

Sasan Power Limited

CIN: U40102MH2006PLC190557

6 X 660 MW Sasan Ultra Mega Power Project
Gram: Siddhi khurd
Post Office: Tiwara
Singrauli – 486 886
Madhya Pradesh, INDIA
www.reliancepower.co.in

Ref: SPL/ENV/MOEF&CC/EC/ 2022-23/25

Date: 07-Nov-2022

**Ministry of Environment Forest & Climate Change
Regional Office (Western Region)**

Kendriya Paryawaran Bhawan, link Road No.-3
E-5, Ravi Shanker Nagar
Bhopal-462016
Madhya Pradesh

**Sub: Six Monthly Compliance status of Environmental Clearance along with
Environmental Monitoring Reports-Req.**

Ref:

1. Environmental Clearance-Letter No. F No. J-13011/15/2006-IA (T) dated; 23-Nov-2006.
2. EC amendment vide no. - J-13011/15/2006-IA (T) dated; 21-July-2009.
3. EC revalidation vide no. - J-13011/15/2006-IA (T) dated; 19-April-2012.

Dear Sir,

With reference to the above subject, please find enclosed herewith Six Monthly Environmental Clearance (EC) compliance status report along with the Environmental Monitoring report like Ambient Air Quality, Stack Emission, Water & Waste Water Quality, Noise Level, Met data and Green belt development during the period of April-2022 to September-2022.
This is for your kind information & record please.

Kindly acknowledge the receipt of these reports.

Thanking You,

Yours faithfully,

For Sasan Power Limited



**(Anand Deshpande)
Station Director**

Cc:

1. The Regional Officer, M.P Pollution Control Board, Singrauli, Madhya Pradesh.
 2. The Chairman, M.P Pollution Control Board, Bhopal.
 3. Zonal Office, CPCB-Bhopal.
 4. MoEF &CC, New Delhi.
- Encl: EC Compliance Report.

SIX MONTHLY COMPLIANCE REPORT
OF
ENVIRONMENTAL CLEARANCE
6*660 ULTRA MEGA THERMAL POWER PLANT
at
SASAN, WAIDHAN, DIST.-SINGARAULI
(MADHYA PRADESH)

Submitted to:
Western Regional Office (Bhopal)
Ministry of Environment & Forest
Central Pollution Control Board, New Delhi
Madhya Pradesh Pollution Control Board-Bhopal



Submitted by:
Environment Management Department
Sasan Power Limited
Village-Siddhi khurd; Post- Tiyara
Tehsil-Waidhan; Dist- Singrauli, Pin- 486886
(Madhya Pradesh)

PERIOD: Apr-2022 to Sept-2022

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**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC
For
Sasan Ultra Mega Power Project
(1st April, 2022 to 30th September, 2022)**

1.0: Introduction:

1. Sasan Power Limited is operating 3960 MW (6 x 660MW) Coal based Thermal Power Plant at Sasan, Dist- Singrauli, Madhya Pradesh.
2. The project of great National importance, through its operating units, is supplying power to 17 utilities in 7 states.
3. All the 6 units of 660MW each have achieved Commercial Operation.
4. All the operation related permits, including Environmental Clearance, Forest Clearance from MOEF&CC and consents from Madhya Pradesh Pollution Control Board, are in place.
5. Environmental quality monitoring in & around the project site is being carried out by MoEF&CC/NABL approved Laboratory on a regular basis.
6. 03 No. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) along with Environmental Parameter Display Board at main gate have been established.
7. Continuous Emission Monitoring System (CEMS) is installed in flue of all the units and the data is linked to the CPCB server.
8. Online Effluent Monitoring System is installed at the outlet of Central Monitoring Basin and data is linked to the CPCB server.
9. IP based High optical zoom camera focus toward ETP outlet, Stack Emission, Coal Yard, is installed and footage capturing on CPCB server on continuous basis.
10. Upliftment of the socio -economic status of the nearby community and society are carried out on a continuous basis through various programs run under the company's Corporate Social Responsibility (CSR) scheme.
11. A vast green belt as per the CPCB guidelines is being developed to curb the emission and also to provide an aesthetic look.
12. Point wise compliance status of Environmental Clearance for SPL is furnished herewith.

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For**

**Sasan Ultra Mega Power Project
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**Compliance status on Environmental Clearance
(6X660 MW Coal based Thermal Power Plant-SUMPP)**

. MOEF Ref. Letter No.: J-13011/15/2006-IA-II (T) dated Nov 23, 06, J –
13011/15/2006-IA-II (T) dated Jul 21, 09 and EC revalidation vide no. J –
13011/15/2006-IA-II (T) dated April 19, 2012

Sr. No.	Stipulation	Compliance Status
I	All conditions stipulated by Madhya Pradesh Pollution control Board vide their letter no S688/TS/MPPCB/2006 dated July 6, 06 shall be strictly implemented.	All the conditions are being implemented.
II	The proposed configuration of the project (5x800) could be changed provided that the total capacity of the power plant shall not exceed 4000 MW and that no individual unit shall be less than 500 MW.	Complied. The total capacity of the project is 3960 MW with 6 units of 660 MW each. Hence, the total project and units capacities conform to the stipulated condition.
III	The total land requirement shall not exceed 3723 acres for all the activities/facilities of the power project put together.	Complied. 3723 acres of land has been acquired.
V	The land requirement which has been reduced from that proposed originally shall be reconciled at the stage of issue of notification for land acquisition under section 6.	Complied. The land acquisition completed as per Sec 6 notification.
VI	R&R in sufficient detail shall be finalized before award of the project and a copy of the detailed R&R shall be submitted to MOEF within three months of issue of this letter or before award of the project.	Complied. R&R plan submitted to MOEF on 8-Aug-2006 by PFC. R&R plan submitted by SPL to GoMP on 16-Feb-2008 and R&R compensation package notified by District Collector vide public notice on 9-Sep-2008 and same is being implemented.
VII	The PAPs losing their homesteads or a major portion of the land shall not be	An R&R colony (Surya Vihar colony) with all the basic facilities like school, temple, hospital, market

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	ousted from the land till they are settled in the alternate sites.	place, Panchayat Bhavan etc. has been constructed for persons affected by the Land Acquisition.
VIII	A Committee under the auspices of the district administration with representatives of the PAPs, local Panchayat and representatives of NGOs and the project proponent shall be constituted to monitor the implementation of the R&R plan.	A committee has been constituted, which is monitoring the implementation under the guidance of District Collector. The copy is available with the district administrator.
IX	Ancient Shiva temple shall be outside the plant boundary and access to the temple shall be provided by project authorities	Complied.
IX	Ash and Sulphur of the coal to be used in the project shall not exceed 34% and 0.5 % respectively.	Noted and being complied. Regular coal quality monitoring is being carried out by SPL. Ash and sulphur content in the coal being used in the project is less than 34% and 0.5% respectively.
X	Two bi flue and one single flue stacks of 275 m height each shall be provided with continuous online monitoring equipments. Exit velocity of 25 m/sec shall be maintained	This condition is amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09 as “Two tri-flue stacks of 275 m height each provided with continuous online monitoring equipments for SO _x , NO _x and Particulate matter. Exit velocity of flue gases is not less than 25 m/s. Mercury emissions from stack also be monitored on quarterly basis.” Amended condition is being complied.
XI	High efficiency electrostatic Precipitator (ESP) with efficiency not less than 99.9% shall be installed to ensure that the particulate emission does not exceed 50 mg/Nm ³ .	High efficiency ESP are installed with efficiency of 99.96% Particulate emission is maintained to less than 50mg/Nm ³ . Stack Emission monitoring report is attached as Annexure 1 .
XII	Space provision shall be made for Flue Gas De-sulphurization (FGD) unit, if	Space provision has been kept in the layout for FGD.

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	required at a later stage.	
XIII	Low NOx burners shall be provided	<p>Complied.</p> <p>Low NOx burners are provided in the boiler of all the units.</p>
XIV	Adequate dust extraction system such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.	<p>Being Complied.</p> <p>Dust suppression system is provided at all Transfer points, Dust extraction system is installed at Coal Silo, Coal Bunkers, Intermediate Ash Silo and Main Ash Silos. Rain Gun type water sprinkler system is installed in Coal Handling area. Internal roads are made pukka to avoid generation of fugitive dust. Water sprinkling is being carried out regularly to reduce the fugitive emissions in dust prone area.</p>
XV	Fly ash shall be collected in dry form only and ash generated shall be used in a phased manner as per provisions of the notification on fly ash utilization issued by Ministry in September, 1999 and its amendment. By end of 9 th year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration slurry.	<p>Being Complied.</p> <p>Dry fly-ash collection system is in place. All efforts are being made to comply with the provisions of fly-ash notification issued by the Ministry in November 2009.</p> <p>The condition of adopting HCSD system is amended vide MOEF letter no J-13011/15/2006-IA-II (T) date Jul 21, 2009.</p> <p>The 67th EAC held during March 19-20, 2010. The matter of ash disposal was deliberated in details & EAC has recommended the project to adopt medium slurry concentration of 38% ash & 62 % water disposal.</p>
XVI	Ash pond shall be lined with LDPE lining. Adequate safety measures shall also be implemented to protect the ash pond bund from getting breached.	<p>Complied.</p> <p>The matter was discussed in the EAC meeting held on March 19-20,2010</p> <p>Matter was deliberated in detail and EAC decided that “Suitably well designated lining using LDPE/HDPE or any other suitable impermeable material like puddle day shall be provided”</p> <p>Ash pond is lined using HDPE surrounding to the embankment and the bottom is lined for its</p>

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		impermeability with Bentonite.
XVII	Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/ State Ground Water Board and a copy of the same shall be submitted within three months to the Ministry.	<p>Complied.</p> <p>A detailed report has been prepared in consultation with CGWA and copy is submitted to MoEF.</p> <p>Rain water harvesting pond & rain water harvesting pits are established to conserve rain water.</p>
XVIII	The treated effluents confirming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary	<p>Noted and is being complied.</p> <p>This condition is amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09, “Discharge of effluents from the power plant may be permitted with condition that the quality of effluents should be as per prescribed norms and should meet the water quality of the receiving body at discharge point and discharge quantity should not exceed 5% of the total consumption of water except in monsoon”.</p>
XIX	Regular Monitoring of ground water in and around the ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the groundwater quality is not adversely affected due to the project.	<p>Noted and is being complied.</p> <p>Piezometers are installed near ash pond area. Ground water monitoring from ash pond area being carried out & report being submitted. The environmental monitoring report, including the monitoring reports of ground water in and around the ash pond area, is enclosed.</p>
XX	A 200 m wide greenbelt will be developed on the western side of the plant area; total area under greenbelt in the plant site will be 474.14 acres which does not include greenbelt area in ash pond and town ship. In addition, a green belt of 50 m width will be developed all around the ash pond.	<p>Being Complied.</p> <p>Development of greenbelt / green cover inside the plant area is in progress. 459112 nos plants in approx 651.36 acres area have been planted till September, 2022. The entire designated area shall be taken up in phases for Greenbelt / greenery development.</p>
XXI	First Aid and sanitation arrangements shall be made for drivers and other contract	Complied.

