

एसजेवीएन थर्मल (प्रा.) लिमिटेड

SJVN Thermal (P) Ltd.

(एसजेवीएन की पूर्ण स्वामित्व वाली अधीनस्थ कंपनी)

(A wholly owned subsidiary of SJVN)

1320 मेगावाट बक्सर ताप विद्युत परियोजना

1320 MW Buxar Thermal Power Project

**ENVIRONMENT DEPARTMENT**

No. STPL/BTPP/ENV/Half Yearly/2023- 1526

Dated: 20/11/2023

To,  
Deputy Director General of Forests (C),  
Ministry of Environment, Forest and Climate Change,  
Integrated Regional Office, 2nd Floor,  
Headquarter- Jharkhand State Housing Board,  
Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi  
Email: ro[dot]ranchi-mef[at]gov[dot]in

**Subject:** Environment Clearance for 2x660 MW Coal Based Super Critical Buxar Thermal Power Project (BTPP) at near village Chausa, District Buxar, Bihar by M/s SJVN Thermal Pvt. Ltd. - **Six Monthly Compliance Report for the period from 01.04.2023 to 30.09. 2023 - Regarding .**

**Reference:** Environment Clearance letter No. J-13012/69/2008/IA.I (T) dated 28.02.2017

Sir,

With reference to the above-mentioned Environment Clearance letter, SJVN Thermal (P) Limited is pleased to submit the Six-Monthly Compliance Report of the conditions stipulated in Environment Clearance for the period from 01.04.2023 to 30.09.2023 in respect of 2x660 MW Buxar Thermal Power Project. The Six-Monthly Compliance Report is enclosed as **Annexure-I**.

It also submitted that SJVN Thermal (Pvt.) Limited / Buxar Thermal Power Project has submitted the application at MoEF&CC for Terms of Reference (ToR) for Environment Clearance for expansion from 1320 MW to 1980 MW of Coal Based Buxar Thermal Power Project by Installing 1x660 MW new Unit. In this regard, duly certified copy of the compliance report of the conditions stipulated in the Environmental Clearance of 1320 MW is required from the Integrated Regional Office of MoEF&CC, Ranchi for further submission to MOEF&CC, GOI for granting of ToR.

In view of above, it is humbly requested to kindly provide the duly certified copy of this compliance report, please.

Thanking you

Yours faithfully,  
For & on behalf of STPL/BTPP

उदय कुमार सिन्हा

(Uday Kumar Sinha)

20.11.2023  
General Manager, Head (Environment)

**Encl: As above**

Our shared Vision: 5000 MW by 2023, 25000 MW by 2030 & 50000 MW by 2040

पंजी. कार्यालय: 169, पाटलिपुत्र कॉलोनी, पटना-800013 (बिहार)

परियोजना कार्यालय: प्रथम तल, मुख्य कार्यालय भवन,

एसजेवीएन थर्मल (प्रा) लिमिटेड, मोहनपुरवा, अखौरीपुर

गोला, चौसा, बक्सर-802114 (बिहार)

दूरभाष: 06183-295168

ईमेल: stplbuxarenvir@gmail.com

www.sjvn.nic.in

**Regd. Office:** 169, Patliputra Colony, Patna-800013 (Bihar)

**Project Office:** 1st Floor, Main Office Building, SJVN

Thermal (P) Ltd., Mohanpurwa, Akhouripur Gola,

Chausa, Buxar-802114 (Bihar) Tel: 06183-295168

E-mail: stplbuxarenvir@gmail.com

**Copy for information to:**

1. Regional Director, Central Pollution Control Board (CPCB), Regional Directorate – Kolkata, 'South end Conclave' Block-502, 5th & 6th Floor, 1582, Razidanga, Main Road, Kolkata- 700107.  
E-mail: [mkbiswas.cpcb@nic.in](mailto:mkbiswas.cpcb@nic.in)
2. Bihar State Pollution Control Board (BSPCB), Parivesh Bhawan, Plot No. NS-B/2, Paliputra Industrial Area, Patliputra, Patna (Bihar) – 800010.  
E-mail: [msbspcb-bih@gov.in](mailto:msbspcb-bih@gov.in), [bspcb@yahoo.com](mailto:bspcb@yahoo.com)

उदय कुमार सिन्हा  
(Uday Kumar Sinha)  
20.11.2021

**General Manager, Head (Environment)**

**Six Monthly Monitoring Report on Compliance to Environmental Aspects  
(For Period Ending September, 2023)**

<b>1) Description of the Project: -</b>	
(i) Name of Project	<b>M/s SJVN Thermal Pvt. Limited, 1320 MW Buxar Thermal Power Project</b> <i>(A wholly owned subsidiary of SJVN Ltd.- A Mini Ratna &amp; Sheduled "A" PSU under Govt. of India)</i>
(ii) Type of the Project	Thermal Power Project (1320 MW)
(iii) Location	New Office Building, Mohanpurwa, Akhoripur Gola, Chausa, Buxar, Bihar-802114
(iv) Contact Address:-	
(a) Concerned Project Head	<b>Chief Executive Officer,</b> New Office Building, Mohanpurwa, Akhoripur Gola, Chausa, Buxar, Bihar-802114 e-mail - <a href="mailto:ceo.stpl@sjvn.nic.in">ceo.stpl@sjvn.nic.in</a>
(b) Concerned Environment Division (Project)	<b>Head (Environment),</b> New Office Building, Mohanpurwa, Akhoripur Gola, Chausa, Buxar, Bihar-802114 e-mail - <a href="mailto:env.stpl@sjvn.nic.in">env.stpl@sjvn.nic.in</a>
(c) Concerned Environment Division (Corporate)	<b>Head (Environment),</b> SJVN Corporate Headquarters, Shanar, Shimla-171006 (Himachal Pradesh) e-mail - <a href="mailto:sjvnecd@sjvn.nic.in">sjvnecd@sjvn.nic.in</a>
<b>2) Environment Clearance</b>	J-13012/69/2008/IA.I (T) dated 28.02.2017

**3. Compliance Report:-**

Sr. No.	Condition in Environment Clearance	Compliance/Status
<b>A. Specific conditions</b>		
i.	Land of 33% of the total project area would be earmarked for greenbelt development. 100 m wide greenbelt with 3 tiers around the plant boundary with plant density of 2,500 trees per hectare with local native species shall be developed.	<p>The project is at advanced stage of construction and due to machinery/equipment movement, sand and aggregate storage, laying of rail infrastructure works, space constraint for the fabrication works etc. the development of Green Belt and plantation work have been done in few patches only. The plantation activity shall commence once the different components of the project are completed in a phased manner.</p> <p>20 no. plant species have been identified as suitable for plant area which include <i>Azadirachta indica</i>, <i>Leucaena leucocephala</i>, <i>Ficus benghalensis</i>, <i>Mangifera indica</i>,</p>

*Asa*

		Terminalia arjuna etc. which are in line with the EIA/EMP report.
ii.	Recommendations of Water Resource Department, Patna vide their letter dated 21.1.2017 shall be implemented for diverting the Buda nalla. Recommendations of IIT Roorkee shall also be implemented in this regard. Re-alignment has been proposed so as not to disturb the natural course of the drainage. Banks of the nalla to be strengthened near outfall locations. Solid waste disposal shall not be disposed in to nallah to maintain flow capacity of the nalla.	The work for diversion of Buddha Nallah is being implemented as per the approval of Flood Control Deptt., Government of Bihar and recommendation of water resource Dept, Patna and IIT, Roorkee. The work is in Progress. (Photographs are enclosed as <b>Appendix-1</b> ). It shall be ensured that no Solid waste has to be disposed in to nallah.
iii.	Site Specific Seismicity Study recommendations by IIT Roorkee shall be implemented in design of all structures and equipment. The design of the structures shall also be in accordance with the provisions of IS.1893 (Part-I):2002 and IS'1893 (Part 4): 2005	All structures and equipment shall be designed for seismic forces adopting the Site-Specific Seismic information recommendations by IIT Roorkee and using the other provisions in accordance with IS:1893(Part-1):2002 & IS:1893(Fart-4):2005.  The maximum horizontal Peak Ground Acceleration (PGA) value estimated from various Seismogenic sources for Buxar Thermal Power Project site, Bihar is 0.13g. However, the recommended horizontal PGA for the project site is 0.16g.
iv	Flue Gas Desulphurization (FGD) and Selective Catalytic Reduction (SCR) shall be installed in the proposed Thermal Power Plant.	Both systems have been envisaged. In respect of Unit #1 50% duct fabrication completed for FGD and 60% SCR and mechanical equipment erection in progress.
v	Sulphur and ash content in the imported coal shall not exceed 0.8% and 12% respectively. The Sulphur and ash content of domestic coal shall not exceed 0.6%/ and 34% respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to the environmental clearance.	Agreed.  Agreement for Long Terms Coal Linkage has been signed from Central Coal Field Limited 27.07.2021 for supply of coal ( <b>Appendix-2</b> ).
vi	The PP shall explore feasibility of Air-Cooled Condensers based on the guidelines of CEA. As proposed, Capital cost of <b>Rs. 1,311.32 Crores</b> shall be earmarked for implementation of Environment Management Plan. <b>CSR budget of Rs.61 Crores has been allocated which shall be spent in 10 years.</b> The CSR budget during operational phase shall be earmarked as per the CSR policy of Gol. Provision for water supply to be made for construction toilets under Swachh Bharat Abhiyan.	Water cooled condenser as per original scheme are being erected.  As per Public Investment Board (PIB) approval of BTTP, an amount of Rs. 1858.39 Crore (At January 2018 Price Level) have been earmarked for Environmental Protection Measures, which is more than the approved cost kept in Environment Clearance i.e. Rs. 1,311.32 Crores. ( <b>Appendix-3</b> )  The CSR/R&R schemes are being implemented at project since 2014. As

		on date Rs. 24.50 Crore expenditure has been done under CSR for Skill Development programme, nomination of youth for ITIs course, Horticulture/Agriculture & Veterinary training, Oxygen Plant, Plant for sanitary pad manufacturing etc.
vii	MoEF&CC Notification S.O. 3305(E) dated 07.12.2015 shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards. The PM, SO <sub>2</sub> , NO <sub>x</sub> and Hg emissions shall not exceed 30 mg/Nm <sup>3</sup> , 100 mg/Nm <sup>3</sup> , 100 mg/Nm <sup>3</sup> and 0.03 mg/Nm <sup>3</sup> respectively. The specific water consumption shall not exceed 2.5 m <sup>3</sup> /MWh and zero wastewater discharge shall be achieved.	Agreed.  The MoEF&CC Notification S.O. 3305(E) dated 7.12.2015 shall be implemented during operation of Buxar Thermal Power Project.
viii	MoEF&CC Notification G.S.R 02(E) dated 02.01.2014 regarding use of raw or blended or beneficiated or washed coal with ash content not exceeding 34% shall be complied with	Agreed.  MoEF&CC Notification G.S.R 02(E) dated 02.01.2014 regarding use of raw or blended or beneficiated or washed coal with ash content not exceeding 34% shall be complied during operation of Buxar Thermal Power Project.
ix	MoEF&CC Notifications on fly ash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with.	Agreed.  MoEF&CC Notifications on fly ash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied during operation phase of Buxar Thermal Power Project.  EOI has been obtained from various users for utilization of fly ash viz., Rural Work Deptt., Govt. of Bihar – 0.48 MMTPA, Road Construction Deptt., Govt. Of Bihar – 0.24 MMTPA, M/s R.K. Mishra Enterprises, Bhagalpur Bihar- 0.5 MMTPA, Lafarge Cement Plant – 0.8 MMTPA, Dalmiya Cement – 0.7 MMTPA and Global Infra Ltd. – 0.5 MMTPA. <b>(Appendix-4)</b>
x	Separate Environmental Clearance may be obtained for the proposed Township in an area of 95 acres with total built-up area of 1,21,178 sq. m as applicable. under EIA Notification 2006.	Vide EC identification no:- EC22B038BR124616 approval has been accorded. <b>(Appendix-5)</b>

	Sewage Treatment Plant (STP) shall be set up in the township for treating wastewater of 900 m <sup>3</sup> /day.	The Project township is under construction and Sewage Treatment Plant (STP) has been included in the plan of township complex, which will be commissioned before commencement of accommodation in the Project township.
xi	An estimate of 5.9 million cubic meters (9 million tons) of Soil would be required for leveling the site. Earth material will be sourced from land/ borrow pits from the nearby areas within 15 km radius from the site. Necessary permits and approvals shall be obtained from the concerned authorities for excavation of earth material.	Only 1,03,002 m <sup>3</sup> soil has been brought out from outside the plant boundary for which necessary approval/permission has been obtained from State Mining Department ( <b>Appendix-6</b> ). Balance soil requirement has been met from excavation of components within plant.
xii	As proposed, separate Environmental Cell with Environmental Engineers, Environmental Scientists, Occupational Health Specialist, Horticulture Specialist, and Social Scientist headed by Environment Head shall function and implement environmental management plan and monitoring activities.  Company shall implement Environmental Management Systems, ISO 14001:2015 at the proposed project. Sustainability Reporting shall be done as per environment management plan.	A separate Environmental Cell has been constituted.  Environment Management System - ISO 14001.2015 certificate has been obtained from Bureau of Indian Standard for all activities of Buxar Thermal Power Plant ( <b>Appendix-7</b> ).
xiii	The compliance of EC conditions shall be reviewed on quarterly basis. In this regard, a compliance mechanism shall be set up through Plant Head who is responsible for implementing the conditions stipulated in the Environmental Clearance, non-compliances and violations.  Budget to implement various environmental pollution control measures as proposed in the EMF shall be kept in a separate account and shall not be diverted for any other purposes.	Is being complied.
xiv	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	STPL vide letter dated 29.04.2019 has submitted a project vision document to the Regional Office, MOEF&CC at Ranchi. ( <b>Appendix-8</b> )
xv	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	The installation of Solar Power System has been envisaged over the available roof tops. The stated condition shall be complied once the plant is commissioned and rooftops of various buildings are available for erection of Solar Panels.  The project township is under construction.

*AS*

xvi	<p>A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports.</p> <p>Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.</p>	<p>Agreed.</p> <p>Shall be duly complied in synchronization of commissioning of Plant.</p>
xvii	<p>Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.</p>	<p>Online continuous monitoring system for stack emission, ambient air and effluent will be installed before commissioning of Project. However, monthly Ambient air quality monitoring is being done as per location identified by BSPCB (<b>Annexure- 9</b>).</p>
xviii	<p>High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm<sup>3</sup> or as would be notified by the Ministry, whichever is lesser. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.</p>	<p>Erection of high Efficiency Electrostatic Precipitators (ESP) for Unit #1 is in full swing; Approx. 89% progress achieved in Unit #1. 27% progress of Unit #2 ESP achieved till date. Moreover, bag filter and water spray system are also planned to be installed in high dusty areas like coal and ash handling points.</p>
xix	<p>Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.</p>	<p>Dust extraction system along with dust suppression (water spray) has been envisaged in high dusty areas like coal and ash handling points as per Environment Clearance.</p>
xx	<p>CoC of at least 5.0 shall be adopted</p>	<p>Shall be complied once the Unit #1 is under operation.</p>
xxi	<p>Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained.</p> <p>Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with <b>half yearly monitoring report</b>.</p>	<p>All the water quality parameters including heavy metals in ground water is being monitored on monthly basis.</p> <p>Monthly Ground Water Quality monitoring is being carried out. The result of latest ground water quality monitoring done in October 2023 at labour colony, Staff colony are attached as <b>Appendix-10</b>.</p>
xxii	<p>A well-designed rain water harvesting system shall be put in place <b>within six months</b>, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use</p>	<p>The condition has been duly considered in Detailed Engineering of the Project Scheme. Same shall be implemented in due course of project construction.</p> <p>The rainfall runoff shall be collected through drains in a Rain water</p>

*Handwritten signature*

		Harvesting Pond (RWHP) and water from the RWHP shall be 100% used in dry season.
xxiii	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant except Buda nalla as proposed for re-alignment without affecting natural drainage	Shall be ensured.  The work for diversion of Buddha Nallah is being implemented as per the approval of Flood Control Deptt., Government of Bihar and recommendation of water resource Dept, Patna and IIT, Roorkee. The work is in Progress. (Photographs are enclosed as <b>Appendix-1</b> ).
xxiv.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved	Is being ensured. Considering the balancing of excavation and filling requirement up to the extent possible.
xxv	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed of in low lying area	Bottom Ash in the form of slurry shall be collected and stored in ash lagoons/dyke.  Monitoring of Heavy Metals in bottom ash shall be started once the Project is commissioned.  For dry fly ash 04 nos. silos with effective capacity of 7200 M <sup>3</sup> (4x1800 M <sup>3</sup> ) will be constructed for storage.
xxvi	No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.	Shall be duly complied if required in future.
xxvii	Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.	Agreed.
xxvii i	Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80%.	The project is at advanced stage of construction and due to machinery/equipment movement, sand and aggregate storage, laying of rail infrastructure works, space constraint for the fabrication works etc. the development of Green Belt and plantation work have been done in few patches only. The plantation



		<p>activity shall commence once the different components of the project are completed in a phased manner.</p> <p>20 no. plant species have been identified as suitable for plant area which include Azadirachta indica, Leucaena leucocephala, Ficus benghalensis, Mangifera indica, Terminalia arjuna etc. which are in line with the EIA/EMP report.</p>
xxix	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary	Agreed.
xxx	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations	<p>Shall be duly complied</p> <p>SJVN has a well-established Corporate Environment Policy, which can be seen at <a href="https://sjvn.nic.in/environmentpolicy/49">https://sjvn.nic.in/environmentpolicy/49</a> (<b>Appendix-11</b>).</p>
xxxi	<p>CSR schemes identified based on need based assessment shall be implemented in consultation with the village panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.</p>	<p>CSR schemes are being implemented since 2014 at Buxar Thermal Power Plant as per CSR Policy on behalf of SJVN Foundation. Total 797 persons have been trained in various trades under the skill development initiative of SJVN Foundation.</p> <p>The CSR/R&amp;R schemes are being implemented at project since 2014. As on date Rs. 24.50 Crore expenditure has been done under CSR for Skill Development programme, nomination of youth for ITIs course, Horticulture/Agriculture &amp; Veterinary training, Oxygen Plant, Plant for sanitary pad manufacturing etc.</p>
xxxii	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final	<p>The CSR works for STPL are being implemented through the SJVN-CSR foundation. All the CSR activities are being monitored by CSR Department, SJVN Corporate Head Quarter, Shimla. In this regard, a Screening Committee has been constituted at Buxar Thermal Power Plant;</p> <ol style="list-style-type: none"> <li>1. Sh. Mahendra Singh Verma, Dy. Manager (HR) – CSR.</li> <li>2. Sh. Abhinav Gajendra Dy. Manager (F&amp;A)</li> <li>3. Sh. Gautam Kumar, Dy. Manager (Civil)</li> </ol>



<b>Part B: General conditions</b>		
i.	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	Agreed. Shall be ensured once Project is to be commissioned.
ii.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation	Agreed. A sewage treatment plant has to be installed in project and treated water will be reused as per stated condition.
iii.	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	To ensure the Fire safety measures, fire safety plan shall be implemented in the project including coal yard, during operation of project. However, procurement of Water tender, Foam fire tender and DCP fire tender are in process.
iv	Storage facilities for auxiliary liquid fuel such as LDO/ HFO/LSHS shall be made in the plant area in consultation with Department 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	Approval from Jt. Chief Controller of Explosive, Kolkata under Petroleum & Explosives Safety Organization (PESO) has been obtained vide reference no. A/P/EC/BI/15/1988 (P522050) dated 27.04.2022 <b>(Appendix-12)</b> .  To deal with the disaster & emergency related matter an Emergency Preparedness Plan has been got prepared from National Safety Council, Mumbai.
v	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First Aid boxes have been kept at different locations at Buxar Thermal Power Project (Offices, Construction site, Guest House, substation, Bachelor accommodation, Security Main gate etc.). The sanitation arrangements are available for all persons including drivers and other contract workers.
vi	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/ less noisy areas.	Shall be duly complied during commissioning and operation period of Buxar Thermal Power Project. Ear Muffs, Ear Plugs are provided to workers.
vii	Regular monitoring of ambient air ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are	Shall be duly complied.  Monthly monitoring of ambient air ground level concentration of SO <sub>2</sub> ,



	found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company	NOx, PM2.5 & PM10 and Hg shall be carried out as per CPCB notification 18.11.2009.  The latest ambient air quality monitoring result of October 2023 at different locations of Buxar Thermal Power Plant are attached ( <b>Appendix-13</b> ).
viii	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Necessary provision kept for compliance (during operations) to meet the stated conditions.
ix	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The construction work of the project is being carried out through contractor (M/s L&T). The construction workers engaged in contraction work has facilitated with necessary amenities by the contractor like labour colony, toilets, electricity, transpiration, safe drinking water and sanitation, first aid & ambulance.  However, workers from nearby villages are also employed in the construction activity, they reside in their own home.
x	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at the Website of MoEF&CC at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Advertisement published in Dainik Jagran and Hindustan times on 05/03/2017 and 09/03/2017 respectively. ( <b>Appendix-14</b> )
xi	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.	Environment Clearance letter available on company website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a> and shared with concerned Panchayat offices. The event of grant of environment clearance was also publicized through advertisement in the newspapers Dainik Jagran and Hindustan on 05/03/2017 and 09/03/2017 respectively. The advertisements are placed at ( <b>Appendix-14</b> ).
xii	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update	Six-monthly compliance reports are being regularly submitted to MoEF&CC & MoEF&CC Regional Office, Ranchi and Bihar State

*KCO*

	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 (PM2.5 & PM10), SO2, NOx (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain	Pollution Control Board, Patna and also uploaded on our website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a> .  The last compliance report for the period ending September 2022 was submitted on 25.05.2023.
xiii	The environment statement for each financial year ending 31st 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Shall be duly complied
xiv	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to MoEF&CC, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, MoEF&CC.	Six-monthly compliance reports are being regularly submitted to MoEF&CC & MoEF&CC Regional Office, Ranchi and Bihar State Pollution Control Board, Patna and also uploaded on our website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a> .  The last compliance report for the period ending September 2022 was submitted on 25.05.2023.
xv	The progress of the project shall be submitted to CEA on six monthly basis.	Shall be duly complied.
xvi	Regional Office of the MoEF&CC will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six-monthly basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	Complete set of requisite documents shared with MoEF&CC regional office on 20/04/2017 and project updates being shared regularly vide half yearly compliance reports ( <b>Appendix-15</b> ).
xvii	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	As per Public Investment Board (PIB) approval of BTTP, an amount of Rs. 1858.39 Crore (At January 2018 Price Level) have been earmarked for Environmental Protection Measures, which is more than the approved cost kept in Environment Clearance i.e. Rs. 1,311.32 Crores. ( <b>Appendix-3</b> )



xviii	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 land development work and commissioning of plant.	<p>The Cabinet Committee on Economic Affairs, chaired by the Prime Minister had given its approval on 07/03/2019 for investment approval for 2x660 MW Buxar Thermal Power Project (Buxar TPP) in District Buxar of Bihar.</p> <p>The project will be completed at an estimated cost of Rs. 10,439.09 crore and implemented by SJVN Thermal Private Ltd., a wholly owned subsidiary of SJVN Ltd., a Mini Ratna CPSU under Ministry of Power, Government of India. The said approval was communicated by Ministry of Power, GoI vide letter No. FU-18/2027-IPC dated 08/03/2019. The Buxar TPP will start yielding benefits from 2023-24.</p>
xix	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry / CPCB/ SPCB who would be monitoring the compliance of environmental status	Agreed.

KD

**Appendix-1**





5/4/23  
11:18 AM

FSA No.

**M O D I F I E D - M O D E L  
C O A L S U P P L Y A G R E E M E N T**

**BETWEEN**

**CENTRAL COALFIELDS LIMITED**

**AND**

**SJVN THERMAL PRIVATE LIMITED**  
(A wholly owned subsidiary of SJVN Limited)

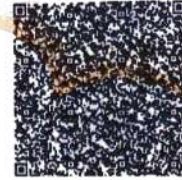
**FOR**

**BUXAR THERMAL POWER PLANT**  
(UNIT 1&2, 2X660 MW)

**[27/07/2021]**



**INDIA NON JUDICIAL  
Government of Bihar  
e-Stamp**



Certificate No. : IN-BR20628404525475T  
 Certificate Issued Date : 17-Jun-2021 12:48 PM  
 Account Reference : SHCIL (FI)/ brshcil01/ BUXAR/ BR-BUX/ BXR  
 Unique Doc. Reference : SUBIN-BRBRSHGIL0126947013719278T  
 Purchased by : CEO STPL  
 Description of Document : Not Applicable  
 Property Description : Not Applicable  
 Consideration Price (Rs.) : 0 (Zero)  
 First Party : Not Applicable  
 Second Party : CEO STPL  
 Stamp Duty Paid By : CEO STPL  
 Stamp Duty Paid (Rs.) : 100(One Hundred only)  
 Reg. fee (Rs.) : 0 (Zero)  
 LLR & P Fee (Rs.) : 0 (Zero)  
 Miscellaneous Fee (Rs.) : 0 (Zero)  
 Discore SC (Rs.) : 0 (Zero)  
 Total Amount (Rs.) : 100 (One Hundred only)



This Agreement is made on this 27th day of July, 2021 between **Central Coalfields Limited**, a company registered under the Companies Act, 1956 and having its registered office at **Darbhanga House, Ranchi, 834001 Jharkhand** hereinafter called the "Seller" (which expression shall unless excluded by or repugnant to the subject or context, include its legal representatives, successors and permitted assigns) of the one part,

AND

**M/s SJVN Thermal Private Limited (A wholly owned subsidiary of SJVN Ltd.)**, a company registered under the Companies Act, 1956 and having its registered office at **169, Patliputra Colony Patna - 800013 (Bihar)**, hereinafter called the "Purchaser" (which term shall unless excluded or repugnant to the subject or context include its legal representatives, successors and permitted assigns) of the other part

AND

Whereas the Purchaser or its predecessor-in-interest was issued a Letter of Assurance (LOA) dated **10.12.2018** from CCL vide reference no. CCL/HQ/C-4/LOA (Power)/Buxar TPP/2018-19/17053-58 against **2x660 MW plant capacity of the Purchaser's TPP (Buxar TPP Unit 1 & 2)** and the Purchaser has achieved the milestones as set out in the Annexure 1 of the LOA and fulfilled other conditions as stipulated under the LOA.

AND

Model FSA – Govt./State Power Utilities (New)

2

CCL & SJVN Buxar Unit 1 & 2 (2x660 MW)

Do not write or type below this line

ILP 0008074078

**Statutory Alert**

1. The authenticity of this Stamp certificate should be verified at 'www.shrestamp.com' or using e-Stamp Mobile App of Stock Holding Corporation of India Ltd. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Whereas the Purchaser has been granted linkage of Coal by Standing Linkage Committee – Long Term (SLC- LT) vide its meeting held on 21.08.2017 circulated vide letter no. 23014/4/2017-CLD dated 19.09.2017 and recommended in the 31<sup>st</sup> CLOA held on 02.05.2018 at CIL, Kolkata for issuance of LOA to Buxar TPP.

AND

Whereas SLC (LT) vide its meeting held on 19.05.2021 recommended inter alia to condone the delay in achievement of LOA milestone of FC and extended the validity of LOA till 31<sup>st</sup> March 2021 and submission of the documents to CCL/ CIL till 30<sup>th</sup> June 2021, as well as waiver of the requirement of additional CG. Further, MOC, Govt. of India vide its letter dated 06.07.2021, while communicating the aforesaid minutes of SLC (LT) communicated that *'as 30.06.2021 is already over, the competent authority has extended the timeline for submission of the documents to CIL/CCL to one (1) month from the date of issuance of this letter'*.

AND

Whereas the Purchaser has requested the Seller vide e-mail dated 06-07-2021 for execution of FSA with **SJVN Thermal Private Limited** for **Buxar TPP Unit 1 & 2 (2x660 MW), Village Chausa, Buxar, 202103, Bihar** of the Purchaser (as per details contained in Schedule-I to this Agreement) and the Seller has agreed to execute instant FSA and make supplies on the terms and conditions set out hereafter,

AND

Whereas the Purchaser has entered into or is yet to enter into long term Power Purchase Agreements (PPA) either directly with Distribution Companies (DISCOMs) or through Power Trading Company (ies) (PTC) who has / have signed back to back PPA(s) (long-term) with DISCOMs and have commissioned or would get commissioned.

AND

Whereas, the Purchaser has not any direct / indirect interest in any manner as associate or group company with any entity who has been allotted coal block in India for end use as stipulated in clause 3.2 with further reinforcement by Schedule-I in accordance with guidelines/policies of the Government of India relating to Letter of Assurance/ Allocation of coal on tapering basis.

AND

Whereas, the Purchaser gives a self-declaration that no coal block(s) has/have been allotted for the Power Plant(s) covered under this Agreement and even if coal block(s) has/have been allotted, such coal block(s) has/have not been allotted as source(s) of coal supplies for the power plant(s) covered under this Agreement. Whereas, the Purchaser further declares that there has been no change in the ownership pattern of the Purchaser since the time of issue of Letter of Assurance (LoA) till the time of signing of this Agreement.

3



Now, therefore, in consideration of the agreement and covenants hereafter set forth and intending to be legally enforceable, the Seller and the Purchaser (each individually a Party hereto and collectively the Parties) hereby covenant and agree as follows:

1. **DEFINITIONS & RULES OF INTERPRETATION:**

1.1 **DEFINITIONS:**

- a. **"Agreement"** means this Coal supply agreement including all its Schedules, Annexure and attachments and subsequent amendments as may be issued in accordance with the terms and conditions hereof and it shall supersede and exclude any previous arrangement, understanding or commitment that the Seller may have had with the Purchaser.
- b. **"Annual Contracted Quantity"** or **"ACQ"** shall have the meaning as ascribed to it in Clause 3.1
- c. **"Applicable Laws"** means all laws, brought into force and effect by the Government of India ("GoI") or the State Government including rules, regulations and notifications made thereunder, and judgments, decrees, injunctions, writs and orders of any court of record, applicable to either Seller/CIL or the Purchaser, their obligations or this Agreement from time to time.
- d. **"As Delivered Price of Coal"** shall have the meaning ascribed to it in Clause 8.
- e. **"Base Price"** shall mean, in relation to a Declared Grade [as defined at 1.1(1)] of Coal produced by Seller, the Pithead price notified from time to time by CIL or Seller; and in relation to Imported Coal, wherever applicable, shall mean its landed cost till the Delivery Point and service charges intimated by CIL or the Seller, as the case may be.  
In the event the Sellers supply coal from sources, notified by Seller on cost plus basis, cost plus basis prices shall be applicable
- f. **"Business Day"** shall mean each Monday, Tuesday, Wednesday, Thursday, Friday and Saturday that is not declared a holiday in the State of **Jharkhand** under the Negotiable Instruments Act, 1981.
- g. **"Coal"** means non-coking as well as coking coal, produced domestically and categorized into different classes, GCV bands, grades and sizes, as per the notification/order issued for such purpose by Government of India(GoI)/CIL/ Seller and shall, where the context so requires, include Imported Coal. For the avoidance of any doubt, Coal shall also include the middlings arising out of washing of coking and non-coking coal.
- h. **"Condition Precedent Period"** shall have meaning ascribed to it under Clause 2.8.3.1



- i. **“CIL”** means Coal India Limited, the holding company of the Seller, having its registered office at **Coal Bhawan, Premise No-04 MAR, Plot No-AF-III, Action Area-1A, Newtown, Rajarhat, Kolkata-700156, India**, and having authorities to enter into any agreement/side agreements, supplementary to this agreement for ensuring supply of coal from import of coal or other alternative sources.
- j. **“Coal Distribution System”** of the Seller would include any distribution system in force including directions thereon from the Government issued from time to time.
- k. **“Colliery Loading Point”** shall mean
- (i) Silo, or
  - (ii) Mid point for wharf wall loading at the colliery, or
  - (iii) Truck loading point, or
  - (iv) Ropeways loading point, or
  - (v) Transfer point to the customer’s belt conveyor etc, as the case may be.
- l. **“Declared Grade”** means the particular grade(s) under different categories [ as defined at 1.1(s)] of Coal mined from any seam or section of a seam in the Seller’s collieries as declared by CIL or the Seller from which Coal is produced and supplied under this Agreement, as declared by CIL or the Seller.
- m. **“Delivery Point”** means any of the colliery sidings or Colliery Loading Points, as the case may be, in the designated Coal mine of the Seller as per Schedule I, and/ or the location(s)/ port(s) identified by the Seller at which the Seller delivers Imported Coal in accordance with the terms of this Agreement.
- n. **“DISCOM”** means the “Distribution Licensee” who is authorized to operate and maintain a distribution system for selling electricity to the consumers in his area of supply at tariffs regulated by the State / Central Regulatory Authority, whichever is applicable.
- o. **“Effective Date”** shall mean the date of occurrence of the last of the events specified under clause 2.8.3.2 or 2.8.3.3
- p. **“First Delivery Date”** shall have the meaning ascribed to it in Clause 2.9
- q. **“Equilibrated Basis”** means determination/computation of various quality parameters such as but not limited to ash, volatile matter, fixed carbon, Gross Calorific Value etc. expressed at Equilibrated Moisture level determined at 60% relative humidity (RH) and 40 degree Celsius (°C).
- r. **“Equilibrated Moisture”** means moisture content, as determined after equilibrating at 60% relative humidity (RH) and 40 degree Celsius as per the relevant provisions (relating to determination of equilibrated moisture at 60% RH and 40 degree Celsius) of BIS 1350 of 1959 or amendment thereof.

