

# 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/ 2021-22/4

Date: 28.05.2021

## Ministry of Environment Forest & Climate Change

### Regional Office (Western Region)

Kendriya Paryawaran Bhawan, link Road No.:3

E-5, Ravi Shanker Nagar

**Bhopal-462 016**

(Madhya Pradesh)

**Sub:** Submission of half-yearly (Oct., 2020 to Mar., 2021) Environmental Clearance (EC) Compliance & Environmental Monitoring Reports for 6X660 MW of Sasan Power Limited.

**Ref:** 1. Environmental Clearance: Letter No.:F No. J-13011/15/2006-IA (T) dated 23<sup>rd</sup> Nov., 2006.  
2. EC amendment vide no.: J-13011/15/2006-IA (T) dated 21<sup>st</sup> July, 2009.  
3. EC revalidation vide no. - J-13011/15/2006-IA (T) dated 19<sup>th</sup> April, 2012.

Dear Sir,

With reference to above mentioned subject, please find enclosed herewith half-yearly Environmental Clearance (EC) compliance status report along with the environmental monitoring reports like Ambient Air Quality, Stack Emission, Water & Waste Water Quality, Noise Level, Met data and Green belt development during the period of **October, 2020 to March, 2021**. This is for your kind information & record please.

Kindly acknowledge the receipt of these reports.

Thanking You,

Yours faithfully,

**For Sasan Power Limited**

  
**(Sachin Mohapatra)**

**Station Director**

**Cc:** 1. MoEF&CC, New Delhi  
2. Zonal Office, CPCB-Bhopal  
3. The Chairman, MPPCB-Bhopal  
4. The Regional Officer, MPPCB-Singrauli, (Madhya Pradesh)

**Encl:** 1. EC compliance report  
2. Environmental Monitoring Report (**October, 2020 to March, 2021**)

**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**  
**M/s. Sasan Power Limited**  
**Village-Siddhi khurd; Post- Tiyara**  
**Teh. -Waidhan; Dist. - Singrauli, Pin- 486886**  
**(Madhya Pradesh)**

**PERIOD: October, 2020 to March, 2021**

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**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
For  
Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

**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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(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

**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 <sub>x</sub> , NO <sub>x</sub> 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 <sup>3</sup> .	High efficiency ESP are installed with efficiency of 99.96%  Particulate emission is maintained to less than 50mg/Nm <sup>3</sup> . Stack Emission monitoring report is attached as <b>Annexure 1</b> .
XII	Space provision shall be made for Flue Gas De-sulphurization (FGD) unit, if required at a later stage.	Space provision has been kept in the layout for FGD.

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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 <sup>th</sup> 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 67<sup>th</sup> EAC held during March 19-20, 2010. The matter of ash disposal was deliberated in details &amp; EAC has recommended the project to adopt medium slurry concentration of 38% ash &amp; 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 impermeability with Bentonite.</p>



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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 &amp; 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 &amp; 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. 444662 plants in approx 633.36 acres area have been planted till Sept, 2020. 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	<p>Complied.</p> <p>All the 6 units of the project are in operation.</p>



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	workers during construction phase.	
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 <b>Annexure 1</b>.</p>
XXIV	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project,	<p>Complied.</p> <p>The notice has been published in the following</p>

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	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 <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> .	newspapers.  <ul style="list-style-type: none"> <li>• Danik Bhaskar dt.13.12.2006</li> <li>• Nav Bharat Times dt.13.12.2006</li> </ul>
XXV	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	Complied.  Separate environment cell is established with qualified Staff under direct control of Sr. Executive.
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.	Condition is amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09".  Latest compliance report for the period of <b>April, 2020 to September, 2020</b> has been submitted to MoEF&CC, CPCB and MPPCB vide letter no. SPL/ENV/ MoEF & CC/EC/2020-21/14 dated 01.12.2020.
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 protection measures along with item-wise break up. This cost should be included as	There is a separate fund allocated for the environmental protection measures and is separately governed under the SAP accounting system. The expenditure is reported as a part of

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	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.	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:- <b><u>Literacy initiatives:</u></b> Provide quality education by engaging DAV management in R&R

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		<p>schools.</p> <p>Improve drinking water and sanitation facilities in the existing school &amp; nearby vicinity. Providing Urjanchal Scholarship for meritorious students, organizing painting competition etc.</p> <p><b><u>Health initiatives:</u></b> Primary Health Centre established in Surya Vihar (R&amp;R) colony with qualified Dr. &amp; staffs. Free medicines are being provided to PAPs. Organize Gynae camp, Free Eye Checkup &amp; Health Checkup Camp, Blood donation camp etc.</p> <p><b><u>Sports and Cultural Initiatives:</u></b> Sponsoring activities like All India &amp; District Level Football &amp; Cricket tournaments, celebration of world environment day, Singrauli Mahotsawa, Durga Puja, etc.</p> <p><b><u>Infrastructure Development initiatives</u></b> like Construction of bore wells &amp; hand pumps, rainwater harvesting ,construction of road ,wall painting etc.</p> <p><b><u>Sustainable Livelihood initiatives</u></b> like Employment to local people, Construction skill training through CIDC, CSTC followed by deployment in project activities, formation of Cooperative Societies &amp; SHGs for awarding of construction contracts, dairy management, wadi cultivation, poultry, goatry, tailoring classes for women, etc.</p> <p><b><u>Vidyaadan Project:</u></b> Vidyadaan project has hatched to aim improve the suroounding govt. school performance and results.</p> <p>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.</p> <p><b><u>Group Blood Donation Campaign:</u></b> Blood donation campaign organised by Sasan Power Ltd. where maximum of our employee volunturrily had participated in the programme</p>
XXXIV	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<p>Complied.</p> <p>Construction work completed and plant is fully operational.</p>

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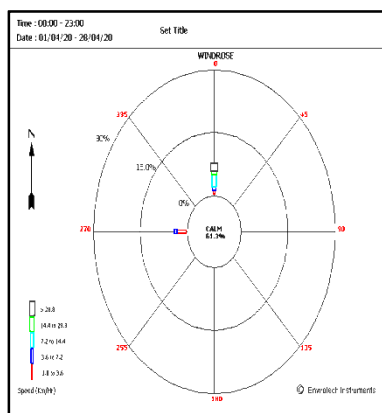
XXXV	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be 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  <a href="http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm">http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm</a>
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 <sub>2</sub> and NO <sub>x</sub> (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.  <a href="http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm">http://www.reliancepower.co.in/business_areas/power_projects/coal_based_projects/sasan/environment.htm</a>  Environmental data display board is established at the main gate.
XXXVI II	The environment statement for each financial year ending 31 <sup>st</sup> 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/ENG/MPPCB/ES/2020-21/07 on 19.06.2020. Latest CTO Compliance report vide letter no. SPL/EMG/PCB/CTO/ 2021-22/3 submitted to RO- MPPCB, Singrauli and Member Secretary, MPPCB- Bhopal on dtd. 14.05.2021.
XXXIX	The project authorities 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	Complied.

