

COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE

(FROM: OCTOBER 2025-MARCH 2026)

(Environment Clearance No. J-13011/24/2008-IA. II (T) dated 30/09/2013, MoEF notification G.S.R.02 (E) dated 2/1/2014. MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019)



For:
Talwandi Sabo Power Limited
Village-Banawala Distt- Mansa (Punjab)

TSPL/ ENV/ MoEF&CC/ EC/MAY-2026/01

Date: 28.05.2026

To,
The Additional Director(s),
Ministry of Environment, Forests & Climate Change,
Govt. of India, Northern Regional Office,
Bays No.24-25, Sector 31-A, Dakshin Marg,
Chandigarh-160030.

Subject: Submission of Half Yearly Environmental Clearance Compliance Report of 1980 MW (3X660 MW) Talwandi Sabo Power Limited, Village Banawala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab.

Ref: -

1. Environmental Clearance No. J-13011/24/2008-IA. II (T) dt.11/07/2008 and amended on 25/03/2010 & 17/06/2010.
2. MoEF Office Memorandum No. J-11013/41/2006-IA. II (I) dt. 06/04/2011.
3. Extension of validity period of Environment Clearance No. J-13011/24/2008-IA. II (T) dated 30/09/2013.
4. MoEF notification G.S.R.02 (E) dated 2/1/2014.
5. MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019

Dear Sir,

This has reference to the above cited subject. Please find enclosed herewith Half Yearly Environmental Clearance Compliance Report of 1980 MW (3X660 MW) Talwandi Sabo Power Limited, Village Banwala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab for the period of October, 2025 to March, 2026.

Thanking you and assuring you our best attention always.

Yours faithfully,

For, Talwandi Sabo Power Limited


Vikas Sharma
Head-Environment






Encl: As above

Cc: -

1. **The Director, MoEF&CC, New Delhi.**
2. **The Member Secretary, CPCB, New Delhi.**
3. **The Environmental Engineer, PPCB, Bathinda.**

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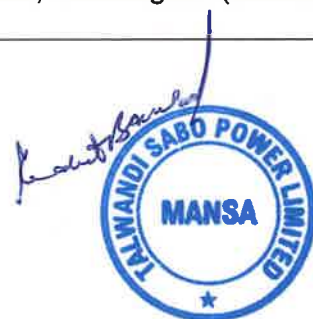
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TALWANDI SABO POWER LIMITED, BANAWALA

Compliance status of the conditions stipulated in Environmental Clearance of 1980 MW (3x660 MW) Talwandi Sabo Power Limited and additional conditions stipulated in Office Memorandums No. J-11013/41/2006-IA. II (I) & F.No.22-13/2019-IA.III dated 06/04/2011 & 28/08/2019 for the period of October, 2025 to March, 2026.

3	Conditions	Compliance Status
(i)	The total land requirement for the project shall be restricted to 2105 acres	Noted.
(ii)	Requisite quantity of coal for the ultimate capacity shall be obtained before commissioning the project	Noted.
(iii)	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively	Complied as Sulphur contents in the coal does not exceed 0.5% and as per MOEF&CC notification dated 21.05.2020, exemption has been provided for the requirement of 34% ash content in coal to be used in the Project. Annexure-1
(iv)	(As amended vide MoEF letter No. J-13011/24/2008-IA. II (T) dt. 17/06/2010) A Tri-flu stack of 275 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x and particulate. Exit velocity of the flue gases shall not be less than 25m/sec	Complied. Exit velocity of flue gases has taken care in design and condition noted.
(v)	High efficiency Electrostatic Precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³	Complied. Stack emission monitoring test reports of NABL accredited and MoEF&CC recognized laboratory for the period of October-25 to March-2026 are enclosed as Annexure-2 (a) to Annexure-2 (f) .
(vi)	Space provision shall be kept for retrofitting of FGD, If required at a later date	Complied.
(vii)	Adequate dust extraction system such as cyclone/bag filters and water spray system in dusty areas such as coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided	Complied.
(viii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash shall be used in a phased manner as per provision of the notification on Fly Ash Utilization issued by Ministry in September 1999 and its amendment. By the end of 9 th year full fly ash utilization should be ensured. Unutilized fly ash shall be disposed off in the ash pond in the form of High Concentration slurry and the bottom ash in	Fly ash is being used as per the provisions of the prevalent notifications issued by MOEF&CC Fly ash generation and utilization report is being submitted to PPCB regional office (monthly) and ash implementation report submitted to CEA, PPCB, CPCB and MoEF&CC Regional Office, Chandigarh (annually) regularly.



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	conventional slurry mode.	Copy of report attached at Annexure-3 (a) to 3(g) .
(ix)	Ash pond shall be lined with HDPE lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached	Complied.
(x)	Closed cycle cooling system with cooling towers shall be provided. COC of at least 5 shall be adopted and the effluents shall be treated as per the prescribed norms	Complied. Cooling tower blow down is being treated in Zero Discharge Unit and the treated water is being recycled for cooling tower make-up.
(xi)	The treated effluent conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangement shall be made that effluents and storm water do not get mixed.	Complied.
(xii)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation	Complied.
(xiii)	Rain water harvesting should be adopted. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Complied.
(xiv)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fire in coal yard especially during summer season. Copy of these measures with full details along with location plant lay out shall be submitted to the ministry as well to the regional office of the ministry at Chandigarh.	Complied. Details already submitted vide letter no. TSPL/MoEF/139 dated 18/7/2013 to MoEF&CC and its Regional office, Chandigarh.
(xv)	Storage facilities for liquid fuel such as LDO and HFO/LSHS shall be made in the plant area where risk in minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in DMP.	Complied. Mock drills are being conducted regularly at Fuel Oil Storage area. Latest Mock drill had conducted on 31.12.2025 during October - 2025 to March-2026 period are enclosed as Annexure- 4 .
(xvi)	Regular monitoring of ground water in and around ash pond area shall be carried out, records maintained and six-monthly reports shall be furnished to the Regional office of this Ministry	Complied. Ground water monitoring is being carried out in and around ash pond area. Test reports for the period October - 2025 to March-2026 from



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		NABL accredited and MoEF&CC recognized laboratory are enclosed as Annexure- 5 (a) to Annexure-5 (f).
(xvii)	A green belt of adequate width and density shall be developed around the plant periphery covering about 1/3 of the project area preferably with local species	Complied.
(xviii)	Activities under CSR shall be enhanced with proper financial allocation. Details of these activities shall be submitted to the Regional office of the Ministry, SPCB and the Ministry	Complied. CSR activities with financial allocation implemented during the period of October - 2025 to March-2026 is enclosed as Annexure-6.
(xix)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase	Complied.
(xx)	Leq of Noise levels emanating from turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplug/ ear muff 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.	Turbines have been provided with acoustic enclosure and installed inside enclosed building. Complied. Complied. Audiometric test is being conducted to workers engaged in noisy areas on six monthly basis and record is being maintained. There was no report of any hearing loss.
(xxi)	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM, RSPM shall be carried out in the impact zone and record maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring station and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional office of this ministry.	Complied. Complied. Ambient Air Quality monitoring reports from MoEF&CC recognized and NABL accredited laboratory for the period of October - 2025 to March-2026 are enclosed as Annexure-7 (a) to Annexure-7 (f).
(xxii)	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 locally concerned within seven days from the date of this clearance letter, informing that the project has been accorded environment clearance and copies of	Complied.



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	clearance letter are available with State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	
(xxiii)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Complied. Copy of Constitution of Environment Management Cell is attached as Annexure- '8' .
(xxiv)	Half yearly report on the status of implementation of the stipulated condition and environmental safeguards shall be submitted to this Ministry/Regional Office/CPCB/SPCB	Periodically submitting to MoEF & CC/ PPCB/ CPCB (copy of Previous letter is attached at Annexure - '9' and continue to comply the same in future also.
(xxv)	Regional office of the Ministry of Environment & Forest located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environment Impact Assessment report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring	Noted. Complied. Copies of EIA and DPR submitted vide letter no. TSPL/ MOEF/ 111 dated 16/6/2009 to Regional Office, Chandigarh.
(xxvi)	Separate funds shall be allocated for implementation of environment protection measures along with item-wise break up. These costs shall be included as part of the project cost. The fund earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Complied. Details of actual project expenditure with item-wise break up has already submitted vide letter no. TSPL/ ENV/ 02/ MoEF&CC/ 155 dated 24/5/2018. Complied. Year-wise expenditure incurred on Environmental protection measures during operational phase is submitting regularly. Expenditure incurred on Environmental protection measures during operational phase for the FY 2025-26 is enclosed as Annexure- '10' .
(xxvii)	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 date of land development work and commissioning of plant	1) Date of site approval from Govt. of Punjab- 25.08.2009 2) Date of financial closure- 26.09.2009 3) Date of commencement of land development work (Leveling and site grading)- 27.02.2010. 4) Consent to operate under Water & Air Acts from PPCB – 31.03.2014. 5) Commissioning of First unit (Unit- 2)- 05.07.2014, Second unit (Unit-3)-



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		25.11.2015 and Third unit (Unit-1) – 25.08.16.
(xxviii)	Full cooperation shall be extended to the Scientist / Officers from the Ministry/Regional Office of the Ministry at Chandigarh/ the CPCB/the SPCB who would be monitoring the compliance of environmental status.	Noted.
Additional Conditions vide Office Order No J-13011/24/2008-IA.II(T) dated 25/03/2010		Compliance Status
(xxix)	The project proponent shall upload the status of compliance of the conditions stipulated in environment clearance issued vide this Ministry's letter of even no dated 11.07.2008, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests	Complied and continue to comply the same in future also.
(xxx)	Criteria pollutants levels including NOx, RSPM (PM ₁₀ & PM _{2.5}), Sox (from Stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant	Complied and continue to comply the same in future also
Additional Conditions vide letter No J-13011/ 24/ 2008-IA.II(T) dated 30/09/2013		Compliance Status
(xxxi)	Scheme for harnessing solar power within the premises of the plant (particularly at available roof tops) shall be critically examined and status of implementation shall be submitted.	Complied. Status of implementation has already submitted vide letter no. TSPL/ ENV/ 02/ MoEF&CC/ 151 dated 28/11/2017.
(xxxii)	Waste Water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB and no effluent, under any circumstances whatsoever, should be discharged into low lying area or into estuary.	Complied.
(xxxiii)	A long-term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio activity	Complied. Reputed institute i.e. Central Institute of Mining and Fuel Research (CIMFR) had been engaged for long term study of radioactivity and heavy metals in coal & fly ash. Copy of report



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	and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	attached at Annexure- '11' .
(xxxiv)	It shall be ensured that in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	Complied. In built monitoring mechanism for CSR schemes already in place. Social audit for the FY-2025-26 got done from reputed government institute i.e. Central University of Punjab. Copy of report attached at Annexure- '12' .
(xxxv)	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 conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Integrated HSE policy has been formulated & identified and designated responsible at all levels of its hierarchy for ensuring adherence to the policy and compliance with conditions stipulated in Environment clearance and other applicable environmental laws and regulations.
4	The Ministry of Environment and Forest reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry, MOEF may impose additional environmental conditions or modify the existing ones, if necessary.	Noted
5	The environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.	Complied. All units i.e. 3x660 MW are in operational.
6	In case any deviation or alteration in the project proposed from those submitted to this Ministry for clearance a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required if any	Noted
7	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act,1981, the Environment (protection) Act,1986 and rules there under, Hazardous Wastes (Management and Handling) Rules 1989 and its amendments, The Public Liability Insurance Act,1991 and its amendments	Noted



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8	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997	Noted
Additional Conditions (as per MoEF Office Memorandum No.J.11013/41/2006-IA.II (I) dated 06/04/2011)		Compliance Status
(i)	Continuous monitoring of stack emissions as well as ambient air quality (as per notified standards) shall be carried out and continuous records maintained. Based on the monitored data, necessary corrective measures as may be required from time to time shall be taken to ensure that the levels are within permissible limits. The results of monitoring shall also be submitted to the respective Regional Office of MoEF regularly. Besides, the results of monitoring will also be put on the website of the company in the public domain.	Complied. TSPL has 4 CAAQMS station and OCEMS for 3 boiler stacks which have real time connectivity with PPCB and CPCB servers. Also, EC compliance report including reports for monitoring of stack emissions and that it is displayed on website. screenshot for TSPL website is attached at Annexure – ‘13’
(ii)	The six-monthly monitoring report as well as the monitored data on various parameters as stipulated in the environment clearance conditions shall be put on the website of the company and also regularly updated. The monitored data shall also be submitted to respective State Pollution Control Board/UTPCCs and the Regional Office of MoEF.	Periodically submitting to MoEF & CC/ PPCB/ CPCB (copy of Previous letter is attached at Annexure – ‘9’ and screenshot for TSPL website is attached at Annexure – ‘13’ and continue to comply the same in future also.
(iii)	The ambient air quality data as well as the stack emission data will also be displayed in public domain at some prominent place near the main gate of the company and updated in real time.	Complied and continue to comply the same in future also.
MoEF&CC Office Memorandum No. L-11011/ 17/ 2014-IA.I (T) dated 25/09/2014		Compliance Status
(i)	The Thermal Power Plants attracting the said Notification shall submit its compliance to the Ministry's Regional Office and SPCB concerned along with the compliance reports of the environmental safeguards stipulated in the ECs and Consents	Complied and continue to comply the same in future also.



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MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019		Compliance Status
(i)	The guidelines prepared by CPCB for disposal of fly ash for reclamation of low-lying areas and in stowing/backfilling of abandoned mines / quarries shall be followed during Disposal of ash in abandoned or working mines, as annexed.	Not applicable
(ii)	There Should at least be clearance of 500 m of safe distance be maintained from River and water body in case of ash disposal in abandoned mines to prevent embankment failures and fly ash flowing into the nearby water body.	Not applicable
(iii)	The top layer of the fly ash disposal area in the abandoned mines shall be kept moist during disposal.	Not applicable
(iv)	Top layer of the disposal area should have 70 cm overburden or gravels / stones and then 30 cm sweet soil cover. Subsequently, the vegetation shall be raised on the soil cover.	Not applicable
(v)	Bioaccumulation and bio-magnification test shall be conducted on surrounding flora and fauna (tree leaves, vegetation, crop yields and cattle population) during pre-monsoon and post monsoon to find out any trace metals as caped through groundwater or runoff.	Noted.
(vi)	Surface runoff and supernatant water, in any case shall not be let into the surrounding areas. It shall be collected by providing adequate drains around the mine. The Supernatant water along with surface runoff shall be treated and re-used for mixing ash and plant operations.	Not applicable
(vii)	To the extent possible, only decanted water from mine, make up water from treated effluents such as cooling tower blow down and treated sewage water shall be used for making ash slurry.	Complied. In power plant, cooling tower blow down is being used for making ash slurry.



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(viii)	Fly ash to be used as soil conditioner in agriculture need and to be applied in controlled manner to limit excessive application so as to prevent soil degradation. The optimize proportion of as to applied which is to be certified by the state Agricultural Universities / Colleges based on the soil testing.	Noted
(ix)	Approval from DGMS shall be obtained before disposing the ash in the mine voids.	Not applicable
(x)	Technology for conversion of fly ash into coarse granules for stowing in the underground mines to be explored.	Noted
(xi)	All the power plant should install different silos for dry collection of fly ash.	Complied. 3 Nos. separate Silos provided for dry fly ash collection.
(xii)	Records pertaining to details of month-wise Quantity of fly ash disposed and water consumption along with nature/source of water shall be maintained and submitted to ministry / regional office annually.	Complied. Details of quantity of fly ash disposed has already submitted to MoEF&CC, Regional Office, Chandigarh, CPCB and PPCB vide letter number TSPL/ENV/F&W/MoEF&CC/May-2026/01 dated 15.05.2026 Annexure – '14' Colling tower blowdown is the source of water for fly ash disposal.
(xiii)	Before starting the disposal of ash into mine voids, the NOC / Permission from the mine owner is to be obtained in case the mine closure activities are not completed or state government in case the mine has been the handed over to the state Govt. after its closure. A copy of such NOC/Permission is to be Submitted to the ministry and its Regional Offices	Not applicable





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असाधारण
EXTRAORDINARY
भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)
प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

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No. 1400]

नई दिल्ली, बृहस्पतिवार, मई 21, 2020/वैशाख 31, 1942
NEW DELHI, THURSDAY, MAY 21, 2020/VAISAKHA 31, 1942

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 21 मई, 2020

का.आ. 1561(अ).—जबकि केन्द्रीय सरकार ने पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 5 के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 के तहत अपनी शक्तियों का प्रयोग करते हुए, ऐश सामग्री (ऐश कंटेंट) को 34% तक की सीमा सहित कोयले का उपयोग करने के लिए ताप विद्युत संयंत्रों की कतिपय श्रेणियों को अधिदेशित करते हुए भारत के राजपत्र, असाधारण में सा.का.नि. 02 (अ), तारीख 2 जनवरी, 2014 द्वारा पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 3 के उपनियम 8 का संशोधन प्रकाशित किया।

और जबकि सा.का.नि. 02 (अ), तारीख 2 जनवरी, 2014 द्वारा उक्त अधिसूचना द्वारा निम्नलिखित समय-सीमा तक कच्चे अथवा मिश्रित अथवा लाभकारी कोयले (बेनिफिसिएटिड कोल), जिसमें ऐश सामग्री चौंतीस प्रतिशत (34%) से अधिक ना हो, का उपयोग करने के लिए त्रैमासिक आधार पर कोयला आधारित ताप विद्युत संयंत्रों को अधिदेशित किया गया है :

क्रम सं.	विद्युत संयंत्र की श्रेणी	गर्तमुख(पिट-हैड)/कोयला खान से ताप विद्युत संयंत्र के अवस्थान की दूरी	समय-सीमा
(क)	एकल ताप विद्युत संयंत्र (किसी भी क्षमता के) और कैटिप्व ताप विद्युत संयंत्र (100 मेगावाट और अधिक क्षमता सहित)	गर्तमुख विद्युत संयंत्रों को छोड़कर गर्तमुख से दूरी पर ध्यान दिए बिना शहरी क्षेत्रों, या परिस्थितिकीय रूप से संवेदनशील क्षेत्रों या अत्यधिक प्रदूषित क्षेत्रों में अवस्थित	2 जून, 2014 से प्रभावी।
(ख)		1000 किमी से अधिक दूर	2 जून, 2014 से प्रभावी।
(ग)		750-1000 किमी के बीच	1 जनवरी, 2015 से प्रभावी।
(घ)		500-749 किमी के बीच	5 जून, 2016 से प्रभावी।

और जबकि, केंद्रीय सरकार ने पर्यावरण (संरक्षण) नियमावली के नियम 5 के उप-नियम (3) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 6 और धारा 25 के अधीन अपनी शक्तियों का प्रयोग करते हुए भारत के राजपत्र, असाधारण में स.का.आ. 3305 (अ), तारीख 7 दिसंबर, 2015 और सा.का.नि.593 (अ), तारीख 28 जून, 2018 द्वारा विद्युत उत्पादन की क्षमता और विद्युत संयंत्र की स्थापना की तारीख और समय-बद्ध रीति से प्राप्त किए जाने के आधार पर ताप विद्युत संयंत्रों की विभिन्न श्रेणियों के लिए उत्सर्जन मानकों और विनिर्दिष्ट जल उपभोग को प्रकाशित किया था।

और जबकि, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने विद्युत मंत्रालय द्वारा दिनांक 13 अक्टूबर, 2017 को प्रस्तुत की गई यथा संशोधित योजना के अनुसार विभिन्न ताप विद्युत संयंत्रों को वर्ष 2022 तक प्रदूषण नियंत्रण उपकरण संस्थापित करने के लिए पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 5 के तहत निर्देश जारी करने के लिए केंद्रीय प्रदूषण नियंत्रण बोर्ड को दिनांक 7 दिसंबर, 2017 के फा.सं. क्यू-15017/40/2007-सीपीडब्ल्यू द्वारा निदेश दिए।

और जबकि, विद्युत मंत्रालय ने अन्य बातों के साथ-साथ यह अभ्यावेदन किया है कि प्रदूषण नियंत्रण प्रौद्योगिकियों के उन्नत होने के साथ ही ताप विद्युत संयंत्र दहन प्रक्रिया से उत्पन्न फ्लाई-ऐश का पता लगाने में बेहतर उपकरणों से सुसज्जित हुए हैं और बिना धुला कोयला अधिक कुशलता और मितव्ययता से प्रयोग किया जा सकता है; ताप विद्युत संयंत्रों को राख अवयवों की विभिन्न किस्मों के साथ कोयले के लिए डिजाइन किया गया है और इनमें सूखी राख (ड्राई ऐश) निकालने, उसका रखरखाव करने और राख के उपयोग के लिए आपूर्ति प्रणालियों को उपलब्ध कराया गया है; धुले कोयले के उपयोग से बिजली उत्पादन महंगा हो जाता है; ताप विद्युत संयंत्रों में उत्पन्न फ्लाई-ऐश सीमेंट निर्माण, ईंटें बनाने, सड़क बिछाने, खनन के उपरांत रिक्त हुए स्थलों और निचले क्षेत्रों को भरने के लिए बैक-फिल सामग्री जैसे कई लाभकारी उपयोगों के लिए प्रयोग की जा रही है; औसतन ऐश की मात्रा 34% तक बनाए रखने की आवश्यकता उद्योगों को कोयले का आयात करने के लिए प्रेरित करती है जिससे विदेशी मुद्रा इत्यादि का बहिर्वाह (आऊटफ्लो) होता है।

और जबकि, कोयला मंत्रालय ने अन्य बातों के साथ-साथ अभ्यावेदन किया है कि कोयला खानें वर्षों से कच्चे कोयले की गुणवत्ता, आकार और बाहरी सामग्री में सुधार के लिए निरंतर कड़े प्रयास कर रही हैं जिससे सभी संबंधित उपकरणों की टूट-फूट में उल्लेखनीय कमी आई है, कोयला धुलाई प्रक्रिया में कई प्रकार का रखरखाव होता है और कोयला खानों से धुलाई-स्थलों (वाशरीज़) तक कोयले की बड़ी मात्रा को सड़क द्वारा ले जाने और फिर आगे

विद्युत संयंत्रों तक ले जाने के लिए रेल साइडिंग तक ले जाने से बचना; धुलाई की प्रक्रिया केवल कोयले को धुले हुए कोयले और वाशरी अवशिष्ट में बँटती है जबकि खनित कोयले की राख की मात्रा वही रहती है; निम्न श्रेणी कोयला वाशरी अवशिष्ट कई छोटे उपयोगकर्ता उद्योगों में, अधिक प्रदूषण आदि सृजित करते हैं।

और जबकि, कोयला मंत्रालय और विद्युत मंत्रालय ने इसलिए अनुरोध किया है कि दिनांक 2 जनवरी, 2014 की अधिसूचना पर पुनः विचार द्वारा, विद्युत संयंत्रों को धुले हुए कोयले के प्रयोग के लिए अधिदेशित करने पर गौर किया जाना अपेक्षित है जिससे पर्यावरण पर प्रतिकूल प्रभाव डाले बिना कोयले की लंबी दूरी की धुलाई के लिए बिजली के उत्पादन में आसानी होगी।

और जबकि, नीति आयोग ने अपनी रिपोर्ट में वाशरीज, कोयला खनन, परिवहन और विद्युत संयंत्रों में कोयले की खपत की दृष्टि से इस विषय का विश्लेषण करने के बाद अन्य बातों के साथ-साथ संक्षिप्त में यह अभ्यावेदन किया है कि समीपवर्ती उद्योगों में वाशरी अवशिष्ट का इस्तेमाल अधिक प्रदूषण पैदा करता है; चूंकि वाशरी अवशिष्ट अनेक छोटे उद्योगों में वितरित होते हैं, इसलिए विद्युत संयंत्र पर उत्पन्न प्रदूषण की तुलना में अनेक स्थलों पर उत्पन्न प्रदूषण को नियंत्रित करना अधिक कठिन होता है; धुलाई प्रक्रिया में उत्पन्न राख (ऐश) कोयला कणों के साथ-साथ पानी को भी प्रदूषित करती है और इसका लाभकारी उपयोग नहीं किया जा सकता, कोयला धुलाई प्रक्रिया में पानी का अधिक प्रयोग होता है, अपशिष्ट सृजन होता है; वाशरी अवशिष्ट के निपटान का पर्यावरण पर प्रतिकूल प्रभाव होता है क्योंकि इसमें बड़ी मात्रा में निम्न श्रेणी कोयला अवशिष्ट, तरल अपशिष्ट प्रवाह, कोयला भण्डारण, कोयला मिट्टी का रखरखाव, अपवाह और उड़ने वाली धूल का रखरखाव और निपटान करना होता है, कोयला धुलाई का स्थलाकृति, जल निकास स्वरूप और गुणवत्ता, जल निकायों, बड़े पैमाने पर प्रतिवेशी वायु गुणवत्ता पर भी प्रतिकूल प्रभाव पड़ता है; धुलाई प्रक्रिया से विद्युत उत्पादन की लागत में भी वृद्धि होती है जिसका कोई पर्यावरणीय लाभ इत्यादि भी नहीं होता।

और जबकि, नीति आयोग ने इसलिए सिफारिश की है कि पर्यावरणीय और प्रदूषण मानकों का निर्धारण करना और उन्हें लागू करना विवेकपूर्ण होगा, जिन्हें कोयले में ऐश की मात्रा प्रतिबंधित किए जाने के बजाए, परिवहन दूरी के आधार पर विद्युत उत्पादकों के साथ जोड़ा जाना चाहिए।

और जबकि, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ऊर्जा मंत्रालय, कोयला मंत्रालय के अभ्यावेदनों, नीति आयोग और कई हितधारकों की रिपोर्ट पर विवेचन करने तथा सावधानीपूर्वक विचार करने के बाद एवं जनहित में निम्नलिखित निष्कर्ष पर पहुंचा है—

- i) खनित कोयले में ऐश सामग्री की मात्रा समान रहती है। वाशरी से ऐश सामग्री दो स्थानों (वाशरी और विद्युत संयंत्र) में विभाजित हो जाती है जबकि बिना धुला कोयला विद्युत संयंत्र में प्रयोग किया जाता है, ऐश सामग्री का निपटान केवल एक स्थान अर्थात् विद्युत संयंत्र में किया जाता है;
- ii) ताप विद्युत संयंत्र प्रदूषण नियंत्रण, ऐश प्रबंधन के लिए तकनीकी रूप से सुसज्जित होते हैं क्योंकि उनमें फ्लाई-ऐश का निराकरण करने के लिए उच्च क्षमता वाले उपकरण होते हैं, ड्राई ऐश निष्क्रमण और हैंडलिंग सिस्टम, ऐश उपयोग के लिए सप्लाई सिस्टम और फ्लू गैसों को तितर-बितर करने के लिए बड़े टाल (स्टैक) होते हैं;
- iii) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने उत्सर्जन मानक अधिसूचित किए हैं जिनमें क्रमशः ताप विद्युत संयंत्रों को समयबद्ध रीति से इन मानकों का पालन करने के लिए अधिदेशित किया गया है;

और जबकि, फ्लाई ऐश प्रबंधन और विभिन्न स्तरों पर बिना धुले कोयले के संसाधन के दौरान उत्पन्न अन्य संबंधित पर्यावरणीय पहलुओं सहित बिना धुले कोयले की हैंडलिंग के लिए यथासंभव उत्कृष्ट कार्यवाही को अपनाया समयोचित है।

और जबकि, कोयला मंत्रालय ने अभ्यावेदन किया है कि मौजूदा अप्रत्याशित कोविड-19 महामारी और इसके फलस्वरूप देश में ऊर्जा उत्पादन के लिए कोयला क्षेत्र की मांग को प्रोत्साहित कर घरेलू कोयले के उपयोग की तत्काल आवश्यकता को देखते हुए यह वांछनीय है कि तत्काल अधिसूचना जारी की जाए।

अब, इसलिए, केंद्रीय सरकार पर्यावरण (संरक्षण) नियमावली, 1986 के नियम 5 के उपनियम (4) के साथ पठित पर्यावरण संरक्षण अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 के तहत अपनी शक्तियों का प्रयोग करते हुए, उक्त नियमावली के नियम 5 के उपनियम (3) के भाग (अ) के तहत सूचना देने की अनिवार्यता को हटा देने के उपरांत जनहित में पर्यावरण (संरक्षण) नियमावली, 1986 को आगे संशोधित करते हुए एतद्वारा निम्नलिखित नियम बनाती है, अर्थात्:

1. (1) इन नियमों को पर्यावरण (संरक्षण) संशोधन नियमावली, 2020 कहा जाएगा।
(2) ये सरकारी गज़ट में प्रकाशित होने की तारीख से लागू होंगे।
2. पर्यावरण (संरक्षण) नियमावली, 1986 में, नियम 3 में, उपनियम (8) के लिए निम्नलिखित उपनियम प्रतिस्थापित होगा, अर्थात् :-

“(8) ताप विद्युत संयंत्रों को, ऐश सामग्री अथवा दूरी संबंधी अनुबंधों के बिना, निम्नलिखित शर्तों के अध्याधीन कोयले के प्रयोग की अनुमति होगी:

(1) उत्सर्जन मानदण्डों के लिए प्रौद्योगिकीय समाधान निर्धारित करना:

- i. वर्तमान अधिसूचनाओं और केंद्रीय प्रदूषण नियंत्रण बोर्ड द्वारा समय-समय पर जारी अनुदेशों के अनुसार विविक्त सामग्री के लिए विनिर्दिष्ट मानदंडों का अनुपालन करना।
- ii. वाशरी के मामले में मिडलिंग और अवशिष्टों का एफबीसी(तरलीकृत तल दहन) प्रौद्योगिकी आधारित विद्युत संयंत्रों में उपयोग किया जाए। एफबीसी संयंत्रों में मिडलिंग और अवशिष्टों के लिए वाशरी में संयोजन (लिकेज) होना चाहिए।

2. ऐश पॉन्ड का प्रबंधन:

- i. ताप विद्युत संयंत्र धुले हुए कोयले से बिना धुले हुए कोयले पर स्विच करने के कारण फ्लाई-ऐश पॉन्ड(मौजूदा विद्युत उत्पादन क्षमता) की अतिरिक्त क्षमता की पात्रता प्राप्त किए बिना, समय-समय पर जारी की गई अधिसूचनाओं में यथा-अधिसूचित शर्तों का पालन करें।
- ii. ऐश प्रबंधन के लिए जल की खपत को अनुकूल करने हेतु समुचित प्रौद्योगिकी समाधान लागू हों;
- iii. यदि आवश्यक हो तो फ्लाई-ऐश का अधिकतम उपयोग सुनिश्चित करने के लिए स्थल विशिष्ट स्थितियों के आधार पर ऐश का पृथक्करण इलैक्ट्रो-स्टैटिक अवक्षेपक (प्रेसिपिटेटर) स्तर पर किया जाए।
- iv. ताप विद्युत संयंत्र उपर्युक्त 2(i) के अध्याधीन, छोड़ी हुई अथवा चालू खानों (वर्किंग माइन्स) में (खान मालिकों द्वारा सुविधाजनक बनाया जाए) पर्यावरणीय सुरक्षा उपायों के साथ फ्लाई-ऐश का निपटान करें।

3. परिवहन:

- i. ढके हुए रेलवे वैगन (तिरपाल अथवा किसी अन्य माध्यम से ढके हुए रेलवे वैगन) और/अथवा खान-क्षेत्र से परे ढके हुए वाहक (कन्वेयर) द्वारा ही कोयले का परिवहन किया जाए। तथापि, जब तक रेल परिवहन/वाहक इन्फ्रास्ट्रक्चर उपलब्ध नहीं हो जाता, सड़क परिवहन ट्रकों द्वारा किया जाए जो तिरपाल अथवा किसी अन्य माध्यम से ढके हुए हों।
 - ii. ताप विद्युत संयंत्र द्वारा सुनिश्चित किया जाए कि
 - (क) रेल अथवा कन्वेयर द्वारा परिवहन के लिए विद्युत संयंत्र में अथवा इसके समीप रेल साइडिंग सुविधा अथवा कन्वेयर सुविधा स्थापित हो; और
 - (ख) यदि रेल अथवा कन्वेयर सुविधा की अनुपलब्धता के कारण परिवहन न हो पाए, तो यह सुनिश्चित किया जाए कि संबंधित खान के डिलीवरी स्थान से कोयले का परिवहन ढके हुए ट्रकों (तिरपाल अथवा किसी अन्य माध्यम द्वारा), अथवा किसी अन्य यंत्रिकृत बंद ट्रक से सड़क द्वारा हो।
- (4) इसे वित्तीय वर्ष 2020-21 और उसके बाद के लिए संबंधित परियोजनाओं हेतु संगत पर्यावरणीय स्वीकृति की अतिरिक्त शर्तें भी समझा जाएगा। मौजूदा पर्यावरणीय स्वीकृतियों को संशोधित किया जाएगा ताकि संगत क्षेत्रों के लिए उपरोक्त शर्तों को प्रवर्तनशील बनाया जा सके। तदनुसार संबंधित राज्य प्रदूषण नियंत्रण बोर्ड द्वारा प्रचालन की अनुमति जारी की जाएगी।

[फा.सं. 13014/01/2020—आईए-1(टी)]

गीता मेनन, संयुक्त सचिव

टिप्पण—मूल नियम भारत के राजपत्र में सं.का.आ. 844(अ), तारीख 19 नवंबर 1986 द्वारा प्रकाशित किए गए थे और पश्चातवर्ती संशोधन सं.का.आ. 82(अ), तारीख 16 फरवरी, 1987; का.आ. 64(अ), तारीख 18 जनवरी, 1988; सा.का.नि. 931(अ), तारीख 27 अक्टूबर, 1989; का.आ. 23(अ), तारीख 16 जनवरी, 1991; सा.का.नि. 95(अ), तारीख 12 फरवरी, 1992; सा.का.नि. 329(अ), तारीख 13 मार्च, 1992; सा.का.नि. 562(अ), तारीख 27 मई, 1992; सा.का.नि. 884(अ), तारीख 20 नवंबर, 1992; सा.का.नि. 386 (अ), तारीख 22 अप्रैल, 1993; सा.का.नि. 422 (अ), तारीख 19 मई, 1993; सा.का.नि. 801 (अ), तारीख 31 दिसंबर, 1993; सा.का.नि. 320 (अ), तारीख 16 मार्च, 1994; सा.का.नि. 560 (अ), तारीख 19 सितंबर, 1997; सा.का.नि. 378 (अ), तारीख 30 जून, 1998; सा.का.नि. 07 (अ), तारीख 22 दिसंबर, 1998; सा.का.नि. 407 (अ), तारीख 31 मई, 2001; सा.का.नि. 826 (अ), तारीख 16 नवंबर, 2009; सा.का.नि. 513 (अ), तारीख 28 जून, 2012; सा.का.नि. 02 (अ), तारीख 02 जनवरी, 2014; का.आ. 3305 (अ), तारीख 07 दिसंबर, 2015; सा.का.नि. 593 (अ), तारीख 28 जून, 2018; और का.आ. 236 (अ), तारीख 16 जनवरी, 2020 द्वारा किए गए।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 21st May, 2020

S.O. 1561(E).—Whereas the Central Government had, in exercise of its powers under Section 3, Section 6 and Section 25 of Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of Environment (Protection) Rules, 1986, published draft rules further to amend sub-rule (8) of rule 3 of Environment (Protection) Rules, 1986, in the Gazette of India, Extraordinary, *vide* number G.S.R. 02(E), dated the

2nd January, 2014 mandating certain categories of thermal power plants to use coal with ash content restricted to 34%.

And whereas, the said Notification *vide* number G.S.R. 02(E) dated the 2nd January, 2014, mandated coal based thermal power plants to use raw or blended or beneficiated coal with ash content not exceeding thirty-four percent (34%), on quarterly basis, by the time lines given below:

Sl. No.	Category of Power Plant	Distance of location of Thermal Power Plant from pit-head/coal mine	Time lines
(a)	Stand-alone Thermal Power Plants (any capacity), and Captive Thermal Power Plants (with capacity of 100 MW and above)	Located in urban areas, or ecologically sensitive areas or critically polluted areas, irrespective of distance from pit-head, except pit-head power plants.	With effect from 2 nd June, 2014.
(b)		beyond 1000 km	With effect from 2 nd June, 2014.
(c)		between 750-1000 km	With effect from 1 st January, 2015.
(d)		between 500-749 km	With effect from 5 th June, 2016.