*af.*

*[Signature]*  
 Chief Executive Officer  
 SJVN Thermal Pvt. Limited  
 (A Subsidiary of SJVN Limited)

- s. **“Grade”** means the grade / class in which the coking and non-coking Coal is categorised and/or to be categorised in terms and in accordance with the relevant notification issued by the Seller and/or by Govt. of India and published in the public domain and/or the Gazette of India, as applicable. The basis of grading for different categories of coal are as under:
- i. Non Coking Coal : based on GCV bands
  - ii. Coking Coal : based on Ash percentage
  - iii. Semi Coking Coal : based on (Ash + Moisture) percentage
- t. **“Imported Coal”** shall mean non-coking as well as coking coal, sourced internationally.
- u. **“Independent Engineer”** shall mean a consulting engineering firm or group, acceptable to the Seller, having necessary expertise to undertake the services or activities as mentioned under Clause 2.8.2.2
- v. **Importing Agency:** It may be the holding company of the Seller i.e CIL or any other agency(ies) appointed for supply of imported coal on behalf of the Seller.
- w. **“IS”** means the standard specifications issued by the Bureau of Indian Standards (BIS)
- x. **“Kilo Calorie”** shall mean the amount of heat required to raise the temperature of one kilogram (1 Kg.) of pure water at fifteen degrees Celsius (15°C), by one degree Celsius (1°C)
- y. **“Level of Delivery”** shall have the meaning ascribed to it in Clause 3.7.
- z. **“Level of Lifting”** shall have the meaning ascribed to it in Clause 3.8.
- aa. **“Merry Go Round” or MGR** shall mean the Purchaser’s captive rail transportation system for transportation of Coal
- bb. **“Month”** shall mean a calendar month.
- cc. **“Party”** means either the Seller or the Purchaser, and **“Parties”** mean a joint reference to the Seller and the Purchaser
- dd. **“Interest Rate”** shall mean the repo rate of Reserve Bank of India (RBI) as applicable on the due date of payment by the Purchaser plus 3% (three).
- ee. **“Performance Incentive”** shall have the meaning ascribed to it in Clause 3.12.
- ff. **“Pithead”** shall mean any of the following as the context may admit:




In case of an underground Coalmine, Pithead shall mean the point of entry into the mine on the surface of coal mine at the ground level and would be a place or point distinct from Delivery Point

In case of an open-cast Coalmine, Pithead shall mean the exit point of Coal on surface (mouth/entry of the main access trench or an auxiliary access trench). In case of open-cast mines with more than one exit points of Coal, there will be as many 'Pitheads' and will apply respectively to the amount of Coal egressing from a particular exit point.

The distance of transportation on surface from the Pithead (mouth of the main access trench or an auxiliary access trench) to the Colliery Loading Point shall be measured along the route of Coal transportation.

- gg. **"PPA" (Long Term)** means the Power Purchase Agreement between the Power Generating Source and the power procurer(s), i.e DISCOM(s) either directly or through PTC(s) who has/ have signed back to back PPA(s) with DISCOMs for a period of 7 years and above. However, the same shall not be applicable for the portion which is sold under market driven price.
- hh. **"Purchaser's Container"** means the Railway wagons and/or trucks placed for and on behalf of the Purchaser and/or receiving hopper, bunker, transfer point owned by the Purchaser from where Coal is moved by the Purchaser directly to its Power Station by belt conveyor.
- ii. **"Quarterly Quantity"** or **"QQ"** shall have the meaning ascribed to it in Clause 3.4.
- jj. **"Seller's Financial Closure"** shall mean the date on which execution of all the loan agreements, notes, indentures, security agreements, letters of credit and any other documents relating to the financing of the coal block have become effective and the Seller has immediate access to such funding with respect to development and operation of the coal block identified in Schedule I to this Agreement.
- kk. **"Signature Date"** shall mean the Date of signing of this Agreement by both Parties.
- ll. **"Surface Moisture"** means the moisture content present in Coal that is derived as the difference between Total Moisture and Equilibrated Moisture, and expressed in percentage terms.
- mm. **"Total Moisture"** means the total moisture content (including surface moisture) expressed as percentage present in Coal and determined on as delivered basis in pursuance to IS.
- nn. **"Unloading Point"** means the place/point at the Purchaser's Power Station end at which Coal from/through the Purchaser's Container is received/ unloaded.

  
Chief Executive Officer  
SJVN Thermal Pvt. Limited  
(A Subsidiary of SJVN Limited)

- oo. "**Gross Calorific Value**" or "**GCV**" means the heat value determined in any calibrated combustion Bomb Calorimeter, in accordance with the procedure laid down in IS: 1350 (Part-II) 1970 dated April 1971 or any subsequent revision thereof and result reported on equilibrated basis at 40 Degree Celsius and 60% Relative Humidity.
- pp. "**Weights and Measures Standards**" mean the standards, as prescribed under the Standards of Weights and Measures Act, 1976 and amendments thereof.
- qq. "**Year**" means the financial year of the Seller, commencing on April 1<sup>st</sup> and ending on the following March 31<sup>st</sup> and "**Quarter**" means the respective three-monthly periods, namely April to June, July to September, and so on.
- rr. "**Power Trading Company (PTC)**": A Power Trading Company is a trading licensee under the Electricity Act 2003 and having Trading License approved by the State Electricity Regulatory Commission under Section 86(1)(b) of the Electricity Act 2003
- ss. "**Third Party**": The agency appointed for collection, preparation and analysis of coal samples at loading points and relevant documentation

#### 1.2 **RULES OF INTERPRETATION:**

- a) A reference to this Agreement includes all schedules and annexures to this Agreement;
- b) A reference to any legislation or legislative provision includes any statutory modification or re-enactment of, or legislative provision substituted for, and any subordinated legislation issued under, that legislation or legislative provision;
- c) Headings do not affect the interpretation of this Agreement;
- d) A reference to Rs., INR or Rupees is to the lawful currency of the Republic of India unless specified otherwise;
- e) A reference to an agreement, deed, instrument or other document include the same as amended, novated, supplemented, varied or replaced from time to time; and
- f) The expressions "including", "includes" and "include" have the meaning as if followed by "without limitation".
- g) Words imparting the singular only also include plural and vice-versa where the context so requires;
- h) The expression "writing" or "written" shall include communications by facsimile and letter;



- i) If any definition in Clause 1.1 is a substantive provision conferring a right or imposing an obligation on any Party, effect shall be given to it as if it were a substantive provision in the body of this Agreement.

2. **PERIOD OF AGREEMENT:**

- 2.1 This Agreement shall come into force on the **Effective Date**.
- 2.2 This Agreement shall, unless terminated in accordance with the terms hereof, remain in force till the end of **twenty (20) years** from the Effective Date or the Life of the Power plant whichever is earlier.
- 2.3 After completion of five (5) years from the First Delivery Date, either Party may, by prior written notice to the other Party for a period not less than thirty (30) days, seek a review of this Agreement.
- 2.4 Notwithstanding the provisions of Clause 2.2 above, in the event of any change in the Grade structure of Coal, such changed Grade structure shall be binding and complied with by both the Parties. The Seller shall within fifteen (15) days of introduction of such change provide a written notice to the Purchaser calling for a joint review of such provisions of this Agreement on which such change in the Grade structure has a bearing, and upon such joint review, this Agreement shall be duly amended in writing to bring it in full conformity with such change.
- 2.5 In the event, the Parties are unable to arrive at a mutually agreed position with respect to the subject matter of review in terms of Clause 2.3 within a period of three (3) months from expiry of each five (5) year term, the Parties shall refer the matter to the Govt. of India and until a decision from the Government of India is received, the Agreement shall continue to be in force. The decision of the Govt. of India on the subject matter shall be final and binding on both the Parties.
- 2.6 (i) In the event of any material change in the Coal distribution system of the Seller due to a Government directive/ notification, at any time after the execution of this Agreement, the Seller shall within seven (7) days of introduction of such change provide a written notice to the Purchaser calling for a joint review. If the Parties are unable to arrive at a mutually agreed position with respect to the subject matter of review, within a period of thirty (30) days from the date of notice the Parties shall refer the matter to the Govt. of India for a decision.
- (ii) In terms of the Presidential Directives dated 17-7-2013 the Seller shall have the right to refer the FSA to the Ministry of Coal, Govt. of India for review of the actual supply schedule as and when FSA for 60,000 MW of plant capacity in aggregate becomes eligible for drawing coal as per FSA
- (iii) ~~Notwithstanding the provision contained in any other clauses of this agreement, the FSA shall not be effective if the Plant is not commissioned by March, 2020.~~



2.7 On completion of twenty (20) years from the Effective Date, or earlier in case of life of the Plant is less than twenty years this Agreement shall expire unless both the Parties mutually agree in writing to extend the Agreement, on the same or such terms as may be agreed upon by the Parties.

2.8 **Condition Precedent (CP)**

The rights and obligations of the Parties under this Agreement are subject to the satisfaction in full of the Conditions Precedent provided under Clause 2.8.1 and Clause 2.8.2 within the Condition Precedent Period unless the same have been waived in accordance with this Agreement.

2.8.1 **Seller's Condition Precedent:**

2.8.1.1 **In respect of supply of Imported Coal:** the Seller shall have (i) acquired a definitive right under a coal import agreement with its supplier of imported coal; and (ii) made all necessary arrangements for import of Coal including the necessary shipping and port arrangements for delivery of Imported Coal in accordance with the terms of this Agreement

2.8.1.2 **In respect of supply of domestic Coal (Applicable only for a Purchaser for whom any coal block has been identified for supply of coal):** the Seller shall have (i) obtained from the lawful authority all requisite sanctions, approvals, licenses and consents including those related to land acquisition, environment and forest clearance for development and operation of the coal block identified in Schedule I to this Agreement; and (ii) achieved Seller's Financial Closure with respect to development and operation of the block identified in Schedule I to this Agreement.

2.8.2 **Purchaser's Condition Precedent**

2.8.2.1 The Purchaser shall have obtained from the lawful authority all necessary clearances, authorizations, approvals and permissions required for, construction, commissioning, operation and maintenance of the Plant

2.8.2.2 The Purchaser shall have completed the construction and the completion of such construction along with readiness of the power plant for lighting up has been certified by an Independent Engineer within the Condition Precedent Period.

2.8.2.3 **Applicable to Purchaser who has signed FSA without entering into long-term PPA:** The Purchaser shall have to furnish the longterm Power Purchase Agreements (PPA) either directly with Distribution Companies (DISCOMs) or through Power Trading Company (ies) (PTC) who has / have signed back to back PPA(s) (long-term) with DISCOMs within the Condition Precedent (CP) period as per clause 2.8.3.1.

### 2.8.3 Satisfaction of Condition Precedent

2.8.3.1 The Conditions Precedents shall be fulfilled/ achieved within a period of twenty-four (24) months from the Signature Date or such further period (upto a maximum of 180 days) as may be extended on account of Force Majeure under Clause 17 of this Agreement (“**Condition Precedent Period**”)

The CPs set out in Clause 2.8.1 above shall be fulfilled to the satisfaction of Seller or waived by the Seller at its sole discretion in accordance with the option to be exercised by the Purchaser in the letter as per Schedule VII with regard to acceptance / surrender of supply of imported coal without affecting in any way the Seller’s obligations under this agreement. Within fifteen (15) days of achieving or waiving the CPs set out in Clause 2.8.1 as the case may be, the Seller shall issue a notice of satisfaction and notify to the Purchaser in writing. The Purchaser within fifteen (15) days from receipt of such notification shall issue a letter accepting the same.

2.8.3.2 The CPs set out in Clause 2.8.2 above shall be fulfilled to the satisfaction of the Seller or waived jointly by both the Parties in writing, as the case may be. Within fifteen (15) days of completion of achieving the CPs set out in Clause 2.8.2 the Purchaser shall issue a written notice of satisfaction and notify to Seller. The Seller within fifteen (15) days from receipt of such notification by Purchaser shall issue a letter accepting the same.

2.8.3.3 Notwithstanding the provisions of clause 2.8.3.1 above, at the request of the Purchaser, CIL may at its sole discretion extend the Condition Precedent Period.

2.8.3.4 If within the Condition Precedent Period, the Purchaser does not fulfill the Condition Precedent set out in clause 2.8.2 due to any reasons other than Force Majeure, or the said Condition Precedents in clause 2.8.2 have not been jointly waived by the parties in writing, the Seller shall have the right to forfeit the Security Deposit amount submitted by the Purchaser without any further notice to Purchaser. In case of FSAs applicable for more than 1 unit of a power plant, Security Deposit shall be forfeited in proportion to the number of units failed to achieve condition precedent.

### 2.9 First Delivery Date

2.9.1.1 Not later than 5 days from Effective Date, both parties shall determine a mutually agreeable 3 Month period within a time period of 18 month from the Effective Date for commencement of coal supplies (“**Target Start Period**”). In the event that the Parties are not able to agree on such 3-Month period then later of the 3 month period suggested by the either party shall be the Target Start Period. The actual date of coal delivery at the Delivery Point by the Seller within the Target Start Period shall be the **First Delivery Date**. In case there is no coal supply by the Seller at the Delivery Point during Target Start Period owing to reasons other than Force Majeure the last date of Target Start Period shall be deemed to be the **First Delivery Date**.

2.9.2 The Target Start Period may be extended on account of Force Majeure in accordance with Clause 17, subject to a maximum of 180 days

## 2.10 Build – Up Period


2.10.1 Build-Up Period shall be the period of 6 months commencing on the First Delivery Date. In case CIL decides at its sole discretion to import, Build-up period shall be extended for a further period of six months for commencing supply of imported coal. During the Build-Up Period any compensation arising on account of short supply or short lifting, as per Clause -3.6 of this Agreement, shall not be payable by either Party. Supply of coal by Seller shall start only after the Purchaser's power plant becoming ready to start lighting up the boilers, to be confirmed by the Purchaser to the Seller in writing with documentary evidence.

2.10.2 The indicative Coal quantities to be supplied by the Seller and to be offtaken by the Purchaser during the Build- up Period are shown below. For avoidance of doubt, it is clarified that the quantities mentioned are indicative and the actual scheduled quantities may exceed or be lower compared to the quantities indicated below. The quantities shall however not exceed the pro-rated contracted quantities under this Agreement

Build Up Period	Indicative Coal Requirement (in Tonnes)
Build-Up Period [A period of 6 /12 months from First Delivery Date as the case may be]	Not Applicable

## 2.11 Security Deposit (SD)

2.11.1 On signing of this agreement, the Commitment Guarantee (CG) provided by the Purchaser prior to issue of Letter of Assurance (LOA) shall stand converted into the Security Deposit amount as determined under Clause 2.11.2. Accordingly, a sum of **Rs. 28,01,48,800 (Rs. Twenty-Eight Crores One Lakh Forty-Eight Thousand Eight Hundred only)** is deemed to have been deposited by the Purchaser towards the Security Deposit amount stipulated in Clause 2.11.2. In the event the Commitment Guarantee amount provided by Purchaser is more than the Security Deposit amount as determined under Clause 2.11.2, Seller shall return such balance amount within three (3) months from the date of signing of this Agreement. In an event the Security Deposit amount as determined under Clause 2.11.2 is more than the Commitment Guarantee amount, the Purchaser shall deposit such balance amount within three (3) months from the date of signing this agreement. Failure to submit the balance amount by the Purchaser within three (3) months from the date of signing of this agreement, as aforementioned, shall entitle the Seller to adjust the ACQ such that it is commensurate with the Security Deposit required to be submitted by the Purchaser under clause 2.11.2

  
Chief Executive Officer  
SJVN Thermal Pvt. Limited  
(A Subsidiary of SJVN Limited)

*Notes: Purchaser directly entering into this Agreement who have been granted coal linkage by Standing Linkage Committee – Long Term (SLC- LT) and have not been issued Letter of Assurance (LOA) by Seller or any Purchaser who have been issued LOA without depositing of Commitment Guarantee as stipulated under the LOA shall deposit the Security Deposit amount as determined under Clause 2.11.2 before the Signature Date. [In such case delete Clause 2.11.1]*

2.11.2 The Purchaser shall deposit with the Seller a sum of **Rs. 28,01,48,800/- (Rs. Twenty-Eight Crores One Lakh Forty-Eight Thousand Eight Hundred only)** for unit 1 & 2 equivalent to six percent (6%) of the Base Price of such Grade of Coal, as described in Schedule-III to this Agreement, prevalent on the date of deposit multiplied by ACQ, as Security Deposit (SD), in cash / Bank Guarantee on or before the signing of this Agreement. In case of multiple Grades indicated in Schedule-III, the simple average base price of grades of coal mentioned in the Schedule-III shall be considered for the purpose of calculation of SD without any commitment whatsoever to supply such Grade of Coal. Such Security Deposit shall be non-interest bearing. Accordingly, the Purchaser has requested to consider **Rs. 28,01,48,800 (Rs. Twenty-Eight Crores One Lakh Forty-Eight Thousand Eight Hundred only)** towards the Security Deposit amount out of the BG of Rs. 56,72,64,000/- (submitted as Commitment Guarantee against LOA dated 10.12.2018).

*[In case the SD is in the form of a bank guarantee the same shall be provided in the enclosed format ("SD – Bank Guarantee") with this Agreement at Schedule- II.]*

*NB- As per the request/ consent of the Purchaser, Rs. 28,01,48,800 out of Rs. 56,72,64,000/- (submitted as Commitment Guarantee against LOA dated 10.12.2018), is being converted into Security Deposit against instant FSA.*

2.11.3 The SD Bank Guarantee submitted by the Purchaser, as per Clause 2.11.2 above, shall remain valid till thirty (30) days from the First Delivery Date under this Agreement. Purchaser shall extend the SD Bank Guarantee and submit such letter of extension/ extended SD Bank Guarantee to the Seller one month in advance of the expiry date thereof, failing which the Seller shall have the right to terminate this Agreement. In case of multiple units of a Power plant, thirty (30) days from FDD of the last unit.

2.11.4 The value of the Security Deposit shall be suitably increased / decreased to match the changes in the Base Price notified by the Seller from time to time. In the event of failure of the Purchaser to provide such increased value within thirty (30) days from the date of notification of such change in Base Price, the Seller shall have the right to terminate the Agreement. If additional SD due to such increase in the Base Price of Coal is submitted by way of additional bank guarantee, the period of validity of such bank guarantee shall be the same as that of the initial SD Bank Guarantee furnished in terms of Clauses 2.11.1 to 2.11.3 above. Alternatively, the amount of the initial SD Bank Guarantee may be increased by an amendment so as to cover the increased value of SD resulting from the change in the Base Price.

2.11.5 The Security Deposit shall be refundable to the Purchaser at the end of 30 days from the First Delivery Date. In case of multiple units of a Power plant, thirty (30) days from FDD of the last unit.

### 3. QUANTITY:

#### 3.1 Annual Contracted Quantity (ACQ):

3.1.1 The Annual Contracted Quantity of Coal agreed to be supplied by the Seller and undertaken to be purchased by the Purchaser, shall be **49.76 Lakh Tonnes per Year** from the Seller's mines and/ or from import, as per Schedule I. For part of Year, the ACQ shall be prorated accordingly. The ACQ shall be in the proportion of the percentage of Generation covered under long term Power Purchase Agreement(s) executed by the Purchaser with the DISCOMs either directly or through PTC(s) who has/have signed back to back long term PPA(s) with DISCOMs. Whenever, there is any change in the percentage of PPA(s), corresponding change in ACQ shall be effected through a side agreement. Such changes shall be allowed to be made only once in a year and shall be made effective only from the beginning of the next quarter. However, in no case ACQ should exceed the LOA quantity as mentioned in Schedule-I.

3.1.2 The Purchaser shall in advance under the Schedule I provide firm annual coal requirement for the initial years required for phasing of the Power Plant after the completion of Build-Up Period, quantities subject to maximum of Annual Contract Quantity mentioned under Clause 3.1.1. Such quantities shall be considered binding and deemed to be Annual Contract Quantities for the respective years and be used for provisions under this Agreement.

3.1.3 It is expressly clarified that the Annual Contracted Quantity (ACQ) shall be valid for each Power Station separately, as mentioned in Schedule I, and all the provisions of this Agreement related to ACQ shall be applicable mutatis mutandis.

#### 3.2 End-use of Coal

The total quantity of Coal supplied pursuant to this Agreement is meant for use at the **Buxar TPP Unit 1 & 2 (2x660 MW), Village Chausa, Buxar, 202103, Bihar** as listed in Schedule I. The Purchaser shall not sell/divert and/or transfer the Coal to any third party for any purpose whatsoever and the same shall be treated as material breach of Agreement, for which the Purchaser shall be fully responsible and such act shall warrant suspension of coal supplies by the Seller.

However, interplant transfer of coal may be considered provided:

- a) Transfer of coal shall be allowed only between the power plants wholly owned by the Purchaser or its wholly owned subsidiary. No transfer of coal shall be allowed for a Joint Venture (JV) company of the Purchaser. The supply of coal, shall for all commercial purpose under the FSA remain unchanged and on account of the original Power Plant.



- b) Both the Power Plants should have executed FSA in the modified FSA Model applicable for new power plants and not having any supplies linked to coal blocks. In case of IPPs both the plants must have valid long term PPAs with DISCOMS.
- c) Transfer of coal will not be allowed to those plants who are allotted coal blocks under this arrangement.
- d) In case of change in the ownership and no environmental clearance of the plant this facility shall stand withdrawn, and
- e) Penalty/Incentive under this arrangement would be considered in terms of (a) above.
- f) Note: In addition to the above conditions, the transferee plant would also require to provide an affidavit to CIL (Supplying Coal Company) affirming that the additional coal supply beyond the ACQ shall only be used for generating power for distribution under long term PPAs with DISCOMS.

### 3.3 Sources of Supply

- 3.3.1 The Seller shall endeavor to supply Coal from own sources as mentioned in Schedule I. In case the Seller is not in a position to supply the Scheduled Quantity (SQ) of Coal from such sources as indicated in Schedule I, the Seller shall have the option to supply the balance quantity of Coal through import which shall not, unless otherwise agreed between the parties, exceed 15% of the ACQ in the year 2012-13 ,13-14 and 14-15, 13% of ACQ in the year 2015-16 and 5% of the ACQ for the year 2016-17 and onwards. Seller may at its discretion, make such arrangement for supply of imported coal through, CIL, and /or other enterprises. Accordingly, the Purchaser has to enter into a 'Side Agreement' with CIL and/or the Seller, as the case may be, in addition to this Agreement. The 'Side Agreement' dealing with the terms and conditions for supply of imported coal would be an integral part of this Agreement.
- 3.3.2 For supply of coal through import as stated in clause 3.3.1 above, the Purchaser shall agree to have back to back arrangements, if so required, with the Importing agency(ies) to be notified by the Seller/CIL and deposit 100% of payable amount in advance. The commercial terms and conditions for such supply shall be regulated as per the Side Agreement.
- 3.3.3 The Seller may also offer coal from loading points / coal stocks to be lifted by the Purchaser by his/ their own transport arrangement by road / road-cum-rail or any other mode up to 5 % of the ACQ. The provision shall however be applicable for supplies of coal under the Agreement from collieries of three coal producing subsidiaries of CIL viz. SECL, MCL and CCL. Further the provision shall continue till such time three major railway lines in these coal companies are constructed and made operational.
- 3.3.4 CIL reserves the right to transfer part of the ACQ from the Seller to another coal producing company (Subsidiary of CIL) based on the proposal received from the Seller, which would be binding on the Purchaser.

Chief Executive Officer  
 SJVN Thermal Pvt. Limited  
 (A Subsidiary of SJVN Limited)

### 3.4 Quarterly Quantity (QQ)

The Annual Contracted Quantities, from indigenous sources, for the Year, as per Clause 3.1 shall be divided into Quarterly Quantities (QQ), expressed in tonnes, as follows:

I <sup>st</sup> Quarter (Apr-Jun.)	25% of ACQ
II <sup>nd</sup> Quarter (Jul-Sep)	22% of ACQ
III <sup>rd</sup> Quarter (Oct-Dec)	25% of ACQ
IV <sup>th</sup> Quarter (Jan-Mar)	28% of ACQ

### 3.5 Scheduled Quantity (SQ):

- 3.5.1 The monthly Scheduled Quantity (SQ) shall be one third (1/3<sup>rd</sup>) of the QQ.
- 3.5.2 Either the Purchaser or the Seller by serving a written Notice at least thirty (30) days prior to the commencement of a month, may revise the SQ to be supplied by the Seller in that month, provided that the increase/ decrease resulting from such revision shall not be in excess of 5% of the SQ and the Purchaser shall seek any such increase in SQ for the months of July, August and September of any Year only with the prior written consent of the Seller.
- 3.5.3 Seller shall have the right to make good the short supplies in a particular month in the succeeding month(s) of the same Quarter to the extent of 5% of the SQ. Similarly, Purchaser shall have the right to make good the short lifting in a particular month in the succeeding months of the same Quarter to the extent of 5% of the SQ.
- 3.5.4 Total variation in any Month pursuant to clauses 3.5.2 and 3.5.3 shall in no case exceed 10% of the SQ.
- 3.5.5 Normally variation shall not be permitted in respect of QQ either by Purchaser or Seller pursuant to 3.5.2, 3.5.3 and 3.5.4 except with mutual consent of the Purchaser and the Seller. However, variation in QQ with corresponding variation in the SQs of the quarter concerned over and above permitted under sub clause 3.5.2, 3.5.3 and 3.5.4 can be made with mutual consent of the Purchaser & the Seller expressed in writing.
- 3.5.6 Not used
- 3.5.7 The above schedule of supply is in respect of supply of coal from indigenous sources. Supply of imported coal shall be made as per its availability, which is depending upon many uncontrollable factors and hence no restrictions shall be applicable for quarterly distribution



### 3.6 Compensation for short delivery/lifting

3.6.1 If for a Year, the Level of Delivery by the Seller, or the Level of Lifting by the Purchaser falls below ACQ with respect to that Year, the defaulting Party shall be liable to pay compensation to the other Party for such shortfall in Level of Delivery or Level of Lifting, as the case may be (“Failed Quantity”) in terms of the following

Source	Level of Delivery / Lifting of Coal in a Year	Percentage of Penalty for the failed quantity (at the rate of weighted average of Base Prices of Grades of coal supplied)		
		2012-13,2013-14 & 2014-15	2015-16	2016-17 onwards
Imported + Domestic Qty	Below 100% but up to 80% of ACQ	NIL	NIL	NIL
Applicable for Imported Coal Only	Below 80% but up to 75% of ACQ	0 - 1.5	0 - 1.5	0 - 1.5
	Below 75% but up to 67% of ACQ			-
	Below 67% but up to 65% of ACQ		-	-

Source	Level of Delivery / Lifting of Coal in a Year	Percentage of Penalty for the failed quantity (at the rate of weighted average of Base Prices of Grades of coal supplied)		
		2012-13,2013-14 & 2014-15	2015-16	2016-17 onwards
Applicable for Domestic Coal	Below 75% but up to 70% of ACQ	-	-	0 - 5
	Below 70% but up to 67% of ACQ	-	-	5 - 10
	Below 67% but up to 65% of ACQ	-	0-2	
	Below 65% but up to 60% of ACQ	0 - 5	-2-7	10 - 20
	Below 60% but up to 55% of ACQ	5 - 10	7 - 20	20 - 40
	Below 55% but up to 50% of ACQ	10 - 20	20 - 40	
	Below 50% of ACQ	20 - 40		

3.6.2 The penalty payable shall be computed in the same manner as done slab-wise for computation of income-tax. However, unlike income tax, the percentage of compensation shall grow on linear basis within each slab

*\* Note: For the phasing period the annual coal requirements shall be based on the quantities mentioned by the Purchaser for the initial years under Schedule I of this agreement*

Note: The Purchaser has to give unconditional acceptance of imported coal and pricing mechanism thereof as would be decided by CIL, by signing the Schedule VII of this agreement. Unless such acceptance is accorded, the penal provision for supply below 80% and up to 65% of ACQ for the years 2012-13, 2013-14 and 2014-15 and below 80% and up to 67% of ACQ for the year 2015-16 shall not be applicable. The penal provision for supply below 75% shall be applicable from the year 2016-17 and onwards. The terms of import and the pricing mechanism shall be as per the provisions of the side agreement.

3.6.3 Agreements made earlier under the 'Coal Distribution System' as defined at clause 1.1(j) shall take precedence over the commitments made under this agreement

3.6.4 The Seller shall be entitled to modify/amend the penalty levels as specified at clause 3.6.1 pursuant to review undertaken by MOC in terms of the clause 2.6(ii)

### 3.7 Level of Delivery:

Level of Delivery with respect to a Year shall be calculated in the form of percentage as per the following formula:

$$\text{Level of Delivery (LD)} = \frac{(DQ+DDQ+FM+RF) \times 100}{ACQ}$$

Where:

LD = Level of Delivery of Coal by the Seller during the Year.

DQ = Delivered Quantity, namely, aggregate actual quantities of Coal delivered by the Seller during the Year

DDQ = Deemed Delivered Quantity, reckoned in the manner stated in Clause 3.11

FM = Proportionate quantity of Coal which could not be delivered by the Seller in a Year due to occurrence of Force Majeure event affecting the Seller and / or the Purchaser, calculated as under:

$$FM = \frac{ACQ \times \text{Number of days lost under applicable Force Majeure event}}{365}$$

Note: For the purpose of calculation of 'Number of days lost under applicable Force Majeure event', affecting both the Parties shall be counted only once.

RF = Quantity of Coal that could not be supplied by the Seller during the Year owing to the Railways not allotting wagons or not placing wagons for loading, in spite of specific valid indent/offer submitted by the Seller to the Railways against valid program(s) submitted by the Purchaser for the purpose.

**3.8 Level of Lifting:**

Level of Lifting with respect to a Year shall be calculated in the form of percentage as per the following formula:

$$\text{Level of Lifting (LL)} = \frac{(\text{ACQ}-\text{DDQ}) \times 100}{\text{ACQ}}$$

Where:

LL = Level of Lifting of Coal by the Purchaser during the Year.

DDQ shall have the same meaning as given in Clause 3.11.

**3.9** For the purpose of computing DDQ and RF, the weight per rake will be **as per the extant Railway rules**, which shall be used for calculation of compensation from either the Purchaser or Seller.

**3.10** (Deleted – Not Used)

**3.11 Deemed Delivered Quantity:**

For the purpose of this Agreement, the aggregate of the following items provided under Clause 3.11.1 to 3.11.2 shall constitute the Deemed Delivered Quantity with respect to a Year.

**3.11.1 For supply of Coal by rail:**

- (i) The quantity of Coal not supplied by the Seller owing to omission or failure on the part of Purchaser to submit in advance the designated rail programme (s) to the Seller as per agreed time-table with respect to the Scheduled Quantity.
- (ii) The quantity of Coal not supplied by the Seller owing to cancellation, withdrawal or modification of the rail programme(s) by the Purchaser after its submission whether before or after allotment of wagon(s) by Railways.
- (iii) The quantity of Coal not supplied by the Seller owing to Purchaser's failure to pay and/or submit / maintain IRLC, as applicable, in accordance with Clause 11.1.2.
- (iv) The quantity of Coal not supplied by the Seller owing to Seller exercising the right of suspension of supplies in terms of Clause 14.
- (v) The quantity of Coal offered by Seller from domestic and/or imported coal in terms of Clause 3.3.1 and 3.3.2 not accepted by the Purchaser.



**3.11.2 For Supply of Coal by road/ ropeways/MGR/belt conveyor:**

- (i) The quantity of Coal not supplied by the Seller owing to Purchaser's failure to pay and/or submit IRLC, as applicable, in accordance with Clause 11.1.2.
- (ii) The quantity of Coal not supplied by the Seller owing to Seller exercising the right of suspension of supplies in terms of Clause 14.
- (iii) The quantity of Coal not supplied by the Seller owing to Purchaser's failure to place the requisite number / type of transport at the Delivery Point for delivery of Coal within the validity period of the sale order/delivery order.
- (iv) The quantity of Coal offered by Seller from domestic and/or imported coal in terms of Clause 3.3.1 and 3.3.2 not accepted by the Purchaser.

3.11.3 Deemed Delivered Quantity in terms of Clause 3.11.1 and 3.11.2 shall be calculated on cumulated monthly basis during a Year.

