

## उपायुक्त –सह– जिला दण्डाधिकारी का कार्यालय, बोकारो (विधि शाख)

दिनांक-14.06.2024 को उपायुक्त, बोकारो की अध्यक्षता में आयोजित माननीय NGT में विचाराधीन वाद O.A. No. 200/ 2014 – M.C. Mehta Vs Union of India & Ors. में पारित आदेश के अनुपालन से संबंधित समीक्षा बैठक की कार्यवाही :-

उपस्थिति :-

- |   |              |
|---|--------------|
| 1. उपायुक्त, बोकारो, .....  | अध्यक्ष      |
| 2. वन प्रमण्डल पदाधिकारी, बोकारो, .....                               | संयोजक सदस्य |
| 3. उप विकास आयुक्त, बोकारो,   |              |
| 4. अपर नगर आयुक्त, चास  |              |
| 5. कार्यपालक पदाधिकारी, फुसरो नगर परिषद्                              |              |
| 6. असैनिक शल्य चिकित्सक –सह– मुख्य चिकित्सा पदाधिकारी,                |              |
| 7. कार्यपालक अभियन्ता, सड़क निर्माण विभाग, रोड डिविजन, बोकारो,        |              |
| 8. कार्यपालक अभियन्ता, ग्रामीण कार्य विभाग, कार्य प्रमण्डल, बोकारो,   |              |
| 9. कार्यपालक अभियन्ता, पेय जल एवं स्वच्छता प्रमण्डल, चास,             |              |
| 10. क्षेत्रीय पदाधिकारी, झारखण्ड राज्य प्रदूषण नियंत्रण पर्सद, धनबाद, |              |
| 11. जिला जन सम्पर्क पदाधिकारी, बोकारो                                 |              |
| 12. नोडल पदाधिकारी, नमामि गंगे योजना, बोकारो                          |              |
| 13. जिला परियोजना पदाधिकारी, नमामि गंगे योजना, बोकारो                 |              |

### बैठक की कार्यवाही :-

वन प्रण्डल पदाधिकारी, बोकारो को माननीय एन0जी0टी0, नई दिल्ली के द्वारा दिये गये निदेशों को उल्लेख किया गया। वन प्रण्डल पदाधिकारी, बोकारो द्वारा बताया गया कि माननीय एन0जी0टी0, नई दिल्ली में विचाराधीन Original Application No. 200/2014 M C Mehta (Applicant) Versus Union of India & Ors. (Respondent) में दिनांक-10.04.2024 को पारित आदेश की कंडिका 4. "Reports on behalf of Deputy Commissioner Sahibganj, Dhanbad, Bokaro and Ramgarh have been filed but, a perusal of said reports reveal that information required by the Tribunal head-wise in terms of the order dated 24.11.2023 has not been furnished. Order dated 24.11.2023 was duly noted dated 05.12.2023. By the order dated 24.11.2023, Tribunal had required following information from each district apart from the other information to be submitted, as under:-

I. Sewage:

- a) Per day generation of sewage in each city/town within the district.
- b) Quantity of sewage treated per day, city/town wise.
- c) The number of sewage treatment plants existing and their capacity and capacity utilization and mode of disposal in each city/town.
- d) Quantity of discharged treated sewage from each STP, particularly for fecal coliform.
- e) Time bound plan to meet the gap, if any, in generation and treatment of sewage.
- f) Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluents and the action against them.
- g) Water quality in river and its tributaries in abutting districts/ towns in the terms of fecal coliform (MPN/ 100ml).

II. Municipal Solid Waste disposal:

- a) Per day generation of Solid waste in each city/town within the district.
- b) Quantity of solid waste treated per day, in each city/town of the district.
- c) The gap in the treatment of solid waste.
- d) Legacy waste and the time bound plan to treat legacy waste.
- e) The manner of utilization of the treated waste as well as rejects arising of remediation of legacy waste.
- f) Current status of dumping of solid waste with reference to location.

III. Construction and Demolition waste:

- a) Total per day generation of C & D waste within the district.
- b) The detail of plant established for the treatment of C & D waste including the existing capacity and capacity utilization.

IV. Industrial Effluent discharge:

- a) Number of industrial unit discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial units.
- b) Total daily generation of such industrial waste within the district.
- c) The manner of treatment of the industrial waste so generated.
- d) The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet.
- e) The per day generation of industrial solid waste and manner of its treatment and disposal in the District.

V. Regulation of Flood Plain Zone:

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- a) *If the flood plain zone has demarcated and the extent of encroachment on the flood plain zone in the district.*
- b) *The details of direct discharge of pollutants by the encroachers by the side of the river Ganga and its tributaries in the district.*

VI. *Bio Medical Waste:*

- a) *The per day total generation of bio-medical waste in the district.*
- b) *The manner of its treatment and disposal.*

VII. *Mining:*

- a) *Number of cases registered within a year against illegal mining in the bed or flood plains of river Ganga and its tributaries and details of enforcement of mining policy of State and "Enforcement & Monitoring Guidelines for Sand Mining"(EMGSM-2020) and Sustainable Sand Mining Management Guidelines 2016. "*

उक्त बिन्दुओं का उल्लेख करते हुए वन प्रमण्डल पदाधिकारी द्वारा बताया गया कि माननीय एन0जी0टी0 के द्वारा दिये गये निदेश दिनांक-10.04.2024 के आलोक प्रतिवेदन समर्पित किया जाना है। माननीय एन0जी0टी0 को आदेश के अनुपालन में प्रतिवेदन तैयार करने के निमित्त वन प्रण्डल पदाधिकारी, बोकारो द्वारा माननीय एन0जी0टी0 द्वारा दिनांक-10.04.2024 पारित आदेश में उल्लेखित विभिन्न बिन्दुओं की एक-एक कर समीक्षा की गई। माननीय एन0जी0टी0 द्वारा जिन बिन्दुओं पर प्रतिवेदन उपलब्ध कराने का निदेश दिया गया है वे निम्नवत है : -

I. *Sewage:*

<b>Issues:</b>	<b>Concerned Dept.</b>
Per day generation of sewage in each city/town within the district.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• Zila Parishad</li> <li>• CCL &amp; BCCL</li> </ul>
Quantity of sewage treated per day, city/town wise.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>

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The number of sewage treatment plants existing and their capacity and capacity utilization and mode of disposal in each city/town.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
Quantity of discharged treated sewage from each STP, particularly for fecal coliform.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
Time bound plan to meet the gap, if any, in generation and treatment of sewage.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept</li> <li>• CCL &amp; BCCL.</li> </ul>
Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluents and the action against them.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> </ul>
Water quality in river and its tributaries in abutting districts/towns in the terms of fecal coliform (MPN/ 100ml).	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>

## II. Municipal Solid waste disposal:

Issues:	Concerned Dept.
Per day generation of Solid waste in each city/town within the district.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• Zila Parishad</li> <li>• CCL &amp; BCCL</li> </ul>

Quantity of solid waste treated per day, in each city/town of the district.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
The gap in the treatment of solid waste.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
Legacy waste and the time bound plan to treat legacy waste.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
The manner of utilization of the treated waste as well as rejects arising of remediation of legacy waste.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>
Current status of dumping of solid waste with reference to location.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• SAIL, T&amp;A Dept.</li> <li>• CCL &amp; BCCL</li> </ul>

### III. Construction and Demolition Waste:

Issues:	Concerned Dept.
Total per day generation of C & D waste within the district.	<ul style="list-style-type: none"> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> </ul>
The detail of plant established for the treatment of C & D waste including the existing capacity and capacity utilization.	<ul style="list-style-type: none"> <li>• Zila Parishad</li> <li>• RCD, Bokaro</li> </ul>

	<ul style="list-style-type: none"> <li>• Building Division Dept. , Bokaro</li> <li>• SAIL, Bokaro</li> <li>• NHAI</li> </ul>
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#### IV. Industrial Effluents Discharge:

Issues:	Concerned Dept.
Number of industrial unit discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial units.	<ul style="list-style-type: none"> <li>• CCL, Khathara, Dhori &amp; Kargali</li> <li>• BCCL</li> <li>• JSPCB, Dhanbad</li> </ul>
Total daily generation of such industrial waste within the district.	<ul style="list-style-type: none"> <li>• BTPS</li> <li>• CTPS</li> </ul>
The manner of treatment of the industrial waste so generated.	<ul style="list-style-type: none"> <li>• TTPS</li> <li>• BIADA</li> </ul>
The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet.	<ul style="list-style-type: none"> <li>• GM, DIC</li> <li>• Factory Inspector, Bokaro</li> </ul>
The per day generation of industrial solid waste and manner of its treatment and disposal in the District.	<ul style="list-style-type: none"> <li>• ESL, Vedanta, Bokaro</li> </ul>
Compilation of the above to be done by Factory Inspector, Bokaro and GM-DIC, Bokaro.	

#### V. Regulation of Flood Plain Zone:

Issues:	Concerned Dept.
If the flood plain zone has demarcated and the extent of encroachment on the flood plain zone in the district.	<ul style="list-style-type: none"> <li>• Additional Collector, Bokaro</li> </ul>
The details of direct discharge of pollutants by the encroachers by the side of the river Ganga and its tributaries in the district.	

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## VI. Bio Medical Waste:

Issues:	Concerned Dept.
The per day total generation of bio-medical waste in the district.	<ul style="list-style-type: none"> <li>• Civil Surgeon, Bokaro</li> <li>• BGH, Bokaro</li> <li>• Chas Nagar Nigam</li> <li>• Phusro Nagar Parishad</li> <li>• GM, DIC, Bokaro</li> </ul>
The manner of its treatment and disposal.	
Compilation of the above to be done by Civil Surgeon, Bokaro.	

## Mining:

Issues:	Concerned Dept.
Number of cases registered within a year against illegal mining in the bed or flood plains of river Ganga and its tributaries and details of enforcement of mining policy of State and "Enforcement & Monitoring Guidelines for Sand Mining" (EMGSM-2020) and Sustainable Sand Mining Management Guidelines 2016.	<ul style="list-style-type: none"> <li>• DMO, Bokaro</li> </ul>

वन प्रमण्डल पदाधिकारी द्वारा उक्त बिन्दुओं को उल्लेख करते हुए यह निदेश दिया गया कि जो भी माननीय एन0जी0टी0 द्वारा उल्लेखित किये गये हैं उसे ध्यान पूर्वक पढ़ते हुए उसके अनुपालन में तथ्यपरक प्रतिवेदन समर्पित किया जाय ताकि जो जिला स्तर पर जो संकलित प्रतिवेदन तैयार किया जाये वो त्रुटिरहित हों।

बैठक में कारखाना निरीक्षक, बोकारो तथा कार्यपालक अभियंता लघु सिंचाई प्रमण्डल, बोकारो की बैठक में अनुपस्थित पाये जाने के कारण वन प्रमण्डल पदाधिकारी, बोकारो द्वारा उनसे संबंधित प्रतिवेदन प्राप्त करने के लिए सूचित करने का निदेश दिया गया।

वन प्रमण्डल पदाधिकारी, बोकारो द्वारा बैठक में उक्त सभी बिन्दुओं पर विस्तृत समीक्षोपरान्त उनके नाम के सामने अंकित विषयों पर दिनांक-27.06.2024 तक प्रतिवेदन समर्पित करने का निदेश दिया गया।

धन्यावाद ज्ञापन के साथ बैठक की कार्रवाई समाप्त की गई।

  
वन प्रमण्डल पदाधिकारी,  
बोकारो।

  
उपायुक्त,  
बोकारो।

ज्ञापांक-.....932...../ विधि, दिनांक-.....22/06...../2024

- प्रतिलिपि :- कारखाना निरीक्षक, बोकारो/महाप्रबंधक, जिला उद्योग केन्द्र, बोकारो को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।
- प्रतिलिपि:- जिला जन सम्पर्क पदाधिकारी, बोकारो/कार्यपालक अभियन्ता, पी0डब्लू0डी0, बोकारो/ कार्यपालक अभियन्ता, आर0डब्लू0डी0, बोकारो/ कार्यपालक अभियन्ता, पी0एच0ई0डी0, बोकारो/तेनुघाट/ कार्यपालक अभियन्ता, बांध प्रमण्डल, तेनुघाट/कार्यपालक अभियन्ता, लघु सिंचाई, बोकारो को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।
- प्रतिलिपि :- सी0ई0ओ0, बोकारो स्टील प्लांट/सी0ई0ओ0, वेदान्ता/मुख्य अभियन्ता, बी0टी0पी0एस0/सी0टी0पी0एस0/टी0टी0पी0एस0/महाप्रबंधक, सी0सी0एल0, बोकारो/महाप्रबंधक, बी0सी0सी0एल0, बोकारो को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।
- प्रतिलिपि :-कार्यपालक पदाधिकारी, नगर परिषद्, फुसरो/अपर समाहर्ता, बोकारो/अपर नगर आयुक्त, चास/सचिव, बियाडा, बोकारो /उप विकास आयुक्त, बोकारो को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।
- प्रतिलिपि :- क्षेत्रीय पदाधिकारी, झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद, धनबाद/वन प्रमण्डल पदाधिकारी, बोकारो को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।
- प्रतिलिपि :- सचिव, झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद, राँची को सूचनार्थ प्रेषित।
- प्रतिलिपि :- सरकार के सचिव, वन पर्यावरण एवं जलवायु परिवर्तन विभाग, झारखण्ड सरकार, राँची को सूचनार्थ प्रेषित।

  
उपायुक्त,  
बोकारो।

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STEEL AUTHORITY OF INDIA LTD.  
BOKARO STEEL PLANT  
ISPAT BHAWAN  
BOKAROSTEELCITY - 827001  
DISTRICT - BOKARO (JHARKHAND)  
Ph. No. 06542 246605 Fax No. 242099  
E-mail : bsl.environment@sail.in

स्टील अथॉरिटी ऑफ इण्डिया लि०  
बेकारो स्टील प्लान्ट  
इस्पात भवन  
बेकारो स्टील सिटी- 827 001  
जिला : बेकारो (झारखण्ड)  
फैक्स संख्या : 06542 242099  
दूरभाष संख्या 06542 246605



REF NO.इसीस / इएमएस / 50 / 2024- 214

DATE 17/06/2024

To,  
Regional Officer  
Jharkhand State Pollution Control Board  
HIG-I, Housing Colony, Dhanbad-826001  
Jharkhand

**Sub:** जिला गंगा समिति की दिनांक: 14.06.2024 को सम्पन्न बैठक में दिए गए निर्देश के आलोक के अद्यतन प्रतिवेदन उपलब्ध कराने के सम्बन्ध में।

Ref :- Letter No. 1166 from Van Bhawan, Bokaro dated 11/06/24

Dear Sir,

With reference to above mentioned letter, please find attached point wise status of compliance and point wise replies from SAIL/Bokaro Steel Plant:-

Sl.	Issue raised	Status of Compliance/Our submission.																								
<b>I</b>	<b>Sewage</b>																									
a.	Per day generation of sewage in each City/town within the District. (Bokaro Steel Township).	31.972 Million Litre per Day of sewage is generated from SAIL/Bokaro Steel Plant Township.																								
b.	Quantity of sewage treated per day, citp/town wise (Bokaro Steel Township).	31.972 Million Litre per Day of sewage is treated in Lagoon based Sewage Treatment Plant at SAIL/Bokaro Steel Plant Township.																								
c.	The number of sewage treatment plants existing and their capacity and capacity utilization and mode of disposal in each city/town.	SAIL/Bokaro Steel Township is having six lagoon based STP for treatment of sewage water from plant as well as township :- <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sl. No</th> <th>STP Location</th> <th>Capacity (MLD)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sec XII</td> <td>10.4</td> </tr> <tr> <td>2.</td> <td>Sec VI</td> <td>5.85</td> </tr> <tr> <td>3.</td> <td>Sec XI</td> <td>2.57</td> </tr> <tr> <td>4.</td> <td>Dhandabara</td> <td>11.4</td> </tr> <tr> <td>5.</td> <td>Camp II</td> <td>0.582</td> </tr> <tr> <td>6.</td> <td>BGH</td> <td>1.17</td> </tr> <tr> <td></td> <td><b>Total</b></td> <td><b>31.972</b></td> </tr> </tbody> </table> <p>The same is included in the State wise inventory list of Sewage Treatment Plants published by CPCB (copy enclosed- page No.28 of State wise details of STPs- <b>Annexure-1</b>). Capacity utilization is 100% the treated sewage is disposed-off in Garga River.</p>	Sl. No	STP Location	Capacity (MLD)	1.	Sec XII	10.4	2.	Sec VI	5.85	3.	Sec XI	2.57	4.	Dhandabara	11.4	5.	Camp II	0.582	6.	BGH	1.17		<b>Total</b>	<b>31.972</b>
Sl. No	STP Location	Capacity (MLD)																								
1.	Sec XII	10.4																								
2.	Sec VI	5.85																								
3.	Sec XI	2.57																								
4.	Dhandabara	11.4																								
5.	Camp II	0.582																								
6.	BGH	1.17																								
	<b>Total</b>	<b>31.972</b>																								
d.	Quantity of discharged treated sewage from each STP, particularly for fecal	Quantity of discharged treated sewage from each STP is given below :- <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sl.</th> <th>STP Location</th> <th>Capacity (MLD)</th> </tr> </thead> <tbody> </tbody> </table>	Sl.	STP Location	Capacity (MLD)																					
Sl.	STP Location	Capacity (MLD)																								

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स्टील अथॉरिटी ऑफ इण्डिया लि०  
बेकारो स्टील प्लान्ट  
इस्पात भवन  
बेकारो स्टील सिटी- 827 001  
जिला : बेकारो (झारखण्ड)  
फैक्स संख्या : 06542 242099  
दूरभाष संख्या 06542 246605



STEEL AUTHORITY OF INDIA LTD.  
BOKARO STEEL PLANT  
ISPAT BHAWAN  
BOKAROSTEELCITY - 827001  
DISTRICT - BOKARO (JHARKHAND)  
Ph. No. 06542 246605 Fax No. 242099  
E-mail : bsl.environment@sail.in

REF NO.इसीस / इएमएस / 50 / 2024- 214

DATE 17/06/2024

coliform.	No		
	1.	Sec XII	10.4
	2.	Sec VI	5.85
	3.	Sec XI	2.57
	4.	Dhandabara	11.4
	5.	Camp II	0.582
	6.	BGH	1.17
	<b>Total</b>		<b>31.97</b>
	The sewage quality is being regularly monitored through in house environmental laboratory of Bokaro Steel Plant and 3 <sup>rd</sup> party monitoring through NABL accredited and MoEFCC recognized laboratory. Copy of Report along with data of fecal coliform is attached as <b>Annexure -2.</b>		
e.	Time bound plan to meet the gap, if any, in generation & treatment of sewage.	NA	
f.	Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluent and the action taken against them. (At Bokaro Steel Township).	In case of Bokaro Steel Township, discharge of Hotels goes to sewage network of Bokaro Steel which is treated at logoon based STPs as detailed above against point c & d.	
<b>II</b>	<b>Municipal Solid Waste Disposal</b>		
a..	Per day generation of Solid waste in each city/ town within the District. (Bokaro Steel Township)	80-90 Tonnes per day.	
b.	Quantity of Solid Waste treated per day. (Bokaro Steel Township).	80-90 Tonnes per day.	
c.	The gap in treatment of Solid Waste	Nil	
d.	Legacy waste and the time bound plan to treat legacy waste.	2.5 Lakh Tonnes. Legacy waste is expected to be treated within next three years.	
e.	The manner of utilization of the treated waste as well as rejects arising out of remediation of legacy waste.	Wet organic wastes are used as manure. The Plastic & Metallic Waste are sent to recyclers.	
f.	Current status of dumping of solid waste.	The Public Health Department of SAIL/Bokaro is providing Municipal Waste Processing & Disposal services to over 47000	

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स्टील अथॉरिटी ऑफ इण्डिया लि०  
बेकारो स्टील प्लान्ट  
इस्पात भवन  
बोकारो स्टील सिटी- 827 001  
जिला : बोकारो (झारखण्ड)  
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REF NO.इसीस / इएमएस / 50 / 2024- 214

DATE 17/06/2024

		unit/family spread across Bokaro Steel Township, with the help of 157 tri-cycles, 02 compactors, 650 Bins, 1 JCB, 1 Dumper Placer & 177 health workers with annual budget of Rs. 6.79 Crores. The job include, door to door collection of garbage, segregation of Wet & Dry waste, recycling of Plastic & Metallic Waste & proper disposal of waste.
<b>II</b>	<b>Construction &amp; Demolition</b>	
<b>I</b>	<b>Waste</b>	
a.	Total per day generation of C&D Waste.	2- 3 Tonnes daily.
b.	The details of the plant established for the treatment of C&D Waste including existing capacity & capacity utilization	The C&D waste are used for area development in low-lying area.
<b>IV</b>	<b>Industrial effluent discharge</b>	
a.	Number of industrial units discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial unit. (Bokaro Steel Plant)	No untreated effluent is discharged by SAIL/Bokaro Steel Plant, as the Bokaro Steel Plant (BSL) has been designed with a central re-circulation system where any effluent discharged from various shops are first treated locally in the shop and then recycled back through Sludge compartment (for settlement) and Cooling Ponds (close circuit) for reuse of water in the process. The Bokaro Steel Plant is also equipped with Effluent Treatment Plants and only treated effluents/storm water are being discharged from the plant.
b.	Total daily generation of such industrial waste within the District. (Bokaro Steel Plant)	Approximately 79440 m <sup>3</sup> of effluent is generated per day which is treated in OF-1, OF-2, CRM-3 & BOD Plant Effluent Treatment Plants of SAIL/Bokaro Steel Plant.
c.	The manner of treatment of the industrial waste so generated	All effluent generated are treated using ETPs installed at SAIL /Bokaro Steel Plant at Outfall-1, Outfall-2, Coke Oven (BOD Plant) and CRM-3 and no effluent is discharged/bypassed in the drain or Damodar river without treatment. Bokaro Steel Plant has been designed with a central re-circulation system where any effluent discharged from various shops are first treated locally in the shop and then recycled back through Sludge compartment (for settlement) and Cooling Ponds (close circuit) for reuse of water in the process. In our endeavour to achieve ZLD, two effluent treatment plants at Outfall-1 and Outfall-2 of 1500 m <sup>3</sup> /Hr capacity each, have been installed where effluents/storm water drain are treated.
d.	The discharge effluent analysis from The CETP and ETP treating the industrial	Treated effluents qualities are being monitored through 3-Tier system:- a. Real time monitoring through Online Effluent Quality

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स्टील अथॉरिटी ऑफ इण्डिया लि०  
बेकारो स्टील प्लान्ट  
इस्पात भवन  
बेकारो स्टील सिटी- 827 001  
जिला : बेकारो (झारखण्ड)  
फैक्स संख्या : 06542 242099  
दूरभाष संख्या 06542 246605



STEEL AUTHORITY OF INDIA LTD.  
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REF NO.इसीस / इएमएस / 50 / 2024- 214

DATE 17/06/2024

	waste from each outlet.	Monitoring System, data is being sent on real time basis to JSPCB & CPCB servers. b. Sampling and analysis of effluent twice in a day through In-House Laboratory of Bokaro Steel Plant. c. 3 <sup>rd</sup> party monitoring of effluent quality through NABL accredited & MoEFCC recognized Laboratory. The effluent quality remains well with-in the stipulated norms. Copy of effluent Monitoring Report from NABL accredited & MoEFCC recognized lab is attached as <b>Annexure-3.</b>
e.	The per day generation of industrial solid waste and manner of its treatment and disposal.	Details of Industrial waste being generated and manner of its treatment and disposal is attached as <b>Annexure-4.</b>
<b>VI</b>	<b>Bio-Medical Waste</b>	
a.	The per day total generation of Bio-Medical Waste.	Bokaro General Hospital (BGH) is operating with valid Bio-Medical Authorization and is having a 50 Kg/hour capacity twin chamber (primary & secondary) captive Incinerator for proper disposal of Bio-Medical Waste. All the Bio-Medical waste generated by the BGH is properly collected, segregated and disposed-off as per the provision of Bio-Medical Waste Management Rules -2016. Copy of Bio-Medical Waste generation & disposal status for the month of May-24 has been attached as <b>Annexure-5.</b>
b.	The manner of its treatment & disposal.	The manner of Bio-Medical Waste treatment & disposal along with annual return copy for the last year has been attached as <b>Annexure-6.</b>

Our humble submission is, as a responsible corporate, SAIL/Bokaro Steel Plant is committed to take all major steps to ensure environmental compliance and conservation.

Submitted for your kind information please.

सधन्यवाद ।  
वास्ते सेल / बेकारो स्टील प्लान्ट

*NP Srivastava*  
17-6-24

NP Srivastava  
GM (Environment & Sustainability)  
SAIL/Bokaro Steel Plant

CONTROL OF URBAN POLLUTION  
SERIES: CUPS/ / 2015



# INVENTORIZAZION OF SEWAGE TREATMENT PLANTS



MARCH, 2015

**CENTRAL POLLUTION CONTROL BOARD**  
(Ministry of Environment and Forests, Govt. of India)  
Parivesh Bhawan, East Arjun Nagar,  
Delhi - 110032

## [INVENTORIZACION OF SEWAGE TREATMENT PLANTS]

Sl. No	City/town	STP Location	STP Commissioned in (Year)	Status (Operational/ Non-Operational/ Under Construction)	STP Installed Capacity MLD	Technology (UASB / ASP / OP / SBR / MBR/ FAB Etc.)	Consent Status
19		B.D.Cantt Srinagar	Under Army	do	5	ASP	

## 4.15 STPs AT JHARKHAND

Jharkhand has 15 numbers of sewage treatment plants having treatment capacity of 117.24 MLD. Details of STPs of Jharkhand are shown in Table 16.

Table 16: STPs-Jharkhand

Sl.No.	City/town	STP Location	STP Commissioned in (Year)	Status (Operational/ Non-Operational/ Under Construction)	STP Installed Capacity MLD	Technology (UASB / ASP / OP / SBR / MBR/ FAB Etc.)	Consent Status
1.	Bokaro	IEL Gomia Township	50 years ago	Operational	1.6	SAS	No
2.		BSL Township(a) Sector 12	Not Known	Operational	10.4	Lagoon	Information not provided
3.		(b) Sector 6	Not Known	Operational	5.85	Lagoon	
4.		(c) Sector 11	Not Known	Operational	2.57	Lagoon	
5.		(d) Dhandabara	Not Known	Operational	11.4	Lagoon	
6.		(e) Camp II	Not Known	Operational	0.582	Lagoon	
7.		(f) BGH	Not Known	Operational	1.17	Lagoon	
8.	Jmshedpur	STP Kharkai	1952	Operational	16	ASP	31/12/2014
9.		STP Bara	1994	Operational	45	ASP	31/12/2014
10.		Baridih STP Unit-I	1952	Operational	4.5	OP	Up to 2013
11.		Baridih STP Unit-II	1964	Operational	7.65	OP	Up to 31/12/2013
12.	UCIL Jadugora, ES	Jadugoda STP	1995	Operational	4.086	ASP	Up to 31/12/2012
13.		NarwaPahar STP	1995	Operational	2	ASP	Up to 31/12/2012
14.	HCL Moubhandar	Moubhandar	1985	Operational	0.8	Classified	Up to 31/12/2007
15.		Moubhandar		Operational	3.636	Filtration	Up to 31/12/2007

**Environmental Consultancy & Laboratory**

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Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

## TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
Bokaro Steel City-827001  
Jharkhand, INDIA

**ULR NO. :** ULR-TC560024000000056F  
**REPORT NO. :** UT/ELS/ REPORT/0072/01-2024  
**ISSUE DATE :** 06/01/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No.: 42-12/2023  
Sampling Procedure : UT/LQMS/SOP/W01A  
Date & Time of Sampling : 30/12/2023 10:20 Hrs.  
Sample Registration Date : 02/01/2024  
Analysis Starting Date : 02/01/2024  
Analysis Completion Date : 06/01/2024  
Sample Collected By : ULTRA TECH  
Sample Lab Code : UT/ELS/011/01-2024

**WASTE WATER SAMPLE ANALYSIS**  
Sample Type : Waste Water  
Sample Location : Oxidation Pond Sector 12  
Sample Quantity & Packaging Details : 1L in Wide Mouth Glass Bottle for Oil & Grease.  
2L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	7.5	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	14	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	8.7	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	60	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	1.9	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	0.08	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:**
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).

**- END OF REPORT -**



For ULTRA TECH,  
*Manasi Namjoshi*  
Manasi Namjoshi  
(Authorized Signatory)



TC-5600

ISO 9001 : 2015  
ISO 45001 : 2018

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Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

**TEST REPORT**

<b>ISSUED TO:</b> M/s. BOKARO STEEL PLANT/SAIL Bokaro Steel City-827001 Jharkhand, INDIA	<b>ULR NO. :</b> ULR-TC560024000000057F <b>REPORT NO. :</b> UT/ELS/ REPORT/0073/01-2024 <b>ISSUE DATE :</b> 06/01/2024 <b>YOUR REF. :</b> 4565049629 <b>REF. DATE :</b> 18/10/2023
--	--

SAMPLE PARTICULARS :		WASTE WATER SAMPLE ANALYSIS	
Sampling Plan Ref. No.:	: 42-12/2023	Sample Type	: Waste Water
Sampling Procedure	: UT/LQMS/SOP/W01A	Sample Location	: Oxidation Pond BGH
Date & Time of Sampling	: 30/12/2023 11:05 Hrs.	Sample Quantity &	: 1L in Wide Mouth Glass Bottle for Oil & Grease.
Sample Registration Date	: 02/01/2024	Packaging Details	: 2L in Polyethylene Container.
Analysis Starting Date	: 02/01/2024		
Analysis Completion Date	: 06/01/2024		
Sample Collected By	: ULTRA TECH		
Sample Lab Code	: UT/ELS/012/01-2024		

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.9	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	19	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	7.5	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	48	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	1.1	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit DL: Detection Limit

Remark/ Statement of Conformity: Nil

Note: 1. This test report refers only to the sample tested.  
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3. Any correction invalidates this test report.  
4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).

- END OF REPORT -

For ULTRA TECH,  
  
Manasi Namjoshi  
(Authorized Signatory)



004928



TC-5600

ISO 9001 : 2015  
ISO 45001 : 2018

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Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

## TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
Bokaro Steel City-827001  
Jharkhand, INDIA

**ULR NO. :** ULR-TC56002400000058F  
**REPORT NO. :** UT/ELS/REPORT/0074/01-2024  
**ISSUE DATE :** 06/01/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No.: 42-12/2023  
Sampling Procedure : UT/LQMS/SOP/W01A  
Date & Time of Sampling : 30/12/2023 11:30 Hrs.  
Sample Registration Date : 02/01/2024  
Analysis Starting Date : 02/01/2024  
Analysis Completion Date : 06/01/2024  
Sample Collected By : ULTRA TECH  
Sample Lab Code : UT/ELS/013/01-2024

**WASTE WATER SAMPLE ANALYSIS**  
**Sample Type :** Waste Water  
**Sample Location :** Oxidation Pond Sector 06  
**Sample Quantity & Packaging Details :** 1L in Wide Mouth Glass Bottle for Oil & Grease.  
2L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	7.3	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	18	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	7.9	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	72	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	1.4	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

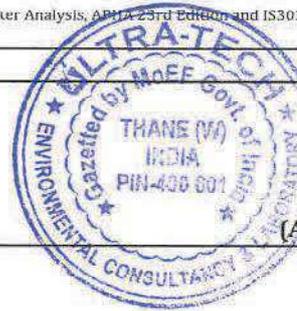
BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

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- END OF REPORT -



For ULTRA TECH,  
*Manasi Namjoshi*  
Manasi Namjoshi  
(Authorized Signatory)



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 STP/ETP/WTP Project Management Consultants

TC-5600

ISO 9001 : 2015  
 ISO 45001 : 2018

Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
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## TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
 Bokaro Steel City-827001  
 Jharkhand, INDIA

**ULR NO. :** ULR-TC560024000000060F  
**REPORT NO. :** UT/ELS/ REPORT/0076/01-2024  
**ISSUE DATE :** 06/01/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS :**  
**Sampling Plan Ref. No.:** 42-12/2023  
**Sampling Procedure:** UT/LQMS/SOP/W01A  
**Date & Time of Sampling:** 30/12/2023 12:25 Hrs.  
**Sample Registration Date:** 02/01/2024  
**Analysis Starting Date:** 02/01/2024  
**Analysis Completion Date:** 06/01/2024  
**Sample Collected By:** ULTRA TECH  
**Sample Lab Code:** UT/ELS/015/01-2024

**WASTE WATER SAMPLE ANALYSIS**  
**Sample Type :** Waste Water  
**Sample Location :** Oxidation Pond, Dhandabra  
**Sample Quantity & Packaging Details :** 1L in Wide Mouth Glass Bottle for Oil & Grease,  
 2L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	7.4	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	11	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	6.8	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	76	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	1.7	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

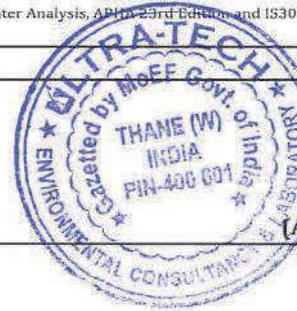
BDL: Below Detection Limit

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Remark/ Statement of Conformity: Nil

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- END OF REPORT -



For ULTRA TECH,  
 M/Namjoshi  
 Manasi Namjoshi  
 (Authorized Signatory)

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Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

### TEST REPORT

<b>ISSUED TO:</b> M/s. BOKARO STEEL PLANT/SAIL Bokaro Steel City-827001 Jharkhand, INDIA	<b>ULR NO. :</b> ULR-TC560024000000061F <b>REPORT NO. :</b> UT/ELS/REPORT/0077/01-2024 <b>ISSUE DATE :</b> 06/01/2024 <b>YOUR REF. :</b> 4565049629 <b>REF. DATE :</b> 18/10/2023
--	---

<b>SAMPLE PARTICULARS :</b> Sampling Plan Ref. No.: 42-12/2023 Sampling Procedure : UT/LQMS/SOP/W01A Date & Time of Sampling : 30/12/2023 12:55 Hrs. Sample Registration Date : 02/01/2024 Analysis Starting Date : 02/01/2024 Analysis Completion Date : 06/01/2024 Sample Collected By : ULTRA TECH Sample Lab Code : UT/ELS/016/01-2024	<b>WASTE WATER SAMPLE ANALYSIS</b> Sample Type : Waste Water Sample Location : Oxidation Pond, Camp 02 Sample Quantity & Packaging Details : 1L in Wide Mouth Glass Bottle for Oil & Grease. 2L in Polyethylene Container.
--	--

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.8	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	12	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	7.5	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	84	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	BDL[DL=0.5]	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:**
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA, 23rd Edition and IS 3025 (Part 1).

