

Format for filling up of Environmental Clearance Compliance Reports

Name of the Project: HALDIA ENERGY LIMITED, HALDIA

Clearance Letter/s No. and date: Letter No. J-13011/23/2008-IA.II (T), dated 01st October 2008 and amendment vide Letter No.J-13011/23/2008-IA.II (T), dated 18th January 2010

Period of Compliance Report: April, 2022 to September, 2022

SI.No.	Conditions	Compliance Status
(i)	It shall be ensured that the Thermal Power Project activities are outside CRZ except those activities, which are specially permitted under the CRZ Notification, 1991. Separate prior clearance under the provisions of CRZ Notification, 1991 shall be obtained for such permitted activities before starting any work.	The Power Project activities fall outside the CRZ boundary. CRZ clearance has already been obtained from WBSCZMA and Compliance for the same has been submitted to MoEF&CC vide Letter No. HEL: 253, dt.3.06.2010.
(ii)	It shall be ensured that the dredged material to be used for filling / leveling of the site does not contain any heavy metals.	Not Applicable. Till date, no dredging material is used for filling/leveling of the site
(iii)	No additional land in excess of 375.78 acres shall be acquired for any activity / facility of this project.	The area earmarked for this project is 375.78 acres. No additional land is acquired for any activity/facility of this project.
(iv)	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.4% and 42% respectively at any given time.	HEL has obtained coal linkage from MCL. HEL also uses some e- auction/import coal for blending.
(iv)	A bi-flue stack of 275m height shall be provided with continuous online monitoring equipments for Sox, Nox and particulate. Exit velocity of flue gases shall not be less than 22m/sec.	Twin flue stacks of 275 meters in height with continuous online monitoring instruments for SOx, NOx and Particulate Matter have been provided at Unit-1 & Unit-2 and a minimum flue gas exit velocity of 22 m/sec is being maintained. Reports for the period of April 2022 to September 2022 are enclosed as Annexure-I.
(v)	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50mg/Nm ³ .	The ESPs are designed to achieve particulate emission below 50 mg/Nm ³ .



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Sl.No.	Conditions	Compliance Status
(vi)	Space provision shall be kept for retrofitting of FGD, if required at a later date.	Space provision has been provided for installation of FGD.
(vii)	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas such as in coal handling and ash handling areas, transfer points and other vulnerable dusty areas shall be provided.	Adequate dust extraction system and water spray system in coal handling and ash handling areas, transfer points and other vulnerable dusty areas have been provided. A dust barrier has also been installed in the Track Hopper area to further arrest coal dust emission, if happen.




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SI.No.	Conditions	Compliance Status
(viii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash utilization shall be ensured to the maximum from day one.	Plant management is focussed on effective utilization of Ash generated at site. For achieving 100% dry Ash utilization, Fly ash is collected pneumatically in dry form and stored in the dry fly ash silos of capacity of 2000 m ³ each and is being utilized for value added applications like cement production, fly ash brick production, Ash based product manufacturing, etc. Ash utilization reports for the period of April 2022 to September 2022 are enclosed as Annexure-II .
(ix)	There shall be no ash pond as part of the project. However for emergency disposal of ash, it may be in the form of ash mound through HCSD system.	High Concentration Slurry Disposal System has been installed to evacuate fly ash in a concentrated slurry form (the rheology prevents any fugitive ash generation) to the ash mound in case of emergency.
(x)	Closed cycle cooling system with cooling towers shall be provided. COC of at least 2.5 shall be adopted and the effluents shall be treated as per the prescribed norms.	Cooling water system with COC of at least 2.5 is being adopted and the effluents are treated as per the prescribed norms.
(xi)	The cooling towers blow down to be discharged into the river Hooghly shall be from the cold water side and at ambient temperature and conforming to the prescribed standards.	The cooling towers blow down conforming to ambient temperature and prescribed standards are reused for plant general cleaning & washing purpose and if required discharged in the river at a location 3.5 km downstream.