And whereas, the Central Government had, in exercise of its powers under sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, in the Gazette of India, Extraordinary, *vide* number S.O. 3305 (E), dated the 7th December, 2015 and G.S.R. 593 (E), dated the 28th June, 2018 published the emission standards and specific water consumption for various category of thermal power plants, based on capacity of power generation and date of installation of power plant and to be achieved in time bound manner.

And whereas, the Ministry of Environment, Forest and Climate Change directed the Central Pollution Control Board *vide* F.No.Q-15017/40/2007-CPW dated the 7th December, 2017 to issue Directions under Section 5 of Environment (Protection) Act, 1986, to various Thermal Power Plants to install pollution control equipment as per the revised plan submitted by the Ministry of Power dated the 13th October, 2017 by 2022.

And whereas, the Ministry of Power has, *inter alia*, represented that with advancement in pollution control technologies, thermal power plants are better equipped to capture fly-ash generated in combustion process and unwashed coal can be used more efficiently and economically; thermal power plants are designed for coal with wide variety of ash content and are equipped with dry ash evacuation, handling and supply systems for ash utilisation; using washed coal makes power generation costlier; fly ash generated in thermal power plants is being used in several beneficial uses like cement manufacturing, brick making, road laying, back-fill material for reclamation of mine voids and low lying areas; requirement of maintaining average ash content to 34% prompts industries to undertake import of coal, resulting in outflow of foreign exchange etc.

And Whereas, the Ministry of Coal has, *inter alia*, represented that the coal mines are constantly striving to improve raw coal in terms of quality, size and extraneous material over the years which has considerably reduced wear and tear of all related equipment, coal washing process involves multiple handling and avoidable road transportation of huge quantities of coal from coal mines to washeries and then to rail sidings for onward transport to power plants; the washing process only divides the coal into washed coal and washery rejects while the ash content of mined coal remains the same; use of low grade coal washery rejects, in the multiple small user industries, generates more pollution etc.

And Whereas, the Ministry of Coal and Ministry of Power have, therefore, represented that the mandating power plants to use washed coal requires to be revisited by reconsidering the notification dated the 2nd January, 2014 which will help ease power generation for long distance haulage of coal without adverse impact on the environment.

And Whereas, the NITI Aayog, in its report after analysing the issue from the perspective of washeries, Coal mining, transportation and consumption of coal at power plants has, *inter alia*, summed up that use of washery rejects in nearby industries generates more pollution; since washery rejects are distributed in number of smaller industries, the pollution control at numerous points is more difficult than controlling the

pollution at power plant end; Ash generated in the washing process pollutes water along with coal particles and cannot be gainfully utilised; Coal washing process involves increased water use, effluent generation; Disposal of washery rejects has negative environmental impact as it has to handle and dispose huge quantity of low grade coal washery rejects, liquid effluent streams, coal storage, handling coal dust, runoff and fugitive dust; Coal washing also adversely impacts topography, water drainage pattern and quality, water bodies, surrounding air quality at large scale; Washing process increases the cost of power generation with no commensurate environmental advantages etc.

And Whereas, NITI Aayog has, therefore, recommended that it may be prudent to determine and enforce the environmental and pollution norms, to be complied with by the power generators, rather than restricting the ash content in coal, based on distance of transportation.

And Whereas, the Ministry of Environment, Forest and Climate Change, after deliberating the representations from Ministry of Power, Ministry of Coal, report of NITI Aayog and various stakeholders and after careful considerations & in larger public interest, arrived at the following:

- (i) The extent of ash content in mined coal remains the same. With washeries, the ash content gets divided at two places (washeries and the power plant), whereas if unwashed coal is used in power plant, the ash content is handled at only one place viz. the power plant;
- (ii) Thermal power plants are technologically equipped to address pollution control, ash management as they have high efficiency equipment to capture fly ash, dry ash evacuation and handling systems, ash supply systems for ash utilisation and tall stacks for wider dispersal of flue gases;
- (iii) The Ministry of Environment, Forest and Climate Change has notified emission norms, mandating respective thermal power plants to adhere to such norms in a time bound manner;

And Whereas, it is expedient to adopt best possible framework towards handling of unwashed coal including management of fly ash and other associated environmental aspects arising out of processing of unwashed coal at different stages.

And Whereas, the Ministry of Coal has represented that in view of the existing unprecedented COVID-19 pandemic and the resultant immediate requirement of utilization of domestic coal by stimulating coal sector demand for power generation in the country, it is desirable to issue the notification at the earliest.

Now, therefore, in exercise of the powers conferred by Section 3, Section 6 and Section 25 of the Environment Protection Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government, after having dispensed with the requirement of notice under clause (a) of sub-rule (3) of rule 5 of the said rules, in public interest, hereby makes the following rules to further amend the Environment (Protection) Rules, 1986, namely :-

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2020
(2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986, in rule 3, for sub-rule (8), the following sub-rule shall be substituted, namely :-

“(8) Use of coal by Thermal Power Plants, without stipulations as regards ash content or distance, shall be permitted subject to following conditions:

(1) **Setting Up Technology Solution for emission norms:**

- (i) Compliance of specified emission norms for Particulate Matter, as per extant notifications and instructions of Central Pollution Control Board, issued from time to time.
- (ii) In case of washeries, Middling and rejects to be utilized in FBC (Fluidised Bed Combustion) technology based thermal power plants. Washery to have linkage for middling and rejects in Fluidised Bed Combustion plants.

(2) **Management of Ash Ponds:**

- (i) The thermal powers plants shall comply with conditions, as notified in the Fly Ash notification issued from time to time, without being entitled to additional capacity of fly ash pond (for existing power generation capacity) on ground of switching from washed coal to unwashed coal.
- (ii) Appropriate Technology solutions shall be applied to optimise water consumption for Ash management;

- (iii) The segregation of ash may be done at the Electro-Static Precipitator stage, if required, based on site specific conditions, to ensure maximum utilization of fly ash;
- (iv) Subject to 2(i) above, the thermal power plants to dispose flyash in abandoned or working mines (to be facilitated by mine owner) with environmental safeguards.

(3) **Transportation:**

- (i) Coal transportation may be undertaken by covered Railway wagon (railway wagons covered by tarpaulin or other means) and/or covered conveyer beyond the mine area. However, till such time enabling Rail transport/conveyer infrastructure is not available, road transportation may be undertaken in trucks, covered by tarpaulin or other means.
 - (ii) It shall be ensured by the thermal power plant that
 - a. Rail siding facility or conveyer facility is set up at or near the power plant, for transportation by rail or conveyor; and
 - b. If transportation by rail or conveyor facility is not available, ensure that the coal is transported out from the Delivery Point of the respective mine in covered trucks (by tarpaulin or other means), or any mechanized closed trucks by road.
- (4) This shall also be deemed to be additional conditions of the relevant Environmental Clearances for respective projects for financial year 2020-21 and onwards. The existing Environmental Clearances shall stand modified so as to make the above conditions operative for relevant sectors. The Consent to Operate shall be issued by respective State Pollution Control Boards accordingly.”

[F.No.13014/01/2020-IA.I(T)]

GEETA MENON, Jt. Secy.

Note:-The principal rules were published in the Gazette of India *vide* number S.O. 844(E), dated the 19th November, 1986 and subsequently amended *vide* numbers S.O. 82(E), dated 16th February, 1987; S.O. 64(E), dated 18th January, 1988; G.S.R. 931(E), dated 27th October, 1989; S.O. 23(E), dated 16th January, 1991; G.S.R. 95(E), dated 12th February, 1992; G.S.R. 329(E), dated 13th March, 1992; G.S.R. 562(E), dated 27th May, 1992; G.S.R. 884(E), dated 20th November, 1992; G.S.R. 386(E), dated 22nd April, 1993; G.S.R. 422(E), dated 19th May, 1993; G.S.R. 801(E), dated 31st December, 1993; G.S.R. 320(E), dated 16th March, 1994; G.S.R. 560(E), dated 19th September, 1997; G.S.R. 378(E), dated 30th June, 1998; G.S.R. 7(E), dated 22nd December, 1998; G.S.R. 407(E), dated 31st May, 2001; G.S.R. 826(E), dated 16th November, 2009; G.S.R. 513(E), dated 28th June, 2012; G.S.R. 02(E) dated 2nd January, 2014; S.O. 3305 (E), dated 7th December, 2015; G.S.R. 593(E), dated 28th June, 2018 and S.O. 236 (E), dated 16th January, 2020.

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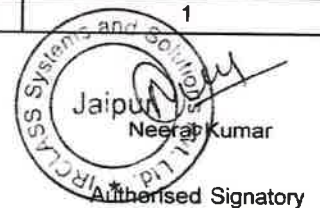
Report No.	ISSPL/EN/25-26/13761/A		Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab			
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85239)			
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (05:20 pm to 05:47pm), Qty. 1 No.			
4. Sample code	25-26/85239			
5. Date of sampling	10/10/2025			
6. Date of Sample testing	15/10/2025 To 20/10/2025			
7. Sampling duration (in minutes)	27.00 Min.			
8. Sampling Location	Boiler Stack (Unit -1 Third Unit) - 660 MW			
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)			
10. Type of stack	MS Circular			
11. Stack attached to	Boiler Stack			
12. Stack Diameter (in meters)	7.2			
13. Stack height (In meters)	275			
14. Type and quantity of fuel used	Coal + Boimass			
15. Instrument Code & Calibration Status	ISSPL/INS/C/134			
16. Control Measures if any	-			
17. Ambient Temperature (C°)	41°C			
18. Flue Gas Temperature (C°)	129°C			

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing: -					
1. Atmospheric Pollution: -					
1	Particulate Matter (PM)	IS 11255 (Part 1) 1985, RA:	32.5	mg/Nm3	1

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Report No.		ISSPL/EN/25-26/13761/A			Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit	
		2019				
2	Sulphur dioxide (SO ₂)	USEPA 6C: 1996/By Flue Gas Analyzer	986.4	mg/Nm ³	0.3	
3	Oxides of Nitrogen (NO _x)	USEPA 7E: 1990/By Flue Gas Analyzer	191.2	mg/Nm ³	0.2	
4	Carbon Monoxide as (CO)	USEPA 10: 1996/By Flue Gas Analyzer	5.10	PPM	0.1	
5	Carbon Dioxide as CO ₂	USEPA 3A:1989	10.1	%	0.1	
6	Oxygen as O ₂	USEPA 3A:1989	7.20	%	0.1	
7	Mercury as (Hg)	USEPA 29:1996/101A:1991	BLQ (LOQ: 0.001)	mg/Nm ³	0.001	

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

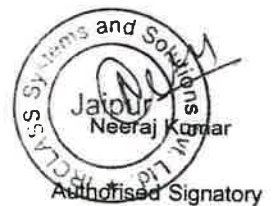
Remark:1: PM, SO₂, NO_x at 6% O₂ Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

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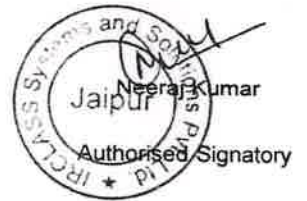
Report No.	ISSPL/EN/25-26/13761/B	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85239)		
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (05:20 pm to 05:47pm), Qty. 1 No.		
4. Sample code	25-26/85239		
5. Date of sampling	10/10/2025		
6. Date of Sample testing	15/10/2025 To 20/10/2025		
7. Sampling duration (in minutes)	27.00 Min.		
8. Sampling Location	Boiler Stack (Unit -1 Third Unit) - 660 MW		
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)		
10. Type of stack	MS Circular		
11. Stack attached to	Boiler Stack		
12. Stack Diameter (in meters)	7.2		
13. Stack height (in meters)	275		
14. Type and quantity of fuel used	Coal + Boimass		
15. Instrument Code & Calibration Status	ISSPL/INS/C/134		
16. Control Measures if any	-		
17. Ambient Temperature (oC)	41°C		
18. Flue Gas Temperature (oC)	129°C		

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing:-					
1. Atmospheric Pollution:-					
1	Velocity of Gas	CPCB Emission	25.4	m/s	Not Specified

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Report No.		ISSPL/EN/25-26/13761/B			Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit	
		Regulation (Part -3)				
2	Temperature	CPCB Emission Regulation (Part -3)	129	°C	5	
3	Moisture	USEPA 4	13.8	%	1	

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

Remark:1: PM, SO2, NOX at 6% O2 Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

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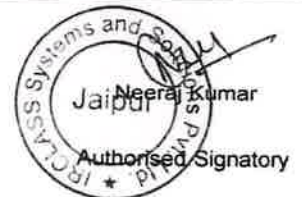
Report No.	ISSPL/EN/25-26/13762/A	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSP/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85238)		
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (04:00 pm to 04:27pm), Qty. 1 No.		
4. Sample code	25-26/85238		
5. Date of sampling	10/10/2025		
6. Date of Sample testing	15/10/2025 To 20/10/2025		
7. Sampling duration (in minutes)	27.00 Min.		
8. Sampling Location	Boiler Stack (Unit -2 First Unit) - 660 MW		
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)		
10. Type of stack	MS Circular		
11. Stack attached to	Boiler Stack		
12. Stack Diameter (in meters)	7.2		
13. Stack height (in meters)	275		
14. Type and quantity of fuel used	Coal + Boimass		
15. Instrument Code & Calibration Status	ISSPL/INS/C/134		
16. Control Measures if any	-		
17. Ambient Temperature (C°)	41°C		
18. Flue Gas Temperature (C°)	130°C		

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing: -					
1. Atmospheric Pollution: -					
1	Particulate Matter (PM)	IS 11255 (Part 1) 1985, RA:	36.7	mg/Nm3	1

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Report No.		ISSPL/EN/25-26/13762/A			Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit	
		2019				
2	Sulphur dioxide (SO ₂)	USEPA 6C: 1996/By Flue Gas Analyzer	992.5	mg/Nm ³	0.3	
3	Oxides of Nitrogen (NO _x)	USEPA 7E: 1990/By Flue Gas Analyzer	187.7	mg/Nm ³	0.2	
4	Carbon Monoxide as (CO)	USEPA 10: 1996/By Flue Gas Analyzer	4.50	PPM	0.1	
5	Carbon Dioxide as CO ₂	USEPA 3A:1989	10.1	%	0.1	
6	Oxygen as O ₂	USEPA 3A:1989	7.10	%	0.1	
7	Mercury as (Hg)	USEPA 29:1996/101A:1991	BLQ (LOQ: 0.001)	mg/Nm ³	0.001	

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

Remark-1: PM, SO₂, NO_x at 6% O₂ Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

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Neeraj Kumar
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Tel: 0141-4805672 | Email – lab@irclass.org | Website : www.isspllab.com

Report No.	ISSPL/EN/25-26/13762/B	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSP/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85238)		
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (04:00 pm to 04:27pm), Qty. 1 No.		
4. Sample code	25-26/85238		
5. Date of sampling	10/10/2025		
6. Date of Sample testing	15/10/2025 To 20/10/2025		
7. Sampling duration (in minutes)	27.00 Min.		
8. Sampling Location	Boiler Stack (Unit -2 First Unit) - 660 MW		
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)		
10. Type of stack	MS Circular		
11. Stack attached to	Boiler Stack		
12. Stack Diameter (in meters)	7.2		
13. Stack height (in meters)	275		
14. Type and quantity of fuel used	Coal + Boimass		
15. Instrument Code & Calibration Status	ISSPL/INS/C/134		
16. Control Measures if any	-		
17. Ambient Temperature (oC)	41°C		
18. Flue Gas Temperature (oC)	130°C		

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing:-					
1. Atmospheric Pollution:-					
1	Velocity of Gas	CPCB Emission	25.3	m/s	Not Specified

Page No. 1/2


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SYSTEMS AND SOLUTIONS PRIVATE LIMITED

Testing Laboratory

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Report No.		ISSPL/EN/25-26/13762/B		Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
		Regulation (Part -3)			
2	Temperature	CPCB Emission Regulation (Part -3)	130	°C	5
3	Moisture	USEPA 4	13.2	%	1

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

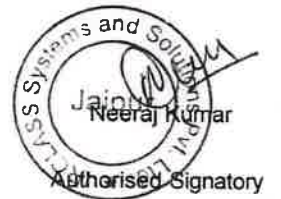
Remark-1: PM, SO₂, NO_x at 6% O₂ Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

Page No. 2/2


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SYSTEMS AND SOLUTIONS PRIVATE LIMITED
Testing Laboratory

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Report No.	ISSPL/EN/25-26/13763/A	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSP/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85237)		
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (04:40 pm to 05:07pm), Qty. 1 No.		
4. Sample code	25-26/85237		
5. Date of sampling	10/10/2025		
6. Date of Sample testing	15/10/2025 To 20/10/2025		
7. Sampling duration (in minutes)	27.00 Min.		
8. Sampling Location	Boiler Stack (Unit -3 Second Unit) - 660 MW		
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)		
10. Type of stack	MS Circular		
11. Stack attached to	Boiler Stack		
12. Stack Diameter (in meters)	7.2		
13. Stack height (in meters)	275		
14. Type and quantity of fuel used	Coal + Boimass		
15. Instrument Code & Calibration Status	ISSPL/INS/C/134		
16. Control Measures if any	-		
17. Ambient Temperature (C°)	41°C		
18. Flue Gas Temperature (C°)	130°C		

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing: -					
1. Atmospheric Pollution: -					
1	Particulate Matter (PM)	IS 11255 (Part 1) 1985, RA:	39.8	mg/Nm3	1

Page No. 1/2


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Report No.	ISSPL/EN/25-26/13763/A			Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
		2019			
2	Sulphur dioxide (SO ₂)	USEPA 6C: 1996/By Flue Gas Analyzer	976.3	mg/Nm ³	0.3
3	Oxides of Nitrogen (NO _X)	USEPA 7E: 1990/By Flue Gas Analyzer	194.7	mg/Nm ³	0.2
4	Carbon Monoxide as (CO)	USEPA 10: 1996/By Flue Gas Analyzer	5.0	PPM	0.1
5	Carbon Dioxide as CO ₂	USEPA 3A:1989	10.4	%	0.1
6	Oxygen as O ₂	USEPA 3A:1989	7.0	%	0.1
7	Mercury as (Hg)	USEPA 29:1996/101A:1991	BLQ (LOQ: 0.001)	mg/Nm ³	0.001

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification


Remark:1: PM, SO₂, NO_X at 6% O₂ Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

Page No. 2/2


 Reviewed By


 Weeral Kumar
 Authorised Signatory



SYSTEMS AND SOLUTIONS PRIVATE LIMITED

Testing Laboratory

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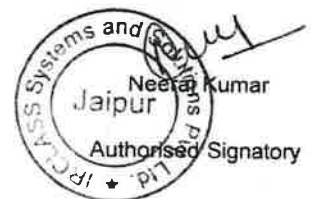
Report No.	ISSPL/EN/25-26/13763/B	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85237)		
3. Material Identification with details	Boiler Stack: Date and Time of Sampling: 10/10/2025 (04:40 pm to 05:07pm), Qty. 1 No.		
4. Sample code	25-26/85237		
5. Date of sampling	10/10/2025		
6. Date of Sample testing	15/10/2025 To 20/10/2025		
7. Sampling duration (in minutes)	27.00 Min.		
8. Sampling Location	Boiler Stack (Unit -3 Second Unit) - 660 MW		
9. Sampling Protocol	IS:11255 (Pt-1) 1985 (RA 2014)		
10. Type of stack	MS Circular		
11. Stack attached to	Boiler Stack		
12. Stack Diameter (in meters)	7.2		
13. Stack height (in meters)	275		
14. Type and quantity of fuel used	Coal + Boimass		
15. Instrument Code & Calibration Status	ISSPL/INS/C/134		
16. Control Measures if any	-		
17. Ambient Temperature (oC)	41°C		
18. Flue Gas Temperature (oC)	130°C		

RESULTS

S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
3I. Chemical Testing:-					
1. Atmospheric Pollution:-					
1	Velocity of Gas	CPCB Emission	25.5	m/s	Not Specified

Page No. 1/2

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SYSTEMS AND SOLUTIONS PRIVATE LIMITED

Testing Laboratory

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Report No.		ISSPL/EN/25-26/13763/B		Date	20/10/2025
S.No.	Test Parameters	Test Method	Results	Units	Detection Limit
		Regulation (Part -3)			
2	Temperature	CPCB Emission Regulation (Part -3)	130	°C	5
3	Moisture	USEPA 4	13.5	%	1

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

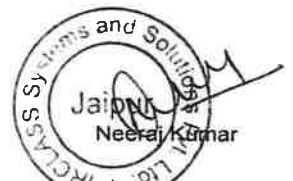
Remark-1: PM, SO₂, NO_x at 6% O₂ Corr

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

Page No. 2/2


 Reviewed By


 Authorised Signatory



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NSEL171125NA029	
Type of Sample # : Stack Emission			
Reference Type : PO Number		Reference No : 5100044398	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	14/11/2025 - 14/11/2025
Sampling Protocol	IS 11255. CPCB. LATS/80/2013-14	Date of Sample Receipt	17/11/2025
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	17/11/2025 - 25/11/2025
Source of Emission	Boiler Stack (Unit 1; Third Unit) 660MW	Date of reporting	25/11/2025
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	36	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1080	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	177	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.2	IS 11255 : Part 3
6	Moisture	%	13.3	IS 11255 : Part 3
7	Temperature	°C	129	IS 11255 : Part 3
8	Oxygen as O2	%	6.5	EL-QTM-08
9	Carbon dioxide as CO2	%	10.8	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NSEL171125NA029

Type of Sample # : Stack Emission


End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.


Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

TEST REPORT



ULR No : NA		Test Report No : NSEL171125NA028	
Type of Sample # : Stack Emission			
Reference Type : PO Number		Reference No : 5100044398	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	14/11/2025 - 14/11/2025
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	17/11/2025
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	17/11/2025 - 25/11/2025
Source of Emission	Boiler Stack (Unit 2; First Unit) 660MW	Date of reporting	25/11/2025
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm ³	40	IS 11255 (Part-1)
2	Sulphur dioxide as SO ₂ (at 6% O2 Corr.)	mg/Nm ³	1153	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm ³	226	EL-QTM-08
4	Mercury	mg/Nm ³	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.7	IS 11255 : Part 3
6	Moisture	%	13.5	IS 11255 : Part 3
7	Temperature	°C	128	IS 11255 : Part 3
8	Oxygen as O ₂	%	6.1	EL-QTM-08
9	Carbon dioxide as CO ₂	%	11.2	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm ³	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar
Authorized Signatory - Chemical

EL-FMT-7.8.2-SE

Page No.1/2

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NSEL171125NA028

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

Authorized Signatory- Chemical



TEST REPORT



ULR No : NA		Test Report No : NSEL171125NA027	
Type of Sample # : Stack Emission			
Reference Type : PO Number		Reference No : 5100044398	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	14/11/2025 - 14/11/2025
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	17/11/2025
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	17/11/2025 - 25/11/2025
Source of Emission	Boiler Stack (Unit 3; Second Unit) 660MW	Date of reporting	25/11/2025
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	39	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1073	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	218	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.5	IS 11255 : Part 3
6	Moisture	%	14.1	IS 11255 : Part 3
7	Temperature	°C	127	IS 11255 : Part 3
8	Oxygen as O2	%	6.3	EL-QTM-08
9	Carbon dioxide as CO2	%	10.5	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7 8.2-SE

Page No,1/2

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NSEL171125NA027

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NSEL151225NA181	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	11/12/2025 - 11/12/2025
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	15/12/2025
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	15/12/2025 - 23/12/2025
Source of Emission	Boiler Stack (Unit-1; Third Unit) 660 MW	Date of reporting	23/12/2025
Stack Description	Single, Circular & Metal	Fuel Used	Coal+Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP followed with fabric filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	42	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1081	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	175	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.3	IS 11255 : Part 3
6	Moisture	%	14.4	IS 11255 : Part 3
7	Temperature	°C	128	IS 11255 : Part 3
8	Oxygen as O2	%	6.5	EL-QTM-08
9	Carbon dioxide as CO2	%	10.3	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

Page No.1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NSEL151225NA181

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NSEL151225NA182	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	11/12/2025 - 11/12/2025
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	15/12/2025
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	15/12/2025 - 23/12/2025
Source of Emission	Boiler Stack (Unit-3; Second Unit) 660 MW	Date of reporting	23/12/2025
Stack Description	Single, Circular & Metal	Fuel Used	Coal+Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP followed by fabric filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm ³	44	IS 11255 (Part-1)
2	Sulphur dioxide as SO ₂ (at 6% O2 Corr.)	mg/Nm ³	1029	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm ³	178	EL-QTM-08
4	Mercury	mg/Nm ³	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.9	IS 11255 : Part 3
6	Moisture	%	14.1	IS 11255 : Part 3
7	Temperature	°C	126	IS 11255 : Part 3
8	Oxygen as O ₂	%	6.3	EL-QTM-08
9	Carbon dioxide as CO ₂	%	10.6	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm ³	BDL (5)	EL-QTM-08

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

Page No. 1/2

TEST REPORT



ULR No : NA

Test Report No : NSEL151225NA182

Type of Sample # : Stack Emission

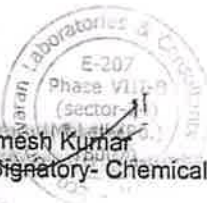
Remarks : NA

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NSEL120126NA082	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	08/01/2026 - 08/01/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	12/01/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	12/01/2026 - 20/01/2026
Source of Emission	Boiler Stack- 660 MW (Unit-1, Third Unit)	Date of reporting	20/01/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Boimass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	42	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1025	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	171	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	26.7	IS 11255 : Part 3
6	Moisture	%	15.1	IS 11255 : Part 3
7	Temperature	°C	129	IS 11255 : Part 3
8	Oxygen as O2	%	6.2	EL-QTM-08
9	Carbon dioxide as CO2	%	10.5	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar
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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NSEL120126NA082

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
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TEST REPORT



ULR No : NA		Test Report No : NSEL120126NA081	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	08/01/2026 - 08/01/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	12/01/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	12/01/2026 - 20/01/2026
Source of Emission	Boiler Stack- 660 MW (Unit-2, First Unit)	Date of reporting	20/01/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Boimass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	40	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1033	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	175	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	26.1	IS 11255 : Part 3
6	Moisture	%	14.7	IS 11255 : Part 3
7	Temperature	°C	128	IS 11255 : Part 3
8	Oxygen as O2	%	6.3	EL-QTM-08
9	Carbon dioxide as CO2	%	10.7	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

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Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

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TEST REPORT



ULR No : NA

Test Report No : NSEL120126NA081

Type of Sample # : Stack Emission

****End of Report****

OTHER INFORMATION

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Mr. Umesh Kumar

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TEST REPORT



ULR No : NA		Test Report No : NSEL120126NA080	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	08/01/2026 - 08/01/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	12/01/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	12/01/2026 - 20/01/2026
Source of Emission	Boiler Stack- 660 MW (Unit-3, Second Unit)	Date of reporting	20/01/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Boimass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	38	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1052	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	178	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.8	IS 11255 : Part 3
6	Moisture	%	15.1	IS 11255 : Part 3
7	Temperature	°C	126	IS 11255 : Part 3
8	Oxygen as O2	%	6.6	EL-QTM-08
9	Carbon dioxide as CO2	%	10.3	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Mr. Umesh Kumar
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TEST REPORT



ULR No : NA

Test Report No : NSEL120126NA080

Type of Sample # : Stack Emission

Remarks : NA

****End of Report****

OTHER INFORMATION

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TEST REPORT



ULR No : NA		Test Report No : NSEL160226NA154	
Type of Sample # : Stack Emission		Reference No : 5100044398 Dt.: 18/11/2025	
Reference Type : Work Order No			
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/02/2026 - 12/02/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	16/02/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	16/02/2026 - 25/02/2026
Source of Emission	Boiler Stack (Unit- 1; Third Unit) 660 MW	Date of reporting	25/02/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal+ Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

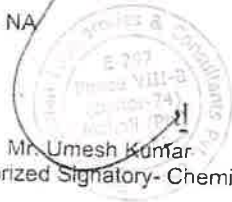
RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm ³	40	IS 11255 (Part-1)
2	Sulphur dioxide as SO ₂ (at 6% O2 Corr.)	mg/Nm ³	1052	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm ³	169	EL-QTM-08
4	Mercury	mg/Nm ³	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	26.6	IS 11255 : Part 3
6	Moisture	%	13.8	IS 11255 : Part 3
7	Temperature	°C	125	IS 11255 : Part 3
8	Oxygen as O ₂	%	6.5	EL-QTM-08
9	Carbon dioxide as CO ₂	%	10.5	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm ³	BDL (5)	EL-QTM-08

Remarks : NA



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ECO BHAWAN

E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NSEL160226NA154

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

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TEST REPORT



ULR No : NA		Test Report No : NSEL160226NA155	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/02/2026 - 12/02/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	16/02/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	16/02/2026 - 25/02/2026
Source of Emission	Boiler Stack (Unit- 2; First Unit) 660 MW	Date of reporting	25/02/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal+ Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	38	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1085	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	173	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.6	IS 11255 : Part 3
6	Moisture	%	14	IS 11255 : Part 3
7	Temperature	°C	128	IS 11255 : Part 3
8	Oxygen as O2	%	6.3	EL-QTM-08
9	Carbon dioxide as CO2	%	10.8	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar

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EL-FMT-7.3 2-SE

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ECO BHAWAN

E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NSEL160226NA155

Type of Sample # : Stack Emission

****End of Report****

OTHER INFORMATION

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TEST REPORT



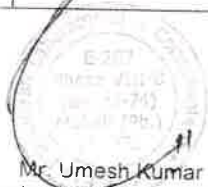
ULR No : NA		Test Report No : NSEL160226NA156	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/02/2026 - 12/02/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	16/02/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	16/02/2026 - 25/02/2026
Source of Emission	Boiler Stack (Unit- 3; Second Unit) 660 MW	Date of reporting	25/02/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal+ Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm ³	42	IS 11255 (Part-1)
2	Sulphur dioxide as SO ₂ (at 6% O2 Corr.)	mg/Nm ³	1031	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm ³	166	EL-QTM-08
4	Mercury	mg/Nm ³	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.7	IS 11255 : Part 3
6	Moisture	%	14.2	IS 11255 : Part 3
7	Temperature	°C	132	IS 11255 : Part 3
8	Oxygen as O ₂	%	6.4	EL-QTM-08
9	Carbon dioxide as CO ₂	%	10.6	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm ³	BDL (5)	EL-QTM-08



Mr. Umesh Kumar
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EL-FMT-7.8.2-SE

Page No. 1/2

TEST REPORT



ULR No : NA

Test Report No : NSEL160226NA156

Type of Sample # : Stack Emission

Remarks : NA

****End of Report****

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

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Authorized Signatory- Chemical



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TEST REPORT



ULR No : NA		Test Report No : NSEL130326NA080	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/03/2026 - 12/03/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	13/03/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	13/03/2026 - 21/03/2026
Source of Emission	Boiler Stack (Unit-1; Third Unit) 660 MW	Date of reporting	21/03/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm ³	31	IS 11255 (Part-1)
2	Sulphur dioxide as SO ₂ (at 6% O2 Corr.)	mg/Nm ³	1061	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm ³	165	EL-QTM-08
4	Mercury	mg/Nm ³	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.2	IS 11255 : Part 3
6	Moisture	%	13.3	IS 11255 : Part 3
7	Temperature	°C	139	IS 11255 : Part 3
8	Oxygen as O ₂	%	6.5	EL-QTM-08
9	Carbon dioxide as CO ₂	%	10.5	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm ³	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NSEL130326NA080

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

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TEST REPORT



ULR No : NA		Test Report No : NSEL130326NA081	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/03/2026 - 12/03/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	13/03/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	13/03/2026 - 21/03/2026
Source of Emission	Boiler Stack (Unit-2; First Unit) 660 MW	Date of reporting	21/03/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	37	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1056	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	168	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	26.0	IS 11255 : Part 3
6	Moisture	%	13.1	IS 11255 : Part 3
7	Temperature	°C	136	IS 11255 : Part 3
8	Oxygen as O2	%	6.3	EL-QTM-08
9	Carbon dioxide as CO2	%	10.8	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

EL-FMT-7.8.2-SE

Page No.1/2

TEST REPORT



ULR No : NA

Test Report No : NSEL130326NA081

Type of Sample # : Stack Emission

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NSEL130326NA082	
Type of Sample # : Stack Emission			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Customer Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/03/2026 - 12/03/2026
Sampling Protocol	IS 11255, CPCB: LATS/80/2013-14	Date of Sample Receipt	13/03/2026
Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	13/03/2026 - 21/03/2026
Source of Emission	Boiler Stack (Unit-3; Second Unit) 660 MW	Date of reporting	21/03/2026
Stack Description	Single, Circular & Metal	Fuel Used	Coal + Biomass
Point of Sample Collection	From Port Hole after APCD	APCD Details (If provided)	ESP Followed with Fabric Filter
Standard/Specifications	Thermal Power Plant : EPA 1986, Sr. No. 25		
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Stack Emission)

Sr.No	Test Parameter	Unit	Result	Test Method
1	Particulate Matter (at 6% O2 Corr.)	mg/Nm3	30	IS 11255 (Part-1)
2	Sulphur dioxide as SO2 (at 6% O2 Corr.)	mg/Nm3	1033	EL-QTM-08
3	Oxides of Nitrogen (at 6% O2 Corr.)	mg/Nm3	173	EL-QTM-08
4	Mercury	mg/Nm3	BDL (0.01)	USEPA Method 29
5	Flue gas velocity	m/s	25.5	IS 11255 : Part 3
6	Moisture	%	13.6	IS 11255 : Part 3
7	Temperature	°C	138	IS 11255 : Part 3
8	Oxygen as O2	%	6.2	EL-QTM-08
9	Carbon dioxide as CO2	%	10.7	EL-QTM-08
10	Carbon Monoxide as CO	mg/Nm3	BDL (5)	EL-QTM-08

Mr. Umesh Kumar

Authorized Signatory- Chemical

EL-FMT-7 8.2-SE

Page No. 1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

☎ 0172-4616225 📠 9781303109 ✉ contact@ecoparyavaran.org | md@ecoparyavaran.org 🌐 www.ecoparyavaran.org

TEST REPORT



IC-11818

ULR No : NA

Test Report No : NSEL130326NA082

Type of Sample # : Stack Emission

Remarks : NA

****End of Report****

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar

Authorized Signatory- Chemical

TSPL/ENV/PPCB/ASH/NOV-2025/08(a)

Date: 05 November 2025

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of revised month-wise progress report regarding generation and utilization of fly ash for the month of October, 2025.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

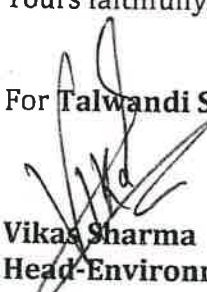
Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith revised month-wise progress report regarding generation and utilization of fly ash for the month of October, 2025 as **Annexure-1**.

Hope that the above information will suffice the requirement.

Yours faithfully,

For **Talwandi Sabo Power Limited,**


Vikas Sharma
Head-Environment



Encl: As above

TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | **Telefax:** 01659-248083 **website:** www.tsplindia.co

CIN NO. U40101MH2007PLC433557

TSPL/ENV/PPCB/ASH/DEC-2025/09

Date: 05 December 2025

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of month-wise progress report regarding generation and utilization of fly ash for the month of November, 2025.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

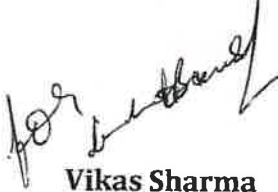
Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith month-wise progress report regarding generation and utilization of fly ash for the month of November, 2025 as **Annexure-1.**

Hope that the above information will suffice the requirement.