**3.12 Performance Incentive:**

3.12.1 If the Seller delivers Coal to the Purchaser in excess of ninety (90%) of the ACQ in a particular Year, The Purchaser shall pay the Seller an incentive ("Performance Incentive") for the excess coal supplied:

Percentage of Actual deliveries	Percentage of Incentive at the rate of weighted average Base Price of grades of coal supplied		
	2012-13, 2013-14 & 2014-15	2015-16	2016-17 onwards
Above 90% but up to 95% of ACQ	0 - 10	0 - 10	0 - 10
Above 95% but up to 100% of ACQ	10 - 20	10 - 20	10 - 20
Above 100% of ACQ	40 (Fixed)	40 (Fixed)	40 (Fixed)

Actual Deliveries = Actual Quantity [in tonnes] of Coal delivered by the Seller in the relevant Year.

3.12.2 The incentive payable shall be calculated in the same manner as done slab-wise for computation of income-tax. However, unlike income tax, the percentage of incentive shall grow on linear basis within each slab

3.12.3 With respect to part of Year in which term of this Agreement begins or ends, the relevant quantities in Clause 3.12.1, shall apply pro-rata.

3.12.4 Deleted

3.12.5 Supply of coal in excess of ACQ shall be with mutual consent

**3.13 Incentive/compensation adjustment for supply below 3100 Kcal/kg**

3.13.1 Coal supplied below 3100 Kcal/Kg (earlier below 'G' grade under UHV system) will be accounted for separately to work out the percentage contribution of below 3100Kcal/kg of the overall supply.

3.13.2 The quantity qualifying for incentive/compensation shall be proportionately divided into two parts in the same ratio as indicated in 3.13.1 above.

3.13.3 25% of the proportionate quantity worked out as supply below 3100Kcal/Kg, as at 3.13.2 above, would be considered for incentive/compensation.

3.13.4 The proportionate quantity worked out as supply above 3100Kcal/Kg, as at 3.13.2 and the adjusted quantity of supply below 3100Kcal/kg, as at 3.13.3 above will be added to ascertain the qualifying quantity for incentive/compensation

**4. QUALITY:**

4.1 The quality of Coal delivered / to be delivered shall conform to the specifications given in Schedule III.

4.2 The Seller shall make adequate arrangements to assess the quality and monitor the same to endeavor that un-graded Coal (GCV of less than 2200 Kcal/Kg for Non-coking coal) is not loaded into the Purchaser's Containers. If the Seller sends any quantity of such Coal, the Purchaser shall limit the payment of cost of Coal to Re.1/- (Rupee one only) per tonne. Royalty, cess, sales tax, etc. shall however be paid as per the Declared Grade. Railway freight shall be borne by the Purchaser.

4.3 The Seller shall deliver sized Coal with size conforming to specifications laid in Schedule III. The Seller shall make reasonable efforts to remove stones from Coal.

4.4 The Seller shall use magnetic separators and metal detectors, at its Coal handling/loading system at the Delivery Point, where the same are already installed.

**4.5 Declaration of Common Grade/ Re-declaration of Grade by the Seller:**

(i) The Seller shall declare one common Grade for Coal seam or seams from which Coal is being dispatched through the same Delivery Point, wherever applicable.

(ii) If the Grade analyzed pursuant Clause 4.7 shows variation from the Declared Grade, consistently over a period of three (3) months, the Purchaser shall request the Seller for re-declaration of Grade, which shall be duly considered by the Seller.



#### 4.6 Oversized Coal / stones

##### 4.6.1 Oversized Coal:

The Purchaser shall inform the Seller all incidents of receipt/presence of oversized Coal, in terms of specifications laid down in Schedule III, in any specific consignment(s), immediately on its detection at the Delivery Point and/or Unloading Point and the Seller shall take all reasonable steps to prevent such ingress at his end.

##### 4.6.2 Stones

The Purchaser shall inform the Seller all incidents of receipt / presence of stones in any specific consignment(s) by rail, immediately on its detection at the Delivery Point and/or Unloading Point. The Seller shall, immediately take all reasonable steps to prevent such ingress at his end. The stones segregated by the Purchaser at the Power Station end shall be assessed jointly by the representative of the Seller and the Purchaser at the Power Station end for adjustments pursuant to Clause 9.1.

##### 4.6.3 Modalities for assessment of stones:

- a) The Purchaser shall endeavor to segregate and stack separately all oversized stones of size more than 250 mm received along with Coal from the Seller's supplies by rail/MGR at the Power Station end, during the month, at a mutually agreed place identified for the purpose within the Power Station premises, for the purpose of joint assessment pursuant to Clause 4.6.2 as per the procedure laid down in Schedule VI of this Agreement for compensation pursuant to Clause 9.1.
- b) The Seller shall depute its representative at the Power Station end between fourth (4<sup>th</sup>) day to tenth (10<sup>th</sup>) day of the following month, for joint assessment of the quantity of stones of size more than 250 mm received by rail/MGR in the preceding month and the Parties shall prepare a jointly signed statement of quantity of stones. The Purchaser shall extend full co-operation and facilitate deputation of such representative of the Seller failing which the Seller shall not agree to the claim raised by the Purchaser in this regard.
- c) In case the Seller's representative fails to be present at the Power Station end, within the period stipulated at Clause 4.6.3 (b) for the assessment of the quantity of oversized stones in compliance to 4.6.3 (a), the quantity of oversized stones assessed by the Purchaser shall be intimated to the Seller, by the fifteenth (15<sup>th</sup>) day of such following month and the same shall be taken as final and binding on the Seller for the purpose of adjustments under Clause 9.1. Thereafter, the Purchaser shall dispose off / remove such stones by the end of such month under intimation to the Seller and the Purchaser shall not be under any obligation to preserve such material beyond the day(s) stipulated herein above. However, the Purchaser shall maintain all records/ documents for example work order, running account bills, payment document etc for such disposal and present the same along with audited records for scrutiny of the Seller, if required.



- d) Quantity of stones attributable to the Seller shall be worked out by pro rata apportionment on the basis of proportionate receipt of Coal by rail/MGR from Seller out of the total Coal received by the rail/MGR at the concerned Power Station during a month. For such apportionment, the Purchaser shall provide certified monthly figures of quantity of Coal received by rail as per Coal bill at the concerned Power Station from the Seller as well as from all sources other than the Seller.
- e) Compensation for oversized stones shall be payable by the Seller to the Purchaser month-wise, Power-station wise, in terms of weighted average Base Price of the analysed Grade of indigenous Coal for the equivalent quantity of stones actually verified/ removed, as above for such coal supplied progressively in a Year by the Seller from the CIL sources to the concerned Power Station by rail/ MGR after accounting for the weight reduction towards destination end, weightment in terms of Clause 5.2 and moisture compensation in terms of Clause 9.2. However, such total quantity of oversized stones actually verified/removed shall be restricted up to a ceiling of 0.75% of the total quantity of indigenous coal supplied during the year for the purpose of compensation if supply of indigenous coal during the year has also been made from any other source(s) including captive block besides CIL sources

4.6.4 Without prejudice to provisions at Clause 4.6.3, if, in the Purchaser's reasonable determination, the presence of oversized Coal and/or stones is causing operating or maintenance problems at the Power Station, then, upon the request of the Purchaser, the Purchaser and the Seller shall meet and prepare a mutually acceptable plan for effectiveness of the Seller's efforts at removing oversized stones from the Coal.

#### 4.7 Assessment of Quality of Coal

##### 4.7.1 Sample collection:

- i) Samples of Coal shall be collected jointly by the Third Parties of the Seller and the Purchaser either manually or through any suitable mechanical sampling arrangement including Augur Sampling method if physically operationable, at each of the Delivery Points for determining the quality of Coal in presence of representatives of Seller and Purchaser
- ii) For the purpose of sampling each rake (source wise, grade wise and plant wise) of Coal supplied from one Delivery Point shall be considered as a lot.
- iii) Each day's supply from a source shall be considered as one lot for the purpose of sampling in case of Coal supplies by road, ropeways, belt and Merry-Go-Round (MGR) rail system. However, in case of Coal supplies by Railways, each rake from a source shall be considered for the purpose of sampling.



4.7.2 Detailed modalities for collection, handling, storage and preparation of samples by *Third Parties* shall be as per Schedule V to this Agreement.

4.7.3 **Sample preparation & analysis:**

(i) **Total Moisture**

Sample for determination of Total Moisture shall be segregated from the sample collected at the Delivery Point by the *Third Parties* jointly, and prepared and analyzed, as per procedure given in Schedule-V.

(ii) **Daily Gross Sample**

a) The Gross Sample collected as per clause 4.7.1(i) for determination of moisture, ash & GCV on equilibrated basis shall be reduced into laboratory sample on the date immediately following the date of collection. The final laboratory samples will be divided into three parts viz. Set – I ,Set – II and Set-III as follows;

- Set-I shall be taken by the Purchaser for analysis at their end to determine the ash, moisture and GCV.
- Set-II shall be analyzed by the Seller to determine the ash, moisture and GCV.
- Set-III shall be kept under joint seal of the Seller, Purchaser and the *Third Parties* as referee sample in the joint custody at the loading end for a period of fourteen (14) days or until the analysis results of Set – I and Set-II are accepted without dispute, whichever is earlier.

b) The sample in Set -I and Set-II shall be analysed for ash, moisture and GCV on equilibrated basis {wherever required in accordance with IS: 1350 (Part -I) – 1984 and IS: 1350 (Part – II) – 1970}.

c) Set-I and Set-II of the laboratory sample as prepared shall be analyzed by the *Third Parties* of Seller and Purchaser in their respective laboratories as per relevant part of IS: 1350 (Part -I) – 1984 and IS: 1350 (Part – II) – 1970 within three-four (3-4) days from the date of preparation and distribution of laboratory sample for analysis of ash, moisture and GCV

d) In the event of any dispute (which shall be raised not later than forty-eight (48) hours after analysis), the referee sample as in Set- II shall be referred for analysis within seventy-two (72) hours of the dispute but not later than eight (8) days of the collection of samples at any mutually agreed NABL Accredited /Government laboratory.

The cost incurred for the analysis of the Referee sample including cost of transportation to the Mutually Agreed Laboratory shall be borne total by the Party raising the dispute.

e) The procedure for storage of referee sample shall be mutually agreed upon by both the Parties.

- 4.7.4 Each sample shall be assigned with a code number and will be identified by such code only and no other particulars will be indicated or written on the tag attached with the relevant bag containing the sample.
- 4.7.5 All tools, tackles required for collection of samples, its preparation and all laboratory facilities for the purpose of analysis of samples - at the loading end be arranged by the Seller as per the provision of this Agreement.
- 4.7.6 (a) In the event of any reason whatsoever third Party sampling & analysis could not be conducted, joint sampling & analysis shall be carried out by the Seller in presence of the Purchaser at the loading end.
- (b) In the event that no sample is collected either by the Third Parties or Seller and Purchaser jointly as mentioned at (a) above from dispatches by a rake or on any day, as the case may be, from a source for any reason, the weighted average of the most recent results available in any preceding month against respective Source and Grade shall be adopted for such dispatches for which samples were not collected.
- 4.7.7 In the event the Third Party appointed by the Purchaser fails /declines to participate in the process of sampling and analysis mentioned at clause 4.7.1(i), such failure/refusal shall not be considered as ground for disputing the result submitted by the Third party of the seller which will be binding on both the Parties.

## 5.0 WEIGHMENT OF COAL

- 5.1 For dispatch of Coal by Rail, all the wagons loaded for the Purchaser shall be weighed at the loading end at the electronic weighbridge of Seller and electronic print out of actual weight recorded shall be provided. Such weighment shall be final and binding for determination of the quantity delivered. The Purchaser shall have the right to witness the weighment of the wagons at the weighbridge, if desired. The Seller shall hand-over copies of jointly signed or in the absence of the Purchaser's representative(s), signed by the Seller, print-outs of the weighment to the Purchaser immediately after weighment of each consignment, besides a copy of such signed printouts shall also be annexed along with the bill(s) raised by the Seller
- 5.2 Only in the absence of weighment of Coal on electronic weighbridge at the loading end, the weight recorded at the Purchaser's electronic weighbridge with an electronic print-out facility at the Unloading Point, if in proper working order, shall be taken as final. In respect of unweighed consignments/ wagons at the Delivery Point on electronic weighbridge and weighed on electronic weighbridge at the Purchaser's end, the Purchaser shall submit the associated electronic printout to the Seller for such consignments/ wagons within thirty (30) days from the date of Railway Receipt, beyond which time the weight of the consignment shall be considered on Railway Receipt basis.



- 5.3 If both the weighbridges installed by the Seller as well as the Purchaser are defective, / not available for recording weight of the consignments of Coal , weighted average quantity of Coal per wagon ( to be determined separately for respective types of wagons in the circuit), as per the actual weighment over a continuous period of immediately preceding seven (7) days shall form the basis for determining the quantity of Coal from that source at that Delivery Point, till such time any one of the weighbridges is corrected and put back into operation. If the weighbridges at both the Seller's and the Purchaser's end are not available for recording weight of coal and actual weighment over a continuous period of immediately preceding seven (7) days is also not available then weight of Coal for such unweighted wagons shall be taken as per the weight indicated in the Railway Receipts (RRs).
- 5.4 The Seller and the Purchaser shall permit access to and make facilities available at its weighbridge, for representatives of either Party to witness and note the weight for the consignment. In case the representative of any Party fails to be present, at the time of such weighment, the weight recorded by the representative of the other Party in accordance with Clause 5.1 and 5.2, shall be final and binding.
- 5.5 The weighbridges both at the Seller's end and at the Purchaser's end shall be calibrated as per the Weights and Measures Standards and also whenever required. Both the Seller and the Purchaser shall have right to witness the calibration of the weighbridge at each other's end. Coal bills of consignment, which are weighed as per the provisions of clause 5.1, shall bear the rubber stamp indicating electronic printout has been enclosed. If the electronic printout with Coal bill is not received by the Purchaser despite rubber stamp, such bills shall be returned to the Seller for re-submission along with electronic printout within twenty (20) days.
- 5.6 **Operation and Maintenance of Weighment System**
- The Parties shall at their respective costs,
- a) Operate and maintain their weighbridges in good working order and in accordance with the Weights and Measures Standards and other applicable laws
- b) Cause the weighbridge to be inspected, tested and certified by the statutory agencies in accordance with and at the intervals required by the Weights and Measures Standards and the Parties shall, at their cost, extend / make available all requisite facilities required for the purpose of testing and/or calibrating the weighbridge.
- 5.7 For dispatch of Coal by road, the weight recorded at the electronic weighbridge of the Seller at the loading end shall be final for the purpose of billing and payment. The Purchaser shall have the right to witness the weighment at the colliery, if desired. The weighbridge shall be calibrated as per the provisions of the Standards of Weights & Measures Act 1976. The Purchaser shall have right to witness such calibration.



- 5.8 For dispatch of Coal by belt conveyor, a weightometer shall be installed at the colliery/ washery end of the Seller and weight recorded by the weightometer shall be the weight of Coal supplied. The weightometer shall be kept under joint seal and will be repaired / recalibrated in the presence of the representatives of the both the Parties, wherever necessary.
- 5.9 For dispatch of Coal by MGR system, weight recorded at the loading end through electronic weighment system shall form the basis for determining the quantities of Coal delivered.

6. **METHOD OF ORDER BOOKING AND DELIVERY OF COAL:**

The Purchaser shall submit monthly programme(s) mode-wise for off-take of Coal against the monthly mode-wise Coal allocation made by the Seller. Notwithstanding, Clause 6.1 and Clause 6.2 shall be applicable in case of Coal off-take by rail and road respectively.

6.1 **Order Booking by Rail:**

- 6.1.1 At least seven (7) working days prior to the commencement of the month concerned, the Purchaser shall submit a programme in writing to the Seller, as per the applicable Railway rules and the Seller's notified procedures. Thereafter, the Seller shall process for issuance of the consent of the programme. The sanction of the consented rail programme shall be obtained accordingly. The validity period of the monthly programme for movement by rail for seeking allotment shall be till the last day of the month concerned. The consent of the programme to be issued by the Seller shall not remain valid after the above period. Once the rake is allotted, it shall remain valid for supply as per the prevailing Railways rules.
- 6.1.2 Subject to fulfillment of payment obligations pursuant to Clause 11.1.2 by the Purchaser, the Seller shall thereupon submit specific indent/offer based on the valid rail programme(s) to the Railways as per the extant Railway rules for the allotment and placement of wagons during the concerned month in conveniently spaced intervals.
- 6.1.3 The wagons shall be booked on "freight to pay" or "freight pre paid" basis, as applicable based on the arrangements made by the Purchaser with Railways in this regard.
- 6.1.4 In case of formation of rakes with wagons loaded from different Delivery Points, the Seller shall make best efforts to complete documentation formalities as per Railway rules so as to enable the Purchaser to avail a trainload freight rate.
- 6.1.5 In the event rail movement is declared / considered not feasible by Railways, review will be made jointly in the matter of mode of transport



## 6.2 Order Booking by Road:

- 6.2.1 The Seller shall intimate the Purchaser about the monthly Coal allocation for order booking seven (7) working days prior to the commencement of the month concerned.
- 6.2.2 Based on the monthly colliery wise allocation done by the Seller in terms of Clause 6.2.1, the Purchaser shall place orders with the Seller for the Scheduled Quantity.
- 6.2.3 Subject to fulfillment of payment obligations pursuant to Clause 11.1.2 by the Purchaser, the Seller shall arrange to issue sale order(s)/delivery order(s) separately for each colliery and issue necessary loading programme / schedule from time to time. The Purchaser shall arrange to place the required number / type of trucks to lift the Coal as per such loading programme / schedule. The Seller shall ensure that the sale order / delivery order in favour of the Purchaser reaches the concerned colliery/weigh bridge within five (5) working days of the last day of the period notified by the Seller for booking orders in terms of Clause 6.2.1.
- 6.2.4 The Seller shall ensure delivery and the Purchaser shall ensure lifting of Coal against sale order / delivery order of any month within the validity period, as mentioned in the sale order.
- 6.2.5 In the event of any quantity remaining undelivered / unlifted, the Purchaser shall be entitled to receive, once the validity period of the sale order/ delivery order expires, the refund of the proportionate value of such quantity.

## 7. TRANSFER OF TITLE TO GOODS:

Once delivery of Coal have been effected at the Delivery Point by the Seller, the property / title and risk of Coal so delivered shall stand transferred to the Purchaser in terms of this Agreement. Thereafter the Seller shall in no way be responsible or liable for the security or safeguard of the Coal so transferred. Seller shall have no liability, including towards increased freight or transportation costs, as regards missing/diversion of wagons / rakes or road transport en-route, for whatever causes, by Railways, or road transporter or any other agency.

## 8.0 PRICE OF COAL:

The “As Delivered Price of Coal” for the Coal supplies pursuant to this Agreement shall be the sum of Base Price, Other Charges and Statutory Charges, as applicable at the time of delivery of Coal.

### 8.1 Base Price

The Purchaser shall pay the Base Price of Coal in accordance with the provisions of this Agreement. It is expressly clarified that the Base Price in relation to the

Indigenous coal and Imported coal shall be notified/declared by the Seller/ CIL, as the case may be from time to time.

## 8.2 Other Charges:

### 8.2.1 Transportation charges:

Where coal is transported by the seller from the Pithead to the Delivery Point, the purchaser shall pay transportation charges which are notified by CIL / the seller from time to time.

### 8.2.2 Sizing/Crushing charges:

Where Coal is crushed by mechanical means for limiting the top-size to 250mm, or any other lower size, the Purchaser shall pay sizing/crushing charges, as applicable and notified by CIL / Seller from time to time.

### 8.2.3 Rapid Loading Charges:

Where Coal is loaded through rapid loading system, the Purchaser shall pay rapid loading charges notified by CIL / Seller from time to time.

### 8.2.4 Any other applicable charges:

Any other applicable charges as notified by CIL/ Seller from time to time including additional charges and service charges arising out of supply of imported coal, as may be applicable. The Service Charges shall be 2% of Landed Price of Imported Coal (CIF Prices) plus applicable taxes and levies for supply of Imported Coal, till any further revision in the rate.

## 8.3 Statutory Charges:

The statutory charges shall comprise royalties, cesses, duties, taxes, levies etc., if any, payable under relevant statute but not included in the Base Price and/or other charges pursuant to Clause 8.2, shall be payable by the Purchaser. These levies/charges shall become effective from the date as notified by the Government/ statutory authority.

8.4 In all cases, the entire freight charges, irrespective of the mode of transportation of the Coal supplied, shall be borne by the Purchaser.

## 9.0 COMPENSATION:

### 9.1 Oversized Stones:

The Seller shall adjust through regular credit notes to the Purchaser amounting to hundred percent (100%) of the weighted average Base Price, as per the analysed Grade of Coal applicable for the month in which such supplies were made by the



Seller and Other Charges pursuant to Clause 8.2 but excluding statutory charges pursuant to Clause 8.3, if any, and railway freight for the quantity of oversized stones received by the Purchaser along with the Coal supplies during the month as per the jointly assessed signed statement or as intimated by the Purchaser to the Seller pursuant to Clause 4.6.3(b) or 4.6.3(c) respectively.

## 9.2 Excess Surface Moisture

- (i) In the event that monthly weighted average Surface Moisture in Coal exceeds seven percent (7%) during the months from October to May and nine percent (9%) during the months from June to September, the Coal quantities delivered to the Purchaser during such month shall be adjusted for the resultant excess Surface Moisture, which shall be calculated in percentage by which the Surface Moisture exceeds the foregoing limits.
- (ii) The seller shall give regular credit note on account of excess Surface moisture, as per clause 9.2(i) above, calculated at the rate of Base Price of Analyzed Grade of coal and other charges, pursuant to clause 8.2 but excluding statutory charges pursuant to clause 8.3, if any, and railway freight for the quantity of excess Surface Moisture.
- (iii) Sampling/ analysis and determination of Surface Moisture for compensation shall be done as per the procedure given in Schedule V.

## 10. OVERLOADING AND UNDER LOADING:

- 10.1 Any penal freight for overloading charged by the Railways for any consignment shall be payable by the Purchaser. However, if overloading is detected from any particular colliery, consistently during three (3) continuous months, on due intimation from the Purchaser to this effect, the Seller undertakes to take remedial measures.
- 10.2 For Non coking coal of GCV exceeding 5800 Kcal/Kg and coking coal of Steel Grade I, Steel Grade II, Washery Grade I, Washery Grade II, Semi-coking Grade I, Semi-coking Grade II and washed Coal; any idle freight for under-loading below the stenciled carrying capacity, as shown on the wagon or carrying capacity based on the actual tare weight or permissible carrying capacity as notified by the Railways (route-wise) for any particular type of wagon from time to time, in which case the stenciled carrying capacity as shown on the wagon is more than the permissible carrying capacity, as the case may be, shall be borne by the Seller. For all other Grades of Coal, any idle freight for under-loading below the stenciled carrying capacity, as shown on the wagon or carrying capacity based on the actual tare weight, as the case may be, plus two (2) tonnes shall be borne by the Seller. However, in the cases where permissible carrying capacity is less than the stenciled carrying capacity, as mentioned above, the idle freight shall be borne by the Seller only up to the permissible carrying capacity



- 10.3 Idle freight resulting from under loading of wagon, as per Clause 10.2, shall be adjusted in the bills. Idle freight shall be reckoned as:
- (i) For Non coking coal of GCV exceeding 5800 Kcal/Kg and coking coal of Steel Grade I, Steel Grade II, Washery Grade I, Washery Grade II, Semi-coking Grade I, Semi-coking Grade II and washed Coal, the difference between the freight charges applicable for the stenciled carrying capacity, as shown on the wagon or carrying capacity based on the actual tare weight or permissible carrying capacity as notified by the Railways (route-wise) for any particular type of wagon from time to time, in which case the stenciled carrying capacity as shown on the wagon is more than the permissible carrying capacity, as the case may be, and the freight payable as per actual recorded weight of Coal loaded in the wagon; and/or
  - (ii) For all other Grades of Coal, the difference between the freight charges applicable for the stenciled carrying capacity, as shown on the wagon or carrying capacity based on the actual tare weight, as the case may be, plus two (2) tonnes less the freight payable as per actual recorded weight of Coal loaded in the wagon. However, in the cases where permissible carrying capacity is less than the stenciled carrying capacity, as mentioned above, the difference shall be reckoned between the freight applicable for permissible carrying capacity and the freight payable as per the actual recorded weight of coal loaded in the wagon

## 11.0 MODALITIES FOR BILLING, CLAIMS & PAYMENT

### 11.1 Bills on Declared Grade basis

- 11.1.1 The Seller shall raise source-wise bills for the Coal supplied to the Purchaser on Declared Grade basis. The Seller shall raise such bills on rake-to-rake basis for delivery of Coal by rail and on daily basis for delivery of Coal by road and other modes of transport. Such bills shall be raised within seven (7) days of delivery.
- 11.1.2 The Purchaser shall pay in accordance with either of the following payment mechanisms –
- (a) The Purchaser shall make advance payment for a month in three (3) installments for availing Coal supplies from the Seller – first (1<sup>st</sup>) installment on the first (1<sup>st</sup>) day of the month, second (2<sup>nd</sup>) installment on the eleventh (11<sup>th</sup>) day of the month and the third (3<sup>rd</sup>) installment on the twenty first (21<sup>st</sup>) day of the month. Each of these payment installments shall cover the As Delivered Price of Coal for the Coal quantities that is one-ninth (1/9<sup>th</sup>) of the QQ concerned, as per Clause 3.4. Further, each of these installments shall take into account the weighted average of Base Prices of Grades mentioned in Schedule III based on actual supplies of immediately available previous month. However, the third (3<sup>rd</sup>) installment shall also include the adjustment amount with regard to the actual quantity of Coal delivered pursuant to Clause 5 and the quality of Coal analysed pursuant to Clause 11.2 vis-à-vis the advance payment made for the previous month. For the avoidance of any doubt, such adjustment amount shall also include the quantity adjustment calculated pursuant to Clause 9.1 & 9.2.



(b) The Purchaser shall maintain with the Seller an Irrevocable Revolving Letter of Credit (IRLC) issued by a bank acceptable to the Seller and in the format acceptable to the Seller and fully conforming to the conditions stipulated in Schedule III for an amount equivalent to As Delivered Price of Coal for the Coal quantities that is one-ninth (1/9<sup>th</sup>) of the QQ concerned, as per Clause 3.4. The As Delivered Price of Coal in this context shall take into account the highest of Base Prices of Grades mentioned in Schedule III. The IRLC shall be maintained throughout the term of this Agreement. The amount of IRLC shall be suitably changed whenever there is a change in any component of the As Delivered Price of Coal. In addition to the IRLC, the Purchaser shall pay advance amount equivalent to seven (7) days Coal value by way of Demand Draft/ Banker's cheque/ Electronic Fund Transfer (EFT).

11.1.3 All the payments shall be made through Demand Draft / Banker's cheque/ Electronic Fund Transfer payable at **Ranchi** (to be stated by the Seller). In the event of non-payment within the aforesaid stipulated period, the Purchaser shall be liable to pay interest in accordance with Clause 12.

11.1.4 Advance payment made by the Purchaser shall be non-interest bearing, and it shall change in accordance with change in the As Delivered Price of Coal.

## 11.2 Adjustment for analyzed quality/ Grade

11.2.1 The bills with regard to adjustment for quality, as determined under Clause 4.7, shall be supported by relevant documents in respect of the analysis carried out of the following parameters:

- a) Total Moisture (%)
- b) Equilibrated Moisture (%)
- c) Ash (%)
- d) GCV (Kcal/Kg)

(a) In the event for any reason whatsoever third-Party sampling & analysis by the agency of Seller & purchaser could not be conducted; joint sampling & analysis shall be carried out by the Seller and the Purchaser at the loading end

(b) In the event no sample is collected either by the Third Parties or Seller and the Purchaser jointly as mentioned at (a) above from dispatches by a rake or on any day, as the case may be, from a source for any reason, the weighted average of the most recent results available in any preceding month against respective Source and Grade shall be adopted for such dispatches for which samples were not collected.

11.2.2. The Seller shall give regular credit note on account of Grade slippage to the extent of difference in the Base Price of Declared Grade and analysed Grade of Coal. In case of analysed Grade being higher than the Declared Grade, bonus bill/ claim



- shall be raised by the Seller. The credit note on Grade slippage shall be issued by the Seller within seven (7) days of acceptance of results under joint signature.
- 11.2.3 The amount arising out of final settlement of any bill pursuant to Clause 11.2.1 that is disputed by the Purchaser shall be paid for, as part of the third (3<sup>rd</sup>) installment pursuant to Clause 11.1.2(a) that is due for payment in the same month or in the immediately succeeding month to the month in which such settlement takes place.
- 11.3 **Bills of Miscellaneous Claims:**
- 11.3.1 The Seller shall, within seven (7) days of the receipt of claim pursuant to Clause 9.1 raised by the Purchaser, issue credit note, which shall be adjusted as part of the third (3<sup>rd</sup>) installment pursuant to Clause 11.1.2. (a).
- 11.3.2 The bills towards interest charges pursuant to Clause 12 shall be raised by the parties on monthly basis by the tenth (10<sup>th</sup>) day of the following month and the payment shall be made by fifteenth (15<sup>th</sup>) day of the same month.
- 11.3.3 Compensation for short supply/lifting, as calculated in accordance with Clause 3.6, shall be payable by the defaulting Party to the other Party within a period of ninety (90) days from the date of receipt of claim failing which it will attract interest in terms of Clause 12.
- 11.3.4 After expiry of the Year, the Seller shall submit an invoice to the Purchaser with respect to the Performance Incentive payable in terms of Clause 3.12.1 and the Purchaser shall pay the amount so due within thirty (30) days of the receipt of the invoice failing which it will attract interest in terms of Clause 12.
- 11.4 **Diverted rakes/ missing wagons**  
In case of diversion of rakes en-route or missing wagons, bills shall be paid to the Seller by the original consignee.
- 11.5 **Annual Reconciliation / Adjustments:**  
The Parties shall jointly reconcile all payments made for the monthly Coal supplies during the Year by end of April of the following Year. The Parties shall, forthwith, give credit/debit for the amount falling due, if any, as assessed during such joint reconciliation. The annual reconciliation statement shall be jointly signed by the authorised representative of the Seller and the Purchaser which shall be final and binding.
- 11.6 In the event of due date of any payment obligation under this Agreement falling on Sunday or a gazetted holiday or Nationwide strike affecting banking services, the next first working day shall be the effective due date for the purpose.



## 12.0 INTEREST ON DELAYED PAYMENT

In the event of delay in payment/adjustment of any amount payable/recoverable pursuant to the provisions of this Agreement, the Seller/the Purchaser shall be entitled to charge interest on such sum remaining outstanding for the period after the due date till such time the payment is made. The interest charged by the Seller/ Purchaser pursuant to this Clause shall be at the Interest Rate, as per Clause 1.1(dd).

13.0 (Deleted – Not Used)

## 14.0 SUSPENSION OF COAL SUPPLIES

14.1 In the event any payment due under this Agreement is not made by the Purchaser by the due date, the Seller shall be entitled to regulate and/or suspend further delivery of Coal till such day the payment as due along with the interest amount is received by the Seller. The quantity of Coal not delivered by the Seller pursuant to such regulation and/or suspension of delivery of Coal shall be the Regulated Quantity Not Supplied (RQNS) and Deemed Delivered Quantity (DDQ) of Coal shall accrue to the Seller for the quantity equal to RQNS.

14.2 In the event the Seller suspends the Coal supplies pursuant to Clause 14.1, during such period that the Coal supplies remain suspended, while the Seller shall be relieved of his obligations under this Agreement, the obligations of the Purchaser under this Agreement shall be deemed to remain in full force.

14.3 The Seller shall resume the Coal supplies within three (3) days of payment of the outstanding amount together with interest.

14.4 Not used

## 15.0 SETTLEMENT OF DISPUTES:

15.1 All differences or disputes between the Parties shall be settled/ resolved amicably. If amicable settlement is not possible, then the unresolved disputes or differences shall be settled through the process below.