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Sl.No.	Conditions	Compliance Status
(xii)	Regular monitoring of the effluents at the discharge point shall be carried out which should among other parameters should also monitor salinity of the discharge water.	Different parameters including salinity in the effluents at discharge point are being monitored and records are being maintained. Monitoring reports for the period of April 2022 to September 2022 are enclosed as Annexure-III .
(xiii)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising of greenbelt / plantation.	Sewage treatment plant (STP) has been installed to treat the sewage generated and treated water is being utilized for greenbelt development purpose.
(xiv)	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for Finalisation of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	A detailed scheme for rainwater harvesting has been approved by Central Ground Water Board, Kolkata vide Letter No.WS-ER/RWH-Proposed 2010-11/-701 dated 16/08/2010. The same has been implemented on the rooftop of various buildings. We have increased the rainwater harvesting area to 6000 sq.m from the existing 1000 sq.m. Large scale rainwater harvesting ponds with a capacity of 1, 00000 m ³ have been constructed within the plant premises for the utilization of rainwater for Plant operation.
(xv)	Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry at Bhubaneswar.	Adequate safety measures like hydrant points and water monitor points, etc. are installed in and around the coal yard and plant area.



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SI.No.	Conditions	Compliance Status
(xvi)	Storage facilities for auxiliary liquid fuel such as LDO and /HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same modification required, if any shall be incorporated in the DMP. Sulphur content in the liquid fuel will not exceed 0.5%.	Facilities for storage of auxiliary liquid fuel such as LDO is provided in the plant area where risk is minimum. A disaster Management Plan has been prepared to meet any eventuality in case of an accident taking place. Mock drills are being conducted on regular basis.
(xvii)	Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.	The groundwater quality analysis on seasonal basis near to ash mound area is being carried out. Reports for the month of June 2022 and September 2022 are enclosed as Annexure-IV .
(xviii)	A green belt of adequate width and density shall be developed around the plant periphery covering 106 acres of area preferably with local species.	Wide Green belt of broad leaf local species along the periphery of the plant is in progress. During financial year 2022-23, we have planted around 3000 saplings with varieties of local species. The total plantation did till date around 1, 23, 00.
(xix)	Besides R&R, social welfare measures for the local population should be undertaken as part of corporate social responsibility. Details in this regard shall be worked out and submitted to the Ministry within three months.	R&R action plan has been prepared and submitted to MoEF&CC vide Letter No. ED(P):HEL:432 dated 16.08.2008. The CSR plan has been prepared and subsequently the work plans have been rolled out in the field. The activities are being implemented under the following thematic heads: 1.Environment 2. Health & Sanitation 3. Education Support 4. Agriculture and Animal Husbandry



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SI.No.	Conditions	Compliance Status
		4. Agriculture and Animal Husbandry 5. Livelihood, Women Empowerment and Capacity Building. Periodic needs assessments surveys are being conducted and regular dialogues with community are carried out to help identifying community's development needs.
(xx)	First aid and sanitation arrangement shall be made for the drivers and other contract workers during construction phase.	Complied
(xxi)	Noise level emanating from turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy / less noisy areas.	Noise level is being maintained within the prescribed limit. Earplugs & Earmuffs have been provided to the employees working in the high noise areas. Noise level monitoring reports for the month April 2022 to September 2022 are enclosed as Annexure-V .
(xxii)	The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no dated 01.10.2008 issued to M/s CESC Limited shall be uploaded in your website and updated periodically and also simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	Complied Uploaded in the Company website.



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SI.No.	Conditions	Compliance Status
(xxiii)	Criteria pollutants levels including Nox, RSPM (PM10 & PM2.5), SOx (from stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant.	Criteria pollutants levels including PM10, PM2.5, SO ₂ and NOx are regularly monitored and records are being maintained & displayed near to the power plant main gate.
(xxiv)	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.	The location of the Ambient Air Quality Monitoring (AAQM) Stations and frequency of monitoring has already been decided in consultation with WBPCB, Haldia. SO ₂ , NO _x , PM2.5 & PM10 in Ambient Air are being monitored in the power plant and records are being maintained. The reports for the period from April 2022 to September 2022 are enclosed as Annexure-VI .
(xxv)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied.