Yours faithfully,

For **Talwandi Sabo Power Limited,**



Vikas Sharma
Head-Environment



Encl: As above

TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | **Telefax:** 01659-248083 **website:** www.tsplindia.co

CIN NO. U40101MH2007PLC433557

Month	Ash Generation						Ash Utilization and its breakup under various utilization heads										Total Utilization	Ash Utilization %								
	Dry Fly Ash		Bottom Ash		Total Ash		Dry Fly Ash Utilization					Bottom ash utilization							Pond ash utilization from operational Dyke							
	MT	MT	MT	MT	MT	MT	RMC Plant	Cement Manufacturing	Fly Ash Bricks Manufacturing (Outside)	Road Construction	Cement Manufacturing via Rail	Total	Brick kiln manufacturers	Cement Manufacturing via Rail	Land Reclamation	Road construction			Land Reclamation	Road construction	Total	Ash Dyke Bund Stabilization	Land Reclamation	In Brick kiln units	Total	MT
Apr-25	195195	48575	243770	136206	14100	5525	12194	168025	4054	0	0	4054	0	5554	38668	0	0	3534	47756	219835	90					
May-25	200113	48378	248491	120011	17363	4416	11606	153395	5993	0	0	5993	0	0	52891	0	0	1513	54403	213791	86					
Jun-25	234765	61700	296465	156549	12825	3982	12041	185397	5891	0	0	5891	0	1906	86039	0	0	2173	90117	281405	95					
Q1	630073	158653	788726	412766	44288	13923	35841	506817	15938	0	0	15938	0	7459	177597	0	0	7219	192276	715031	91					
Jul-25	238603	60044	298646	99728	9099	7758	23689	140274	4825	0	0	4825	0	0	82671	0	0	2318	84989	230088	77					
Aug-25	202182	40943	243125	93165	5203	9903	0	108271	4319	0	0	4319	0	0	91257	0	0	765	92023	204612	84					
Sep-25	224385	35697	260081	139429	4653	11090	16153	171326	5366	0	0	5366	0	0	50973	0	0	1245	52218	228909	88					
Q2	665169	136683	801853	392322	18955	28751	39842	419870	14510	0	0	14510	0	0	224901	0	0	4328	229229	663609	83					
H1	1295242	295336	1590578	745087	63243	42674	75683	926687	30448	0	0	30448	0	7459	402498	0	0	11547	421505	1378640	87					
Oct-25	194299	12343	206643	146872	18271	11728	7980	184850	6660	0	0	6660	0.00	0.00	94392	0	0	2118	96510	288020	139					
Nov-25	162039	23954	185993	133110	13909	9487	4106	160611.97	5533	0	0	5533	0	615	90173	0	0	1076	91864	258009	139					
Dec-25																										
Q3	356339	36298	392636	279981	32180	21215	12086	345462	12192	0	0	12192	0	615	184566	0	0	3194	188375	546029	139					
Jan-26																										
Feb-26																										
Mar-26																										
Q4																										
H2	356339	36298	392636	279981	32180	21215	12086	345462	12192	0	0	12192	0	615	184566	0	0	3194	188375	546029	139					
Annual	1651501	331634	1983215	1025069	95423	63889	87769	1272149	42640	0	0	42640	0	8074	587064	0	0	14741	609879	1924669	97%					

Note:- 1.15 lacs MT is the dead stock out of total stored quantity. Dead Stock shall be maintained in the bottom of the Ash Dyke (Operational) as well as on upstream sides of the bund walls of Ash Dyke (as per the recommendations of Experts Designers) as a safety measure to protect.



Handwritten signatures and notes:
 1. *Notes*
 2. *Rahid. S. ...*
 3. *[Signature]*

**power**

TSPL/ENV/PPCB/ASH/JAN-2026/10

Date: 05 January 2026

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of month-wise progress report regarding generation and utilization of fly ash for the month of December, 2025.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith, month-wise progress report regarding generation and utilization of fly ash for the month of December, 2025 as **Annexure-1**.

Hope that the above information will suffice the requirement.

Yours faithfully,

For **Talwandi Sabo Power Limited,**

Vikas Sharma
Head-Environment

**Encl: As above**TALWANDI SABO POWER LIMITED
Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andhcri (East), Mumbai, Maharashtra, 400093Tel. 91-1659-248000 | Telefax: 01659-248083 website: www.tsplindia.co

CIN NO. U40101MH2007PLC433557

Ash Utilization and its Breakup under Various Utilization Heads

Annexure-1

Month	Ash Generation										Dry Fly Ash Utilization										Bottom Ash Utilization										Pond ash utilization from operational Dyke										Total Ash Utilization %
	Dry Fly Ash	Bottom Ash	Total Ash	Commercial	Non-Plant	Fly Ash Bricks Manufacturing (Overhead)	Road Construction	Concrete Reinforcing (Fly Ash)	Total	Brick Lining	Commercial	Land Reclamation	Road Construction	Total	Commercial (Fly Ash)	Concrete	Road Construction	Asphalt Road	Asphalt Road	Land Reclamation	Asphalt Road	Total																			
Apr-25	185195	485715	263770	136216	14100	5525	0	13194	166025	4054	0	0	4054	0	5354	38668	0	0	0	0	0	0	3534	47756	219835	910															
May-25	200113	483778	244491	120011	17363	4416	0	11606	153385	5992	0	0	5992	0	0	82091	0	0	0	0	0	0	0	54403	213791	86															
Jun-25	236705	61700	236465	186549	12825	3882	0	12491	183397	5891	0	0	5891	0	1306	84039	0	0	0	0	0	0	0	2373	91417	281405	95														
Jul-25	638070	150653	788723	412766	44208	13923	0	35041	504817	15008	0	0	15008	0	7459	172597	0	0	0	0	0	0	0	7210	142276	715011	91														
Aug-25	238603	60044	298644	97728	9099	7750	0	23689	140274	4823	0	0	4823	0	0	62671	0	0	0	0	0	0	0	2318	84989	230088	77														
Sep-25	202482	40943	243425	93165	5243	9903	0	108271	108271	4319	0	0	4319	0	0	91257	0	0	0	0	0	0	0	765	92023	214612	84														
Oct-25	224385	33997	260081	139439	4653	191090	0	16153	121326	5366	0	0	5366	0	0	60973	0	0	0	0	0	0	0	1245	52218	228919	88														
Nov-25	663169	136483	801653	312242	18955	28751	0	19442	419870	14510	0	0	14510	0	0	224901	0	0	0	0	0	0	0	4128	120278	663109	83														
Dec-25	1235442	285326	1520768	745087	62243	42674	0	75002	926687	20446	0	0	20446	0	7454	402498	0	0	0	0	0	0	0	11547	421505	1176640	87														
Jan-25	194259	12243	206443	146872	18271	11728	0	7980	148450	6660	0	0	6660	0	0	94592	0	0	0	0	0	0	0	2119	58590	280020	139														
Feb-25	164039	23954	188993	133110	13909	9487	0	4106	1606137	5333	0	0	5333	0	615	90173	0	0	0	0	0	0	0	1076	91864	258009	139														
Mar-25	131694	23957	165651	121343	8026	2725	0	0	13169448	3777	0	0	3777	0	6836	76721	0	0	0	0	0	0	0	1149	84805	220278	136														
Apr-25	481031	64335	545366	401325	48207	23579	0	12866	477156	13978	0	0	13978	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
May-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jun-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jul-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Aug-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Sep-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Oct-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Nov-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Dec-25	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jan-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Feb-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Mar-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Apr-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
May-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jun-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jul-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Aug-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Sep-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Oct-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Nov-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Dec-26	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jan-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
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Mar-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Apr-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
May-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jun-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Jul-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Aug-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Sep-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Oct-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Nov-27	481033	64255	545288	401325	48207	23579	0	12866	477156	13970	0	0	13970	0	7552	241247	0	0	0	0	0	0	0	4343	271181	766307	138														
Dec-27	481033																																								

TSPL/ENV/PPCB/ASH/FEB-2026/11

Date: 05 February 2026

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of month-wise progress report regarding generation and utilization of fly ash for the month of January, 2026.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

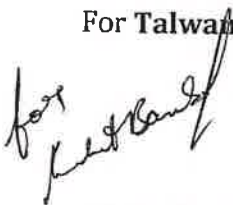
Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith month-wise progress report regarding generation and utilization of fly ash for the month of January, 2026 as **Annexure-1**.

Hope that the above information will suffice the requirement.

Yours faithfully,

For **Talwandi Sabo Power Limited,**



Vikas Sharma
Head-Environment



Encl: As above

TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | **Telefax:** 01659-248083 **website:** www.tsplindia.co

CIN NO. U40101MH2007PLC433557

TSPL/ENV/PPCB/ASH/MARCH-2026/12

Date: 05 March 2026

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of month-wise progress report regarding generation and utilization of fly ash for the month of February, 2026.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith month-wise progress report regarding generation and utilization of fly ash for the month of February, 2026 as **Annexure-1**.

Hope that the above information will suffice the requirement.

Yours faithfully,

For **Talwandi Sabo Power Limited,**


Vikas Sharma
Head-Environment



Encl: As above

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Tel. 91-1659-248000 | **Telefax:** 01659-248083 **website:** www.tsplindia.co

CIN NO. U40101MH2007PLC433557

Annexure-1

Month	Ash Generation										Dry Fly Ash Utilization										Ash Utilization and its handling in/on various activities inside the dam and utilization										Final job utilization from operational dyke										Total Utilization	Ash Utilization %
	Dry Fly Ash	Bottom Ash	Treat Ash	General Manufacturing	SPC Plant	Fly Ash in Power Manufacturing (Outside)	Road Construction	General Manufacturing via Rail	Treat	Manufacturing	General Manufacturing	Land Reclamation	Road Construction	Road Construction	General Manufacturing via Rail	General	Road Construction	Ash Dyke Reclamation	Land Reclamation	In Area	Total	Total Utilization	Ash Utilization %																			
Jan-25	185195	48575	243770	156206	14100	5525	0	12194	168025	4054	0	0	0	4054	0	5594	38668	0	0	3594	47756	219825	90																			
Feb-25	200113	48378	246491	120011	17363	4416	0	11606	153995	5993	0	0	0	5993	0	52891	0	0	0	1513	54403	213791	86																			
Mar-25	234765	61700	296465	156549	12825	3982	0	12081	185197	6991	0	0	0	6991	0	1806	86039	0	0	2179	90117	281405	95																			
Apr-25	610073	138653	788726	412766	44288	11923	0	35841	500117	13938	0	0	0	13938	0	7453	177897	0	0	7219	182278	715031	91																			
May-25	238603	60044	298646	98728	9099	7758	0	23689	140274	4825	0	0	0	4825	0	0	82671	0	0	2318	84989	230088	77																			
Jun-25	202182	40943	249125	93165	5203	9903	0	0	108271	4319	0	0	0	4319	0	0	91257	0	0	765	92023	204612	84																			
Jul-25	224386	35697	260081	139429	4653	11090	0	16133	171326	5366	0	0	0	5366	0	0	50973	0	0	1245	52218	228009	88																			
Aug-25	465169	134683	801853	312122	18935	20751	0	30442	419870	14510	0	0	0	14510	0	0	214901	0	0	4320	224229	642609	83																			
Sep-25	1295342	295316	1590578	745007	61243	42674	0	75463	926487	10448	0	0	0	10448	0	7453	402306	0	0	11547	421505	1378440	87																			
Oct-25	194299	12343	206643	146872	18271	11728	0	7980	184850	6660	0	0	0	6660	0.00	0.00	94392	0	0	2118	96510	288020	139																			
Nov-25	162039	23994	183993	133110	13909	9487	0	4106	1609197	5583	0	0	0	5583	0	615	90179	0	0	1076	91884	288089	139																			
Dec-25	13169448	2395673	16165121	121349	8026	2325	0	0	33169448	3777	0	0	0	3777	0	6956	76921	0	0	1149	84066	220278	136																			
Jan-26	480013	66125	554288	401135	40207	23519	0	12086	477158	16970	0	0	0	16970	0	7552	281287	0	0	4343	271181	766377	138																			
Feb-26	150298	33898	186199	127042	823	971	0	0	136237	4939	0	0	0	4939	0	8004	124861	0	0	1743	134708	273878	148																			
Mar-26	182697	42282	224979	163276	13222	1047	0	4079	181618	5650	0	0	0	5650	0	6008	164847	0.00	0.00	1619	171874	882248	160																			
Apr-26	331294	78180	411174	290318	21446	2018	0	4873	317858	10583	0	0	0	10583	0	14012	289208	0	0	2362	306682	651112	154																			
May-26	821027	114434	945462	691443	61832	25538	0	16180	790611	20553	0	0	0	20553	0	21544	550794	0	0	7705	878823	1801428	145																			
Annual	2118270	439770	2560440	1496730	124898	68232	0	91941	1721999	67001	0	0	0	67001	0	24023	953093	0	0	19252	1001368	27180067	109%																			

Note:-
 1.15 tons MT is the dead stock out of total stored quantity. Dead Stock shall be maintained in the bottom of the Ash Dyke (Operational) as well as on up-stream side of the bund walls of Ash Dyke (as per the recommendations of Experts Designers) as a safety measure to protect.
 2. TSP/L is running plant & having operational dyke.

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TSPL/ENV/PPCB/ASH/APRIL-2026/01

Date: 04 April 2026

To,

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office,
Room No. 406 E, 3rd floor,
District Administrative Building,
Bathinda.

Subject: -Submission of month-wise progress report regarding generation and utilization of fly ash for the month of March, 2026.

Ref: - Renewal of Consent to operate issued for 1980 MW (3X660 MW) under section 21 of Air (Prevention & Control of Pollution) Act, 1981 vide Letter No. CTOA/Varied/MNS/2023/20598849 dated 31/01/2023.

Dear Sir,

This has reference to the above letter regarding the subject matter, please find enclosed herewith month-wise progress report regarding generation and utilization of fly ash for the month of March, 2026 as **Annexure-1**.

Hope that the above information will suffice the requirement.

Yours faithfully,

For Talwandi Sabo Power Limited,



Vikas Sharma
Head-Environment



Encl: As above

TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | **Telefax:** 01659-248083 **website:** www.tsplindia.co

CIN NO. U40101MH2007PLC433557

TSPL/ENV/CEA/APRIL-2026/01

Dated: 25/04/2026

To,
The Chief Engineer,
Thermal Civil Design Division,
Central Electricity Authority,
9th floor, north wing, Sewa Bhawan,
R.K Puram, New Delhi-110066.

Subject: - Submission of Ash compliance report (for the period 1st April 2025 -31st March 2026).

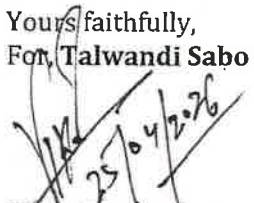
Ref: 1. As per Fly ash notification MoEF & CC REGD. No. D.L.- 33004/99 dated 31.12.2021. and subsequent amendments.

Dear Sir,

With reference to the above-mentioned notification regarding the subject matter, please find enclosed the updated Annexure of the Ash Compliance Report for the financial year 2025-26 in the prescribed format.

Hope the information will suffice your requirements

Yours faithfully,
For, Talwandi Sabo Power Limited,


Vikas Sharma
Head- Environment



Encl.: As above

Copy to:

1. Additional Director (S), MoEF &CC, Govt. of India, Northern Regional office, Bays No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh -160030.
2. The Member Secretary, Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, Delhi 110032.
3. The Environmental Engineer, Punjab Pollution Control Board, Room No. 406 E, 3rd floor, District Administrative Building, Bhatinda, Punjab-151001.

TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | Telefax: 01659-248083 website: www.tsplindia.co

CIN NO. U40101MH2007PLC433557

TSPL Environment

From: TSPL Environment
Sent: 28 April 2026 16:49
To: 'tcdcea@nic.in'; 'eerobti@yahoo.co.in'; 'mscb.cpcb@nic.in'; 'Power, CPCB'; 'Environment Wing'
Cc: Ravinder Thakur; 'Ankoor Gupta'; 'Vikas Sharma Vashisht'; TSPL AshSales; Nilesh.G; 'rndas'; Ayushi Agarwal; 'chahat.b'; 'rahilchaudhary'
Subject: Annual Ash Compliance Report on fly ash generation and its utilization for FY 2025-2026 for Talwandi Sabo Power Limited, Banawala Distt. Mansa, Punjab
Attachments: TSPL Annual Ash Implementation Report FY 25-26.pdf

To,
The Chief Engineer,
Thermal Civil Design Division,
Central Electricity Authority,
9th floor, north wing, Sewa Bhawan,
R.K Puram, New Delhi-110066.

Dear Sir,

Please find attached Annual Ash Compliance Report of fly ash generation and its utilization for FY- 2025-2026 i.e. from April,2025 to March,2026 in prescribed format as per MoEF & CC notification dated 31.12.2021.

For,
Talwandi Sabo Power Limited
Banawala Distt. Mansa
Punjab.

Thanks and Regards,
Chahat Bansal
Environment Department.
+91-9463530325

Annexure

Ash Compliance Report (for the period 1st April'25 to 31st March'26) to be submitted on or before 31st May'26.

Sl. No.	Details	Compliance status
1.	Name of Power Plant	Talwandi Sabo Power Limited
2.	Name of the company	Vedanta
3.	District	Mansa
4.	State	Punjab
5.	Postal address for communication:	Talwandi Sabo Power Limited, Mansa to Talwandi Sabo Road, Vill. Banawala, Distt. Mansa, Punjab, 151 302, India
6.	Email:	Vikas.S@vedanta.co.in
7.	Power Plant installed capacity (MW):	1980 MW
8.	Plant Load Factor (PLF):	61.15%
9.	No. of units generated (MWh):	10605916.33
10.	Total area under power plant (ha): (including area under ash ponds)	2105 acre.
11.	Quantity of coal and biomass consumption during reporting period (Metric Tons per Annum):	6910231.390 MT
12.	Average ash content in percentage (per cent):	40.23 %
13.	Quantity of current ash generation during reporting period (Metric Tons per Annum): Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	Total - 2780167 MT Fly Ash -2309165 MT Bottom Ash -471002 MT
14.	Capacity of dry fly ash storage silo(s) (Metric Tons) :	2650 m ³ each silo (Total silos 03 Nos) Total Storage Capacity 7950 m ³



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Navy

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Archer

15	<p>Details of utilization of current ash generated during reporting period</p> <p>(a) Total quantity of current ash utilized (MTPA) during reporting period:</p> <p>(b) Quantity of fly ash utilized (MTPA):</p> <p>(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels)</p> <p>(ii) Cement manufacturing:</p> <p>(iii) Ready mix concrete:</p> <p>(iv) Ash and Geopolymer based construction material:</p> <p>(v) Manufacturing of sintered or cold bonded ash aggregate:</p> <p>(vi) Construction of roads, road and fly over embankment:</p> <p>(vii) Construction of dams:</p> <p>(viii) Filling up of low lying area:</p> <p>(ix) Filling of mine voids:</p> <p>(x) Use in overburden dumps:</p> <p>(xi) Agriculture:</p> <p>(xii) Construction of shoreline protection structures in coastal districts;</p> <p>(xiii) Export of ash to other countries:</p> <p>(xiv) Others (please specify):</p>	<p>(a) Total quantity of current ash utilized (MTPA) during reporting period: 3074964.67 MT</p> <p>(b) Quantity of fly ash utilized (MTPA): 1911666.33 MT</p> <p>(i) : 69358.78 MT</p> <p>(ii) : 1697053.940 MT</p> <p>(iii) : 145253.61 MT</p> <p>(iv) : --</p> <p>(v) : --</p> <p>(vi) : --</p> <p>(vii) : --</p> <p>(viii) : --</p> <p>(ix) : --</p> <p>(x) : --</p> <p>(xi) : --</p> <p>(xii) : --</p> <p>(xiii) : --</p> <p>(xiv) : --</p>
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<p>(c) Quantity of bottom ash utilized (MTPA):</p> <p>(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):</p> <p>(ii) Cement manufacturing:</p> <p>(iii) Ready mix concrete:</p> <p>(iv) Ash and Geopolymer based construction material:</p> <p>(v) Manufacturing of sintered or cold bonded ash aggregate:</p> <p>(vi) Construction of roads, road and flyover embankment:</p> <p>(vii) Construction of dams:</p> <p>(viii) Filling up of low lying area:</p> <p>(ix) Filling of mine voids:</p> <p>(x) Use in overburden dumps:</p> <p>(xi) Agriculture:</p> <p>(xii) Construction of shoreline protection structures in coastal districts:</p> <p>(xiii) Export of ash to other countries:</p> <p>(xiv) Others (please specify):</p> <p>Total quantity of current ash unutilized (MTPA) during reporting period:</p> <p>(i) Current unutilized fly ash:</p> <p>(ii) Current unutilized bottom ash</p> <p>Total quantity of current ash unutilized (MTPA) during reporting period:</p>	<p>(c) Quantity of bottom ash utilized (MTPA): 62509.30MT</p> <p>(i) : 62509.30 MT</p> <p>(ii) :--</p> <p>(iii) :--</p> <p>(iv) :--</p> <p>(v) :--</p> <p>(vi) :--</p> <p>(vii) :--</p> <p>(viii) :--</p> <p>(ix) :--</p> <p>(x) :--</p> <p>(xi) :--</p> <p>(xii) :--</p> <p>(xiii) :--</p> <p>(xiv) :--</p> <p>(i) 3,97,498.39 MT</p> <p>(ii) 4,08,492.75 MT</p> <p>Total quantity of current ash unutilized: 8,05,991.15 MT</p>
<p>16. Percentage utilization of current ash generated during reporting period (per cent):</p>	<p>110.60 % (Current Year Ash Utilization).</p>
<p>17. Details of disposal of ash in ash ponds</p> <p>(a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period):</p> <p>(b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):</p> <p>(c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m³):</p> <p>(d) Total number of ash ponds:</p> <p>(i) Active:</p> <p>(ii) Exhausted (yet to be reclaimed):</p> <p>(iii) Reclaimed:</p>	<p>(a) 34,66,363.32 MT (As on 31st March 2025)</p> <p>(b) 8,05,991.15 MT (disposed in Operational dyke)</p> <p>(c) 427146 (m3)</p> <p>(d) Total number of ash ponds:</p> <p>(i)Active: 1 no's</p> <p>(ii) N.A</p> <p>(iii) N.A</p>

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(e) total area under ash ponds (ha):	(e) Total area under ash ponds (ha): 94.70 (ha)
--------------------------------------	---

18. Individual ash pond details
Ash pond 1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)

- a. Status: Under construction or Active or Exhausted or Reclaimed
- b. Date of start of ash disposal in ash pond (DD/MM/YYYY or MM/YYYY):
- c. Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY):
(Not applicable for active ash ponds)
- d. area (hectares):
- e. dyke height (m):
- f. volume (m³):
- g. quantity of ash disposed as on 31st March (Metric Tons):
- h. available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):
- i. expected life of ash pond (number of years and months):
- j. coordinates (Lat and Long):
(please specify minimum 4 coordinates) AS

- a. Active 1 No
- b. 07/2014
- c. N.A
- d. Area 94.70 (ha)
- e. Dyke Height 9.3 m
- f. Dyke Volume 75,51,712 m³
- g. Quantity 31,71,565.11 MT (As on 31st March 2026)
- h. Available volume 5890489.29 MT & 65% (Percent)
- i. 5 years (considering fly ash generation at 100% PLF and 100% fly ash disposal to ash pond)
- j. Coordinates as given below:

NORTH WEST CORNER	Easting: 520493.123
	Northing: 3308477.214
	Elevation: 219.268



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	NORTH EAST CORNER	Easting: 521565.074
		Northing: 3308074.467
		Elevation: 218.857
	SOUTH EAST CORNER	Easting: 521452.164
		Northing: 3307462.379
		Elevation: 219.154
	SOUTH WEST CORNER	Easting: 520488.274
		Northing: 3307494.659
		Elevation: 219.136

- k. type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining
- l. mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)
- m. Ratio of ash: water in slurry mix (1:___):
- n. Ash water recycling system (AWRS) installed and functioning: Yes or No
- o. Quantity of wastewater from ash pond discharged into land or water body (m3):
- p. Last date when the dyke stability study was conducted and name of the organization who conducted the study:
- q. Last date when the audit was conducted and name of the organization who conducted the audit:

- k. HDPE lining
- l. HCSD
- m. Ash: water, in slurry mix is 1:2/3, 1:3/7
- n. (As 60-70% concentration of dry solids in slurry)
- o. No (due to HCSD)
- p. NIL
- q. Dyke Management System Audit by Central University of Punjab on 21 March,2026

19. (a) Quantity of Legacy ash Utilized (MTPA):

(b)Quantity of Pond Ash utilized from operational Dyke (MTPA):

- i. Fly ash-based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels):
- ii. Cement manufacturing:
- iii. Ready mix concrete:
- iv. Ash and Geopolymer based construction material:

(a) N.A

(b) Pond Ash utilization from operational dyke - 1100789.04 MT

- (i) : 24422.88 MT
- (ii) : 30737.68 MT
- (iii) : --
- (iv) : --

Arshdeep Singh
Narinder Singh
Arshdeep Singh
Arshdeep Singh



v. Manufacturing of sintered or cold bonded ash aggregate:	(v) : --
vi. Construction of roads, road and flyover embankment and others construction	(vi) : 1045628.48 MT
vii. Construction of dams:	(vii) : --
viii. Filling up of low-lying area:	(viii) : --
ix. Filling of mine voids:	(ix) : --
x. Use in overburden dumps:	(x) : --
xi. Agriculture:	(xi) : --
xii. Construction of shoreline protection structures in coastal districts;	(xii) : --
xiii. Export of ash to other countries:	(xiii) : --
xiv. Others (please specify):	(xiv) : --

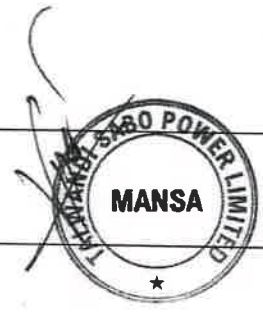


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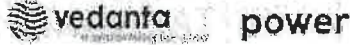
Summary			
Details	Quantity generated (MTP)	Quantity utilized (MTP) and (per cent)	Balance quantity (MTP)
Current ash during reporting period	27,80,166.8	30,74,964.67 (110.60 %)	00
Legacy ash	NA	00	00
Total Ash Utilization		30,74,964.67 (110.60 %)	
Total Legacy Ash (MT)	NA	NA	NA
Dead Stock as required for Ash Dyke (MT)			1500000.00
Net Legacy Ash in Ash Dyke (MT)			NA
<p><i>*15 lacs MT is the dead stock out of total stored quantity. "Dead stock shall be maintained in bottom of the Ash Dyke as well as on upstream sides of the bund walls of Ash Dyke (as per the recommendations of Experts Designers) as a safety measure to protect from any sort of unwanted damages to the bund or to bottom of the Ash Dyke during process of ash excavation / ash evacuation."</i></p>			
Any other information:			
Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be emailed to: moefcccoalash@gov.in			
Signature of Authorized Signatory			



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Ar. S. S.

TALWANDI SABO POWER LIMITED <u>Doc. No-IMS\TSPL\SAFETY\FORM01</u>		
Mock Drill Report		Page 1 of 6_

1- Drill Information		Drill Number: Dec-25-19	
Location of Drill	FOPH		
Date of Drill 31/12/2025	Drill Imitating Time 14:30:00	Drill Start Time 14:31:00	Drill End Time 15:00:00
Weather Temperature	<input checked="" type="radio"/> Cold <input type="radio"/> Warm <input type="radio"/> Hot	Weather Wind	<input checked="" type="radio"/> Calm <input type="radio"/> Breezy <input type="radio"/> Windy
Emergency Scenario/Type of Emergency Simulated	Smoke Observed at HFO Tank-A at FOPH		
Participants of Drill	Security Team, OHC team, Fire Rescue team, Safety team, O&M team;		
Purpose of Drill	To check the alertness of shift O&M team, Security team, Fire & Medical team. To check the preparedness & response of people in case of emergency. To train the emergency team members and check the healthiness of emergency equipment To analyse the awareness of workers in case of the mentioned emergency.		

2- Team members & Coordinators	
Mock Drill Observers /Evaluators	1. Mr. Navneet Kumar-Drill Coordinator; 2. Mr. Himanshu - Incident Controller. 3. Mr. Naveen Lamba - For overall Emergency Response coordinator
Key Contact Personals	1. Mr. Nilesh Gade – Station Head – PMPL 2. Mr. Ravinder Thakur – Factory Head – TSPL 3. Mr. R.N Das – U&M Head – PMPL 4. Mr. Ankur Gupta – Maintenance Head – TSPL 5. Mr. Rakesh Gagrani – HSE Head – TSPL 6. Mr. Pardeep Phor – HSE Head – PMPL 7. Mr. Vijay Amin – Head Operation – PMPL
Salutory Personnel's (if any)	NA
23Fire Fighting Team & Rescue Team	1. Mr. Pardeep Singh (AFO) 2. Mr. Sandeep Singh (LFM) 3. Mr. Amandeep Singh (DCPO) 4. Mr. Jaswinder Singh (FM) 5. Mr. Tarlochan Singh (FM) 6. Mr. Kuldeep Singh (FM)
Search & Support Team	Fire & Rescue team
Medical Team	1. Mr. Gurjeet Kaur (FIRST AID RESPONDER) 2. Mr. Kulwinder Singh (DRIVER)



Mock Drill Report

15.	14:45:00	00:14:00	Fire Fighting operation Complete by Fire Team and without any IP.
16.	15:00:00	00:29:00	Ambulance left the site without IP to OHC.
17.	14:45:00	00:14:00	Mock drill declared & Meeting started about observations, gaps and activities.
18.	15:00:00	00:29:00	Meeting Completed.

4 Analysis & Salient Observation

Evacuation of Personnel

Total Number of Headcounts

29

Positive Highlights

1	Effective access control and movement regulation were demonstrated by the Security Team during the mock drill.
2	The security team effectively ensured that no mobile phones were brought into the FOPH area, which is designated as a no-mobile zone."

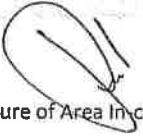
Areas of Improvements

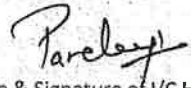
1	Damage to the wind shock device in the FOPH area could affect the correct monitoring of wind direction and speed in case of an emergency
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Mock Drill Report


Enclosures:

Photographs & Evidences to be enclosed


Name & Signature of Area In charge (Avinash Sharma)


Name & Signature of I/C HSE


Signature of Drill Coordinator


Signature of I/C Emergency Team



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ULR: TC584325100002326F

Report No.	ISSPL/WW/25-26/13783/A	Date	28/10/2025
1. Name & address of Customer	Power Mech Projects Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85217)		
3. Material Identification with details	Ground Water: Date and Time of Sampling: 10/10/2025 (03:00 pm), Qty. 5 Ltr.		
4. Source / Location	Piezometer No.4		
5. Sampled By/Condition of Sample	ISSPL - Mr. Pokhar Nath Yogi / OK		
6. Date of sample receipt	15/10/2025		
7. Date of Sample Registration	15/10/2025		
8. Date of sample Testing	15/10/2025 To 20/09/2025		
9. Environmental Conditions	Room Temperature (°C) : NA Relative Humidity (%) : NA		

RESULTS

S.No.	Name of Test	Method of Test	Test Result	Units	Limits as per IS: 10500:2012		Limit of quantification/ Range
					Acceptable	Permissible	
Chemical Testing							
Water							
1	pH	IS:3025 (Part-11)-2022	7.26	-	6.5 – 8.5	No relaxation	2
2	Odour	IS:3025 (Part-5)-2018	Agreeable	-	Agreeable	Agreeable	-
3	Colour	IS:3025 (Part-4)-2021	BLQ(LOQ:1.0)	CU	5.0 (Max.)	15.0	1.0
4	Taste	IS:3025 (Part-8)-1984	Agreeable	-	Agreeable	Agreeable	-
5	Turbidity	IS:3025 (Part-10)-1984	BLQ(LOQ:1.0)	NTU	1.0 (Max.)	5.0	1.0
6	Total Dissolved Solids	IS:3025 (Part-16)-1984	964	mg/L	500.0 (Max.)	2000.0	2
7	Aluminium (as Al)	IS 3025 (Part 65) :	BLQ(LOQ0.01)	mg/L	0.03 (Max.)	0.20	0.01

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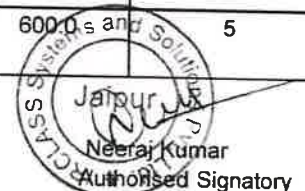
CEG Tower, 1st & 2nd Floor, B-11G, Industrial Area, Malviya Nagar, Jaipur, Rajasthan -302017: India
Tel: 0141-4805672 | Email – lab@irclass.org | Website : www.issplab.com

ULR: TC584325100002326F

Report No.		ISSPL/WW/25-26/13783/A			Date		28/10/2025	
S.No.	Name of Test	Method of Test	Test Result	Units	Limits as per IS: 10500:2012		Limit of quantification/ Range	
					Acceptable	Permissible		
7		2014						
8	Anionic Detergents (as MBAS)	Annex K of IS 13428: 2005	BLQ(LOQ: 0.05)	mg/L	0.20 (Max.)	1.0	0.05	
9	Boron (as B)	IS 3025 (Part 65) : 2014	0.109	mg/L	0.50 (Max.)	2.4	0.01	
10	Calcium (as Ca)	IS:3025 (Part-40)-1991	69.7	mg/L	75.0 (Max.)	200.0	1	
11	Chlorides (as Cl-)	IS:3025 (Part-32)-1988	236	mg/L	250.0 (Max.)	1000.0	1.4	
12	Copper (as Cu)	IS 3025 (Part 65) : 2014	BLQ(LOQ: 0.005)	mg/L	0.05 (Max.)	1.50	0.005	
13	Fluorides (as F)	IS:3025 (Part-60)-2008	BLQ(LOQ: 0.05)	mg/L	1.0 (Max.)	1.5	0.05	
14	Free Residual Chlorine	IS 3025 (Part 26)-2021	BLQ(LOQ: 0.05)	mg/L	0.20 (Min.)##	1.0	0.05	
15	Iron (as Fe)	IS 3025 (Part 65) : 2014	BLQ(LOQ: 0.1)	mg/L	1.0 (Max.)	No relaxation	0.1	
16	Magnesium (as Mg)	IS:3025 (Part-46)-1994	32.7	mg/L	30.0 (Max.)	100.0	1	
17	Manganese (as Mn)	IS 3025 (Part 65) : 2014	BLQ(LOQ: 0.005)	mg/L	0.10 (Max.)	0.30	0.005	
18	Nitrate (as NO3)	APHA 23rd Edition 4500-NO3-B: 2017	22.3	mg/L	45.0 (Max.)	No relaxation	0.5	
19	Phenolic Compound (as C6H5OH)	IS:3025 (Part-43/Sec-1) 2022	BLQ(LOQ: 0.001)	mg/L	0.001 (Max.)	0.002	0.001	
20	Selenium (as Se)	IS 3025 (Part 65) : 2014	BLQ(LOQ: 0.005)	mg/L	0.01 (Max.)	No relaxation	0.005	
21	Sulphate (as SO4)	IS:3025 (Part-24/Sec-1) 2022	121	mg/L	200.0 (Max.)	400.0	1	
22	Total Alkalinity as calcium carbonate	IS:3025 (Part-23)-1986	210	mg/L	200.0 (Max.)	600.0	10	
23	Total Hardness (as CaCO3)	IS:3025 (Part-21)-2009	254	mg/L	200.0 (Max.)	600.0	5	

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ULR: TC584325100002326F

Report No.		ISSPL/WW/25-26/13783/A			Date		28/10/2025
S.No.	Name of Test	Method of Test	Test Result	Units	Limits as per IS: 10500:2012		Limit of quantification/ Range
					Acceptable	Permissible	
24	Zinc (as Zn)	IS 3025 (Part 65) : 2014	BLQ(LOQ:0.005)	mg/L	5.0 (Max.)	15.0	0.005
25	Mineral Oil	IS:3025 (Part-39)-1991	BLQ(LOQ:1.0)	mg/L	1.0 (Max.)	No relaxation	0.5
26	Cadmium (as Cd)	IS 3025 (Part 65) : 2014	BLQ(LOQ:0.001)	mg/L	0.003 (Max.)	No relaxation	0.001
27	Lead (as Pb)	IS 3025 (Part 65) : 2014	BLQ(LOQ:0.005)	mg/L	0.01 (Max.)	No relaxation	0.001
28	Arsenic (as As)	IS 3025 (Part 65) : 2014	BLQ(LOQ:0.005)	mg/L	0.01 (Max.)	No relaxation	0.005
29	Total Chromium (as Cr)	IS 3025 (Part 65) : 2014	BLQ(LOQ:0.005)	mg/L	0.05 (Max.)	No relaxation	0.005
30	Cyanide (as CN)	IS:3025 (Part-27/Sec-1) 2022	BLQ(LOQ:0.01)	mg/L	0.05 (Max.)	No relaxation	0.01
31	Polynuclear aromatic Hydrocarbons (PAH)	ISSPL/STP/C/009	BLQ(LOQ 0.000025)	mg/L	0.0001 (Max.)	No relaxation	0.000025

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification | ## Applicable when water is chlorinated.

