annexure 3 NGT (SZ) Order copy	29-30
5.	28-10-2022	Annexure 4 ANALYSIS REPORT	31-36
6.	15-11-2022	Annexure 5 APPCB NOTICE to 1ST Respondent	37
7.	22-11-2022	Annexure 6 1st Respondent Reply	38-52
8.	28-10-2022	Annexure 7 1st Respondent work order to (NEERI)	53-60

It is certified that all the documents contained in the above annexure are true copies.

Date: 12-12-2022



**ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, VISAKHAPATNAM**

*D.No. 39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam - 530018,
Phone: 0891 -2755356*

Lr. No.3841/PCB/RO-VSP/NGT-ORDER/2022

Date:12.12.2022

**To
The Registrar,
The Hon'ble National Green Tribunal,
Southern Zone,
Chennai.**

Sir,

Sub: APPCB, RO, VSP - NGT O.A. No. 227 of 2021 - M/s. Simhadri Super Thermal Power Project (Stage-I & II), NTPC Limited, Parawada (M), Visakhapatnam District-Hon'ble NGT Order dated.03.11.2022 in O.A. No. 227 of 2022- Latest Report submitted - Reg.

- Ref:**
1. Hon'ble NGT Order dated.23.11.2021 in O.A. No. 227 of 2021.
 2. APPCB report dated.05.01.2022.
 3. Joint Committee report filed before the Hon`ble NGT on 09.02.2022.
 4. CFO & HWA order No. APPCB/VSP/12334/HO/CFO/2002, dated 19.10.2022 valid up to 31.08.2027.
 5. Notice No. 1011/PCB/RO-VSP/2022-861, dated. 15.11.2022.
 6. Hon'ble NGT Order dated. 03.11.2022 in O.A. No. 227 of 2021.

It is to submit that, the Hon'ble NGT vide order dated. 23.11.2021 in O.A. No. 227 of 2021 has appointed a Joint Committee and as a nodal officer, APPCB has filed final report of Joint committee before the Hon`ble NGT on 09.02.2022. The action taken report of APPCB was submitted to the Registrar, the Hon'ble NGT vide reference 2nd cited. The report is produced at Annexure-I.

The industry has obtained renewal of CFO of the Board vide order dated. 19.10.2022 to generate Electricity- 2000 MW (Coal with maximum Sulphur content of 0.6% and ash content of 45%) for a period up to 31.08.2027 vide reference 4th cited. The copy of the CFO & HWA order is produced at Annexure-II.

The Hon'ble NGT vide order dated. 03.11.2022 in O.A. No. 227 of 2022, post the matter on 19.12.2022 vide reference 6th cited. The copy of the Hon'ble NGT order dated. 03.11.2022 is produced at Annexure-III.

In this regard it is to submit that APPCB has received a complaint from the surrounding villagers on 24.10.2022 and officials from APPCB conducted ambient air quality monitoring in and surroundings of the industry on 25.10.2022 & 26.10.2022. As per the analysis reports, the values of PM₁₀ & PM_{2.5} are recorded more than the Board standards as follows:

Mobile Continuous Ambient Air Quality Monitoring:				
Sample Collected at	Date of Sampling	Parameter	Value (µg/m³)	Standard (µg/m³)
Near R&D Railway Cabin	25.10.2022 to 26.10.2022	PM _{2.5}	67.0	60.0
		PM ₁₀	164.0	100.0
Near Administration Building	26.10.2022 to 27.10.2022	PM ₁₀	149.0	100.0

The analysis reports are produced at Annexure-IV.

APPCB issued notice to the industry on 15.11.2022 and directed the industry to comply with the Board standards. The copy of the notice is produced at Annexure-V. The industry submitted reply to the notice on 22.11.2022. A copy of the reply to the APPCB notice furnished by the industry is produced at Annexure-VI.

Further it is to submit that, M/s. NTPC awarded a work to the National Environmental Engineer Institute (NEERI) to carry out the Environmental Assessment of air, water and soil in and around the Simhadri. The copy is produced at Annexure-VII.

Submitted.

Yours faithfully,


ENVIRONMENTAL ENGINEER (FAC)
 12.12.22



**ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, VISAKHAPATNAM**

*D.No. 39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam - 530018,
Phone: 0891 -2755356*

Lr. No. 3841/PCB/RO-VSP/NGT-ORDER/2022

Date:05.01.2022

To
The Registrar,
The Hon'ble National Green Tribunal,
Southern Zone,
Chennai.

Sir,

Sub: APPCB,RO, VSP -M/s. Simhadri Super Thermal Power Project (Stage-I&II), NTPC Limited, Parawada (M), Visakhapatnam District-Hon'ble NGT Order dated.23.11.2021 in O.A. No. 227 of 2021-Non-Compliance of the main conditions stipulated in CFO issued by the APPCB - Report submitted - Reg.

- Ref:**
1. CFO & HWA order No. APPCB/VSP/VSP/12334/HO/CFO/2017, dated 31.07.2017 valid up to 31.08.2022.
 2. Hon'ble NGT Order dated.23.11.2021 in O.A. No. 227 of 2021
 3. Inspection of Board Officials on 29.12.2021 along with the Joint Committee constituted by Hon'ble NGT.

It is to submit that M/s. Simhadri Super Thermal Power Project (Stage-I&II), NTPC Limited, is operating at Parawada, Visakhapatnam District and generating electricity of 2000 MW (4 X 500 MW) using indigenous coal. The industry has obtained Environmental Clearance vide order dated.23.07.1996 for 2 X 500 MW(Stage-I) and vide order dated.01.08.2007 for 2 X 500 MW(Stage-II). The industry has obtained CFO of the Board vide order dated.31.07.2017 to generate Electricity- 2000 MW (Coal with maximum Sulphur content of 0.6% and ash content of 45%) with certain conditions & standards which is valid up to 31.08.2022. The Stage -1 was established in the year 2002 and Stage-II in the year 2011. The Power Plant has established in an extent of 3384 Acres (Plant Area: 1976 Acres, Green Belt - about 650 Acres (20%), Reservoir of 45 days capacity: 200 Acres (approx.), Township: 311 Acres and Ash Pond: 605 Acres). At present the industry is generating the electricity from 1930 MW to 1960 MW in an

average. Pollution control measures implemented by M/s. Simhadri Super Thermal Power Project, NTPC Limited to control air, water & solid waste Management and Environmental Monitoring carried out by APPCB is submitted as follows:

a) Air Emissions & pollution control System:

- i. The industry has installed 4 No. of Boilers of capacity 1675 tons per hour (TPH) each using pulverized coal as fuel which contains 35-40% ash and 0.28 % of Sulphur and provided with Electro Static Precipitators as air pollution control equipment to the Boilers and provided 2 Nos. of bi-flue stacks of 275 M height each to disperse the emissions. The industry has installed on-line stack analyzers for all four stacks of 4 x 500 MW units. The continuous emission monitoring system (CEMS) connected to APPCB/CPCB website to upload the data continuously.
- ii. The Ash generated from the boilers is collected in ash silos and issued to brick and cement manufacturers, remaining ash being sent to Ash Ponds in the form of slurry. Once the ash is settled in Ash Ponds, the water is recollected for making ash slurry.
- iii. During the process of power generation about 33,000 MT of coal burns per day and results in generation of about 9000 MT of fly ash & 2000 MT of bottom ash per day and the uses Sea water for ash slurry making.
- iv. The industry has provided 3 Nos. of Silos (500 Tons each) for collection of dry ash for Phase - I and 3 Nos. of Silos (1200 Tons each) for stage - II and Dry ash system stage - I is being augmented with 2 X 1200 Tons + 1 X 500 MT Silos for better fly ash collection.
- v. The industry has provided dust suppression systems at coal handling sections to avoid fugitive emissions.
- vi. Conocorpus species of tree plantation developed in around coal piles to mitigate fugitive dust emissions. Dust extraction systems have been provided in coal handling area including coal stock yard.
- vii. Flue Gas Desulphurization (FGD) is under implementation, to be commissioned on or before December 2022.
- viii. Combustion modification (De-NO_x /Low NO_x) is under implementation, to be completed on or before December 2022.

- ix. The industry has installed 3 No.s Continuous Ambient Air Quality Monitoring stations(CAQMS) at the periphery of the industry and connected to the CPCB/APPCB web site as per the directions of the CPCB/APPCB. In addition to 3 CAAQM stations the industry has installed additional 3 continuous ambient air quality monitoring stations at Pittavanipalem, Devada, Marada Dasaripeta for monitoring of PM₁₀.

b) Effluent Treatment system and Disposal:

- i. M/s. Simhadri Super Thermal Power Project, NTPC Limited consumes 4,29,240 KLD of Sea water as make up water for industrial cooling and 21,600 KLD of Fresh water. The industry generates about 2,68,810 KLD wastewater (Once through cooling tower blow downs, Boiler blow downs etc., of 2,10,220 KLD discharge into sea & DM plant regeneration/ash pond effluent etc. of 48280 KLD are being re-circulated for ash slurry preparation & for dust suppression at coal stock yards).
- ii. The main plant effluent, which consists of the sea water (to the extent of 99.9%) that is used for cooling purpose, in the Cooling water circulation system. The seawater blow down from the Cooling water circuit is sent to the Common Monitoring Basin from where a combined treated effluent having parameters within the limits is sent to Marine out Fall (MOF) located 750 meters from the sea shore. This marine outfall is designed with the help of National Institute of Oceanography (NIO), Goa and National Institute of Ocean Technology (NIOT), Chennai and Tokyo KYUEI Co. Ltd., Japan.
- iii. M/s. Simhadri Super Thermal Power Project, NTPC Limited has provided Effluent Treatment Plant consisting of Neutralization pond, Tube settler and Coal settling pond for treating the DM plant regeneration effluents, CHP effluent etc.,.
- iv. M/s. Simhadri Super Thermal Power Project, NTPC Limited has provided 2 no. of STPs of 1700 KLD capacity for township and 65 KLD capacities for Plant. The treated sewage effluents utilized for on land irrigation within the industry premises.
- v. The industry has installed Continuous Effluent Quality Monitoring (CEMS) System for monitoring the effluent quality in real time basis, and all the parameters such pH, TSS, Temperature and conductivity data is uploaded to

CPCB / APPCB on continuous basis.

c) Solid Waste Management:

There are four lagoons are existing and the lagoon 1 & 3 covered in an area of 85 acres each and lagoon 2 & 4 covered in an area of 115 acres each. Each lagoon is provided with separate garland drains which are connected to Toe drains around dykes for collection of seepage water which is pumped back for recirculation for ash slurry preparation and dust suppression in ash pond area. Garland drains which are connected to toe drains around dykes for collection of seepage water which is pumped back for recirculation to avoid soil contamination in surrounding area. Ash generation and utilization details for the year 2016 to 2022(upto October) are submitted as follows:

Year	Ash Generation	Ash Utilization	% of Ash Utilization
2016-17	3058234	2558190	84%
2017-18	3010763	3058021	102%
2018-19	2975585	2979991	100%
2019-20	2641122	4430120	168%
2020-21	2448817	3033286	124%
Apr-21 to Oct-21	1986578	1609698	81%

From 2017 to 2020, the industry has achieved 100% utilization of fly ash. Total stock in ash pond as on Oct 2021 is 12.07 Million MT. The representative of M/s. Simhadri Super Thermal Power Project, NTPC Limited informed that the power plant facing difficulties in achieving the 100% ash utilization due to providing the fly ash to end users through a transparent bidding process only as per recent guidelines issued by Ministry of Power, Government of India vide letter dated.22.09.2021.

d) Environmental Monitoring carried out by APPCB:

- i. APPCB has conducted ambient air quality monitoring on 15.12.2021 to 17.12.2021 on the terrace of complainant's house, D.No.6-10, Back side of the Ramalayam Temple, Pittavanipalem(V), Parawada, Visakhapatnam and also conducted mobile continuous ambient air quality monitoring station at the Pump

house, Administration Building and Sarada guest house, Township:

Location	Date of monitoring	PM ₁₀ in (µg/m ³)
Complainant's house	15.12.2021 to 16.12.2021	120
	16.12.2021 to 17.12.2021	127
Pump Station.	16.12.2021 to 17.12.2021	131
Administration Building.	17.12.2021 to 18.12.2021	126
Sarada guest house, Township	18.12.2021 to 19.12.2021	118
Standard(24 Hrly average)		100

As per the analysis results of ambient air quality, the PM₁₀ values are exceed the APPCB norms.

- ii. APPCB has conducted stack monitoring for the stack attached to coal fired boilers of unit I, II, III & IV on 16.12.2021 to 20.12.2021 and as per the analysis results the Particulate Matter (PM) values are within the APPCB norms.
- iii. APPCB has collected ground water samples from the borewells on 15.12.2021 at Pittavanipalem (Complainants village), Devada, Marada Dasaripeta villages, which are nearer to the ash ponds. As per the analysis results of the water samples collected by APPCB from bore wells on 15.12.2021 to 19.12.2021 all the parameters are within the drinking water specification IS10500:2012. The Total Dissolved Solids, Total Hardness (as CaCO₃) & Nitrate (as NO₃) for the bore well samples collected at hand pump-3 at Beri Ayyanna house Pittavanipalem village and Total Hardness (as CaCO₃) & Nitrate (as NO₃) hand pump-2 at Post office Devada village are slightly exceeded the drinking water specification IS-10500:2012.
- iv. The analysis reports of air & water monitoring conducted by APPCB are submitted as Annexure-A.