15.2 *“In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract (s) between Central Public Sector Enterprises (CPSEs) / Port Trusts inter se and also between CPSEs and Government Departments / Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018”.*

16. **TERMINATION OF CONTRACT/AGREEMENT:**

- 16.1 This Agreement may be terminated in the following events and in the manner specified hereunder:
- 16.1.1 In the event that either Party is rendered wholly or partially unable to perform its obligations under this Agreement (“**Affected Party**”) because of a Force Majeure Act, as described in Clause 17 below, and such inability to perform lasts for not less than a total of nine (9) months in continuous form or of twelve (12) months in discontinuous form in a period of two (2) Years, and in the considered assessment of the other Party (“**Non-Affected Party**”) there is no reasonable likelihood of the Force Majeure Act coming to an end in the near future, such Party shall have the right to terminate this Agreement, by giving at least ninety (90) days prior written notice to the Affected Party of the intention to so terminate this Agreement. In such event, the termination shall take effect on expiry of the notice period or ninety (90) days whichever is later, and the Parties shall be absolved of all rights/obligations under this Agreement, save those that had already accrued as on the effective date of termination.
- 16.1.2 In the event that the Purchaser is prevented /disabled under law from using Coal, for reasons beyond their control, owing to changes in applicable environmental and/or statutory norms, howsoever brought into force; the Purchaser shall have the right to terminate this Agreement, subject to a prior written notice to the Seller of thirty (30) days.
- 16.1.3 Not used.
- 16.1.4 In the event that the Level of Delivery (LD) falls below thirty percent (30%) or the Level of Lifting (LL) falls below thirty percent (30%), the Purchaser or the Seller as the case may be, shall have the right to terminate this Agreement, within sixty (60) days of the end of the relevant Year after providing the other Party with prior written notice of thirty (30) days.
- 16.1.5 In the event that either Party suffers insolvency, appointment of liquidator (provisional or final), appointment of receiver of any of material assets, levy of any order of attachment of the material assets, or any order or injunction restraining the Party from dealing with or disposing of its assets and such order having been passed is not vacated within sixty (60) days, the other Party shall be entitled to terminate this Agreement
- 16.1.6 Not Used
- 16.1.7 In the event that any Party commits a material breach of term or condition of this Agreement (“**Defaulting Party**”) not otherwise specified under this clause 16.1, the other Party (“**Non-Defaulting Party**”), shall have the right to terminate this Agreement after providing the Defaulting Party thirty (30) days prior notice and the material breach has not been cured or rectified to the satisfaction of the Non-Defaulting Party within the said period of thirty (30) days.

## 16.2 **Accrued rights to survive termination**

Termination of this Agreement shall be without prejudice to the accrued rights and obligations of either Party as at immediately prior to the termination.

## 17. **FORCE MAJEURE:**

17.1 "Force Majeure Act" means any act, circumstance or event or a combination of acts, circumstances and events which wholly or partially prevents or delays the performance of obligations arising under this Agreement by any Party ("**Affected Party**") and if such act, circumstance or event is not reasonably within the control of and not caused by the fault or negligence of the affected Party, and provided that such act, circumstance or event is in one or more of the following categories:

- a) Flood, inundation of mine, drought, lightning, cyclone, storm, earthquake adverse geo-mining conditions, eruption of gases, subsidence and such natural occurrences.
- b) Explosion, Mine fire and other fire, contamination of atmosphere by radio active or hazardous substances.
- c) Civil disturbance such as riot, terrorism etc.
- d) Industry wise /nation-wide strikes.
- e) Any law, ordinance or order of the Central or State Government, or any direction of a statutory regulatory authority that restricts performance of the obligations hereunder;
- f) Epidemic;
- g) The enactment, promulgation, amendment, suspension or repeal of any Applicable Laws after the date hereof;
- h) Any delay or direction or order on the part of the Government of India or relevant State Government or denial or refusal to grant or renew, or any revocation, or modification of any required permit or mining lease or governmental approvals including those related to land acquisition or environment/ forest clearance provided that such delay, modification, denial, refusal or revocation was not due to a cause attributable to the Affected Party;
- i) Global shortage of Imported Coal or delays caused by supplier or no response to enquiries for supply of coal or logistics constraints in transportation of Imported Coal;
- (j) Any law and order problems affecting coal production and transportation of coal.



- k) Failure of supply of Power from Power Supplier(s)
- l) The events under Force Majeure for supply of coal through import shall be in accordance with the provisions under the side agreement for supply of imported coal as per clause 3.3.1 and 3.3.2.

**17.2 Burden of Proof:**

In the event the Parties are unable to agree in good faith that a Force Majeure Act has occurred; the Parties shall resolve the dispute in accordance with the provisions of this Agreement. The burden of proof as to whether a Force Majeure Act has occurred shall be upon the Party claiming the occurrence or existence of such Force Majeure Act.

**17.3 Effect of Force Majeure:**

If either Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Act, that Party shall be excused from whatever performance is affected by the Force Majeure Act to the extent so affected, provided that:

- a) Within five (5) Business Days after the occurrence of the inability to perform due to a Force Majeure Act, the Affected Party provides a written notice to the other Party of the particulars of the occurrence, including an estimation of its expected duration and probable impact on the performance of its obligations hereunder, and continues to furnish periodic reports with respect thereto, every seven (7) days, during the period of Force Majeure.
- b) The Affected Party shall use all reasonable efforts to continue to perform its obligations hereunder and to correct or cure as soon as possible the Force Majeure Act.
- c) The suspension of performance shall be of no greater scope and duration no longer than is reasonably necessitated by the Force Majeure Act.
- d) The Affected Party shall provide the other Party with prompt notice of the cessation of the Force Majeure Act giving rise to the excuse from performance and shall thereupon resume normal performance of obligations under this Agreement with utmost promptitude.
- e) The non-performance of any obligation of either Party that was required to be performed prior to the occurrence of a Force Majeure Act shall not be excused as a result of such subsequent Force Majeure Act.
- f) The occurrence of a Force Majeure Act shall not relieve either Party from its obligations to make any payment hereunder for performance rendered prior to the



occurrence of Force Majeure Act or for partial performance hereunder during period of subsistence of Force Majeure Act; and

- g) The Force Majeure Act, shall not relieve either Party from its obligation to comply with Applicable Laws. The Affected Party shall exercise all reasonable efforts to mitigate or limit damages to the other Party.

## 18 SCHEDULES / ANNEXURES:

The Schedules detailed below shall form part of this Agreement.

- Schedule - I - Annual Contracted Quantity (ACQ)
- Schedule - II - Bank Guarantee Format for the Security Deposit Submission
- Schedule - III - Quality of Coal
- Schedule - IV - IRLC stipulations
- Schedule- V - Detailed modalities for Third Party sampling
- Schedule - VI - Procedure for segregation and separate stacking of stones of +250 mm size at the Power Station and its joint assessment by the Purchaser and the Seller
- Schedule-VII - Option letter for acceptance / surrender of coal supplies to be made through import of coal

## 19.0 MISCELLANEOUS:

- 19.1 Notice: Any notice to be given under this Agreement shall be in writing and shall be deemed to have been duly and properly served upon the Parties hereto if delivered against acknowledgement or by registered mail with acknowledgement due, addressed to the signatories or the authorised representatives of the signatories nominated in accordance with the provisions of this Agreement at the following addresses:

### 1) Seller's address

Name & Designation:  
**Ajit Singh, GM (M&S)**  
Address: Central Coalfields Limited,  
Darbhanga House, Ranchi -834001.  
  
Telephone: 0651-2360369  
Fax: 0651-2360369  
Email: [gmsnm.ccl@coalindia.in](mailto:gmsnm.ccl@coalindia.in)

### 2) Purchaser's address

Name & Designation:  
**Sanjeev Sood, CEO, STPL**  
Address: SJVN Thermal Pvt. Ltd.  
2<sup>nd</sup> & 3<sup>rd</sup> Floor, Nav Durga Complex,  
Ambedkar Chowk, Buxar, Bihar-802103  
  
Telephone: 06183-295105  
Fax: 06183-295165  
Email: [ceostpl@gmail.com](mailto:ceostpl@gmail.com)

- 19.2 Amendment: This Agreement cannot be amended or modified except by prior written agreement between the Parties.



- 19.3 Severability and Renegotiation: In the event any part or provision of this Agreement becomes, for any reason, unenforceable or is declared invalid by a competent court of law or tribunal, the rest of this Agreement shall remain in full force and effect as if the unenforceable or invalid portions had not been part of this Agreement, and in such eventuality the Parties agree to negotiate with a view to amend or modify this Agreement for achieving the original intent of the Parties.
- 19.4 Governing Law: This Agreement, and the rights and obligations hereunder shall be interpreted, construed and governed by the laws of India. The courts of **Ranchi, Jharkhand** shall have exclusive jurisdiction in all matters under this Agreement.
- 19.5 Entirety: This Agreement together with any documents referred to in it, supersedes any and all oral and written agreements, drafts, undertakings, representations, warranties and understandings heretofore made relating to the subject matter hereof and constitutes the entire Agreement and understanding of the Parties relating to the subject matter hereof. It is expressly agreed that this Agreement shall supersede all previous discussions and meetings held and correspondence exchanged between the Seller & the Purchaser in respect of this Agreement and any decisions arrived at therein in the past and before coming into force of this Agreement shall have no relevance with reference to this Agreement and no reference of such discussions or meetings or past correspondence shall be entertained either by the Seller or the Purchaser for interpreting this Agreement or its implementation.
- 19.6 Counterpart: This Agreement may be executed in any number of counterparts and each counterpart shall have the same force and effect as the original instrument.
- 19.7 In the event there is any change in constitution of the Purchaser company due to amalgamation, merger, de-merger, takeover, court order or change in ownership/shareholding pattern, the Purchaser shall inform the Seller of the same within 30 days of the said change taking effect and thereafter, a fresh Coal Supply Agreement shall be entered into between the Seller and the resultant company as Purchaser after the Seller is satisfied that all the terms and conditions mentioned in the Office Memorandum of the Ministry of Coal, Government of India dated 7th April, 2015 have been satisfied in full by the resultant company.
- 19.8 Assignment: Except as provided in Clause 19.7 above, the Purchaser shall not, without the express prior written consent of the Seller, assign to any third party this Agreement or any part thereof, or any right, benefit, obligation or interest therein or there under
- 19.9 Limitation of Liability: The Parties agree that except as otherwise expressly agreed in this Agreement, neither Party shall have any right or entitlement to any consequential losses, costs or damages, loss of profit or market, as a result of a breach by the other Party of this Agreement



## 20.0 IMPLEMENTATION OF THE AGREEMENT

- 20.1 The respective **Head of Power Station** of the Power Station or his nominated representative shall be authorised to act for and on behalf of the Purchaser.
- 20.2 HOD (M&S) or any representative duly authorized by the Seller shall act for and on behalf of the Seller.
- 20.3 Any other nomination of authorised representative shall be informed in writing, by the Seller and the Purchaser, as the case be, within one month of signing of this Agreement or by giving 30 (thirty) days' notice.


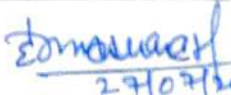
It shall be the responsibility of the Parties to ensure that any change in the address for service or in the particulars of the designated representative is notified to the other Party and all other concerned, before effecting a change and in any case within two (2) Business Days of such change.

## 21.0 Savings

Notwithstanding anything contained herein, this FSA shall not be applicable to purchaser(s) having/seeking tapering linkage(s) and/or Purchaser(s) having PPA(s) of whatever duration permitting sale/supply of electricity at non-regulated rate or market driven price.

Signed in presence of the witness /witnesses under mentioned on **27<sup>th</sup> day of July 2021.**

For Central Coalfields Limited		M/s SJVN Thermal Pvt. Ltd.	
Signature:		Signature:	
Name:	Ajit Singh	Name:	Sanjeev Sood
Designation:	GM (M&S)	Designation:	CEO, STPL
Address:	CCL, Darbhanga House Ranchi-834029	Address:	STPL, Nav Durga Complex, Ambedkar Chowk, Buxar, Bihar-802103
Telephone:	0651-2360369	Telephone:	06183-295105
Fax:	0651-2360369	Fax:	06183-295165
email	gmsnm.ccl@coalindia.in	email:	ceostpl@gmail.com
<b>1. Witness:</b>		<b>1. Witness:</b>	
Signature:		Signature:	
Name:	Nishant K. Vermani	Name:	एस.एल. शर्मा
Designation:	Mgr. (M&S)	Designation:	मुख्य वित्तीय अधिकारी एचएचवीएन थर्मल प्रा. लिमिटेड द्वितीय तल, नवदुर्गा कॉम्प्लेक्स, अम्बेडकर चौक, अम्बेडकर चौक-बुखार-802103 (बिहार)
Address:	CCL, Ranchi	Address	

2. Witness:		2. Witness:	
Signature:		Signature:	 27/07/2021
Name:	Fazal Haque	Name:	Hemant Kumar Shukla
Designation:	Jy. Mgr. (F.M.S.)	Designation:	Sr. Addl. General Manager
Address:	CCL, Ranchi	Address:	STPL, Buxar, Bihar



**Annual Contracted Quantity  
(Refer Clause 3.1)**

**Annual Contracted Quantity**

Sl. No.	Name & location of the Power Plant owned by Purchaser	Unit wise Installed Capacity of the Power Station (in MW)	Balance life** of plant/unit in Years	Name of Rake Fit Station	Original LOA Quantity *** (Lakh Tonnes)	Annual Contracted Quantity (Lakh Tonnes)	Mode of Transport	Source Coal field of the Seller*
1	Buxar TPP Unit I & 2 (2x660 MW), Village Chausa, Buxar, 802103, Bihar	Unit#1 : 660 MW Unit#2 : 660 MW	Unit#1: 25 years after Commissioning Unit#2: 25 years after Commissioning	Not Applicable presently	49.76	49.76	Rail	All operative mines of CCL

\* Details of Imported Coal shall be furnished by the Seller to the Purchaser from time to time as and when such Coal is offered.

\*\* Balance life of the Plant/Unit shall be as determined by appropriate authority of Govt. of India / as declared by way of "Self-declaration" by the authorized signatory of the Purchaser as per prescribed format of CIL.

# Buyer to provide annual coal requirements for the initial years also

\*\*\*LOA Quantity means the quantity mentioned in the Letter of Assurance (LOA) issued by the Seller to the Purchaser.

**BANK GUARANTEE FORMAT  
FOR SECURITY DEPOSIT**

**(Refer Clause 2.11)**

On Rs. 50/- Non judicial Stamp Paper

Date of Issue: -----

Effective Date<sup>1</sup>: -----

Expiry Date: -----

Value of B.G: -----

1. [The Chairman – cum- Managing Director,  
Coal India Limited,  
10, Netaji Subhash Road, Kolkata – 700 001]
2. [The Chairman-cum-Managing Director,  
(name and address of the subsidiary Company)]
3. \_\_\_\_\_

In consideration of Coal India Limited of 10, Netaji Subhash Road, Kolkata – 700 001/ \_\_\_\_\_ (name of the subsidiary Company) having its Registered Office at \_\_\_\_\_ (regd. address of the subsidiary Company) and Sales Office at \_\_\_\_\_ (address of the sales office of the subsidiary Company) (hereinafter referred to as 'Seller', which expression shall unless excluded by or repugnant to the subject or context, include its legal representatives, successors and permitted assigns) having agreed to supply Coal/Imported Coal to \_\_\_\_\_ (Name of the Company/ Partnership firm/ Proprietor) having its registered office at \_\_\_\_\_ (address of the Company/ Partnership firm/ Proprietor) (hereinafter referred to as the 'Purchaser', which term shall unless excluded or repugnant to the subject or context include its legal representatives, successors and permitted assigns in case of Company) and, the Purchaser being required to furnish the Security Deposit as per the terms of the Fuel Supply Agreement (FSA)

We, \_\_\_\_\_ (Name and address of the Bank), having its Head Office at \_\_\_\_\_ (Address of the Head Office of the Bank) (hereinafter called the Guarantor, which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby irrevocably and unconditionally guarantee and undertake to

<sup>1</sup> The Bank Guarantee Effective Date for Security Deposit corresponds to the Signature Date of this agreement

pay Seller or such other place or places as may be directed by the Seller all amounts payable by the Purchaser to the extent of Rs. \_\_\_\_\_/- (Indian Rupees \_\_\_\_\_) at any time upto<sup>2</sup> \_\_\_\_\_ subject to the following terms and conditions :-

- 1) The Guarantor shall pay to the Seller on demand and without any demur, reservation, contest, recourse or protest and/ or without any reference to the Purchaser. As to whether the occasion or ground has arisen for such demand, the decision of the Seller shall be final.
- 2) The Seller shall have the fullest liberty without reference to the Guarantor and without affecting this guarantee to postpone at any time or from time to time the exercise of all or any of its powers and rights under arrangement made with the Purchaser, and the Guarantor shall not be released from this guarantee by any arrangement between the Seller and the Purchaser or any alteration thereof made with or without the consent of the Guarantor or by exercise or non-exercise by the Seller of all or any of its powers and rights against the Purchaser, or any other forbearance, act of omission on the part of the Seller or indulgence granted by or on behalf of the Seller to the Purchaser, which under the law relating to surety ship would but for this provision have the effect of releasing the Bank as Guarantor from their obligations under this guarantee.
- 3) The guarantee herein contained shall not be determined or affected by the winding up or insolvency of the Purchaser, but shall in all respects and for all purpose be binding and operative until all monies due to the Seller in respect of all liability or liabilities of the Purchaser are fully paid.
- 4) It is also agreed that Seller will be entitled at its option to enforce this guarantee against the Guarantor as principal debtor in the instance notwithstanding any other security or guarantee that the Seller may have in relation to the Purchaser's liability.
- 5) The Guarantee will remain valid for a period of sixty-four (64) months from the date hereof and to such further period, as may be required and agreed by the Parties and agreed by the Guarantor before the expiry of the aforesaid validity.
- 6) The Guarantee shall cover all claims or demand of Seller to the extent of the amount guaranteed.
- 7) Notwithstanding anything contained, the liability of the Guarantor under this Agreement is restricted to Rs. \_\_\_\_\_/- (Indian Rupees \_\_\_\_\_), and the same shall be kept operative and valid by the Purchaser upto and including the day of \_\_\_\_\_ (date that is sixty-four (64) months from the issue of the Bank Guarantee) and to such further period, as

<sup>2</sup> The Bank Guarantee should be valid till 30 days after the First Delivery Date



  
Chief Executive Officer  
SJVN Thermal Pvt. Limited  
(A Subsidiary of SJVN Limited)

may be required and agreed by the Parties and agreed by the Guarantor before the expiry of the aforesaid validity.

- 8) This guarantee can be enforced by Seller any number of times for their claims or demand to the total extent of Rs. \_\_\_\_\_/- (Indian Rupees \_\_\_\_\_), as long as it remains in force.
- 9) Unless a demand or claim under this guarantee is received by the Guarantor in writing within the period mentioned in clause 5 and 7 hereof, all rights of the Seller shall be forfeited and the Guarantor shall be relieved or discharged from all liabilities.
- 10) The guarantee is operative at our ----- (name and address of the branch) Branch, \_\_\_\_\_ (Place).

Signature of the Bankers  
With date & Rubber Stamp



**Quality of Coal**  
(Refer Clause 4.1)

S. No.	Name & Location of the Power Plant owned by the Purchaser	Top-size of Coal (mm)	Grade(s) as mentioned in LOA on UHV basis	Corresponding grades in terms of equivalent GCV
1	Buxar TPP Unit 1 & 2 (2x660 MW), Village Chausa, Buxar, 202103, Bihar	(-)250 mm	G9 to G14	G9 to G14

\* Details of Imported Coal shall be furnished by the Seller to the Purchaser from time to time as and when such Coal is offered.



**IRLC Stipulations  
(Refer Clause 11.1.2(b))**

In the event the Purchaser opts to submit IRLC, as per the payment provisions laid down in Clause 11.1.2 (b), the IRLC shall conform to the following conditions:

1. The underlying amount of IRLC shall be equivalent to As Delivered Price of Coal for the Coal quantities that is one-ninth (1/9<sup>th</sup>) of the QQ concerned, as per Clause 3.4. Further, the As Delivered Price of Coal in this context shall take into account the highest of the Base Prices of the Grades mentioned in Schedule III.
2. The underlying amount of IRLC shall be suitably changed whenever there is a change in any component of the As Delivered Price of Coal.
3. The term of the IRLC shall be for a minimum period of one year, and the same shall be renewed one month prior to its expiry so as to remain valid throughout the term of the Agreement.
4. 100% payment shall be released in favour of the Seller against the bills/ invoices duly signed and submitted by the Seller.
5. IRLC shall be automatic without any reinstatement clause, accordingly the amount of each drawl shall be automatically reinstated.
6. IRLC shall be issued by a bank acceptable to the Seller
7. All IRLC charges including those related to opening, establishment, negotiation, re-instatement, amendment or any other incidental charges shall be borne by the Purchaser
8. All documents drawn under this IRLC shall be in English language only.
9. All amounts under this IRLC shall be payable at [ \_\_\_\_\_ ] to be mentioned by the Seller].
10. There shall be no restriction for the number of drawls in a month.



**Detailed modalities for Third Party sampling**

**1.0 Modalities for collection, handling, storage and preparation of third-party samples:**

**1.1 General**

- a) Sample shall be collected source wise, grade wise and Power station wise.
- b) Samples shall be collected, packed and transported in such a manner so as to make these tamper proof to the satisfaction of Seller and Purchaser for which detailed procedure may be worked out at sampling sites jointly by representatives /Third parties of Seller and, Purchaser
- c) Name the colliery / siding / Power Station, date of collection and other identification details (eg. Rake no. in case of rail supply) shall be maintained in a register and a proper code number shall be assigned for each sample for identification and reconciliation of results.
- d) Laboratory samples prepared shall be in the size of 12.5mm for Total Moisture and for ash, moisture and GCV analysis 212 micron IS Seive. Precaution shall be taken so that before analysis, in test laboratory , further sieving or pulverizing is not required.
- e) Proper analysis records shall be maintained at the laboratories where the samples are analysed.
- g) Samples collected at the loading end shall be analysed as per BIS Standards (IS:1350 Part I – 1984) for determination of ash and moisture content and as per (IS:1350Part-II-1970) for
- g) Monthly statements containing the details of each and every analysis result finalized during a month based on Third party/ referee analysis, as the case may be, shall be prepared indicating inter-alia the quantity of Coal covered by the respective analysis results. The respective analysis results shall be applied to the corresponding quality of Coal for billing/ commercial purpose. Copy of the monthly statement / report shall be submitted to the GM(QC)/Director In charge of the Seller by the Third Party
- h) The final pulverized sample shall be divided into three equal parts, Set-I, Set-II, Set-III. Set-I shall be taken by the Purchaser for analysis at their end and the Set-II of the sample shall be taken by the Seller for analysis at the loading end and the Set-III (Referee Sample) to be retained by the third parties jointly in double sealed



condition duly signed by the representative of Seller, Purchaser and the Third Parties and kept in safe custody at the loading end by the Third Parties.

- i) Sample drawn at loading ends shall be analyzed by the Third Party of Seller and Purchaser in laboratories of their respective end
- j) The samples shall be identified at the time of analysis in the laboratories by the code number already assigned as per clause 1.1(c).

## 1.2 COLLECTION OF SAMPLES FROM WAGONS:

- a) In case of dispatch by Rail each rake (source wise, grade wise and Power Station wise) of Coal supplied from one Delivery Point shall be considered as a Lot for the purpose of sampling.
- b) In case of Coal dispatches through MGR the sample collected from each rake (source wise, grade wise and Power Station wise) loaded from the respective Delivery Point during the day shall be pooled together and shall be considered as a lot for the purpose of sampling.
- c) Each rake shall be divided into sub-lots in a manner that the quantity of Coal/number of wagons in such sub-lots is more or less equal. The number of sub lots shall be determined as under :

No. of wagons in the rake	Number of sub lots
Up to 30 wagons	4
>30 wagons up to 50 wagons	5
>50 wagons and above	6

- d) From each of the sub lots one wagon each shall be selected as per random table in IS:436 (Part I/Section I) 1964 or its latest version for collection of increments.
- e) In each wagon selected for sampling, the sample will be drawn from the spot in a manner so that if in one wagon the sample is collected at one end, in the next wagon the spot will be in the middle of the wagon and in the third wagon at the other end and this sampling procedure will be repeated for subsequent wagons.
- f) Before collecting the samples, the spot will be leveled and at least 25 cm of Coal surface shall be removed/scrapped from the top and the place will be leveled for an area of 50 cm by 50 cm.
- g) About 50 kg of sample shall be collected from each selected wagon in the rake of a source by drawing 10 increments of approx. 5 kg each with the help of shovel/scoop.
- h) Any stone/shale of size more than that indicated in Schedule-II shall be removed/discarded, however all stones/ shale of size in terms of Schedule II shall form part of the sample collected.

- i) Source wise, grade wise and Power Station wise Samples collected from all the selected wagons in a rake shall be mixed (grade wise/source wise/Power Station wise) separately to form Gross Sample accordingly.
- j) Item (d) to (g) above shall be applicable for Coal supplied in box wagons as well as BOBR wagons where there is no live overhead traction line.
- k) In case of having live overhead traction line, the parties shall ensure that the power supply in the over head traction is switched off to facilitate collection of joint samples from BOX / BOBR wagons pursuant to points (d) to (g) above.

### 1.3 COLLECTION OF SAMPLES OF COAL DESPATCHES BY ROAD

- a) Sample shall be collected colliery wise / grade wise on daily basis during a day i.e. 6.00 Hr to 18.00 Hr
- b) The first truck for Third party sampling on a day shall be selected randomly from the first eight trucks placed for loading by the Purchaser. Every eighth (8<sup>th</sup>) truck there after shall be subjected to the Third Party Sampling.
- c) The spot at the top of the truck, will be leveled and at least 25 cm of Coal surface shall be removed/scrapped from the top and the place will be leveled for an area of 50 cm by 50 cm for collection of sample.
- d) About 30 kg of sample shall be collected from each truck by drawing 6 increments of approx. 5 kg each with the help of shovel/scoop.
- e) All the samples collected from every eighth truck shall be mixed together grade wise to form a Gross Sample.
- f) Any stone/shale of size more than that indicated in Schedule-II shall be removed/discarded, however all stone / shale of size as mentioned in Schedule II shall form the part of the sample collected.

### 1.4 COLLECTION OF SAMPLES FROM CONVEYOR BELT/ROPEWAYS/ PIPELINE

- a) In case of supply by conveyer belt sample shall be collected in increments of full cross section and thickness of the stream in one operation in a regular interval of time as mutually decided by both Seller and Purchaser and lot shall consist of samples so collected during a day i.e. 0.00 Hr to 0.00 Hr. of the following day.
- b) Before collecting the increments, the speed of the conveyer and quantum of material passing a certain point in a given time shall be ascertained so that an appropriate spacing of time between increments may be arranged over the whole of the lot.
- c) If it is practicable to stop the belt periodically, increment may be collected from the whole cross section of the stream by sweeping the whole of the Coal lying between the sides of a suitable frame placed across the belt. The frame should be inserted in the Coal until it is in contact with the belt across its full width.
- d) Minimum 150 kgs of samples to be collected for daily Gross Sample.

## 1.5 COLLECTION OF SAMPLES FROM STOCKPILE

- a) For the purpose of sampling, the quantity of Coal in the stock pile shall be divided into a suitable manner of sub-lots as specified in the following table:

Weight of the lot (MT)	No. of Sub-lots
Up to 500	2
501 to 1000	3
1001 to 2000	4
2001 to 3000	5
Over 3000	6

- b) The surface of each sub-lot shall be leveled and one point for approximately every 250 MT of material in the sub-lots shall be chosen at random for taking gross sample as per the following procedure:
- In case height of the stock pile is not more than 1.5 metre, the material shall be collected at every selected point by taking the whole section of Coal from top to bottom over the area of a circle of 30 cm diameter.
  - In case the height of the stock pile is more than 1.5 metre, the sample shall be collected at every selected point by taking the material over an area of a circle of 30 cm diameter and up to a depth of 1.5 metre.

## 1.6 PREPARATION OF COLLECTED SAMPLES:

1.6.1 The Gross Sample collected at the loading end jointly by the representative/ Third parties of the Seller and the Purchaser will be divided into two portions. One portion (one fourth of the Gross Sample) called Part-1 will be used for analysis of Total Moisture and the other portion (three fourth of the Gross Sample) called Part-2 for determination of ash, moisture and **GCV** on Equilibrated basis .

1.6.2 The Part-2 Sample shall be jointly reduced into laboratory sample on the date immediately following the date of collection. The final laboratory samples will be divided into three parts viz. Set – I , Set – II and Set-III

- Set – I shall be used for analysis of ash, moisture and GCV at Purchaser's end as per BIS standard (IS 1350 Part 1-1984 and IS 1350 Part-II-1970 as applicable
- Set – II shall be used for analysis of ash, moisture and GCV at Seller's end as per BIS standards IS 1350 Part 1-1984 and IS 1350 Part-II-1970 as applicable
- Set – III shall be kept under joint seal of the Seller, Purchaser and the Third Party as referee sample in the safe custody of Third Parties at the loading end for a period of fourteen days or until the analysis results are accepted without dispute, whichever is earlier. The referee sample i.e. Set-III shall be destroyed after fourteen (14) days from the date of analysis of Set-II if no complaint is received.

- a) The Gross Samples for each Delivery Point shall be separately crushed to (-) 5 cm by mechanical means, mixed thoroughly, coned and quartered.
- b) Two opposite quarters shall be retained and the rest rejected.
- c) The retained material shall be further mixed, halved and one half retained.
- d) Material so obtained shall be crushed to 12.5 mm by a Jaw Crusher and then to 3.3 mm by a palmac type of reduction mill/ or jaw crusher.
- e) The crushed material shall be reduced either by coning and quartering or by ruffling to 2 kgs.
- f) The sample so reduced shall be finally ground to pass through 212 micron IS sieve using a Raymond mini mill.
- g) From the final sample passing through 212 micron IS sieve, 1.5 Kg shall be taken, which shall constitute the laboratory sample.
- h) Such laboratory sample shall be divided into three equal i.e. Set-I , Set-II and Set-III as mentioned at 1.1(h).. The sample shall be kept in glass or polythene container.
- i) All tools and tackles, plastic bags, sealing compound and other items required for collection, preparation, storage and analysis of the sample shall be arranged by the Seller.

## 2.0 PREPARATION OF TOTAL MOISTURE SAMPLE AND DETERMINATION OF TOTAL MOISTURE:

- a) Part – 1 Sample shall be analyzed by the *Third Parties* for determination of Total Moisture as per IS: 1350(Part –1) - 1984.
- b) For rail supplies, rake wise Surface Moisture shall be determined. For supplies by modes other than rail, Surface Moisture shall be determined by the Third Parties on daily basis.
- c) The samples shall be divided into three parts and shall be sealed in three previously weighed air tight plastic containers duly labeled and coded as Set-I™ Set-II™ and Set-III™ (the weight shall include any sealing material to be used also) immediately. Weight of each part of such sample shall be minimum 5 kg. The third set Set-III™ of Coal samples shall be set aside as referee sample. All the containers shall be sealed at the time of sample collection in such a manner that there is no loss of moisture. All the containers, after the collection of the sample and sealing, shall be individually weighed. All the weights, before and after the collection of samples shall be recorded by the Third parties..
- d) An empty tray measuring 1000 cm<sup>2</sup> (1 ft x 1 ft-approx) shall be weighed. The sample for analysis shall be spread in this tray. The weight of Coal of the tray shall be recorded.

- e) This tray containing the sample shall be kept under joint lock in a room/laboratory furnished with either sealing fans or with exhaust fan for drying the sample for 24 hours. If the sample is not reasonably dry the period of drying may be extended to further periods of 24 hours, till the sample is dry.
- f) The tray shall be weighed again and weight noted. Again the sample shall be kept for drying for about 2 hours and again weighed and this process shall be repeated till constant weight is achieved. This would normally take 2-4 hours. The final weight shall be taken and loss in weight that is W1 in the 1st stage of air drying shall be recorded.
- g) This sample shall now be crushed to -12.5 mm size in a crusher. Coning and quartering shall be done to reduce the sample quantity to 5 kg.
- h) This sample of -12.5 mm of approximately 5 kg shall be weighed and kept in an oven at ambient temperature of 38<sup>0</sup>C for about 2 hours. Again weight shall be taken and the process of heating cooling and weighing shall be continued till constant weight is reached.
- i) The loss in weight shall be recorded as W2 that is the loss of weight after 2nd stage drying.
- j) This sample of approximately 5 kg after the 2nd stage of drying shall be crushed to -3.35 mm size and the same shall be reduced to half Kg, by quartering and coning.
- k) Out of the half kg of sample 10 gms of Coal sample shall be taken in a weighed glass dish and kept in the drying oven at 108 +/- 2<sup>0</sup>C for about 90 minutes.
- l) The dish shall be cooled and weighed. Heating, cooling and weighing shall continue till constant weight is reached.
- m) The loss of weight shall be recorded as W3 that is the weight loss in 3rd stage drying.
- n) Based on the above procedure, the Total Moisture shall be computed by the *Third Party*.
- o) All tools and tackles, plastic bags, sealing compounds and other items required for collection, preparation, storage and analysis of the sample shall be *arranged* by the Seller.



## SCHEDULE – VI

### **Procedure for segregation and separate stacking of stones of +250 mm size at the Power Station and its joint assessment by the Purchaser and the Seller**

- 1) The stones segregated from Coal supplies received from Seller during a month at the power plant end shall be collected and stacked separately by Purchaser at a suitable location identified mutually by the Purchaser and Seller.
- 2) Such materials will be stacked in a manner that the same can be measured properly for volume.
- 3) (a) Such material collected and stacked during a month shall be loaded into trucks and weighed at nearest weighbridge to determine weight of such material received during the month.  
  