Remark-1: Sample meets the requirements of IS: 10500-2012 sp. for Drinking Water w.r.t. above tested parameters as Permissible source.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

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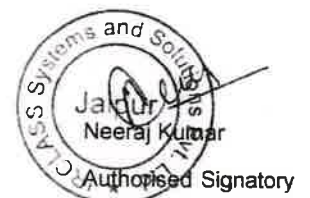
Report No.	ISSPL/WWW/25-26/13783/B	Date	28/10/2025
1. Name & address of Customer	Power Mech Projects Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPU/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85217)		
3. Material Identification with details	Ground Water: Date and Time of Sampling: 10/10/2025 (03:00 pm), Qty. 5 Ltr.		
4. Source / Location	Piezometer No.4		
5. Sampled By/Condition of Sample	ISSPL - Mr. Pokhar Nath Yogi / OK		
6. Date of sample receipt	15/10/2025		
7. Date of Sample Registration	15/10/2025		
8. Date of sample Testing	15/10/2025 To 20/09/2025		
9. Environmental Conditions	Room Temperature (°C) : NA Relative Humidity (%) : NA		

RESULTS

S.No.	Name of Test	Method of Test	Test Result	Units	Limits as per IS:10500:2012		Limit of quantification/ Range
					Acceptable	Permissible	
Chemical Testing							
Water							
1	Total Suspended Solids	IS:3025 (Part-17)-1984	BLQ(LOQ:5.0)	mg/L	Not Specified	Not Specified	5.0
2	Mercury (as Hg)	USEPA 200.8: 1994	BLQ(LOQ:0.0005)	mg/L	0.001 (Max.)	No relaxation	0.0005

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Report No.	ISSPL/WW/25-26/13783/B	Date	28/10/2025
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BLQ= Below Limit of Quantification, LOQ= Limit of Quantification | ## Applicable when water is chlorinated.c

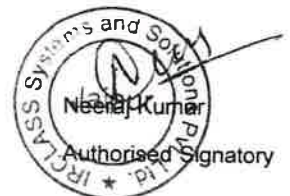
Remark-1: Sample meets the requirements of IS: 10500-2012 sp. for Drinking Water w.r.t. above tested parameters as an Permissible source.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

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Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NGWL011225NA046	
Type of Sample # : Ground Water			
Reference Type : PO Number		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	29/11/2025 - 29/11/2025
Sampling Protocol	IS 17614 (Part 1). EL-MSP-7.3	Date of Receipt of Sample	01/12/2025
Sample Collection Mode	Sample collected by Laboratory Mr. Ravinder Singh	Period of Analysis	01/12/2025 - 06/12/2025
Testing Location	On Site & Permanent Facility	Date of reporting	06/12/2025
Sampling Location	From Piezometer No.4		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre (PM/29/04A), Glass Bottle-1litre (PM/29/04B), PE Bottle-500ml (PM/29/04C) & PE Bottle-500ml (PM/29/04D)		

RESULTS

1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Colour	CU	BDL (1)	5(Max.)	15(Max.)	IS 3025 Part-4 Cl 2.0
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 5
3	pH @ 25°C	-	7.30	6.5-8.5	No relaxation	IS 3025 Part 11
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 8
5	Turbidity	NTU	BDL (0.1)	1(Max)	5(Max)	IS 3025 Part 10
6	Total Dissolved Solids	mg/l	921	500(Max.)	2000(Max.)	IS 3025 Part 16
7	Total Suspended Solids	mg/l	BDL (5)	-	-	IS 3025 (Part 17)
8	Anionic Detergent as MBAS	mg/l	BDL (0.05)	0.2(Max.)	1.0(Max.)	APHA 24th Ed 5540 B and C
9	Calcium as Ca	mg/l	70	75(Max.)	200(Max.)	IS 3025 (Part 40)
10	Chloride as Cl	mg/l	218	250(Max.)	1000(Max.)	IS 3025 (Part 32)

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EL-FMT-7.3.2-W

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

☎ 0172-4616225 ☎ 9781303109 ✉ contact@ecoparyavaran.org | md@ecoparyavaran.org 🌐 www.ecoparyavaran.org

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NGWL011225NA046

Type of Sample # : Ground Water

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
11	Fluoride as F	mg/l	0.60	1.0(Max.)	1.5(Max.)	IS 3025 Part -60
12	Free Residual Chlorine	mg/l	BDL (0.1)	0.2(Max.)	1.0(Max.)	IS 3025 24th Ed-4500G DPD Colorimetric
13	Magnesium as Mg	mg/l	28	30(Max.)	100(Max.)	IS 3025 (Part 46)
14	Nitrate as NO3	mg/l	28	45(Max.)	No Relaxation	IS 3025 Part-34 Cl 3.3, Chromotropic
15	Phenolic Compounds as C6H5OH	mg/l	BDL (0.001)	0.001(Max.)	0.002(Max.)	IS 3025 Part 43/sec 1
16	Sulphates as SO4	mg/l	129	200(Max.)	400(Max.)	IS 3025 (Part 24/Sec 1) Cl 4.0 Turbidity Method
17	Total Alkalinity as CaCO3	mg/l	296	200(Max.)	600(Max.)	IS 3025 (Part 23)
18	Total Hardness as CaCO3	mg/l	288	200(Max.)	600(Max.)	IS 3025 (Part 21)
19	Cyanide as CN	mg/l	BDL (0.02)	0.05(Max.)	No relaxation	IS 3025 (Part 27)
20	Boron as B	mg/l	BDL (0.1)	0.5(Max.)	1.0(Max.)	APHA 24th Ed:2022 4500B Curcumin Method

2. Residue & Contaminants In Water

II. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Aluminium as Al	mg/l	BDL (0.001)	0.03(Max.)	0.2(Max.)	USEPA 3015A
2	Iron as Fe	mg/l	0.19	1.0(Max.)	No Relaxation	USEPA 3015A
3	Manganese as Mn	mg/l	BDL (0.001)	0.1(Max.)	0.3(Max.)	USEPA 3015A
4	Selenium as Se	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
5	Copper as Cu	mg/l	BDL (0.001)	0.05(Max.)	1.5(Max.)	USEPA 3015A
6	Zinc as Zn	mg/l	BDL (0.001)	5.0(Max.)	15(Max.)	USEPA 3015A
7	Chromium as Cr	mg/l	BDL (0.001)	0.05(Max.)	No relaxation	USEPA 3015A
8	Lead as Pb	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
9	Mercury as Hg	mg/l	BDL (0.001)	0.001(Max.)	No relaxation	USEPA 3015A
10	Arsenic as As	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A

Mr. Umesh Kumar

Authorized Signatory- Chemical

EL-FMT-7.8.2-W

Page No. 2/3

TEST REPORT



ULR No : NA		Test Report No : NGWL011225NA046				
Type of Sample # : Ground Water						
11	Polynuclear aromatic hydrocarbons (PAH)	mg/l	BDL (0.00005)	0.0001(Max.)	No relaxation	EL-QTM-15
12	Cadmium as Cd	mg/l	BDL (0.001)	0.003(Max.)	No relaxation	USEPA 3015A

Remarks : NA

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 9872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

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EL-FMT-7 8.2-W

Page No.3/3

TEST REPORT

ULR No : NA		Test Report No : NGWL011225NA046/A	
Type of Sample # : Ground Water			
Reference Type : PO Number		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant. Banawala, District Mansa Punjab- 151302.	Period of Sampling	29/11/2025 - 29/11/2025
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	01/12/2025
Sample Collection Mode	Sample collected by Laboratory Mr. Ravinder Singh	Period of Analysis	01/12/2025 - 06/12/2025
Testing Location	On Site & Permanent Facility	Date of reporting	06/12/2025
Sampling Location	From Piezometer No.4		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre (PM/29/04A), Glass Bottle-1litre (PM/29/04B), PE Bottle-500ml (PM/29/04C) & PE Bottle-500ml (PM/29/04D)		

RESULTS

1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Mineral Oil*	mg/l	BDL (0.01)	0.5(Max.)	No relaxation	IS 3025 (Part 39)

Remarks : *Subcontracted

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-W

Page No.1/2

TEST REPORT

ULR No : NA

Test Report No : NGWL011225NA046/A

Type of Sample # : Ground Water

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

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EL-FMT-7.8.2-W

Page No.2/2



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TEST REPORT



ULR No : NA		Test Report No : NGWL151225NA206	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/12/2025 - 12/12/2025
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	15/12/2025
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	15/12/2025 - 23/12/2025
Testing Location	On Site & Permanent Facility	Date of reporting	23/12/2025
Sampling Location	From Piezometer No.4 (Ash Pond)		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottles-5+1 litre, Glass Bottles-2x1 litre+500ml, PE Bottles-2x500ml & Teflon Bottle- 1 litre		

RESULTS

1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Colour	CU	BDL (1)	5(Max.)	15(Max.)	IS 3025 Part-4 Cl 2.0
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 5
3	pH @ 25°C	-	7.32	6.5-8.5	No relaxation	IS 3025 Part 11
4	Temperature	°C	25	-	-	APHA 24th Ed 2550 B
5	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 8
6	Turbidity	NTU	BDL (0.1)	1(Max)	5(Max)	IS 3025 Part 10
7	Total Dissolved Solids	mg/l	921	500(Max.)	2000(Max.)	IS 3025 Part 16
8	Total Suspended Solids	mg/l	BDL (5)	-	-	IS 3025 (Part 17)
9	Anionic Detergent as MBAS	mg/l	BDL (0.05)	0.2(Max.)	1.0(Max.)	APHA 24th Ed 5540 B and C
10	Calcium as Ca	mg/l	70	75(Max.)	200(Max.)	IS 3025 (Part 40)

Mr. Umesh Kumar
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EL-FMT-7.8.2-W

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ECO BHAWAN

E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NGWL151225NA206

Type of Sample # : Ground Water

11	Chloride as Cl	mg/l	218	250(Max.)	1000(Max.)	IS 3025 (Part 32)
12	Fluoride as F	mg/l	0.65	1.0(Max.)	1.5(Max.)	IS 3025 Part -60
13	Free Residual Chlorine	mg/l	BDL (0.1)	0.2(Max.)	1.0(Max.)	IS 3025 24th Ed-4500G DPD Colorimetric
14	Magnesium as Mg	mg/l	28	30(Max.)	100(Max.)	IS 3025 (Part 46)
15	Phenolic Compounds as C6H5OH	mg/l	BDL (0.001)	0.001(Max.)	0.002(Max.)	IS 3025 Part 43/sec 1
16	Sulphates as SO4	mg/l	129	200(Max.)	400(Max.)	IS 3025 (Part 24/Sec 1) Cl 4.0 Turbidity Method
17	Total Alkalinity as CaCO3	mg/l	296	200(Max.)	600(Max.)	IS 3025 (Part 23)
18	Total Hardness as CaCO3	mg/l	288	200(Max.)	600(Max.)	IS 3025 (Part 21)
19	Cyanide as CN	mg/l	BDL (0.02)	0.05(Max.)	No relaxation	IS 3025 (Part 27)
20	Nitrate as NO3	mg/l	28	45(Max.)	No Relaxation	IS 3025 Part-34 Cl 3.3, Chromotropic
21	Boron as B	mg/l	BDL (0.1)	0.5(Max.)	1.0(Max.)	APHA 24th Ed:2022 4500B Curcumin Method

2. Residue & Contaminants In Water

II. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Aluminium as Al	mg/l	BDL (0.001)	0.03(Max.)	0.2(Max.)	USEPA 3015A
2	Iron as Fe	mg/l	0.192	1.0(Max.)	No Relaxation	USEPA 3015A
3	Manganese as Mn	mg/l	BDL (0.001)	0.1(Max.)	0.3(Max.)	USEPA 3015A
4	Selenium as Se	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
5	Copper as Cu	mg/l	BDL (0.001)	0.05(Max.)	1.5(Max.)	USEPA 3015A
6	Zinc as Zn	mg/l	BDL (0.001)	5.0(Max.)	15(Max.)	USEPA 3015A
7	Chromium as Cr	mg/l	BDL (0.001)	0.05(Max.)	No relaxation	USEPA 3015A
8	Lead as Pb	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
9	Mercury as Hg	mg/l	BDL (0.001)	0.001(Max.)	No relaxation	USEPA 3015A
10	Arsenic as As	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A

Mr. Umesh Kumar
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TEST REPORT



ULR No : NA		Test Report No : NGWL151225NA206				
Type of Sample # : Ground Water						
11	Polynuclear aromatic hydrocarbons (PAH)	mg/l	BDL (0.00005)	0.0001(Max.)	No relaxation	EL-QTM-15
12	Cadmium as Cd	mg/l	BDL (0.001)	0.003(Max.)	No relaxation	USEPA 3015A

Remarks : NA

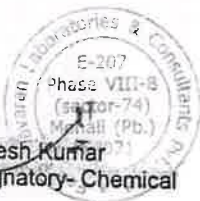
End of Report

OTHER INFORMATION

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EL-FMT-7.8.2-W

TEST REPORT

ULR No : NA		Test Report No : NGWL151225NA206/A	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	12/12/2025 - 12/12/2025
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	15/12/2025
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	15/12/2025 - 23/12/2025
Testing Location	On Site & Permanent Facility	Date of reporting	23/12/2025
Sampling Location	From Piezometer No.4 (Ash Pond)		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottles-5+1 litre, Glass Bottles-2x1 litre+500ml, PE Bottles-2x500ml & Teflon Bottle- 1 litre		

RESULTS

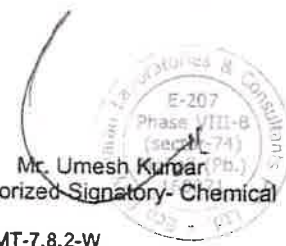
1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Mineral Oil*	mg/l	BDL (0.01)	0.5(Max.)	No relaxation	IS 3025 (Part 39)

Remarks : *Subcontracted

End of Report



Mr. Umesh Kumar
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EL-FMT-7.8.2-W

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TEST REPORT

ULR No : NA

Test Report No : NGWL151225NA206/A

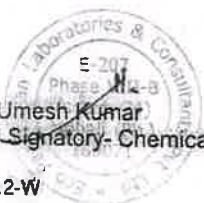
Type of Sample # : Ground Water

OTHER INFORMATION

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EL-FMT-7.8.2-W

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Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



TC-11818

ULR No : NA		Test Report No : NGWL120126NA085	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	10/01/2026 - 10/01/2026
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	12/01/2026
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	12/01/2026 - 20/01/2026
Testing Location	On Site & Permanent Facility	Date of reporting	20/01/2026
Sampling Location	From Piezometer No.4 (Ash Pond)		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre (P/10/01A), Glass Bottle-1litre (P/10/01B), PE Bottle-500ml (P/10/01C) & PE Bottle-500ml (P/10/01D)		

RESULTS

1. Residue & Contaminants In Water

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Aluminium as Al	mg/l	BDL (0.001)	0.03(Max.)	0.2(Max.)	USEPA 3015A
2	Iron as Fe	mg/l	0.21	0.3(Max.)	No Relaxation	USEPA 3015A
3	Manganese as Mn	mg/l	BDL (0.001)	0.1(Max.)	0.3(Max.)	USEPA 3015A
4	Selenium as Se	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
5	Copper as Cu	mg/l	BDL (0.001)	0.05(Max.)	1.5(Max.)	USEPA 3015A
6	Zinc as Zn	mg/l	BDL (0.001)	5.0(Max.)	15(Max.)	USEPA 3015A
7	Chromium as Cr	mg/l	BDL (0.001)	0.05(Max.)	No relaxation	USEPA 3015A
8	Lead as Pb	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
9	Mercury as Hg	mg/l	BDL (0.001)	0.001(Max.)	No relaxation	USEPA 3015A
10	Arsenic as As	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A

Mr. Umesh Kumar
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EL-FMT-7.8.2-W

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT




ULR No : NA	Test Report No : NGWL120126NA085
Type of Sample # : Ground Water	

11	Polynuclear aromatic hydrocarbons (PAH)	mg/l	BDL (0.00005)	0.0001(Max.)	No relaxation	EL-QTM-15
12	Cadmium as Cd	mg/l	BDL (0.001)	0.003(Max.)	No relaxation	USEPA 3015A

2. Chemical Testing

II. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Colour	CU	BDL (1)	5(Max.)	15(Max.)	IS 3025 Part-4 Cl 2.0
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 5
3	pH @ 25°C	-	7.52	6.5-8.5	No relaxation	IS 3025 Part 11
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 8
5	Turbidity	NTU	BDL (0.1)	1(Max)	5(Max)	IS 3025 Part 10
6	Total Dissolved Solids	mg/l	949	500(Max.)	2000(Max.)	IS 3025 Part 16
7	Total Suspended Solids	mg/l	BDL (5)	-	-	IS 3025 (Part 17)
8	Anionic Detergent as MBAS	mg/l	BDL (0.05)	0.2(Max.)	1.0(Max.)	APHA 24th Ed 5540 B and C
9	Calcium as Ca	mg/l	72	75(Max.)	200(Max.)	IS 3025 (Part 40)
10	Chloride as Cl	mg/l	225	250(Max.)	1000(Max.)	IS 3025 (Part 32)
11	Fluoride as F	mg/l	0.60	1.0(Max.)	1.5(Max.)	IS 3025 Part -60
12	Free Residual Chlorine	mg/l	BDL (0.1)	0.2(Max.)	1.0(Max.)	IS 3025 24th Ed-4500G DPD Colorimetric
13	Magnesium as Mg	mg/l	28	30(Max.)	100(Max.)	IS 3025 (Part 46)
14	Phenolic Compounds as C6H5OH	mg/l	BDL (0.001)	0.001(Max.)	0.002(Max.)	IS 3025 Part 43/sec 1
15	Sulphates as SO4	mg/l	133	200(Max.)	400(Max.)	IS 3025 (Part 24/Sec 1) Cl 4.0 Turbidity Method
16	Total Alkalinity as CaCO3	mg/l	305	200(Max.)	600(Max.)	IS 3025 (Part 23)
17	Total Hardness as CaCO3	mg/l	297	200(Max.)	600(Max.)	IS 3025 (Part 21)
18	Cyanide as CN	mg/l	BDL (0.02)	0.05(Max.)	No relaxation	IS 3025 (Part 27)
19	Nitrate as NO3	mg/l	29	45(Max.)	No Relaxation	IS 3025 Part-34 Cl 3.3, Chromotropic


 Mr. Umesh Kumar
 Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NGWL120126NA085				
Type of Sample # : Ground Water						
20	Boron as B	mg/l	BDL (0.1)	0.5(Max.)	1.0(Max.)	APHA 24th Ed:2022 4500B Curcumin Method

Remarks : NA

End of Report

OTHER INFORMATION

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TEST REPORT

ULR No : NA		Test Report No : NGWL120126NA085/A	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	10/01/2026 - 10/01/2026
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	12/01/2026
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	12/01/2026 - 20/01/2026
Testing Location	On Site & Permanent Facility	Date of reporting	20/01/2026
Sampling Location	From Piezometer No.4 (Ash Pond)		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre (P/10/01A), Glass Bottle-1litre (P/10/01B), PE Bottle-500ml (P/10/01C) & PE Bottle-500ml (P/10/01D)		

RESULTS

1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Mineral Oil*	mg/l	BDL (0.01)	0.5(Max.)	No relaxation	IS 3025 (Part 39)

Remarks : Subcontracted

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-W

Page No.1/2

TEST REPORT

ULR No : NA

Test Report No : NGWL120126NA085/A

Type of Sample # : Ground Water

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Mr. Umesh Kumar

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EL-FMT-7.8.2-W

Page No.2/2



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



TC-11818

ULR No : NA		Test Report No : NGWL160226NA163	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	13/02/2026 - 13/02/2026
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	16/02/2026
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	16/02/2026 - 25/02/2026
Testing Location	On Site & Permanent Facility	Date of reporting	25/02/2026
Sampling Location	From Piezometer No.4		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre, Glass Bottle-1litre+500ml ,PE Bottles-2x500ml & Teflon Bottle-1 litre		

RESULTS

1. Residue & Contaminants In Water

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Aluminium as Al	mg/l	BDL (0.001)	0.03(Max.)	0.2(Max.)	USEPA 3015A
2	Iron as Fe	mg/l	0.21	0.3(Max.)	No Relaxation	USEPA 3015A
3	Manganese as Mn	mg/l	BDL (0.001)	0.1(Max.)	0.3(Max.)	USEPA 3015A
4	Selenium as Se	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
5	Copper as Cu	mg/l	BDL (0.001)	0.05(Max.)	1.5(Max.)	USEPA 3015A
6	Zinc as Zn	mg/l	BDL (0.001)	5.0(Max.)	15(Max.)	USEPA 3015A
7	Chromium as Cr	mg/l	BDL (0.001)	0.05(Max.)	No relaxation	USEPA 3015A
8	Lead as Pb	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A
9	Mercury as Hg	mg/l	BDL (0.001)	0.001(Max.)	No relaxation	USEPA 3015A
10	Arsenic as As	mg/l	BDL (0.001)	0.01(Max.)	No relaxation	USEPA 3015A

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EL-FMT-7.8.2-W

Page No.1/3

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NGWL160226NA163

Type of Sample # : Ground Water

11	Polynuclear aromatic hydrocarbons (PAH)	mg/l	BDL (0.00005)	0.0001(Max.)	No relaxation	EL-QTM-15
12	Cadmium as Cd	mg/l	BDL (0.001)	0.003(Max.)	No relaxation	USEPA 3015A

2. Chemical Testing

II. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Colour	CU	BDL (1)	5(Max.)	15(Max.)	IS 3025 Part-4 Cl 2.0
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 5
3	pH @ 25°C	-	7.55	6.5-8.5	No relaxation	IS 3025 Part 11
4	Temperature	°C	24.6	-	-	APHA 24th Ed 2550 B
5	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 8
6	Turbidity	NTU	BDL (0.1)	1(Max)	5(Max)	IS 3025 Part 10
7	Total Dissolved Solids	mg/l	947	500(Max.)	2000(Max.)	IS 3025 Part 16
8	Total Suspended Solids	mg/l	BDL (5)	-	-	IS 3025 (Part 17)
9	Anionic Detergent as MBAS	mg/l	BDL (0.05)	0.2(Max.)	1.0(Max.)	APHA 24th Ed 5540 B and C
10	Calcium as Ca	mg/l	73	75(Max.)	200(Max.)	IS 3025 (Part 40)
11	Chloride as Cl	mg/l	142	250(Max.)	1000(Max.)	IS 3025 (Part 32)
12	Fluoride as F	mg/l	0.85	1.0(Max.)	1.5(Max.)	IS 3025 Part -60
13	Free Residual Chlorine	mg/l	BDL (0.1)	0.2(Max.)	1.0(Max.)	IS 3025 24th Ed-4500G DPD Colorimetric
14	Magnesium as Mg	mg/l	28	30(Max.)	100(Max.)	IS 3025 (Part 46)
15	Phenolic Compounds as C6H5OH	mg/l	BDL (0.001)	0.001(Max.)	0.002(Max.)	IS 3025 Part 43/sec 1
16	Sulphates as SO4	mg/l	142	200(Max.)	400(Max.)	IS 3025 (Part 24/Sec 1) Cl 4.0 Turbidity Method
17	Total Alkalinity as CaCO3	mg/l	399	200(Max.)	600(Max.)	IS 3025 (Part 23)
18	Total Hardness as CaCO3	mg/l	296	200(Max.)	600(Max.)	IS 3025 (Part 21)
19	Cyanide as CN	mg/l	BDL (0.02)	0.05(Max.)	No relaxation	IS 3025 (Part 27)

TEST REPORT



ULR No : NA

Test Report No : NGWL160226NA163

Type of Sample # : Ground Water

20	Nitrate as NO3	mg/l	32	45(Max.)	No Relaxation	IS 3025 Part-34 Cl 3.3, Chromotropic
21	Boron as B	mg/l	BDL (0.1)	0.5(Max.)	1.0(Max.)	APHA 24th Ed:2022 4500B Curcumin Method

Remarks : NA

End of Report

OTHER INFORMATION

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Mr. Umesh Kumar
Authorized Signatory - Chemical



TEST REPORT

ULR No : NA		Test Report No : NGWL160226NA163/A	
Type of Sample # : Ground Water			
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer Name #	Power Mech Projects Limited.		
Address #	Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.	Period of Sampling	13/02/2026 - 13/02/2026
Sampling Protocol	IS 17614 (Part 1), EL-MSP-7.3	Date of Receipt of Sample	16/02/2026
Sample Collection Mode	Sample collected by Laboratory Mr. Prabhjot Singh	Period of Analysis	16/02/2026 - 25/02/2026
Testing Location	On Site & Permanent Facility	Date of reporting	25/02/2026
Sampling Location	From Piezometer No.4		
Sample Description	Colourless liquid.		
Standard/Specifications	IS 10500 : 2021		
Packing, Markings, Seal & Qty.	PE Bottle-1 litre, Glass Bottle-1litre+500ml ,PE Bottles-2x500ml & Teflon Bottle-1 litre		

RESULTS

1. Chemical Testing

I. Water (Ground Water)

Sr.No	Test Parameter	Unit	Result	Acceptable Limit	Permissible Limit in Absence of Alternate Source	Test Method
1	Mineral Oil*	mg/l	BDL (0.01)	0.5(Max.)	No relaxation	IS 3025 (Part 39)

Remarks : *Subcontracted

End of Report



Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-W

Page No.1/2

TEST REPORT

ULR No : NA

Test Report No : NGWL160226NA163/A

Type of Sample # : Ground Water

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar

Authorized Signatory- Chemical

Corporate Social Responsibility Initiatives

Introduction

At TSPL, Corporate Social Responsibility is not merely a compliance, but a conscious effort to catalyse positive socio-economic transformation and ensure inclusive growth in the communities we serve. Anchored in our core values and aligned with national development priorities and the United Nations Sustainable Development Goals, our initiatives are thoughtfully designed to create lasting social impact.

Our approach to CSR is centred on uplifting underserved communities by improving access to quality healthcare, promoting women's empowerment through sustainable livelihood opportunities, supporting child education, advancing sustainable agriculture practices, and developing essential community infrastructure etc.

In the last financial year 2024–25, our social interventions have positively impacted over 60,000 individuals across 26 villages. This is not just a figure—it represents thousands of stories of progress, resilience, and hope. Every project we undertake is a step towards creating empowered communities and fostering shared prosperity.

By continuously engaging with local stakeholders and understanding grassroots challenges, TSPL remains committed to being a socially responsible organization —driving change that is inclusive, sustainable, and deeply human-centric.

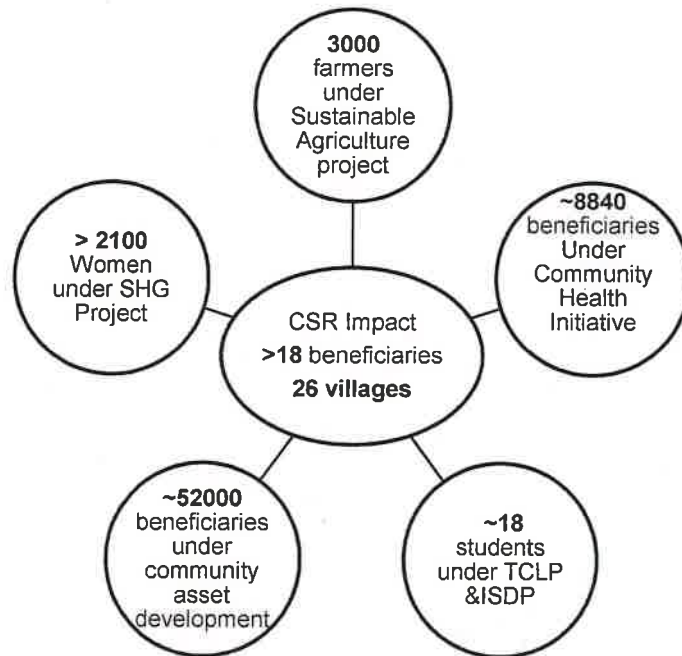


KEY THEMATIC AREA

Key Thematic Area

	Sustainable Livelihood	
	Health Care Services	
	Education & Children Wellbeing	
	Women Empowerment	
	Rural Infrastructure Development	

Glimpse of CSR Impact in H2 FY 26



Brief Highlights of CSR Intervention**Navi Disha – Promotion of Sustainable Agriculture****Fostering sustainable agriculture, edifying over 3000 farmers from 26 villages under Project Navi Disha**

Project *Navi Disha* focuses on transforming rural farming practices by promoting economically viable and environmentally sustainable methods. The initiative includes intensive awareness campaigns on chemical reduction and Integrated Pest Management (IPM), capacity building on organic and natural farming, soil and water testing, crop diversification, and adoption of water conservation measures.

The project also supports farmers with modern agricultural machinery, promotes paddy straw management, and facilitates allied income-generating activities—ensuring enhanced productivity, reduced input costs, and long-term resilience for over 3,000 farmers across 26 villages.

Following are the key highlights of Navi Disha Project –

- TSPL Navi Disha project initiative helped to **prevent paddy straw burning in over 28,000 acres of land for FY 26**, setting a benchmark for sustainable agriculture practices and environment stewardship in collaboration with District Agriculture Department, Mansa for this impactful initiative. Impacted **3,795+ farmers** and saved **28,183 acres from non-burning through these initiatives of land in Distt Mansa**. Through TSPL's sustained and impactful interventions, **Mansa district witnessed a remarkable 50% reduction in stubble burning cases in 2025 over 2024**, a transformative achievement that earned appreciation from Deputy Commissioner Mansa.
- TSPL organized 5 school rallies and painting competition for raising social awareness about environment side effects of straw burning where in students took part in speech and poster-making competitions on the stubble management.
- Conducted over 7 impactful awareness sessions on paddy straw management and stubble burning activity etc. Over 160 farmers benefitted through these training program.
- TSPL has conducted several expert classes on various topics like Cotton & paddy growing, Direct Sowing of Rice (DSR), water saving techniques in rice cultivation, and awareness about dwarf virus in paddy crop, etc





SEHAT- Safe and Effective Health Action by TSPL

Bolstering health eco system, aiding Government PHC and doorstep health care services through health camp – Healing ~ 12300 lives in FY 26

Project SEHAT-(Safe and Effective Health Action by TSPL) ensures access to quality healthcare services to the community in alignment with SDG 3, Strengthening the healthcare ecosystem, supporting Government Primary Health Centers with dental healthcare facilities, and providing doorstep healthcare services through specialized health camps.

Followings are the key highlight of SEHAT Project for FY 26 –

- **Dental Services at PHC Beniwal under the 'SEHAT' Initiative:**
Under the 'SEHAT' Initiative, TSPL facilitated critical dental services at PHC Behniwal, benefiting approx. 742 patients from nearby villages. This effort ensured timely diagnosis and treatment, improving oral health accessibility for underserved communities.
- **Lab Diagnostic Support at Civil Hospital, Mansa:**
A TSPL-supported lab technician at Civil Hospital, Mansa, conducted lab tests for over **1480 patients**, providing **critical diagnostic support** and enhancing healthcare services for those in need.
- **General Health Camps:**
TSPL organized 51 General Health Camps across various locations, delivering essential medical care to over 5990 patients. These camps provided critical diagnoses and free medications, ensuring healthcare access for underserved populations.
- **Specialized Eye Care Camp:**
13 specialized eye screening camps were conducted, where more than 1707 patients were screened by an ophthalmologist. Necessary medications were provided, improving eye health and addressing vision-related concerns within the community.

- **Specialized Gynaecology Camp:**

4 specialized Gynaecology camps were conducted, where more than 315 patients were examined by an gynaecologist.

- **Health Awareness Sessions**

Through a series of informative sessions, TSPL educated ~915 community members on critical health issues such as malaria, dengue, chikungunya, and anaemia, malnutrition, HIV aids, First aid for snake bite , fire burnt , drowning case etc. These sessions empowered communities with vital health knowledge, promoting preventive care and overall well-being.





Project TARA- TSPL Action for Rural Ajeevika -Women Empowerment

Transforming the lives of over **2100 rural women from 20 villages** by providing them with entrepreneurial opportunities and making them Atma -Nirbhar in association with **Punjab State Rural Livelihood Mission** under project TARA (TSPL Action for Rural Ajeevika)



TSPL Gram Nirman Project (Community Infrastructure Development)

Changing Contours of Rural Mansa through providing urban amenities in Rural Areas

TSPL is actively bridging the urban-rural divide by developing vital community infrastructure across villages. Key initiatives include installation of solar streetlights, construction of public washrooms, renovation of community centres, installation of concrete benches, and building of community rest sheds. These efforts have directly benefitted and improved the quality of life for over 50,000 people.

- **Rest Shed in Crematorium:** One community rest shed has been constructed in the village Raipur and Perron respectively
- **New RO Installation :** One new RO has been installed in Raipur village recognizing the pressing need for potable water in Raipur village, TSPL undertook the installation of a RO water purification system as part of its Gram Nirman initiative.

- **Pond rejuvenation:** TSPL has supported pond rejuvenation in 2 various villages for ensuring availability of clean water.
- **Bus stand development :** A new bus stand has been developed in Talwandi Aklia village to enhance public convenience and improve transportation infrastructure for the local community.
- **Street Solar Light Installation:** TSPL has installed more than 200 solar street lights to ensure the availability of lighting during dark hours and enhance safety and accessibility for the community.
- **Sitting benches:** TSPL has installed more than 280 sitting benches at various community locations to enhance public convenience and provide comfortable seating facilities for residents.
- **Development of entrance paths in Gov schools :** To ensure safer and better accessibility during the monsoon season, TSPL developed entrance walkways in two government schools across two villages, improving convenience and mobility for students and staff.





TSPL Computer Literacy Program

Empowering the youth with essential digital skills, 58 students successfully completed a 6-month Diploma in Computer Applications under TSPL's Computer Literacy Program. This initiative is fostering digital empowerment, enhancing employability, and bridging the skill gap in rural communities.



Passion to Serve- Employee Volunteering Program

TSPL actively promotes employee volunteering as a key component of its CSR strategy, fostering a deeper connection between employees and the community. These initiatives not only bridge the gap between the corporate world and society but also promote a culture of care, empathy, and shared responsibility.

In FY 2025-26, TSPL employees collectively contributed **~206 volunteering hours**, engaging in impactful activities such as **winter cloth donation drives, nutrition support for Anganwadi children, kinnoo picking with farmers, TACO Day and awareness sessions with school children.**

Through these efforts, employees not only support community well-being but also gain valuable insights into the local ecosystem—further reinforcing TSPL’s core values of **Care** and **Respect**, while building meaningful stakeholder relationships



Awards and Recognition

1. Project TARA – Women empowerment has been declared as the winner at the 16TH India CSR awards for excellence in women empowerment.
2. Project Sehat received the excellence CSR plant of the year – Healthcare award by Council of enviro excellence for its excellent services in over 12 villages.





