

# 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/ 2018-19/05

Date: 18-May-2019

**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 October-2018 to March-18. 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. 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

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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, 2018 to 31<sup>st</sup> March, 2019)**

**1.0: Introduction:**

1. Sasan Power Limited is operating 3960 MW (6 x 660 MW) 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 660 MW 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.



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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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**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.
IV	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.
V	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

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		9-Sep-2008 and same is being implemented.
VII	The PAPs losing their homesteads or a major portion of the land shall not be ousted from the land till they are settled in the alternate sites.	An R&R colony (Surya Vihar colony) with all the basic facilities like school, temple, hospital, market 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 SOx, NOx 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> .



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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.
XIII	Low NOx burners shall be provided	Complied.  Low NOx burners are provided in the boiler of all the units.
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.	Being Complied.  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.
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.	Being Complied.  Dry fly-ash collection system is in place. All efforts are being made to comply with the provisions of fly-ash notification.  The condition of adopting HCSD system is amended vide MOEF letter no J-13011/15/2006-IA-II (T) date Jul 21, 2009.  The 67 <sup>th</sup> 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.
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.	Complied.  The matter was discussed in the EAC meeting held on March 19-20, 2010.  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"  Ash pond is lined using HDPE surrounding to the



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		embankment and the bottom is lined for its 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 &amp; rain water harvesting pits are established to conserve rain water.</p>
XVIII	The treated effluents conforming 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.</p> <p>409802 plants in approx 593.44 acres area have been planted till March, 2019. The entire designated area shall be taken up in phases for Greenbelt / greenery development.</p>



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XXI	First Aid and sanitation arrangements shall be made for drivers and other contract workers during construction phase.	Complied.  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.	Being Complied.  Condition as amended vide MOEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09, which states that  "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  Turbines are covered with acoustic enclosures 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.
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.	Being Complied  Regular ambient air quality monitoring is being carried out at the monitoring locations recommended by the Regional Officer, MP PCB. Half yearly monitoring reports are being submitted to the regional office (MoEF-Bhopal).



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XXIV	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, 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> .	<p>Complied.</p> <p>The notice has been published in the following newspapers.</p> <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.	<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 April-18 to September-18 has been submitted to MoEF&amp;CC, CPCB and MPPCB vide letter no. SPL/ENV/MOEF&amp;CC/EC/2018-19/16 dated 29.11.2018.</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.	<p>Noted &amp; Agreed.</p>
XXVIII	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break up. This cost should be included as	<p>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</p>



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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.
<b>Following are additional conditions as per MoEF's letter no. J – 13011/15/2006-IA-II (T) dated July 21, 09</b>		
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. Various CSR activities are being implemented for overall development of local community. Major thrust areas are:- <b>Literacy initiatives:</b> Provide quality education by engaging DAV management in R&R schools. Improve drinking water and sanitation facilities in the existing school & nearby vicinity.

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		<p>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>
XXXV	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as	<p>Complied.</p> <p>Construction work completed and plant is fully</p>



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	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.	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/ENV/PCB/ES/ 2018-19/14 dated 27.08.2018.
XXXIX	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and	Complied.  Date of financial closure is 21-Apr-09. Project company through its compliance report



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

communicated the date of financial closure. The Sasan power Ltd. had been allocated to Reliance Power Ltd. by the Project Finance Corporation after obtaining all applicable clearances and approvals.

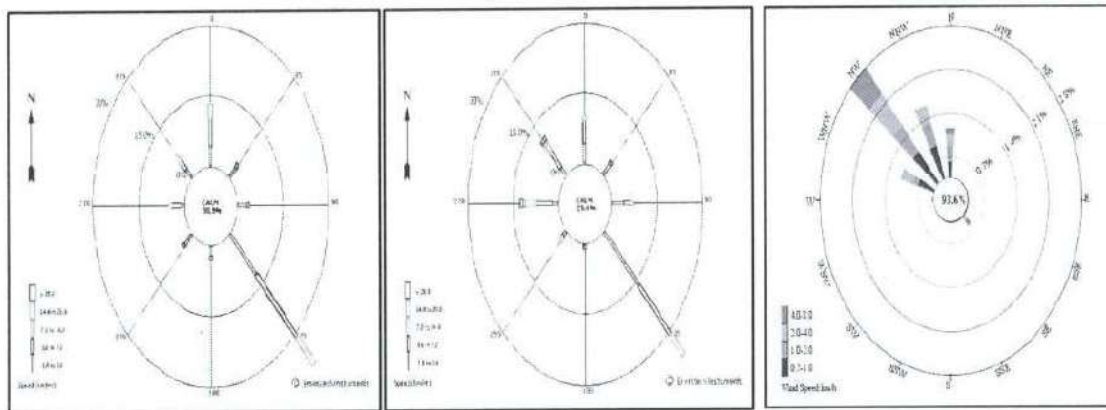
Commercial Operation dates for different units between 2013 and 2015.

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

## Sasan Ultra Mega Power Project (1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

**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. .

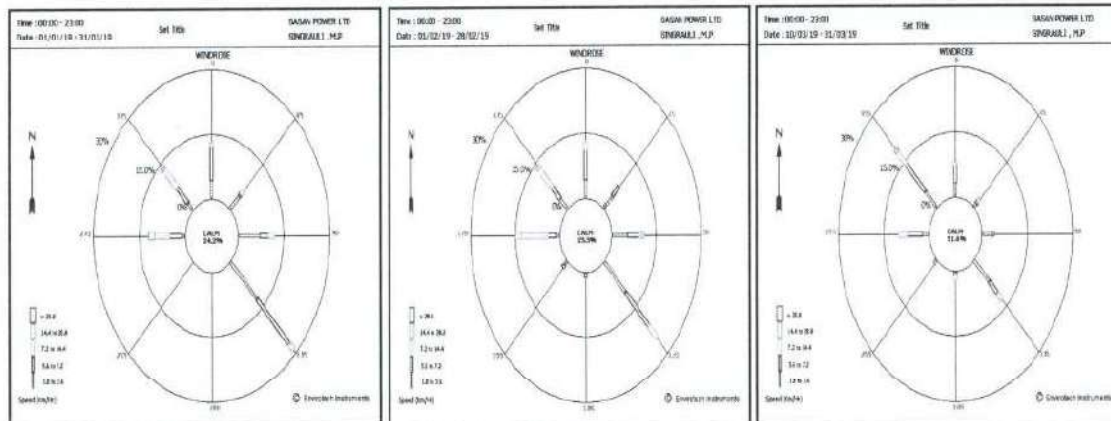
### Wind rose Diagrammed



October, 2018

November, 2018

December, 2018



January, 2019

February, 2019

March, 2019

**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.

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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 2.5, 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.

**409802** trees covering an area of **593.44 acre**, with survival rate of **90 %** have already been planted till March, 2019. 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:**

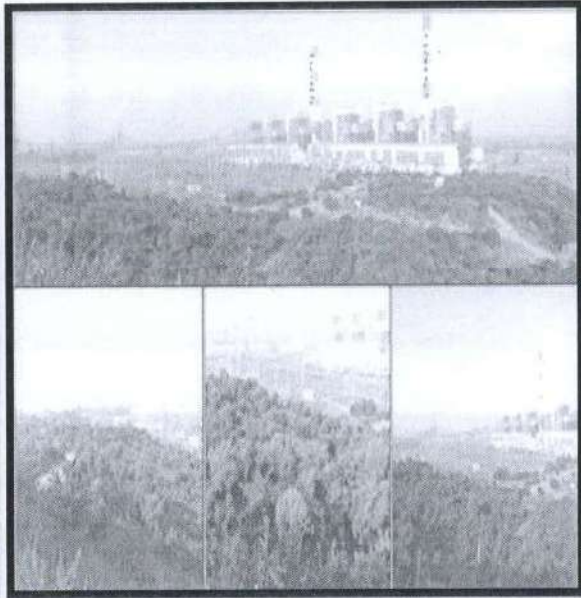
- Fast growing
- Thick canopy cover
- Perennial & evergreen