**- END OF REPORT -**

For ULTRA TECH,  
*Manasi Namjoshi*  
Manasi Namjoshi  
(Authorized Signatory)



**004924**

## Environmental Consultancy & Laboratory

Lab. Gazetted by MoEF&CC-Govt. of India  
Lab. Accredited by NABL - ISO/IEC 17025:2017 [TC-5600, Valid until 03.08.2024 in the field of Testing]  
QCI-NABET Accredited EIA Consulting Organization  
STP/ETP/WTP Project Management Consultants

Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

### TEST REPORT

<b>ISSUED TO:</b> M/s. BOKARO STEEL PLANT/SAIL	<b>ULR NO. :</b> ULR-TC56002400000059F
Bokaro Steel City-827001	<b>REPORT NO. :</b> UT/ELS/ REPORT/0075/01-2024
Jharkhand, INDIA	<b>ISSUE DATE :</b> 06/01/2024
	<b>YOUR REF. :</b> 4565049629
	<b>REF. DATE :</b> 18/10/2023

SAMPLE PARTICULARS :		WASTE WATER SAMPLE ANALYSIS	
Sampling Plan Ref. No.:	: 42-12/2023	Sample Type	: Waste Water
Sampling Procedure	: UT/LQMS/SOP/W01A	Sample Location	: Oxidation Pond-Sector 11
Date & Time of Sampling	: 30/12/2023 12:00 Hrs.		
Sample Registration Date	: 02/01/2024		
Analysis Starting Date	: 02/01/2024	Sample Quantity &	: 1L in Wide Mouth Glass Bottle for Oil & Grease.
Analysis Completion Date	: 06/01/2024	Packaging Details	: 2L in Polyethylene Container.
Sample Collected By	: ULTRA TECH		
Sample Lab Code	: UT/ELS/014/01-2024		

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	7.4	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	13	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	7.9	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	64	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	1.5	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:
- This test report refers only to the sample tested.
  - This test report may not be reproduced in part, without the permission of this laboratory.
  - Any correction invalidates this test report.
  - Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).

**- END OF REPORT -**



For ULTRA TECH,

*Manasi Namjoshi*

Manasi Namjoshi

(Authorized Signatory)



TC-5600

ISO 9001 : 2015  
ISO 45001 : 2018

## Environmental Consultancy & Laboratory

Lab. Gazetted by MoEF&CC-Govt. of India  
Lab. Accredited by NABL - ISO/IEC 17025:2017 [TC-5600, Valid until 03.08.2024 in the field of Testing]  
QCI-NABET Accredited EIA Consulting Organization  
STP/ETP/WTP Project Management Consultants

Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

## TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
Bokaro Steel City-827001  
Jharkhand, INDIA

**ULR NO. :** ULR-TC560024000002052F  
**REPORT NO. :** UT/ELS/ REPORT/2857/03-2024  
**ISSUE DATE :** 30/03/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS :**  
Sampling Plan Ref. No.: 41-03/2024  
Sampling Procedure : UT/LQMS/SOP/W01A  
Date & Time of Sampling : 23/03/2024 15:00 Hrs.  
Sample Registration Date : 26/03/2024  
Analysis Starting Date : 26/03/2024  
Analysis Completion Date : 30/03/2024  
Sample Collected By : ULTRA TECH  
Sample Lab Code : UT/ELS/674/03-2024

**WASTE WATER SAMPLE ANALYSIS**  
Sample Type : Waste Water  
Sample Location : Out Fall No-01  
Sample Quantity & : 1L in Wide Mouth Glass Bottle for Oil & Grease.  
Packaging Details : 2L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.8	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	16	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	5.4	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	40	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	6.1	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

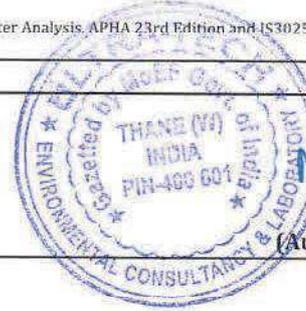
BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:**
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).

**- END OF REPORT -**



For ULTRA TECH,  
**Manasi Namjoshi**  
Manasi Namjoshi  
(Authorized Signatory)



TC-5600

ISO 9001 : 2015  
ISO 45001 : 2018

## Environmental Consultancy & Laboratory

Lab. Gazetted by MoEF&CC-Govt. of India

Lab. Accredited by NABL - ISO/IEC 17025:2017 [TC-5600, Valid until 03.08.2024 in the field of Testing]

QCI-NABET Accredited EIA Consulting Organization

STP/ETP/WTP Project Management Consultants

Lab : Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

## TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
Bokaro Steel City-827001  
Jharkhand, INDIA

**ULR NO. :** ULR-TC560024000002053F  
**REPORT NO. :** UT/ELS/ REPORT/2858/03-2024  
**ISSUE DATE :** 30/03/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

### SAMPLE PARTICULARS :

**Sampling Plan Ref. No.:** 41-03/2024  
**Sampling Procedure :** UT/LQMS/SOP/W01A  
**Date & Time of Sampling :** 23/03/2024 15:30 Hrs.  
**Sample Registration Date :** 26/03/2024  
**Analysis Starting Date :** 26/03/2024  
**Analysis Completion Date :** 30/03/2024  
**Sample Collected By :** ULTRA TECH  
**Sample Lab Code :** UT/ELS/675/03-2024

### WASTE WATER SAMPLE ANALYSIS

**Sample Type :** Waste Water  
**Sample Location :** Out Fall No-02  
**Sample Quantity & :** 1L in Wide Mouth Glass Bottle for Oil & Grease.  
**Packaging Details :** 2L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.8	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	17	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	4.1	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	36	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	2.5	mg/L	-
7	Cyanide as CN <sup>-</sup>	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).

- END OF REPORT -



For ULTRA TECH,

*Manjoshi*

Manasi Namjoshi

(Authorized Signatory)



### TEST REPORT

<b>ISSUED TO:</b> M/s. BOKARO STEEL PLANT/SAIL Bokaro Steel City-827001 Jharkhand, INDIA.	<b>ULR NO. :</b> ULR-TC5600 24 000003002F <b>REPORT NO. :</b> UT/ELS/REPORT/ 4163 /05 -2024 <b>ISSUE DATE :</b> 21/05/2024 <b>YOUR REF. :</b> 4565049629 <b>REF. DATE :</b> 18/10/2023
---	--

<b>SAMPLE PARTICULARS :</b> Sampling Plan Ref. No.: 35-04/2024 Sampling Procedure : UT/LQMS/SOP/W01A Date & Time of Sampling : 27/04/2024 13:10 Hrs. Sample Registration Date : 30/04/2024 Analysis Starting Date : 30/04/2024 Analysis Completion Date : 06/05/2024 Sample Lab Code : UT/ELS/723/04-2024 Sample Collected By : ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD.	<b>WASTE WATER SAMPLE ANALYSIS</b> Sample Type : Waste Water Sample Location : CCT, BOD Plant Outlet Sample Quantity & : Packaging Details : 2L in Polyethylene Container.
---	--

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.3	-	NA
2	Total Suspended Solids	IS 3025 (Part 17):1984	42	mg/L	NA
3	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	16	mg/L	NA
4	Chemical Oxygen Demand	IS 3025 (Part 58):2006	88	mg/L	NA
5	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	44.4	mg/L	NA
6	Cyanide as CN	IS 3025 (Part 27/Sec 1):2021	0.15	mg/L	NA
7	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	NA

BDL: Below Detection Limit      DL: Detection Limit      NA : Not Applicable

Remark/ Statement of Conformity: Nil

- Note:**
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 23rd Edition and IS3025 (Part 1).
  5. This test report shall be referred along with Test Report No. UT/ELS/REPORT/ 4164 / 05 - 2024 Dated 21/05/2024 for final conclusion.



*Manasi Namjoshi*

Manasi Namjoshi  
(Authorized Signatory)

- END OF TEST REPORT -

**TEST REPORT**

<b>ISSUED TO:</b>	<b>M/s. BOKARO STEEL PLANT/SAIL</b>	<b>ULR NO.</b>	: --
Bokaro Steel City-827001		<b>REPORT NO.</b>	: UT/ELS/REPORT/ 4164 /05 -2024
Jharkhand, INDIA.		<b>ISSUE DATE</b>	: 21/05/2024
		<b>YOUR REF.</b>	: 4565049629
		<b>REF. DATE</b>	: 18/10/2023

<b>SAMPLE PARTICULARS</b>	:	<b>WASTE WATER SAMPLE ANALYSIS</b>	
<b>Sampling Plan Ref. No.:</b>	: 35-04/2024	<b>Sample Type</b>	: Waste Water
<b>Sampling Procedure</b>	: UT/LQMS/SOP/W01A	<b>Sample Location</b>	: CCT, BOD Plant Outlet
<b>Date &amp; Time of Sampling</b>	: 27/04/2024 13:10 Hrs.		
<b>Sample Registration Date</b>	: 30/04/2024		
<b>Analysis Starting Date</b>	: 30/04/2024	<b>Sample Quantity &amp;</b>	: 1L in Wide Mouth Glass Bottle for Oil & Grease.
<b>Analysis Completion Date</b>	: 06/05/2024	<b>Packaging Details</b>	
<b>Sample Lab Code</b>	: UT/ELS/723/04-2024		
<b>Sample Collected By</b>	: ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD.		

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	Oil & Grease	IS 3025(PART 39):2021	1.2	mg/L	NA

NA : Not Applicable

Remark/ Statement of Conformity: Nil

- Note:**
- This test report refers only to the sample tested.
  - This test report may not be reproduced in part, without the permission of this laboratory.
  - Any correction invalidates this test report.
  - Parameter/s tested are not covered under NABL scope.
  - Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis, APHA 22nd Edition and IS3025 (Part 1).
  - This test report shall be referred along with Test Report No. UT/ELS/REPORT/ 4163 / 05 - 2024 dated 21/05/2024 for final conclusion.



*Manasi Namjoshi*  
**Manasi Namjoshi**  
 (Authorized Signatory)

- END OF TEST REPORT -

Solid Waste Utilization data (FY 2023-24)

Solid waste	Total Generation	Recycled/Reused in process	Sold	Percentage Utilization	Treatment/Mean of disposal
BF Slag	1915836	0	2062728	107.6	Slag Granulation for its use as Input Raw Material in Cement Industry
B.O.F. Slag	474006	428125	0	90.32	Used internally as raw material in SP, SMS & BF and for area development
BF Flue Dust	49615	49615	0	100	Used internally in SP (Sinter Plant)
Mill Scale	64955	64955	0	100	Used internally in SP (Sinter Plant)
Waste Refractories	8282.28	0	8282.28	100	Sold
Ferric Oxide	6488.51	0	6488.51	100	Sold
ESP (RMP) Dust	40854	31753	9102	100	Used internally in SP (Sinter Plant) as well as sold.
Coke Breeze	443264	442304	960	100	Used internally in SP (Sinter Plant)
<b>Total</b>	<b>3003300.79</b>	<b>1016752</b>	<b>2087560.79</b>	<b>103.36</b>	

Status of Bio-medical Waste during May'2024Annexure-5

## SCHEDULE I

[See rules 3 (e), 4(b), 7(1), 7(2), 7(5), 7 (6) and 8(2)]Part-1

In BSL for Dec'2016 as per BMW Rules'2016

Category	Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options	Quantity Kg/Month
(1)	(2)	(3)	(4)	(5)
Yellow	<b>(a) Human Anatomical Waste:</b> Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).	Yellow coloured non-chlorinated plastic bags	Incineration	110
	<b>(b) Animal Anatomical Waste :</b> Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.	Yellow coloured non-chlorinated plastic bags	Incineration	NA
	<b>(c) Soiled Waste:</b> Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.	Yellow coloured non-chlorinated plastic bags	Incineration	1433
	<b>(d) Expired or Discarded Medicines:</b> Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.	Yellow coloured non-chlorinated plastic bags or containers	Incineration	04
	<b>(e) Chemical Waste:</b> Chemicals used in production of biological and used or discarded disinfectants.	Yellow coloured containers or non-chlorinated plastic bags	Disposed of by incineration	80
	<b>(f) Chemical Liquid Waste :</b> Liquid waste	Separate collection system	Treated in BGH Oxidation pond	800 Ltr

	generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.36.00	leading to effluent treatment system	prior to disposal	
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.	Non-chlorinated yellow plastic bags or suitable packing material	Non-chlorinated chemical disinfection followed by incineration	39
	<b>(h) Microbiology, Biotechnology and other clinical laboratory waste:</b> Blood bags, Laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.	Autoclave safe plastic bags or containers	Pre-treated to sterilize with non-chlorinated chemicals on-site as per National AIDS Control Organisation or World Health Organisation guidelines thereafter for Incineration	113
Red	<b>Contaminated Waste (Recyclable)</b> (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and vaccutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for road making.	875.600
White (Translucent)	<b>Waste sharps including Metals:</b> Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation.	10.200

# 34851

Blue	<b>(a) Glassware:</b> Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Cardboard boxes with blue colored marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or Micro waving or hydroclaving and then sent for recycling.	788
	<b>(b) Metallic Body Implants</b>	Cardboard boxes with blue colored marking		600 g

स्टील अथॉरिटी ऑफ इण्डिया लि०  
बोकारो स्टील प्लान्ट  
इस्पात भवन  
बोकारो स्टील सिटी - 827 001  
जिला : बोकारो (झारखण्ड)  
फैक्स संख्या : 06542 242099  
दूरभाष संख्या 06542 246605

34852

STEEL AUTHORITY OF INDIA LTD.  
BOKARO STEEL PLANT  
ISPAT BHAWAN  
BOKARO STEEL CITY - 827001  
DISTRICT - BOKARO (JHARKHAND)  
Ph. No. 06542 246605 Fax No. 242099  
E-mail : bslecd@gmail.com



SPEED POST

REF NO. इसीएस/इएमएस/12/2024-116

DATE 28/03/2024

सेवा में,

सदस्य सचिव  
झारखण्ड राज्य प्रदूषण नियंत्रण पर्सद  
टी ए डिविजन बिल्डिंग  
एच० ई० सी० कम्पलेक्स  
धुर्वा रॉची 834004

विषय : कैलेंडर वर्ष 2023 में बायोमेडिकल वेस्ट अनुपालन प्रतिवेदन ।

महाशय,

कैलेंडर वर्ष 2023 में बोकारो जनरल अस्पताल के बायोमेडिकल वेस्ट अनुपालन प्रतिवेदन अवलोकनार्थ एवं उचित कारबाई हेतु संलग्न है।

सधन्यवाद ।

आपका विश्वासी  
वास्ते सेल/बोकारो स्टील प्लान्ट

नवीन 28.3.24

एन पी श्रीवास्तव  
महाप्रबंधक/पर्यावरण संरक्षण

प्रतिलिपि

क्षेत्रीय पदाधिकारी  
झारखण्ड राज्य प्रदूषण नियंत्रण पर्सद  
हाउसिंग कोलोनी  
एच आई जी-1  
बरटांड  
धनबाद-826001

**Form - IV**  
(See rule 13)

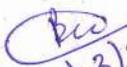
**ANNUAL REPORT**

[To be submitted to the prescribed authority on or before 30th June every year for the period from January to December of the preceding year, by the occupier of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF)]

SN	Particulars		
1.	Particulars of the Occupier		
	(i) Name of the authorised person (occupier or operator of facility)		Dr B.B KARUNAMAY, CHIEF MEDICAL OFFICER
	(ii) Name of HCF or CBMWTF :		Bokaro General Hospital
	(iii) Address for Correspondence		BOKARO STEEL CITY , BOKARO , JHARKHAND , 827004
	(iv) Address of Facility		BOKARO STEEL CITY , BOKARO , JHARKHAND , 827004
	(v) Tel. No, Fax. No		06542-231227 – 231227, 06542 - 232911
	(vi) E-mail ID		bsl.bgh@sail.in , sailbgh@gmail.com
	(vii) URL of Website		<a href="https://sail.co.in/plants/about-bokaro-steel-plant">https://sail.co.in/plants/about-bokaro-steel-plant</a>
	(viii) GPS coordinates of HCF or CBMWTF		
	(ix) Ownership of HCF or CBMWTF		Dr B.B KARUNAMAY, CHIEF MEDICAL OFFICER
	(x). Status of Authorisation under the Bio-Medical Waste (Management and Handling) Rules		Authorisation No.:JSPCB/HO/RNC/BMW-9200586/2021/3 09/02/2021 ..... .....valid up to 31.12.2024
(xi). Status of Consents under Water Act and Air Act		Valid up to: 31.12.2024	
2.	Type of Health Care Facility		
	(i) Bedded Hospital		No. of Beds: 910
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)		NA
	(iii) License number and its date of expiry		2035500836 valid up to 03.04.24
3.	Details of CBMWTF		Not applicable (BGH having captive Incinerator)
	(i) Number healthcare facilities covered by CBMWTF		NA
	(ii) No of beds covered by CBMWTF		NA
	(iii) Installed treatment and disposal capacity of		__NA__ Kg per day

*RK*  
20/03/2024  
**RANJU KUMARI**  
Jr. Officer (M & HS)  
BOKARO GENERAL HOSPITAL

	CBMWTF:			
	(iv) Quantity of biomedical waste treated or disposed by CBMWTF			__ NA __ Kg per day
4	Quantity of waste generated or disposed in Kg per annum (on monthly average basis)			Yellow Category :As per annexure-1 Red Category : As per annexure-1 White: As per annexure-1 Blue Category : As per annexure-1 General Solid waste: 150 Tonnes
5.	Details of the Storage, treatment, transportation, processing and Disposal Facility			
	(i) Details of the on-site storage facility	Size : NA Capacity : NA Provision of on-site storage : (cold storage or any other provision)		
	(ii) disposal facilities	Type of treatment equipment	No of units	Capacity Kg/day
		Incinerators	01	50Kg/hr
		Plasma Pyrolysis	0	
		Autoclaves	0	
		Microwave	0	
		Hydroclave	0	
		Shredder	01	
		Needle tip cutter or destroyer	45	One in each ward
		Sharps encapsulation or concrete pit	01	1m3
		Deep burial pits:	02	1m3
		Chemical disinfection:	45	One in each ward
		Any other treatment equipment:		
	(iii) Quantity of recyclable wastes sold to authorized recyclers after treatment in kg per annum.	Red Category (like plastic, glass etc.) As per annexure-1		
	(iv) No of vehicles used for collection and transportation of biomedical waste	NA(BGH has its own Captive Incinerator)		

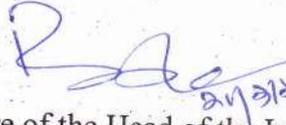
  
 20/03/2024  
**RANJU KUMARI**  
 Jr. Officer (M & HS)  
 BOKARO GENERAL HOSPITAL

	(v) Details of incineration ash and ETP sludge generated and disposed during the treatment of wastes in Kg per annum		Quantity generated	Where disposed
		Incineration Ash ETP Sludge	60Kg	HW Pit
	(vi) Name of the Common Bio-Medical Waste Treatment Facility Operator through which wastes are disposed of	NA		
	(vii) List of member HCF not handed over bio-medical waste.	NA		
6.	Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period	Yes. The copy of MOM attached		
7.	Details trainings conducted on BMW			
	(i) Number of trainings conducted on BMW management.	2		
	(ii) number of personnel trained	380		
	(iii) number of personnel trained at the time of induction	100 %		
	(iv) number of personnel not undergone any training so far	Nil		
	(v) whether standard manual for training is available?	Yes		
	(vi) any other information)			
8.	Details of the accident occurred during the year	NIL		
	(i) Number of Accidents occurred	NA		
	(ii) Number of the persons affected	NA		
	(iii) Remedial Action taken (Please attach details if any)	NA		
	(iv) Any Fatality occurred, details.	NA		
9.	Are you meeting the standards of air Pollution from the Incinerator? How many times in last year could not meet the standards?	Yes, NIL		
	Details of Continuous online	Installed		

  
 20/03/2024  
**RANJU KUMARI**  
 Jr. Officer (M & HS)  
 KARO GENERAL HOSPITAL

	emission monitoring systems installed	
10.	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?	As per annexure-1, NIL
11.	Is the disinfection method or sterilization meeting the log 4 standards? How many times you have not met the standards in a year?	Yes, NIL
12.	Any other relevant information	Air Pollution Control Devices attached with the Incinerator : Wet Scrubber

Certified that the above report is for the period from 1<sup>st</sup>JANUARY 2023 to 31<sup>st</sup>DECEMBER 2023 and all the information given are correct to the best of my knowledge.

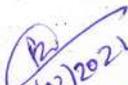
  
21/3/24

Name and Signature of the Head of the Institution

Date:

Place

**Dr. B B Karunamay**  
CMO (M & HS)  
Bokaro General Hospital  
SAIL, Bokaro Steel Plant  
Code-39K

  
24/03/2024  
**RANJU KUMARI**  
Jr. Officer (M & HS)  
BOKARO GENERAL HOSPITAL

Minutes of the Housekeeping & BMW Monitoring committee meeting held in  
the office of Dy.CMO (M&HS) & Chairman BMW Committee , BGH

Date: 04/01/2024

Timing: - 11.00 AM

Name of job/ Contract: Sanitation & Disposal of Bio Medical Waste of BGH, OHS

Purpose of Meeting: To review the operational effectiveness and statutory compliance of  
Biomedical waste Management system in the M&HS department, BSL

1. Members :

- A. Mr Ashok Kumar
- B. Dr. Rajdeep
- C. Dr Awadh Kishore
- D. Mrs. Carol Sharma
- E. Mrs. Sudha Giri
- F. Mrs. Sushila Paswan
- G. Mrs. Ranju Kumari

- GM - *[Signature]*  
 - Addl. CMO - *[Signature]*  
 - ACGO  
 - AGM *[Signature]*  
 - Dy. Mgr. *[Signature]*  
 - JO - *[Signature]*  
 - JO *[Signature]*

2. The committee reviewed the monthly performance of the Biomedical waste management of the department (M&HS) outsourced vide work order no. 4565049078, dated 26.07.2023 to M/S SUN FACILITY SERVICES (P) LTD. The job was commenced from 10.08.2023 to 09.08.2025.
3. Point raised for the vendor :-
  - a) Supervisor and all contract workers should be in proper dress.
  - b) Rotation (In & Out) of Supervisor and contract workers should be done after every 2 or 3 months.
  - c) Printed pay slip and attendance card should be provided to all workers.
  - d) ESIC and PF should be paid as per norm.
  - e) Dress, Shoes and jacket (full dress) should be provided to all workers.
  - f) Counselling and safety should be done by supervisor before starting of work.
  - g) Mask, Gloves and tester should be provided by the company.
  - h) Hand over and take over should be done by machine workers in all shift.
  - i) Supervisor should be available in each shift in each floor
  - j) Cleaning of floor, glass, fan, door and wall should be done regularly.
4. Performance reports from each work area was reviewed along with actions imposed for non performance /poor performance of defined jobs and endorsement the same

**Minutes of the Housekeeping & BMW Monitoring Committee meeting held in the office of Seminar Room (M & HS).**

Date: 21.08.2023 at 12.00 Noon

**Name of Job/ Contract: MANUAL AND AUTOMATED SANITATION & DISPOSAL OF BIO MEDICAL WASTE OF MEDICAL & HEALTH SERVICES (CAT B)**

Purpose of Meeting: To Review the operational effectiveness and statutory compliance of Biomedical Waste Management System in the M & HS department, BSL

1. Members:

A. Dr. Awadh Kishore, ACOMO (M &HS )	-	Eng I/c
B. Md Saiffuduja, Asst. Mgr. (M &HS )	-	Member
C. Mrs. Sushila Paswan, JO (M &HS )	-	Member
D. Mrs. Ranju Kumari, JO (M &HS )	-	Member
E. Mr. Sandeep Pandey	-	Manager (M/s Sun Facilities)

2. The committee reviewed the performance of the Biomedical waste management of the department (M &HS) outsourced vide work order no. 4565049078, dated: 26.07.2023 and shall continue till 09.08.2025.
3. All the supervisors, manager and Contract workers of CAT B are present in this meeting.
4. The committee has discussed about the following matters :-
  - a) Total no. of workers for machine :- 20
  - b) Total Female workers :- 25
  - c) As per work order Contractor must provide at least two set of Uniform, One Rain coat and one pair of shoes.
  - d) Weekly duty roaster should be provide by the supervisor
  - e) Contractor should provide antiseptic soap to the contract workers time to time.
  - f) Attendance card to be duly signed by the ward In charge.
  - g) Proper hand over and takeover of cleaning material/equipment by the workers daily.
  - h) Payment of contract workers should be done up to 07<sup>th</sup> of every month.
  - i) Contractors should provide payment slip to every workers.

*JKR*  
21.8.23

*Sushila*  
21.08.2023

*Ranju Kumari*  
21/08/2023

*S*  
21/8/23

ANNUAL REPORT				
1ST JAN 2023 TO 31ST DEC 2023				
SCHEDULE-I				
ANNEXURE-1 [SEE rules3(e),4(b),7(1),7(2),7(5),7(6) and 8(2)] Part-1				
BMW IN BGH FOR THE MONTH OF ...JAN 2023 TO DEC 2023...				
Category	TYPE OF WASTE	TYPE OF BAG OR CONTAINER TO BE USED	TREATMENT AND DISPOSAL OPTION	QUANTITY KG/MONTH
1	2	3	4	5
	<b>(a) Human Anatomical waste:</b> human tissues, organs, body part and fetus below the viability period (as per the medical termination of pregnancy act 1971, amended from time to time).	yellow coloured non chlorinated plastic bags	Incineration	1333KG
	<b>(b) Animal Anatomical waste:</b> Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospital or colleges or animal houses.		Incineration	NOT APPLICABLE
yellow	<b>(c) Soiled waste:</b> items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.		Incineration	17505 KG
	<b>(d) Expired or discarded medicines:</b> Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.	Yellow coloured non-chlorinated plastic bags or containers	Incineration	189 KG
	<b>(e) Chemical waste:</b> chemical used in production of biological and used or discarded disinfectants.	yellow coloured containers or non-chlorinated plastic bags	Disposed of by incineration	1090 KG

ANNUAL REPORT				
1ST JAN 2023 TO 31ST DEC 2023				
SCHEDULE-I				
ANNEXURE-1 [SEE rules3(e),4(b),7(1),7(2),7(5),7(6) and 8(2)] Part-1				
BMW IN BGH FOR THE MONTH OF ...JAN 2023 TO DEC 2023...				
	<b>(f) Chemical liquid waste:</b> Liquid waste generated due to use of chemical in production of biological and used or discarded disinfectants, silver x-ray developing liquid, discarded formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc. 36.00	separate collection system leading to effluent treatment system	Treated in BGH Oxidation pond prior to disposal	75960LTR
	<b>(g)</b> Discarded linen, mattresses, beddings contaminated with blood or body fluid.	Non-chlorinated yellow plastic bags or suitable packing material	Non- chlorinated chemical disinfection followed by incineration	445 KG
	<b>(h) Microbiology, biotechnology and other clinical laboratory waste:</b> Blood bags, laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.	Autoclave safe plastic bags or containers	pre-treated to sterilize with non- chlorinated chemicals on site as per National AIDS control organisation or world health organisation guidelines thereafter for incineration.	1068 KG
RED	<b>Contaminated waste (Recyclable)</b> (a) wastes generated from disposable item such as tubing, bottle, intravenous tubes and sets, catheters, urine bags, syringes(without needles and fixed needle syringes)and vaccutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers.	Autoclaving or microwaving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for road making	10216 KG

## ANNUAL REPORT

1ST JAN 2023 TO 31ST DEC 2023

## SCHEDULE-I

ANNEXURE-1

[SEE rules 3(e), 4(b), 7(1), 7(2), 7(5), 7(6) and 8(2)] Part-1

## BMW IN BGH FOR THE MONTH OF ...JAN 2023 TO DEC 2023...

White (translucent)	Waste sharp including metal: needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	puncture proof, leak proof, tamper proof containers	Autoclaving or Dry heat sterilization followed by shredding or mutilation.	118 KG
Blue	(a) <b>Glassware:</b> broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Cardboard boxes with blue colored marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and sodium hypochlorite treatment or through autoclaving or microwaving or hydroclaving and then sent for recycling.	6179 KG
	(b) <b>Metallic Body Implants</b>	cardboard boxes with blue colored marking		12 KG



## कार्यालय चास नगर निगम, चास (बोकारो)

आईटीआई मोड़, चास, बोकारो पिन-827013  
E-mail:- [chasmunicipalouncil@gmail.com](mailto:chasmunicipalouncil@gmail.com)

पत्रांक 627  
दिनांक 05/03/24

प्रेषक,

सहायक नगर आयुक्त,  
चास नगर निगम, चास।

सेवा में,

उपायुक्त,  
बोकारो।

विषय :-

दिनांक 24/02/2024 को उपायुक्त, बोकारो की अध्यक्षता में आयोजित जिला गंगा समिति (District Ganga Committee) की बैठक की कार्यवाही का अनुपालन प्रतिवेदन का प्रेषण।

प्रसंग :-

भवदीय ज्ञापांक 290 / विधि, दिनांक 27/02/2024

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के अनुपालन में चास नगर निगम से संबंधित कंडिकावार अनुपालन प्रतिवेदन संशोधित विहित प्रपत्र में तैयार कर पुनः इस पत्र के साथ संलग्न कर आवश्यक कार्रवाई हेतु भेजा जाता है।

सादर सूचनार्थ समर्पित।

विश्वासभाजन

अनु०:- यथापर

ज्ञापांक 627 / दिनांक 05/03/24.

05/03/24  
सहायक नगर आयुक्त  
चास नगर निगम।

प्रतिलिपि :- उप-विकास आयुक्त, बोकारो को सादर सूचनार्थ समर्पित।

540

14/03/24

05/03/24  
सहायक नगर आयुक्त  
चास नगर निगम।

05/03/24

34863

# कार्यालय चास नगर निगम चास, बोकारो

आइ०टी०आइ० मोड़, चास, बोकारो पिन -827013

E-mail:- [chasmunicipalcouncil@gmail.com](mailto:chasmunicipalcouncil@gmail.com)



वसुधैव कुटुम्बकम्

THE EARTH • ONE FAMILY • ONE FUTURE

## NGT Report

SL No.	Issues	Remarks
01	Industrial towns Pollution from industrial effluents and hazardous waste	Chas Municipal Corporation is a small town and there is no registered industrial unit in the municipal area.
02	Some ETPs non performance and bypass into drain	
03	Sewage discharge (Mixed drain/ Kucha drain contamination)	12.44 MLD waste water from 70 small and medium drains fall into Garga River. (DPR prepared, pending with department for approval)
04	Municipal Waste/Bio-medical waste/hazardous waste/legacy waste disposal detailed status required.	<p><b>Municipal Waste</b> – Door to Door collection of solid waste is being done on daily basis in municipal area by agency hired by Chas Municipal Corporation. DPR is already prepared for Integrated SWM Project, due to land issue plant construction has not yet started.</p> <p><b>Bio-Medical Waste/ hazardous waste</b> – Bio-medical waste from some hospitals/dispensaries is collected by an independent agency of Dhanbad in Chas Municipal area. Chas Municipal Corporation does not collect and dispose Bio-Medical Waste. All hospitals/dispensaries/clinics are instructed to execute MoU with agencies for collection of Bio-medical wastes.</p> <p><b>Legacy Waste</b>– Remediation of legacy waste is in progress and 65% work is complete.</p>

*myci*  
05.03.24

Assistant Municipal Commissioner  
Chas Municipal Corporation

*[Signature]*  
05/03/24

# कार्यालय फुसरो नगर परिषद (बोकारो) ।

पत्रांक.....520./न.प. फुसरो,दिनांक.....13/06/24./

प्रेषक,

प्रशासक,  
फुसरो नगर परिषद ।

सेवा में,

उपायुक्त के विशेष कार्य पदाधिकारी,  
जिला गोपनीय शाखा,बोकारो ।

विषय- दिनांक-14.06.2024 को आयोजित बैठक में भाग लेने के संबंध में ।

प्रसंग- भवदीय पत्रांक-1888/गो0 बोकारो,दिनांक-11.06.2024

महाशया,

उपर्युक्त विषयक प्रासंगिक पत्र के अनुपालन में भवदीय द्वारा मांगी गई वांछित प्रतिवेदन इस पत्र के साथ संलग्न कर आवश्यक कार्रवाई हेतु समर्पित किया जाता है ।

सादर सूचनार्थ समर्पित ।

अनु0-यथोक्त ।

विश्वासभाजन

  
13/06/24  
प्रशासक,  
फुसरो नगर परिषद ।

**1. Sewage**

- a. Per day generation of sewage in Phusro - 3.92 MLD
- b. Quantity of sewage treated per day - Nil
- c. The number of sewage treatment plant existing and their capacity and capacity utilization and mode of disposal: - Under Construction
- d. Quantity of discharged treated sewage from each STP - N.A.
- e. Time bound plan to meet the gap, if any, in generation and treatment of sewage - 12 months
- f. Details of hotels, dharamshala and ashram operating without proper consent and discharging untreated effluents and the action taken against them. - None.
- g. Water quality in river and its tributaries in towns in terms of fecal coliform (MPN/100ml) - N.A.