Media Coverage

www.paper.sachin.com 11 Sep 2025 - Page 9

राहत: टीएसपीएल ने बाढ़ पीड़ितों के लिए भेजी 161 राशन किटें

डीसी ने बाढ़ प्रभावित क्षेत्रों में किटें की रवाना

मनसा (पंच कर्ण न्यूज)। बाढ़ पीड़ितों को राहत देने के लिए टीएसपीएल ने 161 राशन किटें की रवाना की हैं।



डीसी ने बाढ़ प्रभावित क्षेत्रों में 161 राशन किटें की रवाना की हैं।

लोक भुलाएँ दा मुनेहा

वेदांता उलवंडी साखे ने हड़ पीड़ितों नुं राहत समगरी पूदान कीडी

लोक भुलाएँ दा मुनेहा... वेदांता उलवंडी साखे ने हड़ पीड़ितों नुं राहत समगरी पूदान कीडी



वेदांता उलवंडी साखे ने हड़ पीड़ितों नुं राहत समगरी पूदान कीडी

बठिंडा भास्कर 11-09-2025

वेदांता ने पंजाब के बाढ़ पीड़ितों को राहत पहुंचाकर निभाई सामाजिक जिम्मेदारी

वेदांता ने पंजाब के बाढ़ पीड़ितों को राहत पहुंचाकर निभाई सामाजिक जिम्मेदारी



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वेदांता पावर दे टीएसपीएल ने मानसा विंच पहाली साजन दी रोकथाम अडे डेने दी पहाली पूषण 'डे मेगा डराष्ट्र सुगु कीडी



वेदांता पावर दे टीएसपीएल ने मानसा विंच पहाली साजन दी रोकथाम अडे डेने दी पहाली पूषण 'डे मेगा डराष्ट्र सुगु कीडी



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पराती प्रबंधन पर विशाल जागरूकता शिविर



पराती प्रबंधन पर विशाल जागरूकता शिविर

Vedanta Power's TSPL launches mega drive on stubble burning prevention and paddy straw management in Mansa



Vedanta Power's TSPL launches mega drive on stubble burning prevention and paddy straw management in Mansa



बाढ़ प्रभावित लोगों को किसी प्रकार की परेशानी नहीं होनी दी जाएगी: डीसी

बाढ़ प्रभावित लोगों को किसी प्रकार की परेशानी नहीं होनी दी जाएगी: डीसी

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Report No.	ISSPL/EN/25-26/13755	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/T SPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85245)		
3. Material Identification with details	Ambient Air Quality Monitoring: Qty. 1 No.		
4. Date of Sampling	13/10/2025 to 14/10/2025		
5. Time of Sampling	09:30 am to 09:30 am		
6. Sampling Location	Station-1 (CAAQMS NO-1)		
7. Sampling Protocol	IS:5182 (Pt-14) 2000		
8. Duration of Sampling (Minutes)	1440 Min.		
9. Test Started On	15/10/2025		
10. Test Completed On	20/10/2025		
11. Date of sample Testing	15/10/2025 To 20/10/2025		
12. Nature & Activity of the Unit	Human and Plant Site Activities		
13. Ambient Temperature (oC)	Min. 16°C, Max. 31°C		
14. Weather Condition during Monitoring	Clear Sky		
15. Instrument Code & Calibration Status	ISSPL/INS/C/120, ISSPL/INS/128, ISSPL/INS/C/217		

RESULTS

S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
I. Chemical Parameter: -						
1. Atmospheric Pollution						
1	Sulphur Dioxide (as SO ₂)	IS:5182 (Part 2)-2001, Reaff :2017	8.20	µg/m ³	80 (Max.)	4
2	Nitrogen Dioxide (as NO ₂)	IS:5182 (Part 6)-2006, Reaff	11.9	µg/m ³	80 (Max.)	6

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Report No.		ISSPL/EN/25-26/13755			Date	
S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
2		:2017				
3	Particulate Matter (as PM _{2.5})	IS:5182 (Part 24):2019	32.8	µg/m ³	60 (Max.)	1
4	Particulate Matter (as PM ₁₀)	IS:5182 (Part 23)-2006, Reaff:2017	64.1	µg/m ³	100 (Max.)	1
5	Carbon Monoxide (as CO)	IS 5182 (Part -10):1999	1.08	mg/m ³	4 (Max.)	0.02
6	Lead (as Pb)	USEPA Method IO 3.5 1999	BLQ(LOQ:0.0005)	µg/m ³	1.0 (Max.)	0.0005

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification


*NAAQS- National Ambient Air Quality Standards: Schedule-VII, [Rule 3 (3B)], [Part-II-se.-3(i)] 16.11.2009.

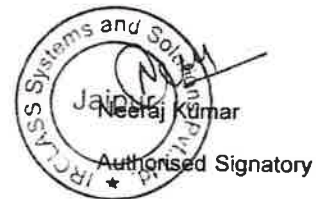
Remark:1- The Results Related only to the items tested.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

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Report No.	ISSPL/EN/25-26/13757	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85243)		
3. Material Identification with details	Ambient Air Quality Monitoring: Qty. 1 No.		
4. Date of Sampling	14/10/2025 to 15/10/2025		
5. Time of Sampling	12:30 pm to 12:30 pm		
6. Sampling Location	Station-2 (CAAQMS NO-2)		
7. Sampling Protocol	IS:5182 (Pt-14) 2000		
8. Duration of Sampling (Minutes)	1440 Min.		
9. Test Started On	15/10/2025		
10. Test Completed On	20/10/2025		
11. Date of sample Testing	15/10/2025 To 20/10/2025		
12. Nature & Activity of the Unit	Human and Plant Site Activities		
13. Ambient Temperature (oC)	Min. 16°C, Max. 31°C		
14. Weather Condition during Monitoring	Clear Sky		
15. Instrument Code & Calibration Status	ISSPL/INS/C/120, ISSPL/INS/128, ISSPL/INS/C/217		

RESULTS

S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
I. Chemical Parameter: -						
1. Atmospheric Pollution						
1	Sulphur Dioxide (as SO ₂)	IS:5182 (Part 2)-2001, Reaff :2017	8.30	µg/m ³	80 (Max.)	4
2	Nitrogen Dioxide (as NO ₂)	IS:5182 (Part 6)-2006, Reaff	12.4	µg/m ³	80 (Max.)	6

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Report No.		ISSPL/EN/25-26/13757			Date	
S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
2		:2017				
3	Particulate Matter (as PM _{2.5})	IS:5182 (Part 24):2019	34.5	µg/m ³	60 (Max.)	1
4	Particulate Matter (as PM ₁₀)	IS:5182 (Part 23)-2006, Reaff:2017	69.7	µg/m ³	100 (Max.)	1
5	Carbon Monoxide (as CO)	IS 5182 (Part -10):1999	1.16	mg/m ³	4 (Max.)	0.02
6	Lead (as Pb)	USEPA Method IO 3.5 1999	BLQ(LOQ:0.0005)	µg/m ³	1.0 (Max.)	0.0005

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

*NAAQS- National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-se.-3(i)] 16.11.2009.

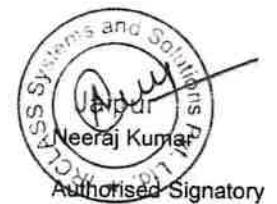
Remark-1- The Results Related only to the items tested.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

End of the Report

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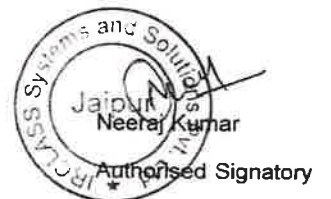
Report No.	ISSPL/EN/25-26/13756	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85244)		
3. Material Identification with details	Ambient Air Quality Monitoring: Qty. 1 No.		
4. Date of Sampling	13/10/2025 to 14/10/2025		
5. Time of Sampling	10:20 am to 10:20 am		
6. Sampling Location	Station-3 (CAAQMS NO-3)		
7. Sampling Protocol	IS:5182 (Pt-14) 2000		
8. Duration of Sampling (Minutes)	1440 Min.		
9. Test Started On	15/10/2025		
10. Test Completed On	20/10/2025		
11. Date of sample Testing	15/10/2025 To 20/10/2025		
12. Nature & Activity of the Unit	Human and Plant Site Activities		
13. Ambient Temperature (oC)	Min. 16°C, Max. 31°C		
14. Weather Condition during Monitoring	Clear Sky		
15. Instrument Code & Calibration Status	ISSPL/INS/C/122, ISSPL/INS/209, ISSPL/INS/C/218		

RESULTS

S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
I. Chemical Parameter: -						
1. Atmospheric Pollution						
1	Sulphur Dioxide (as SO ₂)	IS:5182 (Part 2)-2001, Reaff :2017	11.5	µg/m ³	80 (Max.)	4
2	Nitrogen Dioxide (as NO ₂)	IS:5182 (Part 6)-2006, Reaff	15.2	µg/m ³	80 (Max.)	6

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Report No.		ISSPL/EN/25-26/13756			Date	
S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
2		:2017				
3	Particulate Matter (as PM _{2.5})	IS:5182 (Part 24):2019	36.9	µg/m ³	60 (Max.)	1
4	Particulate Matter (as PM ₁₀)	IS:5182 (Part 23)-2006, Reaff:2017	70.6	µg/m ³	100 (Max.)	1
5	Carbon Monoxide (as CO)	IS 5182 (Part -10):1999	1.24	mg/m ³	4 (Max.)	0.02
6	Lead (as Pb)	USEPA Method IO 3.5 1999	BLQ(LOQ:0.0005)	µg/m ³	1.0 (Max.)	0.0005

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

*NAAQS- National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-se.-3(i)] 16.11.2009.

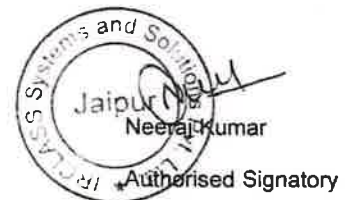
Remark:1- The Results Related only to the items tested.

Remark:2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

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Report No.	ISSPL/EN/25-26/13758	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85242)		
3. Material Identification with details	Ambient Air Quality Monitoring: Qty. 1 No.		
4. Date of Sampling	14/10/2025 to 15/10/2025		
5. Time of Sampling	01:00 pm to 01:00 pm		
6. Sampling Location	Station-4 (CAAQMS NO-4)		
7. Sampling Protocol	IS:5182 (Pt-14) 2000		
8. Duration of Sampling (Minutes)	1440 Min.		
9. Test Started On	15/10/2025		
10. Test Completed On	20/10/2025		
11. Date of sample Testing	15/10/2025 To 20/10/2025		
12. Nature & Activity of the Unit	Human and Plant Site Activities		
13. Ambient Temperature (oC)	Min. 16°C, Max. 31°C		
14. Weather Condition during Monitoring	Clear Sky		
15. Instrument Code & Calibration Status	ISSPL/INS/C/122, ISSPL/INS/209, ISSPL/INS/C/218		

RESULTS

S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
I. Chemical Parameter: -						
1. Atmospheric Pollution						
1	Sulphur Dioxide (as SO ₂)	IS:5182 (Part 2)-2001, Reaff :2017	14.1	µg/m ³	80 (Max.)	4
2	Nitrogen Dioxide (as NO ₂)	IS:5182 (Part 6)-2006, Reaff	19.3	µg/m ³	80 (Max.)	6

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IRCLASS

SYSTEMS AND SOLUTIONS PRIVATE LIMITED
Testing Laboratory



CEG Tower, 1st & 2nd Floor, B-11G, Industrial Area, Malviya Nagar, Jaipur, Rajasthan -302017, India
Tel: 0141-4805672 | Email – lab@irclass.org | Website : www.isspllab.com

Report No.		ISSPL/EN/25-26/13758			Date	
S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
2		:2017				
3	Particulate Matter (as PM _{2.5})	IS:5182 (Part 24):2019	47.5	µg/m ³	60 (Max.)	1
4	Particulate Matter (as PM ₁₀)	IS:5182 (Part 23)-2006, Reaff:2017	81.1	µg/m ³	100 (Max.)	1
5	Carbon Monoxide (as CO)	IS 5182 (Part -10):1999	1.28	mg/m ³	4 (Max.)	0.02
6	Lead (as Pb)	USEPA Method IO 3.5 1999	BLQ(LOQ:0.0005)	µg/m ³	1.0 (Max.)	0.0005

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

*NAAQS- National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-se.-3(i)] 16.11.2009.

Remark-1- The Results Related only to the items tested.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

Page No. 2/2


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SYSTEMS AND SOLUTIONS PRIVATE LIMITED

Testing Laboratory

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 Tel: 0141-4805672 | Email – lab@irclass.org | Website : www.isspllab.com




Report No.	ISSPL/EN/25-26/13760	Date	20/10/2025
1. Name & address of Customer	Power Mech Project Limited Talwandi Sabo Power Ltd., 3X660MW Thermal Power Plant, Banawala, Mansa District Punjab		
2. Reference No.	LOI No. LOI/PMPL/TSPL/2024/WO/005, Dated 09/11/2024 (Reg. No.25-26/85240)		
3. Material Identification with details	Ambient Air Quality Monitoring: Qty. 1 No.		
4. Date of Sampling	13/10/2025 to 14/10/2025		
5. Time of Sampling	11:00 am to 11:00 am		
6. Sampling Location	Village Chehlanwali		
7. Sampling Protocol	IS:5182 (Pt-14) 2000		
8. Duration of Sampling (Minutes)	1440 Min.		
9. Test Started On	15/10/2025		
10. Test Completed On	20/10/2025		
11. Date of sample Testing	15/10/2025 To 20/10/2025		
12. Nature & Activity of the Unit	Human and Plant Site Activities		
13. Ambient Temperature (oC)	Min. 16°C, Max. 31°C		
14. Weather Condition during Monitoring	Clear Sky		
15. Instrument Code & Calibration Status	ISSPL/INS/C/210, ISSPL/INS/221, ISSPL/INS/C/125		

RESULTS

S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
I. Chemical Parameter: -						
1. Atmospheric Pollution						
1	Sulphur Dioxide (as SO ₂)	IS:5182 (Part 2)-2001, Reaff :2017	13.1	µg/m ³	80 (Max.)	4
2	Nitrogen Dioxide (as NO ₂)	IS:5182 (Part 6)-2006, Reaff	21.5	µg/m ³	80 (Max.)	6

Page No. 1/2


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Tel: 0141-4805672 | Email – lab@irclass.org | Website : www.isspllab.com



Report No.		ISSPL/EN/25-26/13760			Date	
S.No.	Name of Test	Method of Test	Results	Unit	Limit as per NAAQS*	Detection Limit
2		:2017				
3	Particulate Matter (as PM _{2.5})	IS:5182 (Part 24):2019	46.3	µg/m ³	60 (Max.)	1
4	Particulate Matter (as PM ₁₀)	IS:5182 (Part 23)-2006, Reaff:2017	77.2	µg/m ³	100 (Max.)	1
5	Carbon Monoxide (as CO)	IS 5182 (Part -10):1999	0.72	mg/m ³	4 (Max.)	0.02
6	Lead (as Pb)	USEPA Method IO 3.5 1999	BLQ(LOQ:0.0005)	µg/m ³	1.0 (Max.)	0.0005

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

*NAAQS- National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-se.-3(i)] 16.11.2009.

Remark-1- The Results Related only to the items tested.

Remark-2: Sampling done by ISSPL Representative (Mr. Pokhar Nath Yogi).

****End of the Report****

Page No. 2/2


Reviewed By


Neeraj Kumar
Authorised Signatory



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL171125NA030	
Type of Sample # : Ambient Air		Date of reporting : 25/11/2025	
Reference Type : PO Number		Reference No : 5100044398	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	13/11/2025 - 14/11/2025	Date of Receipt of Sample	17/11/2025
Sampling Location	Station No.1	Period of Analysis	17/11/2025 - 25/11/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	122	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	73	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	27	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	35	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	22	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	20	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.83	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

* EL-FMT-7 8.2 -AA

Page No.1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NAAL171125NA030

Type of Sample # : Ambient Air

Date of reporting : 25/11/2025

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

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TEST REPORT



ULR No : NA		Test Report No : NAAL171125NA031	
Type of Sample # : Ambient Air		Date of reporting : 25/11/2025	
Reference Type : PO Number		Reference No : 5100044398	
Customer #	Power Mech Projects Limited,, Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	13/11/2025 - 14/11/2025	Date of Receipt of Sample	17/11/2025
Sampling Location	Station No.2	Period of Analysis	17/11/2025 - 25/11/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m3	118	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m3	71	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO2	µg/m3	26	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO2)	µg/m3	28	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH3	µg/m3	24	400(max.)	IS 5182 (Part 25)
6	Ozone as O3	µg/m3	21	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m3	0.74	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m3	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m3	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m3	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C6H6	µg/m3	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m3	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar
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EL-FMT-7.8.2 -AA

Page No.1/2

TEST REPORT



ULR No : NA

Test Report No : NAAL171125NA031

Type of Sample # : Ambient Air

Date of reporting : 25/11/2025

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar
Authorized Signatory - Chemical





TEST REPORT



ULR No : NA		Test Report No : NAAL171125NA032	
Type of Sample # : Ambient Air		Date of reporting : 25/11/2025	
Reference Type : PO Number		Reference No : 5100044398	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	13/11/2025 - 14/11/2025	Date of Receipt of Sample	17/11/2025
Sampling Location	Station No.3	Period of Analysis	17/11/2025 - 25/11/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	117	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	70	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	28	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	30	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	25	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	20	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.79	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar

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EL-FMT-7.8.2 -AA

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TEST REPORT



ULR No : NA

Test Report No : NAAL171125NA032

Type of Sample # : Ambient Air

Date of reporting : 25/11/2025

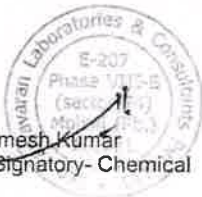
End of Report

OTHER INFORMATION

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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



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Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL171125NA033	
Type of Sample # : Ambient Air		Date of reporting : 25/11/2025	
Reference Type : PO Number		Reference No : 5100044398	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	13/11/2025 - 14/11/2025	Date of Receipt of Sample	17/11/2025
Sampling Location	Station No.4	Period of Analysis	17/11/2025 - 25/11/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	125	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	75	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	27	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	29	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	23	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	22	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.76	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2 -AA

Page No.1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NAAL171125NA033

Type of Sample # : Ambient Air

Date of reporting : 25/11/2025

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

Authorized Signatory- Chemical





Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA	Test Report No : NAAL171125NA034		
Type of Sample # : Ambient Air	Date of reporting : 25/11/2025		
Reference Type : PO Number	Reference No : 5100044398		
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	13/11/2025 - 14/11/2025	Date of Receipt of Sample	17/11/2025
Sampling Location	Village- Chehlanwali	Period of Analysis	17/11/2025 - 25/11/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	110	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	66	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	BDL (25)	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	28	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	27	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	19	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.72	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-AA

Page No.1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

☎ 0172-4616225 📞 9781303109 ✉ contact@ecoparyavaran.org | md@ecoparyavaran.org 🌐 www.ecoparyavaran.org

TEST REPORT



ULR No : NA

Test Report No : NAAL171125NA034

Type of Sample # : Ambient Air


Date of reporting : 25/11/2025


End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

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2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.


Mr. Umesh Kumar
Authorized Signatory- Chemical





Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL151225NA202	
Type of Sample # : Ambient Air		Date of reporting : 23/12/2025	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	11/12/2025 - 12/12/2025	Date of Receipt of Sample	15/12/2025
Sampling Location	Station No.1	Period of Analysis	15/12/2025 - 23/12/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	142	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	85	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	33	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	41	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.97	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



ULR No : NA		Test Report No : NAAL151225NA201	
Type of Sample # : Ambient Air		Date of reporting : 23/12/2025	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	11/12/2025 - 12/12/2025	Date of Receipt of Sample	15/12/2025
Sampling Location	Station No.2	Period of Analysis	15/12/2025 - 23/12/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	137	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	82	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	30	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	36	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.85	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



JLR No : NA	Test Report No : NAAL151225NA200		
Type of Sample # : Ambient Air	Date of reporting : 23/12/2025		
Reference Type : Work Order No	Reference No : 5100044398 Dt.: 18/11/2025		
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	11/12/2025 - 12/12/2025	Date of Receipt of Sample	15/12/2025
Sampling Location	Station No.3	Period of Analysis	15/12/2025 - 23/12/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	136	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	81	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	32	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	35	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.92	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2 -AA

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TEST REPORT



JLR No : NA		Test Report No : NAAL151225NA199	
Type of Sample # : Ambient Air		Date of reporting : 23/12/2025	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	11/12/2025 - 12/12/2025	Date of Receipt of Sample	15/12/2025
Sampling Location	Station No.4	Period of Analysis	15/12/2025 - 23/12/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	145	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	87	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	31	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	38	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.88	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



ULR No : NA		Test Report No : NAAL151225NA198	
Type of Sample # : Ambient Air		Date of reporting : 23/12/2025	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	11/12/2025 - 12/12/2025	Date of Receipt of Sample	15/12/2025
Sampling Location	Village Chelanwali	Period of Analysis	15/12/2025 - 23/12/2025
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear sky
Testing Location	On Site & Permanent Facility		

RESULTS

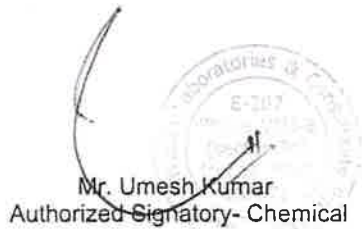
1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	162	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	96	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	28	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	42	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.96	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report



Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2 -AA

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Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL140126NA084	
Type of Sample # : Ambient Air		Date of reporting : 20/01/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Ravinder Singh
Period of Sampling	13/01/2026 - 14/01/2026	Date of Receipt of Sample	14/01/2026
Sampling Location	Station No.1	Period of Analysis	14/01/2026 - 20/01/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky: fogg during night & early morning
Testing Location	On Site & Permanent Facility		

RESULTS

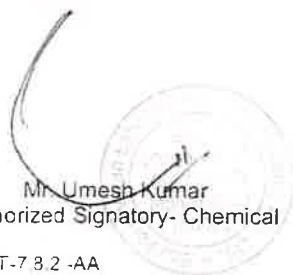
1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	170	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	102	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	34	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	33	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.83	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report


 Mr. Umesh Kumar
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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

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TEST REPORT



ULR No : NA

Test Report No : NAAL140126NA084

Type of Sample # : Ambient Air

Date of reporting : 20/01/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

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TEST REPORT



ULR No : NA		Test Report No : NAAL140126NA085	
Type of Sample # : Ambient Air		Date of reporting : 20/01/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Ravinder Singh
Period of Sampling	13/01/2026 - 14/01/2026	Date of Receipt of Sample	14/01/2026
Sampling Location	Station No.2	Period of Analysis	14/01/2026 - 20/01/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky: fogg during night & early morning
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	178	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	106	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	31	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	41	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.95	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



IC-11818

ULR No : NA

Test Report No : NAAL140126NA085

Type of Sample # : Ambient Air

Date of reporting : 20/01/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NAAL140126NA086	
Type of Sample # : Ambient Air		Date of reporting : 20/01/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Ravinder Singh
Period of Sampling	13/01/2026 - 14/01/2026	Date of Receipt of Sample	14/01/2026
Sampling Location	Station No.3	Period of Analysis	14/01/2026 - 20/01/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky: fogg during night & early morning
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	162	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	98	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	33	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	40	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.85	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



TC-11818

ULR No : NA

Test Report No : NAAL140126NA086

Type of Sample # : Ambient Air

Date of reporting : 20/01/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NAAL140126NA087	
Type of Sample # : Ambient Air		Date of reporting : 20/01/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Ravinder Singh
Period of Sampling	13/01/2026 - 14/01/2026	Date of Receipt of Sample	14/01/2026
Sampling Location	Station No.4	Period of Analysis	14/01/2026 - 20/01/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky: fogg during night & early morning
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	179	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	107	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	29	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	37	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.87	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



ULR No : NA

Test Report No : NAAL140126NA087

Type of Sample # : Ambient Air

Date of reporting : 20/01/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NAAL140126NA088	
Type of Sample # : Ambient Air		Date of reporting : 20/01/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Ravinder Singh
Period of Sampling	13/01/2026 - 14/01/2026	Date of Receipt of Sample	14/01/2026
Sampling Location	Village- Chehlanwali	Period of Analysis	14/01/2026 - 20/01/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky: fogg during night & early morning
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	187	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	111	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	31	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	44	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	1.00	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report

Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2 -AA

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TEST REPORT



ULR No : NA

Test Report No : NAAL140126NA088

Type of Sample # : Ambient Air

Date of reporting : 20/01/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

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2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

Authorized Signatory - Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL160226NA129	
Type of Sample # : Ambient Air		Date of reporting : 25/02/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/02/2026 - 13/02/2026	Date of Receipt of Sample	16/02/2026
Sampling Location	Station No.1	Period of Analysis	16/02/2026 - 25/02/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	85	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	49	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	27	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	35	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	22	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	26	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.83	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA



Mr. Umesh Kumar
Authorized Signatory- Chemical

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Page No. 1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NAAL160226NA129

Type of Sample # : Ambient Air

Date of reporting : 25/02/2026

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

Terms & Conditions :

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2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar
Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NAAL160226NA130	
Type of Sample # : Ambient Air		Date of reporting : 25/02/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/02/2026 - 13/02/2026	Date of Receipt of Sample	16/02/2026
Sampling Location	Station No.2	Period of Analysis	16/02/2026 - 25/02/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov. 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	89	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	52	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	26	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	28	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	20	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	27	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.74	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

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Page No.1/2

TEST REPORT



ULR No : NA

Test Report No : NAAL160226NA130

Type of Sample # : Ambient Air

Date of reporting : 25/02/2026

End of Report

OTHER INFORMATION

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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



TC-11818

ULR No : NA		Test Report No : NAAL160226NA131	
Type of Sample # : Ambient Air		Date of reporting : 25/02/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/02/2026 - 13/02/2026	Date of Receipt of Sample	16/02/2026
Sampling Location	Station No.3	Period of Analysis	16/02/2026 - 25/02/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	91	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	53	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	28	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	30	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	21	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	26	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.79	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kumar

Authorized Signatory- Chemical

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Page No. 1/2

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TEST REPORT



ULR No : NA

Test Report No : NAAL160226NA131

Type of Sample # : Ambient Air

Date of reporting : 25/02/2026

End of Report

OTHER INFORMATION

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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar

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Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL160226NA132	
Type of Sample # : Ambient Air		Date of reporting : 25/02/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/02/2026 - 13/02/2026	Date of Receipt of Sample	16/02/2026
Sampling Location	Station No.4	Period of Analysis	16/02/2026 - 25/02/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m3	86	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m3	50	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO2	µg/m3	27	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO2)	µg/m3	29	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH3	µg/m3	20	400(max.)	IS 5182 (Part 25)
6	Ozone as O3	µg/m3	29	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m3	0.76	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m3	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m3	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m3	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C6H6	µg/m3	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m3	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA

Mr. Umesh Kuntar
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EL-FMT-782-AA

Page No.1/2

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TEST REPORT



ULR No : NA

Test Report No : NAAL160226NA132

Type of Sample # : Ambient Air

Date of reporting : 25/02/2026

End of Report

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
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TEST REPORT



TC-11818

ULR No : NA		Test Report No : NAAL160226NA133	
Type of Sample # : Ambient Air		Date of reporting : 25/02/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/02/2026 - 13/02/2026	Date of Receipt of Sample	16/02/2026
Sampling Location	Village- Chehlanwali	Period of Analysis	16/02/2026 - 25/02/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

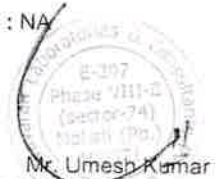
RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	92	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	53	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	BDL (25)	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	28	80(max.)	IS 5182 (Part 6)
5	Ammonia as NH ₃	µg/m ³	23	400(max.)	IS 5182 (Part 25)
6	Ozone as O ₃	µg/m ³	25	180(max.)	IS 5182 (Part 9)
7	Carbon Monoxide as CO	mg/m ³	0.72	4(max.)	IS 5182 (Part 10) NDIR method
8	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5
9	Arsenic (As)	ng/m ³	BDL (4)	6(max.)	USEPA Method IO-3.5
10	Nickel as Ni	ng/m ³	BDL (4)	20(max.)	USEPA Method IO-3.5
11	Benzene as C ₆ H ₆	µg/m ³	BDL (2)	5(max.)	IS 5182 (Part 11)
12	Benzo Pyrene (BaP), Particulate Phase Only	ng/m ³	BDL (0.3)	1(max.)	IS 5182 (Part 12)

Remarks : NA



Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2 -AA

Page No. 1/2

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TEST REPORT



TC-11818

ULR No : NA

Test Report No : NAAL160226NA133

Type of Sample # : Ambient Air

Date of reporting : 25/02/2026

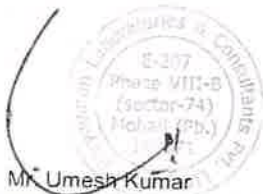
End of Report

OTHER INFORMATION

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7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



M. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL130326NA055	
Type of Sample # : Ambient Air		Date of reporting : 21/03/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/03/2026 - 13/03/2026	Date of Receipt of Sample	13/03/2026
Sampling Location	Station No.1	Period of Analysis	13/03/2026 - 21/03/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	85	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	48	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	25	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	27	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.82	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report



Mr. Umesh Kumar
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EL-FMT-7.8.2 -AA

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

TEST REPORT



ULR No : NA

Test Report No : NAAL130326NA055

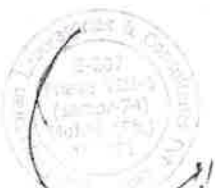
Type of Sample # : Ambient Air

Date of reporting : 21/03/2026

OTHER INFORMATION

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5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical



TEST REPORT



IC-11818

ULR No : NA		Test Report No : NAAL130326NA056	
Type of Sample # : Ambient Air		Date of reporting : 21/03/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/03/2026 - 13/03/2026	Date of Receipt of Sample	13/03/2026
Sampling Location	Station No.2	Period of Analysis	13/03/2026 - 21/03/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	89	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	52	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	28	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	24	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.78	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report



Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7.8.2-AA

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ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 150071

TEST REPORT



ULR No : NA

Test Report No : NAAL130326NA056

Type of Sample # : Ambient Air

Date of reporting : 21/03/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions :

1. The results relate only to the items tested.
2. Giving opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of Test Report.
3. The Test Report shall not be reproduced except in full or part or used as advertisement or evidence in court of law without written approval of the laboratory. Samples drawn under special circumstances like legal cases, the customer must declare the same at the time of submission.
4. Complaint log book is with Quality Cell. Contact No. (M) 91 8872 04 3135, Phone 91 172 4616 225 Email: quality@ecoparyavaran.org
5. The samples tested may be preserved for a period but not exceeding 7 days from date of reporting, unless otherwise specifically desired by the customer or regulatory authorities. However, depending upon the nature of samples and effect of preservation the test results of preserved samples may vary. Laboratory also does not assume any responsibility in the test results of samples kept on hold for want of clarification.
6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar
Authorized Signatory- Chemical



Eco Paryavaran Laboratories & Consultants Pvt. Ltd.

TEST REPORT



ULR No : NA		Test Report No : NAAL130326NA057	
Type of Sample # : Ambient Air		Date of reporting : 21/03/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/03/2026 - 13/03/2026	Date of Receipt of Sample	13/03/2026
Sampling Location	Station No.3	Period of Analysis	13/03/2026 - 21/03/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	86	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	49	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	27	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	30	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.71	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report



Mr. Umesh Kumar
Authorized Signatory- Chemical

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Page No.1/2

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

☎ 0172-4616225 📠 9781303109 📧 contact@ecoparyavaran.org | md@ecoparyavaran.org 🌐 www.ecoparyavaran.org

TEST REPORT



ULR No : NA

Test Report No : NAAL130326NA057

Type of Sample # : Ambient Air

Date of reporting : 21/03/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.

Mr. Umesh Kumar
Authorized Signatory- Chemical



TEST REPORT



ULR No : NA		Test Report No : NAAL130326NA058	
Type of Sample # : Ambient Air		Date of reporting : 21/03/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/03/2026 - 13/03/2026	Date of Receipt of Sample	13/03/2026
Sampling Location	Station No.4	Period of Analysis	13/03/2026 - 21/03/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	83	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	47	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	25	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	32	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.73	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report


Mr. Umesh Kumar
Authorized Signatory- Chemical

EL-FMT-7 8.2 -AA

Page No. 1/2

TEST REPORT



TC-11818

ULR No : NA

Test Report No : NAAL130326NA058

Type of Sample # : Ambient Air

Date of reporting : 21/03/2026

OTHER INFORMATION

Abbreviation & Symbol : # Information provided by customer. ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

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6. All disputes are subjected to jurisdiction of Mohali (Punjab) India and maximum liability of the laboratory does not exceed the testing and sampling charges.
7. In case where sample is provided by the customer, the reported results shall apply to the sample as received.



Mr. Umesh Kumar
Authorized Signatory- Chemical

TEST REPORT



ULR No : NA		Test Report No : NAAL130326NA059	
Type of Sample # : Ambient Air		Date of reporting : 21/03/2026	
Reference Type : Work Order No		Reference No : 5100044398 Dt.: 18/11/2025	
Customer #	Power Mech Projects Limited., Talwandi Sabo Power Ltd. 3x660MW Thermal Power Plant, Banawala, District Mansa, Punjab- 151302.		
Sampling Protocol	IS 5182, EL-MSP-7.3	Mode of Collection of Sample	Sample collected by Laboratory Mr. Prabhjot Singh
Period of Sampling	12/03/2026 - 13/03/2026	Date of Receipt of Sample	13/03/2026
Sampling Location	Village- Chehlanwali	Period of Analysis	13/03/2026 - 21/03/2026
Standard/Specifications	National Ambient Air Quality: G.S.R.No.B-29016/20/90/PCI-L dated 18 Nov, 2009	Environmental Condition	Clear Sky
Testing Location	On Site & Permanent Facility		

RESULTS

1. Chemical Testing

I. Atmospheric Pollution (Ambient Air)

Sr.No	Test Parameter	Unit	Result	Standard	Test Method
1	Respirable Suspended Particulate Matter (PM10)	µg/m ³	87	100(max.)	IS 5182 (Part 23)
2	Particulate Matter (PM2.5)	µg/m ³	51	60(max.)	IS 5182 (Part 24)
3	Sulphur Dioxide as SO ₂	µg/m ³	29	80(max.)	IS 5182 (Part 2)
4	Nitrogen Dioxide (NO ₂)	µg/m ³	34	80(max.)	IS 5182 (Part 6)
5	Carbon Monoxide as CO	mg/m ³	0.84	4(max.)	IS 5182 (Part 10) NDIR method
6	Lead (Pb)	µg/m ³	BDL (0.004)	1.0(max.)	USEPA Method IO-3.5

Remarks : NA

End of Report



Mr. Umesh Kumar
Authorized Signatory- Chemical

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TEST REPORT



ULR No : NA

Test Report No : NAAL130326NA059

Type of Sample # : Ambient Air

Date of reporting : 21/03/2026

OTHER INFORMATION

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Mr. Umesh Kumar
Authorized Signatory- Chemical

Circular: Reconstitution of Environment Management Cell

(In accordance with requirement of The Environment Protection Act, 1986, The Air (Prevention and Control of Pollution) Act 1981 & The Water (Prevention and Control of Pollution) Act 1974.)

Date: 01st November 2025

The following are nominated as members of Environment Cell at TSPL, Punjab.

Sr. No.	Name of member	Designation Department	Committee Designation	Mail id
1.	Mr. Pankaj Sharma	CEO	Chairman	Pankaj.sharma@vedanta.co.in
2.	Mr. Nilesh Gade	Station Head	Vice Chairman	nilesh.g@powermech.net
3.	Mr. Chahat Bansal	Manager- Environment	Secretary	Chahat.b@powermech.net
4.	Ms. Ayushi Agarwal	ESG	Deputy Secretary	Ayushi.agarwal@vedanta.co.in
5.	Mr. Ravinder Thakur	COO	Member	Ravinder.Thakur@vedanta.co.in
6.	Mr. R.N. Das	Head O&M	Member	rndas@powermech.net
7.	Mr. Ankoor Gupta	Head Maintenance	Member	Ankoor.gupta@vedanta.co.in
8.	Mr. Vijay Amin	Operation Head	Member	vijay.a@powermech.net
9.	Mr. Vikas Sharma Vashisht	Head-Advocacy	Member	Vikas.S@vedanta.co.in
10.	Ms. Yeshmeen Mittal	Lead-CSR	Member	Yeshmeen.mittal@vedanta.co.in
11.	Mr. Pushpendra Sengar	Head Operation	Member	Pushpendra.Sengar@vedanta.co.in
12.	Mr. Rakesh Gagrani	Head BOP & TMD	Member	Rakesh.gagrani@vedanta.co.in
13.	Mr. Nitin Jha	Head CHP	Member	Nitin.jha@vedanta.co.in
14.	Mr. Shreyas Gangane	Head BMD & AHP	Member	Shreyas.gangane@vedanta.co.in
15.	Mr. Pardeep Phor	Sr. Manager HSE	Member	pradeep.phor@powermech.net
16.	Mr. Ankur Baliyan	Head AHP	Member	ankur.b@powermech.net
17.	Mrs. Ramanpreet Kaur	Head Water System	Member	ramanpreet.kaur@vedanta.co.in
18.	Ms. Nancy Rana	PG Trainee Water system	Member	nancy.rana@vedanta.co.in
19.	Mr. Sasanka Mahanty	DGM-Water System	Member	Sasanka.m@powermech.net

The tenure of above "Environment Cell" shall be 2 years. The members of the cell are required to have periodic meetings over pre circulated agenda. The gist of the meeting shall be captured & actionable shall be followed up by the above-mentioned members.