(b) In the event entire stock of such material cannot be weighed as per 3 (a) of the schedule, at least 5 trucks of such material loaded from the heap on random basis shall be weighed at the nearest weighbridge to determine the volumetric conversion ratio of such material, i.e. weight per unit of volume. The same conversion ratio will be applied for determining total weight of the heap of such material. The heap containing the entire stock in such cases shall be measured for volume prior to loading in the trucks and the same recorded jointly.
- 4) Two trucks of such material weighed as above will be randomly selected and unloaded at an identified place near the heap and material of +250 mm size will be manually segregated. After such segregation, the same will be weighed at the nearest weighbridge to establish the percentage of material +250mm size in the sample. This percentage will be applied to the total weight of heap determined as per 3(b) to find the weight of material +250 mm size in the heap.
- 5) After determination of weight pursuant to Clause 3 of this Schedule, the stones shall be disposed off by the Purchaser at a suitable place.
- 6) All infra-structural arrangements including for tools, tackles, equipments, trucks and manpower shall be arranged and provided by Purchaser at their own cost.
- 7) The Purchaser shall provide access to the Seller for examination of all documents / records pertaining to the above claim, if the Seller so desires.

## SCHEDULE-VII

### Option letter for confirming acceptance /surrender of coal supply to be made through import in terms of clause 2.8.3.1 of the Modified Model FSA applicable for New SEB/State GenCo Power Utilities.

To

M/s.....  
.....

Dear Sir,

Sub: Acceptance / Surrender of Coal through import.

This has reference to the Letter of Assurance issued to you vide letter No..... for supply of Coal subject to fulfillment of the conditions as stipulated in the said letter.

Clause 3.3 of the FSA provides that the Seller shall have the option to supply the balance quantity of coal through import not exceeding, unless otherwise agreed between the parties, 15% of the ACQ in the year 2012-13, 13-14 and 14-15, 13% of ACQ in the year 2015-16 and 5% of the ACQ for the year 2016-17 and onwards after meeting the quantity available from domestic production.

The percentage of imported coal proposed to be supplied in a year to meet the minimum contractual obligation shall be determined and declared by the Seller on year to year basis.

Accordingly, the imported coal likely to be supplied during..... (year) is .....% of the ACQ.

In order to enable the Seller to make firm arrangement for sourcing coal through import, the Purchaser is required to opt for either of the following two options.

#### Option-A: Confirmation for acceptance of coal through import:

- i) The Purchaser agrees unconditionally to accept supply of coal through import at a price, specification and source as may be decided and offered by the Seller/CIL from time to time.
- ii) The Purchaser would indicate acceptance for either the full quantity or a part of the offered quantity to be supplied through import to be expressed in terms of percentage of ACQ. In case of Purchaser giving consent for supply a part of the offered quantity, the part quantity not accepted shall be considered as Deemed Delivered quantity as per clause 3.11.1(v) and 3.11.2(iv).
- iii) The Build-up-Period as per clause 2.10 of the FSA which is at present for a period of six months from the Effective Date shall stand extended for a further



- period of six months for supply through import to enable the Seller arranging the same after obtaining firm commitment from the Purchaser.
- iv) The Purchaser giving this option shall have to enter into a Side Agreement separately for covering the commercial terms and payment modalities for the supply through import. The Side Agreement shall form an integral part of this Agreement and legally enforceable.

**Option-B: Confirmation for Surrender of coal through import**

- i) The Purchaser unconditionally surrenders the component of ACQ offered by the Seller through import.
- i) The Quantity of imported coal surrendered by the Purchaser shall stand as Deemed Delivered Quantity as per clause 3.11.1(v) and 3.11.2(iv).
- ii) The penal provision for supply below 80% and up to 65% of ACQ for the years 2012-13, 2013-14 and 2014-15 and below 80% and up to 67% of ACQ for the year 2015-16 shall not be applicable. The penal provision for supply below 75% shall be applicable from the year 2016-17 and onwards.

The Purchaser may request for a change of the option exercised by him earlier, but such request has to be made by him at least three months in advance.

Either of the above two options is required to be exercised before or at the time of signing of the FSA by endorsing the format appended below.

You are therefore requested to confirm acceptance of either of the above options by endorsing the copy of the letter in the following manner.

Yours faithfully  
(CGM/GM-Sales)

We, herby confirm that we have read and understood the above including the terms of FSA dated.....and accordingly exercise our unconditional acceptance for the Option A/B (strike out whichever is not acceptable) and request you to take necessary further action.

(In case of exercising option A)

The supply intended to be taken in terms of the percentage of ACQ through import:  
.....

Signature  
Name of the Authorised Signatory  
(Purchaser)  
SEAL

Date:





सत्यमेव जयते

**No.FU-18/2017-IPC**  
**Government of India**  
**Ministry of Power**

Shram Shakti Bhawan, Rafi Marg  
New Delhi dated 08.03.2019

To,  
The Chairman & Managing Director  
SJVN Limited, Corporate Office Complex,  
Shanan, Shimla (HP)-171006

**Sub: Investment Approval for 1320 MW Buxar TPP being executed through SJVN Thermal Pvt. Ltd. (a wholly owned Subsidiary of SJVN Limited), regarding.**

In reference to communication received from Cabinet Secretariat vide D.O. No. CCEA/07/2019(vii) dated 07.03.2019, the undersigned is directed to inform that the Government has approved the following:

- (a) The implementation of 1320 MW Buxar Thermal Power Project with an investment of Rs. 10,439.09 Crore including Interest During Construction (IDC) of Rs. 1146.50 Crore and Financing Charges (FC) of Rs. 36.54 Crore at January 2018 Price Level since SJVNL has given commitment to complete and commission the project with no cost and time overrun subject to variation on account of taxes and duties, foreign currency exchange rates, force majeure and circumstances beyond the control of SJVNL.
  - (b) Supply of not less than 85% of generated power to power distribution company(ies) of Bihar Govt in accordance with the Memorandum of Understanding with the Govt of Bihar,
  - (c) Ex-post facto approval for the cumulative expenditure amounting to Rs. 533.50 Crore against investment approval for pre-construction activities amounting to Rs. 436.68 Crore.
  - (d) Ex-post facto approval for creation of SJVN Thermal Pvt. Ltd. - 100% (wholly) owned subsidiary of SJVN Ltd. and
  - (e) Approval for equity investment upto Rs. 3131.72 Crores at 30% of total project cost at January 2018 Price level by SJVN Ltd. in SJVN Thermal Pvt. Ltd. for implementation of 1320 MW Buxar Thermal Power Project.
2. Commercial Operation Date (COD) of the first unit (660 MW) is envisaged in 52 months from the date of investment approval and the second unit (660 MW) at an interval of six months thereafter.
  3. This issues with the concurrence of the Integrated Finance Wing of Ministry of Power vide their diary No. 56/Finance/2019 dated 08.03.2019.

Yours faithfully,

(S. Majumdar)

Under Secretary to the Govt. of India

Tel: 2335 6938

No.FU-18/2017-IPC  
Government of India  
Ministry of Power

**Copy to:**

1. Principal Pay & Accounts Officer, Ministry of Power, New Delhi.
2. Office of the Principal Director of Commercial Audit and Ex-officio Member Audit Board-III, CAG Building (Annexe), New Delhi-110124.
3. Principal Director of Audit, Economic & Service Ministries, AGCR Building, New Delhi
4. Chairperson, Central Electricity Authority, Sewa Bhawan, New Delhi.
5. Advisor (PAMD), NITI Aayog, Parliament Street, New Delhi.
6. Ministry of Finance (Deptt. of Expenditure) PF-II Division, North Block, New Delhi.
7. Secretary, Ministry of Statistics & Programme Implementation, Sardar Patel Bhawan, New Delhi.
8. Secretary, Ministry of Finance (Deptt. of Economic Affairs), North Block, New Delhi.

**Copy also to:**

1. PS to Minister of State for Power and New & Renewable Energy (I/C)
2. PPS to Secretary (Power)/ PPS to AS(SNS)/ PPS to JS&FA/ PS to JS(Thermal), Ministry of Power, New Delhi.
3. Finance Section/ Budget Section, Ministry of Power, New Delhi.

**ABSTRACT COST ESTIMATE  
(COST PROVISION FOR ENVIRONMENTAL MEASURES)**

				Price Level (Jan, 2018)
				Rs. In Crore
<b>PROJECT : Buxar TPP (2x 660MW)</b>				
Sl. No.	Item Description	FC	IC	Sub - Total
1	Electrostatic Precipitator	0.00	206.37	206.37
2	Chimney	0.00	65.49	65.49
3	Cooling Towers incl. Civil Works	0.00	125.91	125.91
4	Ash Handling	0.00	255.27	255.27
5	Ash Dyke - First 9 years	0.00	90.49	90.49
6	Dust Extraction & Suppression System	0.00	5.09	5.09
7	DM plant waste treatment systems	0.00	5.09	5.09
8	Sewerage collection, treatment & disposal	0.00	4.07	4.07
9	Environmental lab. Equipment	0.00	5.59	5.59
10	Green Belt, Afforestation & Landscaping	0.00	20.85	20.85
11	SCR	0.00	501.48	501.48
12	FGD	0.00	572.68	572.68
	<b>Total</b>	<b>0.00</b>	<b>1858.39</b>	<b>1858.39</b>

**Govt of Bihar**  
**Rural Works Department**

Letter No. - BRRDA (HQ) PMGSY-583/2015 65 /Patna, dated- 07/01/16

From,

Kamlesh Choudhary  
Engineer in Chief

To,

Shri Praveen Gupta  
GM/HoP, BTPP  
SJVN Thermal Pvt. Ltd.

**Sub: Long term requirement of Fly Ash from Thermal Power Plant for its utilization in construction of Rural Roads in the State of Bihar**

Sir,

As you may be aware, Rural Works Department is focusing on construction and maintenance of the rural roads falling mainly in the category of others District Roads (ODR) and Village Roads in Bihar state. In our initiative, towards adoption of environment friendly technology for construction of the rural roads, we intend to utilize fly ash from thermal power plant in construction of rural roads in the state of Bihar.

We understand that SJVN Thermal Pvt. Ltd. is looking to supply fly ash from their coal based Buxar Thermal Power Project, District Buxar.

Though our Fly Ash requirement varies from time to time depending upon quantum of works and at present we are utilising Fly Ash as new Technology. We may require up to 0.48 MMT per annum of Fly Ash for its utilization in construction activity of rural roads as stated above.

It is for your kindly information  
Thanking You.

Yours faithfully

  
06/01/16  
(Kamlesh Choudhary)  
Engineer in Chief

**Office of The Engineer in Chief cum Additional Commissioner cum  
Special Secretary, Road Construction Department, Bihar, Patna.**

Letter no- Sec.-11/Vividh-03-41/2015 - 192(E)

Patna, Date- 2/11/16

From,

Lakshmi Narayan Das,  
Engineer in Chief-cum-  
Additional Commissioner-cum-  
Special Secretary.

To,

Sri Parveen Gupta,  
GM/Hop, BTPP,  
SJVN Thermal Pvt. Ltd.,  
Talpatra Lane, Budh Marg, Patna-800001

Sub:- **Long term supply of Fly Ash from Coal Based Supercritical Buxar Thermal Power Project for its utilisation in construction of Road and other related works.**

Ref:- Your letter no.-392 dated-06.11.2015

Sir,

As directed it is stated that Road Construction Department is focusing on construction and maintenance of roads in Bihar. In our initiative towards adopting of environment friendly technology for construction of road, we intend to utilize Fly Ash from Thermal Power Plant in construction of roads in the state of Bihar.

We understand that SJVN Thermal Power Pvt. Ltd. is looking to supply Fly Ash from their coal based Buxar Thermal Power Project, District Buxar.

Though our Fly Ash requirement varies from time to time depending upon quantum of work, we may require 0.24 MMTPA out of 0.48 MMTPA free of cost as stated in your letter under reference from Buxar Thermal Power Plant.

Hence it is requested to kindly allocate 0.24 MMTPA of Fly Ash from your coal based Buxar Thermal Power Project, District Buxar.

Yours Faithfully,

  
(Lakshmi Narayan Das)  
C.A. 2/11/16



# M/s R.K. MISHRA ENTERPRISES

## Annexure - I

### Expression of interest (EOI) for Uplifting of Fly Ash from 2x660 MW Buxar, TPP

1. Name of Interested Party	:	M/S R.K.Mishra Enterprises
2. Address	:	Patel Nagar, Ward No-17, Purabtoia, Kahaigaon, Bhagalpur (Bihar).
3. Nature Of Business	:	<ul style="list-style-type: none"><li>• Trader</li><li>• Transporter</li><li>• Bricks, Block, Tiles or other ash based product (to be specified) Manufacturer.</li></ul>
4. Type of products being dealt	:	Cements, Asbestors, Bricks, Block, Tiles
5. Classification of the Company	:	Others (if others, please specify) Proprietorship Firm.
6. Contact details	:	Name - Ravi Kant Mishra Designation- Proprietor Mob.No- 09934702851 Email ID: ravikant_mishra14@yahoo.com
7. Proposed end use of fly ash	:	<ul style="list-style-type: none"><li>• Bricks</li><li>• Exports</li><li>• Trading</li></ul> Others (If others, please specify) Trading
8. Years of experience in the business	:	8 (Eight) years
9. Annual Turn over of the business	:	01 (One Crore)
10. Location & Agency's other details	:	a) Distance of Ash utilization unit from Buxar TPP - 200 K.M. b) Address: Patel Nagar, Ward No-17, Purabtoia, Kahaigaon, Bhagalpur (Bihar). c) Details of license/registration (if available) CST/VAT CST No- 10523309132 VAT No- 10523309035
11. Total Requirement of Fly ash	:	5,00,000/-MT/Annum

5/2/14  
Nandini  
Jha  
10/2/14  
28/1/14

Regd. Office : Ogn, P.O.-Maheshamunda, P.S.-Kahaigaon, Dist.-Bhagalpur, Pin-813203 (Bihar),  
Branch Office : Patel Nagar, Ward No.-17, Purab Tola, Kahaigaon, Mob.: 9934702851, 9931859452  
E-mail : ravikant\_mishra14@yahoo.com



# M/s R.K. MISHRA ENTERPRISES

## 12. Quoted Price and Quantity of Fly Ash

Sl.No.	Quantity required (MT/Annum)		Price Offered by party (Rs/MT) at the Fly Ash Silo*		Period of requirement (in no. of years)
	In Figures	In Words	In Figures	In Words	
	5,00,000 MT Per Annum	Five Lacs MT/ Annum	10 Rs/MT	Ten Rupees Only/ MT	20 Years

\* Excluding taxes, Duties & Freight.

- Note :-
1. Those Agencies interested in uplifting of fly ash free of cost, may specify NIL in the column for price offered.
  2. This announcement is not an offer for commitment for fly ash tie-up.

13. Whether willing to enter in to MOU : Yes.

We understand that fly ash quantity to be supplied would be as available basis from the designated delivery point ( on ex. works basis) and we have to arrange transportation at own cost in bulkers / closed trucks. We are liable and responsible for payment towards any taxes, levies, octroi etc. applicable / enforced by state / Central Government from time to time during the tenure of the contract.

Date : 15th October 2015

Place : Kahalgaon

  
Signature

or, M/s R. K. Mishra Enterprises  
  
Proprietor

Name of person - Ravi Kant Mishra  
Designation - Proprietor  
Name Of Company - M/S R.K. Mishra Enterprises  
Address :- Patel Nagar, Ward No-17  
Purabtola, Kahalgaon, Bhagalpur  
(Bihar), Pin- 813203

Regd. Office : Ogn, P.O.-Maheshamunda, P.S.-Kahalgaon, Dist.-Bhagalpur, Pin-813203 (Bihar)  
Branch Office : Patel Nagar, Ward No.-17, Purab Tola, Kahalgaon, Mob.: 9934702851, 9631860452  
E-mail : ravikant\_mishra14@yahoo.com



3/4

CP-31

Sr. Manager (Contract - BD & MS)  
SJVN Limited,  
707-709, 7<sup>th</sup> Floor, DLF South Court,  
District Centre, Saket,  
New Delhi - 110017

Date 24<sup>th</sup> August 2015

Ref: Invitation for Expression of Interest (EOI) SJVN/BD&MS/BTTP/EOI-Fly Ash dated 11<sup>th</sup> July 2015

Dear Sir,

We are pleased to submit the EOI for lifting Fly Ash from the proposed Thermal Power Station at Buxar.

Please find attached the Annexure I with the relevant details.

Thank you.

Yours faithfully,

Rakesh Rana

Asst. Vice President - Business Development & Strategy



5/2

Handwritten notes in blue ink: "Rakesh Rana" and "28/08/15"

Handwritten signature in blue ink: "Mangal"



ANNEXURE I

(On the Company's Letterhead duly signed by Authorized with Company's Stamp)

CP-30

Expression of Interest (EOI) for uplifting of Fly Ash from 2 x660 MW Buxar TPP

1. Name of interested party	: LAFARGE INDIA PVT LTD
2. Address	: EQUINOX BUSINESS PARK, TOWER-3, EAST WING, UPE FLOOR, OFF BANDRA KURLA COMPLEX LBS MARG, KURLA WEST MUN-400070
3. Nature of business	: <input checked="" type="checkbox"/> Cement Manufacturer <input checked="" type="checkbox"/> Ready Mix Concrete (RMC) Manufacturer <input type="checkbox"/> Trader <input type="checkbox"/> Transporter <input checked="" type="checkbox"/> Bricks, Block, Tiles or other ash based product Manufacturer <input type="checkbox"/> Others (if others, please specify)
4. Type of products being dealt	: CEMENT, RMX, AAC BLOCKS, HCB
5. Classification of the Company	: <input type="checkbox"/> Public Limited <input checked="" type="checkbox"/> Private Limited <input type="checkbox"/> Partnership Limited Others (if others, Please specify)
6. Contact details	: Name: RAKESH RAM Designation: ASST. VICE PRESIDENT Tel No. (With STD code): (022) 66306574 Fax No.: (022) 66306570 Mobile No.: 9920040736 Email ID: rakesh.ram@lafarge.com
7. Proposed end use of fly ash	: Cement <input checked="" type="checkbox"/> RMC Asbestos Bricks / AAC BLOCKS <input checked="" type="checkbox"/> Exports Others (if others, please specify)
8. Years of experience in the business	: 15 years
9. Annual Turn Over of the business	: Approx Rs 5200 Crores
10. Location & agency's other details	: a) Distance of Ash utilization unit from Buxar TPP ..... Km To BE DELIBERED b) Address..... c) Details of license/registration (if available):
11. Total Requirement of fly ash	: 0.80 MT / Annum

12. Quoted Price and Quantity of Fly Ash

Sl. No.	Quantity required (MT / Annum)		Price Offered by party (Rs/MT) at the Fly Ash Silo*		Period of requirement (In no. of years)
	In Figures	In Words	In Figures(₹)	In Words(₹)	
1.	0.70	Eight Lac	NIL		30 years +
2.	0.10	Tone			

\*Excluding taxes, Duties & Freight.

Note:- Those Agencies interested in uplifting of fly ash free of cost, may specify NIL in the column for Price offered.

\* 1. Cement - 0.70 MT  
2. AAC BLOCK - 0.10 MT  
TOTAL 0.80 MT.

Y=1/10/20

Manoj

52



13. Whether willing to enter into MOU: Yes.....<sup>Yes</sup> NO.....

We understand that fly ash quantity to be supplied would be as available basis from the designated delivery point and we have to arrange transportation at own cost in bulkers/closed trucks. We are liable and responsible for payment towards any taxes, levies, octroi etc. applicable/ enforced by state/ Central Government from time to time during the tenure of the contract.

Date: 20<sup>th</sup> AUG. 2015  
Place: MUMBAI

Signature:

Name of the person: RAKESH RANA

Designation: ASST. VICE PRESIDENT

Name of company: LAFARGE INDIA PVT. LTD.

Address:  
ERVINE BUSINESS PARK,  
EAST WING, TORNA - 3  
4<sup>th</sup> FLOOR, OFF. ANARA  
KURLA COMPLEX, LBS  
MARG, KURLA - WEST  
MUMBAI - 400170

Company seal



*Handwritten scribble*

*Handwritten signature*

*Handwritten mark*

23<sup>rd</sup> September 2015

**EXPRESSION OF INTEREST**

To,

Sr. Manager (Contract)  
SJVN Limited  
Business Development & Management Services  
707-709, DLF South Court  
District Centre, Saket  
New Delhi - 110017

Dear Sir,

Kindly find below our expression of interest for sourcing Fly Ash from SJVN Thermal Pvt Ltd.

1. Name of Party	Dalmia Cement (Bharat) Ltd
2. Address	Hansalaya, 11 & 12 <sup>th</sup> Floor 15, Barakhamba Road, New Delhi 110001
3. Nature of Business	Cement Manufacturer
4. Type of products being dealt	Cement
5. Classification of the Company	Public Limited
6. Contact Details	Vijay Patil Executive Director- Strategy & Business Excellence Phone : 011-23465200 Fax : 011-23313303 Mobile : 9818866184 Email : <a href="mailto:patil.vijay@dalmiacement.com">patil.vijay@dalmiacement.com</a>
7. Proposed end use of fly ash	Cement Manufacture Fly ash based products (bricks, blocks)
8. Years of experience in the business	More than 20 years
9. Annual Turnover of the business	Rs 4000 Crore
10. Location & agency's other details	Distance of ash utilisation unit from Buxar TPP : Approx 25 km
11. Total requirement of fly ash	7 Lakh metric ton per annum

*V. S.*

*Handwritten signature/initials*

*Manoj*

*Handwritten signature/initials*

## 12. Quoted Price and Quantity of Fly Ash :

Sl No	Quantity required (MT/Annum)		Price Offered by Party (Rs/MT) at the Fly Ash Silo.		Period of requirement (years)
	In Figures	In Words	In Figures	In Words	
1	700,000	Seven Lakhs	NIL	NIL	25

## 13. Whether willing to enter into MOU : YES

We understand that fly ash quantity to be supplied would be as available basis from the designated delivery point (on ex-works basis) and we have to arrange transportation at own cost in bulkers / closed trucks. We are liable and responsible for payment towards any taxes, levies, octroi etc. applicable / enforced by state/Central Government from time to time during the tenure of the contract.

Signature :



Name :

VIJAY PATIL

Designation :

Executive Director - Strategy &amp; Business Excellence

Name of Company :

Dalmia Cement (Bharat) Ltd

Address :

Hansalaya, 11 & 12<sup>th</sup> Floor  
15, Barakhamba Road, New Delhi - 110001

Date :

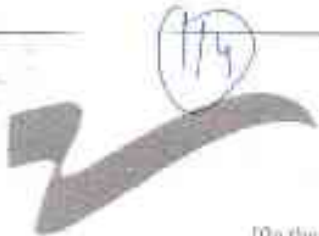
23<sup>rd</sup> September, 2015

Place :

New Delhi





# Global Infra Export

ANNEXURE I

[On the Company's Letterhead duly signed by Authorized with Company's Stamp]

Ref No:

Expression of Interest (Eoi) for upfitting of Fly Ash from 2 x660 MW Binar TPP <sup>Plant</sup>

1. Name of interested party	Global Infra Export
2. Address	Plot Nagas, Ward No. 17, Pasabola, Sahalgau, Bhagalpur, Bihar
3. Nature of business	<ul style="list-style-type: none"> <li><input type="checkbox"/> Cement Manufacturer</li> <li><input type="checkbox"/> Ready Mix Concrete (RMC) Manufacturer</li> <li><input checked="" type="checkbox"/> Trader</li> <li><input checked="" type="checkbox"/> Transporter</li> <li><input checked="" type="checkbox"/> Bricks, Block, Tiles or other ash based product (to be specified) Manufacturer</li> <li><input type="checkbox"/> Others (if others, please specify)</li> </ul>
4. Type of products being dealt	Cement, Asbestos, Block, Block Tiles
5. Classification of the Company	<input type="checkbox"/> Public Limited <input type="checkbox"/> Private Limited <input type="checkbox"/> Partnership Limited <input type="checkbox"/> Others (if others, Please specify) <u>Partnership firm</u>
6. Contact details	Name: <u>SHASHI KANT MISHRA</u> Designation: <u>Partner ship</u> Tel No. (With STD code) Fax No. Mobile No. <u>9831653458, 983470281</u> Email ID: <u>Shashi.kant.807@gmail.com</u>
7. Proposed end use of fly ash	<input type="checkbox"/> Cement <input type="checkbox"/> RMC <input type="checkbox"/> Asbestos <input checked="" type="checkbox"/> Bricks <input checked="" type="checkbox"/> Exports <input type="checkbox"/> Others (if others, please specify) <u>Trading</u>
8. Years of experience in the business	<u>03 (Three) years</u>
9. Annual Turn Over of the business	<u>Fifty (50) Lakh</u>
10. Location & agency's other details	a) Distance of Ash utilization site from Binar TPP <u>200 km</u> b) Address <u>DO</u> c) Details of license/registration (if available) <u>N/A</u>
11. Total Requirement of fly ash	<u>Five (05) Lakh MT/Annum</u>

12. Quoted Price and Quantity of Fly Ash

Sl No.	Quantity required (MT / Annum)		Price Offered by party (Rs/MT) at the Fly Ash Silo*		Period of requirement (in no. of years)
	In Figures	In Words	In Figures(₹)	In Words(₹)	
	<u>500000</u> MT/Annum	<u>Five Lakh</u>	<u>05RS/MT</u>	<u>Five Rupees per MT</u>	<u>20 years</u>

\*Including taxes, Duties & Freight.

- Note: 1. These Agencies interested in upfitting of fly ash free of cost, may specify NIL in the column for Price offered.  
 2. This announcement is not an offer for commitment for fly ash tie-up

*Handwritten signature*

*Handwritten signature: Navin Kumar*

**M/S GLOBAL INFRA EXPORT**

*Handwritten signature*  
**PARTNER**

*Handwritten signature: Nagesh*



# Global Infra Export

11. Whether selling to enter into INCOTERMS: Yes XEO NO

Ref No:

We understand that fly ash quantity to be supplied would be as available from the designated delivery point (on an as-is basis) and we have to arrange transportation at our cost in bullock/truck/trailer. We are liable and responsible for payment towards any taxes, duties, octroi etc. applicable/enforced by state/ Central Government from time to time during the term of the contract.

Date: 20.10.15  
Place: KATIHGAON

Signature: [Signature]  
Name of the person: Sheehi Kant Mishra  
Designation: Partner Ship  
Name of company: GLOBAL INFRA EXPORT  
Address: patel nagar, ward no. 17, Katiagaan, Bhagalpur, Bihar, 813203

Company seal: **M/S GLOBAL INFRA EXPORT**  
[Signature]  
**PARTNER**

[Signature]      [Signature]      [Signature]

ENVIRONMENTAL  
CLEARANCE



Government of India  
Ministry of Environment, Forest and Climate Change  
(Issued by the State Environment Impact Assessment  
Authority(SEIAA), Bihar)

To,

The HEAD INFRASTRUCTURE WORK AND TOWNSHIP DEPARTMENT  
MINI SMART TOWNSHIP OF BTPP BUXAR  
2ND FLOOR NAV DURGA COMPLEX, COLLECTRIATE ROAD,  
AMBEDKAR CHOWK, BUXAR -802103

**Subject:** Grant of Environmental Clearance (EC) to the proposed Project Activity  
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)  
in respect of project submitted to the SEIAA vide proposal number  
SIA/BR/MIS/251608/2022 dated 14 Jan 2022. The particulars of the environmental  
clearance granted to the project are as below.

1. EC Identification No.	EC22B038BR124616
2. File No.	SIA/8(a)/1854/2022
3. Project Type	New
4. Category	B2
5. Project/Activity including Schedule No.	8(a) Building and Construction projects
6. Name of Project	Mini smart Township of BTPP Buxar
7. Name of Company/Organization	MINI SMART TOWNSHIP OF BTPP BUXAR
8. Location of Project	Bihar
9. TOR Date	N/A

The project details along with terms and conditions are appended herewith from page  
no 2 onwards.

Date: 06/05/2022

(e-signed)  
Mr. Sudhir Kumar  
Member Secretary  
SEIAA - (Bihar)

*Note: A valid environmental clearance shall be one that has EC identification  
number & E-Sign generated from PARIVESH. Please quote identification  
number in all future correspondence.*

*This is a computer generated cover page.*

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,  
and Virtuous Environmental Single-Window Hub)



**STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, BIHAR**

**F. No.:- SIA/8(a)/1854/2022**

**Sub:** Proposed Building Project at Mauza:- Khormpur, Tehsil:- Chausa, District:- Buxar, State:- Bihar; by M/s Mini Smart Township of BTPP Buxar [Total Plot Area:- 2,00,400 m<sup>2</sup>, Total Built-up Area:- 69,895.90 m<sup>2</sup>] - Environmental Clearance regarding.

- Reference:-**
1. MoEF&CC Proposal No. - SIA/BR/MIS/251608/2022 & SEIAA File No.:- SIA/8(a)/1854/2022.
  2. Your application dated 17-01-2022 (hard copy submission).
  3. Minutes of the SEAC meeting held on 29-01-2022 and 11-04-2022.
  4. Minutes of the SELAA meeting held on 02-05-2022.

**Sir,**

This has reference to your online application for the above proposal of M/s Mini Smart Township of BTPP Buxar for Building and Construction Project at Mauza:- Khormpur, Tehsil:-Chausa, District:-Buxar, State:- Bihar. The details of the projects are as follows:-

Sl. No.	Item	Details
1.	Name of the project	Proposed Building Project at Mauza:- Khormpur, Tehsil:- Chausa, District:- Buxar, State:- Bihar; by M/s Mini Smart Township of BTPP Buxar
2.	S. No. in the Schedule	8(a)
3.	Type of Project	8(a) {Building & Construction Project}
4.	Total Plot Area	2,00,400 m <sup>2</sup>
5.	Total Built-up Area	69,895.90 m <sup>2</sup>
6.	Total Green Belt Area	47,618.48 m <sup>2</sup> (24% of the total plant area)
7.	Proposed Parking Area of the project	18,327.76 m <sup>2</sup>
8.	Location of the Project	Thana No.- 42, Khata No.- 40, 61, 87, 68, 75, 41, 88, 75, 87, 1, 25, 86, 9, 52, 19, 70, 47, 4, 53, 33, 36, 46, 5, 10, 11, 65, 71, 74, 27, 37, 18, 63, 84, 67, 56, 43 Plot No. 160-207, 209-222, 224-257, 283-287, 294, 296-306, 310, 313, 314, 335, 336, 337, 346, 352, 353, 354,

		355 169/803, 171/796, 171/804 Mauza:- Khormpur, Tehsil:- Chausa, District:- Buxar, State:- Bihar.				
9.	Geo-Coordinates of the project	25° 27' 53.41" N 85° 52' 12.36" E 25° 27' 49.93" N 85° 52' 12.68" E				
10.	Maximum height of the building	25.45 meters				
11.	Stories	<b>Sl. No.</b>	<b>Residential</b>	<b>Building Code</b>	<b>Floor</b>	
		1.	HOP Residence	RES - HOP	G + 01	
		2.	Type - D Accommodation	RES - D	G + 02	
		3.	Type - D Accommodation	RES - D	G + 01	
		4.	Type - C Accommodation	RES - C	S + 07	
		5.	Type - B Accommodation	RES - B	S + 07	
		6.	Field Hostel - Family Complex	RES - FHF	G + 02	
		7.	Field Hostel - Bachelor Complex	RES - FHB	S + 06	
				<b>Non Residential</b>		
		1.	Field Hostel cum Training Center	NRES - TCW	G + 03	
		2.	Primary School and Kindergarten	NRES - TCW	G + 01	
		3.	Hospital	NRES - H	G + 02	
		4.	Shopping complex	NRES - SHOP	G + 01	
		5.	Executive club cum Ladies club	NRES - EC	G + 02	
		6.	Sub-Ordinate Club	NRES - SC	G + 01	
		7.	Guest House	RES - GH	G + 03	
		8.	Auditorium	NRES - AUDIT	G + 01	
9.	Sports Complex	NRES - SC	G			
10.	CISF Office	RES - CISF	G + 01			
11.	CISF Armory	NRES - CISF	G			
12.	CISF Complex	NRES - CISF	G + 07			
13.	CISF Barracks	NRES - AU	G + 01			
12.	Total Water Requirement	360 KLD				
13.	Waste Water Generated	230 KLD				
14.	Solid Waste Generated	912 Kg/day				
15.	Biodegradable Waste	547 Kg/day				
16.	Non-Biodegradable Waste	365 Kg/day				
17.	Bio- Medical waste	20 Kg/day				
18.	STP Capacity	270 KLD				
19.	Source of Water	Groundwater through own Borewells				
20.	Power Requirement	1,872 KVA				
21.	Source of Power	Bihar Electricity Board.				
22.	Power Backup	2 DG set of 500 KVA of DG set will be installed.				
23.	Total Cost of Expansion Project site	Total Project Cost - ₹ 1,65,93,00,000/- Environment Management Plan Cost <b>During Construction Phase</b> Capital Cost - - ₹ 40,00,000/-				

5

		Recurring Cost - ₹ 15,00,000/- <b>During Operation Phase</b> Capital Cost - ₹ 1,44,00,000/- Recurring Cost - ₹ 26,00,000/-
--	--	---

## PREMISES OF THE ENVIRONMENTAL CLEARANCE

This Environmental Clearance is being issued on the premises which have been substantiated / described in detail in the format of application along with enclosed affidavits / certificates / undertakings etc. furnished therewith by the project proponent:-

- (i) Information provided, descriptions mentioned are complete, true and actual and no relevant fact has been concealed to obtain Environmental Clearance deceitfully by the project proponent.
- (ii) Environmental Clearance shall be liable to be revoked if furnished information, provided description / Certificates / Affidavits / Undertaking etc. are found false/ concocted at any stage of its validity.
- (iii) Project Proponent shall intimate SEIAA immediately if there is any change in their official address / E-mail / Ph. No / Cell. no etc failing which communication sent to them on old address shall be considered as delivered.
- (iv) This Environmental Clearance is issued without affecting any court order / statutory other institutions as well as relevant other laws enactment by Ministry of Environment, Forest & Climate Change, Government of India, New Delhi.