**2. Municipal Solid Waste Disposal**

- a. Per day generation of solid waste in Phusro - 30.34 TPD
- b. Quantity of solid waste treated per day, in phusro - Nil
- c. Legacy waste and the time bound plan to treat legacy waste - N.A.
- d. Current status of dumping of solid waste with reference to location. - 23.77042N,86.00083E

**3. Construction and Demolition waste**

- a. Total per day generation of C&D waste in Phusro - 3.03 TPD
- b. The detail of plant established for the treatment of C and D waste including the existing capacity and capacity utilization - N.A.

**4. Industrial Effluent Discharge**

N.A.

**5. Regulation of Flood Plain Zone**

N.D.

**6. Bio Medical Waste**

- a. The per day generation of bio medical waste in Phusro - 0.2 TPD
- b. The manner of its treatment and disposal - Incinerator at CCL Facilities + Incinerator at public toilets for sanitary pads

*K. N. S.*  
13/06/24

*[Signature]*  
13/06/24



34866

Ph: 0326-3510094

झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद  
Jharkhand State Pollution Control Board  
HIG-1, Housing Colony, Dhanbad-826001

ANNEXURE-IV

Letter No: 1197

Dated: 19/6/2024

From,

R.P.Kumar,  
Regional Officer,  
Dhanbad

To,

The Divisional Forest Officer,  
Bokaro.



Sub:

**Compliance report in the light of direction given during meeting of District Ganga Committee, Bokaro held on 14.06.2024 - Reg.**

Ref:

**Memo no. 1166, dated 11.06.2024**

Sir,

With reference to subject noted above, compliance report in light of direction given during meeting of District Ganga Committee, Bokaro is as below :

**(i) Sewage :-**

(a), (b), (c), (d), (e) - information to be provided by Local Urban Body.  
(f) Hotels, Dharamshala and Ashram operating without proper consents and discharging untreated effluent and the action taken against them - Details of Hotels, Dharamshala and Ashram in respect to consent management is attached as annex- I. The Board has directed Hotels, Dharamshala, Ashram Restaurant and Banquet Hall who have not taken CTE/CTO from the Board to obtain the same and also requested it's concerned authorities to take necessary action against the Hotels, Dharamshalla, Ashram, Restaurent, Benquete Hall. Local Urban Body(is) have also been requested to provide the list of Hotels, Dharamshala, Ashram, Restaurent and Banquet Hall, so that they can be directed to obtain CTE/CTO from the Board. Copy of letter attached as annex- II.

(g) Water quality in river and its tributaries in abutting districts/ towns in terms of fecal coliform (MPN/100 ml) - Water quality of river Damodar is being monitored by JSPC Board, Dhanbad on monthly basis and is being uploaded on CPCB, New Delhi website. Copy of test reports of May, 2024 is herewith attached on annex- III. It is here to mention that, facility of testing of Fecal Coliform (MPN/100 ml) is not available with the Board. It may be carried out by Drinking Water and Sanitation Department

**(ii) Municipal Solid Waste Disposal :-**

Information may be obtained from the concerned Municipal Corporation / Nagar Parishad / Urban Local Body(ies).

**(iii) Construction and Demolition Waste :-**

Information may be obtained from the concerned Municipal Corporation / Nagar Parishad / Urban Local Body(ies)

A.C Act  
19/6/24

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**(iv) Industrial Effluent discharge :-**

- (a) Number of Industrial unit discharging their effluent treated/untreated in river Ganga and it's tributaries - 01 (Treated effluent of M/s. Bokaro Steel Plant)
- (b) Total daily generation of such industrial waste within the district - 31.972 Million Liter /day
- (c) The manner of treatment of the industrial waste so generated - ETP
- (d) The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet - Analysis report is attached as annex-VI
- (e) The per day generation of industrial solid waste and manner of it's treatment and disposal in the District - Industrial solid waste generated in the form of Ash (Fly Ash & Bottom Ash) from Thermal Power Plant is utilized in Cement Plant, Low lying area filling, Road construction, Brick, Tiles Mfg. unit. There are four Thermal Power Plant is situated in Bokaro District i.e. (i) M/s. Bokaro Thermal Power Plant, (ii) M/s. Chandrapura Thermal Power Station, (iii) M/s. Tenughat Thermal Power Station, (iv) M/s. Bokaro Power Supply Company(P) Ltd. Fly Ash generation, Stock and utilisation datas are attached as annex - IV

**(iv) Regulation of Flood Plain Zone :-**

- (f) If the flood plain zone has been demarcated and the extent of encroachment on the flood plain zone in the District - Information may be obtained from irrigation/Agr. department.
- (g) The details of direct discharge of pollutant by the encroachers by the side of the river Ganga and it's tributaries in the District - As above.

**(iv) Bio Medical Waste :-**

- (a) The per day total generation of bio medical waste in the District - As per Annual report of 2022 available with JSPC Board, Per day generation of Bio Medical Waste in Bokaro District is 372.154 Kg. The Board has requested to the Civil Surgeon, Bokaro to provide the list of HCF's so that they can be directed to obtain statutory clearance from the Board. Copy attached as annex-V.
- (b) The manner of it's treatment and disposal - Bio Medical waste generated is treated and disposed off through CBWTF Namely M/s. Bio-Genetic Laboratory pvt. Ltd., at Chhota Pichhri, PO- Govindpur, Dist- Dhanbad.

**(iv) Mining :-**

The details may be obtained from D.M.O., Bokaro.

Encl-A/a

Your's faithfully,

  
(R.P. Kumar) 17/06/24  
Regional Officer, Dhanbad.



## List of Hotels, Dharamshala, Ashram, Restaurant, Banquet Hall

S.N.	Name & Address of Hotel, Dharamshala, Ashram, Restaurant, Banquet Hall	Status of CTE/CTO	Remarks
1	M/s. Hotel Blue Diamond Western Avenue At- B.S. City, Dist- Bokaro	CTO obtained for the period upto 30.06.2000	Directed to submit application vide letter no. 1148, dt. 10.06.2024
2	M/s. Limcas Hotel Industries At- Sector-1, Near Ram Mandir, Market, B.S. City, Dist- Bokaro	CTO obtained for the period upto 31.03.2015	Directed to submit application vide letter no. 1147, dt. 10.06.2024
3	M/s. Hotel Classic At- Sec-04, City Centre, B S City, Bokaro	CTO obtained for the period upto 31.12.2000	Directed to submit application vide letter no. 1078, dt. 29.05.2024
4	M/s. Aryan International Hospitality Services Pvt.Ltd. At- Mohan Pur, Jainamore, Dist- Dhanbad	Not Obtained	Directed to submit application vide letter no. 1049, dt. 11.06.2024
5	M/s. Hotel Rajdoot. At- By Pass Road, Chas, Dist- Bokaro	Not Obtained	Directed to submit application vide letter no. 1045, dt. 29.05.2024
6	M/s. Veena Regency At- Opp. Solagidih Tank, Jodhadih More, Chas, Dist- Bokaro	Not Obtained	Directed to submit application vide letter no. 1077, dt. 29.05.2024
7	M/s. Utsav Mandap Guest House, At- Plot No.-HE/18, Sec-04, City Centre, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1047, dt. 29.05.2024
8	M/s. Hotel Golden Residency, At- Gurudwara Road, NH-32, Chas, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1046, dt. 29.05.2024
9	M/s. Zaika Resort, At- Puruliya Road, Sardaha Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1044, dt. 29.05.2024
10	M/s. Hotel Ananda, At- Plot No.-E-3, Sec-4, City Centre, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1042, dt. 29.05.2024
11	M/s. Hotel Aadditayaa International, At- M-4, Sec-4, Bokaro, Behind Jai Jawan Petrol Pump, City Centre, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1052, dt. 29.05.2024
12	M/s. Kohinoor Palace, At- Bokaro Steel City, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1051, dt. 29.05.2024
13	M/s. Vaibhav Hotel Pvt.Ltd., At- Bye Pass Road, Marafari, Dist- Bokaro-827012	Not Obtained	Directed to submit application vide letter no. 1050, dt. 29.05.2024
14	M/s. Nirmala Banquet Hall, At- Plot No-555, Biswarkarma, Co-Operative Colony, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1067, dt. 29.05.2024

15	M/s. Shagun Banquet Hall, At- Plot No.-K-5,Sec-1,Bokaro City, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1066, dt. 29.05.2024
16	M/s. Panchvati Marriage Hall, At- Ashok Vatika Colony Chas, Chas, Dist- Bokaro-827010	Not Obtained	Directed to submit application vide letter no. 1064, dt. 29.05.2024
17	M/s. Hans Hall, At- Bokaro Sector-1, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1063, dt. 29.05.2024
18	M/s. Subhagi Banquet Hall, At- Bari Co-Operative Colony, Siwandih, Bokaro Steel,	Not Obtained	Directed to submit application vide letter no. 1061, dt. 29.05.2024
19	M/s. Hotel Rahul, At- Main Road, Near V Mart, Chas, Dist- Bokaro-827012	Not Obtained	Directed to submit application vide letter no. 1060, dt. 29.05.2024
20	M/s. Jalsa Banquet, At-A-13, Chira Chas, Near Prapti Estate, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1059, dt. 29.05.2024
21	M/s. Imperial Marriage Hall, At-Gaush Nagar, Makhdumpur, Siwandih, Bokaro Steel City, Dist- Bokaro-827010	Not Obtained	Directed to submit application vide letter no. 1057, dt. 29.05.2024
22	M/s. The Celebration, At-GM Colony Road, Near GM Ground, Bokaro Thermal, Dist- Bokaro-829107	Not Obtained	Directed to submit application vide letter no. 1056, dt. 29.05.2024
23	M/s. Shahnai Palaza Marriage Hall, At-Ghus Nagar Colony, Bokaro Steel City, Dist- Bokaro-827003	Not Obtained	Directed to submit application vide letter no. 1055, dt. 29.05.2024
24	M/s. Maha Milan, At-Sector-4, Bokaro Steel City, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1054, dt. 29.05.2024
25	M/s. All Heavens Fully Ac Banquet Hall, At-Chira Chas, Bokaro Steel City, Dist- Bokaro-827003	Not Obtained	Directed to submit application vide letter no. 1053, dt. 29.05.2024
26	M/s. Hans Regency Banquet Hall, At-Mortho Bokaro, Airport Road, Near Ram Mandir, Bokaro City, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1025, dt. 29.05.2024
27	M/s. Shiv Mandap, At-Bhojpur Colony, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1024, dt. 29.05.2024
28	M/s. Deepanjali Palace, At-ITI More, Chas, Beside Nagar Palika Office, Dist- Bokaro-827003	Not Obtained	Directed to submit application vide letter no. 1023, dt. 29.05.2024

29	M/s. Maa Kunti Bhawan, At-Surya Chowk, Beside of Jora Mandir, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1032, dt. 29.05.2024
30	M/s. Hotel Rajendra Residency, At-Plot No- F-15, City Centre, Near Maitry Bhawan, Sec-4, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no.1031 , dt. 29.05.2024
31	M/s. Aaddityaa International Banquet Hall, At-M-4, Hotel Aaddityaa International, City Centre, Sector-4, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1034, dt. 29.05.2024
32	M/s. Hotel Royal Residency, At-Purulia Road, Bokaro City, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1029, dt. 29.05.2024
33	M/s. Shristy Mandap Banquet Hall, At-Plot No-K-3, Sector-1, Near PNB Bank, B.S. City, Dist- Bokaro-827003	Not Obtained	Directed to submit application vide letter no. 1028, dt. 29.05.2024
34	M/s. Sai Marriage Hall & Guest House, At-Raja Bazar, Near Sai Mandir, Bokaro Thermal, Dist- Bokaro-829107	Not Obtained	Directed to submit application vide letter no. 1073, dt. 29.05.2024
35	M/s. Royal Residency, At-Plot No-JC/6, City Centre, Near Bokaro Mall, Sec-4, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1072, dt. 29.05.2024
36	M/s. The Hotel Sunshine Grand, At-Jaina More, Bermo Gomia Road, Dist- Bokaro-829301	Not Obtained	Directed to submit application vide letter no. 1070, dt. 29.05.2024
37	M/s. Hotel Shivam Residency, At-By Pass Road, Chas, Near K M Memorial Hospital, B.S. City, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1069, dt. 29.05.2024
38	M/s. Hotel Swagat, At-Plot No-B-3, 1st Floor, City Centre, Sec-4, Near SBI Bank, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1068, dt. 29.05.2024
39	M/s. Natraj Hotel, At-Shringari Point Complex, Bokaro City, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1041, dt. 29.05.2024
40	M/s. Hotel Lotus Regency, At-Phusro, Phusro Bazar, Dist- Bokaro-829144	Not Obtained	Directed to submit application vide letter no. 1040, dt. 29.05.2024

41	M/s. Hotel Wish Petals Garden, At-Plot No- D118/118E, JIADA, Industrial Area Road, Balidih Dist- Bokaro-827014	Not Obtained	Directed to submit application vide letter no. 1039, dt. 29.05.2024
42	M/s. Hotel New Raj Palace, At-By Pass Road, Chas, Near Indian Overseas Bank, B.S. City, Dist- Bokaro	Not Obtained	Directed to submit application vide letter no. 1038, dt. 29.05.2024
43	M/s. Palki Marriage Hall, At-S K Market, Jodhadi More, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1036, dt. 29.05.2024
44	M/s. R.N. Residency & Banquet, At-Main Road Phusro, Phusro Bazar, Near Ramratan High School, Dist- Bokaro-829144	Not Obtained	Directed to submit application vide letter no. 1035, dt. 29.05.2024
45	M/s. Mangalam Events, (A Unit of Birsa Ashram) At-Ground Floor, Naya More, B.S. City, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1084, dt. 29.05.2024
46	M/s. Hotel Sidhi Vinayak, At-Ranchi Rajdhani Road, Near Punjab Ashoka Petral Pump, Jaina More, Dist- Bokaro-829301	Not Obtained	Directed to submit application vide letter no. 1083, dt. 29.05.2024
47	M/s. Dev Mandap, At-Plot No-F-3, Sec-12/A, Centre Market, B.S. City, Dist- Bokaro-827012	Not Obtained	Directed to submit application vide letter no. 1082, dt. 29.05.2024
48	M/s. Hotel Prabhat Palace, At-Gomia, IEL Road, Near Bank More, Gomia, Dist- Bokaro-829111	Not Obtained	Directed to submit application vide letter no. 1076, dt. 29.05.2024
49	M/s. Hotel Madhuwan Heights & AC Banquet, At-Ground Floor, Chas, Near City Style, B.S. City, Dist- Bokaro-827012	Not Obtained	Directed to submit application vide letter no. 1075, dt. 29.05.2024
50	M/s. Renuka Palace, At-Gomia Thana Road, Near Government Hospital Gomia, Dist- Bokaro-829111	Not Obtained	Directed to submit application vide letter no. 1074, dt. 29.05.2024
51	M/s. Sabir Marriage Hall, At-Ansari Colony, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1091, dt. 29.05.2024

52	M/s. Madhuri Banquet Hall, At-Dhanbad-Chas Road(Telmochho Bridge), Near Pupunki Toll Plaza,Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1090, dt. 29.05.2024
53	M/s. Birsa Mandap, At- Naya More, B.S. City, Dist- Bokaro-827003	Not Obtained	Directed to submit application vide letter no. 1088, dt. 29.05.2024
54	M/s. Hotel West Inn, At- West inn Avenue, Naya More Bus Stand Bokaro, City Center, Dist- Bokaro-827001	Not Obtained	Directed to submit application vide letter no. 1096, dt. 29.05.2024
55	M/s. Prabhat Palace, At- Near New Hotel Prabhat, Dharamsala Road, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1095, dt. 29.05.2024
56	M/s. Hotel Neelkamal, At- Bye Pass Road, Near ICICI Bank, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1094, dt. 29.05.2024
57	M/s. Hotel Yamuna Castle, At- Check Post Main Road, Chas, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1093, dt. 29.05.2024
58	M/s. Hotel Naresh, At- Bye Pass Road Chas, Near Dharmasala Chowk,, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1087, dt. 29.05.2024
59	M/s. New Hotel Prabhat, At- Near Old Bus Stand, Dharamshala More, Chas, Opp. Sri Lakshmi Narayan Mandir, Dist- Bokaro-827013	Not Obtained	Directed to submit application vide letter no. 1086, dt. 29.05.2024
60	M/s. Hotel Yuvraj Regency, At- Plot No-B-23, Sec-4, Near Punjab National Bank, Dist- Bokaro-827004	Not Obtained	Directed to submit application vide letter no. 1085, dt. 29.05.2024



34873  
झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद,  
Jharkhand State Pollution Control Board,  
HIG-I, Housing Colony, Dhanbad-826001

Annex-11

दिनांक : 11/06/2024

पत्रांक : 1170

प्रेषक,

जितेन्द्र प्रसाद सिंह,  
क्षेत्रीय पदाधिकारी,  
धनबाद।

सेवा में,

1. कार्यपालक पदाधिकारी, चास नगर पालिका, पो0- चास, जिला- बोकारो।
2. कार्यपालक पदाधिकारी, फुसरो नगर परिषद, पो0- फुसरो बाजार, जिला- बोकारो।
3. महानगरप्रबंधक, नगर प्रशासन विभाग, बोकारो स्टील प्लांट, पो0- बोकारो स्टील सिटी, बोकारो।

विषय :-

होटल, रेस्टोरेंट, बैंकेट हॉल, आश्रम की सूची उपलब्ध कराने के संबंध में।

महाराज,

उपर्युक्त विषय के प्रसंग में सूचित करना है कि माननीय NGT द्वारा सभी होटल, रेस्टोरेंट, बैंकेट हॉल, मैरिज हॉल, आश्रम को संचालन सहमति प्राप्त करने का निर्देश दिया गया है। पर्वद में उपर्युक्त की सूची उपलब्ध नहीं है।

अतः अनुरोध है कि धनबाद स्थित सभी होटल, रेस्टोरेंट, बैंकेट हॉल, मैरिज हॉल, आश्रम की सूची एक सप्ताह के अन्दर उपलब्ध कराने की कृपा करें, ताकि उन्हें पर्वद से भी स्थापना/संचालन सहमति प्राप्त करने हेतु निर्देशित किया जा सके। साथ ही अनुरोध है कि होटल, रेस्टोरेंट, बैंकेट हॉल, मैरिज हॉल, आश्रम की स्थापना हेतु नक्शा पास करने के पूर्व / ट्रेड लाइसेंस निर्गत करने के पूर्व पर्वद से स्थापना / संचालन सहमति प्राप्त करना भी सुनिश्चित करने की कृपा की जाय।

विश्वासभाजन,

34884  
11-06-2024  
(जितेन्द्र प्रसाद सिंह)  
क्षेत्रीय पदाधिकारी, धनबाद।

Amrta

**JHARKHAND STATE POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE - CUM - LABORATORY, HIG-1, HOUSING COLONY, BARTAND, DHANBAD - 826001**  
**Analysis report of Damodar river/Tributaries/Pond under NWMP of May, 2024**

Lab Ref. No.	STN Code	Sampling Date	Sampling Time	Name Of Monitoring Location	Temp A/W in °C	D.O. mg/lt	pH	BOD mg/lt	Alk mg/lt	Cl- mg/lt	COD mg/lt	T.H. mg/lt	Ca++ mg/lt	Mg++ mg/lt	TDS mg/lt	TS mg/lt	TSS mg/lt
2942	2394	13/05/2024	8:50 AM	TOP CHANCHI LAKE	32/26	7.6	7.5	3	90	36	64	128	17.8	10.248	408	489	81
2943	2382	13/05/2024	10:55 AM	DAMODAR AT PHUSRO ROAD BRIDGE	34/30	7.5	7.5	2.9	88	32	64	128	17.6	10.248	377	436	59
2944	3557	13/05/2024	11:40 AM	DAMODAR RIVER NEAR BERMO RAILWAY STATION, BOKARO	34.5/30	7.5	7.6	2.8	90	38	64	132	30.4	13.176	308	371	63
2945	3555	13/05/2024	1:15 PM	DAMODAR RIVER NEAR ZARANGDIH BRIDGE, BOKARO	36/31	7.5	7.6	2.9	86	26	68	128	17.6	10.248	319	382	63
2946	2381	13/05/2024	1:25 PM	BOKARO AT ZARANGDIH BRIDGE	36/31.5	7.3	7.4	2.6	86	30	64	128	17.6	10.248	292	358	56
2947	3556	13/05/2024	1:40 PM	CONFLUENCE OF BOKARO & DAMODAR RIVER NEAR ZARANGDIH BRIDGE, BOKARO	36/30	7.4	7.5	2.7	86	28	68	128	17.6	10.248	325	380	65
2948	3554	13/05/2024	3:00 PM	KONAR RIVER NEAR SWANG COAL WASHERY, BOKARO	37/32	7.2	7.5	2.2	84	30	64	98	18.4	12.688	305	373	68
2949	2390	13/05/2024	5:30 PM	DAMODAR AT TENUGHAT DAM	34.5/30	7.7	7.6	1.6	82	28	48	92	17.6	11.712	236	281	45
2950	4740	18/05/2024	7:40 AM	LOCO TALAB (PUMPU TALAB), AT-BARMASIA, DHANBAD	31.5/27	3.5	7.4	13.1	98	66	220	124	28.8	11.65	418	494	76
2951	4000	18/05/2024	10:05 AM	GARGA RIVER NEAR TELMUCHO BRIDGE	33/28.5	6.2	7.5	3	98	70	92	152	29.6	18.056	435	528	93
2952	3553	18/05/2024	10:20 AM	DAMODAR RIVER NEAR TELMUCHO BRIDGE	33/28	7.6	7.5	2.8	96	68	92	126	24	15.128	438	531	93
2953	4738	18/05/2024	11:00 AM	JAMUNIA RIVER NEAR LOHAPATTI BRIDGE, MAHUDA, DHANBAD	34/30	7.5	7.6	2.9	96	68	96	128	17.6	10.248	393	485	92
2954	4739	18/05/2024	12:05 PM	KATRI RIVER, NEAR BHATINDA FALL, AT- TETENGABAD, M	35.5/31	7.2	7.4	2.4	96	68	92	128	17.6	10.248	397	473	76
2955	2383	18/05/2024	1:45 PM	DAMODAR U/S JAMADOBA WATER WORKS	36.5/32	7.6	7.5	2.4	86	68	92	126	24	15.128	387	474	87
2956	2384	18/05/2024	3:10 PM	DAMODAR AT DOMGARH WATER WORKS D/S SINDRI	37/32.5	7.6	7.6	2.4	92	64	84	126	24	15.128	407	497	90
2957	2391	18/05/2024	4:35 PM	DAMODAR AT PANCHET DAM	35/30	7.7	7.6	2.1	92	64	76	126	24	15.128	411	486	75
2958	2382	18/05/2024	5:40 PM	BARAKAR AT MAITHAN DAM	33/29	7.8	7.6	1.9	90	42	76	118	24	14.152	315	389	74
2959	4741	18/05/2024	7:15 AM	RANIBANDH TALAB NEAR ISM, DHANBAD	30/28.5	3.5	7.4	12.4	96	62	292	152	29.6	18.056	432	523	91

*S. Singh*  
 (S. Singh)  
 Sample Taker, Dhanbad

*J.P. Singh*  
 (J.P. Singh)  
 R.O., Dhanbad

*R.N. Anjaan*  
 (R.N. Anjaan)  
 Board Analyst, Ranchi  
 11/06/2024

34875

ANNEXURE-V BTPS



Jspcb Dhanbad <dhanbadjspcb@gmail.com>

**Fwd: Monthly ash Generatiion and utilisation report**

1 message

**RAUSHAN KUMAR SINGH** <raushan.singh@dvc.gov.in>  
To: dhanbadjspcb <dhanbadjspcb@gmail.com>  
Cc: TITABUR RAHAMAN <titabur.rahaman@dvc.gov.in>

Sun, Jun 16, 2024 at 9:53 AM

Dear sir  
Please find the desired report.

With regards,  
Raushan Kumar Singh  
Manager(M)  
DVC, BTPS, Bokaro  
Mobile 8986493505

----- Forwarded Message -----  
From: gkgopalcumar@gmail.com  
To: RAUSHAN KUMAR SINGH <raushan.singh@dvc.gov.in>  
Sent: Sun, 16 Jun 2024 09:52:51 +0530 (IST)  
Subject: Monthly ash Generatiion and utilisation report

Please find attachment of Monthly ash Generatiion and utilisation report.

 **monthly ash gen & utilisation.xlsx**  
11K

MONTHLY ASH GENERATION AND UTILISATION REPORT

Month	coal consumed in LMT	% Ash content of coal	Ash Generation in LMT	Total Dry Fly Ash Utilization in LMT	% Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc. (LMT)	In manufacture of Portland Pozzolana cement (LMT)	In construction of Highways & Roads including Flyovers (LMT)	In reclamation of low lying Area (LMT)
April'24	1.831942	44.76	0.819977239	0.639864	78.03438552	0.000533	0.13513	0.50420	0.00000
May'24	1.824900	47.01	0.85788549	1.072051	124.9643003	0.004765	0.08195	0.98533	0.00000
	<b>3.656842</b>		<b>1.677862729</b>	<b>1.711191</b>	<b>102.0294909</b>	<b>0.005298</b>	<b>0.21708</b>	<b>1.48954</b>	<b>0.00000</b>

34877 ANN- ✓

CTPS



Jspcb Dhanbad <dhanbadjspcb@gmail.com>

**Ash report as requested**

1 message

**BPSCL ENVIRONMENT** <environmentbpscl@gmail.com>  
To: Jspcb Dhanbad <dhanbadjspcb@gmail.com>

Wed, Jun 12, 2024 at 4:16 PM

Dear Sir

Kindly find the attached ash utilization report for the year 2023-24. The ash reports are also updated in ash portal.

Regards

M S Mondal

AGM/CED & Env.

**Environment Department**

**Bokaro Power Supply Co (P) Ltd.**

(A Joint Venture of SAIL & DVC)

Hall No. : M-01, Old ADM Building

Ispat Bhawan, Bokaro Steel City-827 001

Email : environment.bpscl@gmail.com

website: www.bpscl.in

 **Ash generation vs utilization 2023-24.pdf**

197K

## MONTHLY ASH GENERATION AND UTILISATION REPORT

Month	coal consumed in LMT	%Ash content of coal	Ash Generation in LMT	Total Dry Fly Ash Utilization in LMT	% Utilization	In making of Fly Ash based/ Bricks/ Blocks/ Tiles etc. (LMT)	In manufacture of Portland Pozzolana cement (LMT)	In construction of Highways & Roads including Flyovers (LMT)	In reclamation of low lying Area (LMT)
April'24	1.831942	44.76	0.819977239	0.639864	78.03438552	0.000533	0.13513	0.50420	0.00000
May'24	1.824900	47.01	0.85788549	1.072051	124.9643003	0.004765	0.08195	0.98533	0.00000
	3.656842		1.677862729	1.71191	102.0294909	0.005298	0.21708	1.48954	0.00000

**Ash generation vs utilization in BPSCL**

Sl. No.	Description	FY 2023 - 24
1	Total Coal Consumption	12,37,918 MT
2	Average ash content (as per test report available with coal co-ordination)	0.39
3	Total Ash Generation	4,88,358.65MT
5	Total ash utilized in low lying area	336,550
6	Total ash utilized in Fly ash Brick manufacturing in-house	405.20MT
7	Total ash utilized other than BPSCL (Through road mode)	18,135 MT
8	M/s Orient Exports Pvt. Ltd. (Through rail mode)	43,162.80 MT
9	Total Ash utilisation (MT)	3,98,253 MT
10	% Utilization	81.55%

34880

 Gmail

Jspcb Dhanbad <dhanbadjspcb@gmail.com>

reply to letter no.840 from law section, DC office bokaro

1 message

**BPSCL ENVIRONMENT** <environmentbpscl@gmail.com>

Mon, Jun 17, 2024 at 12:10 PM

To: dfobokarodivision@rediffmail.com, "bokarodfo@gmail.com" <bokarodfo@gmail.com>

Cc: Jspcb Dhanbad <dhanbadjspcb@gmail.com>

Dear Sir

Kindly find the attached reply against the above referred letter.

Regards

M S Mondal

AGM/ CED & Env.

8986874264

**Environment Department**

**Bokaro Power Supply Co (P) Ltd.**

(A Joint Venture of SAIL & DVC)

Hall No. : M-01, Old ADM Building

Ispat Bhawan, Bokaro Steel City-827 001

Email : environment.bpscl@gmail.com

website: www.bpscl.in



Letter to Law section 17.06.2024.pdf

278K



34882

ANN-V -

TTPJ



Jspcb Dhanbad <dhanbadjspcb@gmail.com>

**Regarding Ash generation and utilisation report.**

1 message

Wed, Jun 12, 2024 at 6:23 PM

**Pollution Team TTPS** <pollution.ttps@tvnl.in>

To: "dhanbadjspcb@gmail.com" <dhanbadjspcb@gmail.com>

Cc: General Manager <gm.ttps@tvnl.in>, Deputy General Manager <dgm.ttps@tvnl.in>, Ajay Kumar Pandey <ajay.pandey@tvnl.in>, Md Nehaluddin Ansari <nehal@tvnl.in>

Sir,

Please find enclosed herewith the filled in format as per prescribed proforma for Ash generation and utilisation Report 2023-24 by Tenughat Thermal Power Station (2 x 210 MW), Lalpania, Bokaro for your kind perusal.

Thanks

With Regards

Get Outlook for Android

 **Ash Gen rpt 23-24.pdf**  
1022K

Monthly Abstract of Ash Generation and Utilization										
(For the Period from 1st April 2023 to March 2024)										
Sl. No.	Month	ASH GENERATION AND UTILIZATION								
		Coal consumed (MMT)	Coal Consumption (LMT)	Ash content of coal (%)	Total Ash Generation (LMT)	Fly Ash Utilization	Ash Utilization (LMT)	Others	Total	%age utilization
1	APRIL 23	154523.40	1.54523	31.88	0.49262	70912.16	0.709	0.03093	0.740	150.23
2	MAY 23	151850.50	1.51851	33.56	0.50961	135084.92	1.351	0	1.351	265.07
3	JUNE 23	128465.40	1.19465	37.45	0.44740	99157.44	0.992	0	0.992	221.63
4	JULY 23	201521.70	1.01522	34.10	0.34619	99455.79	0.995	0.02407	1.019	294.24
5	AUGUST 23	78895.50	0.79396	29.41	0.23350	35769.86	0.358	0	0.358	153.19
6	SEPTEMBER 23	207248.80	1.07249	33.88	0.36336	52815.36	0.528	0	0.528	145.35
7	OCTOBER 23	168826.50	1.68827	33.38	0.56354	86315.69	0.883	0	0.883	156.72
8	NOVEMBER 23	173442.80	1.75443	33.38	0.58563	26153.87	0.262		0.262	44.66
9	DECEMBER 23	162779.40	1.62779	33.38	0.54336	70877.54	0.709		0.709	130.44
10	JANUARY 24	179884.10	1.79484	33.38	0.59912	88034.59	0.880		0.880	146.94
11	FEBRUARY 24	181633.80	1.61634	33.38	0.53953	87861.69	0.879		0.879	162.85
12	MARCH 24	176620.20	1.76620	33.38	0.58956	67436.93	0.674		0.674	114.39
		<b>1738792.10</b>	<b>17.38792</b>	<b>33.38</b>	<b>5.81342</b>	<b>921875.84</b>	<b>9.219</b>	<b>0.1581</b>	<b>9.377</b>	<b>165.48</b>

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 04/03/24  
 EE(c)

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 12/06/24  
 ESE(c)

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ANNIV

BPSU

 Gmail

Jspcb Dhanbad <dhanbadjspcb@gmail.com>

**Fwd: Ash generation and utilization data of CTPS**

1 message

Wed, Jun 12, 2024 at 5:01 PM

**SANJIV KUMAR** <sanjiv.kumar@dvc.gov.in>  
To: dhanbadjspcb <dhanbadjspcb@gmail.com>  
Cc: SATYENDRA KUMAR <satyendra.kumar@dvc.gov.in>

Thanks & Regards,

SANJIV KUMAR  
MANAGER(E),EM&PC  
CTPS,DVC,CHANDRAPURA

**From:** "SANJIV KUMAR" <sanjiv.kumar@dvc.gov.in>  
**To:** "ranchijspcb" <ranchijspcb@gmail.com>  
**Cc:** "SATYENDRA KUMAR" <satyendra.kumar@dvc.gov.in>  
**Sent:** Wednesday, June 12, 2024 4:15:54 PM  
**Subject:** Ash generation and utilization data of CTPS

Dear Sir,  
Pls find the attached file of ash generation and evacuation data of CTPS.