Talwandi Sabo Power Limited



Pankaj Sharma
CEO, TSPL
(M): +91 98931 22357
(Email): Pankaj.sharma@vedanta.co.in



TALWANDI SABO POWER LIMITED

Site Office: Village Banawala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | Telefax: 01659-248083 website: www.tsplindia.co

CIN NO. U40101MH2007PLC433557

COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE

(FROM: OCTOBER 2024-MARCH 2025)

(Environment Clearance No. J-13011/24/2008-IA. II (T) dated 30/09/2013, MoEF notification G.S.R.02 (E) dated 2/1/2014. MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019)



For:
Talwandi Sabo Power Limited
Village-Banawala Distt- Mansa (Punjab)



vedanta
transforming for good

power

TSPL/ ENV/ MoEF&CC/ EC/MAY-2025/01

Date: 24.05.2025

To,
The Additional Director(s),
Ministry of Environment, Forests & Climate Change,
Govt. of India, Northern Regional Office,
Bays No.24-25, Sector 31-A, Dakshin Marg,
Chandigarh-160030.

Subject: Submission of Half Yearly Environmental Clearance Compliance Report of 1980 MW (3X660 MW) Talwandi Sabo Power Limited, Village Banwala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab.

Ref:-

1. Environmental Clearance No. J-13011/24/2008-IA.II (T) dt.11/07/2008 and amended on 25/03/2010 & 17/06/2010.
2. MoEF Office Memorandum No. J-11013/41/2006-IA. II (I) dt. 06/04/2011.
3. Extension of validity period of Environment Clearance No. J-13011/24/2008-IA. II (T) dated 30/09/2013.
4. MoEF notification G.S.R.02 (E) dated 2/1/2014.
5. MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019

Dear Sir,

This has reference to the above cited subject. Please find enclosed herewith Half Yearly Environmental Clearance Compliance Report of 1980 MW (3X660 MW) Talwandi Sabo Power Limited, Village Banwala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab for the period of October, 2024 to March, 2025.

Thanking you and assuring you our best attention always.

Yours faithfully,

For, Talwandi Sabo Power Limited

Vikas Sharma Vashisht
Head, Environment



Encl: As above

Cc: -

1. The Director, MoEF&CC, New Delhi.
2. The Member Secretary, CPCB, New Delhi.
3. The Environmental Engineer, PPCB, Bathinda.

TALWANDI SABO POWER LIMITED

Site Office: Village Banwala, Mansa - Talwandi Sabo Road, Mansa, Punjab, India, 151302

Registered Office Address: 1st Floor, C wing, Unit 103, Corporate Avenue Atul Projects, Chakala, Andheri (East), Mumbai, Maharashtra, 400093

Tel. 91-1659-248000 | Telefax: 01659-248083 website: www.tsplindia.co

CIN NO. U40101MH2007PLC433557

TALWANDI SABO POWER LIMITED, BANAWALA

Compliance status of the conditions stipulated in Environmental Clearance of 1980 MW (3x660 MW) Talwandi Sabo Power Limited and additional conditions stipulated in Office Memorandums No. J-11013/41/2006-IA. II (I) & F.No.22-13/2019-IA.III dated 06/04/2011 & 28/08/2019 for the period of October, 2024 to March, 2025.

3	Conditions	Compliance Status
(i)	The total land requirement for the project shall be restricted to 2105 acres	Noted.
(ii)	Requisite quantity of coal for the ultimate capacity shall be obtained before commissioning the project	Noted.
(iii)	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively	Complied as Sulphur contents in the coal does not exceed 0.5% and as per MOEF&CC notification dated 21.05.2020, exemption has been provided for the requirement of 34% ash content in coal to be used in the Project. Annexure-1
(iv)	(As amended vide MoEF letter No. J-13011/24/2008-IA. II (T) dt. 17/06/2010) A Tri-flu stack of 275 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x and particulate. Exit velocity of the flue gases shall not be less than 25m/sec	Complied. Exit velocity of flue gases has taken care in design and condition noted.
(v)	High efficiency Electrostatic Precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³	Complied. Stack emission monitoring test reports of NABL accredited and MoEF&CC recognized laboratory for the period of October-24 to March-2025 are enclosed as Annexure-2 (a) to Annexure-2 (f) .
(vi)	Space provision shall be kept for retrofitting of FGD, If required at a later date	Complied.
(vii)	Adequate dust extraction system such as cyclone/bag filters and water spray system in dusty areas such as coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided	Complied.
(viii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash shall be used in a phased manner as per provision of the notification on Fly Ash Utilization issued by Ministry in September 1999 and its amendment. By the end of 9 th year full fly ash utilization should be ensured. Unutilized fly ash shall be disposed off in the ash pond in the form of High Concentration slurry and the bottom ash in	Fly ash is being used as per the provisions of the prevalent notifications issued by MOEF&CC Fly ash generation and utilization report is being submitted to PPCB regional office (monthly) and ash implementation report submitted to PPCB, CPCB and MoEF&CC Regional Office, Chandigarh (annually) regularly



TALWANDI SABO POWER LIMITED, BANAWALA

	conventional slurry mode.	Copy of report attached at Annexure-3 (a) to 3(g) .
(ix)	Ash pond shall be lined with HDPE lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached	Complied.
(x)	Closed cycle cooling system with cooling towers shall be provided. COC of at least 5 shall be adopted and the effluents shall be treated as per the prescribed norms	Complied. Cooling tower blow down is being treated in Zero Discharge Unit and the treated water is being recycled for cooling tower make-up.
(xi)	The treated effluent conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangement shall be made that effluents and storm water do not get mixed.	Complied.
(xii)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation	Complied.
(xiii)	Rain water harvesting should be adopted. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Complied.
(xiv)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fire in coal yard especially during summer season. Copy of these measures with full details along with location plant lay out shall be submitted to the ministry as well to the regional office of the ministry at Chandigarh.	Complied. Details already submitted vide letter no. TSPL/MoEF/139 dated 18/7/2013 to MoEF&CC and its Regional office, Chandigarh.
(xv)	Storage facilities for liquid fuel such as LDO and HFO/LSHS shall be made in the plant area where risk in minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in DMP.	Complied. Mock drills are being conducted regularly at Fuel Oil Storage area. Latest Mock drill had conducted on 31.12.2024 during October - 2024 to March-2025 period are enclosed as Annexure- 4 .
(xvi)	Regular monitoring of ground water in and around ash pond area shall be carried out, records maintained and six-monthly reports shall be furnished to the Regional office of this Ministry	Complied. Ground water monitoring is being carried out in and around ash pond area. Test reports from NABL accredited and MoEF&CC recognized laboratory are enclosed as Annexure



TALWANDI SABO POWER LIMITED, BANAWALA

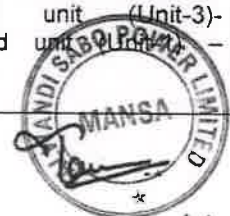
		5 (a) to Annexure-5 (f).
(xvii)	A green belt of adequate width and density shall be developed around the plant periphery covering about 1/3 of the project area preferably with local species	Complied.
(xviii)	Activities under CSR shall be enhanced with proper financial allocation. Details of these activities shall be submitted to the Regional office of the Ministry, SPCB and the Ministry	Complied. CSR activities with financial allocation implemented during the period of April - 2024 to March-2025 is enclosed as Annexure-6 .
(xix)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase	Complied.
(xx)	Leq of Noise levels emanating from turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplug/ ear muff 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.	Turbines have been provided with acoustic enclosure and installed inside enclosed building. Complied. Complied. Audiometric test is being conducted to workers engaged in noisy areas on six monthly basis and record is being maintained. There was no report of any hearing loss.
(xxi)	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM, RSPM shall be carried out in the impact zone and record maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring station and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional office of this ministry.	Complied. Complied. Ambient Air Quality monitoring reports from MoEF&CC recognized and NABL accredited laboratory for the period of October - 2024 to March-2025 are enclosed as Annexure-7 (a) to Annexure-7 (f) .
(xxii)	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 locally concerned within seven days from the date of this clearance letter, informing that the project has been accorded environment clearance and copies of clearance letter are available with State Pollution Control Board/Committee and may	Complied.



[Handwritten Signature]

TALWANDI SABO POWER LIMITED, BANAWALA

	also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	
(xxiii)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Complied. Copy of Constitution of Environment Management Cell is attached as Annexure- '8' .
(xxiv)	Half yearly report on the status of implementation of the stipulated condition and environmental safeguards shall be submitted to this Ministry/Regional Office/CPCB/SPCB	Periodically submitting to MoEF & CC/ PPCB/ CPCB (copy of Previous letter is attached at Annexure - '9' and continue to comply the same in future also.
(xxv)	Regional office of the Ministry of Environment & Forest located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environment Impact Assessment report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring	Noted. Complied. Copies of EIA and DPR submitted vide letter no. TSPL/ MOEF/ 111 dated 16/6/2009 to Regional Office, Chandigarh.
(xxvi)	Separate funds shall be allocated for implementation of environment protection measures along with item-wise break up. These costs shall be included as part of the project cost. The fund earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Complied. Details of actual project expenditure with item-wise break up has already submitted vide letter no. TSPL/ ENV/ 02/ MoEF&CC/ 155 dated 24/5/2018. Complied. Year-wise expenditure incurred on Environmental protection measures during operational phase is submitting regularly. Expenditure incurred on Environmental protection measures during operational phase for the FY 2024-25 is enclosed as Annexure- '10' .
(xxvii)	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 date of land development work and commissioning of plant	1) Date of site approval from Govt. of Punjab- 25.08.2009 2) Date of financial closure- 26.09.2009 3) Date of commencement of land development work (Leveling and site grading)- 27.02.2010. 4) Consent to operate under Water & Air Acts from PPCB - 31.03.2014. 5) Commissioning of First unit (Unit- 2)- 05.07.2014, Second unit (Unit-3)- 25.11.2015 and Third unit - 25.08.16.



Handwritten signature

TALWANDI SABO POWER LIMITED, BANAWALA

(xxviii)	Full cooperation shall be extended to the Scientist / Officers from the Ministry/Regional Office of the Ministry at Chandigarh/ the CPCB/the SPCB who would be monitoring the compliance of environmental status.	Noted.
Additional Conditions vide Office Order No J-13011/24/2008-IA.II(T) dated 25/03/2010		Compliance Status
(xxix)	The project proponent shall upload the status of compliance of the conditions stipulated in environment clearance issued vide this Ministry's letter of even no dated 11.07.2008, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests	Complied and continue to comply the same in future also.
(xxx)	Criteria pollutants levels including NOx, RSPM (PM ₁₀ & PM _{2.5}), Sox (from Stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant	Complied and continue to comply the same in future also
Additional Conditions vide letter No J-13011/ 24/2008-IA.II(T) dated 30/09/2013		Compliance Status
(xxxi)	Scheme for harnessing solar power within the premises of the plant (particularly at available roof tops) shall be critically examined and status of implementation shall be submitted.	Complied. Status of implementation has already submitted vide letter no. TSPL/ ENV/ 02/ MoEF&CC/ 151 dated 28/11/2017.
(xxxii)	Waste Water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB and no effluent, under any circumstances whatsoever, should be discharged into low lying area or into estuary.	Complied.
(xxxiii)	A long-term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. 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.	Complied. Reputed institute i.e. Central Institute of Mining and Fuel Research (CIMFR) had been engaged for long term study of radioactivity and heavy metals in coal & fly ash. Copy of report attached at Annexure- '11'.



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TALWANDI SABO POWER LIMITED, BANAWALA

(xxxiv)	It shall be ensured that in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	Complied. In built monitoring mechanism for CSR schemes already in place. Social audit for the FY-2024-25 got done from reputed government institute i.e. Central University of Punjab. Copy of report attached at Annexure- '12'.
(xxxv)	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 conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Integrated HSE policy has been formulated & identified and designated responsible at all levels of its hierarchy for ensuring adherence to the policy and compliance with conditions stipulated in Environment clearance and other applicable environmental laws and regulations.
4	The Ministry of Environment and Forest reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MOEF may impose additional environmental conditions or modify the existing ones, if necessary.	Noted
5	The environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.	Complied. All units i.e. 3x660 MW are in operational.
6	In case any deviation or alteration in the project proposed from those submitted to this Ministry for clearance a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required if any	Noted
7	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules 1989 and its amendments, The Public Liability Insurance Act, 1991 and its amendments	Noted
8	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997	Noted



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Additional Conditions (as per MoEF Office Memorandum No.J.11013/41/2006-IA.II (I) dated 06/04/2011)		Compliance Status
(i)	Continuous monitoring of stack emissions as well as ambient air quality (as per notified standards) shall be carried out and continuous records maintained. Based on the monitored data, necessary corrective measures as may be required from time to time shall be taken to ensure that the levels are within permissible limits. The results of monitoring shall also be submitted to the respective Regional Office of MoEF regularly. Besides, the results of monitoring will also be put on the website of the company in the public domain.	Complied. TSPL has 4 CAAQMS station and OCEMS for 3 boiler stacks which have real time connectivity with PPCB and CPCB servers. Also, EC compliance report including reports for monitoring of stack emissions and that it is displayed on website. screenshot for TSPL website is attached at Annexure – '13'
(ii)	The six-monthly monitoring report as well as the monitored data on various parameters as stipulated in the environment clearance conditions shall be put on the website of the company and also regularly updated. The monitored data shall also be submitted to respective State Pollution Control Board/UTPCCs and the Regional Office of MoEF.	Periodically submitting to MoEF & CC/ PPCB/ CPCB (copy of Previous letter is attached at Annexure – '9' and screenshot for TSPL website is attached at Annexure – '13' and continue to comply the same in future also.
(iii)	The ambient air quality data as well as the stack emission data will also be displayed in public domain at some prominent place near the main gate of the company and updated in real time.	Complied and continue to comply the same in future also.
MoEF&CC Office Memorandum No. L-11011/ 17/ 2014-IA.I (T) dated 25/09/2014		Compliance Status
(i)	The Thermal Power Plants attracting the said Notification shall submit its compliance to the Ministry's Regional Office and SPCB concerned along with the compliance reports of the environmental safeguards stipulated in the ECs and Consents	Complied and continue to comply the same in future also.
MoEF&CC Office Memorandum F.No.22-13/2019-IA.III dated 28/08/2019		Compliance Status



TALWANDI SABO POWER LIMITED, BANAWALA

(i)	The guidelines prepared by CPCB for disposal of fly ash for reclamation of low-lying areas and in stowing/backfilling of abandoned mines / quarries shall be followed during Disposal of ash in abandoned or working mines, as annexed.	Not applicable
(ii)	There Should at least be clearance of 500 m of safe distance be maintained from River and water body in case of ash disposal in abandoned mines to prevent embankment failures and fly ash flowing into the nearby water body.	Not applicable
(iii)	The top layer of the fly ash disposal area in the abandoned mines shall be kept moist during disposal.	Not applicable
(iv)	Top layer of the disposal area should have 70 cm overburden or gravels / stones and then 30 cm sweet soil cover. Subsequently, the vegetation shall be raised on the soil cover.	Not applicable
(v)	Bioaccumulation and bio-magnification test shall be conducted on surrounding flora and fauna (tree leaves, vegetation, crop yields and cattle population) during pre-monsoon and post monsoon to find out any trace metals as caped through groundwater or runoff.	Noted.
(vi)	Surface runoff and supernatant water, in any case shall not be let into the surrounding areas. It shall be collected by providing adequate drains around the mine. The Supernatant water along with surface runoff shall be treated and re-used for mixing ash and plant operations.	Not applicable
(vii)	To the extent possible, only decanted water from mine, make up water from treated effluents such as cooling tower blow down and treated sewage water shall be used for making ash slurry.	Complied. In power plant, cooling tower blow down is being used for making ash slurry.
(viii)	Fly ash to be used as soil conditioner in agriculture need and to be applied in controlled manner to limit excessive application so as to prevent soil degradation. The optimize proportion of as to applied	Noted



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TALWANDI SABO POWER LIMITED, BANAWALA

	which is to be certified by the state Agricultural Universities / Colleges based on the soil testing.	
(ix)	Approval from DGMS shall be obtained before disposing the ash in the mine voids.	Not applicable
(x)	Technology for conversion of fly ash into coarse granules for stowing in the underground mines to be explored.	Noted
(xi)	All the power plant should install different silos for dry collection of fly ash.	Complied. 3 Nos. separate Silos provided for dry fly ash collection.
(xii)	Records pertaining to details of month-wise Quantity of fly ash disposed and water consumption along with nature/source of water shall be maintained and submitted to ministry / regional office annually.	Complied. Details of quantity of fly ash disposed has already submitted to MoEF&CC, Regional Office, Chandigarh, CPCB and PPCB vide letter number TSPL/ENV/F&W/MoEF&CC/May-2025/01 dated 21.05.2024 Annexure – '14' Colling tower blowdown is the source of water for fly ash disposal.
(xiii)	Before starting the disposal of ash into mine voids, the NOC / Permission from the mine owner is to be obtained in case the mine closure activities are not completed or state government in case the mine has been the handed over to the state Govt. after its closure. A copy of such NOC/Permission is to be Submitted to the ministry and its Regional Offices	Not applicable



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TALWANDI SABO POWER LIMITED, BANWALA

Annexure- 10

INVESTMENT ON ENVIRONMENT PROTECTION MEASURES

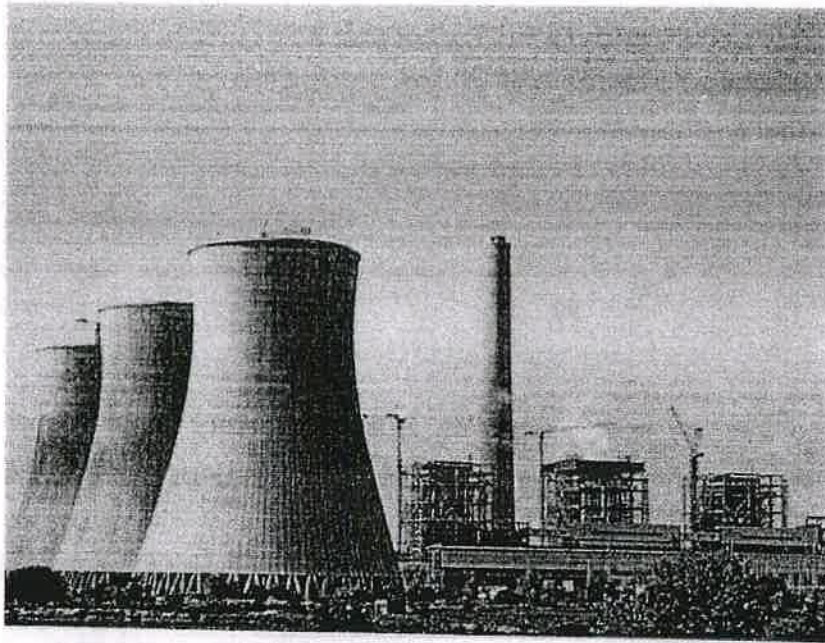
Year	Expenditure in Rs.	Remarks
Capital Expenditure		
2014-2015	1,18,19,949	
2015-2016	2,20,48,141	
2016-2017	2,11,80,205	
2017-2018	14,19,97,557	
2018-2019	7,20,94,530	
2019-2020	3,24,79,492	
2020-2021	5,43,28,674	
2021-2022	6,54,92,472	
2022-2023	6,71,11,840	
2023-2024	6,92,14,574	
2024-2025	7,04,75,376	
2025-2026	8,05,21,284	
Recurring Expenditure		
2014-2015	3,05,79,910	First Unit (Unit-2-660 MW) was commissioned in July,2014
2015-2016	13,78,10,828	Second Unit (Unit-3-660 MW) was commissioned in November,2015
2016-2017	31,51,20,520	Third Unit (Unit-1-660 MW) was commissioned in August,2016
2017-2018	38,34,46,202	
2018-2019	45,33,27,803	
2019-2020	45,91,42,892	
2020-2021	46,19,24,983	
2021-2022	53,69,58,476	
2022-2023	50,55,56,819	
2023-2024	50,97,40,213	
2024-2025	51,13,29,659	
2025-2026	52,25,78,421	

Report

On

**Long term study on radioactivity and heavy metals content
in coal and fly ash of Talwandi Sabo Power Limited, Punjab**

(Reporting Period: April 2020 – September 2020)



**Talwandi Sabo Power Limited,
Banawala, Mansa, Punjab – 151302**



Natural Resources and Environmental Management Group
CSIR-Central Institute of Mining and Fuel Research
Barwa Road, Dhanbad - 826001, Jharkhand

**Long term study on radioactivity and heavy metals content
in coal and fly ash of Talwandi Sabo Power Limited, Punjab**

**PROJECT REPORT
(SSP/345/2018-19)**

-
1. This report is meant for the internal use of your organization only and it should not be published in full or part by your organization or staff. It should not be communicated/circulated to outside parties except the concerned government department.
 2. CSIR-Central Institute of Mining and Fuel Research, Dhanbad reserves the right to publish the results of research for the benefit of the industry.
-

Sponsored by



**Talwandi Sabo Power Limited,
Banawala, Mansa, Punjab – 151302**

Signature of Project Proponent

(Abhay Kumar Singh)/(D.B. Singh)
Sr. Principal Scientist & Project Leader
CSIR-CIMFR, Dhanbad

(K. K. K. Singh)
Chief Scientist & HORG
CSIR-CIMFR, Dhanbad

CSIR-CIMFR Authorized Signatories

(P. K. Mishra)
Sr. Principal Scientist & HOS
Project Planning & Monitoring

(R. V. K. Singh)
Chief Scientist & HORG
Project Planning & Industry Interface

PROJECT TEAM

S.N.	Name & Designation	Role/Contribution
1.	Dr. K. K. K. Singh, Chief Scientist	Project Coordinator
2.	Dr. R. K. Tiwary, Sr. Scientist	Team Member
3.	Dr. D. B. Singh, Scientist	Project Leader
4.	Dr. Abhay Kumar Singh, Sr. Principal Scientist	Project Leader
5.	Dr. Siddharth Singh, Sr. Principal Scientist	Team Member
6.	Dr. G. C. Mondal, Principal Scientist	Team Member

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1.0 INTRODUCTION

The ever growing challenge of population explosion, human civilization, rapid urbanization, and high level industrialization has led to increasing demand for energy and power generation all over the world. Whereas many nations are developing their nuclear energy base and others expanding their biomass and wind energy capacities. In India coal is still the most abundant, most versatile, readily available and easily assessable source of fossil fuel. Coal is accounting for nearly 61% of total power generation. Coal combustion results into generation of huge amount of fly ash. The ash content in Indian coals varies between 10-40%. An increase of 1% in the ash content can result in an increase in coal consumption of 3-4% affecting calorific value and in turn quality of coal. Presently, National Thermal Power Corporation (NTPC) alone generates around 59 million tons of coal ash annually from its coal based thermal power plants. The generation of huge quantities of coal ash poses serious disposal and environmental problems. The major composition of fly ash is qualitatively similar to that of natural earthy materials such as soils and shales. Fly ash is associated with various useful constituents such as Ca, Mg, Mn, Fe, Cu, Zn, B, S and P along with appreciable amounts of toxic elements such as Cr, Pb, Hg, Ni, V, As and Ba. The distribution of each element within the fly ash structure is different, however; the smaller the particle size, the higher is the trace elements content due to the increase in the surface/weight ratio. The alkaline content depends on the concentration of the basic oxides (CaO & MgO) and the amount of acidic substances such as SO₂, SO₃, and P₂O₅ which are also present in the coal fly ash. Oxides of Si, Al, Fe and Ca account for nearly 90% of the composition of fly ash. The disposal of fly ash is considered a potential source of contamination due to the enrichment and surface association of trace elements in the ash particles. Unscientific disposal of fly ash without considering any engineering and environmental control measures may cause environmental problems.

The elements Mn, Ba, V, Co, Cr, Ni, Ln, Ga, Nd, As, Sb, Sn, Br, Zn, Se, Pb, Hg, and S in coal are volatile to a significant extent in the combustion

process. However, the elements Mg, Na, K, Mo, Ce, Rb, Cs, and Nb appear to have smaller fractions volatilized during combustion, whereas Si, Fe, Ca, Sr, La, Sm, Eu, Tb, Py, Yb, Y, Se, Zr, Ta, Na, Ag, and Zn are either not volatilized or show only minor trends related to the geochemistry of mineral matter. In absence of engineering and environmental controls and unscientific handling during transportation, disposal, and storage phases, the residues from coal combustion are subjected to leaching effects of rain and part of the undesirable components in the ashes may pollute both ground and surface waters.

Coal is a sedimentary rock whose organic and inorganic mineral aggregates contain varied concentrations of naturally occurring radioactive materials (NORM) including uranium (^{238}U , ^{235}U) and thorium (^{232}Th) decay chains as well as radioactive potassium (^{40}K). Concentrations of these primordial radionuclides, though dependent on the geological formations of coal, are comparable to the average radioactivity of the earth crust. Mining, processing, and combustion of coal redistribute and concentrate the radionuclides in the environment, thereby enhancing environmental radiation levels above normal background. This results in higher dose delivery not only to coal workers but also to final users and the general environment. It is therefore necessary to evaluate the radioactivity and heavy metals levels of coal and its residue in order to assess the environmental and radiological impacts that may be associated with its exploitation and utilization and to develop functional plan and radiation dose control framework for coal workers and the general public. Extensive researches have been carried out to assess the radionuclide contents of coal deposits around the world.

2.0 STUDY OBJECTIVE

CSIR-Central Institute of Mining and Fuel Research, Dhanbad (CSIR-CIMFR) has undertaken a scientific study on radio activity and heavy metals content in coal and fly ash of Talwandi Sabo Power Limited on request of TSPL. Long term study on radio activity and heavy metals content in coal and fly ash of Talwandi Sabo Power Limited is one of the condition stipulated in

Environmental Clearance (EC) of Talwandi Sabo Power Plant. The major objectives of this study is to quantify the heavy metals content and natural radioactivity levels of raw coal and coal residue (dry fly ash, bottom ash and pond ash) generated at Talwandi Thermal Power Plant in pre-monsoon season. This study will help in evaluation of contamination possibilities of the natural resources and assessing associated human health risk and radiation hazard indices from the activity concentrations of ^{226}Ra , ^{238}U and ^{40}K and in predicting any radiological hazard to final users, and the general public from its exploitation and uses.

CSIR-Central Institute of Mining and Fuel Research, a constituent laboratory under the aegis of Council of Scientific and Industrial Research (CSIR), New Delhi aims to provide R&D inputs for the entire coal-energy chain encompassing exploration, mining and utilization. The laboratory also strives to develop mineral based industries to reach the targeted production for country's energy security and growth with high standards of safety, economy and cleaner environment. Natural Resources and Environmental Management Group (NREM) of CIMFR constitutes an interdisciplinary and versatile experts with diverse experiences in the areas of mining, environmental and earth sciences, hydrological studies, geophysical survey, remote sensing, environmental biology and ecology, This group has wide experience in quantifying the environmental problems and providing right solutions from underground to surface mining, associated industries, thermal powers, coal washeries etc. through R&D and consultancy services. It has capability for handling complex environmental problems in mining and a non-mining area with economy and time targeted completion and also assures cost competitive expert services support to its clients in India and abroad.

3.0 STUDY AREA

Talwandi Sabo Power Ltd. is a coal-based thermal power plant of 1980 MW (3x660 MW) capacity located near Banawala village, about 18 km from the District town of Mansa and 50 kilometers from nearest major city of Bathinda in the State of Punjab (**Fig.1**). It has been named after Talwandi Sabo, a holy

town at a distance of 20 kilometers from the project site. Talwandi Sabo has Historical Value & Religious Importance for the Sikhs. It is one of the 5 Takhts of Sikhism and the Sacred Guru Granth Sahib was hand scripted at this place. The latitude and longitude of the site are 29°53' N to 29°56' N and 75°12' E to 75°15' E respectively. Nearest railway station and airport are Satta Singhwala and Bathinda, located at about 12 km and 30 km from the site, respectively.

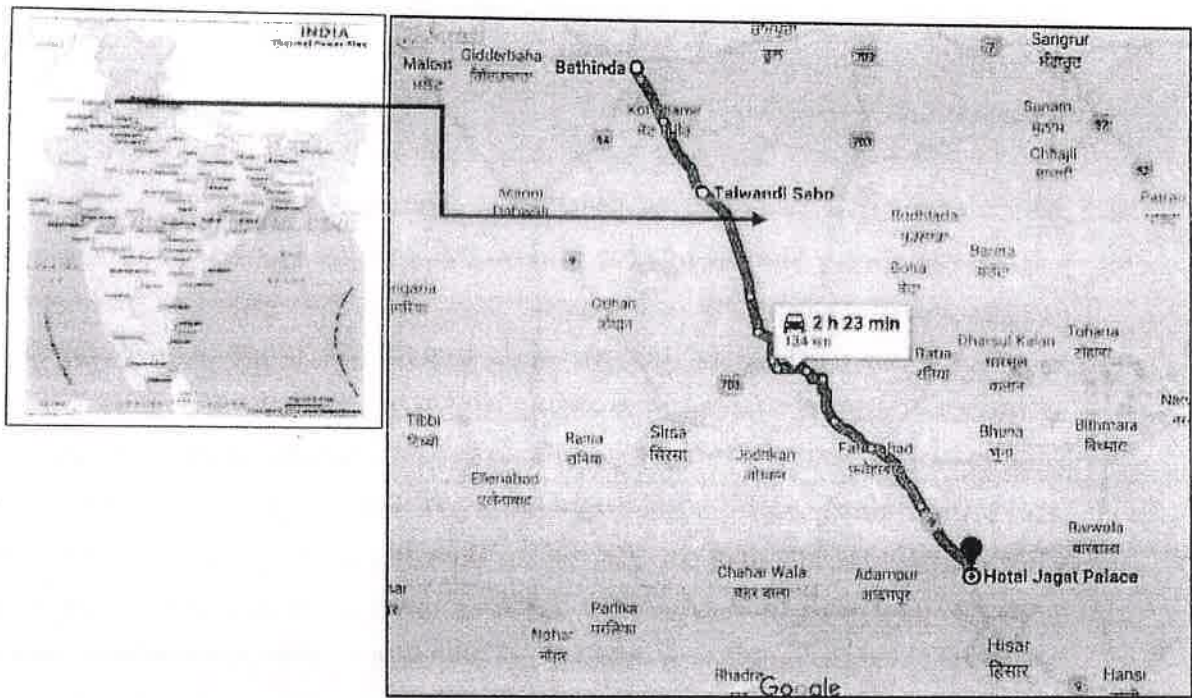


Fig. 1: Location map of Talwandi Sabo Thermal Power Plant

Presently, coal for TSPL power plant is mainly supplied from Mahanadi Coal Fields Ltd. (MCL) of Orissa, located at about 1500 km from the site. Imported coal and washed coal is blended to achieve the desired ash content. Required quantity of water are sourced from the Bheni sub branch of Kotla Canal Branch at a distance of about 20 km from the site. About 2105 acres of land has been earmarked for the plant including ash pond area. It is one of the first few supercritical plants being constructed in the country and is based on Pulverized Fuel (PF) firing technology. Fly Ash is the major by-product of the plant. The dry fly ash is periodically removed from the collection

hoppers below the precipitators and is pneumatically transported to storage silos. Here, dry fly ash is given to cement & brick manufacturers for reutilisation. Bottom ash is being utilized in reclamation of low lying areas within the plant, clay fly ash brick manufacturing etc. and pond ash for road construction. Balance remaining fly ash is mixed with optimum quantity of water to be transported to the ash pond through high concentration slurry disposal system.

4.0 METHODOLOGY

Coal and fly ash samples were collected from Talwandi Sabo Power Plant in the month of May 2020. Coal samples were collected from inside the power station, shortly before being fed into the boilers. Three types of coal samples i.e. (i) ROM coal, (ii) imported coal and (iii) washed coals were collected in 25 kg bags. Besides, one mixed coal samples (iv) was also prepared from three collected coal samples after mixing in 1:1 ratios for elemental analysis. This mixing was done to make it synergistic as in the boiler during combustion, these coals are not separate and the combustion residuals are of this mixed coal.

The coal residue (dry fly ash, bottom ash and pond ash) samples were collected from the ash handling areas of the Thermal Power Plant. Freshly generated dry fly ash samples have been collected from the electrostatic precipitators. Besides, three bottom ash samples (each approx. 25 kg) at different time intervals were collected from the site and mixed thoroughly and 25 kg of this mixed sample was taken for study. The main method of disposal of fly ash from the power plants throughout the world is mixing with water. The resultant slurry is transferred to an ash disposal pond. Fresh pond ash samples were collected from the ash disposal zone where the ash slurry was discharged. Six samples (each of 25 kg) were collected from different locations of the ash pond and were mixed thoroughly and 25 kg of this mixed sample was taken for study. These samples were brought to the laboratory at CSIR-CIMFR, Dhanbad for chemical study. All the samples were homogenized and coning and quartering method was followed for sample volume reduction. Dry

coal and ash samples were grinded and sieved through 200 mesh sieves for chemical analysis.

One gram of coal and ash samples of <200 mesh size were digested with 10 ml of HNO₃ in a Teflon beaker on hot plate for thirty minutes. After 30 minutes, another 5 ml of HNO₃ is added. HNO₃ is added after some time till the brown fumes subside. It is cooled and then 2 ml of hydrogen peroxide is added. It is again heated for 2 hours and cooled. Then few drops of HCl are added and heated for 15-20 minutes and cooled to room temperature. It is now filtered through 0.45 µm membrane filter paper to remove the ash particles. The filtrate is now diluted up to 100 ml with the help of deionized water. All the samples treated in triplicate manner to avoid errors. The digested sample is preserved and analyzed by ICP-MS for elemental composition.

For radioactivity analysis 1 kg of coal, dry fly ash, bottom ash and pond ash samples were collected separately in the field and properly sealed to prevent escape of radon. Radioactivity measurement in coal and coal residue were carried out at Health Physics Division, Bhabha Atomic Research Centre, Mumbai. Before analysis it was ensured that samples attained secular equilibrium where the decay rates of the daughter nuclides and their respective parents become equal.

5.0 RESULTS and DISCUSSION

5.1 Heavy metals distribution in coal and ash:

Fe, Mn, Cr and Zn were the dominant heavy metals in the coal and coal residue (**Table 1**). Concentration of Fe in coal ranged from 25565 mg/kg (imported coal) to 63618 mg/kg (fly ash). Fe content in mixed coal (feed coal) is found to be 32602 mg/kg, while in run of mine (ROM) coal it is 40572 mg/kg. Lowest concentration of Mn is found to be in imported coal (176 mg/kg) and highest in fly ash (638 mg/kg). In general concentrations of measured metals (Cu, Pb, Zn, Co, Ni and Cr) were found to be low in imported

coal as compared to Indian coal (ROM) or feed coal (mixed). Concentration of Fe in ROM coal is 1.6 times higher as compared to imported coal. Pb, Mn and Cu concentration in Indian coals are 4.9, 2.4 and 1.7 times higher respectively as compared to imported coal (**Fig. 2**). Geochemical analysis of coal and coal residue shows that heavy metals concentration in ash samples is higher than the feed coal. Concentration of heavy metals in dry fly ash is about 2 to 4 times higher as compared to feed coal i.e. mixed coal. (**Table 1, Fig. 3**).