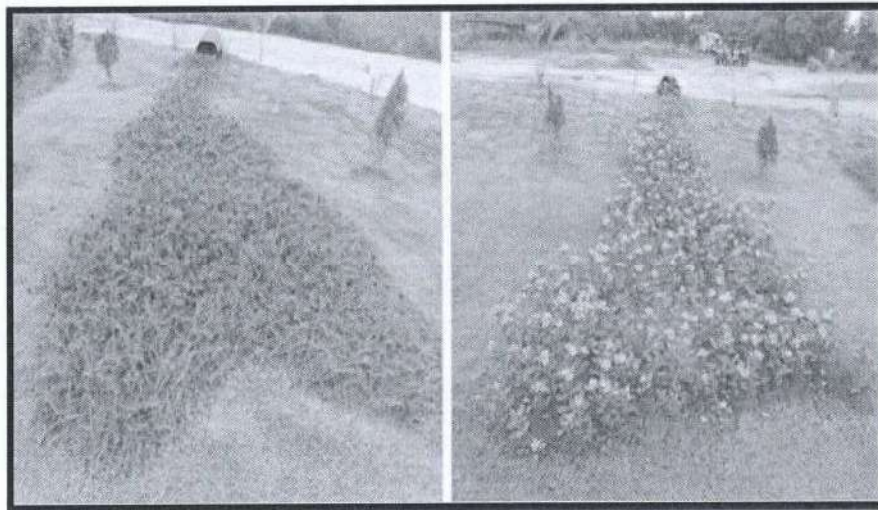
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- Large leaf area index
- High sink potential
- Efficient in absorbing pollutants without affecting their growth
- Suitable for the local seasons



**Greenbelt / Landscapes**



**Flower Spilling Pots**

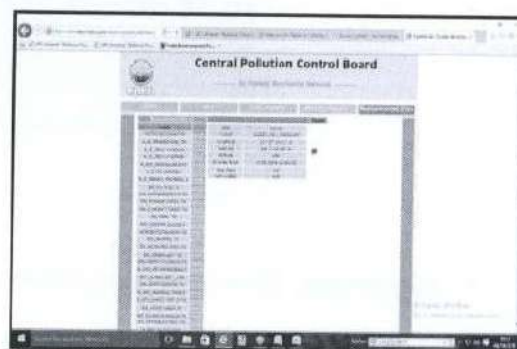
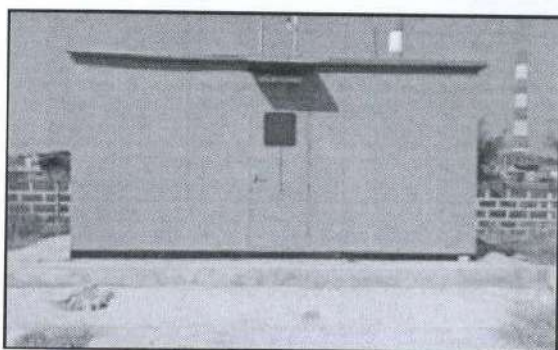
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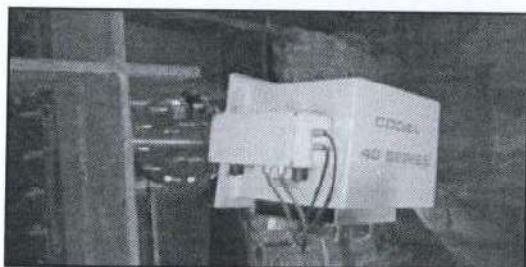
### Mass Plantation

#### 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.





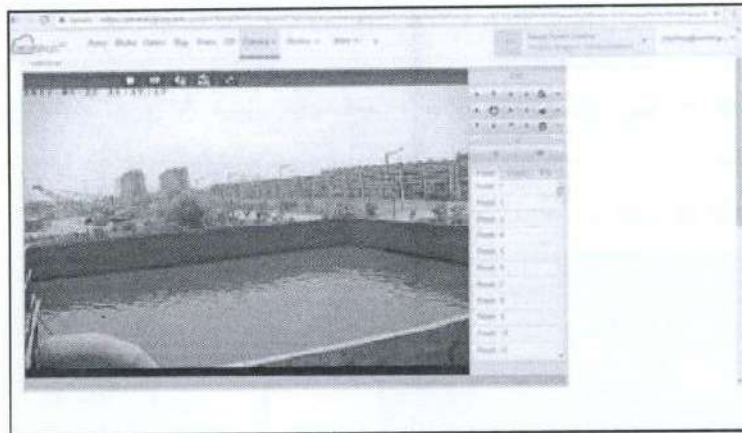
**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
For  
Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

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

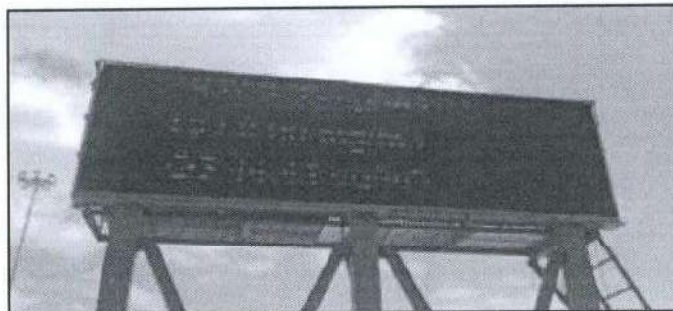


✓ |

- P based camera** with night vision facility installed near 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  
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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

Sasan Power Limited is Certified with Integrated Management System (IMS)  
(ISO 9001:2008, ISO 14001:2004 & OHSAS-18001-2007)

**BUREAU VERITAS**  
Certification



**SASAN POWER LIMITED**

**RELIANCE**  
Power

GRAM: SIDDHIKHURD, POST OFFICE: TIYARA, TEHSIL: WAIDHAN,  
DIST. SINGRAULI - 486 886, MADHYA PRADESH, INDIA.

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management  
System of the above organization has been audited and found to be in accordance  
with the requirements of the Management System standards detailed below.

Standards

**ISO 9001:2015, ISO 14001:2015 &  
BS OHSAS 18001:2007**

Scope of certification

**GENERATION OF ELECTRICITY FROM COAL BASED  
SUPERCRITICAL THERMAL POWER STATION  
OF 6X660 MW CAPACITY**

Original cycle start date: 06 June 2017  
Expiry date of previous cycle: NA  
Certification Audit date: 21 April 2017  
Certification cycle start date: 06 June 2017  
Subject to the continued satisfactory operation of the organization's Management System,  
this certificate expires on: 05 June 2020  
Certificate No. IND17.5716U/Q Version : 2 Revision date: 02 July 2018

  
Signed on behalf of BVCH SAS - UK Branch  
Ramesh KOREGAVE  
Director, CERTIFICATION  
South Asia Region

  
0008

Certification body address: 5th Floor, 66 Prescot Street, London, E1 9HE, United Kingdom  
Local office: Bureau Veritas (India) Private Limited (Certification Business)  
T2 Business Park, Marol Industrial Area, MIDC, Cross Road 'C',  
Andheri (East), Mumbai - 400 093, India

Further clarifications regarding the scope of this certificate and the applicability of the  
management system requirements may be obtained by consulting the organization.  
To check this certificate validity please call +91 22 6274 2009.



**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Management of Waste:**

**Solid waste:** Bio-methanation plant is installed for the utilization of organic waste generated from canteens of plant area. Plant gives two type of valuable product viz. cooking gas & green manure, cooking gas is being re-used in canteen and green manure in horticulture.

In order to ensure the proper and safe dispose of the other solid wastes, SPL has hired the services of M/s. SAHBHAGITA (SHAHRI Avam Gramin Vikas Samiti) Singrauli, an agency identified for the same by the Nagar Palika, Singrauli.

**Plastic waste:** Plastic waste generated in plant and outside the plant area is collected, shredded in plastic shredder machine, and re-used for making bitumen roads.