### I. Statutory compliance:

1. The Project Proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
2. The Project Proponent will obtain CTE from the BSPCB before preparing site for construction; if applicable and CTO before giving occupancy.
3. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment, etc. as per National Building Code including protection measures from lightning, etc.

4. All directions of the Airport Authority, Director of Explosives and Fire Department, etc. shall be complied with.
5. The Project Proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the Bihar State Pollution Control Board.
6. The Project Proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
7. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
8. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by Project Proponents from the respective competent authorities.
9. The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
10. The Project Proponent shall follow the ECBC / ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power, GoI. strictly.
11. The facilities provided for collection, segregation, handling, on site storage & processing of solid waste such as chute system for multi-storey buildings, wet & dry bins, collection centre & mechanical composter, etc. shall be properly maintained. The collected solid waste shall be segregated at site. The recyclable solid waste shall be sold out to the authorized vendors / recyclers for which a written tie-up must be done with the authorized vendors / recyclers.
12. Hazardous waste / E-waste should be disposed off as per Rules applicable and with the necessary approval of the Bihar State Pollution Control Board.
13. Solar power plant or other solar energy related equipment's shall be operated and maintained properly.
14. Provisions shall be made for the integration of solar water heating system.

5

15. Environmental Clearance conditions applicable for construction and operation phase which are in the interest of public at large must be displayed at prominent place which can be easily accessible to public along with address and contact number of authorities to whom violation of EC conditions can be reported.
16. Project site shall be adequately barricaded before the start of construction activity by erecting suitable windscreen upto. 1/3<sup>rd</sup> of the building height or 10 meters height whichever is more to prevent dispersion of dust particulate (fugitive emission) matter from the construction site.
17. Construction of appropriate civil structure and creation of other facilities shall be undertaken to provide benefit of the person suffering from disability in accordance with Hon'ble Supreme Court of India order dated 15<sup>th</sup> December 2017 in Writ Petition (Civil) 292 of 2006 with WP (Civil) 997 of 2013 (Disabled Rights Grout &Anr. Vs Union of India &Ors).

## **II. Air quality monitoring and preservation**

1. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
2. Project site shall be adequately barricaded before the start of construction activity by erecting suitable windscreen upto 1/3<sup>rd</sup> of the building height or upto 10 meters height whichever is more to prevent dispersion of particulate matter (fugitive emission) from the construction site. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. Plastic / tarpaulin sheet covers shall be provided for vehicles bringing all loose construction material e.g sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
3. A Management Plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
4. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height

of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets.

5. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site.
6. All loose construction material e.g sand, soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
7. Wet jet shall be provided for grinding and stone cutting.
8. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
9. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016.
10. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection), Act 1986 prescribed for air and noise emission standards.
11. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
12. For indoor air quality the ventilation provisions as per National Building Code of India shall be implemented.

### **III. Water quality monitoring and preservation:**

1. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wet land and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.

5

2. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
3. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
4. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the Project Proponent. The record shall be submitted to the, SEIAA/ Regional Office, MoEF&CC along with six monthly Monitoring reports.
5. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
6. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape, etc. would be considered as pervious surface.
7. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing, etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning, etc. shall be done.
8. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators, etc.) for water conservation shall be incorporated in the building plan.
9. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
10. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
11. The local bye-law provisions on rain water harvesting should be followed. If local byelaw provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rainwater

harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.

12. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built-up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
13. All recharge should be limited to shallow aquifer.
14. No ground water shall be used during construction phase of the project.
15. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
16. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed into municipal drain.
17. No sewage or untreated effluent water would be discharged through storm water drains.
18. Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
19. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
20. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health

5

and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

21. Separate drainage system shall be developed for storm water so that end point discharge to nearest nallah / river is ensured to avoid water logging without any increase in the pollution load in receiving system.
22. Possibilities need to be explored to use STP waste water during construction phase. Fresh water shall be used only after exhausting the possibility of obtaining STP waste water located in municipal jurisdiction.

#### **IV. Noise monitoring and prevention:**

1. Ambient noise levels shall conform to residential area silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
2. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

#### **V. Energy Conservation measures:**

1. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
2. Outdoor and common area lighting shall be LED.
3. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per Energy Conservation Building Code (ECBC) specifications.

4. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
5. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-law's requirement, whichever is higher.
6. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

#### **VI. Waste Management:**

1. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste (M.S.W.) generated from project shall be obtained.
2. Proper composting / vermi-composting of municipal and biodegradable solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Solid Wastes Management, 2016 (As amended).
3. All the top soil excavated during construction activities shall be stored for use in horticulture/landscape development within the project site.
4. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
5. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.

5

6. Organic waste compost/ Vermiculture pit/ Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
7. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
8. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the Bihar State Pollution Control Board.
9. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials.
10. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003 and 25<sup>th</sup> January, 2016, Ready mixed concrete must be used in building construction.
11. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.
12. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

## **VII. Green Cover:**

1. No tree should be felled unless exigencies demand. Wherever absolutely necessary, tree translocation shall be done with prior permission from the concerned regulatory authority. Old trees should be retained/translocated based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured in the ratio of species cut to species planted.
2. 4,7618.48 sqm. (24%) of the total plot area shall be kept under green belt cover within the project site.

3. All the efforts shall be made not to fell any tree however if any tree need to be removed necessarily, it may be translocated with prior permission from concerned local Authority. In case of felling, plantations to be ensured in the ratio of species cut / removed to species planted. Area for green belt development shall be provided as per the details provided in the Project document.
4. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and re-applied during plantation of the proposed vegetation on site.

#### **VIII. Transport:**

1. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
  - a) Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
  - b) Traffic calming measures.
  - c) Proper design of entry and exit points.
  - d) Parking norms as per local regulation.
  - e) Proper signages.
2. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
3. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./competent authority for road augmentation and shall also have their consent to the

5

implementation of components of the plan which involve the participation of these departments.

**IX. Human health issues:**

1. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
2. For indoor air quality the ventilation provisions as per National Building Code of India.
3. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
4. 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.
5. Occupational health surveillance of the workers shall be done on a regular basis.
6. A First Aid Room shall be provided in the project both during construction and operations of the project.

**X. Corporate Environment Responsibility:**

1. The Project Proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
2. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements/deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

3. A separate Environmental cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly the head of the organization.
4. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the SEIAA/ Ministry, Regional Office along with the Six-Monthly Compliance Report.

**XI. Additional Conditions:-**

1. Provide Waste water drain, rainwater drain and water supply pipe separately. Nothing should be drained outside the campus through underground pipes and nothing should be pumped to groundwater. All the sewage drains shall be covered.
2. Provide Safety measures (Fire, disaster, flood, etc.), /medical facilities and arrangement for physically challenged persons.
3. All the building apartment block, green area and green building of the Campus must be as per RERA and Govt. of Indian Guidelines for residential apartments having high population load (more than 2000 people).

**XII. Special Conditions:-**

1. Provide solar panels in 30% of total rooftop area (open terrace).
2. Plantation along the road as suggested in the meeting by increasing green belt and foot path.
3. Corporate Environmental responsibility (CER) proposal, in consultation with the concerned authority of the Local Body (Municipal Corporation/Municipality/Nagar Panchayat/Gram Panchayat) by clearly outlining the type of activities, which shall predominantly include Municipal Solid Waste Management activities like-
  - a) Material Recovery Facilities.
  - b) Waste processing Facilities.

- c) Waste collection vehicles, etc.
4. Make provisions for electric vehicle charging point at each parking area, for both four wheelers and two wheelers.

### **XIII. Miscellaneous:**

1. The Project Proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded Environmental Clearance and the details of MoEF&CC/SEIAA, Bihar website where it is displayed.
2. The copies of the Environmental Clearance shall be submitted by the Project Proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
3. All utility lines (electricity, telephone, cable, water supply, sewage, drainage, etc. shall be laid below ground level. Ducts shall be provided along and across the roads to lay the utility lines. Major trunk (water/sewerage) lines are to be laid along the utility corridor.
4. Rest room facilities shall be provided for service population.
5. The Project Proponent shall upload the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
6. The Project Proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during their presentation to the State Expert Appraisal Committee.
7. The Project Proponent shall submit six-monthly reports on the status of the compliance of the stipulated Environmental Conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
8. The Project Proponent shall submit the environmental statement for each financial year in Form-V to the Bihar State Pollution Control Board as prescribed under the Environment

(Protection) Rules, 1986, as amended subsequently and put on the website of the company.

9. The Project Proponent shall inform the SEIAA, Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
10. The project authorities must strictly adhere to the stipulations made by the Bihar State Pollution Control Board and the State Government.
11. No further expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Bihar.
12. Concealing factual data or submission of false/fabricated data may result in revocation of this Environmental Clearance and attract action under the provisions of Environment (Protection) Act, 1986.
13. The Environmental Clearance granted on the basis of submitted layout plan of the proposed construction of buildings/establishments of industries shall be provisional for a period of one year or till its approved by the competent authority whichever is earlier. Should there be any deviation / change in the layout plan (as contained in the project proposal on which Environmental Clearance is granted), the Project Proponent shall furnish a copy along with a request to SEIAA, Bihar to make necessary correction/revision in the Environmental Clearance accordingly. Any failure on part of the Project Proponent in doing so will be treated as a violation of Environmental Clearance condition.
14. The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
15. The SEIAA reserves the right to stipulate additional conditions if found necessary which shall be implemented in a time bound manner.
16. The Regional Office of the MoEF&CC, GoI / SEIAA shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

17. Project Proponent shall erect a signboard on his project site and display information regarding name of the project, Environmental Clearance letter No., date and validity period of Environmental Clearance, and Environmental Clearance conditions which affect general public at large along with name of authority to which violation of Environmental Clearance conditions can be reported.
18. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
19. Environmental Clearance shall remain valid for a maximum period of 7 years or completion of project whichever is earlier.
20. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Sd/-

**(Sudhir Kumar)**  
Member-Secretary  
SEIAA, Bihar

**Copy, through email, for information and necessary action to :-**

1. Hon'ble Minister, Environment, Forest and Climate Change Deptt., Govt. of Bihar, Patna.
2. The Additional Chief Secretary, Environment, Forest and Climate Change Deptt., Govt. of Bihar, Sinchai Bhawan, Patna - 15.
3. The Chairman, RERA, Patna.
4. The Chairman, SEAC, Bihar.
5. The Member Secretary, B.S.P.C.B.-cum- Member Secretary SEAC, Bihar.
6. RO, Regional office, MoEF&CC, Bungalow No. A - 2, Shyamali Colony, Doranda, Ranchi - 834002.
7. Guard file.

*6.5.2022*  
**(Sudhir Kumar)**  
Member Secretary,  
SEIAA, Bihar



## जिला खनन कार्यालय, बक्सर

पत्रांक...../एम0 दिनांक.....।

सेवा में,

मेसर्स बालाजी इंजीनिरिया प्र० लि०  
प्र०- ऋषी केश सिंह  
पता- हाउस न०-8, रोड़ न०-9A,  
इन्द्रपुरी, पाटलीपुत्रा, पटना (बिहार)।

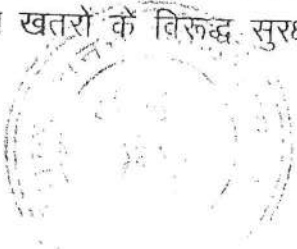
**विषय:-** खनन योजना (Mining Plan) अनुमोदन के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि बक्सर जिलान्तर्गत, चौसा थानान्तर्गत मौजा/ग्राम- रोहनीभान & हिगंही, खाता नं०- 20, 35, 73, 618. खेसरा नं०- 518, 619, 575, 578. रकबा 42.53 हेक्टेयर में लघु खनिज साधारण मिट्टी के खनन हेतु प्रस्तुत खनन योजना का अनुमोदन संयुक्त बिहार पटना के पत्रांक-4156/एम0 पटना दिनांक-27.12.16 के आलोक में निम्न शर्तों के साथ अनुमोदन किया जा रहा है।

40,986.00 m<sup>3</sup>.

1. खनन योजना का अनुमोदन 40,986 घन मी० वर्ष 2022-23 के लिए ही साधारण मिट्टी के उत्पादन हेतु अनुमान्य किया गया है।
2. साधारण मिट्टी खनन की गहराई सतह से 1.5 मी० से अधिक नहीं होगा।
3. खनन कार्य ग्राउन्ड वाटर लेबल से कम से कम 02 मी० उपर तक ही सीमित रखा जाएगा।
4. प्रस्तावित उत्खनन की गहराई के कम से कम आधे के बराबर चौड़ाई रखने वाले सटे मैदानों की सीमा से पटरी छोड़ दी जाएगी।
5. पथ निर्माण, तटबंध निर्माण आदि के प्रयोजनार्थ साधारण मिट्टी के खनन/उत्खनन से संबंधित क्रियाकलाप में विस्फोटक का प्रयोग नहीं होगा।
6. खनन/उत्खनन संबंधी क्रिया-कलाप कार्य क्षेत्र के सामान्य जल निकासी के प्रतिरूप (पैटर्न) को परिवर्तित नहीं करेगा।
7. खोदे गए/उत्खनित गड्ढा (पिट) को परियोजना प्रस्तावक द्वारा उपयोगी प्रयोजन (प्रयोजनों) के लिए पुनः स्थापित किया जाएगा।
8. खोदे गए/उत्खनित गड्ढा के चारों ओर समुचित घेराबंदी कर दी जाएगी, ताकि किसी दुर्घटना से बचा जा सके।
9. दुलाई के दौरान खोदी गई/उत्खनित मिट्टी के फैलने से धूल उत्सर्जन को रोकने के लिए उपाय किए जाएंगे।
10. मिट्टी के खनन/उत्खनन के कारण सृजित जल निकायों में रोगवाहकों (वेक्टर) के प्रजनन के कारण स्वास्थ्य खतरों के विरुद्ध सुरक्षा मानक अपनाये जाएंगे।



*(Handwritten signature)*

11. कामगारों/मजदूरों को पेयजल और सफाई संबंधी सुविधाएँ प्रदान की जाएँगी।
12. किसी उत्खनन क्षेत्र की परिधि से किसी असैनिक संरचना की दूरी कम से कम 15 मीटर रखी जाएगी।
13. राष्ट्रीय पार्को और वन्य प्राणी अभ्यारण्य की सीमा के 1 किलो मीटर के अन्दर उत्खनन के क्षेत्र के मामले में साधारण मिट्टी के खनन/उत्खनन की अनुमति नहीं दी जाएगी।
14. खनन योजना में खनन कार्य बेंच बनाकर किया जाएगा जिसकी अधिकतम उँचाई 1.5 मी० एवं चौड़ाई कम से कम 3.0 मी० होनी चाहिए।
15. खनन कार्य के दौरान निकाले गये टॉप स्वायल को व्यस्थित रूप से एकत्रित कर रखा जाएगा, जिसे खनन कार्य समाप्त होने के उपरान्त उसी क्षेत्र में फैला दिया जाएगा।
16. खनन योजना में वार्णित भूमि के स्वामिस्व तथा भूस्वामियों की सहमती से संबंधित अभिलेखों की पुष्टि करा लिया जाना उपेक्षित होगा।
17. भविष्य में किसी प्रकार की कोई भी गलती खनन योजना अथवा कार्य में पाई जाएगी तो खनन योजना स्वतः निरस्त माना जाएगा।

*CH*  
05/12/22

खनिज विकास पदाधिकारी  
जिला खनन कार्यालय  
बक्सर।

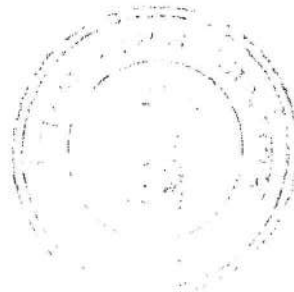
ज्ञापांक 628 / एम० दिनांक 05/12/22

प्रतिलिपि:- R.Q.P. प्रवीण कुमार सिन्हा मंगल मार्केट राजा बाजार को सूचनार्थ प्रेषित।

*CH*  
05/12/22

खनिज विकास पदाधिकारी  
जिला खनन कार्यालय  
बक्सर।

*CH*



*CH*  
*CH*  
*CH*

## जिला खनन कार्यालय, बक्सर

पत्रांक-221/एम0 दिनांक-02/02/2023

सेवा में,

मेसर्स बालाजी इंजीनियरिंग प्र० लि०  
प्रो०- ऋषी केश कुमार  
पता- हाउस न०-8, रोड न०-9A,  
इन्द्रपुरी, पाटलीपुत्रा, पटना (बिहार)।

विषय:- खनन योजना (Mining Plan) अनुमोदन के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि बक्सर जिलान्तर्गत, राजपुर थानान्तर्गत मौजा/ग्राम-नावर & भीलमपुर, खाता नं०-21, 22, 26. खेसरा नं०-60, 358, 230, 233, 235. रकवा 4.85 हेक्टेयर में लघु खनिज साधारण मिट्टी के खनन हेतु प्रस्तुत खनन योजना का अनुमोदन सयुक्त बिहार पटना के पत्रांक-4156/एम0 पटना दिनांक-27.12.16 के आलोक में निम्न शर्तों के साथ अनुमोदन किया जा रहा है।

1. खनन योजना का अनुमोदन 78,570 घन मी० वर्ष 2023-24 के लिए ही साधारण मिट्टी के उत्पादन हेतु अनुमान्य किया गया है।
2. साधारण मिट्टी खनन की गहराई सतह से 1.5 मी० से अधिक नहीं होगा।
3. खनन कार्य ग्राउन्ड वाटर लेबल से कम से कम 02 मी० उपर तक ही सीमित रखा जाएगा।
4. प्रस्तावित उत्खनन की गहराई के कम से कम आधे के बराबर चौड़ाई रखने वाले सटे मैदानों की सीमा से पटरी छोड़ दी जाएगी।
5. पथ निर्माण, तटबंध निर्माण आदि के प्रयोजनार्थ साधारण मिट्टी के खनन/उत्खनन से संबंधित क्रियाकलाप में विस्फोटक का प्रयोग नहीं होगा।
6. खनन/उत्खनन संबंधी क्रिया-कलाप कार्य क्षेत्र के सामान्य जल निकासी के प्रतिरूप (पैटर्न) को परिवर्तित नहीं करेगा।
7. खोदे गए/उत्खनित गड्ढा (पिट) को परियोजना प्रस्तावक द्वारा उपयोगी प्रयोजन (प्रयोजनों) के लिए पुनः स्थापित किया जाएगा।
8. खोदे गए/उत्खनित गड्ढा के चारों ओर समुचित घेराबंदी कर दी जाएगी, ताकि किसी दुर्घटना से बचा जा सके।
9. ढुलाई के दौरान खोदी गई/उत्खनित मिट्टी के फैलने से धूल उत्सर्जन को रोकने के लिए उपाय किए जाएंगे।
10. मिट्टी के खनन/उत्खनन के कारण सृजित जल निकायों में रोगवाहकों (वेक्टर) के प्रजनन के कारण स्वास्थ्य खतरों के विरुद्ध सुरक्षा मानक अपनाये जाएंगे।

11. कामगारों/मजदूरों को पेयजल और सफाई संबंधी सुविधाएँ प्रदान की जाएँगी।
12. किसी उत्खनन क्षेत्र की परिधि से किसी असैनिक संरचना की दूरी कम से कम 15 मीटर रखी जाएगी।
13. राष्ट्रीय पार्को और वन्य प्राणी अभ्यारण्य की सीमा के 1 किलो मीटर के अन्दर उत्खनन के क्षेत्र के मामले में साधारण मिट्टी के खनन/उत्खनन की अनुमति नहीं दी जाएगी।
14. खनन योजना में खनन कार्य बेंच बनाकर किया जाएगा जिसकी अधिकतम उँचाई 1.5 मी० एवं चौड़ाई कम से कम 3.0 मी० होनी चाहिए।
15. खनन कार्य के दौरान निकाले गये टॉप स्वायल को व्यस्थित रूप से एकत्रित कर रखा जाएगा, जिसे खनन कार्य समाप्त होने के उपरान्त उसी क्षेत्र में फँला दिया जाएगा।
16. खनन योजना में वार्षित भूमि के स्वामिस्व तथा भूस्वामियों की सहमती से संबंधित अभिलेखों की पुष्टि करा लिया जाना उपेक्षि होगा।
17. भविष्य में किसी प्रकार की कोई भी गलती खनन योजना अथवा कार्य में पाई जाएगी तो खनन योजना स्वतः निरस्त माना जाएगा।



खनिज विकास पदाधिकारी  
जिला खनन कार्यालय  
बक्सर।

ज्ञापांक 221/...../एम० दिनांक 03/03/23

प्रतिलिपि:- R.Q.P. प्रवीण कुमार सिन्हा मंगल मार्केट राजा बाजार को सूचनार्थ प्रेषित।

Ambika Kumar

03/03/23

खनिज विकास पदाधिकारी  
जिला खनन कार्यालय  
बक्सर।








**भारतीय मानक ब्यूरो**  
**BUREAU OF INDIAN STANDARDS**  
**पर्यावरण प्रबंध पद्धति प्रमाणन लाइसेंस**

**LICENCE FOR THE ENVIRONMENTAL MANAGEMENT SYSTEMS CERTIFICATION**

लाइसेंस सं.- ईएम/एल-5000639

**Licence NO. EM/L-5000639**

भारतीय मानक ब्यूरो अधिनियम, 2016(2016 का 11) द्वारा प्रदत्त शक्तियों के नाते, बक्सर थर्मल पावर प्रोजेक्ट, (एसजेवीएन थर्मल पीवीटी लिमिटेड का यूनिट), मोहनपुरवा, अखाऊरीपुर गोला, चौसा, जिला - बक्सर, बिहार - 802114 को मंजूरी देता है (जिसे इसमें इसके पश्चात इसे अनुज्ञमिधारी कहा गया है) इस अनुसूची में वर्णित विशेष तौर पर उत्पाद एवं/या सेवाओं या प्रक्रियाओं के संबंध में पर्यावरण प्रबंध पद्धति प्रमाणन के अनुज्ञमिधारकों की ब्यूरो की सूची में अनुज्ञमि के अनुसार इसी संख्या धारक को अधिकार एवं अनुज्ञमि सूचीबद्ध किया जाए। IS/ISO 14001:2015 के अनुसार पर्यावरण प्रबंध पद्धति के अधीन उक्त किए गये पते पर केवल अनुज्ञमिधारक धारक द्वारा एमे उत्पाद एवं/या सेवाओं या प्रक्रियाओं को निर्मित किया/उपलब्ध कराया/चलाया जायेगा।

By virtue of the power conferred on it by, the Bureau of Indian Standards Act, 2016 (11 of 2016), the Bureau hereby grants to Buxar Thermal Power Project, (Unit of SJVN Thermal Pvt. Limited), Mohanpurwa, Akhaouripur Gola, Chausa, Dist - Buxar, Bihar - 802114 (hereinafter called the Licensee) the right and licence to be listed in the Bureau's list(s) of Licensee of Environmental Management Systems Certification in respect of the products and/or services or processes particularly described in the schedule hereto, bearing the same number as this licence. Such products and/or services or processes shall be manufactured/provided/carried out by the Licensee at only the address(es) given above, and under the Environmental Management Systems in accordance with IS/ISO 14001:2015

अनुज्ञमि उक्त अधिनियम और उनके अधीन नियमों तथा विनियमों के संबंधित उपबंधों की शर्त पर मंजूर किया गया है तथा उक्त संदर्भित अनुज्ञमितियों को इसके तहत शासित किया जाता है, तथा अनुज्ञमिधारक उक्त नियमों एवं विनियमों का पालन किए जाने के लिए प्रतिज्ञाबद्ध है।

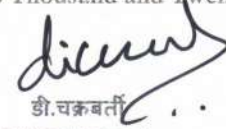
The licence is granted subject to the relevant provisions of the above Act and the rules and regulations made thereunder governing the licences referred to above, and the Licensee hereby covenants with the Bureau duly to observe with the said Rules and Regulations

यह अनुज्ञमि तारीख 31 जनवरी 2023 से 30 जनवरी 2026 तक विधिमान्य रहेगा और विनियमों में यथाविहित पुनः प्रमाणन किया जा सकेगा।

This licence shall be valid from 31 January 2023 to 30 January 2026 and may be recertified as prescribed in the Regulations.

2023 के माह के  
Signed, Sealed and Dated this 20th February

दिन हस्ताक्षरित एवं सुहराकित  
Two Thousand and Twenty Three.



डी.चक्रवर्ती  
D.Chakrabarti

उप सहायनियंत्रक  
Deputy Director General

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

**भारतीय मानक ब्यूरो / BUREAU OF INDIAN STANDARDS**

एन एम आई सी भवन (आठवीं मंजिल), प्लॉट नंबर 7/7, 7/8,  
ब्लॉक - सीपी, सेक्टर - V, साल्ट लेक, कोलकाता - 700091  
NSIC Building (8th Floor) at Plot No. 7/7, 7/8,  
Block - CP, Sector - V, Salt Lake, Kolkata - 700091





## BUREAU OF INDIAN STANDARDS

लाइसेंस सं. ईएम/एल -5000639 की अनुसूची  
Schedule to licence No. EM/L-5000639

जारी : बक्सर थर्मल पावर प्रोजेक्ट, (एसजेवीएन थर्मल पीवीटी लिमिटेड का यूनिट),  
मोहनपुरवा, अखाऊरीपुर गोला, चौसा, जिला - बक्सर, विहार - 802114  
Issued to: Buxar Thermal Power Project, (Unit of SJVN Thermal Pvt. Limited),  
Mohanpurwa, Akhaouripur Gola, Chausa,  
Dist - Buxar, Bihar - 802114

### अनुसूची SCHEDULE

उत्पाद/सेवा/प्रक्रिया हेतु फ़र्म को अनुज्ञप्ति मंजूर की गई है:  
पर्यावरण प्रबंध पद्धति प्रमाणन

Products/services/processes with respect to which the firm has been  
granted the licence for  
Environmental Management Systems Certification:

"All activities in respect of Construction, Erection and Commissioning of  
1320 MW Buxar Thermal Power Project".

At: Buxar Thermal Power Project, (Unit of SJVN Thermal Pvt. Limited),  
Mohanpurwa, Akhaouripur Gola, Chausa, Distt. - Buxar, Bihar - 802114

*D. Chakrabarti*

डी. चक्रवर्ती

D. Chakrabarti

उप महानिदेशक

Deputy Director General

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

भारतीय मानक ब्यूरो / BUREAU OF INDIAN STANDARDS

एन एस आई सी भवन (आठवीं मंजिल), प्लॉट नंबर 7/7, 7/8,  
ब्लॉक - सीपी, सेक्टर - V, साल्ट लेक, कोलकाता - 700091  
NSIC Building (8th Floor) at Plot No. 7/7, 7/8,  
Block - CP, Sector - V, Salt Lake, Kolkata - 700091



### **VISION DOCUMENT OF 1320 MW, BUXAR THERMAL POWER PROJECT (BTPP)**

#### **1.0 Introduction:-**

The installed power generation capacity of India as on is 4,16,591.38 MW and out of this the installed generation capacity in Bihar is 7,323 MW including the allocated shares from central generating stations. As per the 18th EPS published by Central Electricity Authority (CEA), the estimated peak load demand in Bihar at the end of 13th 5-year plan (FY 2021-22) is 9,306 MW. The actual peak demand for the financial year 2018-19 in Bihar was 5115 MW and the peak demand met was 5084MW leaving a peak deficit of 0.6%. It may be noted that the actual power scenarios is less than the projections as per the 18th EPS and also the per capita power consumption in Bihar is lowest at 265 units per annum, against the national average of 1,060 units per annum. The Bihar state government is taking steps to provide access to electricity all households and also agriculture needs in rural areas. To meet up with overall national objective and to enable Bihar access to additional power required to sustain the high growth rate being witnessed, Govt. of Bihar had taken the initiative for developing Thermal Power Projects in the state through Bihar Power Infrastructure Company (BPIC), a joint venture between Bihar State Power Holding Company Limited (BSPHCL) with IL&FS Energy Development Company Limited (IEDCL). BPIC and BSEB had identified a site near village Chausa in District Buxar for the development of 2x660 MW Coal based Thermal Power Project. SJVN, a schedule 'A' PSU and a joint venture of the Govt. of India and the State Govt. of HP, acquired the project through its subsidiary SJVN Thermal Pvt. Ltd. in 2013.

The proposed 1320 Buxar Thermal Power Project (2x660MW) power project was conceived to meet the energy deficit of Bihar state. As per the power purchase agreement 85% of the power generated at the proposed project will be made available to Bihar state for various uses. Due to the location advantage of the Project in terms of availability of water, power evacuation facilities and coal, the cost of power is expected to be competitive.

The proposed project would cater to the ever-increasing demand of electricity in the state of Bihar. It will also increase the availability of electricity in rural areas for agricultural purposes, small scale industries and subsequently helps in improving overall development in agricultural, industrial and infrastructural facilities.

#### **2.0 Long Term Vision for the Project:-**

The long-term vision of the proposed power project is sustainable power generation maintaining high standards of efficiency and financial strength, over the design life (25

years) and extended life of the project through suitable Renovation and Modernization Programmes from Time to Time and stated hereunder;

## **2.1 Vision for Project Site:-**

- To provide uninterrupted and quality power to the Bihar state grid to bridge the demand and supply gap
- Optimal utilization of land by maximizing electrical generation per unit area of the plant. Optimizing specific water consumption requirement for the plant processes to meet the norms for the thermal power projects prescribed by Ministry of Environment Forest and Climate Change (MoEF&CC). Continual improvement in efficiency and PLF through efficient operation and maintenance and Renovation and Modernization Programmes from Time to Time gaining extended life of the project
- Certification of Project with ISO: 9001, ISO 14001, OSHAS-18001, SA-8000 to implement best practices in operation of the plant.

### **2.2.1 Vision towards Technology Selection:-**

The proposed 1320 MW Buxar Thermal Power Project (2x660 MW) power plant based on super critical technology which is the best available technology for the operation of the proposed project. The main advantages of the technology are:

- High Thermal Efficiency, PLF;
- Lower fuel consumption;
- Reduced ash generation;
- Faster load-changes;
- Faster start up time;
- High part load efficiency and higher adaptability for sliding pressure operation

### **2.2.2 Vision Towards the Environmental Protection & Pollution Control:-**

To achieve better performance of the-1320 MW BTTP, the following pollution control and abatement measures are envisaged, in line with the environment clearance granted to the project by MoEF&CC:

- Recycle and Reuse of wastewater
- Adopting the good environmental management practices as per the applicable guidelines and achieving 100% compliance with regulations,

- 275 m multi-flue stack with ESP of more than 99.99 % efficiency which will be provided to control suspended particulate matter to less than 30 mg/Nm<sup>3</sup>, Providing quality fly ash (low carbon content and desired grain size). To enhance the fly ash utilization opportunities in the region, 20% of the fly ash will be provided to local brick manufacturers with no cost to encourage alternative brick manufacturing practices to conserve the natural clay soil that is being widely used by the local brick manufacturers.
- Utilization of technologies such as Flue Gas Desulphurization (FGD) and SCR to minimize ambient air pollution owing to the operation of the plant.
- Dry fly ash handling system and achieving 100% fly ash utilization as per the MOEF&CC fly ash utilization notification.
- Greenbelt will be developed in and around the plant site. Plantation of trees will also be encouraged in the nearby villages. Greenbelt will be developed with locally available plant species.
- Surveillance of all-important environmental parameters on a continuous basis and application of corrective measures Monitoring of all-important environmental parameters on a continuous basis and application of corrective measures in consultation with central and state government authorities.
- Implementation of rooftop solar power plant and rain water harvesting system at site to optimize the judicious use of resources.