Table 1: Heavy metal concentration in coal and ash samples of TSPL

Sample Description	Fe	Mn	Cu	Pb mg/kg	Zn	As	Co	Ni	Cr
Coal	40572	414	44.2	73.7	103.9	21.6	13.9	46.8	136.4
Imported Coal	25565	176	26.6	15.1	68.6	16.4	4.8	23.8	63.9
Washed coal	37927	416	45.7	76.8	135.2	12.7	9.3	46.4	125.4
Mixed Coal	32602	312	32.7	46.6	78.3	16.2	13.5	59.7	143.8
Dry fly ash	63618	638	116.0	187.5	171.3	38.3	32.6	99.0	306.5
Bottom Ash	54325	596	98.4	128.9	96.6	30.6	23.8	76.6	281.9
Pond Ash	51374	602	107.7	157.6	112.2	32.7	25.8	81.0	267.7

Coal is carbon-rich combustible material containing organically bound mineral matter. This organic material is released during coal combustion and enriched inorganic elements in to ash residue. Trace elements associated the organic matter get released during volatilization and accumulate in the refractory phases like mullite and other aluminous phases as clays. Various factors that control the concentrations of trace elements in the coal and ashes include element sources, modes of occurrence, combustion conditions, volatilization-condensation mechanism, and particle size of the ash. Concentration of heavy metals in dry fly ash sample was found as Fe (63618 mg/kg), Mn (638 mg/kg), Cu (116 mg/kg), Pb (187.5 mg/kg), Zn (171.3 mg/kg), As (38.3 mg/kg), Co (32.6 mg/kg), Ni (99.0 mg/kg) and Cr (306.5 mg/kg).

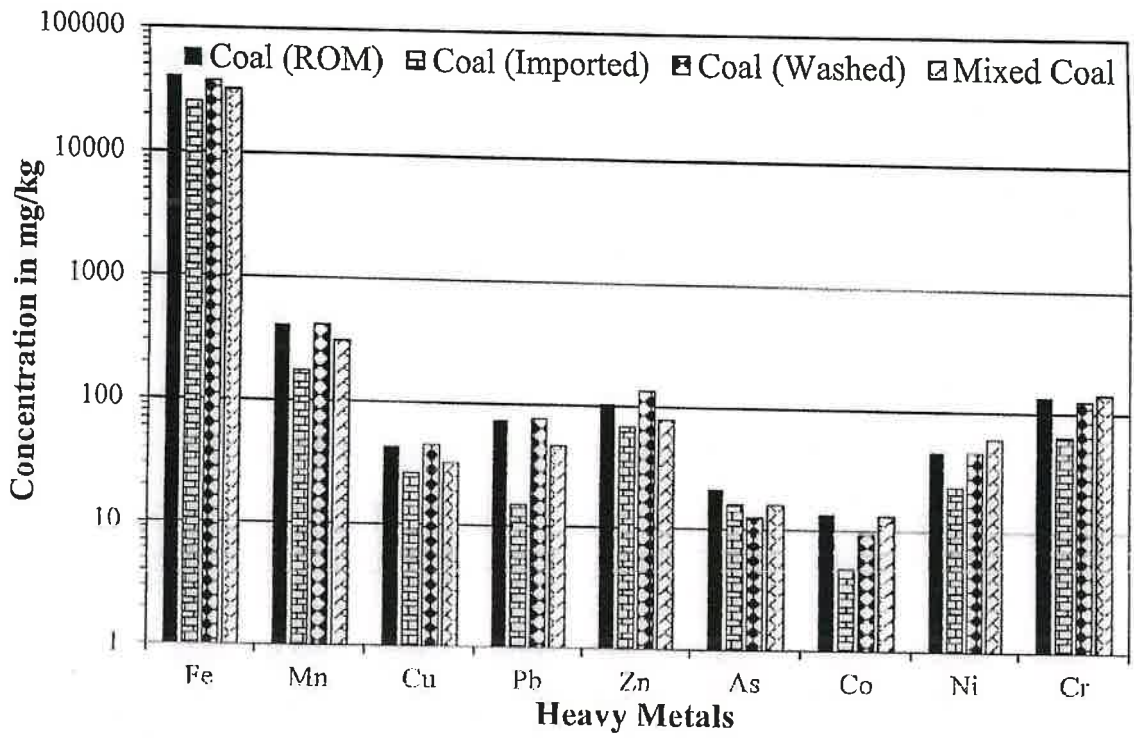


Fig. 2: Heavy metal distribution in coal samples of TSPL

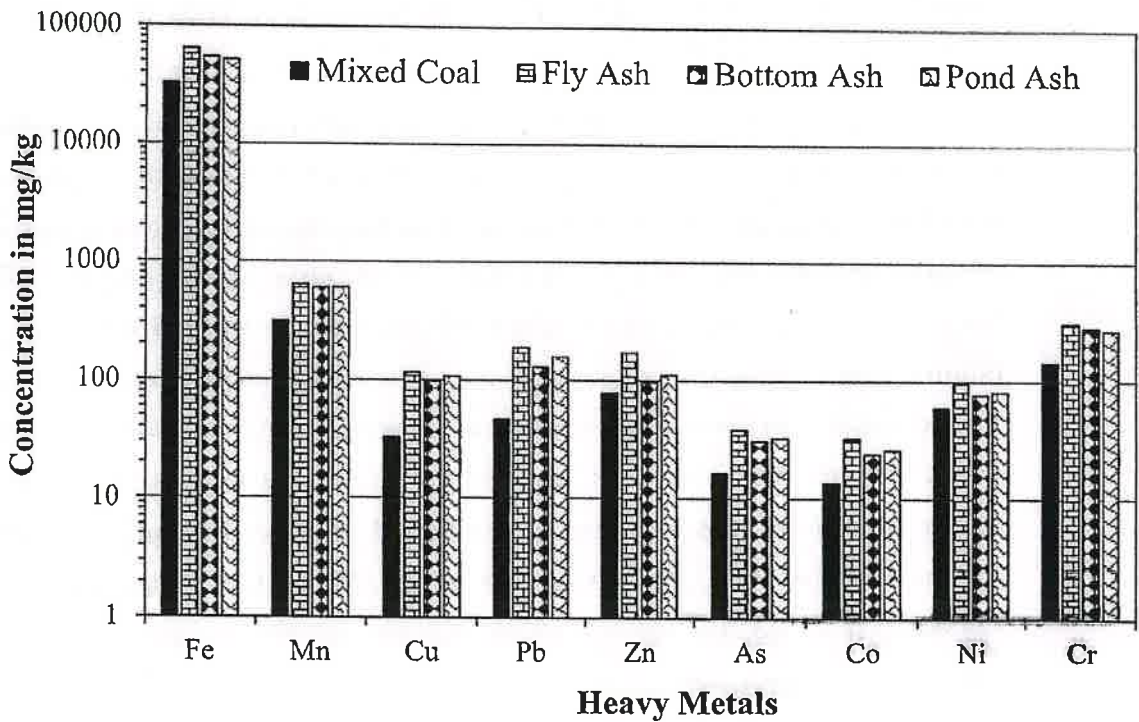


Fig. 3: Heavy metal concentration in feed coal and coal residue

5.2 Leaching behavior of coal ash

The long storage of ash in ponds under wet condition and humid climate can cause leaching of heavy metals from ash, if proper scientific measures not taken. The flow of water through ash may contaminate the underlying soil and ultimately the groundwater system. However most of the environmental problems due to fly ash generation can be minimized by incorporating engineering measures in the design of ash ponds and continuous monitoring of surface and groundwater water systems. TSPL has provided HDPE lining at ash dyke as engineering control to eliminate leaching and ground water contamination.

The leaching characteristics of fly ash mainly depend upon the factors like its chemical composition, mineralogy and morphology. The leaching of elements from fly ash is a time dependent phenomenon. The initial leaching of the fly ash can be characterized by the surface hydrolysis and dissolution of reactive phases formed under high temperature combustion. A close examination of the leaching studies show a rapid early dissolution followed by a later, slower release of the elements. The water-soluble fraction of a combustion residue may reflect the early dissolution process in the natural environment. In fact, the early dissolution mainly involves the soluble salts or the oxides on the particle surface of the fly ash. So, the dominant features of the initial dissolution stage are a high dissolution rate and the solution chemistry is controlled by buffering components of fly ash. At this stage of high dissolution rate, release of salts or heavy metals associated with surface phases occur.

To assess the possibility of groundwater contamination due to disposal of coal residue (dry fly ash, bottom ash and pond ash) a leaching study were carried out at CSIR-CIMFR. A leachate produced during the leaching study were analyzed for heavy metal contents. In the experiments, three glass columns, each of height 1 meter and 9.6 cm internal diameter were packed with 3.0 kg of each of dry fly ash, bottom ash and pond ash. Column 1 contains Pond Ash up to the height of 36.5 cm while column 2 and column 3

contain bottom ash and dry fly ash respectively up to the height of 43 cm and 32.5 cm (**Fig. 4**). This setup was used for column leaching study. 3.0 liters of distilled water was allowed to flow with the gravitational force in each column. The flow rate was different in these three columns i.e. flow rate of 3.0 ml/min for column 1, 7.0 ml/min for column 2 and 1.2 ml/min for column 3. The retention time for these three columns for passing the complete water (i.e. 3 liters) was 2 hr 27 minutes for column 1 i.e. Pond ash, 1 hr. 16 min. minutes for column 2 i.e. bottom ash and 5 hr. 11 minutes for column 3 i.e. dry fly ash. The total leachates of each column were collected separately for measuring the concentration of heavy metals in the leachates of these three types of ashes.

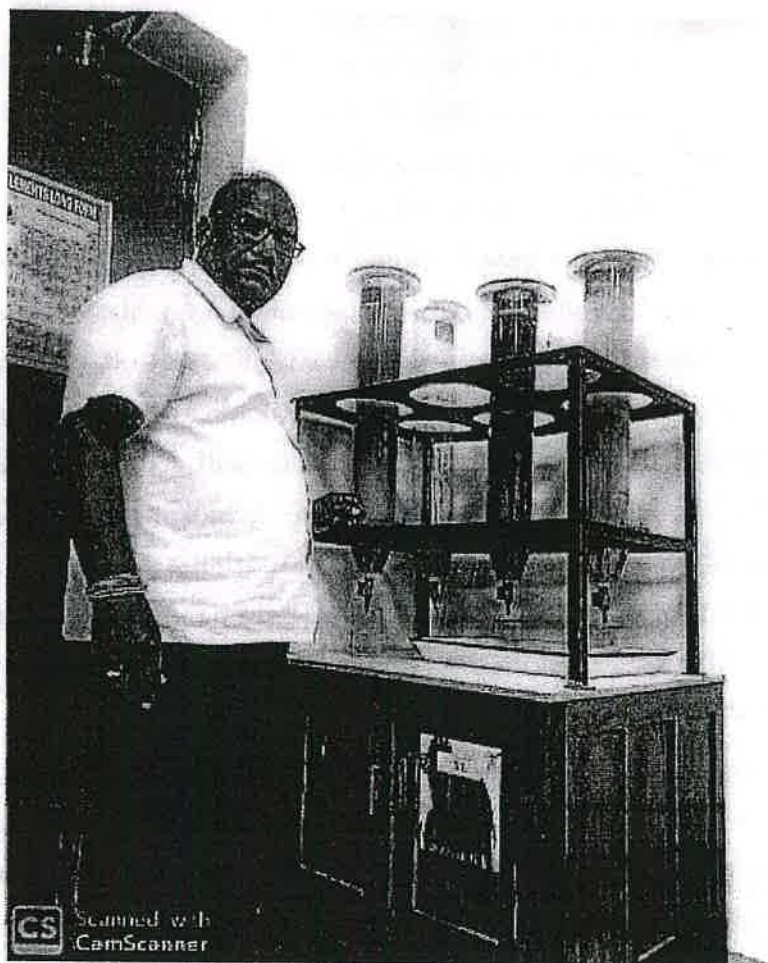


Fig. 4: Experimental set for leaching study

Concentration of heavy metals in leachates of dry fly ash, bottom ash and pond ash is tabulated in **Table 2**. Concentration of leachates were compared with the CPCB specified general standards of discharge of environmental pollutants Part A: Effluents (The Environmental (Protection Rules, 1986). In general concentration of measured heavy metals in leachates are less than the specified limits for inland surface water discharge. This shows that there is no serious issue of groundwater contamination due to fly ash disposal at the TSPL site at present scenario. However, the continuous monitoring of environmental parameters including groundwater water quality in and around the plant site is necessary for long term environmental management planning.

Table 2: Concentration of heavy metals in leachates and CPCB norms for effluent discharge

S.N.	Sample Description	Fe	Mn	Cu	Pb	Zn	As	Ni	Cr
1.	Leachate (Dry fly ash)	2.48	0.944	0.016	0.009	1.13	BDL	0.117	1.162
2.	Leachate (Bottom ash)	1.61	0.414	0.029	0.005	1.84	0.002	0.15	0.53
3.	Leachate (Pond ash)	1.80	0.379	0.018	0.006	1.14	0.001	0.32	0.36
	CPCB standard for effluent discharge	3.00	2.00	3.00	0.1	5.0	0.2	3.00	2.00

Concentration in ppm

5.3 Radionuclide activity in coal and coal residue

All minerals and raw materials contain radionuclides of natural origin. The most important for the purpose of radiation protection are the radionuclides in the ^{238}U and ^{232}Th decay series. In most human activities involving minerals and raw materials, the levels of exposure to these radionuclides are not significantly greater than normal background levels and are not of concern for radiation protection. However, certain work activities can give rise to significantly enhanced exposures that may need to be controlled by regulation. Material giving rise to these enhanced exposures has become known as naturally occurring radioactive material (NORM).

Most coal contains uranium and thorium, as well as their decay products and ^{40}K . The total levels of individual radionuclides typically are not great and are generally about the same as in other rocks near the coal, which varies according to region and geology. Enhanced radionuclide concentration in coal tends to be associated with the presence of other heavy metals and high sulfur content. During combustion, the radionuclides are retained and concentrated in the dry fly ash and bottom ash, with a greater concentration to be found in the fly ash. The concentration of uranium and thorium in bottom and dry fly ash can be up to ten times greater than for the burnt coal, while other radionuclides such as ^{210}Pb and ^{40}K can concentrate to an even greater degree in the dry fly ash.

Coal mining itself also gives rise to a potential NORM issue. Coal can be mined in either open pits or underground mines, and produces a significant amount of waste rock, and drainage water that can present with elevated levels of radioactivity. Underground coal mines are subject to increased radon levels, while sediments discharged in waste water into the environment have been measured with activities as high as 55,000 Bq/kg of ^{226}Ra and 15,000 Bq/kg of ^{228}Ra (IAEA 2003, Tech Report 419).

Table 3: Radionuclide activity in coal and coal residue

S.N.	Sample Name	^{238}U	^{226}Ra	^{40}K
		Bq/kg		
1.	Coal (ROM)	59.9 ± 1.1	51.9 ± 0.4	102.8 ± 2.8
2.	Coal (Imported)	23.4 ± 0.9	26.0 ± 0.3	81.1 ± 2.6
3.	Coal (Washed)	45.2 ± 1.1	40.9 ± 0.4	82.2 ± 2.9
4.	Mixed Sample	33.6 ± 1.2	43.3 ± 0.4	96.0 ± 3.3
5.	Dry Fly Ash	133.6 ± 1.6	117.1 ± 0.5	280.4 ± 3.8
6.	Bottom Ash	95.0 ± 1.5	114.6 ± 2	263.1 ± 4.1
7.	Pond Ash	97.1 ± 1.4	91.1 ± 0.5	228.3 ± 3.7

Radionuclides activity for ^{238}U (95.5 Bq/kg), ^{226}Ra (114.6 Bq/kg), and ^{40}K (263 Bq/kg) in the analyzed dry fly ash of TSPL are lower than the world average radionuclides activity in dry fly ash (**Table 3**). The reported world

average radionuclides activity value in dry fly ash for ^{238}U , ^{226}Ra and ^{40}K are 200 Bq kg⁻¹, 240 Bq kg⁻¹ and 265 Bq kg⁻¹ respectively as per standard values published by United Nations Scientific Committee on the Effect of Atomic Radiation (UNSCEAR-2000)

The variation of the activity concentration values is due to the differences physical, chemical and geo-chemical properties of materials. In general all radionuclide concentrations are higher in coal residuals than the coal samples. The radionuclide activity follow the decreasing order of Dry fly ash > Bottom ash > Pond ash > Coal. The higher values for fly ash may be attributed to its finer size as compared to bottom and pond ash.

6.0 Environmental Management

Talwandi Sabo Power Limited (TSPL) has taken a number of initiatives for environmental management and installed following pollution controlled system to prevent contamination of natural resources:

1. Installation of hybrid ESP (ESP+FF) to limit the particulate matter emissions.
2. Dry fly ash is conveyed through closed pneumatic system and stored in silos.
3. Provision of HDPE lining in ash pond provided to prevent leaching and contamination of ground water.
4. Disposal of ash slurry through closed pipelines in ash dyke by High Concentration Slurry Disposal (HCSD) System.
5. Development of greenbelt around the ash dyke to prevent fugitive dust emissions.

Historically, wastes have always created a disposal problem. The problem of flyash disposal has assumed such an enormous scale in the country that the Ministry of Environment and Forests (MoEF) issued a regulation on 14 September 1999 and amended time to time specifying

normative levels for progressive utilization of flyash. Accordingly TSPL has taken initiative to dispose fly ash for various constructive purposes like.

1. Dry fly ash is disposed to cement and fly ash brick manufacturing units
2. Bottom ash is disposed to brick kilns for clay fly ash brick manufacturing
3. Pond ash is disposed to road construction projects

7.0 Conclusion:

Geochemical study of coal and ash samples collected from Talwandi Sabo power plant has been carried out to assess possible contamination and health risk due to the disposal of fly ash. Total 10 samples comprising four coal (Indian coal, imported coal, washed coal and mixed coal), three ash (dry fly ash, bottom ash, and pond ash) and three leachates (dry fly ash, bottom ash and pond ash) were collected and analyze for heavy metal contents and radioactivity. The analysis result shows dominance of Fe, Mn, Cr and Zn in the heavy metal content in the coal and coal residue of TSPL. Concentration of heavy metals in Indian coal (ROM) are higher as compared to imported coal. In general, concentration of heavy metals in fly ash is higher as compared to feed coal. Among heavy metals Pb, Co, Cr and Ni shows maximum enrichment in fly ash. These are volatile elements and are generally associated organic matter in coal.

Radionuclides activity for ^{238}U (133.6 Bq/kg), ^{226}Ra (117.1 Bq/kg), and ^{40}K (280.4 Bq/kg) in the analyzed dry fly ash of TSPL are lower than the world average radionuclides activity in dry fly ash. Possible radiation health hazards to the exposed community were evaluated based on the measured activity concentrations of ^{226}Ra , ^{238}U and ^{40}K . Radium equivalent activity (Ra_{eq}) in the coal and ash samples of TSPL is lower than 370 Bq/kg as recommended. In general concentration of measured heavy metals in leachates are less than the CPCB specified limits for inland surface water discharge. This shows that there is no serious issue of groundwater contamination due to fly ash disposal at the TSPL site at present scenario.

However, continuous monitoring of radioactivity and environmental parameters including groundwater water quality in and around the plant site is recommended.



Annual Report – 2025-26

Annual Social Audit of
Corporate Social
Responsibility (CSR)
schemes
implemented by



Talwandi Sabo Power Limited,
District Mansa, Punjab

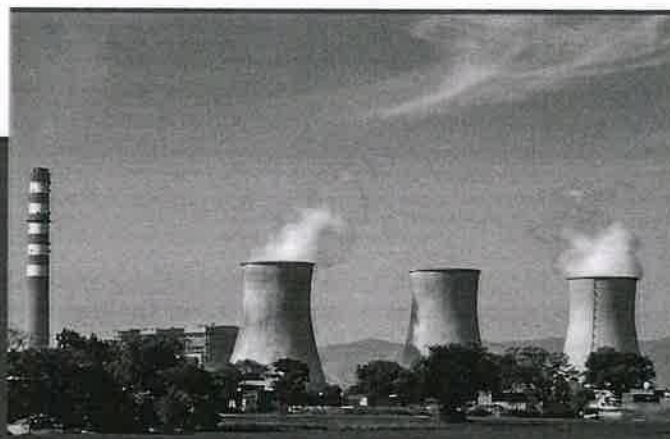
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Submitted by
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INTRODUCTION

Talwandi Sabo Power Limited (TSPL) is a thermal power plant located in Banawala village of Mansa district in Punjab, India. It is a subsidiary of Vedanta Power under the parent organization Vedanta Limited. TSPL is established to operate a 1,980 MW (3×660 MW) power supply to the Punjab State Electricity Board (PSEB) under a 25-year agreement and they are committed to efficient energy production and responsible corporate citizenship.

In line with its Corporate Social Responsibility (CSR) policy, TSPL prioritizes initiatives in health, education, livelihood, women's empowerment, and community development. These programs are designed in collaboration with local communities and stakeholders to ensure effective implementation and sustainability. TSPL's CSR efforts have positively impacted over 40,000 individuals across 26 villages, reflecting its dedication to social welfare and sustainable development.





The Projects

The present report serves to evaluate the developmental works and strategic initiatives undertaken by Talwandi Sabo Power Limited (TSPL) during the fiscal period - 2025-26. A comprehensive assessment was conducted on key plans (projects) under the Corporate Social Responsibility (CSR) framework, as detailed below:

1. Project Navi Disha: Sustainable Agriculture

The objective of the project Navi Disha is to cater a sustainable agriculture initiative under Vedanta-TSPL's CSR program. This program has implemented in collaboration with 'The Nabha Foundation' in Mansa, Punjab. The project aims to promote eco-friendly farming practices, reduce indiscriminate use of pesticide, and introduce modern agricultural technology to enhance productivity and sustainability. It also promotes sustainable agricultural practices for landless and small farmers to enable them to increase their income in a sustainable manner.

2. Project SEHAT (Safe & Effective Health Action by TSPL): Public Health

Project SEHAT (Safe & Effective Health Action by TSPL) functions as a vital healthcare intervention within TSPL's broader CSR portfolio, delivering medical support and wellness activities to their operational periphery. This initiative is dedicated to ensuring equitable access to high-quality healthcare services within the community and aligns with the objectives of Sustainable Development Goal 3.

According to project coordinator Amandeep Singh, the program's actively serving 12 villages with their health and awareness camps and accommodating other nearby rural clusters. These efforts strengthen the existing government healthcare ecosystem by providing comprehensive support to a rural primary health centre (PHC) located in Behniwal village, which serves approximately 11,000 beneficiaries.

3. Project TARA (TSPL Action for Rural Ajeevika): Women Empowerment

In a joint venture with the Ambuja Organisation launched in December 2021, Talwandi Sabo Power Limited (TSPL) established Project TARA (TSPL Action for Rural Ajeevika) in Karamgarh Village. Now, this project is functioning smoothly independently under the new program coordinator by TSPL. This women's empowerment initiative targets the socio-economic elevation of units comprising 12 to 15 women per locality. The project operates on a self-help group (SHG) model where a volunteer woman from each village acts as a bridge between individual members, trainers, and project coordinators.

4. TSPL Gram Nirman Project: Community (Village) Development

The TSPL Gram Nirman Project serves as the primary vehicle for Community and Village Development within the company's corporate social responsibility framework. A rigorous field evaluation was conducted in 8 different villages, which integrated extensive local community engagement to verify the status of rural infrastructure. The assessment revealed that while no fresh infrastructural works were commissioned or newly initiated during the 2025-2026 fiscal cycle, all previously established facilities remained fully functional and maintained their operational integrity.

5. TSPL Computer Literacy

TSPL has introduced the Computer Literacy Project in year 2023 as part of its CSR initiatives under the Skill India program. This intervention aims to enhance digital skills among local youth in Raipur village by offering a certificate course in basic computer applications.



The Objectives

At the behest of Talwandi Sabo Power Limited (TSPL), the Central University of Punjab, Bathinda executes a yearly social audit focused on the following core goals:

1. To check how successfully TSPL's social initiatives convert corporate commitments into concrete community advantages.
 2. To analyse regional requirements and stakeholder participation to better synchronize CSR efforts with actual needs.
 3. To measure the efficacy of project work in sufficiently tackling specific local difficulties.
 4. To pinpoint opportunities for improving both the conceptual framework and the practical execution of these programs.
 5. To advise on policy and structural refinements intended to optimize the enduring results of project investments.
-



Methodology

The social audit of Corporate Social Responsibility (CSR) programs at Talwandi Sabo Power Limited (TSPL), carried out by the Central University of Punjab, utilized a rigorous, multi-stage methodology to evaluate program efficacy and community impact. This structured framework aimed to produce objective, evidence-based evaluations of TSPL's societal contributions by examining practical outcomes within target populations.

The evaluation commenced with extensive stakeholder mapping and engagement. The audit team performed a granular analysis to identify all pertinent groups affected by CSR activities, encompassing local residents, government authorities, non-governmental organizations, and other vital stakeholders. To ensure a plurality of voices was represented, the team facilitated interviews, focus group discussions, and participatory workshops to document community needs, perceptions, and direct experiences with TSPL's initiatives.

Subsequent to these engagements, the auditors worked alongside TSPL's CSR department to assess and sharpen the frameworks of both current and future programs. This collaborative effort focused on:

1. Formulating precise project goals, benchmarks, and metrics for evaluation.
2. Implementing real-time oversight protocols, such as routine field inspections, progress monitoring, and establishing feedback channels with partners and beneficiaries.

Through this systematic approach, the audit ensured that TSPL's CSR portfolio remained adaptive and centred on community requirements, fostering a culture of continuous enhancement

through data-driven insights. Verification also included physical site visits to observe project implementation firsthand, allowing for immediate assessment of progress and direct interaction with those on the ground.

Beyond physical verification, the audit utilized qualitative techniques like unstructured interviews and Focused Group Discussions (FGDs). These sessions engaged a diverse range of participants, including farmers, community members, and partners such as the Nabha Foundation. These direct dialogues provided essential qualitative insights into the community's lived experience and perception of TSPL's CSR contributions.

To accurately measure the influence of TSPL's programs on beneficiary communities, the audit employed a participatory assessment framework. This strategy prioritized stakeholder engagement through storytelling, reflective dialogues, and participatory mapping, enabling individuals to articulate their personal experiences and perceptions of the changes brought about by TSPL's projects.

The audit team utilized a multi-faceted qualitative toolkit to document community perspectives. Focus Group Discussions (FGDs) were implemented to extract direct insights from beneficiaries. Furthermore, the team conducted key informant interviews with a broad spectrum of stakeholders, including Sarpanches, local leaders, and Village Development Committee members, alongside technical experts such as school principals and the head of the Computer Literacy Committee to gain specialized knowledge of the CSR initiatives' outcomes.

By adopting this context-driven methodology, the study achieved a comprehensive view of the cultural, environmental, and socio-economic facets of TSPL's corporate citizenship. This holistic perspective facilitated a sophisticated impact analysis and provided a solid foundation for data-backed recommendations for subsequent developmental efforts.

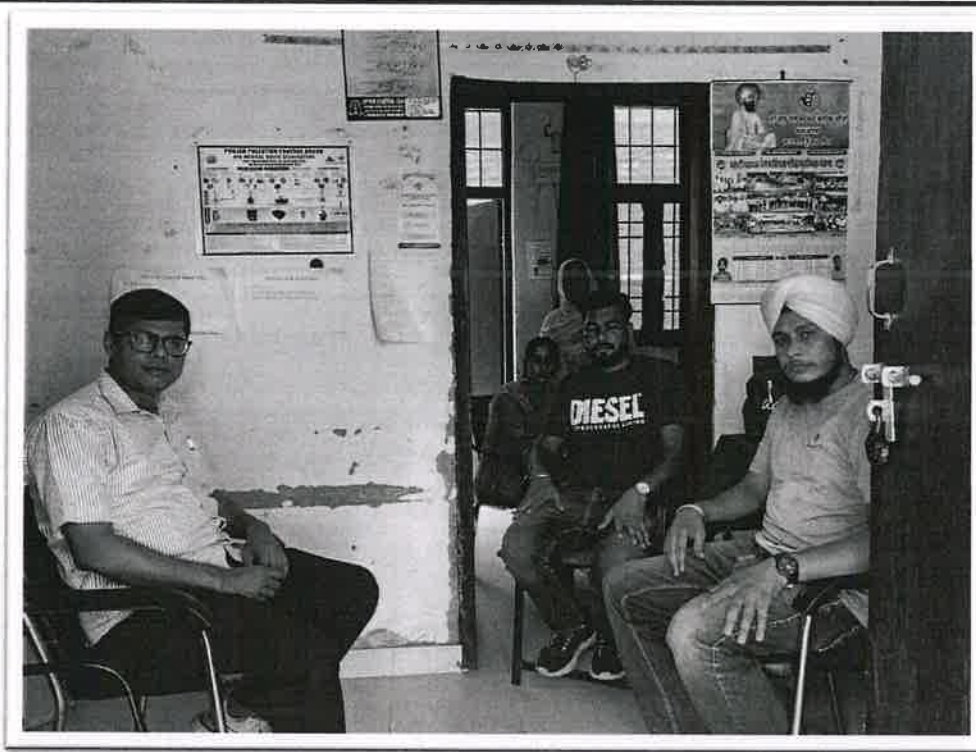


Figure 1: Conducting Meet with PHC at Banawala

Sources of Data

The social audit team adopted a multi-faceted approach to gather data from Behniwal, Raipur 1 & 2, Banawali, Chehlanwali, Perron, Dhingar, and Talwandi Aklia to meet the audit's goals. Complementary information was also sourced from adjacent villages where Talwandi Sabo Power Limited (TSPL) had introduced specific programs, such as Self-Help Groups (SHGs), ensuring a thorough assessment of the company's CSR reach.

Key data sources utilized for this evaluation included:

1. **Village Panchayat Offices:** Records were analysed across the seven core villages to obtain:
 - a. Community demographic profiles.
 - b. Evaluations of local infrastructure, primarily in the education and health sectors.

-
- c. Data regarding marginalized groups to gauge the success of social inclusion initiatives.
2. **Focused Group Discussions (FGDs):** These sessions engaged various stakeholders to broaden the perspective provided by official records, helping to identify project impacts and future needs. Participants included:
 - a. Managers overseeing TSPL's CSR operations.
 - b. Staff from the TSPL-funded Primary Health Centre (PHC) located in Behniwal.
 - c. Representatives from the Nabha Foundation, partners in the Navi Disha sustainable agriculture project.
 - d. Farmers participating in the Navi Disha initiative.
 3. **Key Stakeholder Interviews:** Qualitative insights were collected through direct dialogue with:
 - a. Local Panchayat governance officials.
 - b. Medical professionals and personnel at TSPL-supported health centres.
 - c. Gurudwara management members, providing community engagement viewpoints.
 - d. Village Development Committee members, focusing on local progress and requirements.

Through the integration of these varied methodologies, the team achieved a balanced evaluation of TSPL's CSR footprint, resulting in detailed impact findings and strategic suggestions for future developmental work.

Social Audit Procedures and Phases

The audit was executed through a systematic three-stage framework:

Phase 1: Preparatory Actions

Initial operations focused on foundational data gathering and logistics:

-
1. Acquiring official reports and internal records directly from TSPL.
 2. Analysing village-level administration reports and official census datasets.
 3. Recruiting and training a specialized field team for precise data acquisition.
 4. Cataloguing all records into a standardized structure for subsequent analysis.

Phase 2: Core Auditing Operations

The primary investigative work involved direct field engagement:

1. Performing physical verification of CSR projects across the eight targeted villages.
2. Facilitating Focused Group Discussions (FGDs) with community members and local leadership.
3. Conducting expert interviews with medical staff, Panchayat members, and ward councillors to evaluate project efficacy.

Phase 3: Finalization and Reporting

Concluding activities focused on synthesis and stakeholder engagement:

1. Gathering beneficiary perspectives through targeted group dialogues.
2. Evaluating the audit process via feedback sessions with field personnel.
3. Disseminating findings to the community to promote collaborative governance.
4. Formalizing the documentation of all community grievances and concerns.
5. Developing strategic recommendations to refine and optimize future CSR impact.

Methodological Approach

The evaluation employed qualitative content analysis to synthesize data from interviews and Focused Group Discussions. This methodology was designed to measure the impact of TSPL's CSR programs while identifying critical community requirements.

Analytical priorities included:

1. Measuring the long-term viability and success of various CSR initiatives.
 2. Determining how well projects fit within the specific local social context.
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3. Ensuring alignment between current efforts and emerging community needs.

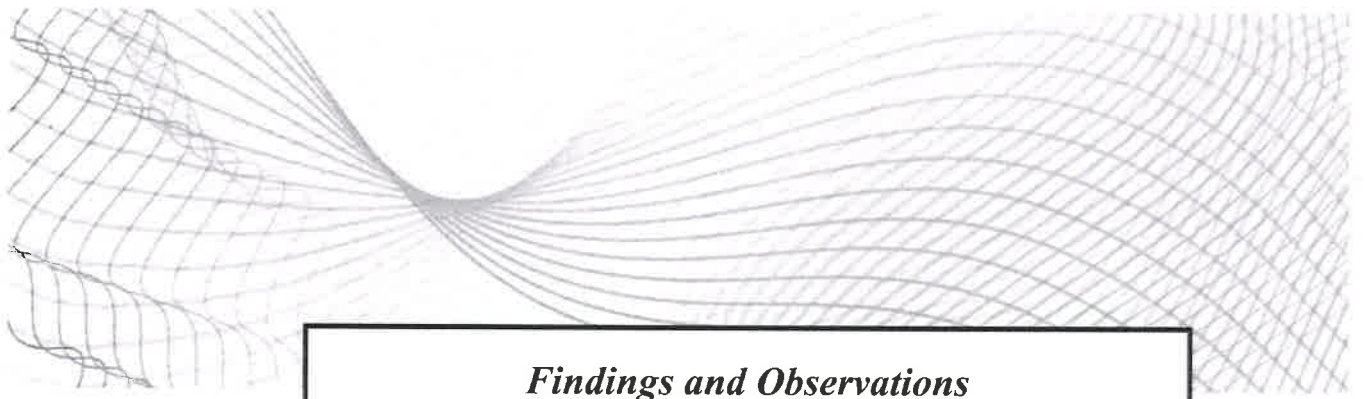
This framework complies with Section 135 (Schedule VII) of the Companies Act, 2013, mandating that corporate decision-making integrates environmental and social goals to drive sustainable development and ensuring the effective and meaningful CSR drives to the community.

Major Findings

Structured around the audit's core objectives, the findings are organized into five primary sectors:

1. Livelihood enhancement through sustainable farming (Navi Disha Project).
2. Healthcare advancement via Project SEHAT (Safe & Effective Health Action by TSPL).
3. Rural women's empowerment under Project TARA (TSPL Action for Rural Ajeevika).
4. Outcomes of community infrastructure development (Gram Nirman Project).
5. Performance evaluation of digital education programs (Computer Literacy Project).

These summaries provide a comprehensive review of the sustainability and social contributions of TSPL's welfare efforts.



Findings and Observations

The following sections detail the comprehensive findings and observations regarding the implementation, reach, and tangible impacts of TSPL's corporate social responsibility initiatives for the fiscal year 2025-2026.

Project Navi Disha: Sustainable Agriculture

The Navi Disha program functions as a systemic intervention engine. It forces a structural transition from legacy, water-intensive, and input-heavy farming models toward scientifically validated, high-yield, climate-resilient practices. The objective is simultaneous ecological restoration and economic margin expansion for the primary producer.