**Paper waste:** Waste paper generated at site is being used for making Paper pen; machine is installed in R&R colony of Surya Vihar and run by Self Help Women Group. Apart from its internal consumption, paper pens are also distributed free of cost by SPL in schools located nearby plant area.

**Domestic waste:** Domestic waste water generated at site is being treated by STP and re-used for green belt development.

**Bio-Medical Waste:** Bio-medical waste generated at site is disposed off through MPPCB authorized vendor- M/s. Indo Water Management and Pollution Control Corporation, Satna.

**Battery Waste:** Battery wastes generated at site is either given to OEM as buy back scheme or recycle through authorized recycler by pollution control board. The battery waste generated at site, is collected and stored at designated place as per SOP.

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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)



**Battery waste properly stored at designated location**

**E-waste:** E-wastes generated at site are either given to OEM as take back scheme or disposed through the recycler authorized by pollution control board. All the e-waste, generated at site, is collected and stored at designated place as per SOP.



**E-waste properly segregated & stored at designated location**

**Celebrations:**

World Water Day, World Sparrow Day, Earth Day & World Environment Day etc. celebrated at SPL with great enthusiasm to create awareness among Employee's, Workers & nearby Villagers.



Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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Awards and Recognitions:



GMF Environment Award (Platinum)



GMF Horticulture Award (Platinum)



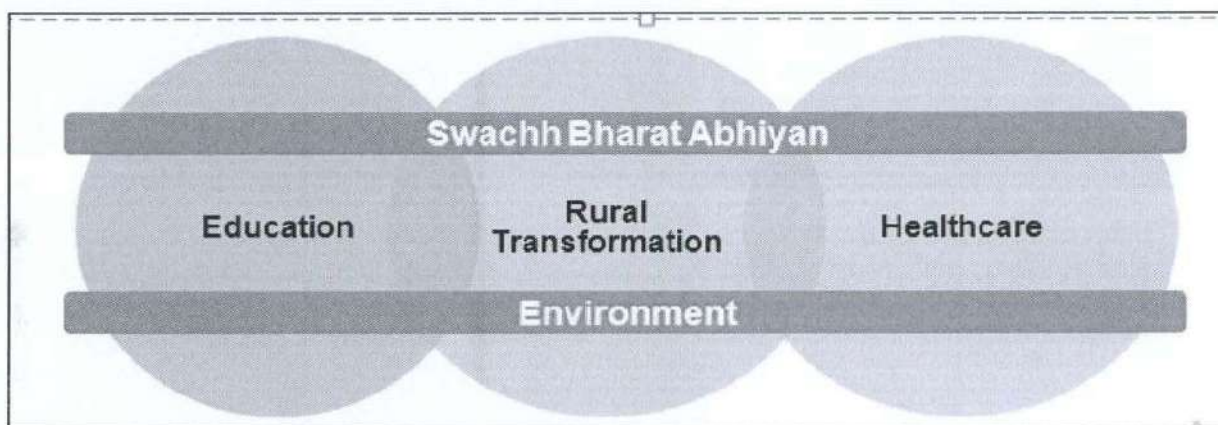
Shrishti Good Green Governance Award (Winner)

**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Corporate Social Responsibility**

**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:**



**DAV SCHOOL SURYA VIHAR: Free & Quality Education**

Total Students	Boys	Girls	Teaching Staff	Non Teaching Staff	Total Classes	Total Sections
1308	734	574	36	05	12 ( LKG to Class X)	32
<b>Note:</b> Actual present XXX + Long Absentees XXX + Demise XXX + TC issued XXX + Admission Canceled XXX = XXX. (Total enrollment as per Admission Register Till date)						
<b>Infrastructure:</b>						
Existing Land XXX Hectare With lease deed for 30 yrs.	Location	Class Rooms	Comp. Lab	Library	Composite Lab	Sick Room
	Old Building	11	1	0	1	0
	Old Building KG Wing	10	0	1	1	0
	New Building	11	0	1	2	0



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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Major CSR Activities during Oct., 2018 to Mar., 2019**

Various co-curricular activities were conducted at DAV school, Surya Vihar viz. Baldiwas, Teachers Day, Saheed Diwas etc.



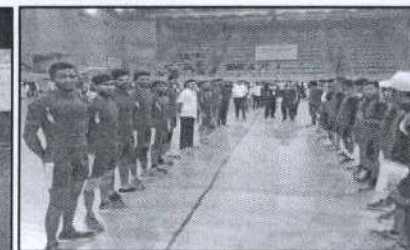
**Teachers Training cum Workshop at DAV School, Surya Vihar on 5<sup>th</sup>-6<sup>th</sup> Jan., 2019**

Teachers training program (II phase) was organized in DAV school, Surya Vihar. The Chief guests comprising Ms. Nisha Peshine, Director-DAV Group is highly impressed with the education standards imparted and knowledge level of children of Surya Vihar.



**DAV National Sports Meet at Ludhiyana (Punjab)**

Students of DAV school, Surya Vihar participated in DAV National Sports Meet and showed their bright performance during the event.



**Republic Day celebration at DAV Surya Vihar on 26<sup>th</sup> Jan., 2019**

**70<sup>th</sup> Republic** day of our Nation was celebrated at DAV Public School, Surya Vihar on 26.01.2019 as Chief Guest **hoisted the Tri-colour** and graced the function in presence of school Principal, Staffs, employees of SPL, locals with cultural dance, recitation, quiz, greenbelt plantation drive etc.

The Chief Guest gave his blessings to students and wish the school would progress by leaps and bounds in coming years. The program ended with 'shanti Paath'.



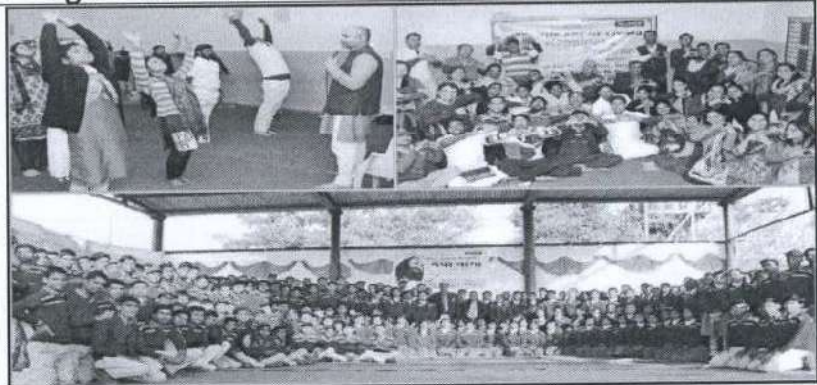


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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Yoga session on 13<sup>th</sup>-16<sup>th</sup> Dec, 2018**

With the objectives of shaping students into well rounded personalities through channelizing the energies and alleviating their physical, mental and emotional stress, experts' yoga Gurus from Vyakti Vikas Kendra (Arts of Living) devoted 4 days at school and rejuvenated more than 200 students and 41 teachers through intensive yoga sessions.



**Result Declaration of 2018-19 Session at DAV School, Surya Vihar**

Annual results declaration program of 2018-19 session was organized at DAV school, Surya Vihar where Teachers-Parents meeting also conducted.



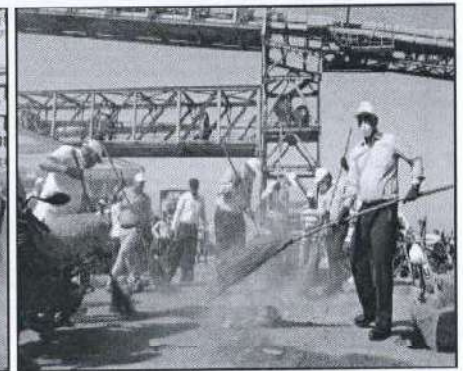
**Vidyaadan Project : Imparting Quality Education at Govt. schools**

Vidyadaan project has hatched to impart quality education among students in surrounding govt. school to enhance knowledge, performance and results. The idea involves utilizing high skilled employee of M/s. SPL.