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	workers during construction phase.	All the 6 units of the project are in operation.
XXII	Leq of noise level should be limited to 75 dBA and regular maintenance of equipment to be undertaken. For people working in the high noise area, personnel protective devices should be provided.	<p>Being Complied.</p> <p>Condition as amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09, which states that</p> <p>“Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in 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 area</p> <p>Turbines are covered with acoustic enclosure system to control noise levels. Personnel protective equipments are provided in working area to minimize the impact on health, if any. Regular health checkup, including audiometric tests, is conducted and records are maintained. High Noise area Display board installed in Noise generation area to aware the workers.</p>
XXIII	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. 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.	<p>Being Complied</p> <p>Regular ambient air quality monitoring is being carried out at the monitoring locations recommended by the Regional Officer, MPPCB. Half yearly monitoring reports are being submitted to the regional office (MoEF-Bhopal). Ambient air monitoring report is attached as Annexure 1.</p>
XXIV	The project proponent shall advertise in at	Complied.

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	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, informing that the project has been accorded environmental clearance and copies of clearance letters 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://www.envfor.nic.in .	<p>The notice has been published in the following newspapers.</p> <ul style="list-style-type: none"> • Danik Bhaskar dt.13.12.2006 • Nav Bharat Times dt.13.12.2006
XXV	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	<p>Complied.</p> <p>Separate environment cell is established with qualified Staff under direct control of Sr. Executive.</p>
XXVI	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	<p>Condition is amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09”.</p> <p>Latest compliance report for the period of Oct-21 to March-22 has been submitted to MoEF&CC, CPCB and MPPCB vide letter no. SPL/ENV/ MoEF & CC/EC/2022-23/07 dated 27-May-2022.</p>
XXVII	Regional Office of the Ministry of Environment and Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environmental Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	Noted & Agreed.
XXVIII	Separate funds should be allocated for implementation of environmental	There is a separate fund allocated for the environmental protection measures and is

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	protection measures along with item-wise break up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year wise expenditure should be reported to this Ministry.	separately governed under the SAP accounting system. The expenditure is reported as a part of Annual Environmental statement submitted to the PCB.
XXIX	Full cooperation should be extended to the Scientists / Officers from the Ministry/Regional Office of the Ministry at Bhopal / the CPCB / the SPCB who would be monitoring the compliance of environmental status.	Noted & being complied.

Following are additional conditions as per MoEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09

XXX	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/ plantation.	Sewage treatment plant is operational. Treated sewage waste water taken to the CMB for its further utilization.
XXXI	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season.	Fire fighting arrangement is provided in coal yard to prevent fire.
XXXII	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with the Dept. of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Noted & being complied. For the storage of LDO/HFO, licenses from the Chief Controller of Explosives, Nagpur have been obtained. Onsite Emergency Plan is approved by the Director, Industrial Health and Safety is in place.
XXXIII	Adequate funds shall be allocated for undertaking CSR Activities	Being complied. Major thrust areas are:-

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Literacy initiatives: Provide quality education by engaging DAV management in R&R schools.

Improve drinking water and sanitation facilities in the existing school & nearby vicinity. Providing Urjanchal Scholarship for meritorious students, organizing painting competition etc.

Health initiatives: Primary Health Centre established in Surya Vihar (R&R) colony with qualified Dr. & staffs. Free medicines are being provided to PAPs. Organize Gynae camp, Free Eye Checkup & Health Checkup Camp, Blood donation camp etc.

Sports and Cultural Initiatives: Sponsoring activities like All India & District Level Football & Cricket tournaments, celebration of world environment day, Singrauli Mahotsawa, Durga Puja, etc.

Infrastructure Development initiatives like Construction of bore wells & hand pumps, rainwater harvesting ,construction of road ,wall painting etc.

Sustainable Livelihood initiatives like Employment to local people, Construction skill training through CIDC, CSTC followed by deployment in project activities, formation of Cooperative Societies & SHGs for awarding of construction contracts, dairy management, wadi cultivation, poultry, goatry, tailoring classes for women, etc.

Vidyadaan Project: Vidyadaan project has hatched to aim improve the suroounding govt. school performance and results.

The idea involves utilizing the high skilled and ready to use employee of SAPL for the betterment of the society and setting new trend and benchmark.

Group Blood Donation Campaign: Blood donation campaign organised by Sasan Power Ltd. where maximum of our employee volunturrily had participated in the programme

Complied.

Construction work completed and plant is fully

XXXIV

First aid and sanitation arrangements shall be made for the drivers and other contract

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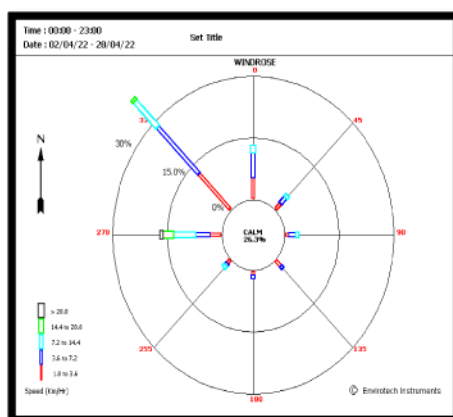
	workers during construction phase.	operational.
XXXV	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. Construction work completed and plant is fully operational.
XXXVI	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm
XXXVI I	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO ₂ and NO _x (ambient levels as well as stack emissions) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being Complied. http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm Environmental data display board is established at the main gate.
XXXVI II	The environment statement for each financial year ending 31 st March in Form – V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MOEF by e – mail.	Being complied. Latest Annual Environment Statement Report, has been submitted to the MPPCB vide letter No. SPL/EMG/MPPCB/ES/2022-23/19 on dtd. 07.09.2022. Latest CTO Compliance report vide letter no. SPL/EMG/ MPCB/CTO /2022-23/23 submitted to RO- MPPCB, Singrauli and Member Secretary, MPPCB- Bhopal on dtd.11.10.2022.
XXXIX	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of	Complied.

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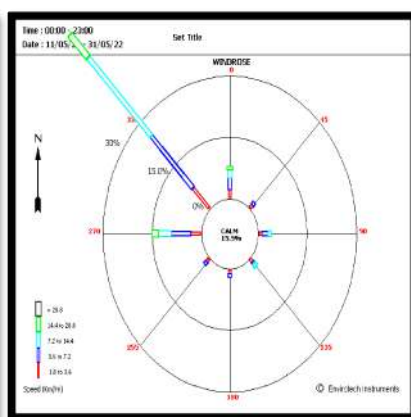
financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.

Micro meteorology: An online Weather Monitoring Station (WM-271-Make-Envirotech) is installed at Environment Lab for the monitoring of site-specific micro-meteorological data for the recording of parameters from 00.00 hr to 23.00 hrs. .

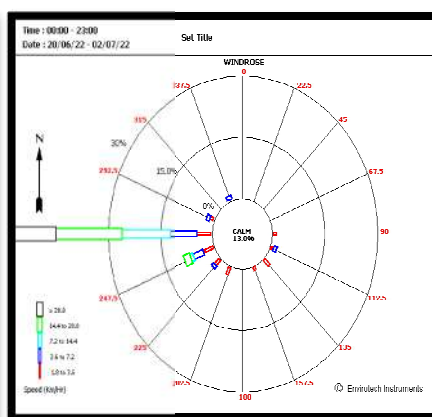
Wind rose Diagrammed



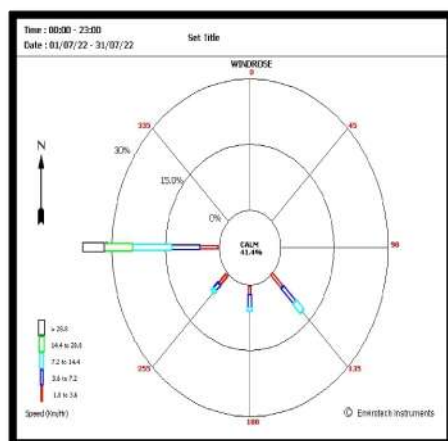
Apr-2022(Wind Dir: WN)



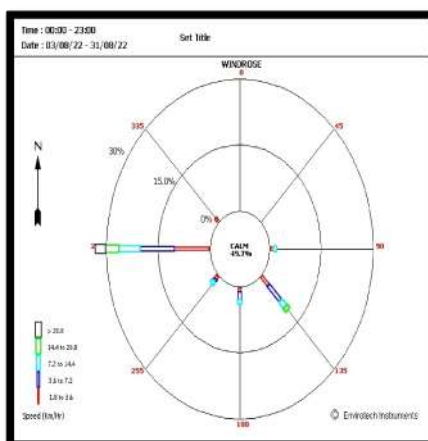
May-2022(Wind Dir: WN)



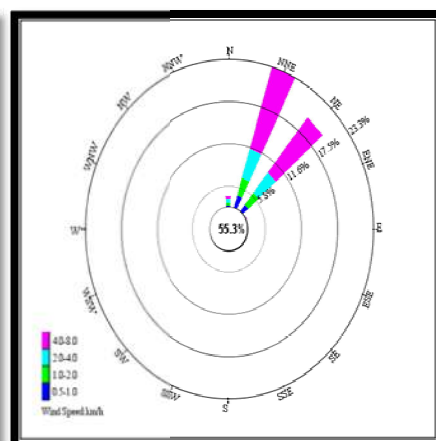
Jun-2022(Wind Dir: W)



Jul.-2022 (Wind Dir: WS)



Aug.-2022 (Wind Dir: WS)



Sep.-2022(Wind Dir: NE)

Ambient Air Quality: The scenario of existing Ambient Air Quality in the study area has been assessed through a network of 06 Ambient Air Quality locations which is

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inside & outside the plant premises. The monitoring network in the air quality surveillance program has been established based on the consultation with the Regional office of Madhya Pradesh Pollution Control Board, Singrauli.