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SI.No.	Conditions	Compliance Status
(xxvi)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	Complied
(xxvii)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Cell with the qualified staff has been set up for implementation of the stipulated environmental safeguards.
(xxviii)	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry / Regional Office / CPCB/SPCB.	The half-yearly compliance report is being submitted to the Integrated Regional Office of MoEF&CC, Kolkata, CPCB, Delhi, and WBPCB, Kolkata. Status of compliance of environmental clearance conditions is being regularly uploaded on the company website.
(xxix)	Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of document including Environment Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	Is being complied with.



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SI.No.	Conditions	Compliance Status
(xxx)	Separate funds shall be allocated for implementation of environmental protection measures along with item wise break up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year wise expenditure should be reported to the Ministry.	The fund earmarked for the environment protection measures will not be diverted for other purposes.
(xxxii)	The project authority shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Financial Closure achieved. Final approval for the investment proposal of the project from WBERC obtained. NTP (Zero Date) is 17th Nov, 2011.
(xxxiii)	Full co-operation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Bhubaneswar / the CPCB / the SPCB who would be monitoring the compliance of environmental status.	Noted & is being complied.



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SI.No.	Conditions	Compliance Status
	Additional Conditions (as per MoEF & CC Notification No. S.O. 1561(E), dated 21.05.2020)	
(1)	Setting Up Technology Solution for emission norms:	
	(i) Compliance of specified emission norms for Particulate Matter, as per extant notifications and instructions of Central Pollution Control Board, issued from time to time.	The ESPs are designed to achieve particulate emission below 50 mg/Nm ³ .
	(ii) In case of washeries, Middling and rejects to be utilized in FBC (Fluidised Bed Combustion) technology based thermal power plants. Washery to have linkage for middling and rejects in Fluidised Bed Combustion plants.	Not Applicable to us.
(2)	Management of Ash Ponds:	
	(i) The thermal powers plants shall comply with conditions, as notified in the Fly Ash notification issued from time to time, without being entitled to additional capacity of fly ash pond (for existing power generation capacity) on ground of switching from washed coal to unwashed coal.	Plant management is focussed on effective utilization of Ash generated at site. For achieving 100% dry Ash utilization, Fly ash is being utilized for value added applications like cement production, fly ash brick production, Ash based product manufacturing etc. There is no Fly Ash Pond at site.



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	(ii) Appropriate Technology solutions shall be applied to optimise water consumption for Ash management;	<ul style="list-style-type: none">• Dry fly ash system and Silos are in place.• Bottom ash system is a closed loop recycling system where the water is recycled.
	(iii) The segregation of ash may be done at the Electro-Static Precipitator stage, if required, based on site specific conditions, to ensure maximum utilization of fly ash;	Dry fly ash collected in ESP hoppers is conveyed through closed pneumatic conveying system & is stored in Fly ash silos of capacity 2000 m3 each and ash from the silos is being utilized as per MoEF&CC guideline.
	(iv) Subject to 2(i) above, the thermal power plants to dispose fly ash in abandoned or working mines (to be facilitated by mine owner) with environmental safeguards.	Noted
(3)	Transportation:	
	(i) Coal transportation may be undertaken by covered Railway wagon (railway wagons covered by tarpaulin or other means) and/or covered conveyer beyond the mine area. However, till such time enabling Rail transport/conveyer infrastructure is not available, road transportation may be undertaken in trucks, covered by tarpaulin or other means.	Coal transportation is being done through Rail only.



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Sl.No.	Conditions	Compliance Status
	<p>(ii) It shall be ensured by the thermal power plant that</p> <p>a. Rail siding facility or conveyor facility is set up at or near the power plant, for transportation by rail or conveyor; and</p> <p>b. If transportation by rail or conveyor facility is not available, ensure that the coal is transported out from the Delivery Point of the respective mine in covered trucks (by tarpaulin or other means), or any mechanized closed trucks by road.</p>	<p>There is a railway siding facility within the plant premises.</p> <p>Not applicable as the coal is being transported by rail.</p>