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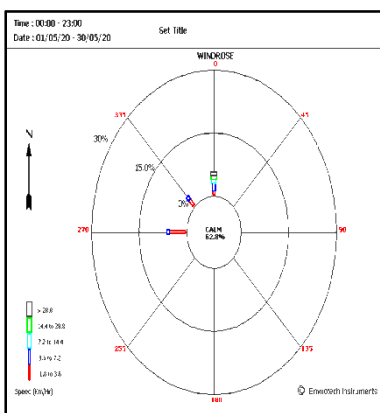
land development work and commissioning of plant.

**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. .

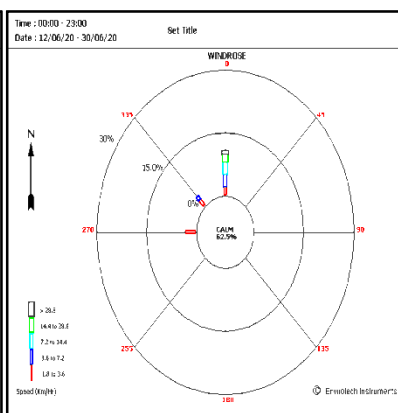
## Wind rose Diagrammed



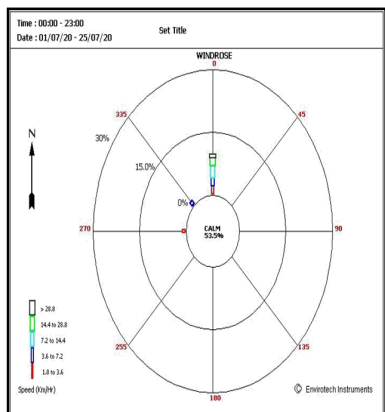
Oct., 2020



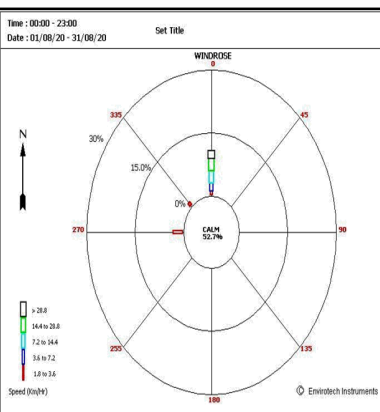
Nov., 2020



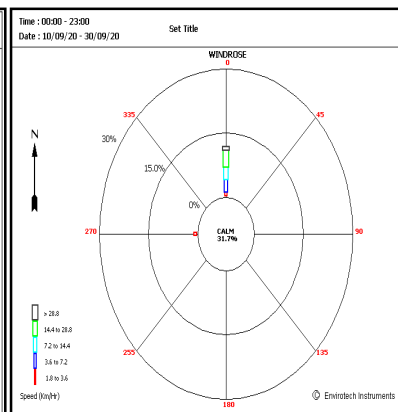
Dec., 2020



Jan., 2021



Feb., 2021



Mar., 2021

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**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 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 PM<sub>10</sub>, PM<sub>2.5</sub>, Sulphur dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) & 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.



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### Sasan Ultra Mega Power Project (1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)

**446,612** trees covering an area of **637.36 acre**, with survival rate of **90 %** have already been planted till March, 2021. 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:

- 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, SO<sub>2</sub>, NO<sub>x</sub> & CO.



✓

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

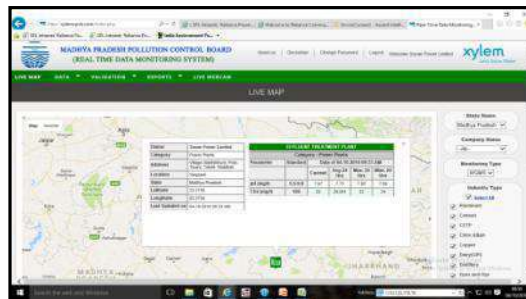


✓ 0

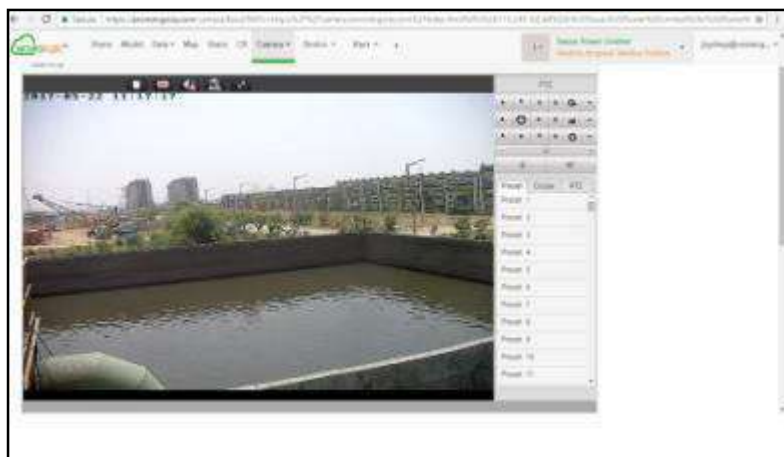
## Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC For

### Sasan Ultra Mega Power Project (1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)

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



- ✓ **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.



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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

**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 Environment Day 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 also, Sasan power Limited has celebrated Word Environment Day 2020 with full enthusiasm. Because of the COVID 2019 restrictions, all the celebrations were planned to be made by following social distancing and avoiding any public gathering. Therefore, with the help of Team IT, events / competitions were made totally online and response by the participants has also been highly encouraging.
- A large number of participation was noticed from the employee, their family and contract worker's side in the various online competitions like Quiz, Slogan, Poster, Essay etc. Prized were also distributed to the winners by following strict social distancing.
- The Sasan leadership has also praised the way of celebrating World Environment Day this year. The Sasan leadership has conveyed their best wishes for World Environment Day for Entire Sasan Family.

➤ **World Ozone Day** has been celebrated with movie demonstrating “Ozone Ki Kahani ,Ozi Ki Jubani” to spread awareness among employees to control greenhouse emission .