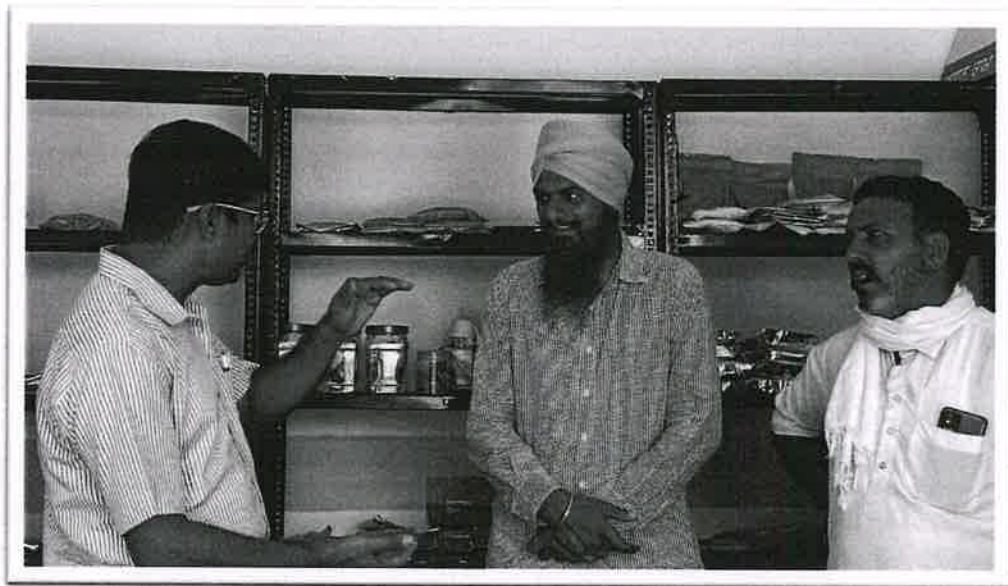


Figure 2: Meeting at Navi Disha Kisaan Society

General Observations

The Navi Disha Project stands as a cornerstone of TSPL's commitment to sustainable agricultural practices in the region. Implemented in strategic partnership with The Nabha Foundation, this initiative has achieved a substantial footprint, actively engaging approximately 3,000 farmers across 26 villages. The core interventions have been successfully executed in key focus villages, including Behniwal, Banawala, Raipur, Perron, Talwandi Akliya, and Chehlanwali.

Interventions during this reporting period focused heavily on transitioning farmers toward sustainable agriculture by adopting organic farming methods and critical water-saving techniques to combat depleting groundwater levels and rising input costs. These interventions are thoughtfully designed to optimize resource utilization, enhance soil health, and introduce modern, climate-resilient farming techniques. A landmark achievement in the previous fiscal year (FY 25) was the establishment of a dedicated oil expeller unit in Talwandi Akliya. This infrastructure addition represents a critical shift from mere agricultural production to localized value-addition. By enabling the farmers to process their raw produce into edible oil locally, the unit significantly boosts their profit margins, reduces their dependency on external, long-distance processing facilities, and fosters localized micro-entrepreneurship.

The Project Navi Disha initiative is undergoing a strategic shift to enhance organization, formalization, and market reach, moving beyond the previous year's focus on implementing various sustainable practices. The current goal is to streamline operations and aggressively explore new opportunities through the self-help group model, focusing on connecting farmers to a wider market. A critical step in this direction was the legal registration of the Navi Disha Kisan Society in January 2026, which started with 73 organic farmers as its initial members. This initiative to formalize the collective enterprise involved securing a rental deed for a physical retail storefront near the Vedanta Power Plant and finalizing backend infrastructure by February 2026. This strategic institutional move transitions ad-hoc selling into a permanent, predictable retail operation that facilitates the daily direct marketing of packaged, branded farm goods, ensuring sustained, optimized revenue streams for the collective membership.

To maintain and enhance the skills required for this operational shift, the Navi Disha team is committed to robust, high-frequency training programs. The program successfully organizes between 2 to 3 integrated camps covering Agriculture and Animal Husbandry every month. The livestock component provides crucial doorstep veterinary services and health check-ups across multiple villages to support dairy and allied income activities. This fiscal year

has seen the execution of around 10 expert camps (or classes) within the Farmer Field Schools (FFS) network. These sessions cover essential agronomic topics, including utilizing the raised-bed method for water efficiency, applying in-situ paddy straw mulching to eliminate stubble burning, and crop diversification into high-value items like sugarcane and turmeric. Significantly, capacity building is evolving to directly support the new market focus, with field school lectures planned and already started on core concepts of marketing and organizing products.

The new focus on market linkages has yielded substantial achievements, validating consumer willingness to pay premiums for the collective's organic products. The enterprise achieved significant public visibility by representing its produce at major events, such as the 'Mela Jagde Jugnu', a cultural festival in Bathinda (Dec 4-7, 2025), which successfully generated ₹17,400 in direct cash sales and served as a powerful market proof-of-concept. This exhibition success contributed to participating farmers receiving recognition. Currently, as confirmed after physical verification by the audit team, the 'Navi Disha Kisan Society Centre' maintains a diverse and expanding product portfolio, all derived from manure farming practices. The products being sold by the society include pickles, spices, pulses, jaggery, biscuits, wheat flour, and organic seeds. This combination of formal legal registration, success at trade fairs, and a diverse organic product range positions the Society for significant growth and sustained economic empowerment for its members.

Feedback from the Stakeholders

The farmers associated with this project acknowledged that the recent interventions by Navi Disha from December 2025 to April 2026 covers more than 10 villages. The Navi Disha has conducted expert classes which provided comprehensive training to 156 farmers in sustainable agriculture across several villages. The sessions spanned critical areas, including promoting organic farming and soil health management to decrease chemical dependency and cultivation costs. Subsequent training focused on enhancing profit margins through value addition in turmeric and sugarcane processing. Apart from these, training sessions were also conducted on important issues like, climate-resilient practices such as Direct Seeded Rice (DSR) and green manuring for water reduction and soil health, alongside guidance on improved cotton farming techniques, including Integrated Pest Management (IPM) for early infestation prevention.



Figure 3: A Picture of Store and Office of Newly Registered Navi Disha Kisan Society

In the current fiscal year (2025-26), Project Navi Disha executed a multifaceted technical assistance and resource mobilization strategy to bolster rural livelihoods such as Farmer Field Schools (FFS) and expert-led sessions prioritized climate-resilient wheat and cotton cultivation, emphasizing water management and soil restoration through mulching and bed-planting techniques. This was supplemented by integrated livestock health management for 167 households, ensuring secondary income stability through localized veterinary care. Direct technical support via 292 field visits optimized germination and crop establishment, while the distribution of nursery equipment and 100 vegetable seed kits to farmers associated with this project promoted self-reliance and nutritional security. To ensure economic sustainability, the initiative established the “Navi Disha Kisan Society” retail outlet and validated consumer demand through exhibitions, generating direct market linkages. Synergistic stakeholder coordination with Block Agriculture Development Officers further aligned these interventions with regional development goals, ensuring institutional validation and amplified community outreach.

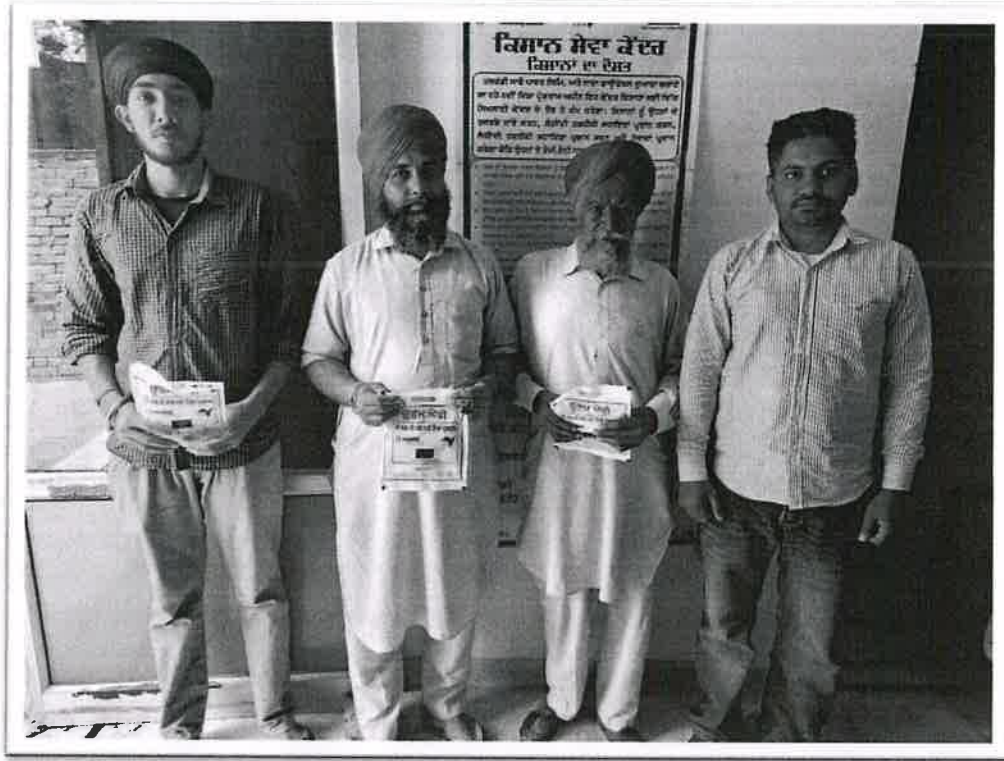


Figure 4: Vegetable (seeds) Distribution to the Farmers

Future Interventions and Recommendations

Looking ahead, the Project Navi Disha initiative is planning several strategic interventions to enhance its long-term impact and sustainability. According to Project Coordinator Gurvinder Singh, future capacity building will integrate advanced technologies such as prior weather and climate conditions with timely updates disseminated directly through WhatsApp groups. The technical scope of the project intends to broaden farmer diversification by increasing its focus on training in integrated farming, alongside the introduction of multi-crop farming techniques. To strengthen the project's infrastructure, there is a plan to establish refrigerators for indigenous seed storage, minimizing farmers' reliance on markets. Furthermore, sustainability efforts will be fortified through the expansion of initiatives to strengthen farmer producer organizations, the promotion of agroforestry and Azolla cultivation, and the execution of awareness programs focused on carbon credits. Future projects supporting sustainable agricultural practices include managing vegetable and agricultural waste, and providing training on accounting and operations necessary for corporate society registration.

Project SEHAT (Safe & Effective Health Action by TSPL): Public Health

The SEHAT Project is a health initiative under one of the TSPL's CSR programs that facilitates health-related activities in the areas surrounding TSPL's operations. According to project coordinator Amandeep Singh and by observations, the sustained impact of all previous interventions, which include its reach across 12 beneficiary villages, confirms the project's consistent success and meticulous maintenance.

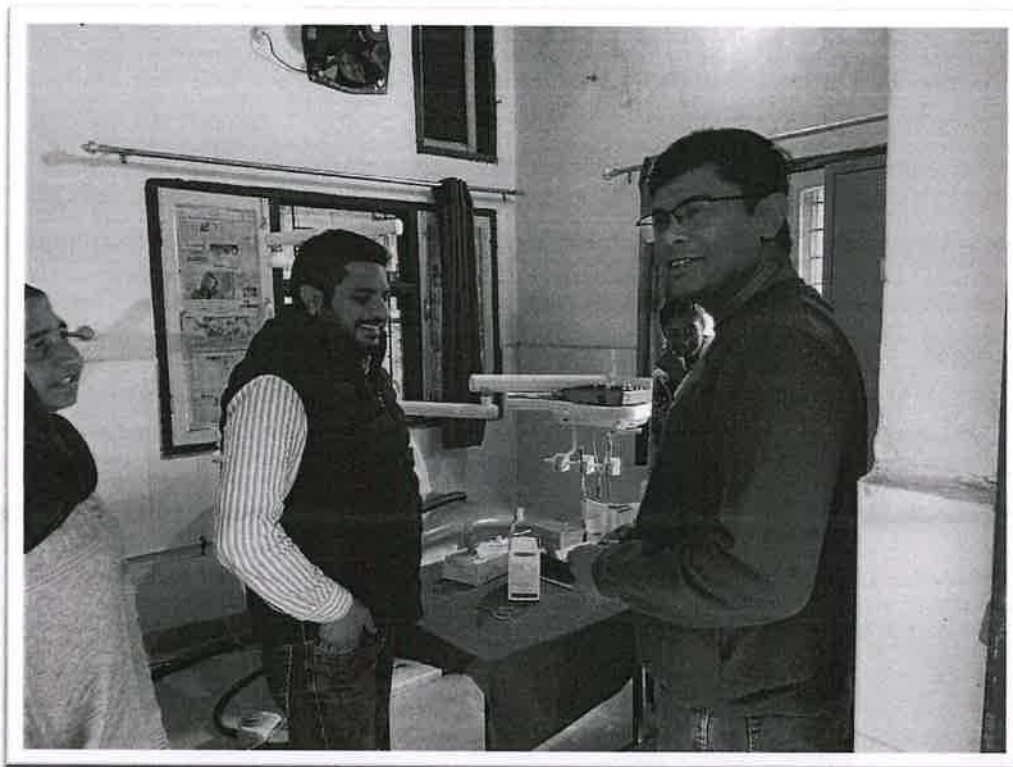


Figure 5: Meeting with Dr. Mandeep at Primary Health Centre

General Observations

Public health remains a top priority of CSR activities undertaken by TSPL, addressed comprehensively through the SEHAT Project. Partnering with the PHD Rural Development Foundation, TSPL has extended critical healthcare services to 10 villages, creating a reliable medical safety net for approximately 12,000 beneficiaries. The project bridges the severe gap in rural healthcare accessibility by bringing specialized medical attention directly to the villagers' doorsteps across Behniwal, Banawala, Raipur, Perron, Talwandi Aklia, and Chehlanwali.

The Project SEHAT team consists of four staff members and is supported by four specialized doctors. These doctors along with the four staff members manage the health camps, with the core team including Dr. Deep Shikha, the gynaecologist; Dr. Mandeep, a dental expert who holds the OPD; Dr. Raj Kumar, who serves as both a kid's expert and general physician; and Dr. Tamanna, an eye specialist. Awareness Camps are handled by the Awareness Instructor, Mr. Darshan Singh. While standard sessions involve one doctor or the Awareness expert, Mega Camps bring in additional external and specialized doctors to work alongside the core team.

Between August 2025 and March 2026, the project operated at an impressive scale, executing 116 targeted activities that reached 10,235 direct beneficiaries. The interventions were highly diversified to meet varied community needs:

1. **General Health Camps:** 51 camps served 5,990 patients. These camps provided primary care, early diagnosis of chronic ailments, and free medication, significantly reducing out-of-pocket medical expenses for rural families.
2. **Dental OPD:** 33 sessions treated 742 patients, addressing a largely neglected aspect of rural health and improving overall oral hygiene and preventative care.
3. **Eye Camps:** 13 specialized camps treated 1,707 patients, offering crucial vision correction and cataract screenings which directly impact the daily productivity and physical safety of the elderly population.
4. **Health awareness sessions:** 13 community sessions engaging 914 participants focused heavily on preventative care, sanitation, nutrition, and disease management.
5. **Special camps on Gynaecological issues :** 4 dedicated camps provided 317 women with safe spaces for reproductive health, maternal care, and confidential medical consultations.
6. **Mega health camps:** 2 large-scale holistic health camps served 565 patients, bringing multi-disciplinary medical expertise under one roof for complex diagnoses.

Table 1: List of Interventions done by SEHAT Project under TSPL

Sr. No	Camp / Intervention Type	Total Actions Executed	Total Patients Treated	Average Patients Per Action
1	General Health Camp	51	5,990	117.5
<i>Key Clinical Focus & Systemic Impact</i>				
Primary diagnostics, aggressive non-communicable disease (NCD) screening (hypertension, diabetes markers), and free essential medication dispensing. Intercepts chronic conditions before acute escalation.				
2	Dental OPD	33	742	22.5
<i>Key Clinical Focus & Systemic Impact</i>				
Oral hygiene education, minor surgical extractions, periodontal scaling, and advanced dental caries management. Mitigates systemic infections originating from neglected oral health.				
3	Eye Camp	13	1,707	131.3
<i>Key Clinical Focus & Systemic Impact</i>				
Precision refractive error assessments, early-stage cataract screenings, and free corrective lens distribution. Directly restores occupational capacity and quality of life for aging populations.				
4	Awareness Session	13	914	70.3
<i>Key Clinical Focus & Systemic Impact</i>				
High-impact education on rural sanitation, vector-borne disease control, maternal health protocols, and nutritional hygiene. Shifts focus from reactive treatment to proactive community prevention.				
5	Gynae Camp	4	317	79.3
<i>Key Clinical Focus & Systemic Impact</i>				
Specialized antenatal care, targeted gynaecological screenings, severe anaemia management, and reproductive tract healthcare. Provides culturally safe, female-led clinical spaces.				
6	Mega Camp	2	565	282.5

Key Clinical Focus & Systemic Impact

Massive, multi-specialty diagnostic setups. Facilitates complex secondary referral routing and advanced clinical screenings across massive localized populations in single-day events.

Total	All Interventions	116	10,235	88.2
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Key Clinical Focus & Systemic Impact

Comprehensive, Baseline Primary Clinical Coverage Established.

Activities Undertaken by Project SEHAT

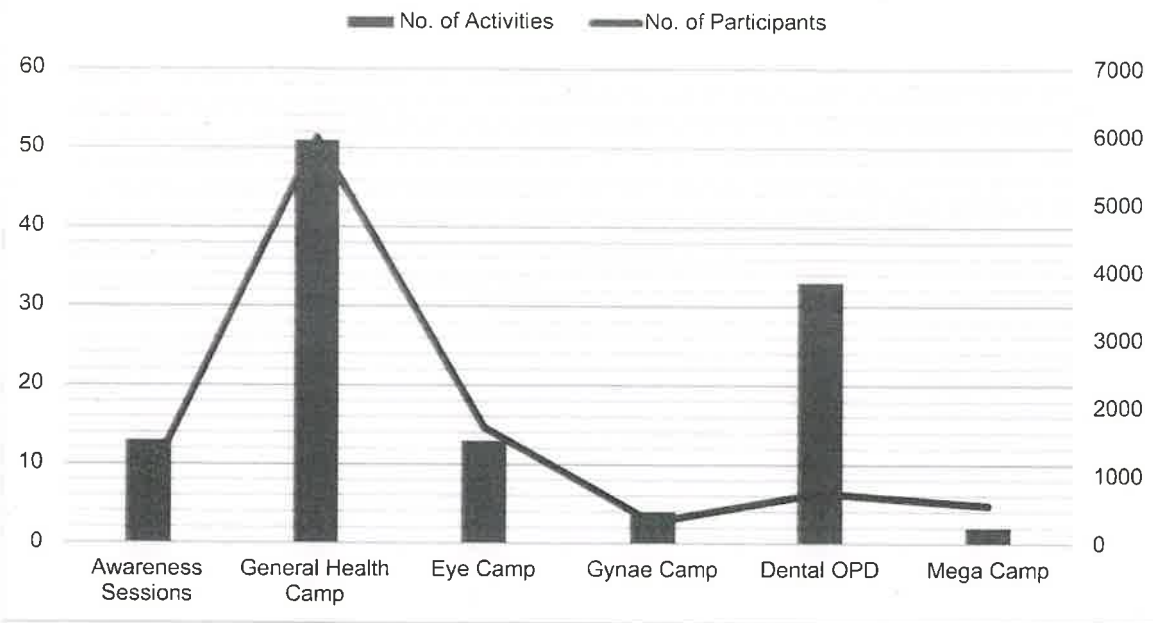


Figure 6: No. of Participants in Compare to No. of Activities undertaken by SEHAT Project.

The project exhibits a heavy structural reliance on mobile clinical infrastructure, with over 58% of patients seeking primary care and a significant unmet need for geriatric and ophthalmic services. To address these systemic vulnerabilities, Gram Nirman project executes a multi-year, tiered infrastructure strategy that has transitioned from addressing foundational sanitation and potable water needs (2020–2022) to deploying advanced public utilities. such

as high-efficiency solar micro-grids and reinforced school perimeters (2023–2026), ensuring long-term community resilience and safety.

Future Requests and Recommendations

Regarding future tactical requirements and procurement requests, the community and clinical stakeholders have formally identified a necessity for a haematology cell counter to enhance localized diagnostic precision.

Project TARA (TSPL Action for Rural Ajeevika): Women Empowerment

TSPL, in collaboration with Ambuja Organisation, initiated Project TARA in Karamgarh Village in December 2021. The project aims to empower a group of 12-15 women per village by training them for small-scale entrepreneurship, enabling them to generate their own income through CSR initiatives.

General Observations

The TARA Project represents a robust framework designed to foster women's empowerment and economic independence. Implemented alongside The Nabha Foundation, this initiative has successfully mobilized a strong, supportive network of approximately 2,100 women members spanning 20 villages. Project operations and Self-Help Group (SHG) activities are actively confirmed across Behniwal, Banawala, Raipur, Perron, Talwandi Akliya, and Chehlanwali.

The project goes far beyond mere financial assistance; it focuses heavily on capacity building, vocational skill training, and cultivating leadership among rural women. By enabling these women to establish micro-enterprises and generate supplementary household income, the TARA project profoundly enhances their decision-making power at the household level, elevates their social standing within the community, and contributes to the broader economic resilience of the local rural economy.

Feedback from the Stockholders

The TARA project, sponsored by Talwandi Sabo Power Limited (TSPL), is a women's empowerment initiative structured around economic upliftment through Self-Help Groups (SHGs). The project currently manages three distinct SHGs, each focusing on a specific micro-enterprise: Jute Bag making, stitching lowers, and producing file folders. While the project has successfully registered over a hundred members across its network, organizational efforts focus

on fostering active participation. Technically, there are approximately 10 members group in each village; however, 9 of these groups are currently active and consistently representing the TARA project, leveraging their training to actively engage in production and contribute to the women's collective economic success.

Future Requests and Recommendations

Looking ahead, the TARA Project has comprehensively planned to introduce Fulkari Work, the traditional method of making head scarf and clothing. The project has already identified the necessary women's groups with enthusiasm and secured a trainer to teach this skill, with a clear strategy to bring the finished products to market. They want to execute it as soon as possible.

TSPL Gram Nirman Project: Community (Village) Development

The Gram Nirman initiative facilitates the structural and aesthetic revitalization of village infrastructure. Through this scheme, deteriorating public spaces, under-resourced academic institutions, and essential sanitation facilities are systematically modernized to meet contemporary standards of durability and functionality. The project focuses on key assets, including the implementation of Solar Micro-Grids for renewable street lighting, the provision of purified drinking water via Sanitation & RO systems, and the installation of Civic & School Assets such as public seating, paved thoroughfares, and recreational parks.

General Observations

Recognizing that robust physical infrastructure is fundamental to a high quality of life, the TSPL Gram Nirman Project, executed by specialized Civil Construction Agencies, focuses on targeted community asset development. Reaching a massive demographic of approximately 50,000 beneficiaries across 10 villages, the FY 26 interventions have visibly transformed the rural landscape.

Village Behniwal

All legacy infrastructural developments remain intact and fully operational, including the Crematorium modernization (2020), the primary Community Park (FY 22), the installation of critical Traffic Mirrors (FY 23), and the 14 solar street lights commissioned in FY 24. For the current fiscal year (FY 26), the village has successfully

completed the strategic deployment and installation of 40 high-efficiency solar street lamps, which establishes a sustainable, off-grid network for enhanced public illumination.

Future Recommendations

Stakeholders and community members have requested several village improvements, including agricultural market support through a green market and storage facility, and public infrastructure enhancements such as new parks, additional solar street lights, a main-road bus stand, lock tiles for streets and the Gurudwara area, school stadium renovation, and traffic mirrors. Furthermore, community facility improvements were proposed for the Dharamsala, alongside restoring or relocating the RO plant to the school for better maintenance and providing more public benches.

Village Banawala

The structural integrity and utility of all prior interventions are confirmed to be maintained, encompassing the landscaping of Shahid Park (2020), the Wastewater Pipeline Project (FY 22), enhancements to the Community Park (FY 23), the outdoor Volleyball Court (FY 23), and strategic Traffic Mirrors (FY 23). Furthermore, the structural overhaul of the Community Dispensary, complete with a modern sanitation block, and the 18 solar street lamps deployed in FY 24 remain operational. In FY 26, the current year's mandate was fulfilled through the allocation of 45 reinforced public benches to enhance communal area utility, alongside the installation of 40 supplementary solar street lights.

Future Recommendations

During the audit's stakeholder consultation phase in Banawala village, community representatives articulated specific requirements for future infrastructure development. These requests are formally documented as follows:

1. Establishment of a dedicated public park for recreational enhancement.
2. Installation of protective perimeter grills around the village pond (Tobha) for safety and environmental management.
3. Restoration and repair of non-functional tube lights within the community centre to ensure full utility.
4. Provision of a chilled water cooler unit at the local school to enhance student amenities and access to potable water.

Village Raipur 1 & Raipur 2

The village of Raipur remains a primary beneficiary of sustained legacy frameworks, including the high-capacity Community RO System (2021), reinforced paved thoroughfares (2020), and the integrated open-air fitness facility. Key social assets commissioned in FY 23, including the public Rest Shed, the specialized Girls' Sanitation Block, and the network of Traffic Mirrors, are confirmed to be fully operational. Furthermore, the FY 24 projects, such as the Raipur 2 Community Centre development, the installation of 26 solar-powered street lamps, and the protective school pond fencing, continue to serve the locality. For the current fiscal year (FY 26), the developmental mandate was achieved through the intensive sanitation and de-silting of the Waterworks sector, the structural paving of the Government School entrance, the construction of a new Crematorium Rest Shed, and the deployment of a commercial-grade RO purification system.

Future Recommendations

During the audit, Raipur stakeholders expressed significant distress regarding previous interventions being deemed insufficient due to uncompensated crop damage and a lack of official response. They formally submitted two critical requests: 1) Instituting substantial, time-to-time coordination meetings with stakeholders to address grievances promptly. 2) Construction of a canal pavement featuring interlocking tiles to connect village with the highway and enhance infrastructure.

Village Perron

During the visit, the operational verification confirms that all developmental assets from prior fiscal cycles remain functional. This inventory incorporates the dual-block sanitation facility with integrated septic systems at the local Government School (2020), the Crematorium upgrade (FY 22), strategic Traffic Mirrors (FY 23), and the FY 24 legacy projects involving the revitalization of the public well and 15 solar-powered lamps. Within the current FY 26 reporting cycle, the developmental mandate was fulfilled through the allocation of 50 reinforced public benches to encourage social cohesion and the construction of a new Government School Gate to fortify institutional security.

Future Recommendations

The community members of the village Perron requested for the development of a bus stand cum park, paired with the installation of solar street lights and sitting benches. The paving of the school entrance and restorative paint work at the community hall have revitalized shared public spaces.

Village Talwandi Aklia

Comprehensive field verification confirms that all legacy developmental assets remain fully functional and integrated into the village infrastructure. This includes the initial solar lighting installation (2020), the communal volleyball facility (2020), the primary Community Park (FY 22), the public Rest Shed (FY 23), and the structural restoration of the Bus Stop Shed (FY 23). Furthermore, the paver block network commissioned within the Talwandi Aklia Stadium during FY 24 continues to exhibit sustained utility. For the current fiscal year (FY 26), the project mandate was successfully realized through the strategic deployment of 40 solar street lamps and 50 reinforced public benches, the comprehensive development of a dual-purpose Bus Stand-cum-Park, and the aesthetic revitalization and structural painting of the Community Hall.

Future Recommendations

During the audit, in Talwandi Aklian village, community representatives articulated specific requirements for future infrastructure development. They requested structural restoration and aesthetic revitalization of the heritage well to safeguard its historical legacy and communal heritage.

Village Chehlanwali

In Chehlanwali village, all preceding infrastructural interventions remain intact and functional, including the Community Park development with play stations (2020), the Crematorium upgrade (FY 22), and the FY 23 assets: 20 solar lights, Traffic Mirrors, the Cycle Stand, and educational BALA wall paintings. The FY 24 legacy project, the construction of a Main Entrance Gate at the Primary School, is also maintained. In the current FY 26, the village received 53 sitting benches and the deployment of 40 solar street lamps, which serves to expand the local renewable energy network as per the project mandate.

Future Recommendations

During the field evaluation in Chehlanwali village, community members and local stakeholders identified specific developmental requirements to upgrade existing infrastructure. These requests are formally documented as follows:

1. Urgent structural replacement of the school gate to ensure campus security.
2. Construction of a utility shed inside the school premises for student aggregation.
3. Establishment of a dedicated village bus stop to improve transit accessibility.
4. Development of a new public park for community recreation and wellness.

Other Extended Locations

The mandate for environmental and infrastructural revitalization was further extended to encompass adjacent rural clusters. Notable ecological interventions include the intensive de-silting and sanitation of the communal pond at Reond Kalan to restore the local aquatic ecosystem. Furthermore, the systematic deployment of renewable energy assets and civic infrastructure, including 10 solar street lamps and 25 reinforced benches at Aspal Kothe, dual installations of 22 units at Maisar Khana, 10 lighting systems at SD College Mansa, and additional communal seating at Dhingar (50 units) and Kot Dharmu (25 units), has successfully standardized the provision of essential public amenities across the broader district periphery.

TSPL Computer Literary

The Computer Literacy Project, launched in 2023 under the national Skill India initiative, represents a fundamental digital intervention within TSPL's Corporate Social Responsibility (CSR) framework. Managed via the Vedanta Foundation and centred in Raipur village, this facility is strategically designed to mitigate the rural digital disparity. By providing certified training in core and advanced computing, the scheme seeks to bolster local youth employability while facilitating seamless access to e-governance, digital pedagogy, and global networking. This deliberate investment in community human capital ensures the upcoming generation possesses contemporary, market-aligned technological proficiencies.



Figure 7: At Computer Literary Centre, Raipur

General Observations

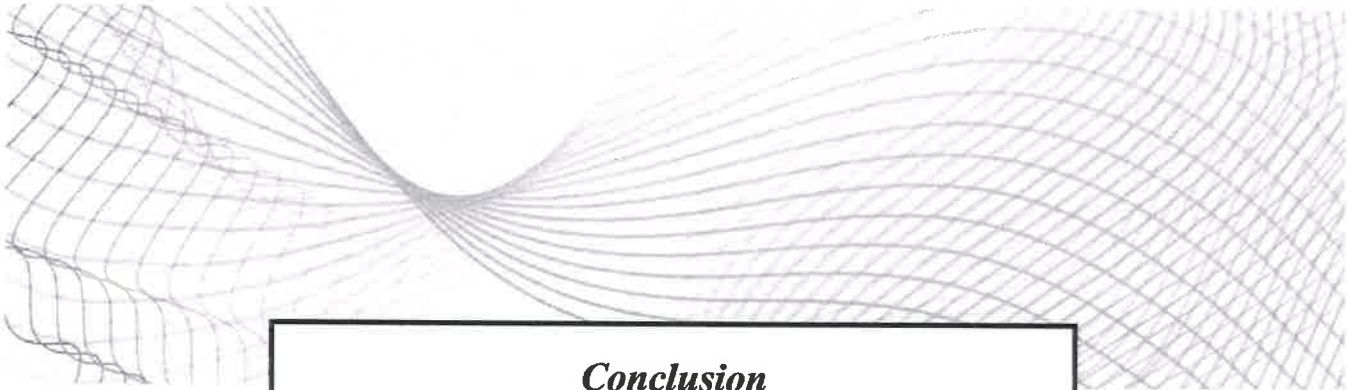
During our visit to the Computer Literary Project, which is in collaborative space with panchayat established Library, it is examined that the institutional documentation validates stable participation rates within the program. The previous student cohort consisted of 40 individuals, including 14 male and 26 female participants, while the active operational cycle currently enrolls 19 students. On-site verification confirmed that registered technological assets are being maintained in functional condition, supporting the instructional needs of the attending student body.

Future Requests and Recommendations

To maintain program efficacy and facilitate future scaling, several essential infrastructural and logistical enhancements were requested in the future interventions, as highlighted through beneficiary and stakeholder engagement:

1. Requested for establishment of a reliable, high-bandwidth internet infrastructure, where they also requested for AI based courses to excel in computer applications.

-
2. Construction of a dedicated sanitation block was requested and they ask to ensure a sustained potable water supply.
 3. The students also highlighted for necessary restoration and repair of compromised window assemblies.
 4. The upgrading the defunct inverter system to provide an Uninterrupted Power Supply (UPS) for classroom operations.
 5. It is also observed that there they need to stock the facility with a comprehensive first aid medical kit.
 6. On observation, assessment and renewal of the 2023 fire extinguisher unit to ensure alignment with current safety decommissioning standards.
-



Conclusion

The social audit of Talwandi Sabo Power Limited's (TSPL) Corporate Social Responsibility (CSR) activities verifies the deep-seated engagement of stakeholders across its various programs. Over the past five to six years, TSPL's initially modest projects have evolved into significant standards for rural progress and the enhancement of community welfare. This audit confirms that TSPL has effectively integrated and acted upon the stakeholder feedback received during previous evaluations. Participants in the recent feedback survey expressed strong approval for TSPL's interventions, highlighting the consistent collaborative efforts between company officials, panchayat members, and other local stakeholders to determine project details. Stakeholders further noted that CSR decision-making remains a democratic process, rooted in comprehensive need assessments, transparent consultation, and inclusive participation. We commend the TSPL CSR team for their dedicated work in ensuring the sustained success of these initiatives.



TSPL India / Sustainability / Environment / Compliance Report / Environmental Clearance



ENVIRONMENT

- Bio-Medical Waste Generation
- Environmental Clearance
- Monthly Report

Environmental Clearance

Document Name	Download
Half Yearly Compliance Report from April 2025 to September 2025	

TSPL/ ENV/F&W/ MoEF&CC/MAY-2026/01

Dated: 15/05/2026

To,**The Additional Director(s),**

Ministry of Environment, Forests & Climate Change,
Govt. of India, Northern Regional Office, Bays No.24-25, Sector 31-A,
Dakshin Marg,
Chandigarh-160030.

Subject: - Submission of month-wise Quantity of fly ash disposed and water consumption along with nature/source of water for the period FY 2025-26.

Ref: - Compliance status of the conditions stipulated in Environmental Clearance of 1980 MW (3x660 MW) Talwandi Sabo Power Limited and additional conditions stipulated in Office Memorandums No. J-11013/41/2006-IA. II (I) & F.No.22-13/2010-IA.III dated 06/04/2011 & 28/08/2019.

Dear Sir,

This has reference to the above cited subject please find enclosed herewith Annexure-1, Quantity of fly ash Utilized / disposed and water consumption month-wise along with nature/source of water for the period FY 2025-26 of Talwandi Sabo Power Limited, Village Banwala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab.

Hope the information will suffice your requirements

Yours faithfully,

For, Talwandi Sabo Power Limited,



Vikas Sharma
Head- Environment



Encl.: As above

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Annexure-1

Quantity of Fly Ash Disposed & Water Consumption Data for the FY 2025-26					
Sr. No.	Month	Total Qty. ash Disposed/Utilized	Raw Water*	Treated Water	Total Qty. Water Consumed
	UOM	MT	Kiltrs	Kiltrs	Kiltrs
1	Apr-25	219835	1657352	20204	1677556
2	May-25	213791	1583368	21258	1604626
3	Jun-25	281405	1769000	31277	1800277
4	Jul-25	230088	1807920	29190	1837110
5	Aug-25	204612	1585564	32750	1618314
6	Sep-25	228909	1595132	25797	1620929
7	Oct-25	288020	1397556	27332	1424888
8	Nov-25	258009	1213548	34744	1248292
9	Dec-25	220278	1035644	17327	1052971
10	Jan-26	275877.9	1174824	31643	1206467
11	Feb-26	359242.7	1445364	29535	1474899
12	Mar-26	294897.2	1484000	46064	1530064
	Total	3074965	17749272	347121	18096393

* Source of Raw water : Canal water



TSPL Environment

From: TSPL Environment
Sent: 15 May 2026 20:03
To: 'chdmoeffenv@gmail.com'; 'Environment Wing IRO Chandigarh'
Cc: Vikas Sharma; chahat.b; 'rahilchaudhary'
Subject: Submission of month-wise Quantity of fly ash disposed and water consumption along with nature/source of water for the period FY 2025-2026.
Attachments: TSPL Ash and Water Consumption FY 25-26.pdf

To,
The Additional Director(s),
Ministry of Environment, Forests & Climate Change,
Govt. of India, Northern Regional Office,
Bays No.24-25, Sector 31-A,
Dakshin Marg,
Chandigarh-160030.

Dear Sir,

This has reference to the above cited subject please find enclosed herewith month-wise Quantity of fly ash disposed/utilized and water consumption along with nature/source of water for the period FY 2025-26 of Talwandi Sabo Power Limited, Village Banwala, Mansa-Talwandi Sabo Road, District-Mansa, Punjab.

Yours faithfully,

For Talwandi Sabo Power Limited,

Banawala Distt. Mansa

Punjab.

Thanks and Regards,
Chahat Bansal
Environment-Section
+91-9463530325