STACK MONITORING REPORT (2X300 MW TPP) of APRIL ' 22 to SEPTEMBER ' 22

Month	Name of the Unit	Stack height (Mtr.)	Stack diameter (Mtr.)	Exit Velocity (m/sec)	Concentration of PM (mg/Nm^3) at 12% CO_2	Concentration of Sulphur Dioxide (mg/Nm^3) at 6% O_2	Concentration of Nitrogen Dioxide (mg/Nm^3) at 6% O_2
Apr-22	Unit-1	275	5	22.45	16	1449	509
	Unit-2			23.32	21	1397	407
May-22	Unit-1	275	5	22.93	20	1663	419
	Unit-2			23.12	30	1777	418
Jun-22	Unit-1	275	5	22.05	17	1588	642
	Unit-2			22.07	21	1481	345
Jul-22	Unit-1	275	5	22.32	13	1646	634
	Unit-2			22.02	27	1594	451
Aug-22	Unit-1	275	5	22.95	29	1362	454
	Unit-2			23.40	28	1444	530
Sep-22	Unit-1	275	5	22.72	28	1566	369
	Unit-2			22.92	30	1737	467




ASH UTILISATION REPORT (2X300 MW TPP) OF APRIL, 2022 TO SEPTEMBER, 2022

Month	Total Ash Generation (MT)	Supply to Fly Ash based Blocks, Product etc (MT)	Fly Ash Supply to Cement Industries (MT)	Fly Ash & Bottom Ash for Low Land Filling, Construction & Embankment, etc. (MT)	Total Ash Utilization (MT)	% Utilization (Approx.)
Apr-22	114078	2985	103671	7422	114078	100
May-22	116422	2882	90673	22867	116422	100
Jun-22	95228	3278	73283	18667	95228	100
Jul-22	91994	3289	79026	9679	91994	100
Aug-22	97016	3400	81266	12350	97016	100
Sep-22	108116	2797	95312	10007	108116	100



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Annexure-III

EFFLUENT QUALITY MONITORING REPORT of APRIL ' 22 to SEPTEMBER ' 22

Month	Parameters	Guard Pond Outlet	Limit
Apr-22	pH	8.04	6.5-8.5
	TSS (mg/l)	15	100
	COD (mg/l)	39	250
	BOD (mg/l)	7.6	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	1.1356	Not Applicable
May-22	pH	7.2	6.5-8.5
	TSS (mg/l)	23	100
	COD (mg/l)	35	250
	BOD (mg/l)	8.2	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	1.0003	Not Applicable
Jun-22	pH	7.45	6.5-8.5
	TSS (mg/l)	21	100
	COD (mg/l)	32	250
	BOD (mg/l)	6.7	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	5.104	Not Applicable
Jul-22	pH	7.71	6.5-8.5
	TSS (mg/l)	22	100
	COD (mg/l)	27	250
	BOD (mg/l)	5.2	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	2.714	Not Applicable
Aug-22	pH	7.62	6.5-8.5
	TSS (mg/l)	15	100
	COD (mg/l)	28	250
	BOD (mg/l)	8	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	2.2489	Not Applicable
Sep-22	pH	7.51	6.5-8.5
	TSS (mg/l)	20	100
	COD (mg/l)	36	250
	BOD (mg/l)	9.1	30
	Oil & Grease (mg/l)	BDL	10
	Salinity (psu)	1.0621	Not Applicable



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Annexure-IV

GROUND WATER QUALITY MONITORING REPORT FOR THE JUNE 2022

S.No.	Parameters	Piezometer (Ash mound area)	Permissible Limit as per IS 10500
	Distance (Km) w.r.t Ash Mound	0.2	
1	pH	7.4	6.5-8.5
2	Nitrate (as NO ₃) (mg/l)	15.9	45
3	Chlorides (as Cl) (mg/l)	896	1000
4	Fluoride (as F) (mg/l)	0.38	1.5
5	Iron (as Fe) (mg/l)	0.44	0.30
6	Calcium (as Ca) (mg/l)	52	200
7	Copper (as Cu) (mg/l)	<0.05	1.5
8	Zinc (as Zn) (mg/l)	<0.05	15
9	Cadmium (as Cd)	<0.002	0.003
10	Lead (as Pb)	<0.01	0.01
11	Mercury (as Hg)	<0.001	0.001
12	Nickel (as Ni)	<0.01	0.02
13	Total Chromium (as Cr)	<0.05	0.05