The Hon'ble NGT vide order dated. 23.11.2021 in O.A. No. 227 of 2021 has appointed a Joint Committee consisting of(i) The District Collector, Visakhapatnam District; (ii) a Senior Officer from Ministry of Environment Forest and Climate Change (MoEF&CC), Integrated Regional Office, Vijayawada;(iii) a Senior Officer from the Central Pollution Control Board (CPCB), Regional Office, Chennai and (iv) a Senior officer from the Andhra Pradesh Pollution Control Board (APPCB) to inspect the area in question and submit a factual as well as action taken report if there is any violation found with a direction as to ascertain following:

- i. *Whether there was any violation of Environmental Clearance(EC) and consent conditions committed by the first respondent / NTPC unit,*
- ii. *Whether the pollution control mechanism provided are sufficient to mitigate the situation of causing pollution of air, water and soil,*
- iii. *Whether the ash pond maintained by the first respondent are being properly maintained as directed by the Andhra Pradesh Pollution Control Board to avoid percolation of the fly ash to contaminate the ground water,*
- iv. *Whether the first respondent unit is complying with in the 100% disposal of fly ash generated and if not, what is the percentage (%) of disposal achieved by them and what is the nature of action taken by the regulators for non-compliance of the same,*
- v. *Whether the Ambient Air Quality (AAQ), Ground Water and the soil quality has been affected on account of any of the activities of the first respondent and if any contamination has been caused, what is the nature of remediation to be taken for the purpose of mitigating the situation,*
- vi. *If any damage has been caused to the environment on account of the violations committed, then the committee is directed to assess the damage caused and also environmental compensation payable by the first respondent,*
- vii. *If there is any further study to be conducted for carrying out the remediation process in an effective manner, the committee is at liberty to suggest and co-opt any expert in this field for the purpose of suggesting the remediation method.*
- viii. *When they are conducting the study regarding the area unit affected on account of the pollution, they are directed to ascertain the impact of pollution on water, air and soil pollution within the project area and also a reasonable distance outside the project area and if there is any damage caused to the agricultural operation on account of the air pollution/dust pollution, that aspect also is directed to be considered by the committee while submitting the report and also including the compensation if any payable on that aspect considering the nature of damage caused to the fertility of the land, affecting the productivity.*

Further it is submitted that officials from APPCB during the visit along with Joint Committee on 29.12.2021, the following non-compliances were observed on the main conditions stipulated in Consent for operation vide order issued by the Board dated. 31.07.2017:

1. The industry is not maintaining permanent mechanical sprinklers for suppression of dust on the haul roads in between the villages.
2. The industry has not maintaining water cover in the ash pond area to prevent fly ash from getting air borne and air pollution in the surrounding area especially to the residents of Pittavanipalem.
3. The industry has developed the greenbelt to the extent of 20% of total area against the consent condition of 33% of total area of 3384 Acres. In order to meet 33% of the green belt development as per the conditions imposed by APPCB, M/s. Simhadri Super Thermal Power Project, NTPC Limited, has reported that they have planted 5,50,000 saplings under Green Visakha Programme and also planted around 2.8 Lakh saplings in paderu under accelerated afforestation Programme. The representative of the industry has informed that they have complied with the 33% of the green belt of total plant area excluding ash pond area, reservoir area & Township area.
4. During heavy rains, the industry has failed to collect the total cenosphere which is very light weight air entrapped ash particle in overflow lagoons thereby the cenosphere particles find its way to creek along with storm water. Recently cenosphere is discharging along with storm water to the sub-creek and the Board has issued directions after reviewing in Task force committee on 21.12.2021. APPCB also imposed Bank guarantee of 1.28 Cr. towards compliance of the conditions / directions stipulated by APPCB and the industry yet to submit the Bank Guarantee to APPCB. Now the industry collecting Cenosphere material by providing additional screen with mesh to stop spill over of any cenosphere.
5. APPCB has monitored the ambient air quality, stack emissions and effluent samples collected during joint inspection. The samples analysis is under progress and it may take 3-4 weeks.
6. Photographs showing inspection of the joint committee in villages & industry and monitoring of air & water quality by officials of APPCB is submitted as Annexure-B.
7. The copy of the Joint Inspection report is herewith enclosed for kind perusal.

Hence the Joint Committee recommends the following measures/studies to be taken up by M/s. Simhadri Super Thermal Power Project, NTPC Limited immediately:

1. The industry shall avoid the excavation operations in ash ponds during heavy winds.
2. The industry shall install micro meteorological station to monitor wind velocity and wind direction, accordingly, the industry shall handle the excavation operations in ash ponds
3. The industry shall install adequate high pressure mist spray sprinklers at coal storage yard and also develop thick greenbelt with tall growing trees to control fugitive emissions effectively.
4. The industry shall provide bitumen / concrete to the haul roads in ash pond area where the heavy vehicular movement is there for transporting pond ash and also install mechanical water sprinklers along the haul road to control fugitive dust emissions in surrounding area.
5. The industry shall provide truck-tyre washing facility near ash pond area to avoid dust emissions during the movement of the trucks.
6. The industry shall develop atleast 10 rows of tall growing trees all around the ash ponds which may act as wind barrier.
7. The industry shall conduct long term impact assessment study to ascertain the impact of pollution on water, air and soil within 5 Km radius of the project area including ash pond area through NEERI/any reputed institutions and also conduct assessment study of impact on human health due to pollution of M/s. Simhadri Super Thermal Power Project, NTPC Limited if any.

Submitted.

Yours faithfully,


ENVIRONMENTAL ENGINEER



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY, VISAKHAPATNAM

D.No.39-33-20/4, Behind RTA Office, Madhavadhara VUDA Colony,
 Visakhapatnam – 530 018.

M. RAVI, M.Sc
 SENIOR ENVIRONMENTAL SCIENTIST

Ph : 0891-2719380/ 481
 e-mail:zovsplab-ses2@appcb.gov.in

FORM - IV
REPORT BY THE STATE BOARD ANALYST

[See Rule-14]

Report No. 2021 - 12 - ST - 001 to 004

Date:20.12.2021

I hereby certify that I M. Ravi (I) State Board Analyst duly appointed under sub-section (3) of Section 26 of the Air (Prevention and Control of Pollution) Act, 1981, received a stack emission samples of M/s Simhadri Super Thermal Power Project (Stage-I & II), NTPC Ltd., Parawada (M), Visakhapatnam District collected from the Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-I) (ST-001), Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-II) (ST-002), Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-III) (ST-003) & Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-IV) (ST-004) collected on 15.12.2021 and received on the day of 16.12.2021 from Junior Scientific Officer, Zonal Laboratory, Visakhapatnam for analysis.

The sample was in a condition fit for analysis as reported below:

I further certify that I have analyzed the above mentioned sample from 16.12.2021 to 20.12.2021 and declare the result of the analysis to be as follows: -

S.No.	Sample No.	Values	Standard (mg/Nm ³)
		Particulate Matter (PM)	
1	Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-I)	75.4	115.0
2	Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-II)	86.1	115.0
3	Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-III)	54.6	100.0
4	Stack attached to 1 X 1675 TPH Coal Fired Boiler (Unit-IV)	58.7	100.0

The condition of the seals, fastening and container on receipt was intact.

Signed this: 20.12.2021

Address:

M. Ravi,
 Senior Environmental Scientist,
 Zonal Laboratory,
 APPCB, Visakhapatnam


 SIGNATURE OF THE STATE BOARD ANALYST

A.P. POLLUTION CONTROL BOARD, ZONAL LABORATORY, VISAKHAPATNAM
MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION
24 Hrs. AVERAGE VALUES

M/s. NTPC-SIMHADRI, PARAWADA, VISAKHAPATNAM

Location-1: PUMP STATION

Date	Time	CO mg/m ³	O3 µg/m ³	NO µg/m ³	NO2 µg/m ³	NOx µg/m ³	NH3 µg/m ³	SO2 µg/m ³	PM 2.5 µg/m ³	PM 10 µg/m ³	AT °C	RH %	WS m/s	WD deg	BP mmHg
16.12.2021 to 17.12.2021	12:00 to 11:00	0.8	78.3	11.5	23.4	34.9	45	25.7	72	131	23.7	71.2	1.6	209	771

Location-2: ADMINISTRATION BUILDING

Date	Time	CO mg/m ³	O3 µg/m ³	NO µg/m ³	NO2 µg/m ³	NOx µg/m ³	NH3 µg/m ³	SO2 µg/m ³	PM 2.5 µg/m ³	PM 10 µg/m ³	AT °C	RH %	WS m/s	WD deg	BP mmHg
17.12.2021 to 18.12.2021	15:00 to 14:00	0.8	87.4	16.7	19.8	36.5	53	33.7	63	126	22.5	69.0	1.4	200	770

Location-3: SARADA GUEST HOUSE, TOWNSHIP

Date	Time	CO mg/m ³	O3 µg/m ³	NO µg/m ³	NO2 µg/m ³	NOx µg/m ³	NH3 µg/m ³	SO2 µg/m ³	PM 2.5 µg/m ³	PM 10 µg/m ³	AT °C	RH %	WS m/s	WD deg	BP mmHg
18.12.2021 to 19.12.2021	16:00 to 15:00	0.7	72.6	11.4	22.6	34.0	44	26.3	70	118	23.3	69.6	0.7	137	769
NAAQ Standards 24 Hrs	-	*2	*100	-	80	-	400	80	60	100	-	-	-	-	-

Note: * O3 & CO standards is for 8 hours

[Signature]
SENIOR ENVIRONMENTAL SCIENTIST



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY, VISAKHAPATNAM

Behind RTA Office, Madhavadhara VUDA Colony
 Visakhapatnam - 530 018.

Ph: 0891-2719480/380/481
 e-mail: zovsplab-ses2@appcb.gov.in

M. RAVI, M.Sc

SENIOR ENVIRONMENTAL SCIENTIST

AMBIENT AIR QUALITY MONITORING REPORT

Analysis Report No. : 2021 - 12 - A - 003 & 004

Monitoring Location : On the terrace of complainant's house,
 D.No. 6-10, Back side of the Ramalayam Temple,
 Pittavanipalem (V), Parawada (M), Visakhapatnam District.

Monitoring conducted by : Analyst (OS), Regional Office, Visakhapatnam

Results:-

S.No.	Date of monitoring	Parameters (24 Hrs Avg.)			
		PM ₁₀ ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)
1.	15.12.2021 to 16.12.2021	120.0	15.0	19.0	28.0
2.	16.12.2021 to 17.12.2021	127.0	13.0	21.0	32.0
Standards(24 hrs average)		100.0	80.0	80.0	400.0

M. Ravi
 SENIOR ENVIRONMENTAL SCIENTIST



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY:: VISAKHAPATNAM
 D.No.39-33-20/1/4, Madhavadhara VUDA Colony, Visakhapatnam - 530018.

M.RAVI, M.Sc.,
 SENIOR ENVIRONMENTAL SCIENTIST

Ph : 0891-2719380/481
 e-mail: zovsplab-ses2@apccb.gov.in

ANALYSIS REPORT

Sample No. : 2021 - 12 - W - 199 to 205
 Sample location/Address : Surrounding villages of M/s NTPC, Parawada Mandal, Visakhapatnam.
 Sample Source :
 W - 199: Sample of water from the hand pump-1 at besides kalpaka road, Pittavanipalem village
 W - 200: Sample of water from the hand pump-2 at besides kalpaka road, Pittavanipalem village
 W - 201: Sample of water from the hand pump-3 at Beri Ayyanna house Pittavanipalem village
 W - 202: Sample of water from the hand pump-1 at Grameena Health care, Devada village
 W - 203: Sample of water from the hand pump-2 at Post office Devada village
 W - 204: Sample of water from the hand pump-1 at Village approach road, Dasaraipeta village
 W - 205: Sample of water from the hand pump-2 at MPUP school, Dasaraipeta village
 Sample collected on : 15.12.2021
 Sample submitted on : 16.12.2021
 Sample collected by : Analyst (OS), Regional Office, Visakhapatnam

S. No.	Parameter	W-199	W-200	W-201	W-202	W-203	W-204	W-205	Drinking water specification IS10500:2012	
									Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
1.	pH	6.51	6.57	6.70	7.12	6.75	6.81	6.87	6.5-8.5	NR
2.	Electrical Conductivity (as $\mu\text{S/cm}$)	1565	2156	3230	2007	1815	1930	1263	--	--
3.	Chloride (as Cl)	185.8	342.4	320.0	293.5	215.2	249.4	88.0	250 mg/L	1000 mg/L
4.	Total Dissolved Solids	1012	1380	2110	1296	1182	1250	816	500 mg/L	2000 mg/L
5.	Total Alkalinity (as CaCO_3)	408	512	368	480	448	560	472	200 mg/L	600 mg/L
6.	Total Hardness (as CaCO_3)	400	500	808	420	680	544	436	200 mg/L	600 mg/L
7.	Calcium (as Ca)	107.2	108.8	182.4	49.6	174.4	81.6	67.2	75 mg/L	200 mg/L
8.	Magnesium (as Mg)	32.07	55.40	50.0	71.92	59.29	82.62	65.12	30 mg/L	100 mg/L
9.	Nitrate (as NO_3)	40.7	31.8	90.0	38.3	66.4	34.8	39.8	45 mg/L	NR
10.	Nitrite Nitrogen (as $\text{NO}_2\text{-N}$)	0.02	0.03	0.84	1.46	0.06	0.10	0.04	--	--
11.	Ammonical Nitrogen (as $\text{NH}_3\text{-N}$)	0.04	0.02	0.02	0.08	0.05	0.02	0.03	0.5 mg/L	NR
12.	Phosphate (as P)	0.02	0.01	BDL	0.01	BDL	0.01	BDL	--	--
13.	Sulphate (as SO_4)	95.15	98.64	110.0	96.05	95.88	68.64	31.64	200 mg/L	400 mg/L
14.	Fluoride (as F)	0.16	0.59	0.11	0.87	0.48	0.72	0.74	1.0 mg/L	1.5 mg/L
15.	Sodium (as Na)	168	257	164	296	114	204	110	--	--
16.	Potassium (as K)	19	5	10	3	12	8	5	--	--
17.	Chromium (as Cr)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05 mg/L	NR
18.	Manganese (as Mn)	0.002	0.004	0.037	0.027	0.025	0.028	0.005	0.1 mg/L	0.3 mg/L
19.	Iron (as Fe)	0.049	0.042	0.063	0.022	0.100	0.034	0.031	0.3 mg/L	NR
20.	Nickel (as Ni)	<0.001	0.001	<0.001	<0.001	0.005	<0.001	<0.001	0.02 mg/L	NR
21.	Copper (as Cu)	0.001	0.003	0.005	0.003	0.011	0.001	0.006	0.05 mg/L	1.5 mg/L
22.	Zinc (as Zn)	0.180	0.059	0.047	0.078	0.207	0.136	0.029	5.0 mg/L	15 mg/L
24.	Arsenic (as As)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.01 mg/L	0.05 mg/L
25.	Cadmium (as Cd)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003 mg/L	NR
26.	Mercury (as Hg)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001 mg/L	NR
27.	Lead (as Pb)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.01 mg/L	NR