**Celebration of Gandhi Jayanti/ Swachhata Abhiyaan**

On the occasion of Gandhi Jaynti Mass swacchata abhiyaan was organized at Shivpahari chauk, Sidhdhi khurd. More than 300 students, 100 community members and more than 200 SPL employee's volunteers had participated in the program.





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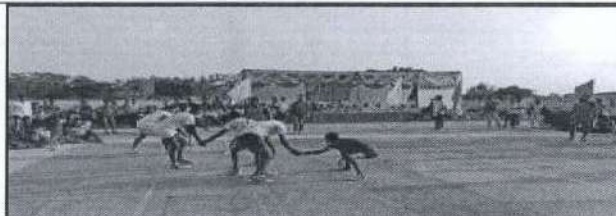
**Reliance- Voluntary Blood Donation Campaign dated 28<sup>th</sup> Dec., 2018**

Voluntary Blood Donation camp in collaboration with Indian Red Cross Society (IRCS-Singrauli).



**Inter Circle Kabaddi Turnament- 2018**

1<sup>st</sup> Inter Circle Kabaddi Tournament was organized at R&R colony Surya Vihar where more than 24 teams from local area have participated.



**3<sup>rd</sup> Inter circle Football Tournament Harrahwa -2019**

The tournament was organized between 16 teams of plant nearby villages & surrounding cities in association with local civic administration.



**Employee Volunteering Day Celebration on 28<sup>th</sup> Feb., 2019**

Total 37 employee volunteers of power plan and coal mine were felicitated during the Employee Volunteering Day Celebration on 28<sup>th</sup> Feb 2019 for their commendable work in the community volunteerism.



**1<sup>st</sup> Inter Circle Cricket Tournament , Tiwara 1<sup>st</sup>-10<sup>th</sup> Feb.,2019**

An Inter Circle Cricket tournament was organized at sports ground Tiwara.



**7<sup>th</sup> Inter-state Volleyball Tournament at Sidhi Kalan 11<sup>th</sup> -13<sup>th</sup> Jan., 2019**

7<sup>th</sup> inter-state volleyball tournament Sidhi Kalan scripted its success story with best teams of the district, MP and UP contested for the coveted trophy.





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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Promotion of Mother & Child Helth Care / Menstrual Hygiene**

Distribution of gud, chana and baby kit to pregnant mothers. Arranged to provide and made available quality sanitary napkins to them through the Anganwadi and ICDs dept.



**Holi Milan (Tilak Holi) at Surya Vihar on 20<sup>th</sup> Mar., 2019**

Holi Milan with resident & family members of Surya Vihar colony, Teaching & Supporting Staff of DAV Public School, Surya Vihar along with SPL employee volunteers & CSR members was organized on 20.03.2019 with an objective to share mutual communication with the community & sensitized them to safe & joyful Holi at R&R colony Surya Vihar.



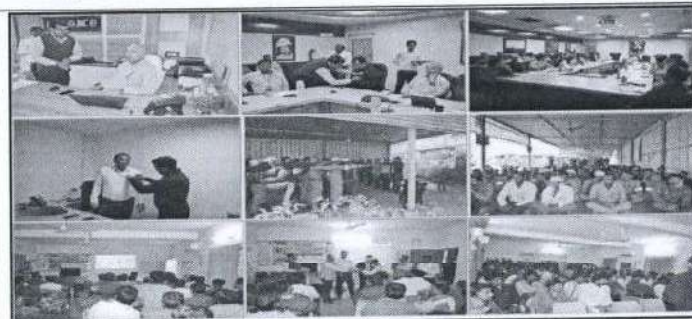
**International Women's Day celebration on 8<sup>th</sup> Mar., 2019**

True to this year's theme "**balance for better**"; International Women's Day was celebrated with grand success at our plant, where galaxies of more than 400 women power, comprises of ladies from Sasan family, female employees, DAV School, Health Centre, Balwadi, Tailoring Centre, women local representatives descended at 'Manthan Auditorium' to make this day memorable.



**World Aids Day 2018 and Awareness Program**

Sasan Power was observed the World AIDS Day on 01.12.2018 at Power Plant, Coal Mines and local community as an opportunity to unite in the fight against HIV/AIDS.

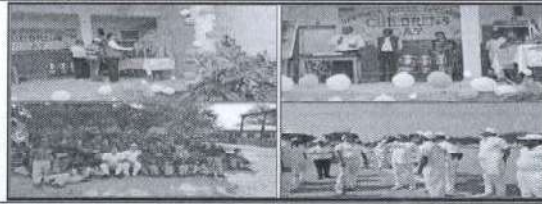




**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Children's Day Celebration on 14<sup>th</sup> Nov., 2018**

Children's Day was celebrated at Sasan power on 14<sup>th</sup> Nov., 2018



**BAIF: Sustainable livelihood development Program**

BAIF-Farm based livelihood Program	BAIF-Farm based livelihood Program	Artificial insemination	So far benefitted
		Confirm pregnancy	So far benefitted
		Cross breed Calving	So far benefitted
		Veterinary Campus	So far benefitted
		De-worming	So far benefitted
		Vaccination	So far benefitted
		Farmers Training Program	So far benefitted

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

For

## Sasan Ultra Mega Power Project (1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

### Ambient Air Quality Monitoring Result

**Advanced Environmental Testing And Research Lab P. Ltd.**

CIN: U73100MP2002PTC015352

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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
New Delhi-110 001, India

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#### 6x660 MW SASAN ULTRA MEGA POWER PROJECT

#### AMBIENT AIR QUALITY DATA

October, 2018 to March, 2019

Months	Pollutants	Locations and Concentrations (in µg/m <sup>3</sup> )													
		AAQ1		AAQ2		AAQ3		AAQ4		AAQ5		AAQ6		AAQ7	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Oct, 2018	PM10	46.3	60.1	39	48.5	49.8	64.2	40.9	52.2	45.3	58	55.3	61.5	50.7	60.1
	PM2.5	18.9	30.7	16.6	22.3	26.8	32.8	20.8	26.2	18.8	28.8	29.2	33.5	25.1	32.5
	SO2	11.9	22.5	9.6	16.2	18.2	25.5	10.8	16.8	14.2	17.8	15.2	21.5	12.2	17.2
	NO2	22.5	29.6	18.6	25.6	28.1	35.6	20.5	28.6	23.5	30.4	24.5	34.5	23.1	31.9
	CO	0.5	0.72	0.36	0.62	0.64	0.74	0.21	0.55	0.51	0.74	0.65	0.78	0.48	0.7
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nov, 2018	PM10	46.2	64.2	40.4	56.6	53.3	66.2	36.1	56.7	52.1	61.8	56.2	64.8	56.4	66.4
	PM2.5	21.1	28.7	17.7	25.7	31	34.9	20.8	28.8	24.4	33.5	27.9	36.8	26	38.7
	SO2	10.3	17.4	12.4	18.2	15.6	21.8	8.6	16.8	14.2	17.6	14.9	19.9	12.4	16.6
	NO2	15.7	26.1	19.6	26.8	25.6	38.2	18.2	28.4	26.8	32.4	26.3	34.2	24.6	32.4
	CO	0.5	0.72	0.48	0.6	0.58	0.81	0.38	0.56	0.51	0.69	0.7	0.81	0.49	0.68
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dec, 2018	PM10	51.9	60.8	42.8	52.8	55.9	65.1	41.8	55.8	56.8	61.2	59.1	66.1	52.1	63.2
	PM2.5	21.1	30.4	17.9	26.8	28.9	35.1	22.6	29.8	26.1	31.6	28.9	37.5	26.7	34.6
	SO2	13.7	17.4	12.4	17.8	17.6	22.1	8.7	16.8	15.6	19.8	16.7	19.3	13.9	19.3
	NO2	20.6	28.2	19.1	24.8	24.8	36.1	15.1	27.1	28.5	34.1	22.6	32.6	24.6	30.6
	CO	0.51	0.86	0.52	0.91	0.66	0.81	0.39	0.52	0.55	0.66	0.71	0.81	0.45	0.66
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Jan, 2019	PM10	47.6	58.6	44.6	55.4	56.3	63.2	40.3	50.5	50.8	61.2	58.2	66.2	47.9	59.4
	PM2.5	23.9	29.2	18.6	26.1	27.6	34.2	18.6	30.2	24.6	33.3	30.3	36.7	22.3	33.5
	SO2	14.6	18.6	12.8	18.6	20.3	25.1	6.9	14.6	14.9	21.3	18.9	23.1	15.3	20.7
	NO2	24.3	31.2	15.4	26.1	27.4	35.5	13.8	25.3	27.3	35.4	28.8	33.8	26.1	34.6
	CO	0.54	0.67	0.46	0.6	0.66	0.82	0.39	0.55	0.59	0.71	0.69	0.82	0.52	0.71
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Feb, 2019	PM10	41.6	61.1	42.1	55.1	55.7	66.4	40.1	52.4	54.1	61.8	58.2	66.2	51.2	58.6
	PM2.5	22.6	31.4	21.8	29.2	30.6	35.4	21.2	29.9	24.5	34.7	30.3	36.7	27.5	33.6
	SO2	14.8	17.1	13.4	17.5	22.2	27.1	10.4	14.7	15.7	24.4	22.7	28.4	16.2	22.5
	NO2	25.4	31.4	19.3	27.6	28.7	35.4	16.1	22.5	29.9	35.3	29.6	38.2	28.5	36.5
	CO	0.58	0.65	0.44	0.56	0.69	0.85	0.44	0.55	0.55	0.7	0.66	0.8	0.58	0.75
	Hg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL



**Sasan Ultra Mega Power Project**  
**(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

## Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352



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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
New Delhi-110 001, India

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March, 2019	PM10	42.6	60	40.6	55.1	55.8	64.8	40.1	49.2	57.1	62.2	56.7	62.2	49.4	57.3
	PM2.5	20.6	35.2	20.7	30.1	29.9	35.4	19.6	27	26.6	35.1	28.8	33.9	24.7	33.1
	SO2	14.8	18	12.6	17.8	19.7	24.6	10.7	13.4	16.2	23	20.4	25.2	15.8	20.6
	NO2	25.8	31.2	20	28	25.8	35.2	17.3	21	27.6	34.8	30	34.6	25.8	34.1
	CO	0.55	0.67	0.42	0.56	0.69	0.8	0.41	0.5	0.56	0.72	0.67	0.79	0.52	0.7
	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= Siddhikurd Village  
 AAQM 6= Permanent Store AAQM 7= Siddhi Kallen

Prepared By

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



Checked &amp; Approved By

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

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

*Advanced Environmental Testing And Research Lab P. Ltd.*

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**6x660 MW SASAN ULTRA MEGA POWER PROJECT**

**Flue Gas Monitoring DATA**

**October, 2018 to March, 2019**

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, 2018	PM	47.6	48.3	41.9	46.3	44.8	45.0
	SO <sub>2</sub>	710.0	736.0	867.0	688.0	712.0	726.0
	NO <sub>x</sub>	251.0	246.0	274.0	256.0	261.0	240.0
	CO	1.7	1.9	1.6	1.8	1.8	1.2
	Exit Velocity (m/s)	25.1	25.3	25.4	24.1	24.8	25.6
Nov, 2018	PM	45.6	44.1	46.4	48.6	44.8	44.6
	SO <sub>2</sub>	732.0	805.0	822.0	710.0	712.0	711.0
	NO <sub>x</sub>	238.0	235.0	263.0	224.0	251.0	271.0
	CO	1.8	1.3	1.6	1.4	1.8	1.2
	Mercury	BDL	BDL	BDL	BDL	BDL	BDL
Dec, 2018	Exit Velocity (m/s)	26.0	24.3	25.1	23.9	25.6	25.7
	PM	44.8	47.2	45.9	46.2	43.9	45.3
	SO <sub>2</sub>	842.0	812.0	818.0	722.0	708.0	726.0
	NO <sub>x</sub>	270.0	282.0	258.0	291.0	286.0	269.0
	CO	1.5	1.6	1.7	1.4	1.6	1.5
Jan, 2019	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity (m/s)	25.2	24.7	25.8	24.3	25.2	25.5
	PM	41.7	45.1	44.3	47.6	45.2	46.1
	SO <sub>2</sub>	833.0	844.0	832.0	786.0	860.0	876.0
	NO <sub>x</sub>	288.0	292.0	287.0	278.0	284.0	289.0
Feb, 2019	CO	1.7	1.2	1.4	1.7	1.4	1.4
	Exit Velocity(m/s)	25.1	25.2	25.1	25.2	25.2	25.2
	PM	45.2	43.9	46.2	46.9	48.1	45.9
	SO <sub>2</sub>	880.0	878.0	866.0	815.0	883.0	893.0
	NO <sub>x</sub>	275.0	281.0	279.0	288.0	282.0	294.0
	CO	2.0	1.7	1.8	1.9	1.8	1.6
	Exit Velocity(m/s)	25.3	25.3	25.1	25.2	25.1	25.1



**Sasan Ultra Mega Power Project**  
**(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

*Advanced Environmental Testing And Research Lab P. Ltd.*

CIN: U73100MP2002PTC015352



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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
New Delhi-110 001, India

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Mar, 2019	PM	44.6	46.1	47.2	42.5	44.6	42.8
	SO <sub>2</sub>	848.0	869.0	870.0	848.0	850.0	867.0
	NO <sub>x</sub>	284.0	272.0	266.0	262.0	246.0	263.0
	CO	1.8	1.8	1.7	1.6	1.8	1.5
	Hg	BDL	BDL	BDL	BDL	BDL	BDL
	Exit Velocity(m/s)	25.2	25.2	25.1	25.1	25.2	25.2

Where, BDL (Below Detection Limit)

Prepared By

Signature.....

Name .....Dr. Rakesh K. Upadhyaya

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

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation ..... Manager

AETRL (P.) LIMITED

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

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**SASAN POWER LIMITED  
AMBIENT NOISE MONITORING  
October, 2018 to March, 2019**

Month/Locations	Day			Night		
	Min	Max	Leq	Min	Max	Leq
<b>Oct, 2018</b>						
Construction Office	54.8	66.9	63.9	52.3	63.8	61.8
Permanent Store	56.6	67.6	64.8	53.5	65.1	63
Sasan Village	43.8	53.8	50.5	38.8	43.3	40.7
Siddhi Khurd Village	45.7	52.1	51.3	41.2	43.6	42.2
Harrahawa Village	46.2	52.6	51.1	38.5	43.7	41.6
Tiyara Town Ship	40.5	47.6	45.3	36.1	41.5	39.2
Siddhi Kailan	44.1	51.2	50.9	39.8	42.4	40.6
<b>Nov, 2018</b>						
Construction Office	59.6	63.6	61.8	51.4	58.4	53.1
Permanent Store	59.4	64.2	62.4	52.2	68.4	65.6
Sasan Village	50.4	58.2	55.3	41.9	43.8	42.8
Siddhi Khurd Village	51.3	54.6	53.3	40.8	43.6	42.2
Harrahawa Village	50.8	54.2	52.7	40.4	42.1	41.6
Tiyara Town Ship	42.6	52.8	49	40.9	42.5	41.2
Siddhi Kailan	48.6	54.2	51.3	40.8	43.5	41.8
<b>Dec, 2018</b>						
Construction Office	58.8	66.4	64.5	55.8	66.1	63.2
Permanent Store	61.1	65.5	63.7	56.4	65.4	60.7
Sasan Village	49.8	53.8	51.2	40.4	42.9	41.6
Siddhi Khurd Village	50.2	52.7	51.5	41.5	44.1	42.3
Harrahawa Village	48.3	51.6	50.4	38.8	41.5	39.4
Tiyara Town Ship	45.1	50.1	48.6	37.4	40.3	38.8
Siddhi Kailan	50.2	53.2	51.8	41.3	43.8	42.1
<b>Jan, 19</b>						
Construction Office	55.1	63.3	62.5	57.2	65.6	62.6
Permanent Store	59.7	66.4	64.6	54.2	66.4	65.1
Sasan Village	45.3	52.9	50.6	41.4	43.4	41.1
Siddhi Khurd Village	50.1	53.4	51.7	40.9	43.1	41.5
Harrahawa Village	44.7	49.8	48.3	42.2	43.4	41.8
Tiyara Town Ship	41.8	47.3	46.7	35.8	41.6	39.7
Siddhi Kailan	47.3	50.8	49.1	40.3	42.7	41.3
<b>Feb, 19</b>						
Construction Office	56.8	66.5	63.8	53.6	63.5	61.5