Thanks & Regards,

SANJIV KUMAR  
MANAGER(E),EM&PC  
CTPS,DVC,CHANDRAPURA

 2022-23 & 2023-24 ASH GEN AND UTILIZATION.xlsx  
15K

Ash Generation	Dry Fly ash utilization	Ash drained into ash pond (in MT)	Ash evacuated from Ash pond (in MT)	DFA GENERATION	Dry Fly ash utilization %	
	Station	Station	Station	Station	Station	
	98360	32778	65582	73770	44.43	
	55192	30235	24957	41394	73.04	
	54659	34686	19973	90242	40994	84.61
Q1	208211	97699	110512	216035	156158	62.56
	78655	48426	30229	77523	58991	82.09
	79127	37359	41768	69169	59345	62.95
	77089	38825	38264	67967	57817	67.15
	234871	124610	110261	214659	176153	70.74
	88638	40520	48118	54843	66479	60.95
	94289	31085	63204	65472	70717	43.96
	95238	25937	69301	70581	71429	36.31
Q3	278165	97542	180623	190896	208624	46.76
	94237	32652	61585	77768	70678	46.20
	52435	18389	34046	40091	39326	46.76
	47131	15182	31949	59760	35348	42.95
Q4	193803	66223	127580	177619	145352	45.56
	915050	386074	528976	799209	686288	56.26
Ash Generation	Dry Fly ash utilization	Ash drained into ash pond (in MT)	Ash evacuated from Ash pond (in MT)	DFA GENERATION	Dry Fly ash utilization %	
	Station	Station	Station	Station	Station	
	47741	13630	34111	61931	33419	40.786
	93972	30355	63617	40509	65780	46.146
	98517	35042	63475	43882	68962	50.814
Q1	240230	79027	161203	146321	168161	46.995
	97594	30913	66681	75705	68316	45.250
	98594	27013	71581	89144	69016	39.140
	98454	34192	64262	80110	68918	49.613
	294642	92118	202524	244958	206249	44.663
	98230	33386	64844	52552	68761	48.554
	91707	34985	56722	68406	64195	54.498
	90881	40718	50163	82371	63617	64.005
Q3	280818	109089	171729	203329	196573	55.496
	96736	45028	51708	82252	67715	66.496
	89975	49002	40973	95874	62983	77.803
	94140	44440	49700	106889	65898	67.438
Q4	280851	138470	142381	285015	196596	70.434
	<b>412704.00</b>	<b>677837.00</b>	<b>879623.07</b>	<b>767578.70</b>	<b>54.55</b>	
Ash Generation	Dry Fly ash utilization	Ash drained into ash pond (in MT)	Ash evacuated from Ash pond (in MT)	DFA GENERATION	Dry Fly ash utilization %	
	Station	Station	Station	Station	Station	
	99711	44826	54885	96449	69798	64.223
	113572	57201	56371	66328	79500	71.951



झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद,  
Jharkhand State Pollution Control Board,  
HIG-1, Housing Colony, Dhanbad-826001

दिनांक

पत्रांक :

प्रेषक,

जितेन्द्र प्रसाद सिंह,  
क्षेत्रीय पदाधिकारी,  
धनबाद।

सेवा में,

अरीनिक शल्य चिकित्सक,  
बोकारो।

विषय : बोकारो जिला स्थित Health Care Facilities (HCFs) की सूची उपलब्ध कराने के संबंध में।

महोदय,

उपर्युक्त विषय के प्रसंग में सूचित करना है कि जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1974, वायु (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1981 तथा जैव चिकित्सा अपशिष्ट प्राधिकरण नियम, 2016 के प्रावधानों के अनुपालन में सभी Health Care Facilities (HCFs) यथा बेडेड हॉस्पिटल, नन-बेडेड हॉस्पिटल, क्लिनिक, नर्सिंग होम्स, लैब, डिस्पेंसरी, ब्लड बैंक इत्यादि को पर्वद से स्थापना सहमति / संचालन सहमति / जैव चिकित्सा अपशिष्ट प्राधिकरण प्राप्त करना अनिवार्य है।

अतः अनुरोध है कि बोकारो जिला स्थित सभी Health Care Facilities (HCFs) यथा बेडेड हॉस्पिटल, नन-बेडेड हॉस्पिटल, क्लिनिक, नर्सिंग होम्स, लैब, डिस्पेंसरी, ब्लड बैंक इत्यादि की सूची यथाशीघ्र उपलब्ध कराने की कृपा करें, ताकि उन्हें पर्वद से स्थापना सहमति/संचालन सहमति/जैव चिकित्सा अपशिष्ट प्राधिकरण प्राप्त करने हेतु निर्देशित किया जा सके।

विश्वासभाजन,

ह0/-

(जितेन्द्र प्रसाद सिंह)

क्षेत्रीय पदाधिकारी, धनबाद।

ज्ञापांक : 848

धनबाद / दिनांक : 06/05/2024

प्रतिलिपि : शाखा प्रमुख (धनबाद), झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद, राँची को सूचनार्थ प्रेषित।

उप-884

06.05.2024

(जितेन्द्र प्रसाद सिंह)

क्षेत्रीय पदाधिकारी, धनबाद।

# ETP 34887/518 REPORT



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## Environmental Consultancy & Laboratory

Lab. Gazetted by MoEF&CC-Govt. of India  
 Lab. Accredited by NABL - ISO/IEC 17025:2017 (TC-5600, Valid until 03.08.2024 in the field of Testing),  
 QCI-NABET Accredited EIA Consulting Organization  
 STP/ETP/WTP Project Management Consultants

TC-5600

ISO 9001 : 2015  
 ISO 45001 : 2018

Lab. Survey No. 93/A, Conformity Hissa No.2 G.V.Brothers Bldg., Bala Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
 Tel: +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

### TEST REPORT

**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL.  
 Bokaro Steel City-827001  
 Jharkhand, INDIA

**ULR NO. :** ULR-TC560024000002052F  
**REPORT NO. :** UT/ELS/REPORT/2857/03-2024  
**ISSUE DATE :** 30/03/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS**

Sampling Plan Ref. No. : 41-03/2024  
 Sampling Procedure : UT/LQMS/SOP/W01A  
 Date & Time of Sampling : 23/03/2024 15:00 Hrs.  
 Sample Registration Date : 26/03/2024  
 Analysis Starting Date : 26/03/2024  
 Analysis Completion Date : 30/03/2024  
 Sample Collected By : ULTRA TECH  
 Sample Lab Code : UT/ELS/674/03-2024

**WASTE WATER SAMPLE ANALYSIS**

Sample Type : Waste Water  
 Sample Location : Out Fall No-01  
 Sample Quantity & : 1 L in Wide Mouth Glass Bottle for Oil & Grease.  
 Packaging Details : 2 L in Polyethylene Container.

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.8	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	16	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	BDL[DL=2]	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	5.1	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	40	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 36): 1988	6.1	mg/L	-
7	Cyanide as CN	IS 3025 (Part 27/Sec 1):2021	BDL[DL=0.02]	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	-

BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:**
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual Water & Wastewater Analysis, APHA 23rd Edition and IS:3025 (Part 1).

- END OF REPORT -

For ULTRA TECH,  
  
 Manasi Namjoshi  
 (Authorized Signatory)

007927


**Environmental Consultancy & Laboratory**

Lab. Gazetted by MoEF&amp;CC-Govt. of India

Lab. Accredited by NABL - ISO/IEC 17025:2017 [TC-5600.Valid until 03.08.2024 in the field of Testing]

OCI-NABET Accredited EIA Consulting Organization

STP/ETP/WTP Project Management Consultants



TC-5600

ISO 9001 : 2015

ISO 45001 : 2018

 Lab : Survey No. 93/A, Conformity Hissa No 2 G.V Brothers Bldg., Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India.  
 Tele : +91 22 2547 49 07 / +91 22 2547 62 17 Email : lab@ultratech.in Visit us at : www.ultratech.in

**TEST REPORT**
**ISSUED TO:** M/s. BOKARO STEEL PLANT/SAIL  
 Bokaro Steel City-827001  
 Jharkhand, INDIA

**ULR NO. :** ULR-TC56002400002053F  
**REPORT NO. :** UT/ELS/REPORT/2858/03-2024  
**ISSUE DATE :** 30/03/2024  
**YOUR REF. :** 4565049629  
**REF. DATE :** 18/10/2023

**SAMPLE PARTICULARS :**

 Sampling Plan Ref. No. : 41-03/2024  
 Sampling Procedure : UT/LQMS/SOP/W01A  
 Date & Time of Sampling : 23/03/2024 15:30 Hrs.  
 Sample Registration Date : 26/03/2024  
 Analysis Starting Date : 26/03/2024  
 Analysis Completion Date : 30/03/2024  
 Sample Collected By : ULTRA TECH  
 Sample Lab Code : UT/ELS/675/03-2024

**WASTE WATER SAMPLE ANALYSIS**
**Sample Type :** Waste Water  
**Sample Location :** Out Fall No-02  
**Sample Quantity & :** 1L in Wide Mouth Glass Bottle for Oil & Grease.  
**Packaging Details :** 2L in Polyethylene Containers.

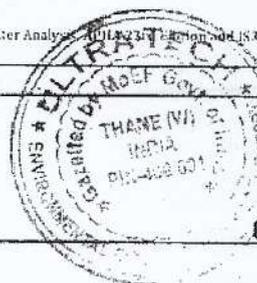
Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.8	-	-
2	Total Suspended Solids	IS 3025 (Part 17):1984	17	mg/L	-
3	Oil & Grease	IS 3025 (Part 39):2021	RDL(DL=2)	mg/L	-
4	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	4.1	mg/L	-
5	Chemical Oxygen Demand	IS 3025 (Part 58):2006	36	mg/L	-
6	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	2.5	mg/L	-
7	Cyanide as CN	IS 3025 (Part 27/Sec 1):2021	RDL(DL=0.02)	mg/L	-
8	Phenols	APHA 23rd Ed. 5530 D	RDL(DL=1)	mg/L	-

BDL: Below Detection Limit

DL: Detection Limit

Remark/ Statement of Conformity: Nil

- Note:
1. This test report refers only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis (2014) Edition and IS 3025 (Part 1)

**- END OF REPORT -**


For ULTRA TECH,

Manasi Namjoshi

Manasi Namjoshi

(Authorized Signatory)

Amey = 51

**ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD**  
 (A Venture of ULTRA TECH Environmental Consultancy & Laboratory)

Lab. Accredited by NABL-ISO/IEC 17025:2017, TC-5600 (Valid up to 03/08/2024)  
 Lab. Recognized by CPCB, MoEF&CC (GOI) under EPA, 1986  
 ISO 9001:2015 & ISO 45001:2018 Certified



Lab. Survey No. 93/A, Conformity/Hissa No. 2, G V Bhatnagar Bldg. Bata Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India. **TC-5600**  
 Tel: +91-22-25474907 / +91-7039076680 Email: lab@ultratech.in

Regd: Unit No. 224, 225, Jai Commercial Complex, Eastern Express Highway Opp. Cadbury Factory, Khopat, Thane (W) 400 601 Maharashtra, India.

### TEST REPORT

<b>ISSUED TO:</b> M/s. BOKARO STEEL PLANT/SAIL	<b>ULR NO.:</b> ULR-TC5600 24 000003002F
Bokaro Steel City-827001	<b>REPORT NO.:</b> UT/ELS/REPORT/ 4163 / 05 - 2024
Jharkhand, INDIA.	<b>ISSUE DATE:</b> 21/05/2024
	<b>YOUR REF.:</b> 4565049629
	<b>REF. DATE:</b> 18/10/2023

<b>SAMPLE PARTICULARS</b>	<b>WASTE WATER SAMPLE ANALYSIS</b>
Sampling Plan Ref. No.: 35-04/2024	Sample Type: Waste Water
Sampling Procedure: UT/LQMS/SOP/W01A	Sample Location: CCT, BOD Plant Outlet
Date & Time of Sampling: 27/04/2024 13:10 Hrs.	
Sample Registration Date: 30/04/2024	
Analysis Starting Date: 30/04/2024	Sample Quantity & Packaging Details: 2L in Polyethylene Container.
Analysis Completion Date: 06/05/2024	
Sample Lab Code: UT/ELS/723/04-2024	
Sample Collected By: ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD.	

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	pH @ 25° C	IS 3025 (Part 11):2022	6.3	-	NA
2	Total Suspended Solids	IS 3025 (Part 17):1984	4.2	mg/L	NA
3	Biochemical Oxygen Demand (27°C, 3Days)	IS 3025 (Part 44):1993	1.6	mg/L	NA
4	Chemical Oxygen Demand	IS 3025 (Part 58):2006	80	mg/L	NA
5	Ammonia as NH <sub>3</sub> -N	IS 3025 (Part 34): 1988	44.4	mg/L	NA
6	Cyanide as CN	IS 3025 (Part 27/Sec 1):2021	0.15	mg/L	NA
7	Phenols	APHA 23rd Ed. 5530 D	BDL[DL=1]	mg/L	NA

BDL: Below Detection Limit. DL: Detection Limit. NA: Not Applicable.

Remark/Statement of Conformity: Nil

- Note:**
1. This test report applies only to the sample tested.
  2. This test report may not be reproduced in part, without the permission of this laboratory.
  3. Any correction invalidates this test report.
  4. Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual, Water & Wastewater, Quality, APHA 23rd Edition and IS:3025 (Part 1).
  5. This test report shall be referred along with Test Report No. UT/ELS/REPORT/ 4163 / 05 - 2024, Date: 21/05/2024, Email: lab@ultratech.in



M. Namjoshi  
 Manasi Namjoshi  
 (Authorized Signatory)

- END OF TEST REPORT -

Amey - A



**ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD**  
 [A Venture of ULTRA TECH Environmental Consultancy & Laboratory]

Lab. Accredited by NABL-ISO/IEC 17025:2017, FC-5606 (Valid up to 03/08/2024)  
 Lab. Recognized by CPCB, MoEF&CC (GOI) under EPA-1986  
 ISO 9001:2015 & ISO 45001:2018 Certified

Lab. Survey No. 93/A, Conformity Hissa No. 2, G V Brothers Bldg, Beta Compound, Khopat, Near Flower Valley, Thane (West) - 400 601, Maharashtra, India  
 Tel: +91-22-25474907 / +91-7039076680 Email: lab@ultratech.in  
 Regd. Unit No. 224, 225, Jai Commercial Complex, Eastern Express Highway, Opp. Cadbury Factory, Khopat, Thane (W) 400 601, Maharashtra, India

**TEST REPORT**

<b>ISSUED TO:</b>	<b>M/s. BOKARO STEEL PLANT/SAIL</b>	<b>ULR NO.</b>	: --
Bokaro Steel City-827001		<b>REPORT NO.</b>	: UT/ELS/REPORT/ 4161 /05 -2024
Jharkhand, INDIA.		<b>ISSUE DATE</b>	: 21/05/2024
		<b>YOUR REF.</b>	: 4565049629
		<b>REF. DATE</b>	: 18/10/2023

<b>SAMPLE PARTICULARS</b>	:	<b>WASTE WATER SAMPLE ANALYSIS</b>	
Sampling Plan Ref. No.:	: 35-04/2024	Sample Type	: Waste Water
Sampling Procedure	: UT/LQMS/SOP/W01A	Sample Location	: CWT, BOD Plant Outlet
Date & Time of Sampling	: 27/04/2024 13:10 Hrs.	Sample Quantity &	: 1L in Wide Mouth Glass Bottle for Oil & Grease
Sample Registration Date	: 30/04/2024	Packaging Details	
Analysis Starting Date	: 30/04/2024		
Analysis Completion Date	: 06/05/2024		
Sample Lab Code	: UT/ELS/723/04-2024		
Sample Collected By	: ULTRA TECH ENVIRONMENTAL CONSULTANCY AND LABORATORY PVT. LTD		

Sr. No.	Test Parameter	Test Method	Test Result	Unit	Standard Limits
1	Oil & Grease	IS 3025(PART 39):2021	1.2	mg/L	NA
					NA - Not Applicable

Remark/ Statement of Conformity: Nil

- Note:
- This test report refers only to the sample tested.
  - This test report may not be reproduced in part, without the permission of this laboratory.
  - Any comment validates this test report.
  - Parameter/s tested are not covered under NABL scope.
  - Sample was collected using laboratory's SOP (UT/LQMS/SOP/W01A) based on CPCB's Guide Manual: Water & Wastewater Analysis (1994) & its revision, IS 3025 Part 1.
  - Copy of report shall be returned along with Test Report No. UT/ELS/REPORT/ 4161 / 05 - 2024. Date of issue: 21/05/2024. For final conclusion.



Manasi Namjoshi  
 (Authorized Signatory)

- END OF TEST REPORT -



कार्यपालक अभियंता का कार्यालय,  
पथ निर्माण विभाग, पथ प्रमण्डल, बोकारो।  
email : eercdbokaro-jhr@nic.in,

पत्रांक :- 831

बोकारो, दिनांक:- 26.06.2024

प्रेषक,

कार्यपालक अभियंता,  
पथ निर्माण विभाग,  
पथ प्रमण्डल, बोकारो।

सेवा में,

उपायुक्त महोदया,  
बोकारो।

विषय :-

दिनांक 14.06.2024 को उपायुक्त, बोकारो की अध्यक्षता में आयोजित माननीय NGT में विचाराधीन वाद O.A. No. 200/2014-M.C. Mehta Vs Union of India & Ors. में पारित आदेश के अनुपालन में प्रतिवेदन समर्पित करने के संबंध में।

प्रसंग :-  
महाशय,

भवदीय ज्ञापांक 932/विधि, दिनांक 22.06.2024.

उपर्युक्त विषयक प्रासंगिक पत्र के अनुपालन में पथ प्रमण्डल, बोकारो से संबंधित अनुपालन प्रतिवेदन निम्न प्रकार है:-

**III. Construction and Demolition Waste :**

Issues:	Compliance Report under RCD, Road Division, Bokaro
Total Per generation of C & D waste within Bokaro	NIL The demolition and construction waste generated if any is used as a back fill & surcharge Material in road construction, itself.
The detail of plant established for the treatment C & D waste including the existing capacity and capacity utilization.	N.A.

सूचनार्थ एवं अग्रेतर कार्रवाई हेतु सादर समर्पित।

विश्वासभाजन

*(Signature)*  
26/06/24  
कार्यपालक अभियंता,  
पथ निर्माण विभाग, पथ प्रमण्डल,  
बोकारो।

34892



कार्यपालक अभियन्ता का कार्यालय,  
भवन निर्माण विभाग, भवन प्रमण्डल, बोकारो।

पत्रांक - 921/

बोकारो, दिनांक 29/06/2024

प्रेषक,

कार्यपालक अभियन्ता,  
भवन प्रमण्डल, बोकारो।

सेवा में,

उपायुक्त,  
बोकारो।

विषय:-

दिनांक 14.06.2024 को उपायुक्त, बोकारो की अध्यक्षता में आयोजित माननीय NGT में विचाराधीन वाद O.A. No. 200/2014-M.C. Mehta Vs Union of India & Ors. में पारित आदेश के अनुपालन में प्रतिवेदन समर्पित करने के संबंध में।

प्रसंग:-

भवदीय पत्रांक 932/विधि, दिनांक 22.06.2024

महाशय,

उपरोक्त विषयक एवं प्रसंगाधीन पत्र के आलोक में सूचित करना है कि भवन प्रमण्डल, बोकारो से संबंधित अनुपालन प्रतिवेदन निम्न प्रकार है:-

## III. Construction and Demolition Waste :

Issues:	Compliance Report under BCD, Building Division, Bokaro.
Total Per generation of C & D waste within Bokaro.	NILL The demolition and construction waste generated if any is used as a back fill & surcharge Material in Building Construction, itself.
The detail of plant established for the treatment C & D waste including the existing capacity and capacity utilization.	N.A.

भवदीय को सादर सूचनार्थ समर्पित।

विश्वासभाजन

  
29/06/24  
कार्यपालक अभियन्ता,  
भवन प्रमण्डल, बोकारो।

कार्यालय, कारखाना निरीक्षक, बोकारो अंचल - 1, बोकारो I

पत्रांकः

प्रेषक,

शिवानन्द लागुरी  
कारखाना निरीक्षक,  
बोकारो अंचल- 1, बोकारो I

सेवा में,

प्रभारी पदाधिकारी, [dist-legalsec-bokaro@jharkhandmail.gov.in](mailto:dist-legalsec-bokaro@jharkhandmail.gov.in)  
विधि शाखा, बोकारो I

2

बोकारो, दिनांकः 28.06.2024

विशयः माननीय एन.जी.टी, नई दिल्ली के O A No. 200/2014-M C MEHTA VS UNION OF INDIA & ORS. में दिनांकः 20/02/2024 को पारित आदेश के अनुपालन में संशोधित प्रतिवेदन देने के संबंध में I

प्रसंगः आपके कार्यालय पत्रांक 932 दिनांक 22.06.2024

महाशय,

उपरोक्त विषय के संबंध में माँगी गई वांछित विवरणी पूर्व में इस कार्यालय के पत्रांकः 15 दिः 11/03/2024 एवं पत्रांकः 114 दिः 22/06/2024 के माध्यम से एक प्रतिवेदन [dist-legalsec-bokaro@jharkhand.gov.in](mailto:dist-legalsec-bokaro@jharkhand.gov.in) में प्रेषित कर दी गई थी I अभी संशोधित प्रतिवेदन इस पत्र के साथ संलग्न कर प्रेषित की जा रही है I

अनुलग्नकः यथोक्त

भवदीय,

(शिवानन्द लागुरी)

कारखाना निरीक्षक

बोकारो अंचल- 1, बोकारो

**REPORT FROM OFFICE OF THE INSPECTOR OF FACTORIES,  
BOKARO CIRCLE- 1 AND 2, BOKARO.**

**IV. INDUSTRIAL EFFLUENTS DISCHARGE:**

SL. NO.	CONCERNED FACTORIES	ISSUES	REMARKS	REASON
1	M/S BOKARO STEEL PLANT	1. <b>NUMBER OF INDUSTRIAL UNIT DISCHARGING THEIR EFFLUENT TREATED/ UNTREATED IN RIVER GANGA AND ITS TRIBUTARIES AND DETAILS OF DEFAULTING INDUSTRIAL UNITS</b>	NOT DISCHARGING	1. Bokaro Steel Plant has been designed with a central re-circulation system where any effluent discharged from various shops are first treated locally in the shop and then recycled back through Sludge compartment (for settlement) and Cooling Ponds (close circuit) for reuse of water in the process. Bokaro Steel plant has also installed two effluent treatments Plant of 1500 m <sup>3</sup> /Hr. capacity each for proper treatment of effluent/storm water.
2	M/S BOKARO POWER SUPPLY COMPANY (P) LTD.		NOT DISCHARGING	Effluent water produced during process is 1200 m <sup>3</sup> /day which is treated in neutralizing pit of WTP and sent to BSL network of Zero liquid discharge system and no industrial effluent is discharged to outside water body. b) Water sent along with ash slurry to ash pond is recovered after settlement of ash and is taken back to cooling pond for reuse and no discharge is done to outside water bodies. c) On-line Effluent Monitoring System has been installed. Real time data transmission is being done through NEVCO server to JSPCB & CPCB. The parameters being monitored are PH, COD, BOD and TSS.
3	M/S ESL STEEL LTD.		NOT DISCHARGING	STP (Sewage Treatment Plant installed and working) ETP (Effluent Treatment Plant Installed and working).
4	M/S CHANDRAPURA THERMAL POWER STATION, DVC		NOT DISCHARGING	STP (Sewage Treatment Plant is under construction) ETP (Effluent Treatment Plant Installed and working) Treated water is recycled in Process.
5	M/S DAMODAR VALLEY CORPORATION; BTPS A		NOT DISCHARGING	STP (Sewage Treatment Plant installed and working) ETP (Effluent Treatment Plant Installed and working) Treated water is recycled in Process.
	M/S TENUGHAT THERMAL POWER STATION		NOT DISCHARGING	FLY ASH IS POURED INTO ASH POND THROUGH ASH PIPELINES, THIS ASH HAS BEEN USED FOR FILLING LOW LAND AREAS OF TTPS AND AFTER FILLING IT IS COVERED WITH SOIL. ONE SILO IS INSTALLED FOR DRY FLY ASH AND ANOTHER SILO IS IN FINAL STAGE OF TESTING/COMMISSIONING. WORK ORDER FOR COLLECTION AND DISPOSAL OF DRY FLY ASH FROM SILO HAS ALREADY BEEN PLACED.  ETP IS UNDER CONTRUCTION. STP IS UNDER PROCESS OF INSTALLATION.

# 34895

M/S KARGALI COAL WASHERY, CCL	-	Manufacturing Closed
M/S KATHARA, CCL	-	Manufacturing Closed
M/S DHORI, CCL	-	Coal Washery Not installed
M/S DUGDA, BCCL	-	Manufacturing Closed since May 2021
M/S MADHUBAND, BCCL	NOT DISCHARGING	Waste water is send to Slime Pond inside Washery premises. There is Four Number of Pond where step by step discharged water is purified. Then fresh water is recycled into manufacturing Process. ETP is not installed as not required STP is not installed as not required.

SL. NO	CONCERNED FACTORIES	ISSUES	REMARKS				REASON
1	M/S BOKARO STEEL PLANT	2. TOTAL DAILY GENERATION OF SUCH INDUSTRIAL WASTE WITHIN THE DISTRICT.	SOLID WASTE	TOTAL GENERATION IN FY 2022-23	RECYCLED/ REUSED	SOLD	Two Effluent treatment Plant of 1500 m <sup>3</sup> /Hr capacity each at Outfall-1 and Outfall-2.
1			BF SLAG	1783926	0	1885462	
4			B.O.F SLAG	452844	450625	9882	
5			BF FLUE DUST	59680	59680	0	
7			MILL SCALE	74930	74930	0	
2			WASTE REFRACTO RIES	2215.65	0	2215.65	
5			FERRIC OXIDE	5042.74	0	5042.74	
3			ESP(RMP) DUST	35810.75	28734.48	7076.27	
4			COKE BREEZE	448999.79	447861	1138.79	
2			TOTAL (Tones)	2863448.93	1061830	1910817.45	

2	M/S BOKARO POWER SUPPLY COMPANY (P) LTD.		<table border="1"> <tr> <td>Ash</td> <td>Solid</td> <td>1255</td> <td>MT/day</td> </tr> <tr> <td>Effluent</td> <td>Liquid</td> <td>1200</td> <td>Cum/Day</td> </tr> <tr> <td>Used Transformer Oil</td> <td>Liquid</td> <td>34</td> <td>KL/year</td> </tr> <tr> <td>Used Industrial Oil</td> <td>Liquid</td> <td>40</td> <td>KL /year</td> </tr> </table>	Ash	Solid	1255	MT/day	Effluent	Liquid	1200	Cum/Day	Used Transformer Oil	Liquid	34	KL/year	Used Industrial Oil	Liquid	40	KL /year	<p>Effluent water produced during process is 1200 m<sup>3</sup>/day which is treated in neutralizing pit of WTP and sent to BSL network of Zero liquid discharge system and no industrial effluent is discharged to outside water body.</p> <p>b) Water sent along with ash slurry to ash pond is recovered after settlement of ash and is taken back to cooling pond for reuse and no discharge is done to outside water bodies.</p> <p>c) <b>On-line Effluent Monitoring System</b> has been installed. Real time data transmission is being done through NEVCO server to JSPCB &amp; CPCB. The parameters being monitored are PH, COD, BOD and TSS.</p>
Ash	Solid	1255	MT/day																	
Effluent	Liquid	1200	Cum/Day																	
Used Transformer Oil	Liquid	34	KL/year																	
Used Industrial Oil	Liquid	40	KL /year																	
3	M/S ESL STEEL LTD.		<ol style="list-style-type: none"> <li>POWER PLANT FLY ASH-42000 MT PER ANNUM</li> <li>DRY FLY ASH-3121.8 MT+ 2880 MT+ 3840 MT+180000 MT</li> <li>GRANULATED SLAG-180000 MT</li> <li>BED ASH- 20000 MT</li> <li>TAR OIL, CYANIDE &amp; PHENOL IS PRODUCED IN BY PRODUCT</li> </ol>	<p>STP (Sewage Treatment Plant installed and working)</p> <p>ETP (Effluent Treatment Plant Installed and working)</p>																
4	M/S CHANDRAPU RA THERMAL POWER STATION, DVC		<p>Fly Ash: 2300-2500 MT on daily basis</p> <p>Used Oil Kept in Bags; Disposed through authorized TSDF -60 KL/Annum</p>	<p>STP (Sewage Treatment Plant is under construction)</p> <p>ETP (Effluent Treatment Plant Installed and working)</p> <p>Treated water is recycled in Process.</p>																
5	M/S DAMODAR VALLEY CORPORATION; BTPS A		<p>Dry Fly Ash- Daily Quantity not given however it is collected in two Silos of capacity 2x1200 MT</p>	<p>STP (Sewage Treatment Plant installed and working)</p> <p>ETP (Effluent Treatment Plant Installed and working)</p> <p>Treated water is recycled in Process.</p>																
	M/S TENUGHAT THERMAL POWER STATION		<p>GAS- SOX, NOX, CO</p> <p>LIQUID- D M PLANT EFFLUENT-500-600 MT /WEEK, BOILER CONDITIONING WATER AND ASH WATER</p> <p>SOLID-Fly ash- 1500-2000 MT /PER DAY, BOTTOM ASH, RSPM AND SUSPENDED PARTICULATE MATTER</p>	<p>FLY ASH IS Poured INTO ASH POND THROUGH ASH PIPELINES, THIS ASH HAS BEEN USED FOR FILLING LOW LAND AREAS OF TTPS AND AFTER FILLING IT IS COVERED WITH SOIL. ONE SILO IS INSTALLED FOR DRY FLY ASH AND ANOTHER SILO IS IN FINAL STAGE OF TESTING/COMMISSIONING. WORK ORDER FOR COLLECTION AND</p>																

			DISPOSAL OF DRY FLY ASH FROM SILO HAS ALREADY BEEN PLACED.
	M/S KARGALI COAL WASHERY, CCL		Manufacturing Closed
	M/S KATHARA, CCL		Manufacturing Closed
	M/S DHORI, CCL		Coal Washery Not installed
	M/S DUGDA, BCCL		Manufacturing Closed since May 2021
	M/S MADHUBAND, BCCL		Waste water is send to Slime Pond inside Washery premises. There is Four Number of Pond where step by step discharged water is purified. Then fresh water is recycled into manufacturing Process. ETP is not installed as not required STP is not installed as not required.