Note: - All values are expressed in mg/l except pH and EC
 NR: No Relaxation

M. Ravi
 SENIOR ENVIRONMENTAL SCIENTIST

Annexure-B

Photographs showing inspection of the joint committee in villages & industry and monitoring of air & water quality by officials of APPCB:



Joint Committee at Pittavanipalem Village



Joint Committee at Marada Dasaripeta



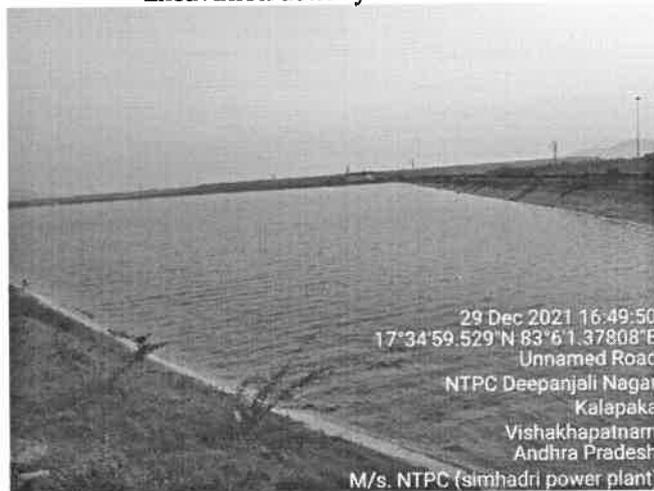
Joint Committee at Devada village



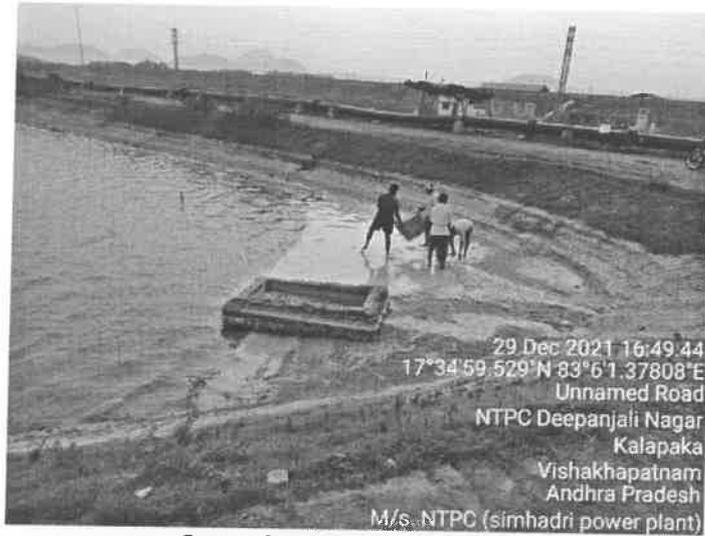
Joint committee inspection at Ash Pond area



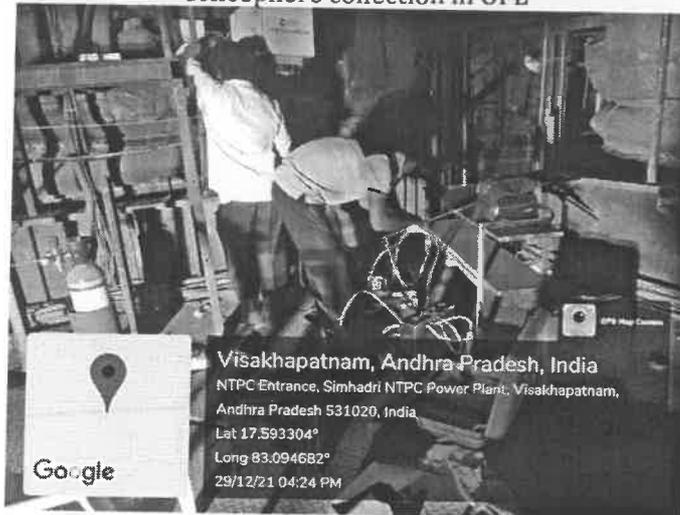
Excavation activity in Ash Pond



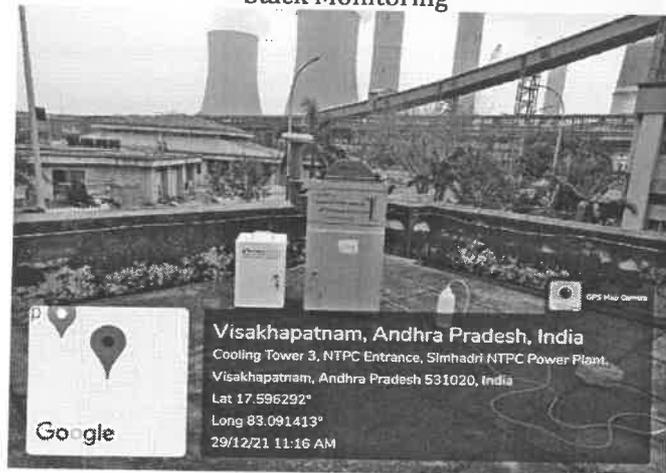
Overflow lagoon (OFL)



Genosphere collection in OFL



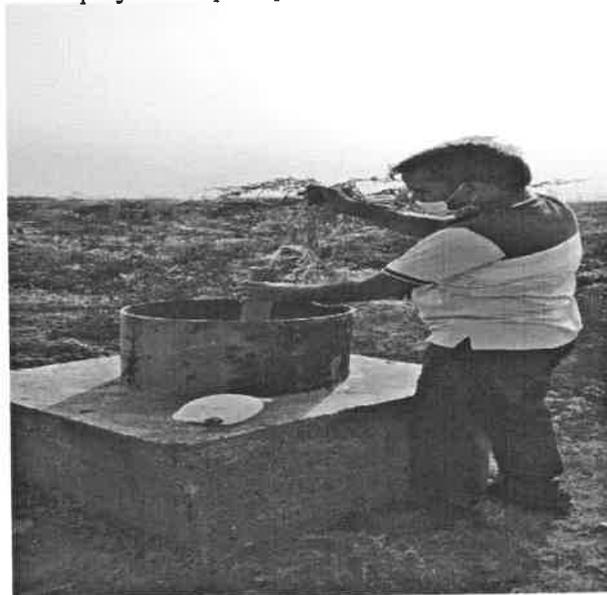
Stack Monitoring



Ambient air quality monitoring in Industry



Display of air quality monitoring online data



Peizowell sample collection at ash pond



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>

**RED CATEGORY
RENEWAL OF CONSENT & AUTHORIZATION ORDER**

Consent Order No : APPCB/VSP/12334/HO/CFO/2002- 19/10/2022

CONSENT is hereby granted for Operation under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation under Rule 6 of the Hazardous & Other Wastes (Management and Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

**M/s. Simhadri Super Thermal Power Project (Stage-I&II),
NTPC Limited, Parawada,
Anakapalli District (Formerly: Visakhapatnam District).
E-mail: ssrao01@ntpc.co.in / pradeepm@ntpc.co.in;**

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

i) Out lets for discharge of effluents:

Stage – I (Unit -1&2)- 1000 MW.

Outlet No.	Outlet Description	Max Daily Discharge (KLD)	Point of disposal
1.	D.M. Plant Regeneration effluent	3,400	Reused for Ash Slurry preparation
2.	Boiler Blow Down and once through Cooling Water after treatment	1,03,900	Into Sea
3.	Ash Pond Effluent	9,600	Reused for Ash Pumping
4.	Domestic	1,790	After treatment in STP, onland for Plantation / Gardening.
Total		1,18,690	

Stage – II (Unit -3&4)- 1000 MW

Existing Outlet No.	Outlet Description	Max Daily Discharge (KLD)	Point of disposal
1.	Filter Back wash	240	Recycled to clarifier inlet
	CHP effluent	4,800	Sedimentation, Treatment & Recycle

2.	DM Plant Regeneration Waste	240	Neutralization and disposal through Central Monitoring Basin (CMB) and excess treated effluents to Sea.
	Cooling Tower blow down	1,06,320	Partial use and disposal through CMB and excess treated effluents to Sea.
	Boiler Blow down	1,080	Disposal through CMB and excess treated effluents to Sea.
	Ash water Blow down	34,320	Disposal through CMB and excess treated effluents to Sea.
3.	Clarifier Sludge	720	Disposed in ash pond
4.	Domestic	2,400	After treatment in ETP, Onland for Plantation / Gardening
	Total	1,50,120 (6255 m3/hr)	

ii) Emissions from chimneys:

Chimney No.	Description of Chimney	Quantity of Emissions in m3/hr. at peak flow
1.	Attached to 2 x1,675 TPH Coal Fired Boilers (Stage-I: 1000 MW)	28,51,560
2.	Attached to 2 x1,675 TPH Coal Fired Boilers (Stage-II: 1000 MW)	28,99,800
3.	Attached to 6 x 1500 KVA D.G Sets	--

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 6 (2)]:

M/s. Simhadri Super Thermal Power Project, NTPC Limited, Stage-I&II, Parawada, Visakhapatnam District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• HAZARDOUS WASTES WITH DISPOSAL OPTION:

Sl. No	Name of the waste	Stream	Quantity	Disposal Option
1.	Waste / Used oil	5.1 of Schedule – I	150 KL/Annum	Shall be routed through APEMC to authorized Reprocessors / Recyclers. (As recyclable waste)
2.	Fuller Earth / Filter Media material	5.2 of Schedule-I	5000 Kg/annum	
3.	Spent Resin	35.2 of Schedule-I	20000 ltrs/annum	Shall be routed through M/s.APEMCL to preprocessor / cement industries for co-processing. (As utilizable waste).
4.	Oil Soaked Cotton Waste	5.2 of Schedule-I	500 Kg/annum	

5.	Insulation Wool	33.2 of Schedule – I	150 MT/annu m	Shall be routed through APEMC to TSDF, Visakhapatnam. (As landfill waste)
----	-----------------	----------------------	------------------	---

This consent order is valid for power generation with quantities indicated below:

S.No.	Product	Quantity
1.	Electricity (Coal with maximum sulphur content of 0.6% and ash content of 45%)	2000 MW (Existing: Stage – I(Unit-1&2) - 1000 MW, Existing: Stage – II(Unit-3&4) - 1000 MW)
2.	Floating solar power plant	25 MW

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorization shall be valid for a period ending with the 31st day of August, 2027.

VIJAY KUMAR GSRKR IAS, MEMBER SECY(GSRKRVK), O/o MEMBER SECRETARY-APPCB

To

**M/s. Simhadri Super Thermal Power Project (Stage-I & II),
NTPC Limited, Parawada,
Visakhapatnam District – 531 020**

Copy to:

1. The JCEE, Zonal Office **Visakhapatnam** for information and necessary action.
2. The EE, Regional Office, **Visakhapatnam** for information and necessary action.

SCHEDULE-A

1. Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.
2. The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.
3. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.
4. The industry should put up two sign boards (6x4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.
5. Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.
6. The industry shall ensure that there shall not be any change in the process technology,

- source & composition of raw materials and scope of working without prior approval from the Board.
7. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.
 8. The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent & HW Authorization of the Board.
 9. The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.
 10. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.
 11. The industry shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.
 12. The industry may explore the possibility of tapping the solar energy for their energy requirements.
 13. The industry should educate the workers and nearby public of possible accidents and remedial measures.

SCHEDULE - B

The industry shall comply with the following conditions with a maximum period of 3 months:

1. The industry shall obtain Fire NOC.
2. The industry shall rectify the water sprinklers in L-1 as fugitive emissions were observed
3. The industry shall maintain permanent mechanical sprinklers for suppression of dust on the haul roads in between the villages and report the compliance to RO-Visakhapatnam.
4. The industry shall complete installation of Flue Gas De-sulphurization (FGD) system to the stack attached to coal fired boilers.
5. The industry shall ensure the PM10 concentration at Pittavanipalem(V), Parawada, Visakhapatnam is below the standards mentioned in this order.
6. The industry shall ensure to meet the ground water standards as per drinking water specification IS-10500:2012 standards
7. Green belt of adequate width and density shall be maintained along the boundary of the industry and around ash ponds with minimum area of 33% of total area and to protect surrounding Villages from fugitive dust.
8. The industry shall remove the existing 150 tons of cenosphere in the premises.
9. The industry shall not operate draft cooling towers without obtaining permission for

the Board.

WATER POLLUTION:

10.The effluent discharged shall not contain constituents in excess of the tolerance limits mentioned below.

Outlet	Parameter	Limiting Standards
2.	pH	6.50 – 8.50
	Temperature not more than 5°C higher than intake water.	
	Total Suspended Solids (at 103 – 105 ⁰ C)	100 mg/l
	Oil and Grease	20 mg/l
	Free chlorine	0.5 mg/l
	Phosphate as PO ₄	20 mg/l
	Chromium (Total)	0.2 mg/l
	Copper (Total)	1mg/l
	Iron	1 mg/l
	Zinc	1 mg/l
	4.	pH
Total Suspended Solids (at 103 – 1050 C)		<100 mg/l
Bio Chemical Oxygen Demand (BOD 3 at 27 0C)		30 mg/l
Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)		<1000 mg/l

11.The source of water is Sea water (8885 cum/hr) from Bay of Bengal and 550 cum/hr from Yeleru left bank canal.The industry shall take steps to reduce water consumption to the extent possible and consumption shall NOT exceed the quantities mentioned below:

Stage – I (Unit -1&2)- 1000 MW

S. No.	Purpose	Quantity in KLD
1.	Industrial Cooling (Makeup) – Sea water	2,16,000 KLD
2.	DM Plant	4,320 KLD
3.	Domestic (including Gardening / Irrigation)	4,080 KLD
Total		2,24,400 KLD

Stage – II (Unit -3&4)- 1000 MW

S. No.	Purpose	Quantity in KLD
1.	Industrial Cooling (Makeup) – Sea water	2,13,240 KLD
2.	DM Plant	13,200 KLD
3.	Domestic (including Gardening / Irrigation)	
Total		2,26,440 KLD

The industry shall maintain separate water meters for the above areas and maintain records.