Third party NABL & MOEF&CC accredited laboratories have been entrusted for carrying out Environmental monitoring, analysis & reporting of environmental parameters at locations designated within and outside plant premises.

Pre- calibrated Fine dust samplers have been used for carrying out ambient air quality monitoring in line with provisions of National Ambient Air Quality Standards (NAAQS). The parameters monitored are PM₁₀, PM 2.5, Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) & Carbon mono oxide (CO).

Noise Environment: Noise level being monitored in Ambient & Work zone area at 12 Locations once in a month. The noise levels at each location were recorded for 24 hours, using integrated sound level meter.

Water Quality: The existing status of water quality for groundwater and surface water was assessed by collecting the water samples from Hand pumps/Bore wells from the village viz. Sidhikhurd, Tiwara, Sasan, Harawaha, and surface water sample from Mayar River, Rihand River & Gawayal Nalaha. Potable water from Plant & Security Camp is also analyzed. The overall water quality parameters have been found to be below the stipulated permissible limits.

Green Belt Development:

A green belt is being developed along the plant boundary, along the roads & other available open space, using native species avenue plantation as per the CPCB guidelines for curbing emission and providing aesthetic look.

459112 trees covering an area of **651.36 acre**, with survival rate of **85 %** have already been planted till September, 2022. A nursery for growing the saplings, being used for plantation purposes, has also been established inside the plant premises.

Criteria used for selection of species for greenbelt:

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- Fast growing
- Thick canopy cover
- Perennial & evergreen
- Large leaf area index
- High sink potential
- Efficient in absorbing pollutants without affecting their growth
- Suitable for the local seasons

Online Monitoring Stations:

- ✓ **Ambient Air Quality:** We have installed 3 nos. of Continuous Ambient Air Quality Monitoring Stations as per the guidelines of Madhya Pradesh Pollution Control Board to monitor PM 10, PM 2.5, SO₂, NO_x & CO.



✓



Flue Gas Emission Monitoring, we have installed Continuous emission monitoring system in all the six stacks & data being transferred on CPCB server.



✓ 0

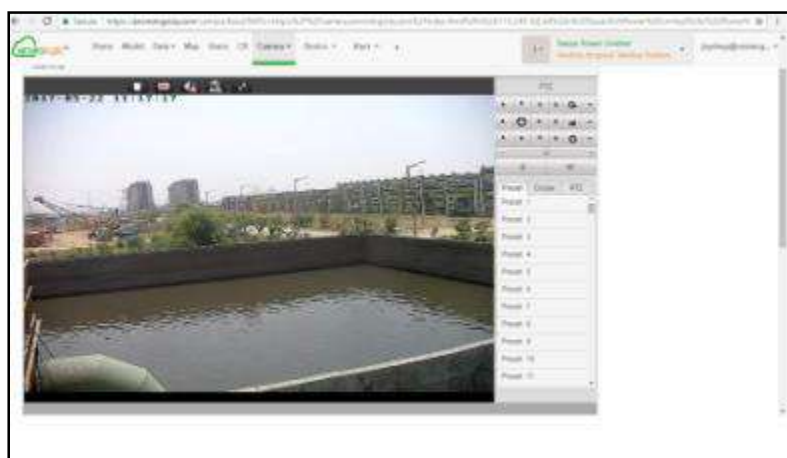


Online Effluent monitoring system: We have also installed Online Effluent Monitoring System and data being transferred on CPCB server.

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- ✓ **IP based camera** with night vision facility installed Nr. ETP and linked with MPPCB server.



- ✓ **Electronic Environmental Parameter Display Board** Installed at the main gate of factory premises.



ENVIRONMENT AWARENESS PROGRAMS

Sasan power Limited continuously spreading environmental awareness among employees and villagers through celebration of various International Day's and cultural programs.

➤ World Environmental Events Celebration :

- **World Environment Day (WED)** is celebrated every year on 5 June to raise awareness and to take positive environmental action to protect our nature and the planet Earth.
- This year Sasan power Limited had celebrated Word Environment Day 2022 with full enthusiasm and response by the participants were also been highly encouraging.
- A large number of participation was noticed from the employee, their family and contract workers in the various competitions like Quiz, Slogan, Poster, Essay etc. Prizes were also distributed to the winners.
- The Sasan leadership has also praised the way of celebrating World Environmental Events this year. The Sasan leadership has conveyed their best wishes for World Environment Day for entire Sasan Family.
- About 500 nos new plantation were also done at Township & in Power Plants by respective HODs and employees on occasion of WED.
- **Some Glimpses are as follows:**



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(1st April, 2022 to 30th September, 2022)**



- **World Ozone Day** had been celebrated on 16th September, 2022. On this occasion a awareness session was organized among employees to control greenhouse emission with a power point presentation and demonstration of a short movie "Ozzy Ozone" , followed by an offline quiz and winners were awarded with prizes.
- About 2800 nos new plantation were also done in Power Plants and surrounding areas by respective HODs and employees on occasion of WOD.



➤ **Green Belt Development:**

- 3300 nos trees had been planted in 2.50 Acres Area during Apr.'22 to Sept.'22.
- Greenbelt Development has covered 651.36 Acres of land within Power Plant as against the requirement of 474.14 Acres.

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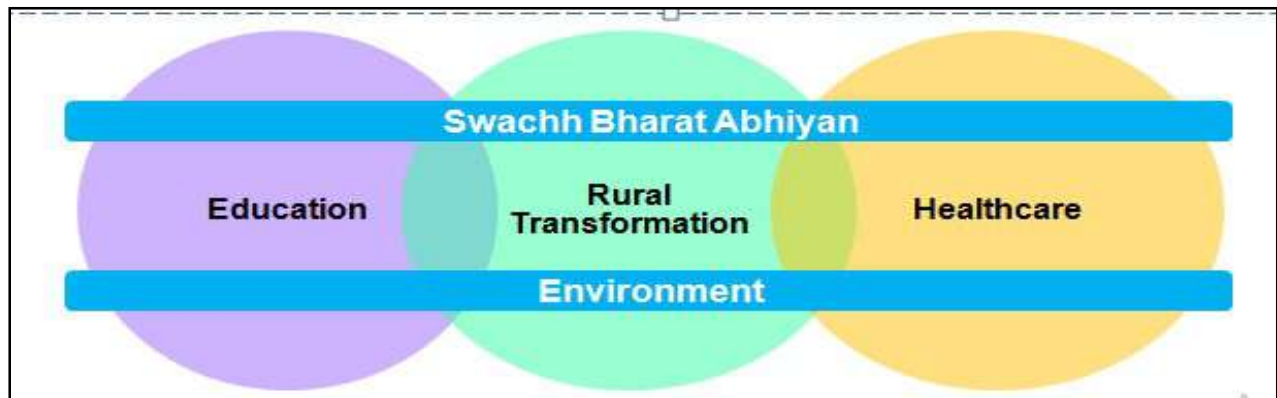
SASAN POWER LIMITED

Corporate Social Responsibility

Major Highlights- April 2022- September-2022

CSR Initiatives and activities:

- **CSR Mission Statement:** To be a socially responsible corporate entity with a thrust on community development, environment, health & safety through sustained business conduct.
- **Its comprehensive development program attempts to:**
 - To improve the standard of living of the community and
 - Create local prosperity, thereby aiming to promote a sustainable lifestyle of self-sufficiency.
- **Key Thematic Focus Areas:**



- **Geographical Outreach:**
 - 20 Villages of District Singrauli, Madhya Pradesh
 - Population catered through CSR endeavors: 30,000
- **Partners:**
 - DAV School, Indian Red Cross Society, Sahara Manch, Local Govt. Bodies and Deptts

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Major CSR Highlights-

The company has robust CSR Policy at group level. The company as a responsible corporate entity endeavors to transform lives to help build more capable and vibrant communities by integrating CSR with its business values and strengths, based on its guiding philosophy, company has formulated on a consolidated basis, a policy for social development with a thrust in the following key thematic areas:

- 1. Education :** Running 1 DAV School (Std XII, CBSE Affiliated) benefitting approx 1333 students. Completely free education, stationary, uniform, bag, shoes, sweater, bus transportation free of cost. Student stipends to eligible students. Supporting 24 Govt Anganwadis, running 2 Balwadis, Education Excellence Program Vidyadaan, Industrial visits , Career Counselling etc. Cumulatively impacting lives of approx 5000 students
 - 2. Healthcare:** Running primary health centre, 24x7 hrs ambulance facilities at centre, monthly average 650-900 OPD. Promotion of 100% institutional delivery through distribution of healthy baby kits, nutritional kits program to Severe Acute Mal-nourish (SAM) children. Promotion of menstrual hygiene through distribution of sanitary pads (7000 packets annually) free of cost, promotion of voluntary blood donation annually 70-80 units of blood to Redcross Blood Bank Singrauli etc
 - 3. Rural Transformation:** Need based infrastructure development, drinking water through hand-pumps installation, promotion of sports and culture, Skill Development training, International Women's Day Celebration etc.
 - 4. Swachh Bharat Abhiyan :** Awareness Generation session for SBA, Swachhta cabinet at Schools etc
 - 5. Environment :** Plantation drive in community, support to Govt Ankur Abhiyan
- **Success Ratio with respect to Implementation of such activities.**
Success of these programs can be judged with following.
 1. DAV School CBSE Board Std X results of previous 4 Yrs is 100% with average QPI Ranging upto 72-76% and highest score of approx 97% that too by students of underseved communities and first generation learners.
 2. Institutional deliveries reaching to approx 90%

Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC For



















Sasan Ultra Mega Power Project (1st April, 2022 to 30th September, 2022)

3. Access to safe drinking water to impacted families, earlier they were dependent on rivulets, well etc but currently have access to hand-pumps etc.
 4. Access to primary health care to impacted families.
 5. District Admin/Redcross Society Singrauli recognizing Sasan Power as a corporate having highest no of blood donation since its inception.
 6. Many more laurels and recognition in forms of CSR Awards by Greentech, Golden Peacock, India CSR, World CSR Day forum etc.
- **Impact on people at large post these activities.**
Standard of living of community has increased tremendously. Apart from direct and indirect employment to over 1000 local people, through monthly direct cash transfer to approx 2300 PAPs under R&R Scheme approx Rs. 1.60 Cr is being pumped in nearby community in form of sustenance allowance, old age pension, divyang and destitute pension etc adding to their monthly income and standard of living.

Major CSR Activities-Pictorial Highlights-

1. Education																																			
DAV-Public School Surya Vihar (CBSE Affiliated Std XII School, with state of art facility)	Running 1 DAV School (Std XII, CBSE Affiliated) benefitting approx 1333 students belonging to Project Affected families (PAFs) who are mostly first generation learners. Education is completely free. Stationary, uniform, bag, shoes, sweater, bus transportation free of cost. Additionally student stipend is also given to eligible students.																																		
CBSE Class X Result - Outstanding performance in last 4 Board Exams of Std X, with 100% pass out results and five students scoring above 90% marks amongst 37 students.	<table><tr><th rowspan="2">Particular</th><th colspan="4">DAV Surya Vihar</th></tr><tr><th>2018-2019</th><th>2019-2020</th><th>2020-21</th><th>2021-22</th></tr><tr><td>Student appeared in 10th Board</td><td>49</td><td>38</td><td>37</td><td>74</td></tr><tr><td>Passed</td><td>47</td><td>38</td><td>37</td><td>74</td></tr><tr><td>Compartment</td><td>2</td><td>0</td><td>0</td><td></td></tr><tr><td>Passed Percentage</td><td>95.92%</td><td>100.00%</td><td>100.00%</td><td>100.00%</td></tr><tr><td>Average Marks percentage (QPI)</td><td>62.49</td><td>73.93%</td><td>73.41%</td><td>68.69%</td></tr></table>	Particular	DAV Surya Vihar				2018-2019	2019-2020	2020-21	2021-22	Student appeared in 10 th Board	49	38	37	74	Passed	47	38	37	74	Compartment	2	0	0		Passed Percentage	95.92%	100.00%	100.00%	100.00%	Average Marks percentage (QPI)	62.49	73.93%	73.41%	68.69%
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	<table><tr><th colspan="5">Toppers Marks (%)</th></tr><tr><td>Topper-I</td><td>96.80%</td><td>94.40%</td><td>94.40%</td><td>97.60%</td></tr><tr><td>Topper-II</td><td>96.40%</td><td>90.40%</td><td>93.00%</td><td>94.00%</td></tr><tr><td>Topper-III</td><td>96.30%</td><td>90.20%</td><td>91.60%</td><td>92.40%</td></tr><tr><td>Nos of Students -Above 90%</td><td>6 (12.24%)</td><td>3 (7.89%)</td><td>5 (13.51%)</td><td>5</td></tr><tr><td>Nos of Students- 80-90%</td><td>7 (14.29%)</td><td>10 (26.32%)</td><td>5 (13.51%)</td><td>9</td></tr><tr><td>Nos of Students-70-80%</td><td>5(10.20%)</td><td>7(18.42%)</td><td>7 (18.91%)</td><td>15</td></tr><tr><td>Nos of Students-60-70%</td><td>12(24.49%)</td><td>15(39.47%)</td><td>18 (48.64%)</td><td>27</td></tr></table>	Toppers Marks (%)					Topper-I	96.80%	94.40%	94.40%	97.60%	Topper-II	96.40%	90.40%	93.00%	94.00%	Topper-III	96.30%	90.20%	91.60%	92.40%	Nos of Students -Above 90%	6 (12.24%)	3 (7.89%)	5 (13.51%)	5	Nos of Students- 80-90%	7 (14.29%)	10 (26.32%)	5 (13.51%)	9	Nos of Students-70-80%	5(10.20%)	7(18.42%)	7 (18.91%)	15	Nos of Students-60-70%	12(24.49%)	15(39.47%)	18 (48.64%)	27
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	<div><div>SIDHI-SINGROLI</div><div>24 J</div></div> <div><div>सिंहरौली जागरण</div><div>अजय कुमार वैश्य 97.60 प्रतिशत, डीएचई स्कूल सूर्य विहार एवं सूरज कुमार वैश्य 93.20 प्रतिशत के साथ डीएचई कृष्ण विहार में रहे प्रथम</div><div><div><</div></div></div>																																								

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Covid-19 Vaccination drive for students for the age group of 15 - 18 years all the eligible students were vaccinated.



Observation of Samarpan Diwas- Birth anniversary of mahatma Hansraj



Career Counseling – Regular career counseling sessions by expert, senior employee volunteers, winning accolades in district level career guidance event





**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC
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<p>Excellent Performance in Singrauli Mahotsav- District level event.</p>	
<p>International Yoga day 2022</p>	 
<p>Selection of students in Jawahar Navodaya School</p>	 <p align="center">दो मेधावियों का हुआ नवोदय विद्यालय में चयन</p> <p>नगर प्रतिनिधि सिंगरौली(वैदना)</p> <p>डीएवी पब्लिक स्कूल सूर्य विहार में अध्ययनरत दो बच्चों का जवाहर नवोदय विद्यालय में चयन हुआ है। सत्र 2022-23 के कक्षा 6वीं में हुई प्रवेश परीक्षा में पंकज कुमार बैस पिता राधेश्याम बैस निवासी सिद्धिकला और अमृता कुमारी पनिका पिता इनरमन पनिका निवासी हरहवा की सफलता से विद्यालय परिवार में खुशियां छाई हुई हैं। दोनों बच्चों के उज्ज्वल भविष्य की कामना करते हुए विद्यालय प्राचार्य मृत्युंजय तिवारी ने कहा कि इन दोनों से अन्य बच्चे भी प्रेरणा लेंगे। जिससे विद्यालय में अध्ययन करने वाले अन्य छात्र छात्राएं भी प्रतियोगी परीक्षाओं में सफलता अर्जित करने में सफल होंगी। उधर दोनों मेधावियों ने अपनी सफलता का श्रेय शिक्षक, शिक्षिकाओं को देते हुए उनके आशीर्वाद की कामना की है।</p>

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Session by Brahma Kumaris-Magic Show	 
Celebration of Independence Day/National Day	 

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<p>Balwadi Operations(2nos) at Tribal Hamlet Benefitting 50 students belonging to Tribal Baiga/Badigeer families</p>	 																																													
<p>2. Health</p>																																														
<p>Primary Health Centre Surya Vihar- fully eqipped health Centre with 24x7 Hours ambulance facility for linkages with secondary and tertiary healthcare facilities at district. Average monthly OPD is approx 650.</p>	<table> <tr> <th colspan="5">OPD Primary Health Centre Surya Vihar FY 22-23</th> </tr> <tr> <th>Sl.NO</th> <th>Months</th> <th>Male</th> <th>Female</th> <th>Total</th> </tr> <tr> <td>1</td> <td>Apr-22</td> <td>440</td> <td>253</td> <td>693</td> </tr> <tr> <td>2</td> <td>May-22</td> <td>356</td> <td>256</td> <td>612</td> </tr> <tr> <td>3</td> <td>Jun-22</td> <td>415</td> <td>353</td> <td>768</td> </tr> <tr> <td>4</td> <td>Jul-22</td> <td>526</td> <td>342</td> <td>868</td> </tr> <tr> <td>5</td> <td>Aug-22</td> <td>644</td> <td>417</td> <td>1061</td> </tr> <tr> <td>6</td> <td>Sep-22</td> <td>735</td> <td>515</td> <td>1072</td> </tr> <tr> <td></td> <td>Total</td> <td>3116</td> <td>2136</td> <td>5074</td> </tr> </table>	OPD Primary Health Centre Surya Vihar FY 22-23					Sl.NO	Months	Male	Female	Total	1	Apr-22	440	253	693	2	May-22	356	256	612	3	Jun-22	415	353	768	4	Jul-22	526	342	868	5	Aug-22	644	417	1061	6	Sep-22	735	515	1072		Total	3116	2136	5074
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Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC For Sasan Ultra Mega Power Project (1st April, 2022 to 30th September, 2022)

Health Awareness- Anti Tobacco Day



World Menstrual Hygiene Day- Adolescent girls



Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC For

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Group Blood Donation – July 2022

40 units of blood donated to
Redcross Blood Bank

Recognition by
Redcross Society and
District Singrauli for
being highest no of
blood donation by
organization in district.

Sasan Power bagged first
position for highest number
(372 units) of blood donation
since start of Singrauli
Chapter of Redcross Society
in 2014. CISF Unit bagged
second position with 205 and
Jan Prayas Foundation
bagged third position with
144 units of blood.