➤ **Green Belt Development:**

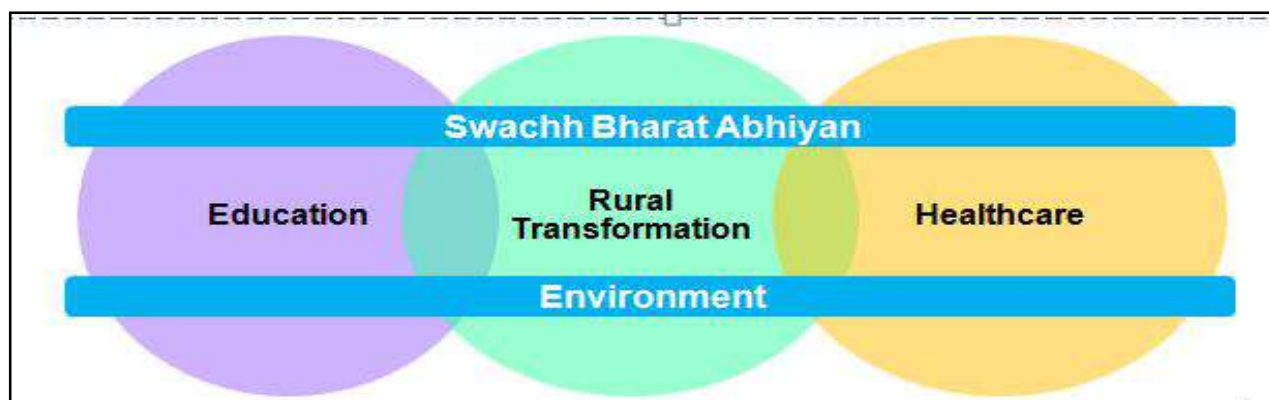
- a) 1950 nos trees have been planted in 4 Acres Area during Oct., 2020 to March, 2021.
- b) Greenbelt Development has covered 637.36 Acres of land within Power Plant as against the requirement of 474.14 Acres.

**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
For  
Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)  
Corporate Social Responsibility**

**Major Highlights- Oct 20-March 21**

**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:**
  - BAIF, DAV Schools, Indian Red Cross Society, Sahara Manch, Local Govt. Bodies and Deptts

**Major CSR Highlights- Oct 20-March 21**

**DAV School Surya Vihar**-English Medium Quality education to under privileged 1128 students completely free through CBSE affiliated school.





**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
For  
Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

**CBSE Affiliation of DAV School Surya Vihar upto Std XII for running classes for Humanities and, Commerce Stream**

**NO. CBSE/AFF//SS-00747-2122/2021-22**

**Dated:  
26/10/20**

**The Manager,  
DAV PUBLIC SCHOOL, SURYA VIHAR  
AT-SURYA VIHAR, PO- TIYARA, DISTT-SINGRAULI  
WAIDHAN  
MADHYA PRADESH ,SINGHROULI, 486886  
(M: 231016)**

**Subject : Upgradation up to Senior Secondary Level- regarding.**

**Ref : Application No. SS-00747-2122 dated 24.02.2020.**

With reference to your application on the subject cited above; I am directed to convey the sanction for General Affiliation as per details given below :

<b>Affiliation No.</b>	<b>1030979</b>
<b>Affiliated for</b>	<b>Senior Secondary School Examination Class 1 to 12</b>
<b>Category</b>	<b>Upgradation of Affiliation</b>
<b>Period of General affiliation</b>	<b>01.04.2021 to 31.03.2024</b>
<b>Year and Month From which admission can be taken in Class-</b>	<b>1 April, 2021</b>



**World Hand Washing Day observation:** The day observed at DAV School Surya Vihar to sensitize the aspect and impact of hygiene and cleanliness. The program was conducted following the COVID-19 protocol.



**Co-curriculum activities at DAV School-different such activities were conducted at school through online/offline medium for overall educational development of students**



**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
For  
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(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

<p><b>Inaugration Yagyashala at DAV School-Yag Shala</b> was inaugurated by Sh.Sachin Mohapatra Station Director along with other senior members of the company</p>	 																																								
<p><b>Observing the Fit india Movement:</b> In line with the Central Govt ambitious program different activities were conducted and studnets sensitised.</p>	 																																								
<p><b>Primary Health Centre Surya Vihar</b>-fully eqipped health Centre with 24x7 Hours ambulance facility for linkages with secondary and tertiary healthcare facilities. Total 4368 patients benefitted through OPD.</p>	<p><b>Nos of Patient benefitted through OPD</b></p> <table><tr><th>SI.NO</th><th>Months</th><th>Male</th><th>Female</th><th>Total</th></tr><tr><td>1</td><td>Oct-20</td><td>457</td><td>326</td><td>783</td></tr><tr><td>2</td><td>Nov-20</td><td>317</td><td>236</td><td>553</td></tr><tr><td>3</td><td>Dec-20</td><td>358</td><td>329</td><td>687</td></tr><tr><td>4</td><td>Jan-21</td><td>469</td><td>361</td><td>830</td></tr><tr><td>5</td><td>Feb-21</td><td>451</td><td>431</td><td>882</td></tr><tr><td>6</td><td>Mar-21</td><td>385</td><td>371</td><td>756</td></tr><tr><td><b>Total</b></td><td></td><td></td><td></td><td><b>4491</b></td></tr></table>	SI.NO	Months	Male	Female	Total	1	Oct-20	457	326	783	2	Nov-20	317	236	553	3	Dec-20	358	329	687	4	Jan-21	469	361	830	5	Feb-21	451	431	882	6	Mar-21	385	371	756	<b>Total</b>				<b>4491</b>
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6	Mar-21	385	371	756																																					
<b>Total</b>				<b>4491</b>																																					
<p><b>COVID-19 Prevention and Care services:</b>Different initiatives like Mask, Sanitiser, Ration Kit distribution conducted in the operational villages</p>	 																																								
<p><b>Promotion of Institutional delivery:</b> 194 units Baby kit distributed to the mother opted for institutional deliveires.</p>																																									



**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
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(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

<p><b>Support to poors during winter season:</b> through Distribution-400 nos of blankets</p>	
<p><b>Malaria prevention drive:</b> Distribution of Mosquitonet-590 nos to underprivileged families including tribals</p>	
<p><b>Celebration of International Women’s Day-21</b> – women from all walk of life gathered to celebrate the day with the underlining theme of empowerment.</p>	
<p><b>Training on Prevention of Sexual Harrassment at Work Place “POSH”</b> : 75 participants attended the program. Speaker was Ms. Archan Patel –Jila Abhiyojan adhikari</p>	
<p><b>Inter Circle Kabaddi tournament- Pipra:</b> 20 teams participated in the event and team Pipra was winner</p>	
<p><b>Inter Circle Volleyball tournament- Giddhkadi (Sidhikhurd)</b> : 20 teams participated. Team Sidhikhurd was winner</p>	