12.The industry shall construct separate storm water drains and provide rain water harvesting structures. No effluents shall be discharged in to the storm water drains.

13.The industry shall install and maintain digital electromagnetic flow meters with

totalizers for Sea water drawl, water from Yeleru canal, water consumption and waste water generation for various categories mentioned in this order; maintain records on daily basis.

14. Effluents shall not be discharged onland or any water bodies or aquifers or outside under any circumstances.
15. Rain water shall not be allowed to mix with domestic wastewater. Industry shall maintain storm water drains, properly.
16. The industry shall maintain Continuous Effluent Quality Monitoring Stations (CEQMS) for the parameters pH, TSS, Temperature and conductivity data is transmitted to CPCB / APPCB on continuous basis.

AIR POLLUTION:

17. The emissions shall not contain constituents in excess of the prescribed limits mentioned below:

Upto 31.12.2022

Chimney No.	Parameter	Emission Standards
1	Particulate matter	115 mg/Nm ³
2	Particulate matter	100 mg/Nm ³

From 01.01.2023 onwards

Chimney No.	Parameter	Emission Standards
1	Particulate matter	100 mg/Nm ³
	Oxides of Nitrogen	600 mg/Nm ³
	Mercury	0.03 mg/Nm ³
2	Particulate matter	50 mg/Nm ³
	Oxides of Nitrogen	300 mg/Nm ³
	Mercury	0.03 mg/Nm ³

18. The industry shall comply with standards / stack height etc., stipulated in the GSR 612 (E) dated 25.08.2014 and GSR 496 (E) dated 09.05.2016 notified by MoEF&CC, GoI.

19. The industry shall comply with the S.O. 3305 (E) dated 07.12.2015, S.O. 682 (E) dated 07.03.2016, GSR 593 (E) dated 28.06.2018, GSR 243 (E) dated 31.03.2021 and GSR 682 (E) dated 05.09.2022 notified by MoEF&CC, GoI.

20. The industry shall comply with ambient air quality standards of PM₁₀ (Particulate Matter size less than 10mm) - 100 mg/ m³; PM_{2.5} (Particulate Matter size less than 2.5 mm) - 60 mg/ m³; SO₂ - 80 mg/ m³; NO_x - 80 mg/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)

Night time (10 PM to 6 AM) - 70 dB (A)

21. The industry shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Act Rules. In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection)

Act, 1986.

22. The overall noise levels in and around the plant shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc., on all sources of noise generation.
23. The industry shall provide a sampling port with removable dummy of not less than 15 cm diameter in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.
24. The industry shall maintain interlocking facility between APC equipment (ESP) and fuel feeding system for all the units, so that the feeding of the fuel will be stopped automatically, in case, the ESP fails/ tripping's are occurred.
25. The industry shall maintain 6 CAAQM stations including 3 CAAQMs (for the parameter particulate matter) operating in Villages and data transmitted to APPCB website without interruption.
26. The industry shall maintain online Emission monitoring system and data transmitted to CPCB & APPCB website without interruption. The industry maintain the data logging facility provided for storing online stack emission data properly, for retrieval as and when necessary.
27. The industry shall take necessary measures like Ammonia dosing to maintain ESPs attached to the Boilers so as to meet SPM standards all the time.

GENERAL:

28. The industry shall not generate power generation beyond the permitted capacity mentioned in this order without obtaining CFE & CFO of the Board.
29. The industry shall achieve 100% utilisation of fly ash as per the Fly Ash Notification.
30. Refurbished Environment Management Team with dedicated man power shall be maintained for continuous monitoring of Plant environment to ensure compliance of CFO conditions.
31. The industry shall maintain duly compacted soil cover of requisite thickness as per norms for the ash ponds to avoid dust pollution and report the compliance to RO-Visakhapatnam.
32. The industry shall comply with the recommendations of the NEERI report. The industry shall carryout a long term study to assess the ground water quality in all sides of the plant over a period of time (2-3 hydrological cycles) with reputed organization / university.
33. The industry shall not use any fuels other than those permitted in this order without prior consent from the Board. They shall maintain log registers on type of fuels & daily consumption, ash content, sulphur content etc., and shall furnish consolidated records to R.O., Visakhapatnam for every three months.
34. The industry shall maintain proper arrangements for collection of seepage from ash pond and pumped back into the ash water system, so as to avoid ground water pollution in the surrounding area.
35. The industry shall maintain water cover throughout ash pond area to prevent fly ash from getting air borne and air pollution in the surrounding area especially to the residents of Pittavanipalem and The industry shall comply with the recommendations of the NEERI report avoid island formation within the lagoon leading to dust problem.
36. Efforts shall be taken to dispose all fly ash in dry form as much as possible instead of diverting it to wet ash pond due to paucity of land available and due to lack of secured landfill arrangement in the ash pond. Dry ash collection systems of Stage-I & Stage - II shall be maintained properly.

37. The industry shall monitor all ground water peizo wells and submit report to RO-Visakhapatnam every three months indicating trends.
38. Garland canal shall be maintained around the fly ash pond to collect water that is expected to leach out and monitoring of such leachates shall be carried out.
39. After increase in the bund level and increase in the storage capacities due to the lateral pressures, the aquifer may be influenced due to the leachates. The industry shall maintain sufficient fresh water in the borrow pits to counter the lateral pressures and contain the leachates if any percolate into strata.
40. The industry shall act on pollution problems that arise out of the ash pond and shall take measures to contain by taking time to time action to dispel apprehensions by the residents of the villagers. If it is required, the industry shall take up the corrective measures like introducing geo-textiles vertically in the sub-surface levels in the detected areas of leaching.
41. The industry shall maintain proper water curtains in the Ash ponds to avoid dust nuisance to the nearby villagers.
42. The industry shall take measures around the ash pond area to avoid entry of animals in order to prevent accidents, breakage of emergency ponds and protection of greenbelt.
43. The industry shall provide truck-tyre washing facility near ash pond area to avoid dust emissions during the movement of the trucks.
44. The industry shall maintain the following records and the same shall be made available to the Board Officials during the inspection.
 - a. Daily power generation details.
 - b. Quantity of Effluents generated and disposed.
 - c. Log Books for pollution control systems.
 - d. Daily Fly ash generated and disposed.
45. The industry shall provide bitumen / concrete to the haul roads in ash pond area where the heavy vehicular movement is there for transporting pond ash and also install mechanical water sprinklers along the haul road to control fugitive dust emissions in surrounding area.
46. The industry shall avoid the excavation operations in ash ponds during heavy winds.
47. The industry shall maintain valid PLI policy which includes Environmental Relief Fund (ERF) and submit copy to RO, Visakhapatnam on yearly base.
48. The industry shall install digital display boards at publicly visible places at the main gate indicating the products manufactured Vs permitted quantities, Treated effluent concentrations Vs discharge standards, Stack emission & AAQ concentrations Vs standards, hazardous waste generation, disposed, stock Vs permitted quantities and validity of CFO; and exhibit the CFO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.
49. The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent for Establishment (CFE) and Consent for Operation (CFO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through MoEF&CC recognized and National Accreditation Board for Laboratory Testing (NABL) accredited third party.
50. The industry shall comply with the orders of Hon`ble NGT in OA No. 227 of 2021.
51. The industry shall comply with all the conditions stipulated in the earlier issued EC order and CFE orders.
52. Any other directions / circulars / notices issued by CPCB, MoEF&CC and APPCB

shall be followed from time to time.

53. The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.

54. The industry shall comply with the MoEF, GoI notification dt. 14.09.1999 and other directions issued time to time with regard to utilization of ash.

Special conditions:

55. The industry shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.

56. The industry shall extend training to the working personnel for the prevention of accidents and necessary antidotes to ensure safety, as per the MSIHC Rules, 1989.

57. The industry shall carry out calibration of safety equipment and leak detection systems at regular intervals and shall certify the same with the Factories Department. That certified copy shall be submitted to the APPCB, Regional Office.

58. The industry shall install fluorescent Wind Vane at the highest point in the industry premises.

59. The industry shall submit Risk analysis and risk assessment covering worst scenario clearly describing impact within the industry premises and outside the industry premises and emergency response system.

60. The industry shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.

SCHEDULE – C

[See rule 6(2)]

**[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR
HANDLING HAZARDOUS WASTES]**

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. An application for the renewal of an authorisation shall be made as laid down under

these Rules.

9. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

Specific Conditions:

- 10.The industry shall not store hazardous waste for more than 90 days as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
- 11.The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buyback basis.
- 12.The industry shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.
- 13.The industry shall maintain proper records for Hazardous and Other Wastes stated in Authorisation in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form-4 as per Rule 20 (2) of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
- 14.Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

**VIJAY KUMAR GSRKR IAS, MEMBER SECY(GSRKRVK), O/o MEMBER
SECRETARY-APPCB**

To

**M/s. Simhadri Super Thermal Power Project,
NTPC Limited, Parawada,
Visakhapatnam District – 531 020**

Signed by Vijay Kumar

Gsrkr las

Date: 19-10-2022 12:50:20

Reason: Approved

Item No.4:-**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI***(Through Video Conference)***Original Application No.227 of 2021 (SZ) &
I.A. No.85 of 2022 (SZ)**

IN THE MATTER OF:

Battu Satish Reddy
Andhra Pradesh.

...Applicant(s)

*With*National Thermal Power Corporation Limited
Simhadri Plant, Andhra Pradesh and Ors.

... Respondent(s)

Date of hearing: 03.11.2022.

CORAM:

HON'BLE Smt. JUSTICE PUSHPA SATHYANARAYANA, JUDICIAL MEMBER

HON'BLE Dr. SATYAGOPAL KORLAPATI, EXPERT MEMBER

For Applicant(s):

Mr. Sravan Kumar.

For Respondent(s):

Mr. AL. Somayaji, Senior Advocate
For M/s. King & Partridge for R1.
Mr. G.M. Syed Nurullah Sheriff for R2.
Mrs. Madhuri Donti Reddy for R3, R5 & R6.
M/s. N. Nathami for R4.

ORDER

1. The interim and final reports of the Joint Committee are filed. The response by the 1st respondent dated 15.07.2022 is also filed. However, the learned Senior Advocate appearing for the 1st respondent wanted to give a comprehensive report in that regard. He also stated that pursuant to the report of the Joint Committee, NEERI has been given the contract for conducting a long-term Environmental Impact Assessment study to ascertain the impact of the pollution on air, water, soil and agricultural crops within 5 Km radius of the project area, which according to them, would take not less than a year.
2. In the meanwhile, the learned counsel appearing for the State Pollution Control Board also wanted to file their action taken report, though it is stated that they have extended their Consent to Operate for a period of five years.
3. The applicant also has to file his objections to the report of the Joint Committee, if any, which may be filed before the next hearing date.
4. Post the matter on 19.12.2022.

Sd/-**Smt. Justice Pushpa Sathyanarayana, JM****Sd/-****Dr. Satyagopal Korlapati, EM**

O.A. No.227/2021 (SZ)
I.A. No.85/2022 (SZ)
03rd November, 2022. Mn.

A.P. POLLUTION CONTROL BOARD, ZONAL LABORATORY, VISAKHAPATNAM
MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION
24 Hrs. AVERAGE VALUES

M/s NTPC-Simhadri, Parawada, Anakapalli.

Location 1 : Near R&D Railway Cabin

Date	Time	CO mg/m ³	O ₃ µg/m ³	NO µg/m ³	NO ₂ µg/m ³	NOx µg/m ³	NH ₃ µg/m ³	SO ₂ µg/m ³	PM 2.5 µg/m ³	PM 10 µg/m ³	AT °C	RH %	WS m/s	WD deg	BP mmHg
25.10.2022	12:00														
	to	1.2	69.9	4	13	18	26	13.5	67	164	29.0	78.7	0.8	128	766
26.10.2022	11:00														
Location 2 : Near Admin. Building															
26.10.2022	14:00														
	to	0.9	61.2	5	17	23	23	25.7	56	149	28.0	75.4	1.2	103	767
27.10.2022	13:00														
Location 3 : Near Sarada Guest House, Township															
27.10.2022	15:00														
	to	0.9	76.9	2	11	13	19	16.0	51	86	27.8	78.0	0.7	124	766
28.10.2022	14:00														
NAAQ Standards 24 Hrs.		*2	*100	-	80	-	400	80	60	100	-	-	-	-	-

Note:-

* CO & Ozone standard is for 8 hours

At Location 1&2, the PM10 values are exceeding the NAAQ Standards

At Location 1, the PM2.5 value is exceeding the NAAQ Standards

Remarks:

M. Rao
SENIOR ENVIRONMENTAL SCIENTIST

A.P. POLLUTION CONTROL BOARD, ZONAL LABORATORY, VISAKHAPATNAM
 MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION
 VOCs and MERCAPTANS VALUES (24 Hrs average)

M/s NTPC-Simhadri, Parawada, Anakapalli.