### **2.3 Vision towards CSR:-**

- To become an integral part of the local communities and encouraging social, economic and cultural aspects in the region through a sustained and need based Corporate Social Responsibility programs
- CSR activities will be taken up to fulfill the basic requirements of the people in the area. The basic requirements of the community needs will be strengthened by extending health care; educational facilities will be improved.
- To participate in various CSR activities like infrastructure development, education, medical facilities, self-employment, community development and awareness programmes, vocational training in and around the project site.
- The proposed power plant will provide direct and indirect employment to many people based on their qualification, skill sets and experience



बिहार राज्य प्रदूषण नियंत्रण पर्षद्

परिवेश भवन, प्लॉट न०-एन.एस-वी/2, औद्योगिक क्षेत्र,  
पाटलीपुत्रा, पटना-800010

पत्रांक: 1386

प्रेषक

एस० चन्द्रशेखर, भा० न० सं०

सदस्य सचिव

सेवा में,

श्री संजीव शूद,

चीफ़ एक्जीक्यूटिव ऑफिसर,

एसजेभीएन थर्मल (प्रा०) लि०,

बक्सर ताप विद्युत परियोजना,

परियोजना कार्यालय: दूसरी मंजिल, नव दुर्गा परिसर,

कलेक्ट्रेट रोड, अम्बेदकर चौक, बक्सर-802103.

पटना, दिनांक: 22.9.2021

विषय: पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के प्राधिकार के पत्र दिनांक 28.02.2017 द्वारा निर्गत पर्यावरणीय स्वीकृति के शर्त (सामान्य vii) के अनुपालन हेतु पर्यावरणीय वायु गुणवत्ता जाँच बिन्दु/स्थल (Location) निर्धारण के संबंध में।

प्रसंग: आपका पत्रांक STPL/08/01/15/2021-155 दिनांक 13.08.2021

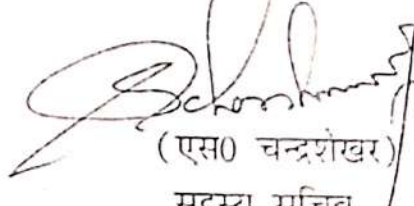
महाशय,

उपर्युक्त विषय एवं प्रसंग के संबंध में सूचित करना है कि प्रस्तावित निम्नलिखित चार लोकेशन पर्यावरणीय वायु जाँच हेतु स्वीकृत किया जाता है:-

1. North of colony & Towards West of Chimney;
2. North West of Rail Bulb and North West of Chimney;
3. East of Chimney and near Main Entry; and
4. North East of Chimney and East of Ash Dyke.

उपर्युक्त चार लोकेशन पर पर्यावरणीय वायु जाँच हेतु अगले एक वर्ष का एक्शन प्लान यथाशीघ्र भेजी जाय।

विश्वासिभाजन

  
(एस० चन्द्रशेखर)  
सदस्य सचिव  
22/9/21

**SIMA LABS****Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.**

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com

**TEST REPORT**

ULR : TC1122023200007375F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006023/N

\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114, Bihar\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (STPL Office Complex)

**RESULTS OF ANALYSIS**

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Organoleptic &amp; Physical Parameters</b>							
1.	Colour	Hazen	<2.0	Max. 5	Max. 15	IS:3025 (P-4)	NA
2.	Odour	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-5)	NA
3.	pH Value	NA	7.52	6.5 to 8.5	No Relaxation	IS:3025 (P-11)	NA
4.	Taste	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-7 & 8)	NA
5.	Total Dissolved Solids	mg/L	1024	Max. 500	Max. 2000	IS:3025 (P-16)	NA
6.	Turbidity	NTU	<1.0	Max. 1	Max. 5	IS:3025 (P-10)	NA
<b>General Parameter</b>							
7.	Aluminium (as Al)	mg/L	BLQ	Max. 0.03	Max. 0.2	IS:3025 (P-2)	LOQ (0.01)
8.	Ammonia (as Total Ammonia-N)	mg/L	BDL	Max. 0.5	No Relaxation	IS:3025 (P-34)	0.1
9.	Anionic Detergents (as MBAS)	mg/L	BDL	Max. 0.2	Max. 1.0	Annex. 'K' of IS:13428	0.1
10.	Barium (as Ba)	mg/L	BLQ	Max. 0.7	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
11.	Boron (as B)	mg/L	BLQ	Max. 0.5	Max. 2.4	IS:3025 (P-2)	LOQ (0.05)
12.	Calcium (as Ca)	mg/L	84.1	Max. 75	Max. 200	IS:3025 (P-40)	NA

REVIEWED BY

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic.

Page : 1 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1968PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007375F

Party Code : S/BHR/18922

REPORT NO. : SE1009006023/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
13.	Chloramines (as Cl <sub>2</sub> )	mg/L	BDL	Max. 4.0	No Relaxation	IS:3025 (P-26)	0.1
14.	Chloride (as Cl)	mg/L	30.8	Max. 250	Max. 1000	IS:3025 (P-32)	NA
15.	Copper (as Cu)	mg/L	BLQ	Max. 0.05	Max. 1.5	IS:3025 (P-2)	LOQ (0.01)
16.	Fluoride (as F)	mg/L	BDL	Max. 1.0	Max. 1.5	APHA - 4500 F-D	0.05
17.	Free residual chlorine (as Cl <sub>2</sub> )	mg/L	BDL	Min. 0.2	Min. 1.0	IS:3025 (P-26)	0.1
18.	Iron (as Fe)	mg/L	BLQ	Max. 1.0	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
19.	Magnesium (as Mg)	mg/L	32.4	Max. 30	Max. 100	IS:3025 (P-46)	NA
20.	Managnese (as Mn)	mg/L	BLQ	Max. 0.1	Max. 0.3	IS:3025 (P-2)	LOQ (0.01)
21.	Mineral Oil	mg/L	BDL	Max. 1.0	No Relaxation	Cl-5 of (P-39)	0.1
22.	Nitrate (as NO <sub>3</sub> )	mg/L	BDL	Max. 45	No Relaxation	IS:3025 (P-34)	0.05
23.	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BDL	Max. 0.001	Max. 0.002	IS:3025 (P-43)	0.001
24.	Selenium (as Se)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
25.	Silver (as Ag)	mg/L	BLQ	Max. 0.1	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
26.	Sulphate (as SO <sub>4</sub> )	mg/L	8.1	Max. 200	Max. 400	IS:3025 (P-24)	NA
27.	Sulphide (as H <sub>2</sub> S)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-29)	0.02
28.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	573.11	Max. 200	Max. 600	IS:3025 (P-23)	NA
29.	Total Hardness (as CaCO <sub>3</sub> )	mg/L	343	Max. 200	Max. 600	IS:3025 (P-21)	NA
30.	Zinc (as Zn)	mg/L	BLQ	Max. 5.0	Max. 15	IS:3025 (P-2)	LOQ (0.05)
<b>Toxic Substance</b>							
31.	Cadmium (as Cd)	mg/L	BLQ	Max. 0.003	No Relaxation	IS:3025 (P-2)	LOQ (0.002)
32.	Cyanide (as CN)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-21)	0.05
33.	Lead (as Pb)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
34.	Mercury (as Hg)	mg/L	BLQ	Max. 0.001	No Relaxation	USEPA Method 200.7	LOQ (0.001)
35.	Molybdenum (as MO)	mg/L	BLQ	Max. 0.07	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
36.	Nickel (as Ni)	mg/L	BLQ	Max. 0.02	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
37.	Total Arsenic (as As)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
38.	Total Chromium (as Cr)	mg/L	BLQ	Max. 0.05	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
39.	Polychlorinated Biphenyls	mg/L	BLQ	Max. 0.005	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)

*Rak*  
REVIEWED BY

*[Signature]*  
D. S. M. Technical  
Authorized Signatory

AUTHORISED SIGNATORY

**Remarks:**

- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
- Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
- This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
- The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
- SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
- SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
- Re-testing charges will be applicable in case the results are reproducible.
- Duplicable copy will be issued on chargeable basis.
- This Test Report is not valid without a hologram.
- SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007375F

Party Code : S/BHR/18922

REPORT NO. : SE1009006023/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
40.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/L	BLQ	Max. 0.0001	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)
<b>Pesticides Residue</b>							
41.	2,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
42.	2,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
43.	2,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
44.	2,4-Dichlorophenoxy Acetic Acid	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
45.	4,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
46.	4,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
47.	4,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
48.	Alachlor	µg/L	BLQ	Max. 20	NA	SIMA/INS/STP/001	LOQ (0.01)
49.	Aldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
50.	Alpha endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
51.	Alpha HCH	µg/L	BLQ	Max. 0.01	NA	SIMA/INS/STP/001	LOQ (0.005)
52.	Atrazine	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
53.	Beta endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
54.	Beta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
55.	Butachlor	µg/L	BLQ	Max. 125	NA	SIMA/INS/STP/001	LOQ (0.01)
56.	Chlorpyrifos	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
57.	Delta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
58.	Dieldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
59.	Endosulfan sulphate	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
60.	Ethion	µg/L	BLQ	Max. 3.0	NA	SIMA/INS/STP/001	LOQ (0.01)
61.	Gamma-HCH (Lindane)	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
62.	Isoproturon	µg/L	BLQ	Max. 9.0	NA	SIMA/INS/STP/001	LOQ (0.01)
63.	Malathion	µg/L	BLQ	Max. 190	NA	SIMA/INS/STP/001	LOQ (0.01)
64.	Methyl Parathion	µg/L	BLQ	Max. 0.3	NA	SIMA/INS/STP/001	LOQ (0.01)
65.	Monocrotophos	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
66.	Phorate	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)

### Trihalomethanes

REVIEWED BY

D.G.M. Technical  
Authorized Signatory  
Equipment

AUTHORISED SIGNATORY

- Remarks:**
1. The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  3. This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  4. The sample(s) of Drugs & Cosmetics will be destroyed after one year. Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  5. SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  6. SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  7. Re-testing charges will be applicable in case the results are reproducible.
  8. Duplicable copy will be issued on chargeable basis.
  9. This Test Report is not valid without a hologram.
  10. SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 3 of 4

SB

Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007375F

Party Code : S/BHR/18922

REPORT NO. : SE1009006023/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
67.	Bromodichloromethane	mg/L	BLQ	Max. 0.06	NA	SIMA/INS/STP/002	LOQ (0.02)
68.	Bromoform	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)
69.	Chloroform	mg/L	BLQ	Max. 0.2	NA	SIMA/INS/STP/002	LOQ (0.02)
70.	Dibromochloromethane	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---



REVIEWED BY

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 4 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

REPORT NO. : SE1009006023/O

\*Customer Ref.No. : NS

\*Reference Date : NS

Date of Sampling : 07/10/2023

Date of Received : 09/10/2023

Date of Issue : 18/10/2023

Start Date of Analysis : 09/10/2023

Date of Completion : 17/10/2023

Environmental Condition : 27±2°C,RH 65±5%

Sample Condition : OK

\*Sample Qty. : 6 Ltr.

SOP/Sampling Plan : SIMA/ENV/SOP/024

Test Method Deviation : NA

Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (STPL Office Complex)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Microbiological quality of water</b>							
1.	E.Coli	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA
2.	Total Coliform	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---

Matibha Rawat  
Technical Manager  
Authorized Signatory  
Microbiology

REVIEWED BY

Signature  
D.G.M. Technical  
Authorized Signatory

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 1

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007377F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006123/N  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114, Bihar

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (STPL Under Construction  
Township)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Organoleptic &amp; Physical Parameters</b>							
1.	Colour	Hazen	<2.0	Max. 5	Max. 15	IS:3025 (P-4)	NA
2.	Odour	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-5)	NA
3.	pH Value	NA	7.72	6.5 to 8.5	No Relaxation	IS:3025 (P-11)	NA
4.	Taste	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-7 & 8)	NA
5.	Total Dissolved Solids	mg/L	812	Max. 500	Max. 2000	IS:3025 (P-16)	NA
6.	Turbidity	NTU	<1.0	Max. 1	Max. 5	IS:3025 (P-10)	NA
<b>General Parameter</b>							
7.	Aluminium (as Al)	mg/L	BLQ	Max. 0.03	Max. 0.2	IS:3025 (P-2)	LOQ (0.01)
8.	Ammonia (as Total Ammonia-N)	mg/L	BDL	Max. 0.5	No Relaxation	IS:3025 (P-34)	0.1
9.	Anionic Detergents (as MBAS)	mg/L	BDL	Max. 0.2	Max. 1.0	Annex. 'K' of IS:13428	0.1
10.	Barium (as Ba)	mg/L	BLQ	Max. 0.7	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
11.	Boron (as B)	mg/L	BLQ	Max. 0.5	Max. 2.4	IS:3025 (P-2)	LOQ (0.05)
12.	Calcium (as Ca)	mg/L	78.5	Max. 75	Max. 200	IS:3025 (P-40)	NA

REVIEWED BY

AUTHORISED SIGNATORY

D. S. M. Technical  
Authorized Signatory

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007377F

Party Code : S/BHR/18922

REPORT NO. : SE1009006123/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
13.	Chloramines (as Cl <sub>2</sub> )	mg/L	BDL	Max. 4.0	No Relaxation	IS:3025 (P-26)	0.1
14.	Chloride (as Cl)	mg/L	40.7	Max. 250	Max. 1000	IS:3025 (P-32)	NA
15.	Copper (as Cu)	mg/L	BLQ	Max. 0.05	Max. 1.5	IS:3025 (P-2)	LOQ (0.01)
16.	Fluoride (as F)	mg/L	BDL	Max. 1.0	Max. 1.5	APHA - 4500 F-D	0.05
17.	Free residual chlorine (as Cl <sub>2</sub> )	mg/L	BDL	Min. 0.2	Min. 1.0	IS:3025 (P-26)	0.1
18.	Iron (as Fe)	mg/L	BLQ	Max. 1.0	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
19.	Magnesium (as Mg)	mg/L	22.9	Max. 30	Max. 100	IS:3025 (P-46)	NA
20.	Managnese (as Mn)	mg/L	BLQ	Max. 0.1	Max. 0.3	IS:3025 (P-2)	LOQ (0.01)
21.	Mineral Oil	mg/L	BDL	Max. 1.0	No Relaxation	CI-5 of (P-39)	0.1
22.	Nitrate (as NO <sub>3</sub> )	mg/L	BDL	Max. 45	No Relaxation	IS:3025 (P-34)	0.05
23.	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BDL	Max. 0.001	Max. 0.002	IS:3025 (P-43)	0.001
24.	Selenium (as Se)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
25.	Silver (as Ag)	mg/L	BLQ	Max. 0.1	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
26.	Sulphate (as SO <sub>4</sub> )	mg/L	8.5	Max. 200	Max. 400	IS:3025 (P-24)	NA
27.	Sulphide (as H <sub>2</sub> S)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-29)	0.02
28.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	430.4	Max. 200	Max. 600	IS:3025 (P-23)	NA
29.	Total Hardness (as CaCO <sub>3</sub> )	mg/L	290.1	Max. 200	Max. 600	IS:3025 (P-21)	NA
30.	Zinc (as Zn)	mg/L	BLQ	Max. 5.0	Max. 15	IS:3025 (P-2)	LOQ (0.05)
<b>Toxic Substance</b>							
31.	Cadmium (as Cd)	mg/L	BLQ	Max. 0.003	No Relaxation	IS:3025 (P-2)	LOQ (0.002)
32.	Cyanide (as CN)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-27)	0.05
33.	Lead (as Pb)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
34.	Mercury (as Hg)	mg/L	BLQ	Max. 0.001	No Relaxation	USEPA Method 200.7	LOQ (0.001)
35.	Molybdenum (as MO)	mg/L	BLQ	Max. 0.07	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
36.	Nickel (as Ni)	mg/L	BLQ	Max. 0.02	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
37.	Total Arsenic (as As)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
38.	Total Chromium (as Cr)	mg/L	BLQ	Max. 0.05	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
39.	Polychlorinated Biphenyls	mg/L	BLQ	Max. 0.005	No Relaxation	SIMA/INS/STP/001	LOQ (0.00025)

REVIEWED BY

D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year. Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007377F

Party Code : S/BHR/18922

REPORT NO. : SE1009006123/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
40.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/L	BLQ	Max. 0.0001	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)

### Pesticides Residue

41.	2,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
42.	2,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
43.	2,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
44.	2,4-Dichlorophenoxy Acetic Acid	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
45.	4,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
46.	4,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
47.	4,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
48.	Alachlor	µg/L	BLQ	Max. 20	NA	SIMA/INS/STP/001	LOQ (0.01)
49.	Aldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
50.	Alpha endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
51.	Alpha HCH	µg/L	BLQ	Max. 0.01	NA	SIMA/INS/STP/001	LOQ (0.005)
52.	Atrazine	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
53.	Beta endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
54.	Beta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
55.	Butachlor	µg/L	BLQ	Max. 125	NA	SIMA/INS/STP/001	LOQ (0.01)
56.	Chlorpyrifos	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
57.	Delta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
58.	Dieldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
59.	Endosulfan sulphate	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
60.	Ethion	µg/L	BLQ	Max. 3.0	NA	SIMA/INS/STP/001	LOQ (0.01)
61.	Gamma-HCH (Lindane)	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
62.	Isoproturon	µg/L	BLQ	Max. 9.0	NA	SIMA/INS/STP/001	LOQ (0.01)
63.	Malathion	µg/L	BLQ	Max. 190	NA	SIMA/INS/STP/001	LOQ (0.01)
64.	Methyl Parathion	µg/L	BLQ	Max. 0.3	NA	SIMA/INS/STP/001	LOQ (0.01)
65.	Monocrotophos	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
66.	Phorate	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)

### Trihalomethanes

*[Signature]*  
REVIEWED BY

*[Signature]*  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 3 of 4

SB

Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007377F

Party Code : S/BHR/18922

REPORT NO. : SE1009006123/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
67.	Bromodichloromethane	mg/L	BLQ	Max. 0.06	NA	SIMA/INS/STP/002	LOQ (0.02)
68.	Bromoform	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)
69.	Chloroform	mg/L	BLQ	Max. 0.2	NA	SIMA/INS/STP/002	LOQ (0.02)
70.	Dibromochloromethane	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---



REVIEWED BY

D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 4 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006123/O  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114, Bihar

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (STPL Under Construction  
Township)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Microbiological quality of water</b>							
1.	E.Coli	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA
2.	Total Coliform	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---

Pratibha Rawat  
Technical Manager  
Authorized Signatory  
Microbiology

REVIEWED BY

D.S.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 1

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007374F

Party Code : S/BHR/18922  
\*Issued to SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006223/N  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C,RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (Labour Colony-1)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Organoleptic &amp; Physical Parameters</b>							
1.	Colour	Hazen	<2.0	Max. 5	Max. 15	IS:3025 (P-4)	NA
2.	Odour	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-5)	NA
3.	pH Value	NA	7.52	6.5 to 8.5	No Relaxation	IS:3025 (P-11)	NA
4.	Taste	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-7 & 8)	NA
5.	Total Dissolved Solids	mg/L	952	Max. 500	Max. 2000	IS:3025 (P-16)	NA
6.	Turbidity	NTU	<1.0	Max. 1	Max. 5	IS:3025 (P-10)	NA
<b>General Parameter</b>							
7.	Aluminium (as Al)	mg/L	BLQ	Max. 0.03	Max. 0.2	IS:3025 (P-2)	LOQ (0.01)
8.	Ammonia (as Total Ammonia-N)	mg/L	BDL	Max. 0.5	No Relaxation	IS:3025 (P-34)	0.1
9.	Anionic Detergents (as MBAS)	mg/L	BDL	Max. 0.2	Max. 1.0	Annex. 'K' of IS:13428	0.1
10.	Barium (as Ba)	mg/L	BLQ	Max. 0.7	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
11.	Boron (as B)	mg/L	BLQ	Max. 0.5	Max. 2.4	IS:3025 (P-2)	LOQ (0.05)
12.	Calcium (as Ca)	mg/L	65.2	Max. 75	Max. 200	IS:3025 (P-40)	NA

REVIEWED BY

*P. K. Singh*

AUTHORISED SIGNATORY

*D. G. M. Technical*  
D.G.M. Technical  
Authorized Signatory

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007374F

Party Code : S/BHR/18922

REPORT NO. : SE1009006223/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
13.	Chloramines (as Cl <sub>2</sub> )	mg/L	BDL	Max. 4.0	No Relaxation	IS:3025 (P-26)	0.1
14.	Chloride (as Cl)	mg/L	56.6	Max. 250	Max. 1000	IS:3025 (P-32)	NA
15.	Copper (as Cu)	mg/L	BLQ	Max. 0.05	Max. 1.5	IS:3025 (P-2)	LOQ (0.01)
16.	Fluoride (as F)	mg/L	BDL	Max. 1.0	Max. 1.5	APHA - 4500 F-D	0.05
17.	Free residual chlorine (as Cl <sub>2</sub> )	mg/L	BDL	Min. 0.2	Min. 1.0	IS:3025 (P-26)	0.1
18.	Iron (as Fe)	mg/L	BLQ	Max. 1.0	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
19.	Magnesium (as Mg)	mg/L	17.6	Max. 30	Max. 100	IS:3025 (P-46)	NA
20.	Managnese (as Mn)	mg/L	BLQ	Max. 0.1	Max. 0.3	IS:3025 (P-2)	LOQ (0.01)
21.	Mineral Oil	mg/L	BDL	Max. 1.0	No Relaxation	Cl-5 of (P-39)	0.1
22.	Nitrate (as NO <sub>3</sub> )	mg/L	BDL	Max. 45	No Relaxation	IS:3025 (P-34)	0.05
23.	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BDL	Max. 0.001	Max. 0.002	IS:3025 (P-43)	0.001
24.	Selenium (as Se)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
25.	Silver (as Ag)	mg/L	BLQ	Max. 0.1	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
26.	Sulphate (as SO <sub>4</sub> )	mg/L	8.8	Max. 200	Max. 400	IS:3025 (P-24)	NA
27.	Sulphide (as H <sub>2</sub> S)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-29)	0.02
28.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	535.2	Max. 200	Max. 600	IS:3025 (P-23)	NA
29.	Total Hardness (as CaCO <sub>3</sub> )	mg/L	235.2	Max. 200	Max. 600	IS:3025 (P-21)	NA
30.	Zinc (as Zn)	mg/L	BLQ	Max. 5.0	Max. 15	IS:3025 (P-2)	LOQ (0.05)

### Toxic Substance

31.	Cadmium (as Cd)	mg/L	BLQ	Max. 0.003	No Relaxation	IS:3025 (P-2)	LOQ (0.002)
32.	Cyanide (as CN)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-27)	0.05
33.	Lead (as Pb)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
34.	Mercury (as Hg)	mg/L	BLQ	Max. 0.001	No Relaxation	USEPA Method 200.7	LOQ (0.001)
35.	Molybdenum (as MO)	mg/L	BLQ	Max. 0.07	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
36.	Nickel (as Ni)	mg/L	BLQ	Max. 0.02	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
37.	Total Arsenic (as As)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
38.	Total Chromium (as Cr)	mg/L	BLQ	Max. 0.05	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
39.	Polychlorinated Biphenyls	mg/L	BLQ	Max. 0.005	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)

*P. K. K.*  
REVIEWED BY

*D. S. M. Technical*  
D.S.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007374F

Party Code : S/BHR/18922

REPORT NO. : SE1009006223/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
40.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/L	BLQ	Max. 0.0001	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)
<b>Pesticides Residue</b>							
41.	2,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
42.	2,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
43.	2,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
44.	2,4-Dichlorophenoxy Acetic Acid	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
45.	4,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
46.	4,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
47.	4,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
48.	Alachlor	µg/L	BLQ	Max. 20	NA	SIMA/INS/STP/001	LOQ (0.01)
49.	Aldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
50.	Alpha endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
51.	Alpha HCH	µg/L	BLQ	Max. 0.01	NA	SIMA/INS/STP/001	LOQ (0.005)
52.	Atrazine	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
53.	Beta endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
54.	Beta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
55.	Butachlor	µg/L	BLQ	Max. 125	NA	SIMA/INS/STP/001	LOQ (0.01)
56.	Chlorpyrifos	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
57.	Delta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
58.	Dieldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
59.	Endosulfan sulphate	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
60.	Ethion	µg/L	BLQ	Max. 3.0	NA	SIMA/INS/STP/001	LOQ (0.01)
61.	Gamma-HCH (Lindane)	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
62.	Isoproturon	µg/L	BLQ	Max. 9.0	NA	SIMA/INS/STP/001	LOQ (0.01)
63.	Malathion	µg/L	BLQ	Max. 190	NA	SIMA/INS/STP/001	LOQ (0.01)
64.	Methyl Parathion	µg/L	BLQ	Max. 0.3	NA	SIMA/INS/STP/001	LOQ (0.01)
65.	Monocrotophos	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
66.	Phorate	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)

### Trihalomethanes

REVIEWED BY

D. G. M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

<p><b>Remarks:</b></p> <ol style="list-style-type: none"> <li>The Results listed refer only to the above tested sample &amp; applicable parameters. Endorsement of products is neither inferred nor implied.</li> <li>Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.</li> <li>This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.</li> <li>The sample(s) of Drugs &amp; Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs &amp; Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.</li> <li>SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.</li> <li>SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.</li> <li>Re-testing charges will be applicable in case the results are reproducible.</li> <li>Duplicable copy will be issued on chargeable basis.</li> <li>This Test Report is not valid without a hologram.</li> <li>SIMA Stands for : Sophisticated Industrial Materials Analytic</li> </ol>	<p>Page : 3 of 4</p> <p>SB</p>
---	--------------------------------

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007374F

Party Code : S/BHR/18922

REPORT NO. : SE1009006223/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
67.	Bromodichloromethane	mg/L	BLQ	Max. 0.06	NA	SIMA/INS/STP/002	LOQ (0.02)
68.	Bromoform	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)
69.	Chloroform	mg/L	BLQ	Max. 0.2	NA	SIMA/INS/STP/002	LOQ (0.02)
70.	Dibromochloromethane	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---



REVIEWED BY

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 4 of 4

SB

Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006223/O  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (Labour Colony-1)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Microbiological quality of water</b>							
1.	E.Coli	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA
2.	Total Coliform	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---

Pratibha Rawat  
Technical Manager  
Authorized Signatory  
Microbiology

Dr. Akash Chandra  
D.G.M. Technical  
Authorized Signatory

#### REVIEWED BY

#### AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Standa for : Sophisticated Industrial Materials Analytic

Page : 1 of 1

SB

Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007376F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009006323/N  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C,RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (Labour Colony-2)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Organoleptic &amp; Physical Parameters</b>							
1.	Colour	Hazen	<2.0	Max. 5	Max. 15	IS:3025 (P-4)	NA
2.	Odour	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-5)	NA
3.	pH Value	NA	7.76	6.5 to 8.5	No Relaxation	IS:3025 (P-11)	NA
4.	Taste	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-7 & 8)	NA
5.	Total Dissolved Solids	mg/L	1037	Max. 500	Max. 2000	IS:3025 (P-16)	NA
6.	Turbidity	NTU	<1.0	Max. 1	Max. 5	IS:3025 (P-10)	NA
<b>General Parameter</b>							
7.	Aluminium (as Al)	mg/L	BLQ	Max. 0.03	Max. 0.2	IS:3025 (P-2)	LOQ (0.01)
8.	Ammonia (as Total Ammonia-N)	mg/L	BDL	Max. 0.5	No Relaxation	IS:3025 (P-34)	0.1
9.	Anionic Detergents (as MBAS)	mg/L	BDL	Max. 0.2	Max. 1.0	Annex. 'K' of IS:13428	0.1
10.	Barium (as Ba)	mg/L	BLQ	Max. 0.7	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
11.	Boron (as B)	mg/L	BLQ	Max. 0.5	Max. 2.4	IS:3025 (P-2)	LOQ (0.05)
12.	Calcium (as Ca)	mg/L	96.6	Max. 75	Max. 200	IS:3025 (P-40)	NA

REVIEWED BY

AUTHORISED SIGNATORY

D.G.M, Technical  
Authorized Signatory

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007376F

Party Code : S/BHR/18922

REPORT NO.

: SE1009006323/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
13.	Chloramines (as Cl <sub>2</sub> )	mg/L	BDL	Max. 4.0	No Relaxation	IS:3025 (P-26)	0.1
14.	Chloride (as Cl)	mg/L	85.4	Max. 250	Max. 1000	IS:3025 (P-32)	NA
15.	Copper (as Cu)	mg/L	BLQ	Max. 0.05	Max. 1.5	IS:3025 (P-2)	LOQ (0.01)
16.	Fluoride (as F)	mg/L	BDL	Max. 1.0	Max. 1.5	APHA - 4500 F-D	0.05
17.	Free residual chlorine (as Cl <sub>2</sub> )	mg/L	BDL	Min. 0.2	Min. 1.0	IS:3025 (P-26)	0.1
18.	Iron (as Fe)	mg/L	BLQ	Max. 1.0	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
19.	Magnesium (as Mg)	mg/L	31.4	Max. 30	Max. 100	IS:3025 (P-46)	NA
20.	Managnese (as Mn)	mg/L	BLQ	Max. 0.1	Max. 0.3	IS:3025 (P-2)	LOQ (0.01)
21.	Mineral Oil	mg/L	BDL	Max. 1.0	No Relaxation	Cl-5 of (P-39)	0.1
22.	Nitrate (as NO <sub>3</sub> )	mg/L	BDL	Max. 45	No Relaxation	IS:3025 (P-34)	0.05
23.	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BDL	Max. 0.001	Max. 0.002	IS:3025 (P-43)	0.001
24.	Selenium (as Se)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
25.	Silver (as Ag)	mg/L	BLQ	Max. 0.1	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
26.	Sulphate (as SO <sub>4</sub> )	mg/L	18.2	Max. 200	Max. 400	IS:3025 (P-24)	NA
27.	Sulphide (as H <sub>2</sub> S)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-29)	0.02
28.	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	499.5	Max. 200	Max. 600	IS:3025 (P-23)	NA
29.	Total Hardness (as CaCO <sub>3</sub> )	mg/L	370.4	Max. 200	Max. 600	IS:3025 (P-21)	NA
30.	Zinc (as Zn)	mg/L	BLQ	Max. 5.0	Max. 15	IS:3025 (P-2)	LOQ (0.05)

### Toxic Substance

31.	Cadmium (as Cd)	mg/L	BLQ	Max. 0.003	No Relaxation	IS:3025 (P-2)	LOQ (0.002)
32.	Cyanide (as CN)	mg/L	BDL	Max. 0.05	No Relaxation	IS:3025 (P-27)	0.05
33.	Lead (as Pb)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
34.	Mercury (as Hg)	mg/L	BLQ	Max. 0.001	No Relaxation	USEPA Method 200.7	LOQ (0.001)
35.	Molybdenum (as MO)	mg/L	BLQ	Max. 0.07	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
36.	Nickel (as Ni)	mg/L	BLQ	Max. 0.02	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
37.	Total Arsenic (as As)	mg/L	BLQ	Max. 0.01	No Relaxation	IS:3025 (P-2)	LOQ (0.005)
38.	Total Chromium (as Cr)	mg/L	BLQ	Max. 0.05	No Relaxation	IS:3025 (P-2)	LOQ (0.01)
39.	Polychlorinated Biphenyls	mg/L	BLQ	Max. 0.005	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)

REVIEWED BY

AUTHORISED SIGNATORY

D.S.M. Technical  
Authorized Signatory  
Government of India

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 4

SB

Indicates details provided by the customer



## TEST REPORT



ULR : TC1122023200007376F

Party Code : S/BHR/18922

REPORT NO. : SE1009006323/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
40.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/L	BLQ	Max. 0.0001	No Relaxation	SIMA/INS/STP/001	LOQ (0.000025)
<b>Pesticides Residue</b>							
41.	2,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
42.	2,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
43.	2,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
44.	2,4-Dichlorophenoxy Acetic Acid	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
45.	4,4' DDD	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
46.	4,4' DDE	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
47.	4,4' DDT	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
48.	Alachlor	µg/L	BLQ	Max. 20	NA	SIMA/INS/STP/001	LOQ (0.01)
49.	Aldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
50.	Alpha endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
51.	Alpha HCH	µg/L	BLQ	Max. 0.01	NA	SIMA/INS/STP/001	LOQ (0.005)
52.	Atrazine	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
53.	Beta endosulfan	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
54.	Beta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
55.	Butachlor	µg/L	BLQ	Max. 125	NA	SIMA/INS/STP/001	LOQ (0.01)
56.	Chlorpyrifos	µg/L	BLQ	Max. 30	NA	SIMA/INS/STP/001	LOQ (0.01)
57.	Delta HCH	µg/L	BLQ	Max. 0.04	NA	SIMA/INS/STP/001	LOQ (0.01)
58.	Dieldrin	µg/L	BLQ	Max. 0.03	NA	SIMA/INS/STP/001	LOQ (0.01)
59.	Endosulfan sulphate	µg/L	BLQ	Max. 0.4	NA	SIMA/INS/STP/001	LOQ (0.01)
60.	Ethion	µg/L	BLQ	Max. 3.0	NA	SIMA/INS/STP/001	LOQ (0.01)
61.	Gamma-HCH (Lindane)	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)
62.	Isoproturon	µg/L	BLQ	Max. 9.0	NA	SIMA/INS/STP/001	LOQ (0.01)
63.	Malathion	µg/L	BLQ	Max. 190	NA	SIMA/INS/STP/001	LOQ (0.01)
64.	Methyl Parathion	µg/L	BLQ	Max. 0.3	NA	SIMA/INS/STP/001	LOQ (0.01)
65.	Monocrotophos	µg/L	BLQ	Max. 1.0	NA	SIMA/INS/STP/001	LOQ (0.01)
66.	Phorate	µg/L	BLQ	Max. 2.0	NA	SIMA/INS/STP/001	LOQ (0.01)

### Trihalomethanes

*[Signature]*

REVIEWED BY

*[Signature]*  
 D.G.M. Technical  
 Authorized Signatory  
 SIMA LABS  
 AUTHORIZED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 3 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007376F

Party Code : S/BHR/18922

REPORT NO. : SE1009006323/N

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
67.	Bromodichloromethane	mg/L	BLQ	Max. 0.06	NA	SIMA/INS/STP/002	LOQ (0.02)
68.	Bromoform	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)
69.	Chloroform	mg/L	BLQ	Max. 0.2	NA	SIMA/INS/STP/002	LOQ (0.02)
70.	Dibromochloromethane	mg/L	BLQ	Max. 0.1	NA	SIMA/INS/STP/002	LOQ (0.02)

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---



REVIEWED BY

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 4 of 4

SB

\*Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

Buxar Thermal Power Project, Main Office Building,  
Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

REPORT NO. : SE1009006323/O  
\*Customer Ref.No. : NS

\*Reference Date : NS  
Date of Sampling : 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 18/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 17/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : 6 Ltr.  
SOP/Sampling Plan : SIMA/ENV/SOP/024  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ground Water (Labour Colony-2)

### RESULTS OF ANALYSIS

Reference : IS 10500 -2012

Sample Description : Clear colourless liquid

S.No.	Parameter	Units	Results	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Protocols	Detection Limits
<b>Microbiological quality of water</b>							
1.	E.Coli	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA
2.	Total Coliform	per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS15185: 2016	NA

The above tested parameters meets the requirement of IS:10500-2012

Specification (Permissible Limit)

NA- Not Applicable, BDL- Below Detection Limit, BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

--- End of Test Report ---

Pratibha Ranat  
Technical Manager  
Authorized Signatory  
Microbiology

D. G. M. Technical  
Authorized Signatory

REVIEWED BY

AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 1

SB

Indicates details provided by the customer



Menu

## SJVN LIMITED

(A Joint Venture of Govt. of India & Govt. of Himachal Pradesh  
A 'Mini Ratna' & Schedule 'A' PSU | ISO 9001:2015 Certified Company  
CIN: L40101HP1988GOI008409

### ENVIRONMENT POLICY

[HOME](#) > [ENVIRONMENT](#) > [ENVIRONMENT POLICY](#)

## ENVIRONMENT POLICY STATEMENT

SJVN reaffirms its commitment towards sustainable power generation and transmission with utmost care for environment.