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<p><b>Inter Circle Kabaddi tournament- R&amp;R Colony Surya Vihar:</b> more than 16 teams participated, majan kalan was winner</p>	
<p><b>9<sup>th</sup> Inter State Volleyball tournament –Sidhi Kalan 2021</b> Different state level teams participated. MP Police was winner, Azamgarh was runner up. Attractive Cash Prizes and trophy was given.</p>	
<p><b>Safe Drinking Water :</b> through installation of 13 nos Hand-pumps at repairing of more than 30 hand-pumps</p>	

**Compliance Status Report for “Environmental Clearance” Accorded by the MoEF&CC  
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(1<sup>st</sup> October, 2020 to 31<sup>st</sup> March, 2021)**

**Farm Based Sustainable Livelihood Initiative through BAIF- Cattle Development through Cross Breeding (Artificial insemination, vaccination, de-worming, veterinary camps)-**

- a. Artificial Insemination(AI)- So far 8851 AI done till project inception, 1335 AI in this FY
- b. Cross Breed Calf- 2594 nos cross breed calf since project inceptions and 308 nos in this FY
- c. Vaccination- 21400 since project inception and 5295 in this FY
- d. De-worming- 20427 since project inception and 7071 in this FY
- e. Farmers Meeting- 57, benefitting 1015 farmers so far
- f. Farmers Training 34 , benefitting 908 farmers so far





# 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 9976, 2232177

Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



March, 2021	PM10	50.85	57.09	42.36	50.05	58.4	63.36	42.93	48.49	50.53	57.71	57.6	63.02	51.93	57.16
	PM2.5	25.63	28.89	23.36	29.06	30.3	35.11	21.46	27.61	24.11	28.82	27.14	34.07	22.71	28.5
	SO2	16.17	21.62	15.77	20.05	25.96	32.33	11.79	16.49	16.5	22.1	24.99	28.38	15.56	19.9
	NO2	22.44	27.27	20.75	26.93	33.89	39.09	16.5	21.78	25.16	30	33.81	37.63	26.41	30.22
	CO	0.628	0.691	0.539	0.61	0.655	0.715	0.358	0.418	0.59	0.63	0.649	0.702	0.623	0.686
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

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

Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED





## 6x660 MW SASAN ULTRA MEGA POWER PROJECT

### Flue Gas Monitoring DATA

October, 2020 to March, 2021

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

Months	Pollutants	Locations and Concentrations (in mg/Nm <sup>3</sup> )					
		Unit # 1	Unit # 2	Unit # 3	Unit # 4	Unit # 5	Unit # 6
Oct, 2020	PM	44.1	41.8	44.9	42.8	47.2	46.1
	SO <sub>2</sub>	866	871	875	852	881	879
	NO <sub>x</sub>	247	259	243	247	262	272
	CO	1.49	1.66	1.59	1.69	1.81	1.79
	Exit Velocity (m/s)	25.05	24.90	25.11	25.14	25.28	25.27
Nov, 2020	PM	42.9	45.1	43.5	46.2	45.8	40.8
	SO <sub>2</sub>	876	886	849	863	872	874
	NO <sub>x</sub>	232	247	251	242	259	261
	CO	1.51	1.71	1.69	1.77	1.44	1.8
	Exit Velocity (m/s)	25.09	25.24	25.10	24.94	25.08	25.14
Dec, 2020	PM	43.2	44.7	41.6	47.1	47.2	42.5
	SO <sub>2</sub>	881	869	873	893	865	860
	NO <sub>x</sub>	240	239	243	227	247	241
	CO	1.96	1.88	1.66	1.83	1.61	1.49
	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity (m/s)	25.22	25.13	25.30	25.04	25.17	25.19
Jan, 2021	PM	41.9	45.1	46.9	45.7	44.1	46
	SO <sub>2</sub>	842	871	888	878	870	871
	NO <sub>x</sub>	229	242	237	236	237	248
	CO	1.22	1.72	1.69	1.91	1.68	1.58
	Exit Velocity(m/s)	25.11	25.28	25.71	25.19	25.07	25.26
Feb, 2021	PM	45.8	42.5	47.2	41.6	46.5	43.8
	SO <sub>2</sub>	833	866	871	881	868	875
	NO <sub>x</sub>	235	238	242	241	244	241
	CO	1.78	1.69	1.93	1.83	1.77	1.63
	Exit Velocity(m/s)	25.62	25.48	25.88	25.26	25.36	25.51
Mar, 2021	PM	43.7	45.9	46.7	43.8	41.3	46.2

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	SO2	840	871	836	869	882	863
	NOx	241	232	229	245	233	234
	CO	1.93	1.77	1.62	1.58	1.41	1.8
	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity(m/s)	25.78	25.05	25.62	25.31	25.81	25.68

Where, BDL (Below Detection Limit)

Prepared By

Signature.....  
Name .....Dr. Dinesh K. Uchhariya  
Designation .....Dy. Manager (Technical)  
AETRL (P.) LIMITED



Checked & Approved By

Signature.....  
Name .....Rajesh Jain  
Designation .....Manager  
AETRL (P.) LIMITED

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aelgwalior@gmail.com](mailto:aelgwalior@gmail.com)