Location 1: Near R&D Railway Cabin

Date	Time	Methyl mercaptan (ppb)	Ethyl mercaptan (ppb)	Dimethyl sulfide (ppb)	Carbon disulfide (ppb)	Dibutyl sulfide (ppb)	Dimethyl disulfide (ppb)	Diazole (ppb)	Methane (ppb)	3-methylbutane (ppb)	2,4-dimethylbutane (ppb)	benzene (ppb)	cyclohexane (ppb)	2-methylbutane (ppb)	2,3-dimethylbutane (ppb)	2-methylpentane (ppb)	2,2,4-trimethylpentane (ppb)
25.10.2022 to 26.10.2022	12:00 to 11:00	0.0	0.0	0.4	0.0	0.3	0.5	0.4	0.4	0.1	0.1	0.1	0.1	0.5	1.4	0.5	0.0

Location 2: Near Admin. Building

26.10.2022 to 27.10.2022	14:00 to 13:00	0.0	0.0	0.4	0.0	0.3	0.5	0.4	0.1	0.1	0.2	0.1	0.1	0.6	1.1	1.2	0.0
--------------------------	----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Location 3: Near Sarada Guest House, Township

27.10.2022 to 28.10.2022	15:00 to 14:00	0.0	0.0	0.4	0.0	0.3	0.5	0.4	0.2	0.1	0.1	0.1	0.1	1.0	0.8	0.4	0.0
--------------------------	----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

A.P. POLLUTION CONTROL BOARD, ZONAL LABORATORY, VISAKHAPATNAM
 MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION
 VOCs and MERCAPTANS VALUES (24 Hrs average)

M/s NTPC-Simhadri, Parawada, Anakapalli.

Date	Time	M/s NTPC-Simhadri, Parawada, Anakapalli.															
		iso-Butane FID (ppb)	n-Butane FID (ppb)	trans-2-butene (ppb)	1-butene (ppb)	cis-2-butene (ppb)	cyclopentane-FID (ppb)	iso-Pentane FID (ppb)	n-Pentane FID (ppb)	trans-2-pentene (ppb)	1-pentene (ppb)	cis-2-pentene (ppb)	2,2-dimethylbutane (ppb)	2,3-dimethylbutane (ppb)	isoprene (ppb)	methyldiethylamine (ppb)	Hexane (ppb)
Location 1: Near R&D Railway Cabin																	
25.10.2022	12:00 to 11:00	1.3	0.7	0.4	0.3	0.0	0.4	0.2	0.0	0.0	0.0	0.0	1.1	8.8	0.0	0.1	0.0
Location 2: Near Admin. Building																	
26.10.2022	14:00 to 13:00	0.8	1.3	0.0	0.9	0.0	0.7	0.4	0.1	0.1	0.0	0.0	0.4	20.9	0.1	0.0	0.4
Location 3: Near Sarada Guest House, Township																	
27.10.2022	15:00 to 14:00	1.7	3.1	0.1	0.3	0.1	0.3	0.8	0.6	0.0	0.0	0.0	0.6	0.8	0.4	0.0	0.3

MP
 SENIOR ENVIRONMENTAL SCIENTIST



Andhra Pradesh Pollution Control Board

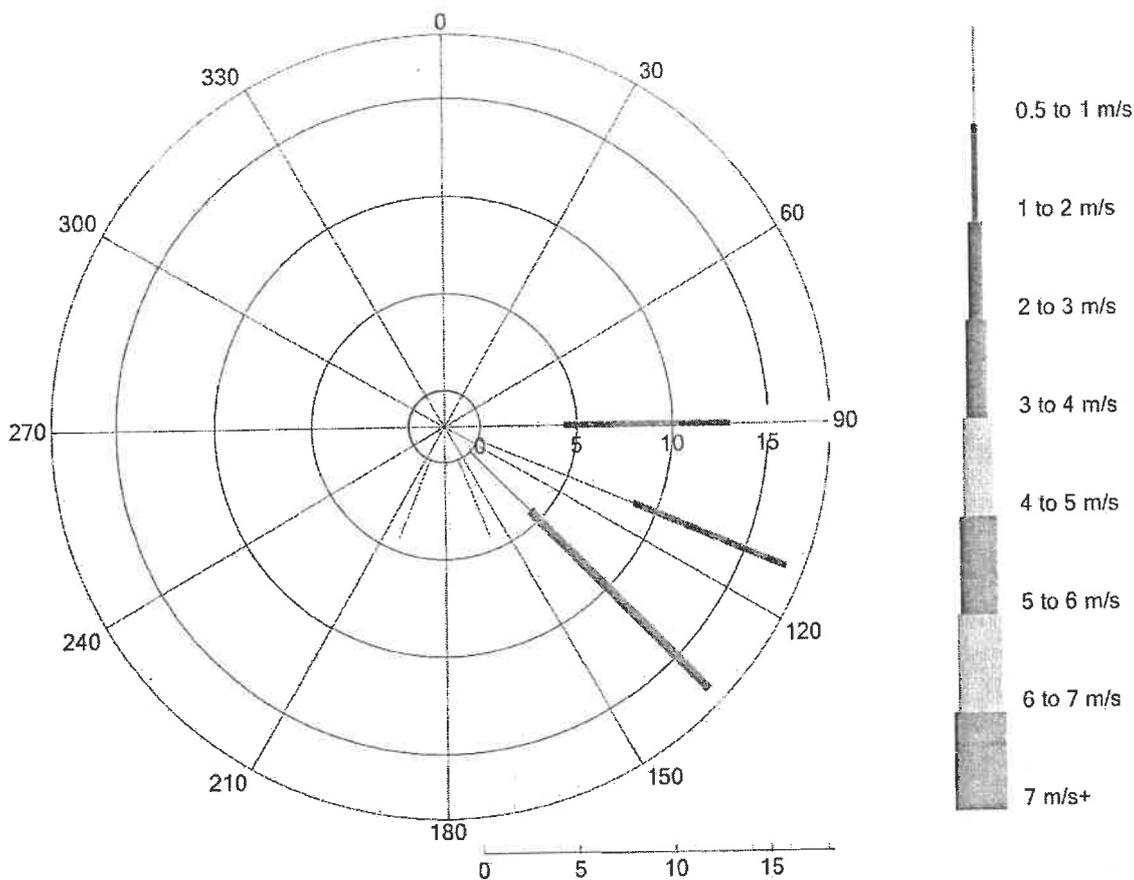
Continuous Ambient Air Quality Monitoring Station : Mobile Van

AP Pollution Control Board

Location 1:- Near R&D Railway Cabin, NTPC-
Simhadri, Parawada, Anakapalli.

Wind Rose

25-10-2022 12:00 to 26-10-2022 11:00



43.5% calm
100.0% valid data present



Andhra Pradesh Pollution Control Board

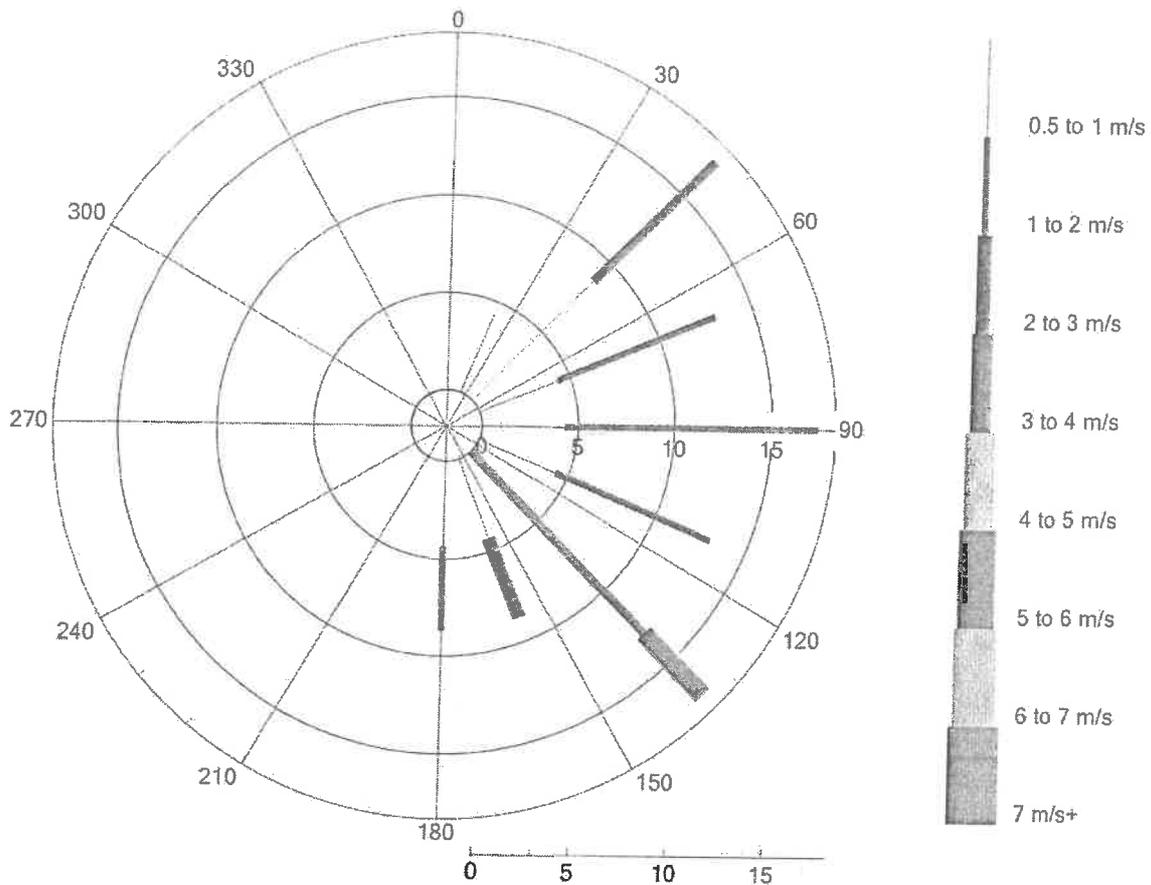
Continuous Ambient Air Quality Monitoring Station : Mobile Van

AP Pollution Control Board

Location 2:- Near Administration Building, NTPC-Simhadri, Parawada, Anakapalli.

Wind Rose

26-10-2022 14:00 to 27-10-2022 13:00



0.0% calm
100.0% valid data present



Andhra Pradesh Pollution Control Board

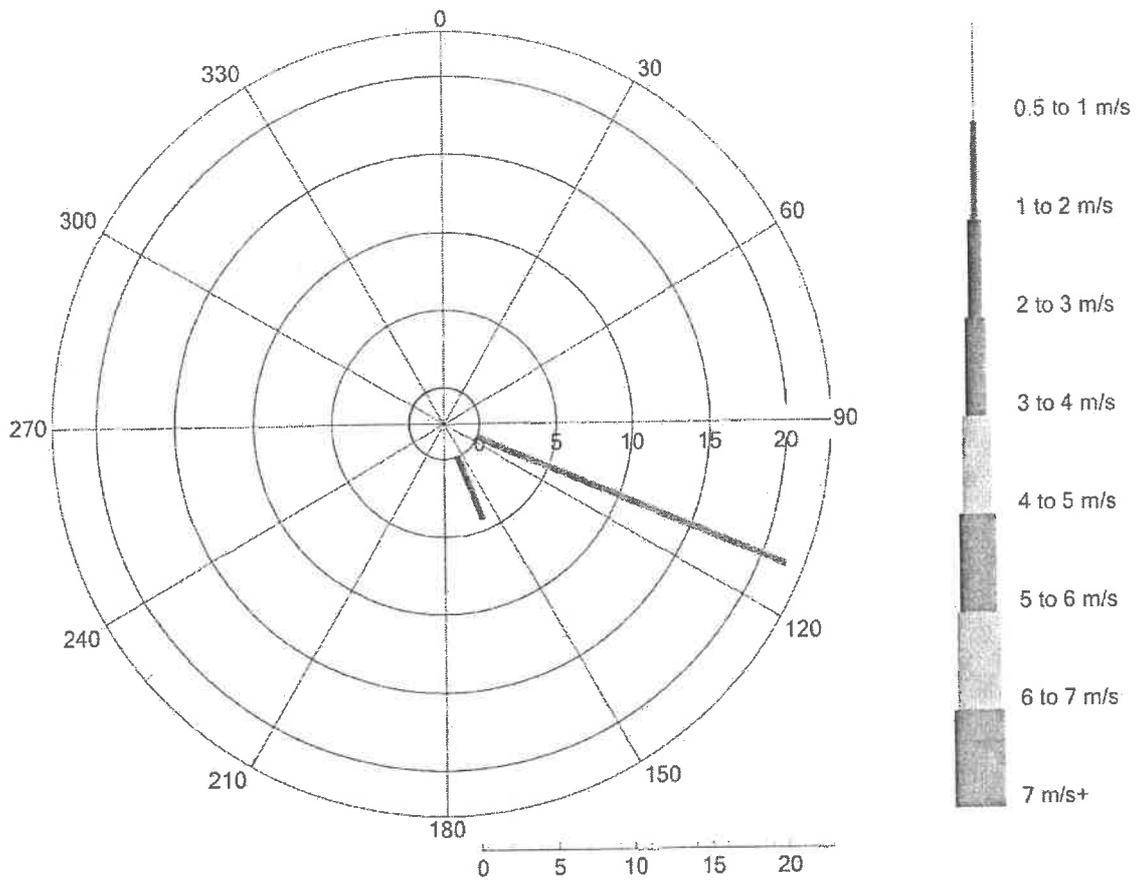
Continuous Ambient Air Quality Monitoring Station : Mobile Van

AP Pollution Control Board

**Location 3:- Near Sarada guest house(Township),
NTPC-Simhadri, Parawada, Anakapalli.**

Wind Rose

27-10-2022 15:00 to 28-10-2022 14:00



60.9% calm
100.0% valid data present


ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, VISAKHAPATNAM

 D.No. 39-33-20/4/1, Madhavadhara Vuda Colony,
 Visakhapatnam - 530018, Phone: 0891 -2755356

Lr.No. 1011/PCB/RO-VSP/2022 - 861
Date: 15/11/2022
NOTICE

Sub: APPCB - RO, Visakhapatnam - M/s. Simhadri Super Thermal Power Project, (Stage-I&II) NTPC Limited, Parawada, Anakapalli District (Formerly: Visakhapatnam District). - Non-Compliance with the Board standards - Notice Issued - Reg.