**Sasan Ultra Mega Power Project**  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

# Advanced Environmental Testing And Research Lab P. Ltd.

CIN: U73100MP2002PTC015352



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

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Permanent Store	57.9	64.8	62.1	55.8	62.6	60.6
Sasan Village	46.5	51.6	49.7	42.1	44.4	42.3
Siddhi Khurd Village	51.1	52.3	51.5	40.2	43.8	41.9
Harrahawa Village	43.9	48.4	46.4	41.6	43.4	42.5
Tiyara Town Ship	40.1	42.3	41.1	37.6	40.3	39.2
Siddhi Kallan	48.8	52.6	50.5	41.1	43.5	41.8

March, 19

Construction Office	57.1	66.9	64.4	52.8	64.1	62.1
Permanent Store	58.1	67.1	65.2	54.5	63.8	61.2
Sasan Village	44.6	52.5	50.1	41.3	44.1	42.7
Siddhi Khurd Village	50.8	53.1	51.8	40.5	43.2	41.5
Harrahawa Village	44.2	50	48.3	41.4	43.8	42.4
Tiyara Town Ship	41.3	43.7	42.4	39.2	41.6	40.6
Siddhi Kallan	49.1	53.1	51.6	42.7	43.6	41.5

Prepared By

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



Checked &amp; Approved By

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

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**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)	October, 2018					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.56	7.81	7.53	7.28	6.68	7.16
Colour (Hazen)	15	1.96	2.16	2.61	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.24	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	428	410	426	130	110	106
Total Alkalinity (mg/L)	600	188	180	192	72	50	54
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	190	196	197	65	61	58
Calcium as Ca (mg/L)	200	47.6	49.8	52.1	16.3	13.3	16.1
Magnesium as Mg (mg/L)	100	17.3	17.4	16.2	5.89	6.74	4.33
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	88.6	60.9	106.9	19.9	11.9	10.9
Sulphate (mg/L)	400	63.4	76.2	76.5	9.2	5.18	6.11
Fluoride* (mg/L)	1.5	0.49	0.571	0.62	BDL	BDL	BDL
Nitrate (mg/L)	45	7.65	10.2	10.6	0.48	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. Uchharya

Designation .....Dr. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature:

Name .....Rajesh Jain

Designation .....Manager

AETRL (P.) LIMITED



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

For

**Sasan Ultra Mega Power Project**  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

**Advanced Environmental Testing And Research Lab P. Ltd.**

CIN: U73100MP2002PTC015352

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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
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## SASAN POWER LIMITED GROUND / POTABLE WATER QUALITY

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	November, 2018					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.73	7.82	7.71	6.9	6.86	6.94
Colour (Hazen)	15	1.53	1.88	2.21	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	456	436	460	114	98	106
Total Alkalinity (mg/L)	600	162	150	181	59	48	44
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	172	186	191	56	52	48
Calcium as Ca (mg/L)	200	45.6	48.4	51.7	15.5	12.9	11.5
Magnesium as Mg (mg/L)	100	14.1	15.8	15.1	4.17	4.8	4.67
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	48.4	55.3	66.1	12.1	9.36	8.6
Sulphate (mg/L)	400	58.3	70.6	70.8	5.26	4.18	4.85
Fluoride* (mg/L)	1.5	0.58	0.55	0.66	BDL	BDL	BDL
Nitrate (mg/L)	45	7.14	4.26	8.72	0.72	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. Uthariya

Designation .....Dy Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rakesh Jain

Designation.....Manager

AETRL (P.) LIMITED

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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**SASAN POWER LIMITED  
GROUND / POTABLE WATER QUALITY**

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	December, 2018					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.59	7.76	7.66	6.97	6.92	6.99
Colour (Hazen)	15	1.35	1.49	1.82	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.39	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	462	452	480	102	115	96
Total Alkalinity (mg/L)	600	155	148.6	180	52.3	52	40
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	178	180.5	194	54.9	48	44
Calcium as Ca (mg/L)	200	45.2	50.1	55.9	14.8	11.1	9.55
Magnesium as Mg (mg/L)	100	15.8	13.4	13.8	4.35	4.92	4.89
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	42.7	45.4	64.1	9.48	6.99	6.97
Sulphate (mg/L)	400	55.1	58.1	75.9	3.21	4.79	4.18
Fluoride* (mg/L)	1.5	0.64	0.58	0.72	BDL	BDL	BDL
Nitrate (mg/L)	45	6.88	5.18	7.61	0.43	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. Uchhanava

Designation .....Dr. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rakesh Jain

Designation .....Manager

AETRL (P.) LIMITED



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

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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

CIN: U73100MP2002PTC015352



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**SASAN POWER LIMITED  
GROUND / POTABLE WATER QUALITY**

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	January, 2019					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.49	7.53	7.71	6.91	6.86	6.92
Colour (Hazen)	15	1.42	1.28	1.66	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.31	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	470	463	484	98	108	110
Total Alkalinity (mg/L)	600	162	178.1	179	48.5	55	48
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	183	185.5	190	52.4	47.6	50.2
Calcium as Ca (mg/L)	200	46.3	53.7	54.5	12.2	11.5	11.9
Magnesium as Mg (mg/L)	100	16.3	12.8	13.1	5.47	4.58	4.92
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	45.4	46.7	60.5	8.76	6.04	7.05
Sulphate (mg/L)	400	53.8	60.5	72.4	3.21	4.13	4.46
Fluoride* (mg/L)	1.5	0.62	0.57	0.67	BDL	BDL	BDL
Nitrate (mg/L)	45	5.99	7.22	7.42	0.31	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. Ughrasya

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

AETRL (P.) LIMITED



Checked & Approved By

Signature 

Name .....Rakesh Jain

Designation .....Manager

AETRL (P.) LIMITED

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

**Sasan Ultra Mega Power Project**  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)

*Advanced Environmental Testing And Research Lab P. Ltd.*

CIN: U73100MP2002PTC015352



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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
New Delhi-110 001, India

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

Gwalior-474 011, M.P., India

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**SASAN POWER LIMITED**  
**GROUND / POTABLE WATER QUALITY**

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	February, 2019					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.66	7.83	7.86	6.86	6.87	6.9
Colour (Hazen)	15	1.18	1.36	1.28	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.36	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	459	470	488	92	100	106
Total Alkalinity (mg/L)	600	166	174	170	40.6	53.2	42
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	190	195	195	46.6	48.8	56.1
Calcium as Ca (mg/L)	200	48.9	55.3	54.2	10.3	10.8	12.5
Magnesium as Mg (mg/L)	100	16.5	13.8	14.5	5.16	5.29	6.04
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	45.3	65.2	8.04	6.11	6.92
Sulphate (mg/L)	400	50.1	61.2	70.1	3.36	3.78	4.05
Fluoride* (mg/L)	1.5	0.66	0.55	0.65	BDL	BDL	BDL
Nitrate (mg/L)	45	2.66	6.18	7.72	0.22	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. Uchhariva

Designation ..... Dr. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature:

Name ..... Rakesh Jain

Designation ..... Manager

AETRL (P.) LIMITED



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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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

**Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
New Delhi-110 001, India**

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

**Gwalior-474 011, M.P., India**

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**SASAN POWER LIMITED  
GROUND / POTABLE WATER QUALITY**

Parameters	IS:10500 1991(Reaff:2012) Limits (Permissible Limits)	March, 2019					
		Monitoring Location					
		GW1	GW2	GW3	PW1	PW2	PW3
pH	6.5-8.5	7.7	7.73	7.76	7.01	6.87	6.92
Colour (Hazen)	15	1.34	1.41	1.36	BDL	BDL	BDL
Odor*	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	5	BDL	BDL	0.28	BDL	BDL	BDL
Total Dissolved Solids (mg/L)	2000	464	464	490	96	102	110
Total Alkalinity (mg/L)	600	171	177	182	44.2	52	48
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	189	193	196	47.1	47.4	54.5
Calcium as Ca (mg/L)	200	52.9	55.8	55.1	10.9	10.2	11.9
Magnesium as Mg (mg/L)	100	13.79	13	14.15	4.79	5.32	6.01
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	46.1	49.3	66.1	7.11	6.83	7.08
Sulphate (mg/L)	400	52.3	60.6	71.8	3.62	3.16	4.11
Fluoride* (mg/L)	1.5	0.67	0.542	0.66	BDL	BDL	BDL
Nitrate (mg/L)	45	3.79	6.68	8.32	0.18	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. Vohra

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

AETRL (P.) LIMITED



Checked & Approved By

Signature

Name .....Rakesh Jain

Designation .....Manager

AETRL (P.) LIMITED

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**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  
SURFACE WATER QUALITY  
(October, 2018)**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.52	7.46	7.61
Colour (Hazen)	300	59	96	88.3
Total Dissolved Solids (mg/L)	1500	316	386	356
Dissolved Oxygen (mg/L)	4	7.82	7.62	7.58
Biochemical Oxygen Demand (mg/L)	3	1.52	1.22	1.46
Chloride (mg/L)	600	58.6	54.8	42.6
Cyanide* (mg/L)	0.05	BDL	BDL	BDL
Fluoride* (mg/L)	1.5	0.43	0.25	0.28
Sulphate (mg/L)	400	44.6	38.9	42.1
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	22.4	22.1	16.5
Arsenic* (mg/L)	0.2	BDL	BDL	BDL
Copper* (mg/L)	1.5	0.14	0.019	0.011
Iron* (mg/L)	50	1.79	0.31	0.33
Zinc* (mg/L)	15	BDL	0.16	0.26
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=Gavalya Nalla (Harrahwa Village), SW2=Mayar River, SW3= Rihand River				

Where, BDL (Below Detection Limit)

Prepared By

Signature.....

Name .....Dr. Dinesh K. Ushwariya

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

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rakesh Jain

Designation ..... Manager

AETRL (P.) LIMITED



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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

CIN: U73100MP2002PTC015352



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**Sasan Power Limited  
SURFACE WATER QUALITY  
November, 2018**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.48	7.84	7.82
Colour (Hazen)	300	42	56	62.2
Total Dissolved Solids (mg/L)	1500	342	344	341
Dissolved Oxygen (mg/L)	4	7.44	7.38	7.32
Biochemical Oxygen Demand (mg/L)	3	1.28	1.16	1.51
Chloride (mg/L)	600	52.8	50.6	51.6
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.51	0.42	0.36
Sulphate (mg/L)	400	42.1	32.5	38.6
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	18.4	16.8	12.6
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	0.12	0.014	0.009
Iron (mg/L)	50	1.61	0.28	0.28
Zinc (mg/L)	15	BDL	0.55	0.21
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. Vagharia**  
Designation.....**Dy. Manager (Technical)**  
AETRL (P.) LIMITED



Checked & Approved By

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

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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**Sasan Power Limited  
SURFACE WATER QUALITY  
December, 2018**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.81	7.49	7.64
Colour (Hazen)	300	36	48.6	50.4
Total Dissolved Solids (mg/L)	1500	332	356	320
Dissolved Oxygen (mg/L)	4	7.46	6.51	7.41
Biochemical Oxygen Demand (mg/L)	3	1.22	1.82	1.28
Chloride (mg/L)	600	42.1	43.2	36.2
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.57	0.39	0.42
Sulphate (mg/L)	400	38.9	36.1	30.7
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	15.7	11.2	14.2
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	0.11	0.018	0.011
Iron (mg/L)	50	0.92	0.19	0.29
Zinc (mg/L)	15	BDL	0.82	1.1
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. Ritesh K. Uchharia**  
Designation.....**Dr. Manager (Technical)**  
AETRL (P.) LIMITED



Checked & Approved By

Signature.....  
Name.....**Rakesh Jain**  
Designation.....**Manager**  
AETRL (P.) LIMITED



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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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**Sasan Power Limited  
SURFACE WATER QUALITY  
January, 2019**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.56	7.81	7.76
Colour (Hazen)	300	28.6	30.3	28.9
Total Dissolved Solids (mg/L)	1500	340	332	348
Dissolved Oxygen (mg/L)	4	7.28	7.35	6.49
Biochemical Oxygen Demand (mg/L)	3	1.32	1.26	1.76
Chloride (mg/L)	600	45.3	38.4	44.1
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.49	0.51	0.46
Sulphate (mg/L)	400	33.8	33.8	34.9
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	14.8	10.7	15.7
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	0.058	0.018	0.014
Iron (mg/L)	50	0.59	0.436	0.23
Zinc (mg/L)	15	0.22	1.08	0.49
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. Wadhwa

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

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name .....Rajesh Jain

Designation.....Manager

AETRL (P.) LIMITED

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

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(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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**Sasan Power Limited  
SURFACE WATER QUALITY  
February, 2019**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.42	7.53	7.92
Colour (Hazen)	300	20.8	25.4	33.7
Total Dissolved Solids (mg/L)	1500	348	372	330
Dissolved Oxygen (mg/L)	4	7.06	6.88	7.15
Biochemical Oxygen Demand (mg/L)	3	1.58	2.06	1.38
Chloride (mg/L)	600	48.4	42.7	36.6
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.51	0.39	0.55
Sulphate (mg/L)	400	32.9	38.2	36.4
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	18.4	10.6	15.6
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	0.041	0.017	0.014
Iron (mg/L)	50	0.49	0.192	0.408
Zinc (mg/L)	15	0.207	0.366	1.11
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. Vertharia  
Designation .....Dr. Manager (Technical)  
AETRL (P.) LIMITED



Checked & Approved By

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



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

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CIN: U73100MP2002PTC015352

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

Regional Office: BMS Business Center, 10 PVR Plaza Complexes Connaught Circus,  
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**Sasan Power Limited  
SURFACE WATER QUALITY  
March, 2019**

Parameters	IS:2296 Class 'C' Limits	Monitoring Location		
		SW1	SW2	SW3
pH	6.5-8.5	7.61	7.71	7.55
Colour (Hazen)	300	22.7	20.9	30.1
Total Dissolved Solids (mg/L)	1500	350	360	342
Dissolved Oxygen (mg/L)	4	7.12	6.68	7.63
Biochemical Oxygen Demand (mg/L)	3	1.66	2.11	1.29
Chloride (mg/L)	600	46.7	43.8	34.3
Cyanide (mg/L)	0.05	BDL	BDL	BDL
Fluoride (mg/L)	1.5	0.56	0.48	0.51
Sulphate (mg/L)	400	36.1	37.1	33.7
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	16.3	14.2	16.9
Arsenic (mg/L)	0.2	BDL	BDL	BDL
Copper (mg/L)	1.5	0.033	0.022	0.018
Iron (mg/L)	50	0.426	0.166	0.332
Zinc (mg/L)	15	0.211	0.291	0.901
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. Uchhariva  
Designation.....Dr. Manager (Technical)  
AETRL (P.) LIMITED



Checked & Approved By

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

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

**Sasan Ultra Mega Power Project  
(1<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019)**

**Advanced Environmental Testing And Research Lab P. Ltd.**

**CIN: U73100MP2002PTC015352**



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**Sasan Power Limited  
ASH POND EFFLUENT ANALYSIS REPORT  
(October, 2018 to March, 2019)**