## SASAN POWER LIMITED AMBIENT NOISE MONITORING October, 2020 to March, 2021

Month/Locations	Day			Night		
	Min	Max	Leq	Min	Max	Leq
<b>Oct, 2020</b>						
Construction Office	54.1	68.7	65.5	52.7	63.1	60.5
Permanent Store	53.9	69.1	66.2	50.6	65.6	63.5
Sasan Village	44.5	54	52.7	41.7	43.7	42.9
Siddhi Khurd Village	43.2	53.4	51.6	40.8	42.6	41.6
Harrahawa Village	45	52.9	48.2	40.5	42.1	41.8
Tiyara Town Ship	42.5	46.1	44.8	37.6	40.6	39.1
Siddhi Kallan	43.9	54.2	51.1	41	43.7	42.7
<b>Nov, 2020</b>						
Construction Office	52.8	67.1	64.1	51.8	64.1	62.3
Permanent Store	51.5	65.8	60.9	49.7	63.6	61.4
Sasan Village	42.8	53.2	50.6	40.6	42.7	41.2
Siddhi Khurd Village	41.9	52.7	49.1	42.7	44.2	43.8
Harrahawa Village	42.2	51.2	45.9	41.2	43.6	42.1
Tiyara Town Ship	38.1	47.6	44.8	36.9	41.2	39.3
Siddhi Kallan	42.5	52.8	50.1	40.3	42.8	41.8
<b>Dec, 2020</b>						
Construction Office	55.9	69.2	63.7	52.2	65.1	61.6
Permanent Store	53.2	66.1	61.5	47.7	64.9	60.5
Sasan Village	47.4	52.8	50.7	42.8	44.3	43.1
Siddhi Khurd Village	46.6	51.5	48.6	41.6	43.1	42.9
Harrahawa Village	44.7	52.3	48.2	40.1	44.8	43
Tiyara Town Ship	37.8	45.1	42.1	37.5	40.6	38.6
Siddhi Kallan	40.7	52	49.2	42.1	43.2	42.1
<b>Jan, 21</b>						
Construction Office	57.1	70.1	66.8	52.1	67.6	62.9
Permanent Store	55.7	65.9	61.1	49.1	64.1	58.7
Sasan Village	46	53.5	51.9	40.7	44	43.1
Siddhi Khurd Village	45.8	52.3	49.9	40	42.7	41.9
Harrahawa Village	43.9	51.7	48.8	41	44.5	42.6
Tiyara Town Ship	35.7	46.5	40.5	33.8	41.9	37.4
Siddhi Kallan	42.2	54.2	48.6	41	43.1	42.5
<b>Feb, 21</b>						
Construction Office	60.8	72.2	68.1	55.8	65.1	61.5



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Permanent Store	58.2	66.5	62.3	52.6	63.9	60.2
Sasan Village	45.5	52.3	50.2	41.5	44.1	42
Siddhi Khurd Village	44.3	53.1	51.1	41.9	43.9	42.5
Harrahawa Village	45.1	52	49.7	40.5	43.1	41.8
Tiyara Town Ship	41.2	45.3	43.7	37.5	42.3	39.5
Siddhi Kallan	44.7	51.9	47.2	40.9	43.6	41.6
<b>March, 21</b>						
Construction Office	59.5	70.7	67.5	56.5	64.1	62.9
Permanent Store	57.3	68.3	64.6	54.3	62.9	58
Sasan Village	46.7	51.8	48.8	40.7	43.1	41.5
Siddhi Khurd Village	45.6	52.6	50.3	39.6	42.9	40.9
Harrahawa Village	46.2	52.9	48.2	41.2	43.1	42.1
Tiyara Town Ship	42	47.1	45.6	35.7	40.3	37.8
Siddhi Kallan	43.5	54.0	49.2	41.3	42.9	41.8

Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED

Month/Locations	Day			Night		
	Max	Min	Leq	Max	Min	Leq
<b>October, 2020</b>						
Amlohari Village	44.9	51.4	48.9	41.9	44.2	42.7
Dhatura Village	43.7	53.2	50.2	41.2	43.7	42.5
TF-435	46.9	54.1	51.1	42.1	43.1	42.9
Hirrwah Village	43.1	52.6	49.7	40.7	44.4	42.5
Naugarh Village	42.7	52.7	50.2	41.6	43.5	42.9
Pachaur Village	43	51.5	48.6	40.5	43.8	42.5
Shiv Pahari	52.2	63.2	58.1	52.3	54.1	53.6
<b>November, 2020</b>						
Amlohari Village	46.8	54.7	50.7	42.7	45	44.2
Dhatura Village	45.1	54.9	52.5	42.6	44.7	43.4
TF-435	47.5	53.6	51.8	40.6	43.6	41.1
Hirrwah Village	44.8	53.4	51.3	41.2	44.7	42.9
Naugarh Village	43.6	51.8	50.7	40.8	42.1	41.7
Pachaur Village	42.8	52.2	49.1	41.4	43.2	42.1
Shiv Pahari	51.1	64.3	61.8	51.7	54.8	52.6
<b>December, 2020</b>						
Amlohari Village	47.9	53.8	51.7	40.9	44.2	42.7
Dhatura Village	46.6	53.5	50.1	40.2	43.6	41.4
TF-435	48.1	55.3	53.3	40.1	44.1	42.7
Hirrwah Village	43.7	52.7	50	41.6	43.8	42.9
Naugarh Village	44.8	50.1	47.5	41.7	43.6	42.5
Pachaur Village	45.2	51.8	48.9	40.9	44	43.8
Shiv Pahari	50.6	62.6	60.1	49.8	53.1	51.7
<b>January, 2021</b>						
Amlohari Village	44.7	52.1	50.1	40.5	44.2	42.7
Dhatura Village	45.1	54.2	52.3	40.9	43.5	42.4
TF-435	47.9	53.7	49.7	41.6	44.4	42.9
Hirrwah Village	46.2	51.9	49.1	41.7	42.7	42
Naugarh Village	46.9	52.5	49.9	41	43.1	42.4
Pachaur Village	45.7	53.1	50.9	42.5	43.5	43
Shiv Pahari	55.1	60.5	58.7	49.2	53.1	51.5
<b>February, 2021</b>						

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Amlohari Village	46.1	53.0	51.5	42.3	43.7	43.1
Dhatura Village	44.6	52.8	50.1	41.8	44.1	42.9
TF-435	48.3	54.1	52	42.7	44.3	43.7
Hirrwah Village	45.1	52.7	50.6	40.2	43	41.8
Naugarh Village	47.2	51.3	48.5	42.1	43.8	42.5
Pachaur Village	44.9	53.6	51.4	40.8	44	42.3
Shiv Pahari	50.5	62.7	60.1	47.5	52.6	49.2
<b>March, 2021</b>						
Amlohari Village	45.9	54.1	52.5	41.7	44	42.9
Dhatura Village	43.7	53.2	51.1	40.5	43.6	42.1
TF-435	48.6	52.6	50	42.2	43.4	42.9
Hirrwah Village	44.8	50.4	50.6	41.3	44.1	41.3
Naugarh Village	42.3	52.8	46.9	40.7	42.9	41.7
Pachaur Village	43.2	51.9	48.7	39.5	42.6	40.9
Shiv Pahari	48.9	64.6	62.3	45.9	53.1	51.6

Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy. Manager.(Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED

# 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 9976, 2232177

Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	October, 2020					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.73	7.53	7.56	6.91	6.95	6.93
Colour (Hazen)	15	2.49	2.67	2.86	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.51	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	473	479	479	102	116	112
Total Alkalinity (mg/L)	600	172	178	170	47.6	45.1	46.8
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	181	188	186	48.9	50.8	48.1
Calcium as Ca (mg/L)	200	52.9	51.7	54.7	9.93	9.76	8.86
Magnesium as Mg (mg/L)	100	11.84	14.27	11.96	5.87	6.41	6.28
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	55.9	53.7	55.1	4.08	3.18	3.55
Sulphate (mg/L)	400	65.7	48.8	61.7	2.33	1.72	2.16
Fluoride* (mg/L)	1.5	0.626	0.611	0.703	BDL	BDL	BDL
Nitrate (mg/L)	45	4.36	5.76	9.8	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 *(Nos/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)

Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED



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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	November, 2020					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.55	7.39	7.49	6.94	6.99	7.01
Colour (Hazen)	15	2.31	2.05	2.11	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.51	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	486	477	480	96	108	119
Total Alkalinity (mg/L)	600	177	172	173	45.2	46.8	51.2
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	186	184	182	45.7	52.2	54.7
Calcium as Ca (mg/L)	200	52.1	50.5	52.2	9.11	9.83	9.05
Magnesium as Mg (mg/L)	100	13.54	14.03	12.51	5.64	6.66	7.86
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	57.7	57.2	51.7	3.89	2.93	3.81
Sulphate (mg/L)	400	69	52.3	58.2	2.17	2.89	2.93
Fluoride* (mg/L)	1.5	0.686	0.663	0.693	BDL	BDL	BDL
Nitrate (mg/L)	45	5.18	4.95	4.86	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 *(Nos/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)

### Prepared By

Signature.....  
Name ..... Dr. Dinesh K. Uchhariya  
Designation ..... Dy Manager (Technical)  
AETRL (P.) LIMITED



### Checked & Approved By

Signature.....  
Name ..... Rajesh Jain  
Designation ..... Manager  
AETRL (P.) LIMITED

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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	December, 2020					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.63	7.6	7.53	6.97	6.91	7.08
Colour (Hazen)	15	2.42	2.28	2.29	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.44	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	480	470	472	91	101	122
Total Alkalinity (mg/L)	600	181	173	173	46.9	47.2	53
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	176	180	185	47.1	51	52.2
Calcium as Ca (mg/L)	200	50.7	51.1	51.1	9.42	9.92	9.56
Magnesium as Mg (mg/L)	100	11.96	12.69	13.91	5.69	6.36	6.82
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	61.8	55.1	52.8	3.09	2.11	3.05
Sulphate (mg/L)	400	63.5	50.8	53.8	2.66	2.63	2.63
Fluoride* (mg/L)	1.5	0.641	0.614	0.676	BDL	BDL	BDL
Nitrate (mg/L)	45	5.63	5.36	2.89	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 *(Nos/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)

Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED



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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	January, 2021					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.59	7.47	7.39	6.93	6.88	7.02
Colour (Hazen)	15	2.55	3.08	2.08	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.55	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	496	480	487	96	98	110
Total Alkalinity (mg/L)	600	189	170	176	44.5	45.7	57
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	193	174	189	50.6	48	55.6
Calcium as Ca (mg/L)	200	53.1	52.8	52.2	9.58	9.58	9.81
Magnesium as Mg (mg/L)	100	14.64	10.21	14.21	6.47	5.84	7.55
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	57.5	57.8	50.3	3.36	2.66	2.93
Sulphate (mg/L)	400	61.6	55.1	55.5	2.08	2.18	2.17
Fluoride* (mg/L)	1.5	0.688	0.708	0.688	BDL	BDL	BDL
Nitrate (mg/L)	45	2.38	3.18	3.17	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 *(Nos/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)

### Prepared By

Signature.....  
Name ..... Dr. Dinesh K. Uchhariya  
Designation ..... Dy Manager (Technical)  
AETRL (P.) LIMITED



### Checked & Approved By

Signature.....  
Name ..... Rajesh Jain  
Designation ..... Manager  
AETRL (P.) LIMITED



# Advanced Environmental Testing And Research Lab P. Ltd.



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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	February, 2021					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.61	7.66	7.47	6.97	6.9	6.99
Colour (Hazen)	15	2.21	3.28	3.96	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.42	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	490	487	492	90	102	106
Total Alkalinity (mg/L)	600	190	179	168	46.2	49.1	55.5
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	194	183	182	51.1	51.2	53.2
Calcium as Ca (mg/L)	200	53.7	53.4	51.8	9.77	9.86	10.1
Magnesium as Mg (mg/L)	100	14.51	12.02	12.75	6.46	6.45	6.79
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	62.8	55.1	54.6	3.19	2.15	2.86
Sulphate (mg/L)	400	66.3	67.5	57.3	2.56	3.36	2.67
Fluoride* (mg/L)	1.5	0.774	0.715	0.654	BDL	BDL	BDL
Nitrate (mg/L)	45	3.63	5.36	3.86	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 *(Nos/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)

Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED



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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	March, 2021					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.57	7.49	7.55	6.91	6.95	6.9
Colour (Hazen)	15	2.88	2.81	3.22	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.61	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	483	480	498	88	98	110
Total Alkalinity (mg/L)	600	178	169	172	44.8	47.8	58.1
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	191	181	189	47.3	49.9	55.8
Calcium as Ca (mg/L)	200	52.8	52.7	53.1	9.52	9.7	10.8
Magnesium as Mg (mg/L)	100	14.34	11.96	13.67	5.71	6.23	6.99
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	66.7	52.8	57.1	2.03	2.28	2.1
Sulphate (mg/L)	400	69	63.9	58.7	2.46	2.66	2.88
Fluoride* (mg/L)	1.5	0.742	0.702	0.633	BDL	BDL	BDL
Nitrate (mg/L)	45	4.08	3.38	4.22	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 *(Nos/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)

### Prepared By

Signature.....  
Name ..... Dr. Dinesh K. Uchhariya  
Designation ..... Dy Manager (Technical)  
AETRL (P.) LIMITED



### Checked & Approved By

Signature.....  
Name ..... Rajesh Jain  
Designation ..... Manager  
AETRL (P.) LIMITED

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## Sasan Power Limited SURFACE WATER QUALITY (October, 2020)