Ref: 1. CFO & HWA order No. APPCB/VSP/VSP/12334/CFO/HO/2017 Dt. 19.10.2022 valid up to 31.08.2027.
 2. Complaint received from surrounding villagers on 24.10.2022.
 3. Board Officials inspected the industry on 25.10.2022 to 28.10.2022.

Whereas you are operating Thermal Power Plant in the name of M/s. Simhadri Super Thermal Power Project, NTPC Ltd., Parawada, Visakhapatnam District to produce power generation-2000MW

Whereas vide references 1st cited, the Board has issued Consent for Operation and Hazardous Waste Authorization to your industry on 19.10.2022 to produce power generation of 2000MW Stage-I(Unit-I&II)-1000MW & Stage-II (Unit-III&IV)-1000 MW which is valid up to 31.08.2027 duly stipulating certain conditions & standards to comply with.

Whereas, the Board officials has conducted Ambient Air Quality Monitoring in the industry and as per the analysis reports Particulate Matter PM_{2.5} & PM₁₀ values are exceeded the Board Standards.

Mobile Continuous Ambient Air Quality Monitoring:				
Sample Collected at	Date of Sampling	Parameter	Value (µg/m ³)	Standard (µg/m ³)
Near R&D Railway Cabin	25.10.2022 to 26.10.2022	PM _{2.5}	67.0	60.0
		PM ₁₀	164.0	100.0
Near Administration Building	26.10.2022 to 27.10.2022	PM ₁₀	149.0	100.0

Whereas, as per the analysis reports, the values of PM_{2.5} & PM₁₀ in Ambient Air Quality are exceeded the Board standards, thereby not complying with norms stipulated by the Board.

Hence you are hereby directed to take immediate necessary measures and submit detailed compliance report for CFO order dt.19.10.2022 within 7 days from the date of receipt of this notice, failing which action will be initiated against your industry under section 31(A) of Air (Prevention & Control of Pollution) Amendment Act, 1987 in the interest of Public Health and Protection of Environment.

ENVIRONMENTAL ENGINEER (FAC)

16.11.22

To
 The Occupier,
 M/s. Simhadri Super Thermal Power Project, (Stage-I & II),
 NTPC Limited, Parawada,
 Anakapalli District (Formerly: Visakhapatnam District).



एनटीपीसी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Government of India Enterprise)

सिम्हाद्री / Simhadri

Ref. No. SMPS: EMG & AU: 2022:

Date: 22.11.2022

To

Environmental Engineer- RO
Andhra Pradesh Pollution Control Board,
D.No. 39-33-20/4/1, Madhavadhara Vuda Colony,
Visakhapatnam - 530018, Phone: 0891 -2755356

Dear Sir,

Subject: Your notice 1011/PCB/RO-VSP/2022/861 dated 15.11.2022

With reference to the subject and above letter, it is represented that, NTPC Simhadri power generation strictly adheres to emission control measures as stipulated by CPCB, APPCB guidelines and daily average emissions are always well within the prescribed limits.

It is brought to your kind attention that, due to temperature inversion effect during winter seasons and high presence of marine aerosols due to proximity to seacoast, the PM 10 & P2.5 values will be normally beyond stipulated limits

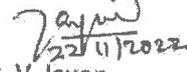
Also, the PM 10 values plummeted during Diwali from 24.10.2022 to 26.10.2022. The same data can be substantiated as per news articles enclosed pertaining to Vishakhapatnam city, during October 2022, highest being 204µg/m³ (News articles and AQI index for Vizag city as Annexure -I)

We assure you that the stack emissions at NTPC-Simhadri are always maintained as per the prescribed norms of CPCB/MOEF and it is a continuous endeavor of NTPC Simhadri to ensure Environment protection aspects in all respects.

We assure you that under your kind guidance NTPC Simhadri will strive hard to ensure Environment protection aspects in all respects

Thanking you,

Yours sincerely,


22/11/2022
Dr. V Jayan
AGM (EMG & AU)

सिम्हाद्री सुपर थर्मल पावर प्रोजेक्ट, पोस्ट: एनटीपीसी-सिम्हाद्री - 531 020. जिला : विशाखपट्टणम (अं.प्र.)

Simhadri Super Thermal Power Project Post : NTPC Simhadri - 531 020. Dist : Visakhapatnam (A.P.)
Phone No. : 08924-243858, Fax No. : 08924-243092

पंजीकृत कार्यालय : एन टी पी सी भवन, स्कोप कॉम्प्लेक्स 7, इन्स्टिट्यूशनल एरिया, लोदी रोड, नई दिल्ली - 110003
दूरभाष : 11-24360100, फैक्स : 11-24361018, वेबसाइट: www.ntpc.co.in

Regd Office : NTPC Bhawan, Scope Complex 7, Institutional Area, Lodi Road, New Delhi - 110003,
Tel : 011-243601000, Fax : 011-24361018, Website : www.ntpc.co.in

THE HINDU

India

World

Opinion

Entertainment

Today's Paper

Menu



TH FREE TRIAL

SUBSCRIBE

LOGIN

EPAPER / ELECTIONS 2022 ↗ / HOUSING.COM

celebrations

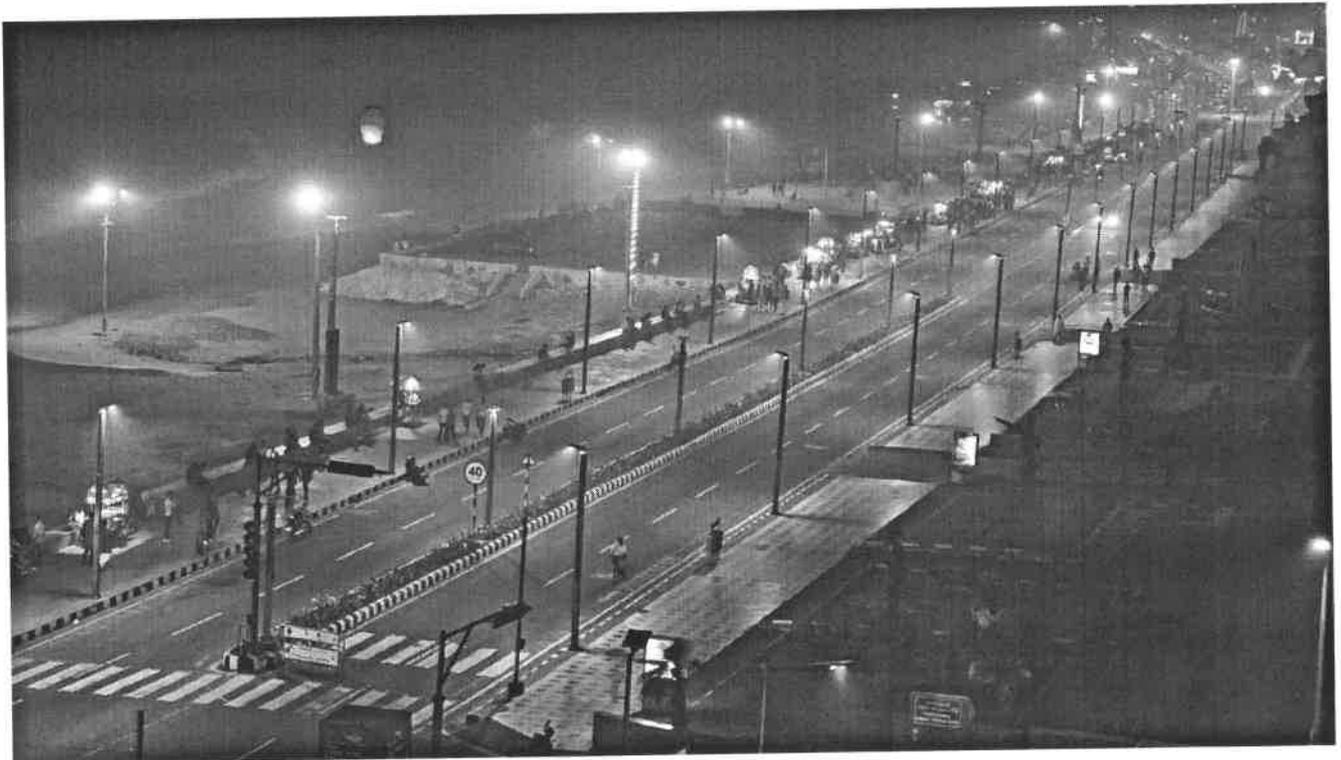
Average Air Quality Index in Visakhapatnam comes down to 'poor' from 'moderate'

October 25, 2022 09:58 pm | Updated 09:58 pm IST - VIJAYAWADA

THARUN BODA

COMMENTS SHARE

READ LATER



The average Air Quality Index (AQI) value deteriorated from 123 on Monday to 233 on Tuesday in Visakhapatnam. | Photo Credit: K.R. DEEPAK

Air quality in the cities in Andhra Pradesh has deteriorated following the Deepavali celebrations as people burst fireworks as part of the festival on Monday.

Even as the pollution did not reach alarming levels in most of the cities monitored by the Central Pollution Control Board (CPCB), the quality plummeted to poor and moderate levels from the usually observed levels on Tuesday.

ADVERTISEMENT

The level of pollutants began to increase since Monday night and reached a peak around noon on Tuesday, as per the hourly reports by the CPCB. Visakhapatnam was the only city which witnessed poor air quality as the Air Quality Index (AQI) reached 241 on Tuesday morning.

According to the AQI Bulletin, the average AQI value in Visakhapatnam between 4 p.m. on Monday to 4 p.m. on Tuesday was 233. The previous day (during the 24 hours ending 4 p.m. on Monday), the average AQI in Visakhapatnam was only 123.

ADVERTISEMENT

In Anantapur, the average AQI on Tuesday increased to 191 from 118 the previous day and in Amaravati (Secretariat) which lies between Vijayawada and Guntur, it increased to 150 from 78. Similarly, in Rajamahendravaram, the average AQI slightly increased to 90 on Tuesday from 77, the previous day. However, in Tirupati (Tirumala station), the average AQI came down to 60 on Tuesday from 76 the previous day.

The prominent pollutant in Amaravati and Visakhapatnam that was Particulate Matter (PM) 10 earlier. However on Tuesday, it was particulate matter less than 2.5 micrometres (PM 2.5), which is easily inhalable and causes more harm than PM 10.

Similarly, the prominent pollutant in Anantapur was PM 2.5 on Tuesday but it was PM 10 in Tirupati and Rajamahendravaram.

The continuous air quality monitoring system at PWD Grounds in Vijayawada was not live as per the CPCB. Similar air pollution levels are likely continue on Wednesday, the officials said.

ADVERTISEMENT

 COMMENTS  SHARE

Related Topics

[Andhra Pradesh](#) / [Vijayawada](#) / [air pollution](#)

Trending

- 1 Cyclone Mandous likely to hit coast around Mamallapuram by December 9, 2022 midnight, bring heavy rain
- 2 'Rapid road' on OMR to be finally opened for traffic on December 8
- 3 White House supports passage of bill that eliminates per country quota for Green Cards; Indian-Americans set to benefit

- 4 Men are losing their Y chromosome, but a new sex gene discovery brings hope
-
- 5 Chennai's Amma Naana, the store with flavours from around the world, opens a new outlet on ECR

Latest News

6 mins ago - Chennai

Cyclone Mandous live updates | IMD predicts heavy rain in Tamil Nadu, Puducherry and Karaikal

11 mins ago - New Articles

Facing detention under PSA, Kashmiri journalist Fahad Shah gets bail in two cases

37 mins ago - World

New Zealand PM Ardern says China has become 'more assertive'

41 mins ago - Other States

Maharashtra-Karnataka border row: MVA MPs seek Amit Shah's intervention to restrain 'high-handed' Karnataka govt.

[READ MORE STORIES](#)

ADVERTISEMENT

Recommended



'Rapid Road' failed first test in



South Coastal Andhra Pradesh



YSR Congress Party will be the



Grave financial crisis grips

Bengaluru, but will now be benchmarked for quality and cost

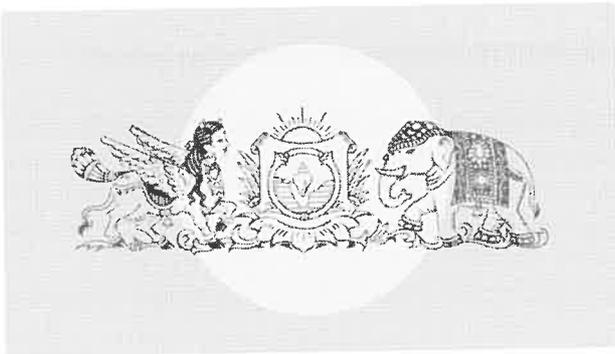
bracing for cyclonic storm 'Mandous'

first to welcome if Andhra Pradesh and Telangana get a chance to reunite, says Sajjala

Andhra Pradesh, says BJP leader Purandeswari

Top News Today

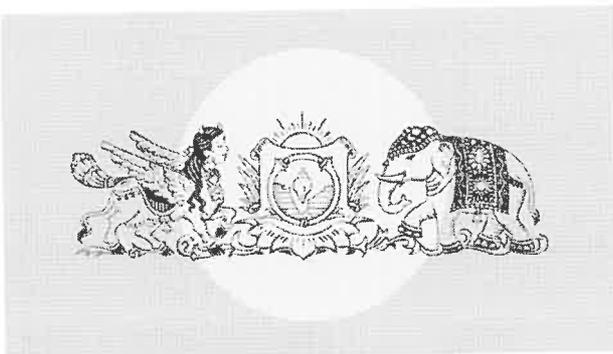
TOP NEWS / INDIA / WORLD / SPORTS / BUSINESS / SCI-TECH / ENTERTAINMENT / LIFE & STYLE



INDIA

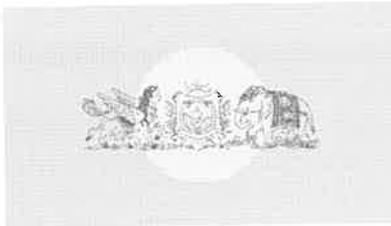
No proposal at present to reintroduce NJAC, Rajya Sabha told

PTI



INDIA

Process to appoint ad hoc judges must be less cumbersome: Supreme Court



INDIA

Centre stops Maulana Azad scholarship for research scholars from minority communities

Union Minority Affairs Minister Smriti Irani says in Lok Sabha that the decision was made since the scheme overlaps with various other schemes

THE HINDU BUREAU

AGRICULTURE

ENVIRONMENT

WORLD

Sri Lanka to resume negotiations on stalled trade agreement with India

MEERA SRINIVASAN

INDIA

Electoral Bonds worth over ₹676 crore sold during a single week in November: RTI

JATIN ANAND

WORLD

Who is Viktor Bout,

THE HINDU BUREAU

Field trials of GM mustard DMH-11 showed high yield, says Science Minister

JACOB KOSHY

Rajya Sabha clears Wildlife Bill, Minister promises to protect elephants

THE HINDU BUREAU

the Russian arms smuggler, involved in the prisoner swap?