Training on HIV /AIDS awerness & Observation of World Aidas through Sahara Manch a local NGO affiliated with State AIDS Controll Society total Beneficiaries – 150+






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<p>International Yoga day 2022</p>	
<p>Safe Motherhood Program in collaboration with Govt ICDS Deptt in 24 Aganwadis- Distribution of Baby kit to promoting Instructional Delivery (592 Units)</p>	
<p>Promotion of Institutional Delivery / Menstrual Hygiene- Free Sanitary distribution to the adolescent girls -7000</p>	
<p>3.Rural Transformation</p>	

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<p>Azadi Ka Amrit Mahotsav- Patriotic Tiranga Yatra and Tiranga hoisting in Community</p>	 
<p>Community Visits to Buddha Temple-</p>	 
<p>Community Consultation</p>	 
<p>Mosquito Net Distribution</p>	 

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<p>Installation and maintenance of Hand-pumps</p>	
<p>4. Swacch Bharat Abhiyan</p> <p>Sensitization of cleanliness</p>	
<p>5. Environment Conservation</p>	



6x660 MW Sasan Ultra Mega Power Project

Ambient Air Quality Data

April, 2022 to September, 22

Months	Pollutants	NAAQ Standards: 2009	Locations and Concentrations (in $\mu\text{g}/\text{m}^3$)													
			AAQ1		AAQ2		AAQ3		AAQ4		AAQ5		AAQ6		AAQ7	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
April, 2022	PM10	50.0	57.89	48.63	56.11	57.77	63.3	42.23	51.2	50.24	57.78	58.63	65.69	51.11	56.78	PM10
	PM2.5	23.52	28.12	22.3	28.41	25.36	33.78	21.88	28.58	23.2	27.45	28.36	34.42	25.12	27.78	PM2.5
	SO2	22.78	28.78	18.11	23.12	26.3	32.24	12.42	18.96	20.36	24.31	25.24	28.12	21.2	26.1	SO2
	NOx	27.21	31.07	25.08	32.89	33.3	38.82	22.36	27.3	25.02	29.11	33.3	38.7	23.8	29.4	NOx
	CO	589	636	525	612	711	778	510	602	618	682	711	778	614	669	CO
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg
May, 2022	PM10	51.45	58.63	47.61	56.78	56.01	65.78	43.3	49.3	49.45	55.6	60.63	64.66	50.74	57.12	PM10
	PM2.5	24.12	28.06	22.11	28.78	28.3	33.5	22.63	28.93	22.69	27.48	30.01	35.63	23.6	27.85	PM2.5
	SO2	21.37	27.52	17.36	25.11	24.17	32.05	13.78	19.6	20.5	25.1	26.96	30.89	21.88	27.69	SO2
	NOx	25.11	32.63	24.79	31.44	32.39	38.89	23.25	27.93	26.3	30.13	31.33	38.13	26.63	30.28	NOx
	CO	605	685	531	611	718	755	511	588	612	689	705	782	612	696	CO
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg
June, 2022	PM10	48.13	53.11	47.6	52.47	55.78	60.69	41.48	45.25	48.11	54.52	57.3	61.04	47.78	52.63	PM10
	PM2.5	22.3	27.42	20.45	26.52	25.42	30.63	20.14	24.52	22.87	27.13	26.46	31.36	22.3	26.44	PM2.5
	SO2	21.89	26.78	18.06	23.14	23.62	28.12	13.52	18.82	19.88	23.9	24.3	27.82	19.05	24.22	SO2
	NOx	24.33	32.12	22.52	26.45	30.39	36.56	20.13	25.78	25.06	29.31	30.11	35.42	23.2	27.52	NOx
	CO	612	682	574	623	678	745	512	588	600	682	703	782	613	682	CO
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg
July, 2022	PM10	46.78	52.13	42.36	50.45	51.57	56.13	33.02	40.02	42.12	50.36	50.47	53.02	41.63	49.5	PM10
	PM2.5	18.07	22.48	18.12	25.78	22.36	26.31	15.36	20.13	17.3	24.31	23.11	28.93	17.78	23.52	PM2.5
	SO2	15.44	22.82	14.45	17.55	21.88	24.69	11.25	15.13	13.31	20.13	19.89	24.13	15.13	23.63	SO2
	NOx	21.36	27.69	17.36	23.55	25.89	29.23	17.25	20.6	16.1	22.3	24.27	29.31	21.86	26.36	NOx
	CO	558	620	452	582	589	682	512	582	530	610	587	633	512	602	CO
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg
August, 2022	PM10	32.66	43.23	30.17	35.96	42.23	51.01	28.25	33.27	30.14	40.12	41.48	47.17	32.45	40.01	PM10
	PM2.5	14.23	18.11	12.42	16.82	17.89	22.63	11.05	15.88	15.36	20.78	18.19	23.9	14.12	18.82	PM2.5
	SO2	10.18	14.25	9.3	13.82	16.78	20.58	5.14	9.69	12.22	16.82	14.28	18.52	12.2	16.02	SO2
	NOx	16.47	22.14	11.89	16.44	19.02	24.11	10.36	13.99	14.72	19.78	16.11	20.96	15.69	20.52	NOx
	CO	411	502	388	423	502	563	347	389	423	502	523	596	425	572	CO

Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352

Approved: by Ministry of Environment, Forest and Climate Change (MoEF&CC)

Registered Office: 63/1, Kailash Vihar, Near Income Tax Office, City Center-II

Gwalior-474 011, M.P., India

0751-409 99716, 2232177

Email: aetri2016@gmail.com, aelgwalior@gmail.com



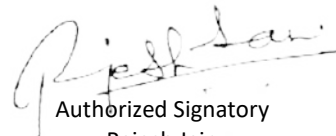
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg
September, 2022	PM10	31.6	39.52	30.52	35.45	40.47	46.33	22.58	31.98	30.12	35.47	41.96	46.63	30.3	35.82	PM10
	PM2.5	11.18	17.36	12.17	16.08	18.52	24.36	12.74	15.69	13.58	17.12	19.42	23.55	13.58	17.76	PM2.5
	SO2	9.78	15.63	8.78	13.52	14.15	18.47	3.66	9.25	11.82	14.78	12.33	16.63	10.42	15.85	SO2
	NOx	14.17	20.58	9.52	16.01	17.85	23.45	8.25	13.45	14.82	18.89	15.3	19.23	12.1	16.52	NOx
	CO	425	470	402	444	509	547	322	352	447	487	530	575	428	475	CO
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Hg

Where, BDL (Below Detection Limit)

AAQM 1= Sasan Village AAQM 2= Harrahawa Village AAQM 3= Construction Office AAQM 4= Township AAQM 5= Siddhikhurd Village
AAQM 6= Permanent Store AAQM 7= Siddhi Kallan


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Flue Gas Monitoring Data

April, 2022 to September, 22

Unit Capacity 660 MW Stack Height 275 m Stack Dia 7.1m Platform level 135 m

Months	Pollutants	Locations and Concentrations (in mg/Nm ³)					
		Unit # 1	Unit # 2	Unit # 3	Unit # 4	Unit # 5	Unit # 6
April, 2022	PM	43.2	42.1	44.9	46.7	44.8	47
	SO ₂	880	866	863	846	858	874
	NO _x	229	237	232	230	232	239
	CO	1.42	1.76	1.42	1.75	1.82	1.18
	Exit Velocity (m/s)	25.52	25.93	25.71	25.11	25.82	26.12
May, 2022	PM	44.9	47.8	46.2	45.1	47.1	45.3
	SO ₂	875	892	871	880	882	871
	NO _x	256	266	261	275	263	273
	CO	1.36	1.17	1.55	1.63	1.71	1.57
	Exit Velocity (m/s)	25.91	26.19	26.01	25.86	26.2	26.36
June, 2022	PM	41.8	46.1	48.5	44.5	45.6	46.8
	SO ₂	866	878	893	857	880	866
	NO _x	274	260	275	281	271	249
	CO	1.63	1.52	1.33	1.55	1.58	1.35
	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity (m/s)	25.45	26.19	25.9	25.77	26.01	25.88
July, 2022	PM	44.1	42.9	45.1	41.8	41.9	47.1
	SO ₂	872	868	888	868	875	891
	NO _x	231	277	242	293	285	255
	CO	1.42	1.63	1.61	1.71	1.66	1.47
	Exit Velocity (m/s)	25.61	26.02	25.28	25.61	25.93	25.72
August, 2022	PM	42.8	45.1	46.8	46.1	45.2	42.8
	SO ₂	887	892	869	869	876	858
	NO _x	242	258	231	278	279	249
	CO	1.61	1.55	1.52	1.47	1.42	1.36
	Exit Velocity (m/s)	25.04	25.31	25.58	25.82	25.55	25.18

Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352

Approved: by Ministry of Environment, Forest and Climate Change (MoEF&CC)

Registered Office: 63/1, Kailash Vihar, Near Income Tax Office, City Center-II

Gwalior-474 011, M.P., India

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September, 2022	PM	44.6	42.8	41.9	40.7	46.8	44.7
	SO ₂	882	866	860	861	872	882
	NO _x	262	242	284	248	266	251
	CO	1.43	1.31	1.49	1.39	1.78	1.49
	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity (m/s)	25.08	25.36	25.58	25.61	25.96	25.7

Where, BDL (Below Detection Limit)


Reviewed by

Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory

Rajesh Jain
(TD & QC Head)