SL. NO.	CONCERNED FACTORIES	ISSUES	REMARKS
1	M/S BOKARO STEEL PLANT	3. MANNER OF TREATMENT OF INDUSTRIAL WASTE SO GENERATED.	BSL HAS BEEN DESIGNED WITH A CENTRAL RE-CIRCULATION SYSTEM WHERE ANY EFFLUENT DISCHARGED FROM VARIOUS SHOPS ARE FIRST TREATED LOCALLY IN THE SHOP AND THEN RECYCLED BACK THROUGH SLUDGE COMPARTMENT (FOR SETTELMENT) AND Cooling Ponds (close circuit) FOR REUSE OF WATER INN THE PROCESS.  Two Effluent treatment Plant of 1500 m3/Hr capacity each at Outfall-1 and Outfall-2
2	M/S BOKARO POWER SUPPLY COMPANY (P) LTD.		CHEMICAL TREATMENT IS DONE IN WATER TREATMENT PLANT BEFORE RELEASE OF EFFLUENT TO BSL NETWORK
3	M/S ESL STEEL LTD.		1. POWER PLANT FLY ASH-42000 MT PER ANNUM – SOLD TO M/SDALMIA CEMENT(BHARAT) LTD. 2. DRY FLY ASH-3121.8 MT – SOLD TO M/S N. R. CONSTRUCTION PVT. LTD. , 2880 MT TO M/S AADISHAN INDUSTRIES, 3840 MT TO M/S ECO INDUSTRIES, 180000 MT TO ACC LIMITED 3. GRANULATED SLAG-180000 MT TO M/S ACC LIMITED 4. BED ASH- 20000 MT – SOLD TO M/S SHAGAN COMMERCIALS (ON BEHALF OF TATA STEEL)

4	M/S CHANDRAPURA THERMAL POWER STATION, DVC	<ol style="list-style-type: none"> <li>1. Generation of Fly Ash: 2300-2500 MT on daily basis. POWER PLANT FLY ASH- SOLD TO M/S ACC LTD, SINDRI AND M/S Dalmia cement, Bokaro.</li> <li>2. Silo installed.</li> <li>3. Rest Fly ash to Ash Pond through running Slurry which is evacuated by Hyva on daily basis for utilization of filling Mines and NHAJ use.</li> </ol>
5	M/S DAMODAR VALLEY CORPORATION; BTPS A	Ash Pond is ZLD complied. Ash water Recirculation System(AWRS) is in service. Installation of two number of Sewage Treatment Plant(STP) is under progress. Probable date of completion is 05/12/2024
	M/S TENUGHAT THERMAL POWER STATION	<p>PROPER CHEMICAL TREATMENT OF CHEMICAL LIQUID HAS BEEN CARRIED OUT AND NEUTRALISED IT BEFORE ITS DISPOSAL.</p> <p>FLY ASH IS POURED INTO ASH POND THROUGH ASH PIPELINES, THIS ASH HAS BEEN USED FOR FILLING LOW LAND AREAS OF TTPS AND AFTER FILLING IT IS COVERED WITH SOIL.</p> <p>ONE SILO IS INSTALLED FOR DRY FLY ASH AND ANOTHER SILO IS IN FINAL STAGE OF TESTING/COMMISSIONING. WORK ORDER FOR COLLECTION AND DISPOSAL OF DRY FLY ASH FROM SILO HAS ALREADY BEEN PLACED.</p> <p>ESP INSTALLED TO COLLECT ASH FROM FLY ASH.</p> <p>ETP IS UNDER CONTRUCTION.</p> <p>STP IS UNDER PROCESS OF INSTALLATION.</p>
	M/S KARGALI COAL WASHERY, CCL	Manufacturing Closed
	M/S KATHARA, CCL	Manufacturing Closed
	M/S DHORI, CCL	Coal Washery Not installed
	M/S DUGDA, BCCL	Manufacturing Closed since May 2021
	M/S MADHUBAND, BCCL	Waste water is send to Slime Pond inside Washery premises. There is Four Number of Pond where step by step discharged water is purified. Then fresh water is recycled into manufacturing Process. ETP is not installed as not required STP is not installed as not required.

SL. NO.	CONCERNED FACTORIES	ISSUES	REMARKS	REASON
1	M/S BOKARO STEEL PLANT	<b>4. THE DISCHARGE EFFLUENT ANALYSIS</b>	FOR CHEMICAL AND BIOLOGICAL TREATMENT OF LIQUID WASTE, BSL IS HAVING BIOLOGICAL OXIDATION AND DEPHENOLIZATION PLANT AT COKE OVEN.	Two Effluent treatment Plant of 1500 m3/Hr capacity each at Outfall-1 and Outfall-2.



		FROM THE CETP AND ETP TREATING THE INDUSTRIAL WASTE FROM EACH OUTLET.	Analysis Report not submitted.																
2	M/S BOKARO POWER SUPPLY COMPANY (P) LTD.		<table border="1"> <tr> <td>pH Value</td> <td>7.5</td> <td></td> </tr> <tr> <td>TSS</td> <td>14</td> <td>mg/l</td> </tr> <tr> <td>O &amp; G</td> <td>12</td> <td>mg/l</td> </tr> <tr> <td>BOD</td> <td>5.4</td> <td>mg/l</td> </tr> <tr> <td>COD</td> <td>26</td> <td>Mg/l</td> </tr> </table>	pH Value	7.5		TSS	14	mg/l	O & G	12	mg/l	BOD	5.4	mg/l	COD	26	Mg/l	<p>Effluent water produced during process is 1200 m<sup>3</sup>/day which is treated in neutralizing pit of WTP and sent to BSL network of Zero liquid discharge system and no industrial effluent is discharged to outside water body.</p> <p>b) Water sent along with ash slurry to ash pond is recovered after settlement of ash and is taken back to cooling pond for reuse and no discharge is done to outside water bodies.</p> <p>c) <b>On-line Effluent Monitoring System</b> has been installed. Real time data transmission is being done through NEVCO server to JSPCB &amp; CPCB. The parameters being monitored are PH, COD, BOD and TSS.</p>
pH Value	7.5																		
TSS	14	mg/l																	
O & G	12	mg/l																	
BOD	5.4	mg/l																	
COD	26	Mg/l																	
3	M/S ESL STEEL LTD.		Analysis report not given	STP (Sewage Treatment Plant installed and working) ETP (Effluent Treatment Plant Installed and working)															
4	M/S CHANDRAPURA THERMAL POWER STATION, DVC		<p>Lamella clarifier is used for arresting turbidity of wash water.</p> <p>In ETP hydrochloric acid and lime is used as per requirement for maintaining PH of effluents (received from DM plant neutralization pit, boiler blowdown water, wash water) before discharge and the same is being used in ash handling plant for ash slurry disposal system.</p>	STP (Sewage Treatment Plant is under construction) ETP (Effluent Treatment Plant Installed and working) Treated water is recycled in Process.															
5	M/S DAMODAR VALLEY CORPORATION; BTPS A		Analysis report not given	STP (Sewage Treatment Plant installed and working) ETP (Effluent Treatment Plant Installed and working) Treated water is recycled in Process.															
	M/S TENUGHAT THERMAL POWER STATION		Analysis report not given	<p>FLY ASH IS Poured INTO ASH POND THROUGH ASH PIPELINES, THIS ASH HAS BEEN USED FOR FILLING LOW LAND AREAS OF TTPS AND AFTER FILLING IT IS COVERED WITH SOIL.</p> <p>ONE SILO IS INSTALLED FOR DRY FLY ASH AND ANOTHER SILO IS IN FINAL STAGE OF TESTING/COMMISSIONING. WORK ORDER FOR COLLECTION AND DISPOSAL OF DRY FLY ASH FROM SILO HAS ALREADY BEEN PLACED.</p> <p>ETP IS UNDER CONSTRUCTION. STP IS UNDER PROCESS OF INSTALLATION.</p>															
	M/S KARGALI COAL WASHERY, CCL		Analysis report not given																

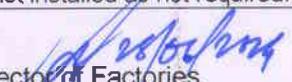
y:	M/S KATHARA, CCL		Analysis report not given	
y:	M/S DHORI, CCL		Analysis report not given	
y:	M/S DUGDA, BCCL		Analysis report not given	
y:	M/S MADHUBAND, BCCL		Analysis report not given	Waste water is send to Slime Pond inside Washery premises. There is Four Number of Pond where step by step discharged water is purified. Then fresh water is recycled into manufacturing Process. ETP is not installed as not required STP is not installed as not required.

SL. NO.	CONCERNED FACTORIES	ISSUES	REMARKS				EFFECTIVE ARRANGEMENT
1L	M/S BOKARO STEEL PLANT	5. THE PER DAY GENERATION OF INDUSTRIAL SOLID WASTE AND MANNER OF ITS TREATMENT AND DISPOSAL IN THE DISTRICT.	SOLID WASTE	TOTAL GENERATION IN FY 2022-23	RECYCLED/ REUSED	SOLD	Solid waste either recycled/ reuse or sold as per list given in this report For liquid waste Two Effluent treatment Plant of 1500 m3/Hr capacity each at Outfall-1 and Outfall-2.
J I S T R I B U T I O N			BF SLAG	1783926	0	1885462	
			B.O.F SLAG	452844	450625	9882	
			BF FLUE DUST	59680	59680	0	
			MILL SCALE	74930	74930	0	
			WASTE REFRACTORIES	2215.65	0	2215.65	
			FERRIC OXIDE	5042.74	0	5042.74	
			ESP(RMP) DUST	35810.75	28734.48	7076.27	
			COKE BREEZE	448999.79	447861	1138.79	
			TOTAL (Tones)	2863448.93	1061830	1910817.45	
		2(S D	M/S BOKARO POWER SUPPLY COMPANY (P) LTD.		ASH(SOLID) -1255(MT/DAY) USED BATTRIES		

				<ul style="list-style-type: none"> <li>· Arrangement has been made for fly ash bagging and transportation through railway wagon to end users.</li> <li>· Regular rakes of Ash is sent through rail mode to Bangladesh</li> <li>· Fly ash brick manufacturing machines are installed for in-house brick manufacturing for internal use of BPSCL &amp; BSL.</li> <li>· Dry fly ash is also supplied to local ash brick manufacturers through road mode.</li> <li>· USED BATTERIES ARE DISPOSED OFF THROUGH BUYBACK ARRANGEMENT</li> </ul>
3	M/S ESL STEEL LTD.		<p>5. POWER PLANT FLY ASH-42000 MT PER ANNUM – SOLD TO M/SDALMIA CEMENT(BHARAT) LTD.</p> <p>6. DRY FLY ASH-3121.8 MT – SOLD TO M/S N. R. CONSTRUCTION PVT. LTD. , 2880 MT TO M/S AADISHAN INDUSTRIES, 3840 MT TO M/S ECO INDUSTRIES, 180000 MT TO ACC LIMITED</p> <p>7. GRANULATED SLAG-180000 MT TO M/S ACC LIMITED</p> <p>8. BED ASH- 20000 MT – SOLD TO M/S SHAGAN COMMERCIALS (ON BEHALF OF TATA STEEL)</p>	<p>STP (Sewage Treatment Plant installed and working)</p> <p>ETP (Effluent Treatment Plant Installed and working)</p>
4	M/S CHANDRAPURA THERMAL POWER STATION, DVC		<p>A hazardous waste yard is developed for storage of hazardous liquid wastes as per the norms of hazardous waste management for liquid wastes under the shade with peripheral drainage collection sump pit and solid hazardous waste is kept under the shed and Solid hazardous wastes like e-wastes, batteries of other are kept under the shaded rooms or building till its final disposal to PCB authorized recycler through online e-auction platform of M/s MSTC or M/s m-junction.</p>	<p>Electrostatic precipitators are in service in both units which collect dry fly ash.</p>
5	M/S DAMODAR VALLEY CORPORATION; BTPS A		<p>Quantity not given.</p> <p>DRY FLY ASH IS COLLECTED IN TWO NO. OF SILOS OF CAPACITY 2X1200 MT. SOLD TO M/S B. K. MAHTO ( brick manufacturer).POND ASH IS BEING UTILIZED IN FILLING LOW LYING AREAS IN KHUTRI NEAR JENAMORE, JIADA/BIADA AND NHAI.</p>	<p>STP (Sewage Treatment Plant installed and working)</p> <p>ETP (Effluent Treatment Plant Installed and working)</p> <p>Treated water is recycled in Process.</p>
	M/S TENUGHAT THERMAL POWER STATION			<p>PROPER CHEMICAL TREATMENT OF CHEMICAL LIQUID HAS BEEN CARRIED OUT AND NEUTRALISED IT BEFORE ITS DISPOSAL.</p>

34902

				<p>FLY ASH IS POURED INTO ASH POND THROUGH ASH PIPELINES, THIS ASH HAS BEEN USED FOR FILLING LOW LAND AREAS OF TTPS AND AFTER FILLING IT IS COVERED WITH SOIL.</p> <p>ONE SILO IS INSTALLED FOR DRY FLY ASH AND ANOTHER SILO IS IN FINAL STAGE OF TESTING/COMMISSIONING. WORK ORDER FOR COLLECTION AND DISPOSAL OF DRY FLY ASH FROM SILO HAS ALREADY BEEN PLACED. ESP INSTALLED TO COLLECT ASH FROM FLY ASH.</p> <p>ETP IS UNDER CONTRUCTION. STP IS UNDER PROCESS OF INSTALLATION.</p>
	M/S KARGALI COAL WASHERY, CCL			Manufacturing Closed
	M/S KATHARA, CCL			Manufacturing Closed
	M/S DHORI, CCL			Coal Washery Not installed
	M/S DUGDA, BCCL			Manufacturing Closed
	M/S MADHUBAND, BCCL			<p>Waste water is send to Slime Pond inside Washery premises. There is Four Number of Pond where step by step discharged water is purified. Then fresh water is recycled into manufacturing Process.</p> <p>ETP is not installed as not required STP is not installed as not required.</p>

  
 Inspector of Factories,  
 Bokaro Circle 1 & 2, Bokaro

34903



CENTRAL COALFIELDS LIMITED

(A MINIRATNA CAT-1 COMPANY)

(GOVT. OF INDIA UNDERTAKING)

OFFICE OF THE GENERAL MANAGER

KATHARA AREA

PO:-KATHARA, DIST:-BOKARO,(JHARKHAND)

JHARKHAND-829116



Ref: GM/KTA/PS/25/24-25/116

Date: 19.06.2024

To,

The Divisional Forest Department  
Chas, Bokaro

Sub: Reply of order issued on dtd 10.04.2024 by Hon'ble NGT in respect of Application No. 200/2014 (MC Mehta vs Union of India and Ors.)

Ref: DFO letter No. 1166 dtd 11.06.2024

Dear Sir,

I am writing to provide you information with reference to your letter no. 1166 dtd 11.06.2024 regarding the order issued on dtd 10.04.2024 by Hon'ble NGT in respect of Application No. 200/2014 (MC Mehta vs Union of India and Ors.)

The water consumption of both washeries i.e Kathara washery and Sawang washery are 963.96 KLD and 547 KLD respectively and the both washeries are functioning on closed water circuit system (Zero Liquid Discharge System).

The Withdrawal of Water from Mines of Kathara Area are as follows:

S.No.	Project	Mine Water Discharge to Stream (KLD)
1	Jarangdih OCP	1354
2	Govindpur OCP	497

The water discharged from the mines undergoes a comprehensive treatment process, which includes the utilization of well-established settling ponds, efficient Effluent Treatment Plants (ETP), and strategically designed water sumps.

To safeguard the Damodar River, we prioritize proper settling and treatment of discharges, preserving water quality. Concurrently, we establish a green barrier along the banks to mitigate erosion and promote biodiversity. Additionally, the toe wall constructed to prevent the direct run-off and soil erosion.

We are conducting regular assessments and monitoring of the water discharge from NABL laboratories for the Mines, Washeries and upstream and downstream of Damodar river in the Kathara Area, and the results indicate that the levels of pollutants and contaminants in the discharged water are well within the permissible limits specified by the relevant environmental regulations. (Report Enclosed)



Regards,

General Manager  
Kathara Area

✓

**TEST REPORT**

03/24 Test Report No. 1906	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-19.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

**TEST RESULT**

The sample has been tested with the following results:-

**Area :** Kathara  
**Stations:**

**Project:**

**Kathara OCP**

**Date of Sampling:**

1. Damodar U/S of Mine
2. Damodar D/S of Mine

10-01-2024  
10-01-2024

Sl.No	Parameter	Sampling Stations				Detection-Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	14	6			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	7.1	7.4			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.51	0.57			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	1.99	1.42			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	7.8	7.9			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	110	134			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	298	427			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	16	14			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	0.005	0.008			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

Authorized Signatory

- Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested  
2) This Report cannot be reproduced in part or full without written permission of the management.  
3) This is computer generated report and requires no signature.

34905



Letter No. ESL/HSE/2024-25/02

Date: June 17, 2024

To,

Member Convenor, District Ganga Committee-cum- Divisional Forest Officer,  
Bokaro Forest Division,  
Bokaro, Jharkhand

**Subject:** Submission of compliance status of order dated 10.04.2024 passed by the Hon'ble National Green Tribunal in the case of M.C. Mehta vs Union of India and Ors. (Case No. 200/2014)

**Ref:** Your letter no. 1064 dated 28.05.2024.

Respected Sir,

In adherence to the directions provided by your good office in your letter no. 1064 dated 28.05.2024, we are herewith attaching the information related to the compliance status of order dated 10.04.2024 passed by the Hon'ble National Green Tribunal in the case of M.C. Mehta vs Union of India and Ors. (Case No. 200/2014). The requisite details detailing compliance of the order is attached herewith and marked as *Annexure-1*.

We will be happy to provide any clarification in furtherance of our submission, in case required by your good office. We assure you of our commitment in maintaining compliance with all environmental regulations, standards and court orders at our Plant Premises.

Yours faithfully,

Ravish Sharma,

Factory Manager cum Chief Operating Officer.

ESL Steel Limited

www.eslsteel.com  
+08651 103477

Registered Office: Siyaljori, P.O. Jogidih, O.P. Bangaria, P.S. Chandankyari, Bokaro, Pin - 828303  
Jharkhand, India  
CIN: U27310JH2006PLC012663

Corporate Office: Lohanchal Colony, Plot No. 10, Beside Sector 12, Bokaro Steel City - 827012  
Jharkhand, India

Sensitivity: Confidential (C2)

34906



**Encl:**

- 1) Annexure 1- Compliance Status

Copy to: District Commissioner, Bokaro for information.

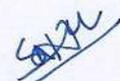
W [www.eslsteel.com](http://www.eslsteel.com)  
T +08651-102477

**Registered Office:** Siyaljori, P.O. Jogidih, O.P. Bangaria, P.S. Chandankyari, Bokaro, Pin - 828303  
Jharkhand, India  
CIN: U27310JH2006PLC012663

**Corporate Office:** Lohanchal Colony, Plot No. 10, Beside Sector 12, Bokaro Steel City - 827012  
Jharkhand, India

## Annexure 1

	Points	Remarks
<b>1</b>	<b>Sewage</b>	
	a) Per day generation of sewage in each city/town within the district.	Not Applicable.
	b) Quantity of sewage treated per day; city/town wise.	Not Applicable
	c) The number of sewage treatment plant existing and their capacity and capacity utilization and mode of disposal in each city/town.	Not Applicable
	d) Quantity of discharged treated sewage from each STP, particularly for faecal coliform.	Not Applicable
	e) Time bound plan to meet the gap, if any, in generation and treatment of sewage	Not Applicable
	f) Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluent and the action taken against them.	Not Applicable
	g) Water quality in river and its tributaries in abutting district/towns in terms of faecal coliform (MPN/100ml)	Not Applicable
<b>2</b>	<b>Municipal Solid Waste disposal:</b>	
	a) Per day generation of Solid waste in each city/town within the district.	Not Applicable
	b) Quantity of solid waste treated per day, in each city/town of the district.	Not Applicable
	c) The gap in treatment of solid waste.	Not Applicable
	d) Legacy waste and the time bound plan of treat legacy waste.	Not Applicable
	e) The manner of utilization of the treated waste as well as rejects arising out of remediation of legacy waste.	Not Applicable
	f) Current status of dumping of solid waste with reference to location.	Not Applicable
<b>3</b>	<b>Construction and Demolition waste:</b>	
	a) Total per day generation of C & D Waste within the District.	Not Applicable: No demolition activity being carried out.
	b) The detail of plant established for the treatment of C & D Waste including the existing capacity and capacity utilization. Industrial Effluent discharge	Not Applicable: No demolition activity being carried out.
<b>4</b>	<b>Industrial Effluent Discharges</b>	
	a) Number of industrial unit discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial units.	Not Applicable
	b) Total daily generation of such industrial waste within the district.	Not Applicable
	c) The manner of treatment of the industrial waste so generated.	We Have ETP



	d) The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet.	ETP Report to be attached
	e) The per day generation of industrial solid waste and manner of its treatment and disposal in the district.	Quarterly approx. 10MT ETP sludge generated and utilised in sinter plant
<b>5</b>	<b>Regulation of Flood Plain Region</b>	
	f) If the flood plain zone has been demarcated and the extent of encroachment on the flood plain zone in the district.	Not Applicable
	g) The details of direct discharge of pollutants by the encroachers by the side of the river Ganga and its tributaries in the District.	Not Applicable
<b>6</b>	<b>Bio medical Waste:</b>	
	a) The per day total generation of bio medical waste in the district.	Not Applicable
	b) The manner of its treatment and disposal.	Not Applicable
<b>7</b>	<b>Mining:</b>	
	a) Number of cases registered within a year against illegal mining in the bed or flood plains of river Ganga and its tributaries and details of enforcement of mining policy of State and "Enforcement & Monitoring Guidelines for Sand Mining" (EMGSM-2020) and Sustainable Sand Mining Management Guidelines 2016."	Not Applicable

*S. K. Singh*

# 34909

ANNEXURE NO -01

**Compliance against file no: - O.A.NO 200/2014 – M.C. Mehta Vs Union of India & Ors.**

Sl.No.	Related	Compliance	Industrial waste generation year -2023-24	Remark
1.	Total daily generation of such industrial waste within the district.	<p>There are three types of industrial waste generated in DVC, CTPS (Chandrapura)</p> <ol style="list-style-type: none"> <li>1. Solid               <ol style="list-style-type: none"> <li>1. Solid waste; -                   <ol style="list-style-type: none"> <li>(a) Battery,</li> <li>(b) Oil storage Drum (HFO/LFO/Transformer oil)</li> <li>(c) E-Waste</li> <li>(d) Dry Fly Ash</li> </ol> </li> <li>2. Liquid waste: -                   <ol style="list-style-type: none"> <li>(a) Waste grease</li> <li>(b) Waste Lubricant</li> <li>(c) Transformer oil</li> <li>(d) Hfo/Lfo</li> <li>(e) Effluent discharge</li> </ol> </li> <li>3. Gas: -                   <ol style="list-style-type: none"> <li>SOX(SO<sub>2</sub>), NOX (NO<sub>2</sub>), PM, CO.</li> </ol> </li> </ol> </li> </ol>	<p>Solid waste: - E-Waste Generation</p> <p>(a) Compute – CPU – 11 Nos Monitor -09 Nos Keyboard – 11 Nos Mouse – 2 Nos Printer – 2 Nos Battery - 152 Nos Dry fly ash – 418704 MT Pond ash – 1096541 MT</p> <p>Liquid Waste: - Waste grease and Waste Lubricant: 232.9 KL</p> <p>PH Value avg: -8.1 TSS Value avg: -62.1 BOD Value avg:-10.5 For U#7 SOX Avg value:-500 NOX Avg value :-200 PM Avg Value :-20 For U#8 SOX Avg value :-520 NOX Avg value :-325 PM Avg Value :-25</p>	<p>DE-NOX installed in U#7 &amp; to be installed in U#8 during O/H</p>

प्रबन्धक (विद्युत)  
 Manager (Electrical)  
 25/06/2024  
 म.प्र.प.नि. व.स.नि. अ.ता.वि.के., चन्द्रपुरा  
 EM&PC, DVC, CTPS, Chandrapura

# 34910

## TENUGHAT THERMAL POWER STATION

Tenughat Vidyut Nigam Limited

(A GOVT. OF JHARKHAND UNDERTAKING)

P.O.: TTPS, Lalpania, Distt. Bokaro.



Letter No. : ...1.1.9.....

Date: 26/06/24

From,

ESE (HR),  
TTPS, Lalpania, Bokaro.

To,

Deputy Commissioner,  
Bokaro.

**Sub: Compliance as per your letter no 932 dated 22.06.2024.**

**Ref: Point No. IV of Letter No - 932 dated 22.06.2024**

Sir/Mam,

With reference to above, following are the submissions in context of measures taken by our plant Tenughat Thermal Power Station (2x210MW), Lalpania for managing industrial effluence discharge:-

- 1. Installation of AWRS (Ash Water Recirculation System) at TTPS:-** Work order for installation of above system at TTPS, Lalpania has been placed on M/s Hydrotech Paryavarana (India) Pvt. Ltd, Mohali - 160071 vide work order no 433333645 dated 15.03.2024. The initial work against above work order has already started. Through above system, we shall be able to achieve Zero Liquid Discharged (ZLD) in respect of ash water.
- 2. Installation of ETP (Effluent Treatment Plant) at TTPS :-** Above system with a capacity of 4 MLD is already in process of installation at TTPS. The manner of treatment of the effluent of the plant is Activated Sludge Process (ASP). About 3 MLD of effluent is expected to be generated in the Plant while both our Units (2x210MW) are in running condition. Civil and mechanical work of tank area of above system at plant has got completed. Laying of pipelines and installation of equipments is in process. Through above system, all the effluent discharge lines of plant area shall be terminated in collection tank at ETP site area. The collected effluent would be treated in ETP and would be reused in plant. By this process, we shall be able to achieve Zero Liquid Discharge (ZLD) in respect of effluents in plant area.

The above measures shall contribute in the compliance of the points raised by NGT for management of pollution with industrial effluent at TTPS.

Yours Faithfully,

ESE (HR),

TTPS, Lalpania, Bokaro

34911



**CENTRAL COALFIELDS LIMITED**  
(A MINIRATNA CAT-1 COMPANY)  
(GOVT. OF INDIA UNDERTAKING)  
OFFICE OF THE GENERAL MANAGER  
KATHARA AREA  
PO:-KATHARA, DIST:-BOKARO,(JHARKHAND)  
JHARKHAND-829116



Ref: GM/KJA/PS/25/24-25/116

Date: 19.06.2024

To,  
**The Divisional Forest Department**  
Chas, Bokaro

**Sub: Reply of order issued on dtd 10.04.2024 by Hon'ble NGT in respect of Application No. 200/2014 (MC Mehta vs Union of India and Ors.)**

Ref: DFO letter No. 1166 dtd 11.06.2024

Dear Sir,

I am writing to provide you information with reference to your letter no. 1166 dtd 11.06.2024 regarding the order issued on dtd 10.04.2024 by Hon'ble NGT in respect of Application No. 200/2014 (MC Mehta vs Union of India and Ors.)

The water consumption of both washeries i.e Kathara washery and Sawang washery are 963.96 KLD and 547 KLD respectively and the both washeries are functioning on closed water circuit system (Zero Liquid Discharge System).

The Withdrawal of Water from Mines of Kathara Area are as follows:

S.No.	Project	Mine Water Discharge to Stream (KLD)
1	Jarangdih OCP	1354
2	Govindpur OCP	497

The water discharged from the mines undergoes a comprehensive treatment process, which includes the utilization of well-established settling ponds, efficient Effluent Treatment Plants (ETP), and strategically designed water sumps.

To safeguard the Damodar River, we prioritize proper settling and treatment of discharges, preserving water quality. Concurrently, we establish a green barrier along the banks to mitigate erosion and promote biodiversity. Additionally, the toe wall constructed to prevent the direct run-off and soil erosion.

We are conducting regular assessments and monitoring of the water discharge from NABL laboratories for the Mines, Washerries and upstream and downstream of Damodar river in the Kathara Area, and the results indicate that the levels of pollutants and contaminants in the discharged water are well within the permissible limits specified by the relevant environmental regulations. **(Report Enclosed)**

Regards,

General Manager  
Kathara Area

19/06/2024

## TEST REPORT

03/24 Test Report No. 1906	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-19.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

### TEST RESULT

The sample has been tested with the following results:-

**Area :** Kathara  
**Stations:**

1. Damodar U/S of Mine
2. Damodar D/S of Mine

**Project:**

**Kathara OCP**

**Date of Sampling:**

10-01-2024

10-01-2024

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	14	6			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	7.1	7.4			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.51	0.57			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	1.99	1.42			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	7.8	7.9			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	110	134			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	298	427			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	16	14			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	0.005	0.008			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

Authorized Signatory

Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested  
2) This Report cannot be reproduced in part or full without written permission of the management.  
3) This is computer generated report and requires no signature.



**OFFICE OF THE GENERAL MANAGER, DHORI AREA  
POST- PHUSRO, DISTT. -BOKARO, PIN -825102**



Ref. No.: GM(D)/Env/Compliance/District Ganga Committee/Bokaro/2023-2024/1513 Date: 20.06.2024

To,

The Divisional Forest Officer  
Bokaro Forest Division, Bokaro

**Subject: Submission of the relevant information in respect of the "District Ganga Committee", Bokaro, Jharkhand vide letter no.-SMCG/UDHD/NGT MoM/08/2021 72 dated 26.04.2024.**

**Reference:**

1. Letter of Dy. Director, Ranchi vide letter no.-SMCG/UDHD/NGT MoM/08/2021 72 dated 26.04.2024.
2. Letter from your good office vide no.- 1064 dated 28/05/2024

Dear Sir,

Please find attached (Annexure-A) herewith the relevant information as required above. However, it is to mention here that previously on dated 21.03.2024, the detailed compliance of the observation raised during the meeting of the "District Ganga Committee", Bokaro, Jharkhand held on dated 24.02.2024 have been submitted to the Office of DC Bokaro, Jharkhand **in the specified format as required by the honourable court (NGT) along with the relevant reports & supporting documents in respect of Dhori Area of M/s. Central Coalfields Ltd.** vide letter no.: GM(D)/Env/Compliance/District Ganga Committee/Bokaro/2023-2024/ 1037 dated 11.03.2024.

This is submitted for your kind perusal & further needful. You are kindly requested to acknowledge the same. We will be highly grateful to you.