Parameters	Limits	Months					
		Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019
pH	6.5-8.5	6.61	6.74	6.51	6.68	6.71	6.69
TSS (mg/l)	100	26	60	52	48	44	39
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)		BDL	BDL	BDL	BDL	BDL	BDL
Aluminum* (mg/L)		2.81	2.57	2.87	2.16	2.54	3.02
Total Chromium* (mg/L)		BDL	BDL	BDL	BDL	BDL	BDL
Copper* (mg/L)		0.023	BDL	BDL	BDL	BDL	BDL
Mercury* (mg/L)		BDL	BDL	BDL	BDL	BDL	BDL
Iron* (mg/L)		0.072	0.041	0.029	0.017	0.012	0.027
Nickel* (mg/L)		BDL	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Prepared By

Signature.....  
Name.....**Dr. Dinesh K. Uchharya**  
Designation.....**Dr. Manager (Technical)**  
AETRL (P.) LIMITED



Checked & Approved By

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



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Sasan Power Limited  
ETP Outlet  
(October, 2018 to March, 2019)

Parameters	Limits	Months					
		Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019
pH	5.5 to 9.0	7.02	7.56	7.38	7.56	7.87	7.69
Total Dissolved Solids (mg/L)	2100	235	348	402	348	530	642
Chlorides* (mg/L)	1000	46.5	40.5	48.9	100	110	118
Biochemical Oxygen Demand (mg/L)	30	11.2	10.1	11.3	11.3	14.1	13.2
Chemical Oxygen Demand (mg/L)	250	80	58	62.8	56.4	66.1	70.6
Total Suspended Solids (mg/L)	100	40	32	48	40	48	52
Oil & Grease (mg/L)	10	1.8	1.2	1.62	2.06	2.22	2.92

Prepared By

Signature.....  
Name .....Dr. Ritesh K. Wadhwa  
Designation .....Dr. Manager (Technical)  
AETRL (P.) LIMITED



Checked & Approved By

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

**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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**SASAN POWER LIMITED  
STP Outlet (Purvanchal Camp)  
(October, 2018 to March, 2019)**

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019
pH	5.5 to 9.0	7.24	7.52	7.49	7.36	7.49	7.51
Biochemical Oxygen Demand (mg/L)	30	9.11	11.2	10.2	9.39	8.48	8.69
Chemical Oxygen Demand (mg/L)	250	36	60	72	80	75.6	77.2
Total Suspended Solids (mg/L)	100	18	28	30	28	36	42
Oil & Grease (mg/L)	10	2	4	0.6	2	1.98	1.76
Fecal Coliform* (MPN/100 ml)	<1000	10	16	14	16	18	28

Prepared By

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



Checked & Approved By

Signature.....  
Name.....**Rakesh Jain**  
Designation.....**Manager**  
AETRL (P.) LIMITED



**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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**Advanced Environmental Testing And Research Lab P. Ltd.**

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**Sasan Power Limited  
STP Outlet (Near Hydrogen Plant)  
(October, 2018 to March, 2019)**

Parameters	Limits	Concentration of Pollutants (STP Outlet)					
		Oct, 2018	Nov, 2018	Dec, 2018	Jan, 2019	Feb, 2019	Mar, 2019
pH	5.5 to 9.0	7.23	7.48	7.32	7.24	7.55	7.71
Biochemical Oxygen Demand (mg/L)	30	9.26	10.2	10.1	5.6	6.11	6.48
Chemical Oxygen Demand (mg/L)	250	40	42	48	38	42.8	48.1
Total Suspended Solids (mg/L)	100	24	20	46	32	28	34
Oil & Grease (mg/L)	10	2	1.62	1.43	1.8	1.16	1.22
Fecal Coliform* (MPN/100 ml)	<1000	22	26	22	28	32	38

Prepared By

Signature.....  
Name.....**Dr. Dinesh K. Vethanaya**  
Designation.....**Dr. Manager, Technical**  
AETRL (P.) LIMITED



Checked & Approved By

Signature.....  
Name.....**Raresh Jain**  
Designation.....**Manager**  
AETRL (P.) LIMITED

**Compliance Status Report for "Environmental Clearance" Accorded by the MoEF&CC  
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**SASAN POWER LIMITED**

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

Parameters	IS:10500 Limits	(December, 2018)							
		Piezometer							
		Piezometer (SPL/AD/PZ-01)	Piezometer (SPL/AD/PZ-04)	Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-06)	Piezometer (SPL/AD/PZ-07)	Piezometer (SPL/AD/PZ-08)	Piezometer (SPL/AD/PZ-09)	Security Training Center (Island-3)
pH	6.5-8.5	7.42	7.71	7.9	7.67	7.58	7.38	8.01	7.71
Colour (Hazen)	15	2.13	3.15	1.62	1.36	1.38	1.62	1.6	0.88
Odor*	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.
Turbidity (NTU)	1	0.86	1.09	1.22	0.42	0.44	0.77	0.57	0.43
TDS (mg/L)	2000	390	402	414	416	390	368	386	389
Total Alkalinity (mg/L)	600	176	142	165	156	161	130	146	132
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	180	178	189	182	160	153	168	168
Calcium as Ca (mg/L)	200	51.8	48.3	55.7	52.6	44.3	40.6	45.1	50.2
Magnesium as Mg (mg/L)	100	12.3	13.9	12.1	12.7	11.9	12.5	13.5	10.3
Residual Chlorine* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Boron* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides (mg/L)	1000	44.6	50.3	61.3	40.3	43.4	59.2	45.1	45.9
Sulphate (mg/L)	400	42.1	33.6	43.2	37.6	30.2	40.7	34.7	35.2
Fluoride* (mg/L)	1.5	0.642	0.61	0.55	0.62	0.56	0.41	0.57	0.39
Nitrate (mg/L)	45	5.79	7.15	11.2	4.93	4.49	6.36	4.69	7.68
Phenolic Compound* (mg/L)	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil* (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Where, BDL (Below Detection Limit)

Prepared By

Signature.....

Name.....Dr. Dinesh K. Uthappa

Designation.....P. Manager (Technical)

AETRL (P.) LIMITED



Checked & Approved By

Signature.....

Name.....Rakesh Jain

Designation.....Manager

AETRL (P.) LIMITED



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**SASAN POWER LIMITED**

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

Parameters	IS:10500 Limits	(March, 2019)							
		Piezometer							
		Piezometer (SPL/AD/PZ-01)	Piezometer (SPL/AD/PZ-04)	Piezometer (SPL/AD/PZ-05)	Piezometer (SPL/AD/PZ-06)	Piezometer (SPL/AD/PZ-07)	Piezometer (SPL/AD/PZ-08)	Piezometer (SPL/AD/PZ-09)	Security Training Center (Island-3)
pH	6.5-8.5	7.51	7.82	7.76	7.63	7.81	7.66	7.91	7.69
Colour (Hazen)	15	1.92	2.62	1.25	1.16	1.21	1.71	1.41	0.52
Odor*	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.	Agre.
Turbidity (NTU)	1	0.72	0.68	1.08	0.49	0.44	0.81	0.74	0.53
TDS (mg/L)	2000	382	410	425	472	348	380	390	347
Total Alkalinity (mg/L)	600	169	151	168	159	176	158	152	130
Total Hardness as CaCO <sub>3</sub> (mg/L)	600	184	181	185	180	168	168	174	171
Calcium as Ca (mg/L)	200	52.1	49.6	55.1	53.8	45.1	45.8	47	51.6
Magnesium as Mg (mg/L)	100	13.1	13.85	11.48	11.1	13.43	12.73	13.73	10.21
Residual Chlorine* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Ammonia (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Boron* (mg/L)	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorides (mg/L)	1000	40.7	52.1	58.9	47.1	46.1	56.4	48.7	43.6
Sulphate (mg/L)	400	45.6	38.8	44.1	37.6	38.6	44.6	37.2	37.1
Fluoride* (mg/L)	1.5	0.66	0.623	0.561	0.616	0.607	0.63	0.546	0.42
Nitrate (mg/L)	45	4.23	5.19	9.13	5.96	8.33	6.78	7.31	6.62
Phenolic Compound* (mg/L)	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mineral Oil* (mg/L)	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulphide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cyanide* (mg/L)	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Anionic detergent* (mg/L)	1	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