Month/Locations	Day			Night		
	Min	Max	Leq	Min	Max	Leq
April, 2022						
Construction Office	52.3	70.3	66.1	50.6	65.6	61.3
Permanent Store	54.4	72.1	67.6	51.7	66.1	62.1
Sasan Village	47.1	52.8	50.3	37.3	42.8	40.2
Siddhi Khurd Village	46.5	51.9	48.7	36.1	40.6	38.7
Harrahawa Village	43.6	53.1	48.2	38.7	41.1	40.3
Tiyara Town Ship	41.2	50.2	46.8	35.6	40.7	37.1
Siddhi Kallan	42.1	52.6	50.2	39.3	41.6	40.6
May, 2022						
Construction Office	51.5	72.6	68.1	48.5	63.7	58.6
Permanent Store	52.1	71.4	65.6	50.2	65.5	56.2
Sasan Village	50.5	53.9	52.3	38.9	43.3	41.1
Siddhi Khurd Village	44.8	50.2	46.7	35.7	41.1	37.4
Harrahawa Village	42.9	51.6	44.2	37.5	42.5	40.8
Tiyara Town Ship	43.4	51.5	47.8	33.1	38.9	36.6
Siddhi Kallan	40.6	53.1	52.9	35.7	40.3	38.2
June, 2022						
Construction Office	50.8	70.1	65.6	47.1	62.1	55.3
Permanent Store	51.6	72.0	66.2	48.6	66.0	57.0
Sasan Village	50.2	52.5	51.1	37.2	42.6	39.1
Siddhi Khurd Village	43.7	51.6	48.6	36.0	43.2	40.7
Harrahawa Village	45.1	52.2	49.0	38.7	41.1	40.1
Tiyara Town Ship	40.6	49.1	46.7	32.6	39.2	36.8
Siddhi Kallan	41.2	53.4	50.2	36.2	39.6	37.0
July, 2022						
Construction Office	51.2	69.5	64.2	48.6	60.5	57.6
Permanent Store	52.9	70.6	63.1	44.8	63.3	58.2
Sasan Village	51.1	54.2	52.6	35.1	43.6	41.7
Siddhi Khurd Village	45.2	52.1	47.8	34.2	42.1	41.1
Harrahawa Village	47.6	53.8	51.2	36.6	42.8	39.8
Tiyara Town Ship	42.7	50.6	48.6	31.9	37.2	35.2
Siddhi Kallan	43.1	52.1	49.4	35.5	41.7	38.9
August, 2022						

Advanced Environmental Testing And Research Lab P. Ltd.

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Gwalior-474 011, M.P., India

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Construction Office	50.7	70.6	64.2	45.1	58.6	52.3
Permanent Store	55.5	71	63.1	43.3	65.1	57.7
Sasan Village	49.6	53.2	52.6	34.9	41.9	38.1
Siddhi Khurd Village	44.1	50.7	47.8	33.7	40.6	36.8
Harrahawa Village	46.3	51.3	51.2	34.9	41.2	37.3
Tiyara Town Ship	40.8	48.4	48.6	30.2	38.7	36.7
Siddhi Kallan	42.7	51.8	49.4	37.4	40.2	37.2
September, 2022						
Construction Office	48.2	67.2	60.7	44.8	57.1	50.7
Permanent Store	51.8	68.3	61.6	42.9	61.8	55.3
Sasan Village	44.1	50.8	48.1	33.2	40.6	37.8
Siddhi Khurd Village	42.9	48.1	45.8	32.8	38.2	36.1
Harrahawa Village	41.8	49.9	47.9	35.6	42.6	37.9
Tiyara Town Ship	38.2	49.8	43.0	31.1	36.1	33.3
Siddhi Kallan	41.2	50.4	46.8	33.8	37.8	34.1


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)

Month/Locations	Day			Night		
	Max	Min	Leq	Max	Min	Leq
April, 2022						
Amlohari Village	44.2	52.3	49.9	40.6	43.7	41.6
Dhatura Village	44.3	51.4	48	41.1	43.3	42.3
TF-435	46.4	52.1	50.2	37.3	41.8	39.7
Hirrwah Village	43.1	51.6	48.5	38.2	42.1	40.2
Naugarh Village	40.5	52.7	46.1	35.4	40.3	37.2
Pachaur Village	41.8	52.2	49.8	38.9	40.5	39.0
Shiv Pahari	50.1	60.8	57.3	45.3	53.6	51.1
May, 2022						
Amlohari Village	42.8	53.7	50	40.1	43.6	42.8
Dhatura Village	43.6	52.6	47.6	40.8	42.1	41.6
TF-435	44.5	53.8	51.7	36.6	40.3	38.2
Hirrwah Village	45.6	53.3	51.2	37.8	41.8	39.7
Naugarh Village	42.1	50.4	48.8	34.2	42.6	38.6
Pachaur Village	40.7	51.6	47.3	35.9	41.4	37.2
Shiv Pahari	52.6	62.2	56	42.9	52.2	50.7
June, 2022						
Amlohari Village	41.6	54.5	52.3	41.6	43.3	42.2
Dhatura Village	40.2	53.1	46.1	38.2	43.6	40.6
TF-435	42.7	53.6	50.5	39.1	41.2	40.1
Hirrwah Village	44.1	52.7	48.9	36.8	42.7	38.8
Naugarh Village	41.6	51.3	47.2	37.6	43.1	41.7
Pachaur Village	42.0	50.4	48.7	38.1	41.8	39.9
Shiv Pahari	51.4	62.8	55.2	41.8	53.9	51.0
July, 2022						
Amlohari Village	42.4	52.2	50.1	40.7	42.7	41.3
Dhatura Village	41.1	51.2	47.6	39.6	41.1	40.2
TF-435	43.2	50.7	48.7	37.5	42.6	41.0
Hirrwah Village	44.6	51.3	45.8	35.2	40.8	36.4
Naugarh Village	42.1	50.1	46.6	36.7	41.7	38.3
Pachaur Village	43.8	52.0	46.2	36.6	42.2	38.2
Shiv Pahari	52.2	60.7	57.7	42.1	52.2	47.1
August, 2022						

Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352

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Gwalior-474 011, M.P., India

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Amlohari Village	40.6	51.5	48.3	35.6	41.3	38.1
Dhatura Village	42.7	52.6	49.4	37.2	40.9	38.9
TF-435	41.6	51.2	46.9	36.1	41.7	39.5
Hirrwah Village	42.5	50.6	46.1	34.9	38.2	36.3
Naugarh Village	41.0	49.7	44.7	33.3	40.3	37.7
Pachaur Village	40.4	51.2	48	35.7	41.4	40.9
Shiv Pahari	50.3	58.1	51.2	41.5	50.8	46.6
Septemer, 2022						
Amlohari Village	38.7	48.3	44.7	32.2	38.1	36.6
Dhatura Village	41.8	47.1	45.1	33.0	37.6	35.7
TF-435	37.3	48.8	46	34.7	40.2	37.1
Hirrwah Village	35.1	47.0	42.9	32.6	39.8	37.6
Naugarh Village	40.8	49.3	43.7	35.3	40.6	38.8
Pachaur Village	41.2	50.9	46.5	31.0	36.0	33.2
Shiv Pahari	52.8	55.2	53.1	38.4	47.1	44.1

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



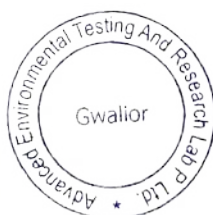
6x660 MW Sasan Ultra Mega Power Project

Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	April, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.3	7.36	7.35	6.93	6.91	6.9
Colour, Hazen	15	2.3	3.02	2.93	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	484	489	467	70	86	72
Total Alkalinity, mg/l	600	169	181	166	31.1	43.5	32.7
Total Hardness as CaCO ₃ , mg/l	600	182	193	188	36.2	44.4	35
Calcium as Ca, mg/l	200	53.1	52.9	51.2	9	9.72	9.2
Magnesium as Mg, mg/l	100	11.9	14.8	14.6	3.28	4.78	2.91
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	44.2	62.9	50.2	1.22	1.63	1.11
Sulphate, mg/l	400	47.9	58.3	53.9	1.43	2.01	1.3
Fluoride, mg/l	1.5	0.631	0.617	0.622	BDL	BDL	BDL
Nitrate (mg/L)	45	2.17	3.05	2.86	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harraha Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)

Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)



Authorized Signatory
Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project


Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	May, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.34	7.348	7.26	6.95	6.97	6.88
Colour, Hazen	15	3.05	2.43	2.25	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	490	491	470	78	89	70
Total Alkalinity, mg/l	600	188	174	158	37.6	41.8	30.1
Total Hardness as CaCO ₃ , mg/l	600	193	190	181	39.1	47.2	33.8
Calcium as Ca, mg/l	200	55.2	53.7	52.6	9.5	10.36	9.9
Magnesium as Mg, mg/l	100	12	13.5	12.1	3.71	5.12	2.24
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	48.1	60.2	47.6	1.78	1.77	1.25
Sulphate, mg/l	400	51.96	55.6	61.2	1.63	2.26	1.93
Fluoride, mg/l	1.5	0.682	0.658	0.645	BDL	BDL	BDL
Nitrate (mg/L)	45	2.55	2.63	1.99	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harrahwa Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



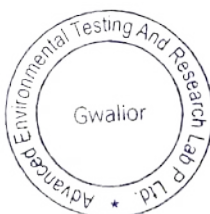
6x660 MW Sasan Ultra Mega Power Project

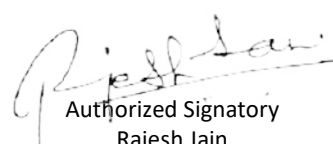
Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	June, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.28	7.35	7.31	6.91	6.88	6.93
Colour, Hazen	15	1.96	2.17	2.96	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	476	482	452	80	80	74
Total Alkalinity, mg/l	600	183	177	163	38.1	40.1	33.5
Total Hardness as CaCO ₃ , mg/l	600	186	186	178	35.6	43.8	37.1
Calcium as Ca, mg/l	200	51.7	51.9	50.1	9.76	10.02	9.88
Magnesium as Mg, mg/l	100	13.8	13.6	12.8	2.82	4.49	2.98
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	45.6	66.8	49.7	1.46	1.63	1.15
Sulphate, mg/l	400	57.7	57	66.5	1.27	2.11	1.9
Fluoride, mg/l	1.5	0.693	0.628	0.636	BDL	BDL	BDL
Nitrate (mg/L)	45	2.28	2.82	2.96	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harrahwa Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