**Enclosure: Annexure-A**

Yours Sincerely

*[Signature]*  
20/6/24  
General Manager  
Dhori Area, CCL

*[Signature]*

Copy To:

1. The Deputy Collector, Bokaro, Jharkhand (via email)
2. The Regional Officer, Jharkhand State Pollution Control Board, Dhanbad, Jharkhand (via email)
3. The District Mining Officer, Bokaro, Jharkhand (via email)

ANNEXURE-A

Sl.	Category/Source of Waste Generation	Details/Quantity of Waste Generated	Remarks									
<b>I. Sewage</b>												
a	Per day generation of sewage in each city/town within the district	The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro.	Dhori Area has 3 coal producing mines namely Selected Dhori Opencast Project, Amlu Opencast Project & Dhori(Khas) Underground Project. The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro. However, owing our proactive responsibility towards environment, we periodically analyze water quality, its PH, BOD, COD, TSS, TDS, Heavy Metals, Nitrates, etc in core as well as buffer zone and they are found to be well within the limits. Copy of latest quarter (Q3 i.e. October-2023 to December-2023) is attached herewith for kind perusal & further needful.									
b	Quantity of sewage treated per day city/town wise	The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro.										
c	The number of sewage treatment plant existing and their capacity and capacity utilization and mode of disposal in each city/town.	<table border="1"> <tr> <td>Central Colony: 1000 KLD</td> <td>To be commissioned</td> <td>31<sup>st</sup> March 2025</td> </tr> <tr> <td>SDOCM Colony: 60 KLD</td> <td>To be commissioned</td> <td>31<sup>st</sup> march 2025</td> </tr> <tr> <td>Central Hospital Dhori(20 KLD)</td> <td>To be commissioned</td> <td>31<sup>st</sup> march 2025</td> </tr> </table>	Central Colony: 1000 KLD	To be commissioned	31 <sup>st</sup> March 2025	SDOCM Colony: 60 KLD	To be commissioned	31 <sup>st</sup> march 2025	Central Hospital Dhori(20 KLD)	To be commissioned	31 <sup>st</sup> march 2025	As deliberated above our colonies associated with the mines are scattered & having individual in house septic tank/soak pit system. But as a measure of additional compliance, we have proposed 3 Nos. of STP in the Dhori Area.
Central Colony: 1000 KLD	To be commissioned	31 <sup>st</sup> March 2025										
SDOCM Colony: 60 KLD	To be commissioned	31 <sup>st</sup> march 2025										
Central Hospital Dhori(20 KLD)	To be commissioned	31 <sup>st</sup> march 2025										
d	Quantity of discharged treated sewage from each STP, particularly for fecal coliform	NA										

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e	Time bound plan to meet the gap, if any, in generation and treatment of sewage	NA	
f	Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluent and the action taken against them.	NA	
g	Water quality in river and its tributaries in abutting districts /towns in terms of fecal coliform (MPN/100ml)	Copy of latest quarter (Q3 i.e. October-2023 to December-2023) is attached herewith.	
<b>II. Municipal Solid Waste disposal</b>			
a	Per day generation of Solid waste in each city/town within the district		the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro. However, owing our proactive responsibility towards environment, we periodically analyze water quality, its PH, BOD, COD, TSS, TDS, Heavy Metals, Nitrates, etc in core as well as buffer zone and they are found to be well within the limits. Copy of latest quarter (Q3 i.e. October-2023 to December-2023) is attached herewith for kind perusal & further needful.
b	Quantity of solid waste treated per day, in each city/town of the district		
c	The gap in treatment of solid waste		
d	Legacy waste and the time bound plan to treat legacy waste	NA	
e	The manner of utilization of the treated waste as well as rejects arising out of remediation of legacy waste		
f	Current status of dumping of solid waste with reference to location		
<b>III. Construction and Demolition waste:</b>			
a	Total per day generation of C & D Waste within the District		We are coal mining companies as such we are not generating Construction & Demolition waste.
b	The detail of plant established for the treatment of C & D Waste including the existing capacity and capacity utilization	NA	

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<b>IV. Industrial Effluent discharge</b>		
a	Number of industrial unit discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial units.	NA
b	Total daily generation of such industrial waste within the district.	
c	The manner of treatment of the industrial waste so generated.	
d	The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet.	As such there is no effluent discharge. However, the burnt oil, used lubricant, waste water after washing of HEMMs which are generated are being treated/settled in ETP/Settling tank for its reuse.
e	The per day generation of industrial solid waste and manner of its treatment and disposal in the district.	As such there is no effluent discharge. However, the burnt oil, used lubricant, waste water after washing of HEMMs which are generated are being treated/settled in ETP/Settling tank for its reuse.
		No Industrial Effluent is discharged into the river Ganga or its tributaries (in this case river Damodar). All the water discharged from ETP is used for Industrial Purpose like Fire Fighting, Washing of HEMMs, sprinkling of Haul Roads, dust suppression as well as Green Belt Development. Water Use Diagram of Mine Water is attached herewith for kind perusal & further needful.
		2 Nos. of fresh automized ETP of 70 KLD capacity has been proposed in Selected Dhori Opencast Project & Amlu Opencast Project of Dhori Area, CCL

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20.06.24



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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1600	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Sarda Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	10/10/23-11/10/23	16-10-2023	16/10/23-18/10/23	146	66	34	< 25	< 6	East Sunny
Oct-23 2nd FN	25/10/23-26/10/23	01-11-2023	01/11/23-04/11/23	153	60	31	< 25	< 6	East Sunny
Nov-23 3rd FN	08/11/23-09/11/23	16-11-2023	16/11/23-20/11/23	161	81	45	< 25	< 6	East Sunny
Nov-23 4th FN	24/11/23-25/11/23	01-12-2023	01/12/23-05/12/23	174	74	30	< 25	< 6	East Sunny
Dec-23 5th FN	08/12/23-09/12/23	18-12-2023	18/12/23-21/12/23	169	86	42	< 25	< 6	East Sunny
Dec-23 6th FN	21/12/23-22/12/23	01-01-2024	01/01/24-04/01/24	183	92	52	< 25	< 6	East Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1601	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Makuli Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )/TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Oct-23 1st FN	10/10/23-11/10/23	16-10-2023	16/10/23-18/10/23	165	82	49	< 25	< 6	East Sunny
Oct-23 2nd FN	26/10/23-27/10/23	01-11-2023	01/11/23-04/11/23	148	70	36	< 25	< 6	East Sunny
Nov-23 3rd FN	08/11/23-09/11/23	16-11-2023	16/11/23-20/11/23	153	66	30	< 25	< 6	East Sunny
Nov-23 4th FN	25/11/23-26/11/23	01-12-2023	01/12/23-05/12/23	183	81	46	< 25	< 6	East Sunny
Dec-23 5th FN	08/12/23-09/12/23	18-12-2023	18/12/23-21/12/23	171	62	33	< 25	< 6	East Sunny
Dec-23 6th FN	21/12/23-22/12/23	01-01-2024	01/01/24-04/01/24	224	127	64	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1602	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Pichari Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	207	95	52	< 25	< 6	East Sunny
Oct-23 2nd FN	26/10/23-27/10/23	01-11-2023	01/11/23-04/11/23	180	85	42	< 25	< 6	East Sunny
Nov-23 3rd FN	09/11/23-10/11/23	16-11-2023	16/11/23-20/11/23	168	90	49	< 25	< 6	East Sunny
Nov-23 4th FN	25/11/23-26/11/23	01-12-2023	01/12/23-05/12/23	184	74	36	< 25	< 6	West Sunny
Dec-23 5th FN	09/12/23-10/12/23	18-12-2023	18/12/23-21/12/23	177	85	43	< 25	< 6	East Sunny
Dec-23 6th FN	22/12/23-23/12/23	01-01-2024	01/01/24-04/01/24	191	78	39	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1603	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Central Colony (filter plant)

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )/TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	191	87	44	< 25	< 6	East Sunny
Oct-23 2nd FN	26/10/23-27/10/23	01-11-2023	01/11/23-04/11/23	163	75	31	< 25	< 6	East Sunny
Nov-23 3rd FN	09/11/23-10/11/23	16-11-2023	16/11/23-20/11/23	187	94	54	< 25	< 6	East Sunny
Nov-23 4th FN	25/11/23-26/11/23	01-12-2023	01/12/23-05/12/23	176	84	42	< 25	< 6	West Sunny
Dec-23 5th FN	09/12/23-10/12/23	18-12-2023	18/12/23-21/12/23	177	79	33	< 25	< 6	East Sunny
Dec-23 6th FN	22/12/23-23/12/23	01-01-2024	01/01/24-04/01/24	189	92	48	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1604	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Dec-23
Customer	CCL		
Testing/Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery

Station Name	Noise Level dB(A) Leq					
	Oct-23 1st FN	Oct-23 2nd FN	Nov-23 3rd FN	Nov-23 4th FN	Dec-23 5th FN	Dec-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	10-10-2023	25-10-2023	08-11-2023	24-11-2023	08-12-2023	21-12-2023
<b>1. Sarda Colony</b>	51.6/49.3	51.5/46.1	52.6/48.8	52.6/47.2	50.4/46.3	58.4/48.2
Date of recording	10-10-2023	25-10-2023	08-11-2023	24-11-2023	08-12-2023	21-12-2023
<b>2. Makuli Colony</b>	51.8/49.6	52.2/46.6	54.2/49.9	51.3/46.2	51.8/46.7	57.6/47.3
Date of recording	10-10-2023	25-10-2023	08-11-2023	24-11-2023	08-12-2023	21-12-2023
<b>3. Pichari Village</b>	52.1/50.3	52.7/45.5	52.4/50.7	54.1/47.6	50.1/44.6	58.4/48.2
Date of recording	11-10-2023	26-10-2023	09-11-2023	25-11-2023	09-12-2023	22-12-2023
<b>4. Central Colony (Filter Plant)</b>	51.6/49.1	53.1/47.2	55.7/49.2	55.3/46.4	52.7/47.5	58.8/48.5

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1605	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A'. LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-23 1st FN	13/10/23	16/10/23	16/10/23-31/10/23	12	<2.00	7.78	29
Oct-23 2nd FN	31/10/23	01/11/23	01/11/23-15/11/23	16	<2.00	7.44	33
Nov-23 3rd FN	15/11/23	16/11/23	16/11/23-30/11/23	8	<2.00	7.52	28
Dec-23 5th FN	15/12/23	18/12/23	18/12/23-29/12/23	8	<2.00	7.55	35
Dec-23 6th FN	26/12/23	01/01/24	01/01/24-15/01/24	12	<2.00	7.66	38
<b>BIS Standard &amp; Method</b>				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report No. 1606	Job No. 094323120	Year	2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec. '23
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/23
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/23-08/01/24
Testing /Sampling Protocol	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery  
 Stations: 1. Lagoon Discharge (Nov 2<sup>nd</sup> FN) Date of Sampling: 30/11/2023  
 2.

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l	0.63			0.02	50.0, Max	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l	<0.002			0.002	0.2 , Max	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l	<2.00			2.00	30.0 , Max	IS 3025 /44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l	<0.0004			0.0004	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l	12			4.00	250.0, Max	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l	<0.02			0.02	3.0 , Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate (as PO <sub>4</sub> <sup>-3</sup> ) mg/l	<0.30			0.30	5.0 , Max	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F <sup>-</sup> ) mg/l	2.74			0.02	2.0 , Max	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l	<0.02			0.02	5.0 , Max	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium (as Cr <sup>+6</sup> ), mg/l	<0.01			0.01	0.1, Max	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l	<0.04			0.04	3.0 , Max	IS 3025 /53: 2003, R : 2009 , AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l	<0.001			0.001	0.1, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l	29			0.01	2.0 , Max	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l	0.162			0.003	3.0 , Max	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen (as NO <sub>3</sub> -N) mg/l	0.59			0.50	10.0 , Max	APHA, 23rd Edition, UV-Spectrophotometric Method, 2017
16	Oil & Grease, mg/l	<2.00			2.00	10.0, Max	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	7.53			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001			0.001	1.0 , Max	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l	<0.0005			0.0005	0.05, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S <sup>2-</sup> ), mg/l	<0.005			0.005	2.0 , Max	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (°C )	20.4			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, R:2002, Thermometric
22	Total Chromium (as Cr), mg/l	<0.002			<0.002	2.0 , Max	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l	1.4			1.00	100.0 , Max	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l	<0.02			0.02	1.0 , Max	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l	37			10.00	100.0 , Max	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l	0.115			0.005	5.0 , Max	IS 3025 /49: 1994, R: 2009, AAS (Air-Ac-Flame)

\*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1607	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori  
Stations:

Project: Dhori Khas Colliery  
Date of Sampling:

1. Jhoria Nala before Conf. with Damodar

13-10-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002				0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00				2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004				0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	8				2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02				0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	6.3				0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.7				0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01				0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04				0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001				0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	19.24				0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.31				1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001				0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005				0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	42				2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	108				25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	18				10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	0.039				0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1608	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery  
 Stations: 1. Central Colony Filter Plant, Near DAV Makoli Date of Sampling: 13-10-2023

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	19.2			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	6			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	0.48			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	0.04			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	0.50			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.96			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Autipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>2-</sup> ) mg/l	51			2.00	200, Max	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	64			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	151			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	84			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	2.5			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	0.01			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1609	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	191	87	44	< 25	< 6	East Sunny
Oct-23 2nd FN	26/10/23-27/10/23	01-11-2023	01/11/23-04/11/23	165	75	32	< 25	< 6	East Sunny
Nov-23 3rd FN	09/11/23-10/11/23	16-11-2023	16/11/23-20/11/23	187	94	53	< 25	< 6	East Sunny
Nov-23 4th FN	25/11/23-26/11/23	01-12-2023	01/12/23-05/12/23	176	84	47	< 25	< 6	West Sunny
Dec-23 5th FN	09/12/23-10/12/23	18-12-2023	18/12/23-21/12/23	162	79	33	< 25	< 6	East Sunny
Dec-23 6th FN	22/12/23-23/12/23	01-01-2024	01/01/24-04/01/24	189	92	51	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1610	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Tunio Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	157	74	40	< 25	< 6	East Sunny
Oct-23 2nd FN	27/10/23-28/10/23	01-11-2023	01/11/23-04/11/23	162	88	50	< 25	< 6	East Sunny
Nov-23 3rd FN	09/11/23-10/11/23	16-11-2023	16/11/23-20/11/23	185	85	47	< 25	< 6	East Sunny
Nov-23 4th FN	26/11/23-27/11/23	01-12-2023	01/12/23-05/12/23	192	78	43	< 25	< 6	West Sunny
Dec-23 5th FN	09/12/23-10/12/23	18-12-2023	18/12/23-21/12/23	229	92	52	< 25	< 6	East Sunny
Dec-23 6th FN	22/12/23-23/12/23	01-01-2024	01/01/24-04/01/24	217	76	38	< 25	< 6	East Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1611	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Gunjadih Magazine

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	137	62	38	< 25	< 6	East Sunny
Oct-23 2nd FN	27/10/23-28/10/23	01-11-2023	01/11/23-04/11/23	166	78	40	< 25	< 6	East Sunny
Nov-23 3rd FN	10/11/23-11/11/23	16-11-2023	16/11/23-20/11/23	154	68	34	< 25	< 6	West Sunny
Nov-23 4th FN	26/11/23-27/11/23	01-12-2023	01/12/23-05/12/23	140	65	27	< 25	< 6	East Sunny
Dec-23 5th FN	10/12/23-11/12/23	18-12-2023	18/12/23-21/12/23	159	76	38	< 25	< 6	East Sunny
Dec-23 6th FN	23/12/23-24/12/23	01-01-2024	01/01/24-04/01/24	168	81	47	< 25	< 6	West Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1612	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Dec-23
Customer	CCL		
Testing/Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori

Station Name	Noise Level dB(A) Leq					
	Oct-23 1st FN	Oct-23 2nd FN	Nov-23 3rd FN	Nov-23 4th FN	Dec-23 5th FN	Dec-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	11-10-2023	26-10-2023	09-11-2023	25-11-2023	09-12-2023	22-12-2023
1. Colony	50.7/48.5	52.3/46.4	52.3/48.8	52.1/45.6	51.6/45.7	56.4/47.5
Date of recording	11-10-2023	26-10-2023	09-11-2023	25-11-2023	09-12-2023	22-12-2023
2. Tunio Village	51.7/49.8	51.9/45.4	51.4/48.8	53.4/45.6	49.6/43.4	58.2/48.1

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1613	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A'. LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area: Dhori Project: Selected Dhori Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-23 1st FN	13/10/23	16/10/23	16/10/23-31/10/23	16	<2.00	7.94	35
Oct-23 2nd FN	31/10/23	01/11/23	01/11/23-15/11/23	8	<2.00	7.57	30
Nov-23 3rd FN	15/11/23	16/11/23	16/11/23-30/11/23	12	<2.00	7.66	31
Dec-23 5th FN	15/12/23	18/12/23	18/12/23-29/12/23	16	<2.00	7.64	39
Dec-23 6th FN	26/12/23	01/01/24	01/01/24-15/01/24	8	<2.00	7.59	31
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report No. 1614	Job No. 094323120	Year	2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec. '23
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/23
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/23-08/01/24
Testing /Sampling Protocol	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori  
 Stations: 1. Lagoon Discharge (Nov 2<sup>nd</sup> FN) Date of Sampling: 30/11/2023  
 2.

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l	0.72			0.02	50.0, Max	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l	<0.002			0.002	0.2, Max	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l	<2.00			2.00	30.0, Max	IS 3025/44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l	<0.0004			0.0004	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l	8			4.00	250.0, Max	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l	<0.02			0.02	3.0, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate (as PO <sub>4</sub> <sup>-3</sup> ) mg/l	<0.30			0.30	5.0, Max	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F <sup>-</sup> ) mg/l	0.61			0.02	2.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l	<0.02			0.02	5.0, Max	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium (as Cr <sup>+6</sup> ), mg/l	<0.01			0.01	0.1, Max	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l	<0.04			0.04	3.0, Max	IS 3025/53: 2003, R : 2009, AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l	<0.001			0.001	0.1, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l	0.10			0.01	2.0, Max	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l	0.021			0.003	3.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen (as NO <sub>3</sub> -N) mg/l	20.57			0.50	10.0, Max	APHA, 23rd Edition, UV-Spectrophotometric Method, 2017
16	Oil & Grease, mg/l	<2.00			2.00	10.0, Max	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	87.57			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001			0.001	1.0, Max	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l	<0.0005			0.0005	0.05, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S <sup>2-</sup> ), mg/l	<0.005			0.005	2.0, Max	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (°C)	20.7			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, R:2002, Thermometric
22	Total Chromium (as Cr), mg/l	<0.002			<0.002	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l	2.8			1.00	100.0, Max	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l	<0.02			0.02	1.0, Max	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l	27			10.00	100.0, Max	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l	0.008			0.005	5.0, Max	IS 3025/49: 1994, R: 2009, AAS (Air-Ac-Flame)

\*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1615	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori  
Stations:Project: Selected Dhori  
Date of Sampling:

1. Tisri Nala (2) before confluence with Damodar
2. Damodar after conf. with Tisri Nala

13-10-2023  
13-10-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	6	6			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	6.1	6.2			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.72	0.51			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	0.06			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	3.21	0.50			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.29	8.09			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	44	28			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	193	151			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	26	14			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1616	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori  
 Stations: 1 Project Office, Borewell Water Date of Sampling: 13-10-2023

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	20.8			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	10			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	0.54			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	0.56			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	0.54			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	8.26			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	35			2.00	200, Max	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	88			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	159			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	100			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	1.4			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	<0.005			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1617	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Tarmi Stations: Tarmi Siding Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	223	95	49	< 25	< 6	East Sunny
Oct-23 2nd FN	27/10/23-28/10/23	01-11-2023	01/11/23-04/11/23	207	92	55	< 25	< 6	East Sunny
Nov-23 3rd FN	10/11/23-11/11/23	16-11-2023	16/11/23-20/11/23	179	83	40	< 25	< 6	West Sunny
Nov-23 4th FN	26/11/23-27/11/23	01-12-2023	01/12/23-05/12/23	205	90	51	< 25	< 6	East Sunny
Dec-23 5th FN	10/12/23-11/12/23	18-12-2023	18/12/23-21/12/23	188	75	45	< 25	< 6	East Sunny
Dec-23 6th FN	23/12/23-24/12/23	01-01-2024	01/01/24-04/01/24	191	81	33	< 25	< 6	West Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1618	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori                      **Project:** Tarmi                      **Stations:** Tarmi Colony (Officers Comp. Office)

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10+>\text{PM}_{10}}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Oct-23 1st FN	11/10/23-12/10/23	16-10-2023	16/10/23-18/10/23	171	82	42	< 25	< 6	East Sunny
Oct-23 2nd FN	28/10/23-29/10/23	01-11-2023	01/11/23-04/11/23	185	68	41	< 25	< 6	East Sunny
Nov-23 3rd FN	10/11/23-11/11/23	16-11-2023	16/11/23-20/11/23	162	79	45	< 25	< 6	West Sunny
Nov-23 4th FN	27/11/23-28/11/23	01-12-2023	01/12/23-05/12/23	203	86	51	< 25	< 6	East Sunny
Dec-23 5th FN	10/12/23-11/12/23	18-12-2023	18/12/23-21/12/23	192	80	42	< 25	< 6	East Sunny
Dec-23 6th FN	23/12/23-24/12/23	01-01-2024	01/01/24-04/01/24	209	91	50	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1619	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Dec-23
Customer	CCL		
Testing/Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project:

Tarmi

Station Name	Noise Level dB(A) Leq					
	Oct-23 1st FN	Oct-23 2nd FN	Nov-23 3rd FN	Nov-23 4th FN	Dec-23 5th FN	Dec-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	11-10-2023	27-10-2023	10-11-2023	26-11-2023	10-12-2023	23-12-2023
<b>1. Tarmi Siding Colony</b>	52.3/50.5	52.7/46.3	54.7/49.8	52.1/45.4	52.7/46.4	60.8/50.6
Date of recording	11-10-2023	27-10-2023	10-11-2023	26-11-2023	10-12-2023	23-12-2023
<b>2. Tarmi Colony (officers comp office)</b>	51.4/49.2	53.3/46.1	55.4/50.8	50.6/45.9	51.3/47.1	56.6/49.8

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

12/23 Test Report no. 1620	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A'. LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori      **Project:** Tarmi      **Stations:** 1. Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-23 1st FN	13/10/23	16/10/23	16/10/23-31/10/23	16	<2.00	8.25	31
Oct-23 2nd FN	31/10/23	01/11/23	01/11/23-15/11/23	16	<2.00	7.51	34
Nov-23 3rd FN	15/11/23	16/11/23	16/11/23-30/11/23	12	<2.00	7.51	35
Dec-23 5th FN	15/12/23	18/12/23	18/12/23-29/12/23	12	<2.00	7.62	27
Dec-23 6th FN	26/12/23	01/01/24	01/01/24-15/01/24	16	<2.00	7.63	36
<b>BIS Standard &amp; Method</b>				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report No. 1621	Job No. 094323120	Year	2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec. '23
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/23
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/23-08/01/24
Testing /Sampling Protocol	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Tarmi  
 Stations: Date of Sampling: 30/11/2023  
 1. Lagoon Discharge (Nov 2<sup>nd</sup> FN)  
 2.

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l	0.85			0.02	50.0, Max	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l	<0.002			0.002	0.2 , Max	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l	<2.00			2.00	30.0 , Max	IS 3025 /44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l	<0.0004			0.0004	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l	20			4.00	250.0, Max	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l	<0.02			0.02	3.0 , Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate (as PO <sub>4</sub> <sup>-3</sup> ) mg/l	<0.30			0.30	5.0 , Max	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F <sup>-</sup> ) mg/l	0.56			0.02	2.0 , Max	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l	<0.02			0.02	5.0 , Max	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium (as Cr <sup>+6</sup> ), mg/l	<0.01			0.01	0.1, Max	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l	<0.04			0.04	3.0 , Max	IS 3025 /53: 2003, R : 2009 , AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l	<0.001			0.001	0.1, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l	<0.01			0.01	2.0 , Max	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l	<0.003			0.003	3.0 , Max	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen (as NO <sub>3</sub> -N) mg/l	20.90			0.50	10.0 , Max	APHA, 23rd Edition, UV-Spectrophotometric Method, 2017
16	Oil & Grease, mg/l	<2.00			2.00	10.0, Max	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	7.51			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001			0.001	1.0 , Max	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l	<0.0005			0.0005	0.05, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S <sup>2-</sup> ), mg/l	<0.005			0.005	2.0 , Max	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (°C )	19.8			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, R:2002, Thermometric
22	Total Chromium (as Cr), mg/l	<0.002			<0.002	2.0 , Max	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l	2.8			1.00	100.0 , Max	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l	<0.02			0.02	1.0 , Max	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l	30			10.00	100.0 , Max	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l	<0.005			0.005	5.0 , Max	IS 3025 /49: 1994, R: 2009, AAS (Air-Ac-Flame)

\*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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## TEST REPORT

12/23 Test Report no. 1622	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori **Project:** Tarmi **Date of Sampling:** 13-10-2023  
**Stations:** 1 Tarmi Filter Plant near Sub station

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition, Carmine
2	Cadmium (as Cd), mg/l	<0.0004			0.0005	0.003, Max	APHA, 23rd Edition, AAS-GTA
3	Calcium (as Ca), mg/l	73.6			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	4			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric
5	Copper (as Cu), mg/l	<0.02			0.03	0.05, Max	IS 3025/42 : 1992 R : 2009, AAS-Flame
6	Fluoride (as F <sup>-</sup> ) mg/l	0.39			0.02	1.0, Max	APHA, 23rd Edition, SPADNS
7	Free Residual Chlorine, mg/l	0.05			0.02	0.2, Min	APHA, 23rd Edition, DPD
8	Iron (as Fe), mg/l	<0.04			0.06	0.3, Max	IS 3025 /53 : 2003, R : 2009 , AAS-Flame
9	Lead (as Pb), mg/l	<0.001			0.005	0.01, Max	APHA, 23rd Edition, AAS-GTA
10	Manganese (as Mn), mg/l	<0.01			0.02	0.1, Max	IS-3025/59:2006,AAS-Flame
11	Nickel (as Ni), mg/l	<0.003			0.01	0.02 , Max	IS-3025/54:2003, AAS-Flame
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	42.42			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	6.29			0.2	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Antipyrine
16	Selenium (as Se), mg/l	<0.0005			0.002	0.01, Max	APHA, 23rd Edition, AAS-GTA
17	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	322			2.00	200, Max	APHA, 23rd Edition, Turbidity
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	44			4.00	200, Max	IS-3025/23:1986, Titration
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA
20	Total Chromium (as Cr), mg/l	<0.002			0.04	0.05, Max	IS-3025/52:2003, AAS-Flame
21	Total Dissolved Solids, mg/l	581			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	308			4.00	200, Max	IS-3025/21:1983, R-2002, EDTA
23	Turbidity, NTU	<1			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric
24	Zinc (as Zn), mg/l	0.535			0.01	5.0, Max	IS 3025/ 49 : 1994, R : 2009, AAS-Flame

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1623	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Amlo

Stations: P.O Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> +>PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	12/10/23-13/10/23	16-10-2023	16/10/23-18/10/23	256	109	61	< 25	< 6	East Sunny
Oct-23 2nd FN	28/10/23-29/10/23	01-11-2023	01/11/23-04/11/23	241	118	59	< 25	< 6	East Sunny
Nov-23 3rd FN	13/11/23-14/11/23	16-11-2023	16/11/23-20/11/23	255	125	53	< 25	< 6	East Sunny
Nov-23 4th FN	27/11/23-28/11/23	01-12-2023	01/12/23-05/12/23	248	117	65	< 25	< 6	West Sunny
Dec-23 5th FN	11/12/23-12/12/23	18-12-2023	18/12/23-21/12/23	327	173	68	< 25	< 6	East Sunny
Dec-23 6th FN	24/12/23-25/12/23	01-01-2024	01/01/24-04/01/24	302	165	74	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1624	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori                      **Project:** Amlo                      **Stations:** Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	12/10/23-13/10/23	16-10-2023	16/10/23-18/10/23	244	118	69	< 25	< 6	East Sunny
Oct-23 2nd FN	28/10/23-29/10/23	01-11-2023	01/11/23-04/11/23	261	126	72	< 25	< 6	East Sunny
Nov-23 3rd FN	13/11/23-14/11/23	16-11-2023	16/11/23-20/11/23	246	114	66	< 25	< 6	East Sunny
Nov-23 4th FN	27/11/23-28/11/23	01-12-2023	01/12/23-05/12/23	217	108	53	< 25	< 6	West Sunny
Dec-23 5th FN	11/12/23-12/12/23	18-12-2023	18/12/23-21/12/23	220	110	61	< 25	< 6	East Sunny
Dec-23 6th FN	24/12/23-25/12/23	01-01-2024	01/01/24-04/01/24	211	102	56	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1625	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Amlo Stations: Chapri Guest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	12/10/23-13/10/23	16-10-2023	16/10/23-18/10/23	278	76	42	< 25	< 6	East Sunny
Oct-23 2nd FN	29/10/23-30/10/23	01-11-2023	01/11/23-04/11/23	330	119	67	< 25	< 6	East Sunny
Nov-23 3rd FN	13/11/23-14/11/23	16-11-2023	16/11/23-20/11/23	273	86	48	< 25	< 6	East Sunny
Nov-23 4th FN	28/11/23-29/11/23	01-12-2023	01/12/23-05/12/23	288	93	56	< 25	< 6	West Sunny
Dec-23 5th FN	11/12/23-12/12/23	18-12-2023	18/12/23-21/12/23	311	146	72	< 25	< 6	East Sunny
Dec-23 6th FN	24/12/23-25/12/23	01-01-2024	01/01/24-04/01/24	251	81	53	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1626	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Amlo Stations: Amlo Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	12/10/23-13/10/23	16-10-2023	16/10/23-18/10/23	219	93	53	< 25	< 6	East Sunny
Oct-23 2nd FN	29/10/23-30/10/23	01-11-2023	01/11/23-04/11/23	211	83	45	< 25	< 6	East Sunny
Nov-23 3rd FN	14/11/23-15/11/23	16-11-2023	16/11/23-20/11/23	245	91	51	< 25	< 6	East Sunny
Nov-23 4th FN	28/11/23-29/11/23	01-12-2023	01/12/23-05/12/23	176	86	42	< 25	< 6	East Sunny
Dec-23 5th FN	12/12/23-13/12/23	18-12-2023	18/12/23-21/12/23	195	76	48	< 25	< 6	East Sunny
Dec-23 6th FN	25/12/23-26/12/23	01-01-2024	01/01/24-04/01/24	186	92	56	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1627	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Dec-23
Customer	CCL		
Testing/Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Amlo

Station Name	Noise Level dB(A) Leq					
	Oct-23 1st FN	Oct-23 2nd FN	Nov-23 3rd FN	Nov-23 4th FN	Dec-23 5th FN	Dec-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	12-10-2023	28-10-2023	13-11-2023	27-11-2023	11-12-2023	24-12-2023
<b>1. P.O.Office</b>	50.1/48.3	51.4/45.1	52.2/48.6	50.4/46.3	53.7/48.9	60.2/50.4
Date of recording	12-10-2023	28-10-2023	13-11-2023	27-11-2023	11-12-2023	24-12-2023
<b>2. Workshop</b>	51.9/49.7	52.6/46.3	56.7/50.9	54.2/47.7	55.6/51.4	60.4/50.2

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1628	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area: Dhori Project: Amlo Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-23 1st FN	14/10/23	16/10/23	16/10/23-31/10/23	8	<2.00	8.03	26
Oct-23 2nd FN	31/10/23	01/11/23	01/11/23-15/11/23	12	<2.00	7.54	25
Nov-23 3rd FN	15/11/23	16/11/23	16/11/23-30/11/23	8	<2.00	7.58	30
Dec-23 5th FN	15/12/23	18/12/23	18/12/23-29/12/23	20	<2.00	7.6	34
Dec-23 6th FN	26/12/23	01/01/24	01/01/24-15/01/24	12	<2.00	7.54	32
<b>BIS Standard &amp; Method</b>				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report No. 1629	Job No. 094323120	Year	2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec. '23
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/23
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/23-08/01/24
Testing /Sampling Protocol	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Amlo  
 Stations: Date of Sampling: 30/11/2023  
 1. Lagoon Discharge (Nov 2<sup>nd</sup> FN)  
 2.

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l	0.90			0.02	50.0, Max	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l	<0.002			0.002	0.2, Max	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l	<2.00			2.00	30.0, Max	IS 3025/44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l	<0.0004			0.0004	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l	16			4.00	250.0, Max	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l	<0.02			0.02	3.0, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate (as PO <sub>4</sub> <sup>-3</sup> ) mg/l	<0.30			0.30	5.0, Max	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F <sup>-</sup> ) mg/l	0.54			0.02	2.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l	<0.02			0.02	5.0, Max	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium (as Cr <sup>+6</sup> ), mg/l	<0.01			0.01	0.1, Max	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l	<0.04			0.04	3.0, Max	IS 3025/53: 2003, R : 2009, AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l	<0.001			0.001	0.1, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l	<0.01			0.01	2.0, Max	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l	0.014			0.003	3.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen (as NO <sub>3</sub> -N) mg/l	21.02			0.50	10.0, Max	APHA, 23rd Edition, UV-Spectrophotometric Method, 2017
16	Oil & Grease, mg/l	<2.00			2.00	10.0, Max	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	7.60			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001			0.001	1.0, Max	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l	<0.0005			0.0005	0.05, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S <sup>2-</sup> ), mg/l	<0.005			0.005	2.0, Max	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (°C)	19.6			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, R:2002, Thermometric
22	Total Chromium (as Cr), mg/l	<0.002			<0.002	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l	2.8			1.00	100.0, Max	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l	<0.02			0.02	1.0, Max	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l	33			10.00	100.0, Max	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l	0.005			0.005	5.0, Max	IS 3025/49: 1994, R: 2009, AAS (Air-Ac-Flame)

\*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1630	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 Ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area :

Dhori

Project:

Amlo

Stations:

1 Amlo Chapri Guest House

Date of Sampling:

13-10-2023

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition, Carmine
2	Cadmium (as Cd), mg/l	<0.0004			0.0005	0.003, Max	APHA, 23rd Edition, AAS-GTA
3	Calcium (as Ca), mg/l	19.2			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	6			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric
5	Copper (as Cu), mg/l	<0.02			0.03	0.05, Max	IS 3025/42 : 1992 R : 2009, AAS-Flame
6	Fluoride (as F <sup>-</sup> ) mg/l	0.49			0.02	1.0, Max	APHA, 23rd Edition, SPADNS
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD
8	Iron (as Fe), mg/l	<0.04			0.06	0.3, Max	IS 3025 /53 : 2003, R : 2009 , AAS-Flame
9	Lead (as Pb), mg/l	<0.001			0.005	0.01, Max	APHA, 23rd Edition, AAS-GTA
10	Manganese (as Mn), mg/l	0.02			0.02	0.1, Max	IS-3025/59:2006,AAS-Flame
11	Nickel (as Ni), mg/l	<0.003			0.01	0.02 , Max	IS-3025/54:2003, AAS-Flame
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	3.56			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.99			0.2	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Antipyrine
16	Selenium (as Se), mg/l	<0.0005			0.002	0.01, Max	APHA, 23rd Edition, AAS-GTA
17	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	62			2.00	200, Max	APHA, 23rd Edition, Turbidity
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	64			4.00	200, Max	IS-3025/23:1986, Titration
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA
20	Total Chromium (as Cr), mg/l	<0.002			0.04	0.05, Max	IS-3025/52:2003, AAS-Flame
21	Total Dissolved Solids, mg/l	172			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	92			4.00	200, Max	IS-3025/21:1983, R-2002, EDTA
23	Turbidity, NTU	<1			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric
24	Zinc (as Zn), mg/l	0.041			0.01	5.0, Max	IS 3025/ 49 : 1994, R : 2009, AAS-Flame

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1631	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Dhori East

Stations: Staff Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Oct-23 1st FN	13/10/23-14/10/23	16-10-2023	16/10/23-18/10/23	247	74	38	< 25	< 6	East Sunny
Oct-23 2nd FN	29/10/23-30/10/23	01-11-2023	01/11/23-04/11/23	262	82	46	< 25	< 6	East Sunny
Nov-23 3rd FN	14/11/23-15/11/23	16-11-2023	16/11/23-20/11/23	245	90	54	< 25	< 6	East Sunny
Nov-23 4th FN	28/11/23-29/11/23	01-12-2023	01/12/23-05/12/23	312	96	55	< 25	< 6	East Sunny
Dec-23 5th FN	12/12/23-13/12/23	18-12-2023	18/12/23-21/12/23	233	92	50	< 25	< 6	East Sunny
Dec-23 6th FN	25/12/23-26/12/23	01-01-2024	01/01/24-04/01/24	256	81	47	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1632	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Dhori East

Stations: Mine Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	13/10/23-14/10/23	16-10-2023	16/10/23-18/10/23	265	150	72	< 25	< 6	East Sunny
Oct-23 2nd FN	30/10/23-31/10/23	01-11-2023	01/11/23-04/11/23	243	121	65	< 25	< 6	East Sunny
Nov-23 3rd FN	14/11/23-15/11/23	16-11-2023	16/11/23-20/11/23	231	110	53	< 25	< 6	East Sunny
Nov-23 4th FN	28/11/23-29/11/23	01-12-2023	01/12/23-05/12/23	254	114	61	< 25	< 6	East Sunny
Dec-23 5th FN	12/12/23-13/12/23	18-12-2023	18/12/23-21/12/23	246	144	76	< 25	< 6	East Sunny
Dec-23 6th FN	25/12/23-26/12/23	01-01-2024	01/01/24-04/01/24	252	120	63	< 25	< 6	West Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1633	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Dhori East

Stations: G.M.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Oct-23 1st FN	13/10/23-14/10/23	16-10-2023	16/10/23-18/10/23	234	118	51	< 25	< 6	East Sunny
Oct-23 2nd FN	25/10/23-26/10/23	01-11-2023	01/11/23-04/11/23	228	105	56	< 25	< 6	East Sunny
Nov-23 3rd FN	15/11/23-16/11/23	16-11-2023	16/11/23-20/11/23	235	112	47	< 25	< 6	East Sunny
Nov-23 4th FN	28/11/24-29/11/24	01-12-2023	01/12/23-05/12/23	256	124	64	< 25	< 6	West Sunny
Dec-23 5th FN	13/12/23-14/12/23	18-12-2023	18/12/23-21/12/23	238	130	70	< 25	< 6	East Sunny
Dec-23 6th FN	26/12/23-27/12/23	01-01-2024	01/01/24-04/01/24	246	128	62	< 25	< 6	West Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1634	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Dec-23
Customer	CCL		
Testing/Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori East

Station Name	Noise Level dB(A) Leq					
	Oct-23 1st FN	Oct-23 2nd FN	Nov-23 3rd FN	Nov-23 4th FN	Dec-23 5th FN	Dec-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	13-10-2023	29-10-2023	14-11-2023	28-11-2023	12-12-2023	25-12-2023
<b>1. Staff Colony</b>	50.9/48.4	52.5/46.2	52.7/48.9	55.6/47.3	50.4/45.6	55.5/49.2
Date of recording	13-10-2023	30-10-2023	15-11-2023	29-11-2023	13-12-2023	26-12-2023
<b>2. G.M.Office</b>	50.1/48.8	52.1/45.7	54.4/50.8	52.1/46.3	53.4/46.6	60.8/50.2

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1635	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area: Dhori Project: Dhori East Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Oct-23 1st FN	14/10/23	16/10/23	16/10/23-31/10/23	12	<2.00	7.98	41
Oct-23 2nd FN	31/10/23	01/11/23	01/11/23-15/11/23	20	<2.00	7.58	36
Nov-23 3rd FN	15/11/23	16/11/23	16/11/23-30/11/23	12	<2.00	7.44	38
Dec-23 5th FN	15/12/23	18/12/23	18/12/23-29/12/23	8	<2.00	7.66	32
Dec-23 6th FN	26/12/23	01/01/24	01/01/24-15/01/24	12	<2.00	7.58	33
<b>BIS Standard &amp; Method</b>				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report No. 1636	Job No. 094323120	Year	2023-24
Type of Sample:	Effluent Water	Quarter Ending	Dec. '23
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/23
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/23-08/01/24
Testing /Sampling Protocol	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori Project: Dhori East  
 Stations: Date of Sampling: 30/11/2023  
 1. Lagoon Discharge (Nov 2<sup>nd</sup> FN)  
 2.