AFF

SEE MORE →

ADVERTISEMENT

THE HINDU

The Hindu

About Us

Code of Editorial Values

News Archive

Sitemap

Print Subscription

Digital Subscription

[Subscribe to Newsletters](#)

[Rss Feeds](#)

[Readers Editor-Terms of Reference](#)

Contact us

[Contact Us](#)

[Advertise With Us](#)

Group News Sites

[The Hindu](#)

[BL on Campus](#)

[Sportstar](#)

[Business Line](#)

[இந்து தமிழ் திசை](#)

[The Hindu Centre for Politics and Public Policy](#)

[Frontline](#)

[Young World Club](#)

[The Hindu E-Paper](#)

[BusinessLine E-Paper](#)

[Crossword+ "Free Games"](#)

[Coupons](#)

Other Products

[RoofandFloor](#)

[STEP](#)

[Images](#)

[Classifieds](#)

[Special Publications](#)

[Bookstore](#)

Popular Sections

[News](#)

[India](#)

[World](#)

[Opinion](#)

[Editorial](#)

[Business](#)

[Sport](#)

Trending on thehindu.com

[No more Air Suvidha form for international arrivals from November 22](#)

[Chief Justice of India, Collegium judges meet protesting Gujarat, Telangana High Courts' lawyers over proposed transfers of their HC judges](#)

[Rainy days ahead for Chennai, north Tamil Nadu](#)

[FIFA World Cup 2022 | Full Netherlands squad and schedule](#)

[Mangaluru auto rickshaw blast | Prime suspect procured SIM card in Coimbatore](#)

Trending on our Group sites

[Jio Cinemas app scores as football fans flock to download it](#)

[Ashok Leyland switches to the fast lane](#)

[Fears in Sri Lanka over Tamil Nadu decision to scrap Tantea plantations](#)

[1947: Madras Devadasis \(Prevention of Dedication\) Act passed](#)

[FIFA World Cup 2022: Top teams which failed to qualify for Qatar WC](#)

[Terms of Use](#) / [Privacy Policy](#)

Copyright © 2022, THG PUBLISHING PVT LTD. or its affiliated companies. All rights reserved.

[BACK TO TOP](#)

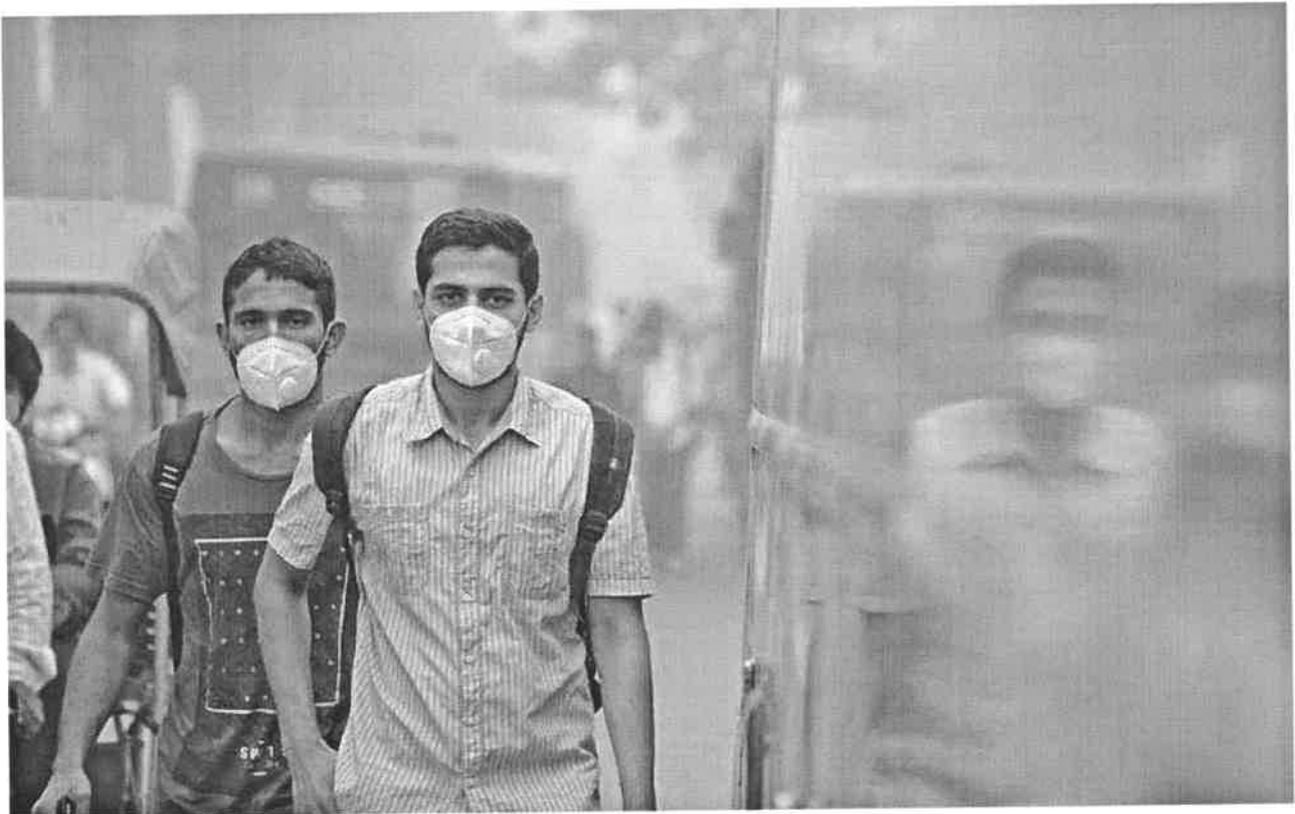


Home > News/City Updates

Diwali celebrations amplify air pollution levels in Visakhapatnam

26/10/2022 in News/City Updates Reading Time: 2 mins read

0



Share on Facebook

Share on Twitter

Share on WhatsApp

Share on Telegram

Share on Email

in

On Monday, Visakhapatnam City witnessed a major spike in air pollution levels due to crackers' bursting. The officials of the Andhra Pradesh Pollution Control Board (APPCB) stated that the air quality on 24 October 2022 rose to the 'unhealthy' level. As per the National Ambient Air Quality Standards (NAAQ), the Particulate Matter (PM) 10 stood at 151-200 micrograms per cubic meter, while PM 2.5 was recorded at 80 mg per cubic meter.

Also read: [From oil lamps to electricity, the story of lighting up Vizag](#)

The APPCB identified PM 10 and PM 2.5 as the primary air pollutants in Visakhapatnam. The board also stated that this year witnessed a higher spike compared to 2021, during which PM10 stood at 131. Further, it added that the city recorded PM10 levels of 89.4 and PM2.5 levels of 35 the day before Diwali, i.e. 23 October 2022.

On Monday, the highest PM10 level was recorded at Pedagantyada, where it reached 204 mg per cubic meter, and the lowest was Gnanapuram- 118. Vizag recorded average PM10 levels of 89.4 and PM2.5 levels of 35 a week before Diwali. As per the NAAQ norms, the PM10 and PM2.5 readings should be restricted to figures below 100 and 60 respectively.

Some of the other areas where air pollution levels spiked above the limits in Visakhapatnam are- Autonagar (PM10 – 181, PM2.5- 80), Police Barracks (140, PM2.5 46), and Mindi (PM10- 148, PM2.5- 69).

Stay tuned to Yo! Vizag website and [Instagram](#) for more city updates.

Tags: [air pollution](#) [air quality in visakhapatnam](#) [Andhra Pradesh Pollution Control Board](#)
[diwali](#) [national ambient air quality standards](#) [visakhapatnam](#) [vizag](#)



Related Posts

Home > States > Andhra Pradesh

Air quality unhealthy in Vizag on Diwali night

Pollution level at various places in the city recorded a spike on Monday evening as citizens burst crackers on the occasion of Deepavali.



Published: 26th October 2022 06:11 AM | Last Updated: 26th October 2022 06:11 AM

Print | A+ A A-



Image used for representational purpose only. (Photo | EPS)

By Express News Service

VISAKHAPATNAM: Pollution level at various places in the city recorded a spike on Monday evening as citizens burst crackers on the occasion of Deepavali. The presence of Particulate Matter (PM) 2.5 and 10 in the air was more this year as against last year during the festival of lights.

Officials of the AP Pollution Control Board (APPCB) said PM 10 and PM 2.5 have been identified as the main pollutants in Vizag on Monday. Air quality in most parts of the city was 'unhealthy' as PM 10 was between 151-200 as against the NAAQ (National Ambient Air Quality Standards) norm of 100. On the other hand, PM 2.5 stood at 80 as against the NAAQ norm of 60.

SPIKE IN PARTICULATE MATTER				
Location	2022		2021	
	PM 2.5	PM 10	PM 2.5	PM 10
Mindi	69	148	54	113
Autonagar	80	181	57	120
Police Barracks	46	140	62	133

The PM10 level in Visakhapatnam increased to 149.6 micrograms per cubic metre during Deepavali this year from 131 last year. While the city reported an average PM 10 of 89.4 and PM 2.5 of 35 on Sunday, the day before the festival, the readings went up to 149.6 and 54.6, respectively, on Monday. Pedagantyada

recorded PM 10 at 204, while the lowest of 118 was reported at Gnanapuram on October 18.

The same places recorded PM 10 of 83 and 96 respectively on Sunday. Though the city has been reporting an average PM 10 concentration of 89.4 micrograms per cubic metre, it reported 149.6 micrograms per cubic metre on Monday. A week before Deepavali, the city recorded PM 2.5 concentration of 35 against 54.6 on the day of the festival.

The city witnessed huge sale of fireworks on Sunday and Monday as people turned up in large numbers in over 350 shops set up across the city. Rajesh, a software employee, said the rush at the crackers shops reflected that the pre-covid situation was back in the city.

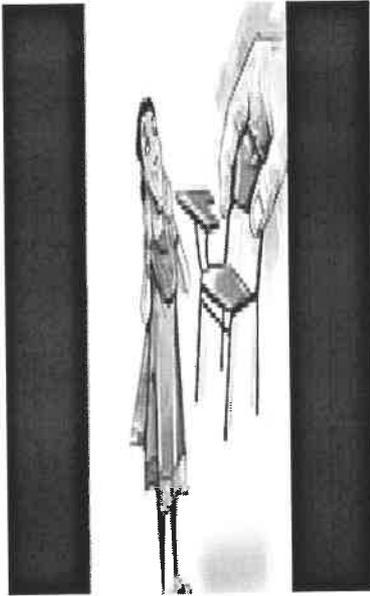
What's PM 2.5 & 10?

PM10 describes the inhalable particles with diameters that are generally 10 micrometers and smaller

Particles in the PM 2.5 size range can travel farther into the respiratory tract and affect the lungs. Exposure to fine particles can cause short-term health effects such as eye, nose, throat and lung irritation, coughing, sneezing, runny nose and shortness of breath