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.37	7.62	7.51
Colour (Hazen)	300	142	158	139
Total Dissolved Solids (mg/L)	1500	648	462	440
Dissolved Oxygen (mg/L)	4	5.66	5.11	5.48
Biochemical Oxygen Demand (mg/L)	3	2.53	2.31	2.42
Chloride (mg/L)	600	52.8	56.7	49.8
Cyanide* (mg/L)	0.05	BDL	BDL	BDL
Fluoride* (mg/L)	1.5	0.508	0.527	0.551
Sulphate (mg/L)	400	57.6	51.7	47.8
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	17.1	10.9	12.2
Arsenic* (mg/L)	0.2	BDL	BDL	BDL
Copper* (mg/L)	1.5	BDL	BDL	BDL
Iron* (mg/L)	50	0.148	0.145	0.165
Zinc* (mg/L)	15	0.217	0.16	0.284
Cadmium* (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED

# 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 9976, 2232177

Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited SURFACE WATER QUALITY November, 2020

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.41	7.59	7.49
Colour (Hazen)	300	155	151	142
Total Dissolved Solids (mg/L)	1500	662	471	449
Dissolved Oxygen (mg/L)	4	5.78	5.55	5.17
Biochemical Oxygen Demand (mg/L)	3	2.49	2.36	2.29
Chloride (mg/L)	600	59.1	52.9	47.2
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.558	0.558	0.563
Sulphate (mg/L)	400	55.2	57	52.3
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	14.8	13.1	15.4
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	BDL	BDL	BDL
Iron (mg/L)	50	0.132	0.159	0.148
Zinc (mg/L)	15	0.224	0.145	0.263
Cadmium (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited SURFACE WATER QUALITY December, 2020

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.49	7.33	7.35
Colour (Hazen)	300	138	148	130
Total Dissolved Solids (mg/L)	1500	648	456	432
Dissolved Oxygen (mg/L)	4	5.93	5.49	5.28
Biochemical Oxygen Demand (mg/L)	3	2.42	2.46	2.13
Chloride (mg/L)	600	57.5	41.9	40.7
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.547	0.532	0.552
Sulphate (mg/L)	400	59.1	49.7	50.8
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	12.9	10.8	17.1
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	BDL	BDL	BDL
Iron (mg/L)	50	0.155	0.136	0.13
Zinc (mg/L)	15	0.217	0.117	0.242
Cadmium (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited SURFACE WATER QUALITY January, 2021

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.51	7.41	7.47
Colour (Hazen)	300	127	152	110
Total Dissolved Solids (mg/L)	1500	448	416	428
Dissolved Oxygen (mg/L)	4	5.36	5.33	5.69
Biochemical Oxygen Demand (mg/L)	3	2.17	2.46	2.33
Chloride (mg/L)	600	50.2	42.5	47.1
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.515	0.557	0.519
Sulphate (mg/L)	400	61.5	45.2	55.7
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	8.95	16.1	14.6
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	BDL	BDL	BDL
Iron (mg/L)	50	0.163	0.159	0.138
Zinc (mg/L)	15	0.119	0.281	0.209
Cadmium (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED



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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited SURFACE WATER QUALITY February, 2021

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.38	7.35	7.29
Colour (Hazen)	300	150	132	108
Total Dissolved Solids (mg/L)	1500	431	436	430
Dissolved Oxygen (mg/L)	4	5.78	6.02	6.11
Biochemical Oxygen Demand (mg/L)	3	2.52	2.21	2.36
Chloride (mg/L)	600	57.8	49.2	48.7
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.576	0.563	0.542
Sulphate (mg/L)	400	66.2	48.7	58.1
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	10.12	15.6	17.6
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	BDL	BDL	BDL
Iron (mg/L)	50	0.178	0.161	0.151
Zinc (mg/L)	15	0.163	0.193	0.214
Cadmium (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited SURFACE WATER QUALITY March, 2021

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.49	7.41	7.37
Colour (Hazen)	300	163	148	122
Total Dissolved Solids (mg/L)	1500	440	443	449
Dissolved Oxygen (mg/L)	4	5.86	5.63	5.80
Biochemical Oxygen Demand (mg/L)	3	2.60	2.30	2.61
Chloride (mg/L)	600	55.1	51.1	52.3
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.559	0.57	0.561
Sulphate (mg/L)	400	63.7	46.8	52.9
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	12.86	17.1	15.7
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	BDL	BDL	BDL
Iron (mg/L)	50	0.18	0.144	0.166
Zinc (mg/L)	15	0.172	0.182	0.252
Cadmium (mg/L)	0.01	BDL	BDL	BDL
Chromium as Cr <sup>6+</sup> (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)

### Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED



**Sasan Power Limited**  
**ASH POND EFFLUENT ANALYSIS REPORT**  
(October, 2020 to March, 2021)

Parameters	Limits	Months					
		Oct, 2020	Nov, 2020	Dec, 2020	Jan, 2021	Feb, 2021	Mar, 2021
pH	6.5-8.5	6.93	7.11	7.32	7.17	7.09	6.93
TSS (mg/l)	100	52	82	68	58	88	64
Oil and Grease (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 <sup>+6</sup> (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)		0.366	0.256	0.318	0.378	0.268	0.312
Aluminum* (mg/L)		3.11	2.89	2.293	2.63	3.11	3.48
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)		0.228	0.208	0.221	0.391	0.345	0.386
Nickel* (mg/L)		0.236	0.252	0.264	0.199	0.17	0.22

Where, BDL (Below Detection Limit)

**Prepared By**

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



**Checked & Approved By**

Signature.....

Name ..... Rajesh Jain

Designation..... Manager

AETRL (P.) LIMITED

# Advanced Environmental Testing And Research Lab P. Ltd.



CIN: U73100MP2002PTC015352

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



Sasan Power Limited

ETP Outlet

(October, 2020 to March, 2021)

Parameters	Limits	Months					
		OCT, 2020	NOV, 2020	DEC, 2020	JAN, 2021	FEB, 2021	MAR, 2021
pH	5.5 to 9.0	7.48	7.39	7.41	7.32	7.63	7.51
Total Dissolved Solids (mg/L)	2100	878	896	908	936	890	910
Chlorides* (mg/L)	1000	127	138	128	136	126	131
Biochemical Oxygen Demand (mg/L)	30	11.8	10.7	11.1	10.3	8.8	7.17
Chemical Oxygen Demand (mg/L)	250	66.5	62.1	66.0	76.5	70.1	52.8
Total Suspended Solids (mg/L)	100	58	64	72	66	38	52
Oil & Grease (mg/L)	10	3.14	2.88	2.12	1.38	1.88	1.96

Prepared By

Signature.....