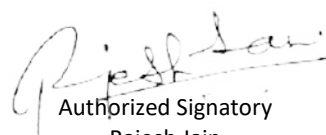
6x660 MW Sasan Ultra Mega Power Project Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	July, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.35	7.37	7.34	6.95	6.92	6.97
Colour, Hazen	15	2.63	2.62	3.26	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	488	491	473	86	88	82
Total Alkalinity, mg/l	600	163	168	166	40.6	42.6	37.2
Total Hardness as CaCO ₃ , mg/l	600	189	182	174	38.2	44.1	40.3
Calcium as Ca, mg/l	200	51.2	52.3	50.3	9.96	10.5	9.92
Magnesium as Mg, mg/l	100	14.8	12.5	11.7	3.18	4.31	3.69
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	49	67.2	47.6	1.76	1.88	1.56
Sulphate, mg/l	400	60.2	55.6	61.8	1.82	2.36	1.87
Fluoride, mg/l	1.5	0.646	0.652	0.66	BDL	BDL	BDL
Nitrate (mg/L)	45	2.93	2.17	2.28	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harraha Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



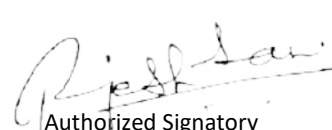
6x660 MW Sasan Ultra Mega Power Project Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	August, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.38	7.28	7.44	6.9	6.96	6.9
Colour, Hazen	15	2.1	2.7	2.3	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	480	486	455	68	72	80
Total Alkalinity, mg/l	600	167	177	160	33.1	41.1	35.1
Total Hardness as CaCO ₃ , mg/l	600	171	169	173	35.9	43.8	44.2
Calcium as Ca, mg/l	200	50.6	49.7	48.6	9.75	10.2	9.76
Magnesium as Mg, mg/l	100	10.82	10.87	12.51	2.83	4.49	4.71
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	47.2	60.8	45.1	2.16	1.55	1.44
Sulphate, mg/l	400	54.6	51.6	56.3	1.37	2.03	1.23
Fluoride, mg/l	1.5	0.601	0.696	0.478	BDL	BDL	BDL
Nitrate (mg/L)	45	1.96	1.9	3.67	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harrahwa Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



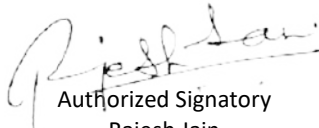
6x660 MW Sasan Ultra Mega Power Project Ground / Potable Water Quality

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	September, 2022					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.36	7.47	7.39	6.95	6.89	6.86
Colour, Hazen	15	1.72	3.16	3.12	BDL	BDL	BDL
Odor	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	5	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids, mg/l	2000	458	496	466	82	88	78
Total Alkalinity, mg/l	600	171	182	158	35.6	42.2	37.1
Total Hardness as CaCO ₃ , mg/l	600	181	196	180	37.1	44.1	39.6
Calcium as Ca, mg/l	200	52.2	53.2	51.5	9.92	10.2	9.72
Magnesium as Mg, mg/l	100	13.3	13.9	12.5	2.36	4.51	2.68
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	49.1	67.2	45.6	1.82	1.88	1.36
Sulphate, mg/l	400	59.1	61.1	62.1	1.36	2.36	1.72
Fluoride, mg/l	1.5	0.701	0.689	0.612	BDL	BDL	BDL
Nitrate (mg/L)	45	2.63	2.63	1.36	BDL	BDL	BDL
Phenolic Compound, mg/l	0.002	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL	BDL
TC, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
E. Coli, MPN/100ml	Shall not be detected in 100 ml sample	Absent	Absent	Absent	Absent	Absent	Absent
GW=Ground Water	GW1= Siddhi Khurd Village, GW2= Sasan Village, GW3= Harrahwa Village,						
PW = Potable Water	PW1= Service Building, PW2=Township Canteen, PW3= Purvanchal Canteen						

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



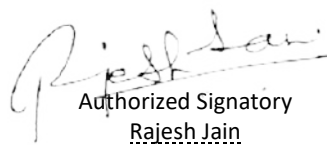
**6x660 MW Sasan Ultra Mega Power Project
Surface Water Quality
(April, 2022)**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.44	7.36	7.51
Colour, Hazen	300	163	147	168
Total Dissolved Solids, mg/l	1500	486	382	398
Dissolved Oxygen, mg/l	4	6.04	6.31	6.36
Biochemical Oxygen Demand, mg/l	3	2.53	2.56	2.22
Chloride, mg/l	600	55.8	55.6	44.2
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.512	0.547	0.531
Sulphate, mg/l	400	61.2	49.2	47.5
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	10.2	6.38	7.66
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.363	0.323	0.242
Zinc, mg/l	15	0.171	0.171	0.17
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



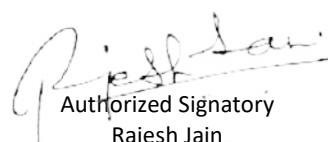
6x660 MW Sasan Ultra Mega Power Project
Surface Water Quality
May, 2022

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.48	7.63	7.38
Colour, Hazen	300	160	160	172
Total Dissolved Solids, mg/l	1500	409	392	380
Dissolved Oxygen, mg/l	4	6.12	6.17	6.14
Biochemical Oxygen Demand, mg/l	3	2.85	2.43	2.3
Chloride, mg/l	600	59.1	52.9	47.8
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.558	0.589	0.558
Sulphate, mg/l	400	52.8	55.8	53.6
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	7.8	11.6	5.96
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.418	0.528	0.204
Zinc, mg/l	15	0.136	0.362	0.189
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




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Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Surface Water Quality


June, 2022

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.52	7.5	7.41
Colour, Hazen	300	143	136	163
Total Dissolved Solids, mg/l	1500	415	352	346
Dissolved Oxygen, mg/l	4	6.28	6.25	6.52
Biochemical Oxygen Demand, mg/l	3	2.56	2.54	2.03
Chloride, mg/l	600	56.6	58.1	44.1
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.578	0.511	0.545
Sulphate, mg/l	400	50.1	51.3	50.1
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	10.2	9.85	6.6
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.448	0.536	0.225
Zinc, mg/l	15	0.163	0.31	0.146
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
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Authorized Signatory
Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Surface Water Quality


July, 2022

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.47	7.61	7.55
Colour, Hazen	300	196	210	185
Total Dissolved Solids, mg/l	1500	422	370	328
Dissolved Oxygen, mg/l	4	5.96	6.1	5.9
Biochemical Oxygen Demand, mg/l	3	2.86	2.69	2.38
Chloride, mg/l	600	59.1	55.8	41.9
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.489	0.572	0.588
Sulphate, mg/l	400	45.9	55.9	47.6
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	12.1	15.3	5.96
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.528	0.582	0.308
Zinc, mg/l	15	0.196	0.379	0.227
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
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6x660 MW Sasan Ultra Mega Power Project

Surface Water Quality

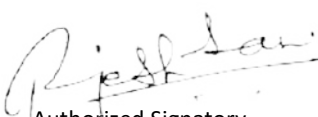
August, 2022

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.36	7.48	7.41
Colour, Hazen	300	172	189	170
Total Dissolved Solids, mg/l	1500	388	352	310
Dissolved Oxygen, mg/l	4	5.75	5.18	5.89
Biochemical Oxygen Demand, mg/l	3	2.38	2.42	2.02
Chloride, mg/l	600	62.3	43.7	40.6
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.389	0.482	0.507
Sulphate, mg/l	400	44.1	40.6	44.1
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	10.8	12.8	5.11
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.358	0.331	0.342
Zinc, mg/l	15	0.156	0.427	0.216
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
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Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Surface Water Quality


September, 2022

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.42	7.61	7.49
Colour, Hazen	300	138	138	169
Total Dissolved Solids, mg/l	1500	420	366	338
Dissolved Oxygen, mg/l	4	6.14	6.38	6.3
Biochemical Oxygen Demand, mg/l	3	2.42	2.28	2.22
Chloride, mg/l	600	57.9	55.6	47.8
Cyanide, mg/l	0.05	BDL	BDL	BDL
Fluoride, mg/l	1.5	0.544	0.578	0.549
Sulphate, mg/l	400	52.8	59.1	57.8
Phenolic Compound, mg/l	0.005	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL
Oil and Grease, mg/l	0.1	BDL	BDL	BDL
Nitrate, mg/l	50	13.8	13.6	8.36
Arsenic, mg/l	0.2	BDL	BDL	BDL
Copper, mg/l	1.5	BDL	BDL	BDL
Iron, mg/l	50	0.404	0.442	0.274
Zinc, mg/l	15	0.182	0.256	0.156
Cadmium, mg/l	0.01	BDL	BDL	BDL
Chromium as Cr ⁶⁺ , mg/l	0.05	BDL	BDL	BDL
Selenium, mg/l	0.05	BDL	BDL	BDL
Lead, mg/l	0.1	BDL	BDL	BDL
SW= Surface Water SW1=Gavaiya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)


Reviewed by
Dr. Dinesh K. Uchhariya
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(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Ash Pond Effluent Analysis Report


(April, 2022 to September, 2022)

Parameters	Limits	Months					
		April, 2022	May, 2022	June, 2022	Jul-22	Aug-22	Sep-22
pH	6.5-8.5	6.96	7.02	7.11	7.27	6.92	7.2
TSS, mg/l	100	60	65	60	66	58	63
Oil and Greas, mg/l	20	BDL	BDL	BDL	BDL	BDL	BDL
Arsenic' mg/l	BDL	BDL	BDL	BDL	BDL	BDL
Lead' mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Cadmium' mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Chromium as Cr ⁺⁶ mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Manganese, mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Selenium, mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Zinc, mg/l		0.436	0.756	0.526	0.408	0.328	0.369
Aluminum, mg/l		2.89	2.93	2.15	2.39	2.89	2.82
Total Chromium, mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Copper, mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Mercury, mg/l		BDL	BDL	BDL	BDL	BDL	BDL
Iron, mg/l		0.283	0.341	0.306	0.372	0.217	0.258
Nickel, mg/l		0.338	0.412	0.472	0.369	0.289	0.339