More From The Section

123456



Centre's nod for 630 more PG medical seats in Andhra Pradesh



8,000 km roads developed with Rs 2,000 crore in Andhra Pradesh: Minister



New disaster management action plan on row: APSDMA

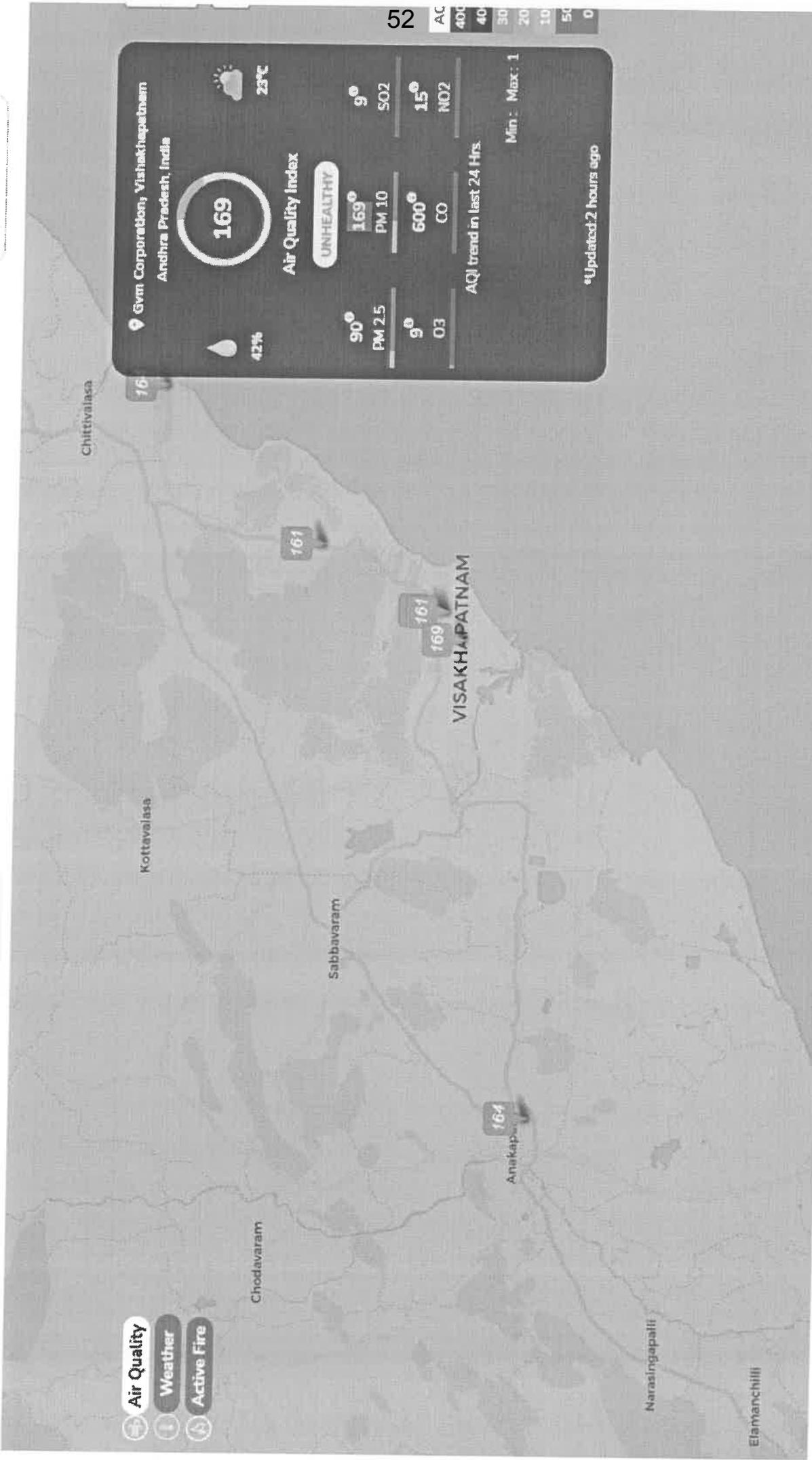


Girl betw train
Prac

Now we are on Telegram too. Follow us for updates

TAGS Diwali Visakhapatnam Air Quality Air pollution

- Air Quality
- Weather
- Active Fire



Gvm Corporation, Vishakhapatnam
Andhra Pradesh, India

42% Humidity

28°C Temperature

169 Air Quality Index

UNHEALTHY

90° PM 2.5	169° PM 10	9° SO2
9° O3	600° CO	15° NO2

AQI trend in last 24 Hrs. Min: Max: 1

*Updated 2 hours ago

**NTPC Limited**

(A Government of India Enterprise)

CPG-3, Simhadri Project

P.O. SIMHADRI VISAKHAPATNAM

VISAKHAPATNAM

Andhra Pradesh- 531020, India

Telephone No. : 08924-243032/243525 Fax No. : 08924-243590/243092

Service Purchase OrderPAN No. : AAACN0255D
CIN No. : L40101DL1975GOI007966

Purchase Order No. : 4000284559-037-1035 Date : 28.10.2022 (version : 0)

To

National Environmental Engg Research Institute (NEERI)

NEHRU MARG OPPOSITE CENTRAL JAIL

WARDHA ROAD

NAGPUR

Maharashtra

India - 440020

E-Mail : S_BASHA@NEERI.RES.IN

Vendor Code : 1052500

Subject: : Environmental Assessment of air, water and soil in and around Simhadri
NIT NO. : 9900241163/037/1035 Dated 27.07.2022
Your Offer No. : Offer submitted against Tender ID: 2022_NTPC_65241_1
Your Reference : Offer submitted against Tender ID: 2022_NTPC_65241_1
Our Reference : Tender ID: 2022_NTPC_65241_1

Dear Sir,

This has reference to our above mentioned NIT, Your offer and subsequent discussions. We are pleased to accept your offer opened on 27.07.2022 and confirm having awarded on you the work of Environmental Assessment of air, water and soil in and around Simhadri of total value INR 6,210,000.00 (Rupee SIXTY-TWO LAKH TEN THOUSAND ONLY) mentioned in the scope of works, special terms & conditions, Bill of quantities etc.

The duration of the service period shall be from 15.11.2022 to 14.02.2024. Though the duration of contract shall remain same, the actual date of commencement of the contract shall be as per the direction of EIC. AGM (EMG) or His Authorized representative shall be EIC for this work.

This service purchase order along with its annexure is being issued to you in duplicate. We request you to return the duplicate copy of this service purchase order, duly signed on each page by your authorised signatory in token of your unequivocal acknowledgment of the same within 15 days from the date of this service purchase order. If no communication is received within 15 days of receipt of Purchase Order, it will be treated that order has been accepted in entirety.

We thank you for the interest shown by you in our project and the cooperation extended to us. We expect to receive your continued cooperation in future also.

Thanking You,
For & on behalf of NTPC Limited.

GRS REEDY
DGM (C&M) CPG3

Enclosures :

SI No.	Code	Description	Unit	Quantity	Net Price	Amount	Long Text
Name of Work: (Bill of Quantity) Environmental Assessment of air, water and soil in and around Simhadri							
Delivery/Invoicing Address: 1035 Simhadri Super Thermal Power Project P.O. SIMHADRI VISAKHAPATNAM Andhra Pradesh 531020 India 08924-243032/243525 08924-243590/243092 Invoicing to be done on GST No. : 37AAACN0255D2ZW							
10		Study of air,water and soil	AU	1.000	6,210,000.00	6,210,000.00	
Tax: IN:Integrated GST-ND @ 18.00 % Extra							
10.10		Ground water study	AU	1	6,210,000.0000	6,210,000.00	
TOTAL OF BOQ PART : 00010						INR 6210000.00	
Amount						6210000.00	
Other Charges						0.00	
Net Amount on BOQ PART : 00010						INR 6210000.00	
Net Total Amount						INR 6,210,000.00	
Less Rebate/Amount						INR 0.00	
Grand Total						INR 6,210,000.00	
INR SIXTY-TWO LAKH TEN THOUSAND ONLY							

Terms & Conditions

Payment Terms

Payment terms :

- 1.1st Installment - 50% of project cost + GST (@ 18%)-Advance payment along with work order
2. 2nd Installment- 20% of project cost + GST (@ 18%) On completion of Sampling work
- 3.3rd Installment 20% of project cost + GST (@ 18%) On Submission of "Draft Report"
- 4.4th Installment 10% of project cost + GST (@ 18%) On Submission of "Final Report"

SD : Not Applicable

LD : Not Applicable

Contract Agreement: Not Applicable.

Invoice to be raised on delivery/invoice address against the given PO line items.

Special Instruction

1) You shall execute and complete the subject work at the site specified by the Engineer-in-charge, strictly as per:

- a) Schedule of items
- b) Scope of work
- c) NTPC GCC.
- d) Any other as per Tender documents.

2) GENERAL:

2) ACCEPTANCE OF LETTER OF AWARD:

You are requested to return the duplicate of this Award Letter immediately but not later than a period of Fifteen (15) days of issue of this Award Letter, duly signed & stamped on each page as token of your unconditional acceptance of the same.

Break up of Price (For Service Related Lines Only)

SI No.	Service Code	Description	Qty.	UOM	Rate	Premium	Discount	Addl Discount	Net Rate	Value
10.10		Ground water study	1	AU	6,210,000.00	0.00	0.00	0.00	6,210,000.0000	6,210,000.00

SCOPE OF WORK

00010 : Study of air, water and soil

1.1 Objectives

- # To monitor ambient air quality within 5 km radius study area at identified locations
- # To assess the water quality in and around the plant site
- # To assess the soil characteristics in and around the plant site
- # To identify and evaluate significant impacts due to NTPC operations on air, water and soil environments.

1.2 Scope of Work

The salient features of the study are as follows:

Air Environment:

- # Identification of ambient air quality monitoring stations (AAQMS) based on local topography and climatology/meteorological data
- # Five AAQMS will be established and sample collection will be done on 24 h Avg. basis for the following parameters: Particulate Matter (size less than 10 μm or PM10), Particulate Matter (size less than 2.5 μm or PM2.5), Sulphur dioxide (SO₂), Nitrogen dioxide (NO₂), Ozone (O₃), Carbon monoxide (CO), Ammonia (NH₃), Particulate metals like lead (Pb), Arsenic (As) and Nickel (Ni) in the study area of 5 km radius continuously for 10 days
- # Stack monitoring for PM, SO₂ and NO₂ from the existing power plants chimneys
- # Collection of hourly meteorological data comprising wind speed, wind direction, temperature, relative humidity, cloud cover, solar insolation and rainfall (primary/secondary data sources)
- # Prediction of impacts on ambient air quality due to the power plant through application of air quality models as stipulated in "Assessment of Impacts on Air Environment: Guidelines for Conducting Air Quality Modelling"- a publication of Central Pollution Control Board
- # Plotting isopleths of identified air pollutants over the study area map for understanding the dispersion pattern of these pollutants and impact zone based on the threshold values.
- # Delineation of an air quality management plan to maintain ambient air quality within the prescribed limits prescribed by APPCB.

Water Environment:

- # Delineation of study area on 1:50,000 scale and establishment of monitoring network of wells/ hand pumps/ bore wells for monitoring of groundwater levels as well as groundwater quality in the study area around the plant site
- # Identification of available water bodies (surface as well as groundwater) existing around the plant in 5 km buffer zone. Information if required shall be

gathered from Central Ground Water Board/ concerned State Ground Water Bodies/ or other Government records.

- # Delineation of the groundwater flow in the study area
- # The surface and groundwater quality parameters shall be monitored as per APHA (2012) protocol for pre-monsoon and post monsoon season
- # The samples of raw water and ash pond effluents will be collected and analyzed as per standards
- # Groundwater and surface water quality for major cations, anions (pH, EC, TDS, Total alkalinity, total hardness, Ca, Mg, Na, K, Cl, SO₄, PO₄, NO₃, silica, F, oil and grease) and trace elements (As, B, Cd, Co, Cr, Cu, F, Fe, Mn, Ni, Hg, Pb, Zn, Al), will be analyzed.
- # The inlet and outlet samples from ETP/STP (2nos) shall be collected and analyzed
- # Analysis of fly ash, bottom ash and pond ash characteristics for the major heavy metals and other chemical characteristics using TCLP tests to assess the hazardous nature of the ash
- # Suggest of mitigation plan for water contamination, if any

Soil Environment:

- # Study of existing land use and cropping patterns, vegetation, forestry, wastelands using primary and secondary data
- # Studies on Soil Characteristics with reference to relevant physico-chemical parameters like pH, Conductivity, Organic Carbon, Particle Size Distribution, Texture, Bulk Density, Particle Density, Porosity, water holding capacity, Soil permeability, Soluble Cations & Anions, Sodium Adsorption ratio (SAR), Cation Exchange

Capacity (CEC), Available N, P & K and elements (As, B, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn)

Collection and analysis of secondary data on soils and cropping pattern in the study area

Assessment of impacts on land-use pattern, if any due to NTPC activities

1.3 Period of monitoring:

The duration of the study will be over a period of 12 months. The sampling shall be carried out for pre-monsoon and post-monsoon seasons.

1.4 Reporting

Draft Report: 03 months after the completion of second-season sampling work

Final Report: 01 month from the date of receipt of the comments on draft report from NTPC

1.5 Deliverables

§ Assessment of air, water and soil Report

§ All the relevant data carried out by CSIR - NEERI HZC

1.6 Inputs by the NTPC

Following information and assistance are required to be provided by M/s. NTPC Simhadri:

Assistance for undertaking site inspection, field data collection at site

Maps showing location of industry in digitized form/AutoCAD/GIS

Local transportation and lodging/boarding facilities to CSIR-NEERI HZC staff during sampling work and meetings

Relevant technical data, previous reports and toposheet of the study area

Technical persons to be deputed for assisting CSIR-NEERI team during monitoring and site visits

Any other information available with M/s. NTPC Simhadri

Payment terms

1.1st Installment - 50% of project cost + GST (@ 18%)-Advance payment along with work order

2. 2nd Installment- 20% of project cost + GST (@ 18%) On completion of Sampling work

3.3rd Installment 20% of project cost + GST (@ 18%) On Submission of "Draft Report"

4.4th Installment 10% of project cost + GST (@ 18%) On Submission of "Final Report"

Deliverables :

i) Draft Report : Soft copy of Draft report after completion of monitoring and analysis for comments.

ii) Final report : 05 copies along with soft copy on CD # 2 Nos.

Prepared By:

Ramasubhodaya Reddy Gajjala

List of Documents

Please note that below documents are needed to be provided along with Invoice.

S.No.	Document Description
-------	----------------------

NTPC VENDOR PAYMENT PORTAL & PAYMENT PROCEDURE

1. For all the cases where payment documents are to be directly submitted to NTPC (excluding Payment through Bank cases), the Invoice and supporting document(s) as required in the Purchase Order have to be Digitally Signed with class II or III digital signature and uploaded in the NTPC Vendor Payment Portal <https://pradip.ntpc.co.in/VendorFinal/Login.jsp>.

In such cases, there will be no requirement of physical copy of invoice & documents except for Lorry Receipts (LRs)/ Delivery Challan, which are normally sent along with the material/ transporter. Bank Guarantees to be sent in original wherever applicable.

2. From **15.5.2020**, NTPC will accept only digitally signed Invoice & supporting documents from Vendors for direct payment cases. Submission of documents in physical form shall not be accepted by NTPC unless otherwise asked for in the PO.

For such cases of physical submission, Vendors are required to send complete set of documents including invoice etc. addressed to the "Invoice Receipt Center" of the Delivery/ Invoicing Address as mentioned in the Purchase Order Annexure 1/ BOQ Sheet.

While submitting the Invoice/ Bills & related documents in physical form, Vendors are required to mention the following details on the top of the envelope:

- a. Invoice/Bill reference No.
- b. NTPC PO No./ Package no.
- c. NTPC Vendor Code as per PO

In addition to above, vendors are requested to mention their correspondence E-mail & Mobile No. in the Covering Letter, through which invoice processing related information/clarification request may be sent.

3. Vendors can track / monitor the status of payments from the Vendor payment portal. Help documents are available in the portal. Vendors are requested to make full use of the Vendor Payment Portal.

4. For payment cases through bank, all original documents are to be submitted in bank as per terms of PO.