Name .....Dr. Dinesh K. Uchhariya

Designation .....Dy. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED

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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## SASAN POWER LIMITED STP Outlet (Purvanchal Camp) (October, 2020 to March, 2021)

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		Oct, 2020	Nov, 2020	Dec, 2020	Jan, 2021	Feb, 2021	Mar, 2021
pH	5.5 to 9.0	7.42	7.47	7.33	7.29	7.22	7.3
Biochemical Oxygen Demand (mg/L)	30	9.25	9.89	9.96	8.17	9.86	8.93
Chemical Oxygen Demand (mg/L)	250	68.1	71.7	75.1	59.8	67.8	61.2
Total Suspended Solids (mg/L)	100	52	60	66	52	42	50
Oil & Grease (mg/L)	10	1.52	1.08	1.28	1.08	0.86	0.92
Fecal Coliform* (MPN/100 ml)	<1000	48	78	64	80	72	80
RFC (mg/L)	5	0.18	0.10	0.18	0.10	0.12	0.14

### Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED



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Email: [aetrl2016@gmail.com](mailto:aetrl2016@gmail.com), [aetlgwalior@gmail.com](mailto:aetlgwalior@gmail.com)



## Sasan Power Limited STP Outlet (Near Hydrogen Plant) (October, 2020 to March, 2021)

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		Oct, 2020	Nov, 2020	Dec, 2020	Jan, 2021	Feb, 2021	Mar, 2021
pH	5.5 to 9.0	7.77	7.52	7.47	7.36	7.41	7.39
Biochemical Oxygen Demand (mg/L)	30	6.15	5.26	5.86	5.24	7.11	7.93
Chemical Oxygen Demand (mg/L)	250	57.3	42.8	51.2	48.7	55.3	68.7
Total Suspended Solids (mg/L)	100	38	50	62	66	46	42
Oil & Grease (mg/L)	10	1.89	1.44	1.2	1.16	1.02	1.11
Fecal Coliform* (MPN/100 ml)	<1000	56	60	72	56	62	48
RFC (mg/L)	5	0.19	0.14	0.1	0.16	0.10	0.12

### Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



### Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED

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## SASAN POWER LIMITED

### GROUND WATER QUALITY (Around the Ash Pond)

Parameters	IS:10500 Limits	(December, 2020)									
		Piezometer									
		Piezometer (SPL/AD/PZ-01)	Piezometer (SPL/AD/PZ-02)	Piezometer (SPL/AD/PZ-03)	Piezometer (SPL/AD/PZ-04)	Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-06)	Piezometer (SPL/AD/PZ-08)	Piezometer (SPL/AD/PZ-10)	Nr Old Labor Camp (Island 3 and Island 4 area)	Security Training Center (Island-3)
pH	6.5-8.5	7.6	7.77	7.55	7.57	7.28	7.71	7.62	7.39	7.72	7.59
Colour (Hazen)	15	2.17	1.36	1.18	2.23	2.47	3.15	3.19	2.32	2.63	3.17
Odor*	Agre.	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre
Turbidity (NTU)	1	0.78	0.82	0.76	0.68	0.77	0.47	0.62	0.67	0.66	BDL
TDS (mg/L)	2000	386	469	433	402	459	486	468	450	478	436
Total Alkalinity (mg/L)	600	165	186	148	152	152	180	170	167	166	159
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	179	181	162	174	175	192	179	175	173	166
Calcium as Ca (mg/L)	200	49.2	50.2	45.1	50.1	48.5	52.2	47.3	48.9	46.3	45.1
Magnesium as Mg (mg/L)	100	13.61	13.48	11.96	11.84	13.06	14.94	14.76	12.81	13.91	12.93
Residual Chlorine* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Boron* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides (mg/L)	1000	40.1	52.7	49.8	55.2	45.7	46.1	57.2	43.9	53.5	51
Sulphate (mg/L)	400	37.6	48.8	47.1	47.7	51.5	58.2	44.4	40.1	55.8	44.7
Fluoride* (mg/L)	1.5	0.614	0.611	0.628	0.626	0.63	0.641	0.636	0.621	0.576	0.579
Nitrate (mg/L)	45	7.13	4.38	5.63	6.15	5.12	8.33	5.28	8.39	5.33	8.11
Phenolic Compound* (mg/L)	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil* (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Prepared By

Signature.....

Name ..... Dr. Dinesh K. Uchhariya

Designation ..... Dy. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name ..... Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED

# 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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## SASAN POWER LIMITED

### GROUND WATER QUALITY (Around the Ash Pond)

Parameters	IS:10500 Limits	(March, 2021)									
		Piezometer									
		Piezometer (SPL/AD/PZ-01)	Piezometer (SPL/AD/PZ-02)	Piezometer (SPL/AD/PZ-03)	Piezometer (SPL/AD/PZ-04)	Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-06)	Piezometer (SPL/AD/PZ-08)	Piezometer (SPL/AD/PZ-10)	Nr Old Labor Camp (Island 3 and Island 4 area)	Security Training Center (Island-3)
pH	6.5-8.5	7.55	7.6	7.61	7.62	7.47	7.53	7.78	7.44	7.66	7.61
Colour (Hazen)	15	2.53	1.86	1.82	3.08	3.56	3.75	3.89	2.62	2.81	3.86
Odor*	Agre.	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre	Agre
Turbidity (NTU)	1	0.8	0.48	0.71	0.57	0.82	0.68	0.86	0.62	0.43	BDL
TDS (mg/L)	2000	392	475	449	415	449	490	478	469	496	452
Total Alkalinity (mg/L)	600	170	189	155	163	165	188	176	161	189	152
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	182	192	173	186	178	197	189	183	196	169
Calcium as Ca (mg/L)	200	47.8	51.7	49.2	51.5	50.7	52.8	52.7	49.4	53.1	47.7
Magnesium as Mg (mg/L)	100	15.18	15.24	12.15	13.91	12.45	15.79	13.91	14.45	15.36	12.08
Residual Chlorine* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Boron* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides (mg/L)	1000	44.5	57.2	47.7	52.8	47.1	49.9	62.8	47.6	61.7	55.2
Sulphate (mg/L)	400	41.9	60.7	41.8	40.2	54.3	51.8	58.1	42.8	65.4	51.9
Fluoride* (mg/L)	1.5	0.624	0.601	0.663	0.602	0.619	0.672	0.668	0.636	0.593	0.6
Nitrate (mg/L)	45	5.39	5.57	8.3	2.86	5.58	6.96	7.15	6.18	2.88	7.89
Phenolic Compound* (mg/L)	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil* (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Prepared By

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Name ..... Dr. Dinesh K. Uchhariya

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AETRL (P.) LIMITED



Checked & Approved By

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