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l	0.65			0.02	50.0, Max	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l	<0.002			0.002	0.2, Max	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l	<2.00			2.00	30.0, Max	IS 3025 /44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l	<0.0004			0.0004	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l	16			4.00	250.0, Max	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l	<0.02			0.02	3.0, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate (as PO <sub>4</sub> <sup>-3</sup> ) mg/l	<0.30			0.30	5.0, Max	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F <sup>-</sup> ) mg/l	0.54			0.02	2.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l	<0.02			0.02	5.0, Max	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium (as Cr <sup>+6</sup> ), mg/l	<0.01			0.01	0.1, Max	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l	<0.04			0.04	3.0, Max	IS 3025 /53: 2003, R : 2009, AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l	<0.001			0.001	0.1, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l	<0.01			0.01	2.0, Max	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l	<0.003			0.003	3.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen (as NO <sub>3</sub> -N) mg/l	20.90			0.50	10.0, Max	APHA, 23rd Edition, UV-Spectrophotometric Method, 2017
16	Oil & Grease, mg/l	<2.00			2.00	10.0, Max	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	7.66			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l	<0.001			0.001	1.0, Max	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l	<0.0005			0.0005	0.05, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S <sup>2-</sup> ), mg/l	<0.005			0.005	2.0, Max	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (°C)	20.6			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, R:2002, Thermometric
22	Total Chromium (as Cr), mg/l	<0.002			<0.002	2.0, Max	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l	1.4			1.00	100.0, Max	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l	<0.02			0.02	1.0, Max	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l	35			10.00	100.0, Max	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l	0.007			0.005	5.0, Max	IS 3025 /49: 1994, R: 2009, AAS (Air-Ac-Flame)

\*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1637	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori  
Stations:

Project: Dhori East  
Date of Sampling:

- Joria Nala near Phusro Giridih Road Crossing 13-10-2023
- Damodar before Conf. of Joria Nala 13-10-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	6	6			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	6.1	6			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	1.15	0.6			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	0.50	0.50			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.29	8.3			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	42	28			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	202	164			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	21	25			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

12/23 Test Report no. 1638	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Dec-23
Customer	CCL	Date of Receipt:	16-10-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.10.23-30.11.23
Testing/Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area :

Dhori

Project:

Dhori East

Stations:

1 GM Office, Dhori Area Borewell Water

Date of Sampling:

13-10-2023

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	16			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	4			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	2.75			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	0.50			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	8.18			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	26			2.00	200, Max	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	60			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	112			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	68			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	5.5			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	<0.005			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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## TEST REPORT

<b>12/23 Test Report no. 1639</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample:	<b>Drinking Water</b>	Quarter Ending	<b>Dec-23</b>
Customer	CCL	Date of Receipt:	<b>16-10-2023</b>
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	<b>16.10.23-30.11.23</b>
Testing/Sampling Protocol:	<b>IS:10500 Drinking Water Standards, LQR 33</b>		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori **Project:** Pichri OCP  
**Stations:** 1 Pichri Village, Tube well Water **Date of Sampling:** 13-10-2023

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	163.2			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	170			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	0.28			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.005			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	94.6			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	8.2			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	185			2.00	200, Max	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	264			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	945			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	564			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	<1			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	<0.005			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1600	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Sarda Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Oct '23 1st FN	10/10/23	10/10/23	10/10/23	<20	0.581	<19.62	E to W
Oct '23 2nd FN	25/10/23	25/10/23	25/10/23	<20	0.564	<19.62	E to W
Nov '23 3rd FN	08/11/23	08/11/23	08/11/23	<20	0.549	<19.62	E to W
Nov. '23 4th FN	24/11/23	24/11/23	24/11/23	<20	0.477	<19.62	E to W
Dec. '23 5th FN	08/12/23	08/12/23	08/12/23	<20	0.398	<19.62	E to W
Dec. '23 6th FN	21/12/23	21/12/23	21/12/23	<20	0.391	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1601	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Makuli Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	10/10/23	10/10/23	10/10/23	<20	0.548	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	25/10/23	25/10/23	25/10/23	<20	0.513	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	08/11/23	08/11/23	08/11/23	<20	0.371	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	24/11/23	24/11/23	24/11/23	<20	0.460	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	08/12/23	08/12/23	08/12/23	<20	0.415	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	21/12/23	21/12/23	21/12/23	<20	0.354	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1602	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Pichari Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	10/10/23	10/10/23	10/10/23	<20	0.552	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	25/10/23	25/10/23	25/10/23	<20	0.501	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	08/11/23	08/11/23	08/11/23	<20	0.475	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	24/11/23	24/11/23	24/11/23	<20	0.428	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	08/12/23	08/12/23	08/12/23	<20	0.384	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	21/12/23	21/12/23	21/12/23	<20	0.379	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1603	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Dhori Khas Colliery Stations: Central Colony (filter plant)

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.471	<19.62	E to W
Oct '23 2nd FN	26/10/23	26/10/23	26/10/23	<20	0.409	<19.62	W to E
Nov '23 3rd FN	09/11/23	09/11/23	09/11/23	<20	0.378	<19.62	E to W
Nov. '23 4th FN	25/11/23	25/11/23	25/11/23	<20	0.386	<19.62	W to E
Dec. '23 5th FN	09/12/23	09/12/23	09/12/23	<20	0.407	<19.62	E to W
Dec. '23 6th FN	22/12/23	22/12/23	22/12/23	<20	0.421	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1604	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.607	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	26/10/23	26/10/23	26/10/23	<20	0.567	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	09/11/23	09/11/23	09/11/23	<20	0.476	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	25/11/23	25/11/23	25/11/23	<20	0.451	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	09/12/23	09/12/23	09/12/23	<20	0.526	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	22/12/23	22/12/23	22/12/23	<20	0.544	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov. '2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1605	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Tunio Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.412	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	26/10/23	26/10/23	26/10/23	<20	0.466	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	09/11/23	09/11/23	09/11/23	<20	0.471	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	25/11/23	25/11/23	25/11/23	<20	0.358	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	09/12/23	09/12/23	09/12/23	<20	0.395	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	22/12/23	22/12/23	22/12/23	<20	0.401	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1606	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : Dhori Project: Selected Dhori Stations: Gunjadih Magazine

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.716	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	27/10/23	27/10/23	27/10/23	<20	0.850	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	10/11/23	10/11/23	10/11/23	<20	0.772	<19.62	W to E
Nov. '23 4 <sup>th</sup> FN	26/11/23	26/11/23	26/11/23	<20	0.656	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	10/12/23	10/12/23	10/12/23	<20	0.690	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	23/12/23	23/12/23	23/12/23	<20	0.700	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1607	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori                      **Project:** Tarmi                      **Stations:** Tarmi Siding Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.700	<19.62	E to W
Oct '23 2nd FN	27/10/23	27/10/23	27/10/23	<20	0.622	<19.62	E to W
Nov '23 3rd FN	10/11/23	10/11/23	10/11/23	<20	0.584	<19.62	W to E
Nov. '23 4th FN	26/11/23	26/11/23	26/11/23	<20	0.647	<19.62	E to W
Dec. '23 5th FN	10/12/23	10/12/23	10/12/23	<20	0.629	<19.62	E to W
Dec. '23 6th FN	23/12/23	23/12/23	23/12/23	<20	0.613	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

## TEST REPORT

12/23 Test Report no. 1608	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** Dhori                      **Project:** Tarmi                      **Stations:** Tarmi Colony (Officers Comp. Office)

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Oct '23 1st FN	11/10/23	11/10/23	11/10/23	<20	0.687	<19.62	E to W
Oct '23 2nd FN	27/10/23	27/10/23	27/10/23	<20	0.583	<19.62	E to W
Nov '23 3rd FN	10/11/23	10/11/23	10/11/23	<20	0.669	<19.62	W to E
Nov. '23 4th FN	26/11/23	26/11/23	26/11/23	<20	0.542	<19.62	E to W
Dec. '23 5th FN	10/12/23	10/12/23	10/12/23	<20	0.604	<19.62	E to W
Dec. '23 6th FN	23/12/23	23/12/23	23/12/23	<20	0.584	<19.62	W to E

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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**TEST REPORT**

12/23 Test Report no. 1609	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori**Project:** Amlo**Stations:** P.O Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	12/10/23	12/10/23	12/10/23	<20	0.411	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	28/10/23	28/10/23	28/10/23	<20	0.522	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	13/11/23	13/11/23	13/11/23	<20	0.447	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	27/11/23	27/11/23	27/11/23	<20	0.506	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	11/12/23	11/12/23	11/12/23	<20	0.472	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	24/12/23	24/12/23	24/12/23	<20	0.453	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## TEST REPORT

12/23 Test Report no. 1610	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Amla

Stations: Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	12/10/23	12/10/23	12/10/23	<20	0.701	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	28/10/23	28/10/23	28/10/23	<20	0.726	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	13/11/23	13/11/23	13/11/23	<20	0.689	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	27/11/23	27/11/23	27/11/23	<20	0.703	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	11/12/23	11/12/23	11/12/23	<20	0.781	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	24/12/23	24/12/23	24/12/23	<20	0.728	<19.62	W to E

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1611	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori                      **Project:** Amlo                      **Stations:** Chapri Guest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Oct '23 1st FN	12/10/23	12/10/23	12/10/23	<20	0.479	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	28/10/23	28/10/23	28/10/23	<20	0.442	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	13/11/23	13/11/23	13/11/23	<20	0.419	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	27/11/23	27/11/23	27/11/23	<20	0.444	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	11/12/23	11/12/23	11/12/23	<20	0.461	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	24/12/23	24/12/23	24/12/23	<20	0.419	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

**TEST REPORT**

12/23 Test Report no. 1612	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori**Project:** Amlo**Stations:** Amlo Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	12/10/23	12/10/23	12/10/23	<20	0.480	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	29/10/23	29/10/23	29/10/23	<20	0.461	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	14/11/23	14/11/23	14/11/23	<20	0.426	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	28/11/23	28/11/23	28/11/23	<20	0.402	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	12/12/23	12/12/23	12/12/23	<20	0.375	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	25/12/23	25/12/23	25/12/23	<20	0.349	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCH

## TEST REPORT

12/23 Test Report no. 1613	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : Dhori

Project: Dhori East

Stations: Staff Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	13/10/23	13/10/23	13/10/23	<20	0.493	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	29/10/23	29/10/23	29/10/23	<20	0.484	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	14/11/23	14/11/23	14/11/23	<20	0.411	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	28/11/23	28/11/23	28/11/23	<20	0.452	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	12/12/23	12/12/23	12/12/23	<20	0.444	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	25/12/23	25/12/23	25/12/23	<20	0.438	<19.62	W to E

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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**TEST REPORT**

12/23 Test Report no. 1614	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori**Project:** Dhori East**Stations:** Mine Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Oct '23 1st FN	13/10/23	13/10/23	13/10/23	<20	0.724	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	29/10/23	29/10/23	29/10/23	<20	0.687	<19.62	E to W
Nov '23 3 <sup>rd</sup> FN	14/11/23	14/11/23	14/11/23	<20	0.705	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	28/11/23	28/11/23	28/11/23	<20	0.657	<19.62	E to W
Dec. '23 5 <sup>th</sup> FN	12/12/23	12/12/23	12/12/23	<20	0.692	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	25/12/23	25/12/23	25/12/23	<20	0.675	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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**TEST REPORT**

12/23 Test Report no. 1615	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	December-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** Dhori**Project:** Dhori East**Stations:** G.M.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Oct '23 1st FN	13/10/23	13/10/23	13/10/23	<20	0.469	<19.62	E to W
Oct '23 2 <sup>nd</sup> FN	30/10/23	30/10/23	30/10/23	<20	0.433	<19.62	W to E
Nov '23 3 <sup>rd</sup> FN	15/11/23	15/11/23	15/11/23	<20	0.414	<19.62	E to W
Nov. '23 4 <sup>th</sup> FN	29/11/23	29/11/23	29/11/23	<20	0.402	<19.62	W to E
Dec. '23 5 <sup>th</sup> FN	13/12/23	13/12/23	13/12/23	<20	0.354	<19.62	E to W
Dec. '23 6 <sup>th</sup> FN	26/12/23	26/12/23	26/12/23	<20	0.337	<19.62	W to E

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## TEST REPORT

12/23 Test Report No. Metal / 01		Job No. 094323120	2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec.'2023
Customer	CCL	Date of Receipt of Sample:	16/10/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	06/11/23-27/12/23
Sampling Protocol:	USEPA IO-3.2: 1999, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

<b>Area :</b>	<b>Dhori</b>	<b>Project:</b>	<b>Dhori Khas Colliery</b>
<b>Stations:</b>	1. Sarda Colony 2. Makuli Colony 3. Pichari Village 4. Central Colony (filter plant)		<b>Date of Sampling:</b> 10-11/10/2023 10-11/10/2023 10-11/10/2023 11-11/10/2023

S.No	Test Parameters	Units	Test Result				Method detection Limit	Limit (NAA QS-2011)	Test Method
			1	2	3	4			
Stations:									
1	Conc. of As in Air	ng/m <sup>3</sup>	0.85	0.54	1.50	0.53	0.1	6.00	USEPA IO-3.2:1999
2	Conc. of Ni in Air	ng/m <sup>3</sup>	4.74	3.62	5.21	5.55	0.1	20.00	USEPA IO-3.2:1999
3	Conc. of Pb in Air	µg/m <sup>3</sup>	0.016	0.015	0.016	0.018	0.005	1.0	USEPA IO-3.2: 1999
4	Conc. of Cu in Air	ng/m <sup>3</sup>	0.31	0.19	0.30	0.25	0.1	-	USEPA IO-3.2: 1999
5	Conc. of Cd in Air	ng/m <sup>3</sup>	0.052	0.038	0.044	0.090	0.02	-	USEPA IO-3.2: 1999
6	Conc. of Cr in Air	ng/m <sup>3</sup>	0.18	0.15	0.17	0.19	0.1	-	USEPA IO-3.2: 1999
7	Conc. of Hg in Air	ng/m <sup>3</sup>	<0.005	<0.005	<0.005	<0.005	0.005	-	USEPA IO-3.2: 1999

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## TEST REPORT

12/23 Test Report No. Metal / 02		Job No. 094323120	2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec.'2023
Customer	CCL	Date of Receipt of Sample:	16/10/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	06/11/23-27/12/23
Sampling Protocol:	USEPA IO-3.2: 1999, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

<b>Area :</b>	<b>Dhori</b>	<b>Project:</b>	<b>Selected Dhori</b>
<b>Stations:</b>	1. Colony 2. Tunio Village 3. Gunjadih Magazine 4.		<b>Date of Sampling:</b> 11-11/10/2023 11-11/10/2023 11-12/10/2023

S.No	Test Parameters	Units	Test Result				Method detection Limit	Limit (NAAQS-2011)	Test Method
			1	2	3	4			
Stations:									
1	Conc. of As in Air	ng/m <sup>3</sup>	0.48	0.81	1.66		0.1	6.00	USEPA IO-3.2:1999
2	Conc. of Ni in Air	ng/m <sup>3</sup>	1.63	3.85	6.32		0.1	20.00	USEPA IO-3.2:1999
3	Conc. of Pb in Air	µg/m <sup>3</sup>	0.006	0.026	0.043		0.005	1.0	USEPA IO-3.2: 1999
4	Conc. of Cu in Air	ng/m <sup>3</sup>	0.31	0.18	0.36		0.1	-	USEPA IO-3.2: 1999
5	Conc. of Cd in Air	ng/m <sup>3</sup>	0.030	0.025	0.037		0.02	-	USEPA IO-3.2: 1999
6	Conc. of Cr in Air	ng/m <sup>3</sup>	0.13	0.16	0.15		0.1	-	USEPA IO-3.2: 1999
7	Conc. of Hg in Air	ng/m <sup>3</sup>	<0.005	<0.005	<0.005		0.005	-	USEPA IO-3.2: 1999

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## TEST REPORT

12/23 Test Report No. Metal / 04		Job No. 094323120	2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec.'2023
Customer	CCL	Date of Receipt of Sample:	16/10/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	06/11/23-27/12/23
Sampling Protocol:	USEPA IO-3.2: 1999, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

<b>Area :</b>	<b>Dhori</b>	<b>Project:</b>	<b>Amlu</b>
<b>Stations:</b>	1. P.O Office 2. Workshop 3. Chapri Guest House 4. Amlu Village		<b>Date of Sampling:</b> 12-12/10/2023 12-13/10/2023 12-13/10/2023 12-13/10/2023

S.No	Test Parameters	Units	Test Result				Method detection Limit	Limit (NAAQS-2011)	Test Method
			1	2	3	4			
Stations:			1	2	3	4			
1	Conc. of As in Air	ng/m <sup>3</sup>	1.86	0.99	1.06	0.49	0.1	6.00	USEPA IO-3.2:1999
2	Conc. of Ni in Air	ng/m <sup>3</sup>	7.01	3.76	1.82	5.11	0.1	20.00	USEPA IO-3.2:1999
3	Conc. of Pb in Air	µg/m <sup>3</sup>	0.050	0.015	0.006	0.016	0.005	1.0	USEPA IO-3.2: 1999
4	Conc. of Cu in Air	ng/m <sup>3</sup>	0.21	0.37	0.17	0.33	0.1	-	USEPA IO-3.2: 1999
5	Conc. of Cd in Air	ng/m <sup>3</sup>	0.026	0.099	0.024	0.034	0.02	-	USEPA IO-3.2: 1999
6	Conc. of Cr in Air	ng/m <sup>3</sup>	0.13	0.18	0.13	0.13	0.1	-	USEPA IO-3.2: 1999
7	Conc. of Hg in Air	ng/m <sup>3</sup>	<0.005	<0.005	<0.005	<0.005	0.005	-	USEPA IO-3.2: 1999

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## TEST REPORT

12/23 Test Report No. Metal / 05		Job No. 094323120	2023-24
Type of Sample	Ambient Air	Quarter Ending	Dec.'2023
Customer	CCL	Date of Receipt of Sample:	16/10/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	06/11/23-27/12/23
Sampling Protocol:	USEPA IO-3.2: 1999, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

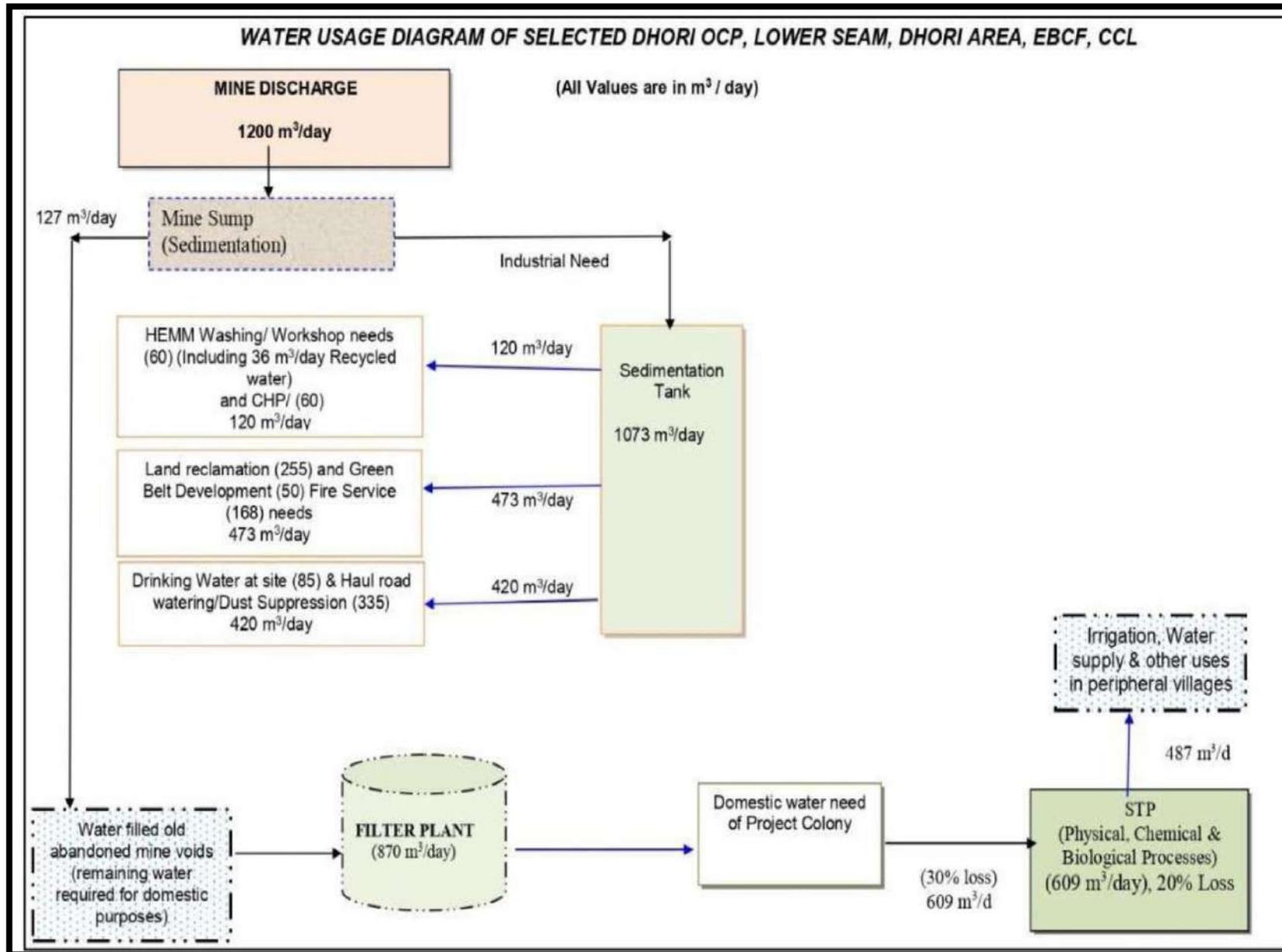
Area : Dhori Project: Dhori East

Stations: 1. Staff Colony Date of Sampling: 13-14/10/2023  
 2. Mine Office 13-14/10/2023  
 3. G.M.Office 13-14/10/2023  
 4.

S.No	Test Parameters	Units	Test Result				Method detection Limit	Limit (NAAQS-2011)	Test Method
			1	2	3	4			
Stations:			1	2	3	4			
1	Conc. of As in Air	ng/m <sup>3</sup>	1.80	0.78	1.83		0.1	6.00	USEPA IO-3.2:1999
2	Conc. of Ni in Air	ng/m <sup>3</sup>	6.32	4.69	6.70		0.1	20.00	USEPA IO-3.2:1999
3	Conc. of Pb in Air	µg/m <sup>3</sup>	0.053	0.022	0.057		0.005	1.0	USEPA IO-3.2: 1999
4	Conc. of Cu in Air	ng/m <sup>3</sup>	0.29	0.37	0.24		0.1	-	USEPA IO-3.2: 1999
5	Conc. of Cd in Air	ng/m <sup>3</sup>	0.030	0.028	0.024		0.02	-	USEPA IO-3.2: 1999
6	Conc. of Cr in Air	ng/m <sup>3</sup>	0.16	0.13	0.13		0.1	-	USEPA IO-3.2: 1999
7	Conc. of Hg in Air	ng/m <sup>3</sup>	<0.005	<0.005	<0.005		0.005	-	USEPA IO-3.2: 1999

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# WATER USAGE DIAGRAM 34978



The peak industrial water demand for Selected Dhori OCM was projected as 1013 cum/day. The domestic water demand (colony + industrial buildings) was projected as 870 cum/day. Thus, the total water requirement is 1883 cum/day.

Proposed source of water is from mine water of Selected Dhori Quarry & from Integrated Water Supply System (IWSS). NOC from CGWA has been granted vide no: 21-4/325/JH/MIN/2018 Dated: 01.11.2021 for a permitted quantity of 2841 KLD.

34979



**CCL**

*Fuelling Sustainable Growth*

**CENTRAL COALFIELDS LTD.**

**सेन्ट्रल कोलफील्ड्स लिमिटेड**

(भारत सरकार का एक उपक्रम / कोल इंडिया लि. की एक अनुषंगी कंपनी)

पंजीकृत कार्यालय : दरभंगा हाउस, रौंजी 834 001 (झारखण्ड)

CIN : U10200JH1956GOI000581

**Office of the General Manager, B&K Area, Kargali**

**P.O. Bermo, Dist. Bokaro-829104**

Ref. no: GM(B&K)/Secy/2024-25/ 64.

Date :25/06/2024

To,  
The Deputy Commissioner,  
Bokaro, Jharkhand.

Subject: Information sought by District Ganga Committee.

Ref: Letter no. 290 dt 27.02.2024 from the Office of DC, Bokaro  
Letter no. 452 dt 29.02.2024 from the Office of RO,JSPCB, Dhanbad  
Meeting called on 09.03.2024 at DC Office, Bokaro

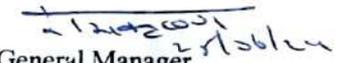
Dear Sir,

In reference to above mentioned letters and as discussed in the meeting on dt 09.03.2024 at your good office, the Compliance of the order passed by honourable NGT in number 200/2014 (M.C. Mehta versus Union of India and Ors.) with respect to B&K Area, M/s CCL are being attached as Annexure-I.

This is for your kind information and perusal for onward submission.

Encl as above

Yours faithfully

  
General Manager

B&K Area

Copy to:

1. The DMO, Bokaro
2. Office Copy

# 34980

## ANNEXURE-I

Sl.	Category/Source of Waste Generation	Details/Quantity of Waste Generated		Remarks	
<b>I. Sewage</b>					
a	Per day generation of sewage in each city/town within the district	The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro.		B&K Area has 3 working coal mines namely Bokaro OCO, Karo Exp OCP and Konar Exp OCP. The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro. However, owing our proactive responsibility towards environment, we periodically analyze water quality, its PH, BOD, COD, TSS, TDS, Heavy Metals, Nitrates, etc in core as well as buffer zone and they are found to be well within the limits. Copy of latest quarter ( i.e. Jan-2024 to March-2024) is attached herewith for kind perusal & further needful.	
b	Quantity of sewage treated per day city/town wise	The colonies associated with these mines are scattered and have individual in house septic tank/soak pit system. So, there is no discharge of sewage in the drain connecting to river Damodar. Moreover, the solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro.			
c	The number of sewage treatment plant existing and their capacity and capacity utilization and mode of disposal in each city/town.	Jawahar Nagar, Subhash Nagar and Ram Nagar	To be commissioned	Dec 2025	As deliberated above our colonies associated with the mines are scattered & having individual in house septic tank/soak pit system. One STP for combined 3 colonies is proposed whose DPR is being prepared.
d	Quantity of discharged treated sewage from each STP, particularly for fecal coliform	NA			

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e	Time bound plan to meet the gap, if any, in generation and treatment of sewage	NA	
f	Details of Hotels, Dharamshala and Ashram operating without proper consent and discharging untreated effluent and the action taken against them.	NA	
g	Water quality in river and its tributaries in abutting districts /towns in terms of fecal coliform (MPN/100ml)	Copy of latest quarter ( i.e. Jan-2024 to March-2024) is attached herewith.	
<b>II. Municipal Solid Waste disposal</b>			
a	Per day generation of Solid waste in each city/town within the district	NA	The solid waste generated are being taken care by the Phusro Nagar Parishad as our colony falls under the ambit of the city council of Phusro, Bermo, Bokaro. However, owing our proactive responsibility towards environment, we periodically analyze water quality, its PH, BOD, COD, TSS, TDS, Heavy Metals, Nitrates, etc in core as well as buffer zone and they are found to be well within the limits. Copy of latest quarter ( i.e. Jan-2024 to March-2024) is attached herewith for kind perusal & further needful.
b	Quantity of solid waste treated per day, in each city/town of the district		
c	The gap in treatment of solid waste		
d	Legacy waste and the time bound plan to treat legacy waste		
e	The manner of utilization of the treated waste as well as rejects arising out of remediation of legacy waste		
f	Current status of dumping of solid waste with reference to location		
<b>III. Construction and Demolition waste:</b>			
a	Total per day generation of C & D Waste within the District		We are coal mining companies as such we are not generating Construction & Demolition waste.
b	The detail of plant established for the treatment of C & D Waste including the existing capacity and capacity utilization	NA	

  
 Area Environment Officer  
 B&K Area, Kargali, CCL

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<b>IV. Industrial Effluent discharge</b>			
a	Number of industrial unit discharging their effluent treated/untreated in river Ganga and its tributaries and details of defaulting industrial units.	NA	No Industrial Effluent is discharged into the river Ganga or its tributaries (in this case river Damodar). All the water discharged from ETP is used for Industrial Purpose like Fire Fighting, Washing of HEMMs, sprinkling of Haul Roads, dust suppression as well as Green Belt Development.
b	Total daily generation of such industrial waste within the district.		
c	The manner of treatment of the industrial waste so generated.		
d	The discharge effluent analysis from the CETP and ETP treating the industrial waste from each outlet.	As such there is no effluent discharge. However, the burnt oil, used lubricant, waste water after washing of HEMMs which are generated are being treated/settled in ETP/Settling tank for its reuse.	One No. of fresh automized ETP of 100 KLD capacity has been proposed in Konar Exp OCP
e	The per day generation of industrial solid waste and manner of its treatment and disposal in the district.	As such there is no effluent discharge. However, the burnt oil, used lubricant, waste water after washing of HEMMs which are generated are being treated/settled in ETP/Settling tank for its reuse.	