Where, BDL (Below Detection Limit)


Reviewed by
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6x660 MW Sasan Ultra Mega Power Project

ETP Outlet

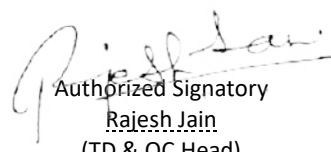
(April, 2022 to September, 2022)

Parameters	Limits	Months					
		April, 2022	May, 2022	June, 2022	Jul-22	Aug-22	Sep-22
pH	5.5 to 9.0	7.34	7.36	7.39	7.3	7.25	7.32
Total Dissolved Solids, mg/l	2100	830	872	886	812	838	852
Chlorides, mg/l	1000	128	133	135	140	134	129
Biochemical Oxygen Demand, mg/l	30	11.8	10.1	8.9	12.2	10.1	7.26
Chemical Oxygen Demand, mg/l	250	112	96	91	110	96.6	78.9
Total Suspended Solids, mg/l	100	56	44	62	58	58	52
Oil & Grease, mg/l	10	2.62	3.68	2.78	2.08	2.6	2.06


Reviewed by

Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project


STP Outlet (Purvanchal Camp)

(April, 2022 to September, 2022)

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		April, 2022	May, 2022	June, 2022	Jul-22	Aug-22	Sep-22
pH	5.5 to 9.0	7.32	7.39	7.45	7.36	7.41	7.28
Biochemical Oxygen Demand, mg/l	30	8.01	8.89	7.12	7.82	9.02	7.26
Chemical Oxygen Demand, mg/l	250	66.7	71.2	55.8	61.2	78.6	66.1
Total Suspended Solids, mg/l	100	40	48	52	48	56	48
Oil & Grease, mg/l	10	0.36	0.88	0.36	0.28	0.16	0.3
Fecal Coliform (MPN/100 ml)	<1000	40	62	48	58	60	52
RFC, mg/l	5	0.11	0.18	0.11	0.16	0.11	0.13


Reviewed by
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(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

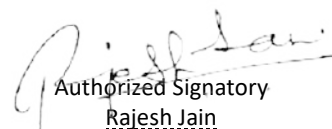
STP Outlet (Near Hydrogen Plant)

(April, 2022 to September, 2022)

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		April, 2022	May, 2022	June, 2022	Jul-22	Aug-22	Sep-22
pH	5.5 to 9.0	7.33	7.28	7.3	7.37	7.32	7.34
Biochemical Oxygen Demand, mg/l	30	7.42	6.31	5.82	4.91	5.78	5.19
Chemical Oxygen Demand, mg/l	250	69.1	52.8	58.1	47.8	52.7	47.6
Total Suspended Solids, mg/l	100	48	28	38	48	34	50
Oil & Grease, mg/l	10	0.44	0.68	0.88	0.48	0.77	0.21
Fecal Coliform (MPN/100 ml)	<1000	52	38	42	82	42	39
RFC, mg/l	5	0.14	0.15	0.17	0.12	0.18	0.19


Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)




Authorized Signatory
Rajesh Jain
(TD & QC Head)



6x660 MW Sasan Ultra Mega Power Project

Ground Water Quality (Around the Ash Pond)

Parameters	IS:10500 Limits	June, 2022				
		Peizometer				
		Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-08)	Nr Old Labor Camp (Island 3 and Island 4 area)	Security Training Center (Island-3)	Mango Garden CHP Area
pH	6.5-8.5	7.31	7.52	7.31	7.33	7.47
Colour, Hazen	15	2.36	2.21	2.82	2.14	2.36
Odor	Agre.	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	1	0.52	0.36	0.57	BDL	0.78
TDS, mg/l	2000	460	452	465	452	469
Total Alkalinity, mg/l	600	166	147	160	142	171
Total Hardness as CaCO ₃ , mg/l	600	172	166	181	170	163
Calcium as Ca, mg/l	200	48.1	47.1	50.2	49.2	48.8
Magnesium as Mg, mg/l	100	12.57	11.7	13.5	11.4	9.96
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	43.7	60.6	47.8	41.6	45.6
Sulphate, mg/l	400	38.6	39.6	53.6	40.8	47.1
Fluoride, mg/l	1.5	0.528	0.578	0.552	0.511	0.605
Nitrate, mg/l	45	2.93	3.36	3.89	4.6	3.88
Phenolic Compound, mg/l	0.001	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Reviewed by
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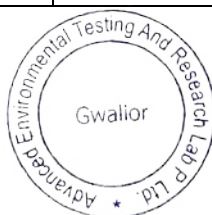
6x660 MW Sasan Ultra Mega Power Project

Ground Water Quality (Around the Ash Pond)

Parameters	IS:10500 Limits	(September, 2022)				
		Peizometer				
		Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-08)	Nr Old Labor Camp (Island 3 and Island 4 area)	Security Training Center (Island-3)	Mango Garden CHP Area
pH	6.5-8.5	7.41	7.49	7.36	7.44	7.43
Colour, Hazen	15	2.72	3.63	3.18	2.82	2.36
Odor	Agre.	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	1	0.45	0.42	0.66	BDL	0.55
TDS, mg/l	2000	472	466	470	458	462
Total Alkalinity, mg/l	600	171	152	169	161	180
Total Hardness as CaCO ₃ , mg/l	600	186	169	178	158	176
Calcium as Ca, mg/l	200	50.8	49.6	52.1	47.2	47.1
Magnesium as Mg, mg/l	100	11.3	11.9	12.3	11.7	9.79
Residual Chlorine, mg/l	1	BDL	BDL	BDL	BDL	BDL
Total Ammonia, mg/l	0.5	BDL	BDL	BDL	BDL	BDL
Boron, mg/l	1	BDL	BDL	BDL	BDL	BDL
Chlorides, mg/l	1000	44.6	63.2	51.7	48.1	41.8
Sulphate, mg/l	400	47.1	45.1	47.9	47.1	46.7
Fluoride, mg/l	1.5	0.558	0.588	0.566	0.558	0.611
Nitrate, mg/l	45	3.26	3.63	5.13	3.26	4.63
Phenolic Compound, mg/l	0.001	BDL	BDL	BDL	BDL	BDL
Mineral Oil, mg/l	0.5	BDL	BDL	BDL	BDL	BDL
Sulphide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL
Cyanide, mg/l	0.05	BDL	BDL	BDL	BDL	BDL
Anionic detergent, mg/l	1	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Reviewed by
Dr. Dinesh K. Uchhariya
(Technical Manager)



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Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352

Approved: by Ministry of Environment, Forest and Climate Change (MoEF&CC)

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6x660 MW Sasan Ultra Mega Power Project Cooling Tower Below Down April, 2022


S. No.	Parameter	Standard as per EP Rules 1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.223	0.182
2.	Zinc as Zn (mg/l)	1	0.044	0.036
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.452	0.512

Where, BDL= Below Detection Limit


Reviewed by

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**6x660 MW Sasan Ultra Mega Power Project
Cooling Tower Below Down
May, 2022**

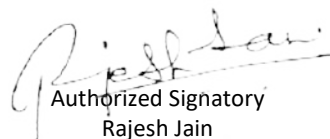
S. No.	Parameter	Standard as per EP Rules 1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.362	0.308
2.	Zinc as Zn (mg/l)	1	0.052	0.069
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.715	0.452

Where, BDL= Below Detection Limit



Reviewed by
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**6x660 MW Sasan Ultra Mega Power Project
Cooling Tower Below Down
June, 2022**

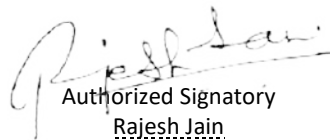
S. No.	Parameter	Standard as per EP Rules1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.331	0.418
2.	Zinc as Zn (mg/l)	1	0.065	0.039
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.486	0.401

Where, BDL= Below Detection Limit


Reviewed by

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6x660 MW Sasan Ultra Mega Power Project
Cooling Tower Below Down
July, 2022

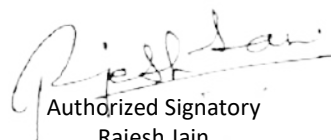
S. No.	Parameter	Standard as per EP Rules 1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.247	0.308
2.	Zinc as Zn (mg/l)	1	0.048	0.046
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.551	0.622

Where, BDL= Below Detection Limit


Reviewed by

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**6x660 MW Sasan Ultra Mega Power Project
Cooling Tower Below Down
August, 2022**

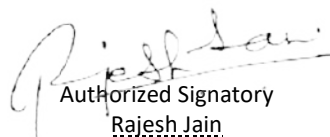
S. No.	Parameter	Standard as per EP Rules 1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.182	0.207
2.	Zinc as Zn (mg/l)	1	0.035	0.024
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.473	0.502

Where, BDL= Below Detection Limit


Reviewed by

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**6x660 MW Sasan Ultra Mega Power Project
Cooling Tower Below Down
September, 2022**

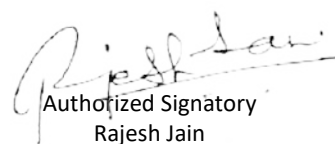
S. No.	Parameter	Standard as per EP Rules1986	Cooling Tower Below Down-I	Cooling Tower Below Down-II)
1.	Free available Chlorine (mg/l)	0.5	0.224	0.392
2.	Zinc as Zn (mg/l)	1	0.041	0.027
3.	Total Chromium as Cr (mg/l)	0.2	BDL	BDL
4.	Phosphate as PO ₄ (mg/l)	5	0.552	0.489

Where, BDL= Below Detection Limit


Reviewed by

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