### TOWARDS THIS COMMITMENT, SJVN WILL ENDEAVOUR TO:

- > Conduct all its activities in an environmentally responsible manner and comply with applicable legal requirements, guidelines, directives and other commitments.
- > Continually improve its management systems to prevent pollution and seek new and innovative ways to mitigate environmental impacts of its past, present and future activities.
- > Develop and maintain efficient two-way communication with the stakeholders and collaborate with them in resolving environmental concerns.
- > Minimize waste generation, promote efficient use of resources and contribute towards reduction of Green House Gas (GHG) emissions.
- > Promote environmental awareness among its employees, contractors and suppliers and ensure that they have the training, knowledge, skills, resources, and equipment to meet the environmental commitments.

<a href="#">Preamble</a>
<a href="#">Environment Policy</a>
<a href="#">Initiatives</a>
<a href="#">Clearances and Reports</a>
<a href="#">Clearances &amp; reports i.r.o. Corporate Head Quarter</a>



[Hyperlink Policy](#)   [Accessibility Statement](#)   [Privacy Policy](#)   [Disclaimer](#)   [Sitemap](#)  
[SJVN Caller Tune](#)   [Women Helpline no.](#)   [SJVN Intranet](#)   [Contact Us](#)

**Stock Watch** Today: 16/05/2023



**PCMM/3**  
Copyright © 2017 PCMM/3





भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)

Petroleum & Explosives Safety Organisation (PESO)

8-एस्प्लेनेड पूर्व, पहली मंजिल

कोलकाता (प.ब.)- 700069

8, Esplanade East, 1st floor,

Kolkata - 700069

## Appendix-12

E-mail : [jtccekolkata@explosives.gov.in](mailto:jtccekolkata@explosives.gov.in)

Phone/Fax No : 033 - 22486600,22480427

संख्या /No : A/P/EC/BI/15/1988 (P522050)

दिनांक /Dated : 27/04/2022

सेवा में /To,

M/s. SJVN Thermal ( P) Ltd.,  
Buxar Thermal power project (2x660)MW, Chausa, Bux,  
Chausa,  
District: BUXAR  
State: Bihar  
PIN: 802114

विषय /Sub : Khasra No, 433-434, Khorampur, Thana No. 42, Sikraul, Chausa, Taluka: Buxar, District: BUXAR, State: Bihar, PIN: 802114 में प्रस्तावित पेट्रोलियम वर्ग C अधिष्ठापन के अनुमोदन के सम्बन्ध में।  
Proposed Petroleum Storage Class C Installation at Khasra No, 433-434, Khorampur, Thana No. 42, Sikraul, Chausa, Taluka: Buxar, District: BUXAR, State: Bihar, PIN: 802114  
Approval Regarding.

महोदय  
/Sir(s),

कृपया आपके पत्र क्रमांक OIN1061032 दिनांक 26/04/2022 का अवलोकन करें।

Please refer to your letter No. OIN1061032 dated 26/04/2022

Drawing(s) nos. SMPL-P-383-M-100 dated 23/07/2020, SMPL-P-383-M-102 dated 22/03/2022, 111-29-0200 dated 28/05/2018, अनुमोदित किया जाता है तथा प्रत्येक आरेखण की एक प्रति विधिवत पृष्ठांकित कर लौटाई जा रही है।

The Drawing(s) nos. SMPL-P-383-M-100 dated 23/07/2020, SMPL-P-383-M-102 dated 22/03/2022, 111-29-0200 dated 28/05/2018, showing the site and layout etc. of the specified installation is/are approved and one copy of the same is returned herewith in token of approval.

#### Conditions of the Approval:-

The storage area should be fence and separated from other facilities. minimum safety distance from A/G tanks to fencing ,Unloading/loading platform,pump house must be as per PR2002

अग्रिम कार्रवाई हेतु इस कार्यालय को प्रेषित करें।

The following documents which are necessary in connection with the grant of a licence in Form XV of the Petroleum Rules, 2002 for the above installation may please be submitted to this office for further action in the matter.

1. प्ररूप IX(संलग्न ) में विधिवत भरा हुआ एवं हस्ताक्षरित आवेदन।  
An Application in Form IX (enclosed) duly filled in and signed.
2. पेट्रोलियम नियम 2002 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से अनुज्ञप्ति शुल्क ₹ 50000/- (प्रति वर्ष – अधिकतम 10 वर्ष तक) ऑनलाइन जमा किया जाना है।  
A license fee of Rs. 50000/- (per year - maximum upto 10 years) to be submitted online through e-payment facility available on online application portal under petroleum Rules, 2002.
3. अनुमोदन की शर्तों को (यदि कोई हो) शामिल करते हुए तथा किसी भी इंक करेक्शन के बिना, अधिकृत हस्ताक्षरकर्ता द्वारा विधिवत हस्ताक्षरित, अनुमोदित प्लान की ब्लू प्रिंट या सीएडी (CAD) प्रिंट में चार प्रतियाँ।  
Four copies of the approved plans.
4. इस संगठन द्वारा मान्यता प्राप्त सक्षम व्यक्ति द्वारा उनके हस्ताक्षर के स्टैप सहित जारी पेट्रोलियम नियम 2002 के अंतर्गत नियम 130 और 126 में आवश्यक निर्धारित प्ररूप (संलग्न) में सेफ्टी और टेस्ट प्रमाण-पत्र।  
Safety and Test Certificate required under rule 130 and 126 of the Petroleum Rules, 2002 (enclosed) issued by Competent person.
5. पेट्रोलियम नियम के नियम 144 के अंतर्गत जिला प्राधिकारी द्वारा जारी 'अनापत्ति प्रमाण-पत्र' की मूल प्रति तथा उनके द्वारा विधिवत हस्ताक्षरित एवं कार्यालय की मोहर लगा हुआ साईट प्लान।  
Original copy of 'No Objection Certificate' from the District Authority together with site plan duly endorsed by him with his office seal thereon.
6. इस कार्यालय से होनेवाले पत्राचार पर हस्ताक्षर करने के लिए अधिकृत व्यक्ति(यों)के नमूना हस्ताक्षर।  
Specimen signature(s) of the person(s) authorised to sign the correspondence intended for this organisation with a copy to Controller of Explosives, Patna.
7. Copy of Hazop Study & Risk Analysis Report.
8. Copy of On-Site Emergency Plan.
9. Copy of Safety Report under Rule 10 of MSIHC Rule, 1989.

जी.एस.आर. 519(ई) दिनांक 05/06/2000 द्वारा भारत सरकार, पेट्रोलियम तथा प्राकृतिक गैस मंत्रालय द्वारा अधिसूचित आदेश 2000 के 'सॉल्वेंट, रेफिनेट तथा स्लॉप (अधिग्रहण, बिक्री, भंडारण और ऑटोमोबाइल में उपयोग की रोकथाम) आवश्यकता/प्रावधान का कृपया पालन करें।

Please follow the requirement/provision of " Solvent, Raffinate and Slop ( Acquisition, Sale, Storage & Prevention of use in Automobiles)" Order 2000 notified by Government of India, Ministry of Petroleum and Natural Gas vide G.S.R. 519 (E) dated 05/06/2000.

यह अनुमोदन/अनुमति अन्य प्राधिकारियों से आवश्यक अनुमति/क्लीयरन्स प्राप्त करने से या यथा लागू अन्य विधियों से छूट नहीं देती है।

This approval/permission, however, does not absolve from obtaining necessary permission/clearance from other authorities or under other statutes as applicable.

भवदीय /Yours faithfully,

((अब्दुल मुत्तालिब)  
(Abdul Muttalib)  
विस्फोटक नियंत्रक

Controller of Explosives  
कृते संयुक्त मुख्य विस्फोटक नियंत्रक  
For Jt. Chief Controller of Explosives  
कोलकाता (प.ब.)/Kolkata

**Note:-This is system generated document does not require signature.**

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : <http://peso.gov.in> देखें)  
(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)

# Appendix-13 AAQR October 2023



## SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007290F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009005623/N  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office  
Building, Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114, Bihar

\*Reference Date : NS  
Date of Sampling : 04/10/2023 To 05/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 16/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 16/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : NS  
SOP/Sampling Plan : SIMA/ENV/SOP/012  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ambient Air

### RESULTS OF ANALYSIS

Reference : As Per EP Act-1986

Sample Description : One Ambient Air sample was drawn by us from 04/10/2023 to 05/10/2023

Name of Industry : SJVN Thermal Pvt. Ltd.

Location of the Sampling Point : North of Colony & Towards West of Chimney

Date of Sampling : 04/10/2023 To 05/10/2023

Sampling started at : 01:00 PM (Dt: 04/10/2023)

Sampling completed at : 01:00 PM (Dt: 05/10/2023)

Actual time of sampling : 1440 Minutes

Flow rate of sampling : 1.27 m<sup>3</sup>/minute

Total volume of air sampled : 1829 m<sup>3</sup> (For PM10) & 23.996 m<sup>3</sup> (For PM 2.5)

Ambient temperature (°C) : 30

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m <sup>3</sup>	89.7	100	IS:5182 (P-23) Reaff. 2017	NA
2.	Particulate Matter (as PM - 2.5)	µg/m <sup>3</sup>	49.2	60	IS:5182 (P-24):2019	NA
3.	Nitrogen Dioxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	29.1	80	IS:5182 (P-6) Reaff. 2017	NA
4.	Sulphur Dioxide (as SO <sub>2</sub> )	µg/m <sup>3</sup>	18.6	80	IS:5182 (P-2) Reaff. 2017	NA

*Reviewed by*  
REVIEWED BY

*Signature*  
Dipankar Jha  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

**Remarks:**

- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
- Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
- This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
- The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
- SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
- SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
- Re-testing charges will be applicable in case the results are reproducible.
- Duplicable copy will be issued on chargeable basis.
- This Test Report is not valid without a hologram.
- SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007290F

Party Code : S/BHR/18922

REPORT NO.

: SE1009005623/N

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
5.	Carbon Monoxide (as CO) (8 hours)	mg/m <sup>3</sup>	1.239	2.0	IS:5182 (P-10) Method-C Reaff. 2019	NA
6.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5.0	IS:5182 (P-11) Reaff. 2017	0.5
7.	Ammonia (as NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400	IS:5182 (P-25):2018	20
8.	Ozone (as O <sub>3</sub> ) (8 hours)	µg/m <sup>3</sup>	24.0	100	IS:5182 (P-9) Reaff. 2019	NA
9.	Lead (as Pb)	µg/m <sup>3</sup>	BDL	1.0	IS:5182 (P-22) Reaff. 2019	0.03
10.	Arsenic (as As)	ng/m <sup>3</sup>	BDL	6	Methods of Air sampling & Analysis-822	1.5
11.	Nickel (as Ni)	ng/m <sup>3</sup>	BDL	20	IS:5182 (P-26):2020	1.5
12.	Benzo (a) Pyrene (Bap)	ng/m <sup>3</sup>	BDL	1.0	IS:5182 (P-12) Reaff. 2019	0.06

NA-Not Applicable, BDL- Below Detection Limit

The above mentioned parameters meets the specification of EP Act Standard.

--- End of Test Report ---



*Disobly*  
REVIEWED BY

*Disobly*  
D.S.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007289F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009005723/N

\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office  
Building, Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114, Bihar

\*Reference Date : NS  
Date of Sampling : 05/10/2023 To 06/10/2023

Date of Received : 09/10/2023

Date of Issue : 16/10/2023

Start Date of Analysis : 09/10/2023

Date of Completion : 16/10/2023

Environmental Condition : 27±2°C, RH 65±5%

Sample Condition : OK

\*Sample Qty. : NS

SOP/Sampling Plan : SIMA/ENV/SOP/012

Test Method Deviation : NA

Sample Collection : Sample Drawn By Us

\*Sample Name : Ambient Air

### RESULTS OF ANALYSIS

Reference : As Per EP Act-1986

Sample Description : One Ambient Air sample was drawn by us from 05/10/2023 to 06/10/2023

Name of Industry : SJVN Thermal Pvt. Ltd.

Location of the Sampling Point : North West of Rail Bulb & North West of Chimney

Date of Sampling : 05/10/2023 To 06/10/2023

Sampling started at : 01:20 PM (Dt: 05/10/2023)

Sampling completed at : 01:20 PM (Dt: 06/10/2023)

Actual time of sampling : 1440 Minutes

Flow rate of sampling : 1.265 m<sup>3</sup>/minute

Total volume of air sampled : 1822 m<sup>3</sup> (For PM10) & 24.009 m<sup>3</sup> (For PM 2.5)

Ambient temperature (°C) : 31

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m <sup>3</sup>	79.3	100	IS:5182 (P-23) Reaff. 2017	NA
2.	Particulate Matter (as PM - 2.5)	µg/m <sup>3</sup>	47.9	60	IS:5182 (P-24):2019	NA
3.	Nitrogen Dioxides (as NO2)	µg/m <sup>3</sup>	28.3	80	IS:5182 (P-6) Reaff. 2017	NA
4.	Sulphur Dioxide (as SO2)	µg/m <sup>3</sup>	18.3	80	IS:5182 (P-2) Reaff. 2017	NA

*Reviewed by*  
REVIEWED BY

*Signature*  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



TC-11220



## TEST REPORT



ULR : TC1122023200007289F

Party Code : S/BHR/18922

REPORT NO. : SE1009005723/N

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
5.	Carbon Monoxide (as CO) (8 hours)	mg/m3	1.052	2.0	IS:5182 (P-10) Method-C Reaff. 2019	NA
6.	Benzene (as C6H6)	µg/m3	BDL	5.0	IS:5182 (P-11) Reaff. 2017	0.5
7.	Ammonia (as NH3)	µg/m3	BDL	400	IS:5182 (P-25);2018	20
8.	Ozone (as O3) (8 hours)	µg/m3	23.0	100	IS:5182 (P-9) Reaff. 2019	NA
9.	Lead (as Pb)	µg/m3	BDL	1.0	IS:5182 (P-22) Reaff. 2019	0.03
10.	Arsenic (as As)	ng/m3	BDL	6	Methods of Air sampling & Analysis-822	1.5
11.	Nickel (as Ni)	ng/m3	BDL	20	IS:5182 (P-26);2020	1.5
12.	Benzo (a) Pyrene (Bap)	ng/m3	BDL	1.0	IS:5182 (P-12) Reaff. 2019	0.06

NA-Not Applicable, BDL- Below Detection Limit

The above mentioned parameters meets the specification of EP Act Standard.

--- End of Test Report ---



*Reviewed by*  
REVIEWED BY

*Signature*  
D.G.M. Technical  
Authorized Signatory  
Environment  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007288F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.

REPORT NO. : SE1009005823/N  
\*Customer Ref.No. : NS

Buxar Thermal Power Project, Main Office  
Building, Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

\*Reference Date : NS  
Date of Sampling : 06/10/2023 To 07/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 16/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 16/10/2023  
Environmental Condition : 27±2°C, RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : NS  
SOP/Sampling Plan : SIMA/ENV/SOP/012  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ambient Air

### RESULTS OF ANALYSIS

Reference : As Per EP Act-1986

Sample Description : One Ambient Air sample was drawn by us from 06/10/2023 to 07/10/2023  
Name of Industry : SJVN Thermal Pvt. Ltd.  
Location of the Sampling Point : East of Chimney and Near Main Entry  
Date of Sampling : 06/10/2023 To 07/10/2023  
Sampling started at : 01:40 PM (Dt: 06/10/2023)  
Sampling completed at : 01:40 PM (Dt: 07/10/2023)  
Actual time of sampling : 1440 Minutes  
Flow rate of sampling : 1.295 m<sup>3</sup>/minute  
Total volume of air sampled : 1865 m<sup>3</sup> (For PM10) & 23.998 m<sup>3</sup> (For PM 2.5)  
Ambient temperature (°C) : 30

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m <sup>3</sup>	90.3	100	IS:5182 (P-23) Reaff. 2017	NA
2.	Particulate Matter (as PM - 2.5)	µg/m <sup>3</sup>	50.4	60	IS:5182 (P-24):2019	NA
3.	Nitrogen Dioxides (as NO2)	µg/m <sup>3</sup>	32.0	80	IS:5182 (P-6) Reaff. 2017	NA
4.	Sulphur Dioxide (as SO2)	µg/m <sup>3</sup>	20.4	80	IS:5182 (P-2) Reaff. 2017	NA

*Reviewed By*  
REVIEWED BY

*Authorized Signatory*  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

Remarks: 1. The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.  
2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.  
3. This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.  
4. The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.  
5. SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.  
6. SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.  
7. Re-testing charges will be applicable in case the results are reproducible.  
8. Duplicable copy will be issued on chargeable basis.  
9. This Test Report is not valid without a hologram.  
10. SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007288F

Party Code : S/BHR/18922

REPORT NO. : SE1009005823/N

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
5.	Carbon Monoxide (as CO) (8 hours)	mg/m <sup>3</sup>	1.242	2.0	IS:5182 (P-10) Method-C Reaff. 2019	NA
6.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5.0	IS:5182 (P-11) Reaff. 2017	0.5
7.	Ammonia (as NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400	IS:5182 (P-25):2018	20
8.	Ozone (as O <sub>3</sub> ) (8 hours)	µg/m <sup>3</sup>	24.3	100	IS:5182 (P-9) Reaff. 2019	NA
9.	Lead (as Pb)	µg/m <sup>3</sup>	BDL	1.0	IS:5182 (P-22) Reaff. 2019	0.03
10.	Arsenic (as As)	ng/m <sup>3</sup>	BDL	6	Methods of Air sampling & Analysis-822	1.5
11.	Nickel (as Ni)	ng/m <sup>3</sup>	BDL	20	IS:5182 (P-26):2020	1.5
12.	Benzo (a) Pyrene (Bap)	ng/m <sup>3</sup>	BDL	1.0	IS:5182 (P-12) Reaff. 2019	0.06

NA-Not Applicable, BDL- Below Detection Limit

The above mentioned parameters meets the specification of EP Act Standard.

--- End of Test Report ---



*Reviewed by*  
REVIEWED BY

*Signature*  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 2

SB

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007287F

Party Code : S/BHR/18922  
\*Issued to : SJVN Thermal Pvt. Ltd.  
  
Buxar Thermal Power Project, Main Office  
Building, Mohanpurwa, Akhouripur Gola, Chausa,  
Buxar-802114 , Bihar

REPORT NO. : SE1009005923/N  
\*Customer Ref.No. : NS  
  
\*Reference Date : NS  
Date of Sampling : 07/10/2023 To 08/10/2023  
Date of Received : 09/10/2023  
Date of Issue : 16/10/2023  
Start Date of Analysis : 09/10/2023  
Date of Completion : 16/10/2023  
Environmental Condition : 27±2°C,RH 65±5%  
Sample Condition : OK  
\*Sample Qty. : NS  
SOP/Sampling Plan : SIMA/ENV/SOP/012  
Test Method Deviation : NA  
Sample Collection : Sample Drawn By Us

\*Sample Name : Ambient Air

### RESULTS OF ANALYSIS

Reference : As Per EP Act-1986

Sample Description : One Ambient Air sample was drawn by us from 07/10/2023 to 08/10/2023  
  
Name of Industry : SJVN Thermal Pvt. Ltd.  
Location of the Sampling Point : North East of Chimney and East of Ash Dyke  
Date of Sampling : 07/10/2023 To 08/10/2023  
Sampling started at : 02:00 PM (Dt: 07/10/2023)  
Sampling completed at : 02:00 PM (Dt: 08/10/2023)  
Actual time of sampling : 1440 Minutes  
Flow rate of sampling : 1.265 m<sup>3</sup>/minute  
Total volume of air sampled : 1822 m<sup>3</sup> (For PM10) & 23.994 m<sup>3</sup> (For PM 2.5)  
Ambient temperature (°C) : 29

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m <sup>3</sup>	84.8	100	IS:5182 (P-23) Reaff. 2017	NA
2.	Particulate Matter (as PM - 2.5)	µg/m <sup>3</sup>	49.2	60	IS:5182 (P-24):2019	NA
3.	Nitrogen Dioxides (as NO <sub>2</sub> )	µg/m <sup>3</sup>	30.0	80	IS:5182 (P-6) Reaff. 2017	NA
4.	Sulphur Dioxide (as SO <sub>2</sub> )	µg/m <sup>3</sup>	19.2	80	IS:5182 (P-2) Reaff. 2017	NA

*Reviewed by*  
REVIEWED BY

*Divyanka Jha*  
Divyanka Jha  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

**Remarks:** 1. The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.  
2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.  
3. This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.  
4. The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.  
5. SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.  
6. SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.  
7. Re-testing charges will be applicable in case the results are reproducible.  
8. Duplicable copy will be issued on chargeable basis.  
9. This Test Report is not valid without a hologram.  
10. SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 1 of 2

VS

\* Indicates details provided by the customer



# SIMA LABS

Sophisticated Industrial Materials  
Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

Address : A-3/7, Mayapuri Industrial Area,  
Ph-II, New Delhi - 110064

Phone : +(91)-(011) 43854300

Email : reports@simalab.com

CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com



## TEST REPORT



ULR : TC1122023200007287F

Party Code : S/BHR/18922

REPORT NO. : SE1009005923/N

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
5.	Carbon Monoxide (as CO) (8 hours)	mg/m3	1.037	2.0	IS:5182 (P-10) Method-C Reaff. 2019	NA
6.	Benzene (as C6H6)	µg/m3	BDL	5.0	IS:5182 (P-11) Reaff. 2017	0.5
7.	Ammonia (as NH3)	µg/m3	BDL	400	IS:5182 (P-25):2018	20
8.	Ozone (as O3) (8 hours)	µg/m3	23.5	100	IS:5182 (P-9) Reaff. 2019	NA
9.	Lead (as Pb)	µg/m3	BDL	1.0	IS:5182 (P-22) Reaff. 2019	0.03
10.	Arsenic (as As)	ng/m3	BDL	6	Methods of Air sampling & Analysis-822	1.5
11.	Nickel (as Ni)	ng/m3	BDL	20	IS:5182 (P-26):2020	1.5
12.	Benzo (a) Pyrene (Bap)	ng/m3	BDL	1.0	IS:5182 (P-12) Reaff. 2019	0.06

NA-Not Applicable, BDL- Below Detection Limit

The above mentioned parameters meets the specification of EP Act Standard.

--- End of Test Report ---



*Reviewed by*  
REVIEWED BY

*Authorized Signatory*  
D.G.M. Technical  
Authorized Signatory  
AUTHORISED SIGNATORY

- Remarks:**
- The Results listed refer only to the above tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.
  - Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.
  - This Test Report is not to be reproduced wholly or in part and cannot be used as evidence in the Court of law and should not be used in any advertising media without written permission from SIMA Labs Pvt. Ltd.
  - The sample(s) of Drugs & Cosmetics will be destroyed after one year, Perishable samples (Other than Drugs & Cosmetics) will be destroyed after 7 days and non perishable samples will be destroyed after 30 days of the date of issue of test report or unless otherwise specified.
  - SIMA Labs Pvt. Ltd. will not be held responsible for the authenticity of any photocopied, forged and or partially presented test reports.
  - SIMA Labs Pvt. Ltd. will ensure all corrective action as per our policy in case of any discrepancy in any sample tested by SIMA Labs Pvt. Ltd.
  - Re-testing charges will be applicable in case the results are reproducible.
  - Duplicable copy will be issued on chargeable basis.
  - This Test Report is not valid without a hologram.
  - SIMA Stands for : Sophisticated Industrial Materials Analytic

Page : 2 of 2

VS

\* Indicates details provided by the customer

हिन्दुस्तान

पटना • गुरुवार • 09 मार्च 2017 • 04

## **मैसर्स एसजेवीएन थर्मल (प्रा.) लि. को पर्यावरणीय मंजूरी**

पर्यावरण, वन एवं जलवायु परिवर्तन (एमओईएफ एंड सीसी) मंत्रालय के दिनांक 28 फरवरी, 2017 के पत्र सं. जे. 13012/69/2008-आईए.आई(टी) के तहत बिहार में बक्सर जिले के चौसा गांव में प्रस्तावित "कोयले पर आधारित 2x660 मेगावाट के सुपर क्रिटिकल बक्सर थर्मल पावर परियोजना (बीटीपीपी)" को पर्यावरणीय मंजूरी प्रदान की है।

मंजूरी पत्र की प्रति बिहार राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है तथा इसके एमओईएफ एंड सीसी की वेबसाइट <http://envfor.nic.in> तथा [www.http://sjvn.nic.in](http://www.http://sjvn.nic.in) पर भी देखा जा सकता है।

**नायीकर्ता: मुख्य कार्यकारी अधिकारी**

**मैसर्स एसजेवीएन थर्मल (प्रा.) लि.**

(भारत सरकार के अधीन एक मिनी रत्न तथा शेड्यूल (ए)

पीएसयू-एसजेवीएन लि. की पूर्व स्वामित्व वाली अधीनस्थ कंपनी)

कार्यालय: नव दुर्गा कॉम्प्लेक्स, द्वितीय तल, अम्बेडकर चौक, कलेक्टर रोड,

बक्सर-802101 दूरभाष: 06183-223105

हिन्दुस्तान न्यूज पेपर दिनांक-9 मार्च 2017 को प्रकाशित  
किया गया।

के.ए.ए.

सूचना - मुख्य कार्यकारी अधिकारी

एन एस ओ

प्रमुख (ईएफ एम)

NT

## मेसर्स एसजेवीएन थर्मल ( प्रा. ) लि.

को पर्यावरणीय मंजूरी

पर्यावरण, वन एवं जलवायु परिवर्तन (एमओईएफ एंड सीसी) मंत्रालय के दिनांक 28 फरवरी, 2017 के पत्र सं० जे 13012/69/2008-आईए.आई(टी) के तहत बिहार में बक्सर जिले के चौसा गांव में प्रस्तावित "कोयले पर आधारित 2x660 मेगावाट के सुपर क्रिटिकल बक्सर थर्मल पावर परियोजना (बीटीपीपी)" को पर्यावरणीय मंजूरी प्रदान की है।

मंजूरी पत्र की प्रति बिहार राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है तथा इसके एमओईएफ एंड सीसी की वेबसाइट <http://envfor.nic.in> तथा [www.http://sjvn.nic.in](http://sjvn.nic.in) पर भी देखा जा सकता है।

जारीकर्ता : मुख्य कार्यकारी अधिकारी

मेसर्स एसजेवीएन थर्मल ( प्रा. ) लि.

( भारत सरकार के अधीन एक मिनी रत्न तथा शेड्यूल (ए) पीएसयू-एसजेवीएन लि. की पूर्ण स्वामित्व वाली अधीनस्थ कंपनी )

कार्यालय : नव दुर्गा कॉम्प्लेक्स, द्वितीय तल,  
अम्बेदकर चौक, कलेक्टरेट रोड, बक्सर - 802101

दूरभाष : 06183-223105

दैनिक जागरण 5 मार्च 2017 को प्रकाशित किया गया,

सूचनाार्थ :- मुख्य कार्यकारी अधिकारी  
सीएफ ओ  
प्रमुख (सीएफओ)

NR

2017-6/3

# SJVN Thermal (P) Ltd.

(A wholly owned subsidiary of SJVN Ltd.- A Mini Ratna & Schedule 'A' PSU under GoI)

Buxar Thermal Power Project (1320 MW)

CIN:U31908BR2007PTC017646

Email: liaisonpatna@gmail.com

Ref: STPL/BTPP/Envr./17-199

Date: April 20, 2017

The Additional Principal Chief Conservator of Forests (C),  
Ministry of Environment Forest and Climate Change,  
Regional office (Eastern-Central Zone Region)  
Bungalow No. A-2, Shyamali Colony,  
Ranchi - 834 002 (Jharkhand)

बिहार राज्य प्रदूषण नियंत्रण पार्षद  
पाटलीपुत्रा औद्योगिक क्षेत्र, पटना-13

24 APR 2017

प्राप्त किया

Attn.: Sh. Kanwarjit Singh, IFS

Sub: Environment Clearance of 1320 MW Buxar Thermal Power Project- regarding.

Dear Sir,

With reference to the subject cited matter, it is submitted that SJVN Thermal (P) Limited, a subsidiary of SJVN Limited (A Miniratna Schedule 'A' CPSU) is implementing the 1320 MW Buxar Thermal Power Project (BTPP) in village Chausa, district Buxar, Bihar. Environment clearance has been accorded to the project by MoEF&CC vide letter no. J-13012/69/2008-IA.I (T) dated 28.02.2017. (Copy enclosed)

In this regard, in compliance of the letter of environmental clearance, the following information/data is kindly submitted to your good office for reference and records.

- The final EIA/EMP report and additional information submitted to MoEF&CC for seeking environment clearance in hard and soft copy.
- The project information sheet in the prescribed format in hard and soft copy.
- Copy of the advertisement published in local newspapers for publicizing the grant of environmental clearance.
- A copy of the environment clearance letter has also been uploaded on SJVN's website; [www.sjvn.nic.in](http://www.sjvn.nic.in)

It is kindly submitted that the project execution work shall be started after obtaining PIB & CCEA approval and the project commissioning has accordingly been planned during FY 2022-2023. We further undertake that STPL shall comply with all conditions stipulated in the Environment Clearance letter and will be submitting the first six monthly compliance report (for period of April 2017- September 2017) in the month of October 2017 and thereafter half yearly regularly to your office.

In addition, it is kindly requested that all future correspondence to this office may be addressed to the Chief Executive Officer, SJVN Thermal Pvt Ltd, 2<sup>nd</sup> floor, Navdurga Complex, Near Ambedkar Chowk, Collectorate Road, Buxar -802101 E-mail: [liaisonpatna@gmail.com](mailto:liaisonpatna@gmail.com), Phone: 06183-223168, 9630089352.

Contd

We hope the above information is line with your requirements.

Thanking You,  
Yours Faithfully,

*Parveen Gupta*  
24/04/2017

(Parveen Gupta)  
Chief Executive Officer

Encl.(s): As above

Copy: For kind information please:

1. Member Secretary, Bihar State Pollution Control Board, Parivesh Bhawan, Patliputra Industrial Area, Patn



18576