GROUND WATER QUALITY MONITORING REPORT FOR THE MONTH SEPTEMBER 2022

S.No.	Parameters	Piezometer (Ash mound area)	Permissible Limit as per IS 10500
	Distance (Km) w.r.t Ash Mound	0.2	
1	pH	7.3	6.5-8.5
2	Nitrate (as NO ₃) (mg/l)	28.7	45
3	Chlorides (as Cl) (mg/l)	882	1000
4	Fluoride (as F) (mg/l)	0.43	1.5
5	Iron (as Fe) (mg/l)	0.31	0.30
6	Calcium (as Ca) (mg/l)	52	200
7	Copper (as Cu) (mg/l)	<0.05	1.5
8	Zinc (as Zn) (mg/l)	<0.05	15
9	Cadmium (as Cd)	<0.002	0.003
10	Lead (as Pb)	<0.01	0.01
11	Mercury (as Hg)	<0.001	0.001
12	Nickel (as Ni)	<0.01	0.02
13	Total Chromium (as Cr)	<0.05	0.05



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Annexure-V

NOISE LEVEL MONITORING REPORT OF of APRIL ' 22 to SEPTEMBER ' 22

S.No.	Monitoring Location	Apr-22		May-22		Jun-22		Jul-22		Aug-22		Sep-22	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
1	NEAR ADMIN BUILDING	66.5	59.5	68.1	59.0	66.9	60.7	67.0	59.6	67.8	61.3	68.2	60.1
2	NEAR GATE NO.1	66.1	59.6	66.6	59.5	62.2	57.2	65.2	58.6	67.1	61.3	66.1	59.5
3	NEAR RESERVOIR AREA	63.0	58.9	63.4	59.6	73.0	62.8	64.4	59.3	64.9	60.7	63.7	59.6
4	NEAR CHP ER1	71.9	67.3	71.3	68.6	70.1	63.9	72.4	67.4	72.2	68.2	70.3	67.8




AMBIENT AIR QUALITY MONITORING DATA FOR THE MONTH OF APRIL '22 to SEPTEMBER '22

Annexure-VI

	Location-1				Location-2				Location-3			
	Switch Yard Building Rooftop				Admin Building Rooftop				Raw Water Pre Treatment Plant Roof top			
	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	PM _{2.5}	PM ₁₀	SO ₂	NO ₂
Distance (KM) (w.r.t stack)	0.2				0.5				0.3			
Direction (w.r.t stack)	N				ESE				NE			
Month/Date	Apr-22											
08.04.2022	39.6	73.1	4.52	26.02	33.3	61.5	4.65	28.09	38.8	72.4	4.77	27.82
19.04.2022	38.8	74.8	4.32	30.80	38.8	69.2	5.44	36.20	41.3	75.9	5.68	34.58
	May-22											
02.05.2022	44.2	73.7	4.72	27.34	42.5	69.5	5.37	29.17	37.1	64.2	5.02	27.28
21.05.2022	37.9	62.4	4.45	25.93	41.2	79.4	4.51	28.30	44.6	70.6	4.29	26.86
	Jun-22											
06.06.2022	43.7	75.0	4.92	22.63	37.1	58.6	4.71	23.99	39.2	69.1	5.09	27.82
22.06.2022	42.5	71.3	4.35	23.34	30.4	56.6	4.27	26.38	39.2	72.9	4.33	26.14
	Jul-22											
11.07.2022	35.0	59.7	4.77	30.46	32.9	55.5	4.55	29.74	34.2	59.4	4.46	28.49
27.07.2022	36.7	66.6	4.35	24.32	33.8	60.4	4.48	26.24	39.2	73.3	4.39	23.99
	Aug-22											
12.08.2022	29.6	48.5	4.44	24.49	26.7	33.5	4.86	25.49	28.7	41.3	4.77	22.98
24.08.2022	28.3	51.4	4.63	27.14	25.4	41.9	5.34	33.14	26.3	45.9	4.84	29.20
	Sep-22											
13.09.2022	19.7	42.5	5.01	22.56	18.2	27.1	4.72	25.05	19.4	41.6	5.25	24.53
26.09.2022	19.2	40.5	5.19	26.17	17.1	36.5	5.29	28.98	18.3	38.5	5.71	30.48
Permissible Limits (24 Hrs Avg.)	60	100	80	80	60	100	80	80	60	100	80	80