  
 Area Environment Officer  
 B3K Area, Kargali, OCL



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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1200	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10+</sub> >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	02/01/24-03/01/24	15-01-2024	15/01/24-18/01/24	225	121	55	< 25	< 6	East Sunny
Jan-24 2nd FN	16/01/24-17/01/24	01-02-2024	01/02/24-05/02/24	232	139	57	< 25	< 6	West Sunny
Feb-24 3rd FN	01/02/24-02/02/24	17-02-2024	17/02/24-21/02/24	235	128	61	< 25	< 6	East Sunny
Feb-24 4th FN	17/02/24-18/02/24	01-03-2024	01/03/24-05/03/24	243	130	61	< 25	< 6	East Sunny
Mar-24 5th FN	01/03/24-02/03/24	18-03-2024	18/03/24-21/03/24	257	149	65	< 25	< 6	East Sunny
Mar-24 6th FN	18/03/24-19/03/24	01-04-2024	01/04/24-05/04/24	276	157	68	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1201	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )/TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	02/01/24-03/01/24	15-01-2024	15/01/24-18/01/24	183	78	43	< 25	< 6	East Sunny
Jan-24 2nd FN	16/01/24-17/01/24	01-02-2024	01/02/24-05/02/24	191	83	50	< 25	< 6	West Sunny
Feb-24 3rd FN	01/02/24-02/02/24	17-02-2024	17/02/24-21/02/24	155	78	43	< 25	< 6	East Sunny
Feb-24 4th FN	17/02/24-18/02/24	01-03-2024	01/03/24-05/03/24	168	74	45	< 25	< 6	East Sunny
Mar-24 5th FN	01/03/24-02/03/24	18-03-2024	18/03/24-21/03/24	162	85	47	< 25	< 6	East Sunny
Mar-24 6th FN	18/03/24-19/03/24	01-04-2024	01/04/24-05/04/24	172	90	51	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1202	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: I W S P Kargali

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	02/01/24-03/01/24	15-01-2024	15/01/24-18/01/24	322	129	54	< 25	< 6	East Sunny
Jan-24 2nd FN	16/01/24-17/01/24	01-02-2024	01/02/24-05/02/24	229	78	43	< 25	< 6	West Sunny
Feb-24 3rd FN	01/02/24-02/02/24	17-02-2024	17/02/24-21/02/24	225	73	40	< 25	< 6	East Sunny
Feb-24 4th FN	17/02/24-18/02/24	01-03-2024	01/03/24-05/03/24	207	78	49	< 25	< 6	East Sunny
Mar-24 5th FN	01/03/24-02/03/24	18-03-2024	18/03/24-21/03/24	248	85	45	< 25	< 6	East Sunny
Mar-24 6th FN	18/03/24-19/03/24	01-04-2024	01/04/24-05/04/24	257	88	50	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1203	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: Phusro Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	03/01/24-04/01/24	15-01-2024	15/01/24-18/01/24	217	124	57	< 25	< 6	East Sunny
Jan-24 2nd FN	17/01/24-18/01/24	01-02-2024	01/02/24-05/02/24	237	133	62	< 25	< 6	West Cloud
Feb-24 3rd FN	02/02/24-03/02/24	17-02-2024	17/02/24-21/02/24	242	110	51	< 25	< 6	East Sunny
Feb-24 4th FN	18/02/24-19/02/24	01-03-2024	01/03/24-05/03/24	261	118	54	< 25	< 6	East Sunny
Mar-24 5th FN	02/03/24-03/03/24	18-03-2024	18/03/24-21/03/24	275	120	58	< 25	< 6	East Sunny
Mar-24 6th FN	19/03/24-20/03/24	01-04-2024	01/04/24-05/04/24	282	125	57	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1204	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Kargali OC Stations: Jawahar Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	03/01/24-04/01/24	15-01-2024	15/01/24-18/01/24	161	83	45	< 25	< 6	East Sunny
Jan-24 2nd FN	17/01/24-18/01/24	01-02-2024	01/02/24-05/02/24	157	73	40	< 25	< 6	West Cloud
Feb-24 3rd FN	02/02/24-03/02/24	17-02-2024	17/02/24-21/02/24	168	79	44	< 25	< 6	East Sunny
Feb-24 4th FN	18/02/24-19/02/24	01-03-2024	01/03/24-05/03/24	152	72	48	< 25	< 6	East Sunny
Mar-24 5th FN	02/03/24-03/03/24	18-03-2024	18/03/24-21/03/24	207	74	43	< 25	< 6	East Sunny
Mar-24 6th FN	19/03/24-20/03/24	01-04-2024	01/04/24-05/04/24	211	80	48	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

<b>03/24 Test Report No. 1205</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample:	Noise	Quarter Ending	Mar-24
Customer	CCL		
Testing/ Sampling Protocol:	<i>'The noise pollution (Regulation and Control), Rules,2000, LQR 34</i>		
Remarks:			

### TEST RESULT

The sample has been tested with the following results: -

Area :	B&K		Project:		Kargali OC	
Station Name	Noise Level dB(A) Leq					
	Jan-24 1st FN	Jan-24 2nd FN	Feb-24 3rd FN	Feb-24 4th FN	Mar-24 5th FN	Mar-24 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	02-01-2024	16-01-2024	01-02-2024	17-02-2024	01-03-2024	18-03-2024
<b>1. P.O.Office</b>	51.5/45.6	58.4/49.5	58.2/49.5	50.8/48.3	50.8/48.3	50.7/48.4
Date of recording	02-01-2024	16-01-2024	01-02-2024	17-02-2024	01-03-2024	18-03-2024
<b>2. Rest House</b>	50.3/44.2	58.8/50.5	50.5/45.6	50.6/48.2	50.5/48.7	50.2/48.6
Date of recording	03-01-2024	17-01-2024	02-02-2024	17-02-2024	01-03-2024	18-03-2024
<b>2. Jawahar Nagar Cly.</b>	52.4/44.5	59.4/51.2	51.4/46.2	50.9/48.7	50.9/48.6	50.4/48.9

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1206	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Kargali OC Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-24 1st FN	06/01/24	15/01/24	15/01/24-31/01/24	12	<2.00	7.63	36
Jan-24 2nd FN	30/01/24	01/02/24	01/02/24-16/02/24	8	<2.00	7.52	31
Feb-24 3rd FN	08/02/24	17/02/24	17/02/24-29/02/24	16	<2.00	7.41	44
Feb-24 4th FN	24/02/24	01/03/24	01/03/24-15/03/24	12	<2.00	8.31	32
Mar-24 5th FN	08/03/24	18/03/24	18/03/24-01/04/24	8	<2.00	7.66	29
Mar-24 6th FN	25/03/24	01/04/24	01/04/24-16/04/24	20	<2.00	7.82	38
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1207	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&K  
Stations:

Project: Kargali OC  
Date of Sampling:

- |   |            |
|---|------------|
| 1. Baid Karo Nala before Damodar        | 06-01-2024 |
| 2. Damodar after conf. Of BK Nala       | 06-01-2024 |
| 3. Raw water Damodar River, Kargali End | 06-01-2024 |

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002	<0.002		0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00	<2.00		2.00	IS 3025/44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004	<0.0004		0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	10	10	10		2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02	<0.02		0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	8.1	7.4	7.5		0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.42	0.42	0.51		0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01	<0.01		0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04	<0.04		0.04	IS 3025/53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	0.60	0.50	1.74		0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.4	8.3	8.3		1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005		0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	47	47	61		2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	216	228	235		25.00	IS 3025/16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	26	25	29		10.00	IS 3025/17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005	<0.005		0.005	IS 3025/49: 1994, R : 2009, AAS (Air-Ac-Flame)

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A Mini Ratna Company

## TEST REPORT

03/24 Test Report No. 1208	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&K  
Stations:Project: Kargali OC  
Date of Sampling:

1. Treated Water from IWSP

06-01-2024

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	27.2			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	10			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	0.47			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	1.50			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.9			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Autipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>2-</sup> ) mg/l	59			2.00	200, Max	APHA, 23rd Edition, Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	76			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	193			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	124			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	1			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	<0.005			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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## TEST REPORT

03/24 Test Report No. 1209	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Bokaro OC                      **Stations:** Hind Strip Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	03/01/24-04/01/24	15-01-2024	15/01/24-18/01/24	192	76	45	< 25	< 6	East Sunny
Jan-24 2nd FN	17/01/24-18/01/24	01-02-2024	01/02/24-05/02/24	181	84	46	< 25	< 6	West Cloud
Feb-24 3rd FN	02/02/24-03/02/24	17-02-2024	17/02/24-21/02/24	191	72	43	< 25	< 6	East Sunny
Feb-24 4th FN	18/02/24-19/02/24	01-03-2024	01/03/24-05/03/24	165	67	42	< 25	< 6	East Sunny
Mar-24 5th FN	02/03/24-03/03/24	18-03-2024	18/03/24-21/03/24	181	67	38	< 25	< 6	East Sunny
Mar-24 6th FN	19/03/24-20/03/24	01-04-2024	01/04/24-05/04/24	249	85	51	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## TEST REPORT

03/24 Test Report No. 1210	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Bokaro OC

Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	04/01/24-05/01/24	15-01-2024	15/01/24-18/01/24	170	80	47	< 25	< 6	East Sunny
Jan-24 2nd FN	18/01/24-19/01/24	01-02-2024	01/02/24-05/02/24	160	71	42	< 25	< 6	West Rain
Feb-24 3rd FN	03/02/24-04/02/24	17-02-2024	17/02/24-21/02/24	202	80	45	< 25	< 6	East Sunny
Feb-24 4th FN	19/02/24-20/02/24	01-03-2024	01/03/24-05/03/24	188	77	44	< 25	< 6	East Sunny
Mar-24 5th FN	03/03/24-04/03/24	18-03-2024	18/03/24-21/03/24	213	75	45	< 25	< 6	East Sunny
Mar-24 6th FN	20/03/24-21/03/24	01-04-2024	01/04/24-05/04/24	197	85	49	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## TEST REPORT

03/24 Test Report No. 1211	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Bokaro OC                      **Stations:** Gandhinagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	04/01/24-05/01/24	15-01-2024	15/01/24-18/01/24	140	69	34	< 25	< 6	East Sunny
Jan-24 2nd FN	18/01/24-19/01/24	01-02-2024	01/02/24-05/02/24	150	58	35	< 25	< 6	West Rain
Feb-24 3rd FN	03/02/24-04/02/24	17-02-2024	17/02/24-21/02/24	160	71	39	< 25	< 6	East Sunny
Feb-24 4th FN	19/02/24-20/02/24	01-03-2024	01/03/24-05/03/24	176	79	45	< 25	< 6	East Sunny
Mar-24 5th FN	03/03/24-04/03/24	18-03-2024	18/03/24-21/03/24	185	70	38	< 25	< 6	East Sunny
Mar-24 6th FN	20/03/24-21/03/24	01-04-2024	01/04/24-05/04/24	191	83	45	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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## TEST REPORT

03/24 Test Report No. 1212	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Mar-24
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Bokaro OC

Station Name	Noise Level dB(A) Leq					
	Jan-24 1st FN	Jan-24 2nd FN	Feb-24 3rd FN	Feb-24 4th FN	Mar-24 5th FN	Mar-24 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	03-01-2024	17-01-2024	02-02-2024	18-02-2024	02-03-2024	19-03-2024
<b>1. Hindstrip Colony</b>	50.4/43.5	60.2/51.8	51.2/45.3	51.3/49.8	51.3/49.5	51.5/49.8
Date of recording	04-01-2024	18-01-2024	03-02-2024	19-02-2024	03-03-2024	20-03-2024
<b>2. Rest House</b>	50.3/43.6	58.2/52.1	50.5/46.7	50.7/48.4	50.3/48.3	50.8/48.5

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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## TEST REPORT

03/24 Test Report No. 1213	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Bokaro OC Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-24 1st FN	06/01/24	15/01/24	15/01/24-31/01/24	8	<2.00	7.58	28
Jan-24 2nd FN	30/01/24	01/02/24	01/02/24-16/02/24	12	<2.00	7.55	34
Feb-24 3rd FN	08/02/24	17/02/24	17/02/24-29/02/24	8	<2.00	7.49	27
Feb-24 4th FN	24/02/24	01/03/24	01/03/24-15/03/24	16	<2.00	7.86	36
Mar-24 5th FN	08/03/24	18/03/24	18/03/24-01/04/24	12	<2.00	7.63	33
Mar-24 6th FN	25/03/24	01/04/24	01/04/24-16/04/24	16	<2.00	7.75	35
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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## TEST REPORT

03/24 Test Report No. 1214	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area :

B&amp;K

Project:

Bokaro OC

Stations:

Date of Sampling:

1. Goda Nala before Damodar
2. Damodar before Goda Nala
3. Damodar after Goda Nala

06-01-2024

06-01-2024

06-01-2024

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002	<0.002		0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00	<2.00		2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004	<0.0004		0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	18	18	10		2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02	<0.02		0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	7.7	7.4	8.1		0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.70	0.74	0.55		0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01	<0.01		0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04	<0.04		0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	6.44	6.92	1.69		0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.4	8.4	8.3		1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005		0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	85	85	60		2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	363	313	226		25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	27	43	35		10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005	<0.005		0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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## TEST REPORT

03/24 Test Report No. 1215	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Karo - I                      **Stations:** Karo Seam Incline

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	04/01/24-05/01/24	15-01-2024	15/01/24-18/01/24	205	114	45	< 25	< 6	East Sunny
Jan-24 2nd FN	18/01/24-19/01/24	01-02-2024	01/02/24-05/02/24	176	89	41	< 25	< 6	West Rain
Feb-24 3rd FN	03/02/24-04/02/24	17-02-2024	17/02/24-21/02/24	188	90	47	< 25	< 6	East Sunny
Feb-24 4th FN	19/02/24-20/02/24	01-03-2024	01/03/24-05/03/24	201	82	40	< 25	< 6	East Sunny
Mar-24 5th FN	03/03/24-04/03/24	18-03-2024	18/03/24-21/03/24	197	96	49	< 25	< 6	East Sunny
Mar-24 6th FN	20/03/24-21/03/24	01-04-2024	01/04/24-05/04/24	246	120	55	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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34999



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1216	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Karo - I

Stations: Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10+>\text{PM}_{10}}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	204	119	47	< 25	< 6	East Sunny
Jan-24 2nd FN	27/01/24-28/01/24	01-02-2024	01/02/24-05/02/24	239	125	51	< 25	< 6	East Sunny
Feb-24 3rd FN	04/02/24-05/02/24	17-02-2024	17/02/24-21/02/24	218	104	55	< 25	< 6	East Sunny
Feb-24 4th FN	20/02/24-21/02/24	01-03-2024	01/03/24-05/03/24	228	117	45	< 25	< 6	East Sunny
Mar-24 5th FN	04/03/24-05/03/24	18-03-2024	18/03/24-21/03/24	237	129	58	< 25	< 6	East Sunny
Mar-24 6th FN	21/03/24-22/03/24	01-04-2024	01/04/24-05/04/24	265	136	63	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35000



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1217	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K      **Project:** Karo - I      **Stations:** New Karo Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> +>PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	182	83	43	< 25	< 6	East Sunny
Jan-24 2nd FN	27/01/24-28/01/24	01-02-2024	01/02/24-05/02/24	175	79	47	< 25	< 6	East Sunny
Feb-24 3rd FN	04/02/24-05/02/24	17-02-2024	17/02/24-21/02/24	165	81	40	< 25	< 6	East Sunny
Feb-24 4th FN	20/02/24-21/02/24	01-03-2024	01/03/24-05/03/24	173	75	32	< 25	< 6	East Sunny
Mar-24 5th FN	04/03/24-05/03/24	18-03-2024	18/03/24-21/03/24	188	81	36	< 25	< 6	East Sunny
Mar-24 6th FN	21/03/24-22/03/24	01-04-2024	01/04/24-05/04/24	195	85	39	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35001



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1218	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Karo - I

Stations: Karo Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	143	66	38	< 25	< 6	East Sunny
Jan-24 2nd FN	27/01/24-28/01/24	01-02-2024	01/02/24-05/02/24	153	69	39	< 25	< 6	East Sunny
Feb-24 3rd FN	04/02/24-05/02/24	17-02-2024	17/02/24-21/02/24	138	64	26	< 25	< 6	East Sunny
Feb-24 4th FN	20/02/24-21/02/24	01-03-2024	01/03/24-05/03/24	156	68	36	< 25	< 6	East Sunny
Mar-24 5th FN	04/03/24-05/03/24	18-03-2024	18/03/24-21/03/24	173	74	39	< 25	< 6	East Sunny
Mar-24 6th FN	21/03/24-22/03/24	01-04-2024	01/04/24-05/04/24	206	81	41	< 25	< 6	East Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35002



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

### TEST REPORT

<b>03/24 Test Report No. 1219</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample:	Noise	Quarter Ending	Mar-24
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

### TEST RESULT

The sample has been tested with the following results: -

Area :	B&K		Project:		Karo - I	
Station Name	Noise Level dB(A) Leq					
	Jan-24 1st FN	Jan-24 2nd FN	Feb-24 3rd FN	Feb-24 4th FN	Mar-24 5th FN	Mar-24 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	05-01-2024	27-01-2024	04-02-2024	20-02-2024	04-03-2024	21-03-2024
<b>1. New Karo Colony</b>	49.5/43.3	58.2/50.4	52.5/44.6	50.9/48.9	50.9/48.5	51.2/49.6
Date of recording	05-01-2024	27-01-2024	04-02-2024	20-02-2024	04-03-2024	21-03-2024
<b>2. Karo Village</b>	51.4/45.5	60.2/50.6	49.8/43.5	51.8/49.5	51.5/49.7	51.8/49.7

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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35003



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1220	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Karo - I Stations: Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-24 1st FN	06/01/24	15/01/24	15/01/24-31/01/24	12	<2.00	7.55	34
Jan-24 2nd FN	30/01/24	01/02/24	01/02/24-16/02/24	16	<2.00	7.62	29
Feb-24 3rd FN	08/02/24	17/02/24	17/02/24-29/02/24	12	<2.00	7.6	28
Feb-24 4th FN	24/02/24	01/03/24	01/03/24-15/03/24	8	<2.00	7.65	31
Mar-24 5th FN	08/03/24	18/03/24	18/03/24-01/04/24	20	<2.00	7.72	38
Mar-24 6th FN	25/03/24	01/04/24	01/04/24-16/04/24	8	<2.00	7.69	30
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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## TEST REPORT

<b>03/24 Test Report No. 1221</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Karo Special

**Stations:** Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )/TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
<b>Jan-24 1st FN</b>	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	152	83	46	< 25	< 6	East Sunny
<b>Jan-24 2nd FN</b>	28/01/24-29/01/24	01-02-2024	01/02/24-05/02/24	148	79	40	< 25	< 6	East Sunny
<b>Feb-24 3rd FN</b>	05/02/24-06/02/24	17-02-2024	17/02/24-21/02/24	165	74	34	< 25	< 6	East Sunny
<b>Feb-24 4th FN</b>	21/02/24-22/02/24	01-03-2024	01/03/24-05/03/24	150	83	38	< 25	< 6	East Sunny
<b>Mar-24 5th FN</b>	05/03/24-06/03/24	18-03-2024	18/03/24-21/03/24	161	67	40	< 25	< 6	East Sunny
<b>Mar-24 6th FN</b>	22/03/24-23/03/24	01-04-2024	01/04/24-05/04/24	168	79	37	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35005



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

<b>03/24 Test Report No. 1222</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Karo Special

**Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10}$ + $>\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
<b>Jan-24 1st FN</b>	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	214	105	42	< 25	< 6	North Sunny
<b>Jan-24 2nd FN</b>	28/01/24-29/01/24	01-02-2024	01/02/24-05/02/24	202	116	47	< 25	< 6	East Sunny
<b>Feb-24 3rd FN</b>	05/02/24-06/02/24	17-02-2024	17/02/24-21/02/24	181	92	45	< 25	< 6	East Sunny
<b>Feb-24 4th FN</b>	21/02/24-22/02/24	01-03-2024	01/03/24-05/03/24	196	89	48	< 25	< 6	East Sunny
<b>Mar-24 5th FN</b>	05/03/24-06/03/24	18-03-2024	18/03/24-21/03/24	192	101	50	< 25	< 6	East Sunny
<b>Mar-24 6th FN</b>	22/03/24-23/03/24	01-04-2024	01/04/24-05/04/24	237	123	57	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35006



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1223	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Karo Special

Stations: Central School

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> +>PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	05/01/24-06/01/24	15-01-2024	15/01/24-18/01/24	183	73	38	< 25	< 6	North Sunny
Jan-24 2nd FN	28/01/24-29/01/24	01-02-2024	01/02/24-05/02/24	204	69	34	< 25	< 6	East Sunny
Feb-24 3rd FN	05/02/24-06/02/24	17-02-2024	17/02/24-21/02/24	164	65	31	< 25	< 6	East Sunny
Feb-24 4th FN	21/02/24-22/02/24	01-03-2024	01/03/24-05/03/24	171	71	33	< 25	< 6	East Sunny
Mar-24 5th FN	05/03/24-06/03/24	18-03-2024	18/03/24-21/03/24	226	82	41	< 25	< 6	East Sunny
Mar-24 6th FN	22/03/24-23/03/24	01-04-2024	01/04/24-05/04/24	249	85	46	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35008



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1225	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&K  
Stations:

Project: Karo Special  
Date of Sampling:

1. Bokaro River before Nala
2. Bokaro River after Nala

08-01-2024  
08-01-2024

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	12	12			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	7.8	8.3			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.42	0.42			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	1.48	1.47			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.4	8.2			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001			0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	55	64			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	198	207			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	37	28			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1226	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali Washery

Stations: Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )/TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	06/01/24-07/01/24	15-01-2024	15/01/24-18/01/24	169	68	37	< 25	< 6	North Sunny
Jan-24 2nd FN	29/01/24-30/01/24	01-02-2024	01/02/24-05/02/24	154	73	32	< 25	< 6	East Sunny
Feb-24 3rd FN	06/02/24-07/02/24	17-02-2024	17/02/24-21/02/24	179	74	39	< 25	< 6	East Sunny
Feb-24 4th FN	22/02/24-23/02/24	01-03-2024	01/03/24-05/03/24	192	86	41	< 25	< 6	East Sunny
Mar-24 5th FN	06/03/24-07/03/24	18-03-2024	18/03/24-21/03/24	190	76	37	< 25	< 6	East Sunny
Mar-24 6th FN	23/03/24-24/03/24	01-04-2024	01/04/24-05/04/24	194	78	42	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

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35010



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1227	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali Washery

Stations: Dhori GM Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10+</sub> >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	12/01/24-13/01/24	15-01-2024	15/01/24-18/01/24	217	102	51	< 25	< 6	East Sunny
Jan-24 2nd FN	24/01/24-25/01/24	01-02-2024	01/02/24-05/02/24	192	90	47	< 25	< 6	East Sunny
Feb-24 3rd FN	14/02/24-15/02/24	17-02-2024	17/02/24-21/02/24	197	96	42	< 25	< 6	East Sunny
Feb-24 4th FN	28/02/24-29/02/24	01-03-2024	01/03/24-05/03/24	215	107	54	< 25	< 6	East Sunny
Mar-24 5th FN	14/03/24-15/03/24	18-03-2024	18/03/24-21/03/24	208	117	56	< 25	< 6	East Sunny
Mar-24 6th FN	29/03/24-30/03/24	01-04-2024	01/04/24-05/04/24	241	125	58	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1228	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali Washery

Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	02/01/24-03/01/24	15-01-2024	15/01/24-18/01/24	183	78	43	< 25	< 6	East Sunny
Jan-24 2nd FN	16/01/24-17/01/24	01-02-2024	01/02/24-05/02/24	191	83	50	< 25	< 6	West Sunny
Feb-24 3rd FN	01/02/24-02/02/24	17-02-2024	17/02/24-21/02/24	155	78	43	< 25	< 6	East Sunny
Feb-24 4th FN	17/02/24-18/02/24	01-03-2024	01/03/24-05/03/24	168	74	45	< 25	< 6	East Sunny
Mar-24 5th FN	01/03/24-02/03/24	18-03-2024	18/03/24-21/03/24	162	85	47	< 25	< 6	East Sunny
Mar-24 6th FN	18/03/24-19/03/24	01-04-2024	01/04/24-05/04/24	172	90	51	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35012

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

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A Mini Ratna Company

## TEST REPORT

03/24 Test Report No. 1229	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali Washery

Stations: Phusro W/S

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	03/01/24-04/01/24	15-01-2024	15/01/24-18/01/24	217	124	57	< 25	< 6	East Sunny
Jan-24 2nd FN	17/01/24-18/01/24	01-02-2024	01/02/24-05/02/24	237	133	62	< 25	< 6	West Cloud
Feb-24 3rd FN	02/02/24-03/02/24	17-02-2024	17/02/24-21/02/24	242	110	51	< 25	< 6	East Sunny
Feb-24 4th FN	18/02/24-19/02/24	01-03-2024	01/03/24-05/03/24	261	118	54	< 25	< 6	East Sunny
Mar-24 5th FN	02/03/24-03/03/24	18-03-2024	18/03/24-21/03/24	275	120	58	< 25	< 6	East Sunny
Mar-24 6th FN	19/03/24-20/03/24	01-04-2024	01/04/24-05/04/24	282	125	57	< 25	< 6	East Rain

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35013

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

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A Mini Ratna Company**TEST REPORT**

03/24 Test Report No. 1230	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Mar-24
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

**TEST RESULT**

The sample has been tested with the following results: -

Area : **B&K** Project: **Kargali Washery**

Station Name	Noise Level dB(A) Leq					
	Jan-24 1st FN	Jan-24 2nd FN	Feb-24 3rd FN	Feb-24 4th FN	Mar-24 5th FN	Mar-24 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	06-01-2024	29-01-2024	06-02-2024	22-02-2024	06-03-2024	23-03-2024
<b>1. Subhas Nagar Colony</b>	51.6/45.2	57.8/51.4	51.6/44.3	51.7/49.4	50.6/48.9	51.5/49.7
Date of recording	12-01-2024	24-01-2024	14-02-2024	28-02-2024	14-03-2024	29-03-2024
<b>2. Dhori G.M.Office</b>	51.5/45.4	60.8/50.4	54.6/47.7	50.1/49.3	50.1/48.3	50.1/48.5

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1231	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Konar Expansion OCP Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> +>PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	06/01/24-07/01/24	15-01-2024	15/01/24-18/01/24	156	64	34	< 25	< 6	North Sunny
Jan-24 2nd FN	29/01/24-30/01/24	01-02-2024	01/02/24-05/02/24	135	67	29	< 25	< 6	East Sunny
Feb-24 3rd FN	06/02/24-07/02/24	17-02-2024	17/02/24-21/02/24	166	71	34	< 25	< 6	East Sunny
Feb-24 4th FN	22/02/24-23/02/24	01-03-2024	01/03/24-05/03/24	143	68	36	< 25	< 6	East Sunny
Mar-24 5th FN	06/03/24-07/03/24	18-03-2024	18/03/24-21/03/24	188	86	43	< 25	< 6	East Sunny
Mar-24 6th FN	23/03/24-24/03/24	01-04-2024	01/04/24-05/04/24	225	81	48	< 25	< 6	East Sunny

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1232	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Konar Expansion OCP Stations: P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter (PM <sub>10</sub> + >PM <sub>10</sub> )TPM	Particulate Matter (PM <sub>10</sub> )	Particulate Matter (PM <sub>2.5</sub> )	Sulphur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (as NO <sub>x</sub> )	
Jan-24 1st FN	06/01/24-07/01/24	15-01-2024	15/01/24-18/01/24	212	108	52	< 25	< 6	North Sunny
Jan-24 2nd FN	29/01/24-30/01/24	01-02-2024	01/02/24-05/02/24	219	96	47	< 25	< 6	East Sunny
Feb-24 3rd FN	06/02/24-07/02/24	17-02-2024	17/02/24-21/02/24	204	113	45	< 25	< 6	East Sunny
Feb-24 4th FN	22/02/24-23/02/24	01-03-2024	01/03/24-05/03/24	191	90	40	< 25	< 6	East Sunny
Mar-24 5th FN	06/03/24-07/03/24	18-03-2024	18/03/24-21/03/24	226	108	47	< 25	< 6	East Sunny
Mar-24 6th FN	23/03/24-24/03/24	01-04-2024	01/04/24-05/04/24	231	103	52	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1233	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K      **Project:** Konar Expansion OCP      **Stations:** Barwabera Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	07/01/24-08/01/24	15-01-2024	15/01/24-18/01/24	165	78	48	< 25	< 6	North Sunny
Jan-24 2nd FN	30/01/24-31/01/24	01-02-2024	01/02/24-05/02/24	181	81	46	< 25	< 6	East Sunny
Feb-24 3rd FN	07/02/24-08/02/24	17-02-2024	17/02/24-21/02/24	176	72	36	< 25	< 6	East Sunny
Feb-24 4th FN	23/02/24-24/02/24	01-03-2024	01/03/24-05/03/24	167	72	32	< 25	< 6	East Sunny
Mar-24 5th FN	07/03/24-08/03/24	18-03-2024	18/03/24-21/03/24	176	65	34	< 25	< 6	East Sunny
Mar-24 6th FN	24/03/24-25/03/24	01-04-2024	01/04/24-05/04/24	203	83	47	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept. '2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1234	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Konar Expansion OCP

Stations:

Lodherbera Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters ( in $\mu\text{g}/\text{m}^3$ )					Wind Direction (from) & Weather
				Total Particulate Matter ( $\text{PM}_{10} + >\text{PM}_{10}$ )/TPM	Particulate Matter ( $\text{PM}_{10}$ )	Particulate Matter ( $\text{PM}_{2.5}$ )	Sulphur Dioxide ( $\text{SO}_2$ )	Nitrogen Oxides (as $\text{NO}_x$ )	
Jan-24 1st FN	07/01/24-08/01/24	15-01-2024	15/01/24-18/01/24	154	62	31	< 25	< 6	North Sunny
Jan-24 2nd FN	30/01/24-31/01/24	01-02-2024	01/02/24-05/02/24	170	75	41	< 25	< 6	East Sunny
Feb-24 3rd FN	07/02/24-08/02/24	17-02-2024	17/02/24-21/02/24	165	83	39	< 25	< 6	East Sunny
Feb-24 4th FN	23/02/24-24/02/24	01-03-2024	01/03/24-05/03/24	157	67	34	< 25	< 6	East Sunny
Mar-24 5th FN	07/03/24-08/03/24	18-03-2024	18/03/24-21/03/24	178	74	42	< 25	< 6	East Sunny
Mar-24 6th FN	24/03/24-25/03/24	01-04-2024	01/04/24-05/04/24	184	84	45	< 25	< 6	East Sunny

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1235	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Mar-24
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

## TEST RESULT

The sample has been tested with the following results: -

Area :

B&amp;K

Project:

Konar Expansion OCP

Station Name	Noise Level dB(A) Leq					
	Jan-24 1st FN	Jan-24 2nd FN	Feb-24 3rd FN	Feb-24 4th FN	Mar-24 5th FN	Mar-24 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	06-01-2024	29-01-2024	06-02-2024	22-02-2024	06-03-2024	23-03-2024
<b>1. P.O.Office</b>	52.2/45.4	58.4/50.8	50.8/44.2	50.3/48.7	50.1/48.4	50.3/48.5
Date of recording	06-01-2024	29-01-2024	06-02-2024	22-02-2024	06-03-2024	23-03-2024
<b>2. Barwabera Village</b>	52.3/43.7	6.2/51.4	49.7/45.5	51.9/49.7	51.8/49.3	51.9/49.6
Date of recording	06-01-2024	29-01-2024	06-02-2024	22-02-2024	06-03-2024	23-03-2024
<b>3. Lodherbera Village</b>	52.4/44.5	59.8/51.6	52.4/46.5	51.8/49.5	51.6/49.8	51.8/49.6

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1236	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Mar-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane. Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K Project: Konar Expansion OCP Stations: Lagoon Konar OCP

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-24 1st FN	06/01/24	15/01/24	15/01/24-31/01/24	8	<2.00	7.61	37
Jan-24 2nd FN	30/01/24	01/02/24	01/02/24-16/02/24	12	<2.00	7.56	33
Feb-24 3rd FN	08/02/24	17/02/24	17/02/24-29/02/24	8	<2.00	7.64	31
Feb-24 4th FN	24/02/24	01/03/24	01/03/24-15/03/24	16	<2.00	7.81	43
Mar-24 5th FN	08/03/24	18/03/24	18/03/24-01/04/24	12	<2.00	7.65	35
Mar-24 6th FN	25/03/24	01/04/24	01/04/24-16/04/24	20	<2.00	7.73	41
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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35020



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1237	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

<b>Area :</b>	<b>B&amp;K</b>	<b>Project:</b>	<b>Konar Expansion OCP</b>
<b>Stations:</b>			<b>Date of Sampling:</b>
	1. Upstream of Konar River		08-01-2024
	2. Downstream of Konar River		08-01-2024
	3. Goda nala D/S of Mine		08-01-2024
	4. Konar River in Confluence with Bokaro River		08-01-2024

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002	<0.002	<0.002	0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	<2.00	<2.00	<2.00	<2.00	2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004	<0.0004	<0.0004	0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl <sup>-</sup> ), mg/l	12	12	20	12	2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02	<0.02	<0.02	0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	7.6	7.9	7.6	8	0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F <sup>-</sup> ) mg/l	0.45	0.45	0.74	0.48	0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01	<0.01	<0.01	0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04	<0.04	<0.04	0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001	<0.001	<0.001	0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	1.88	1.97	9.29	2.29	0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.3	8.3	8	7.9	1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001	<0.001	<0.001	<0.001	0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) mg/l	39	37	90	39	2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	202	214	346	209	25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	32	33	13	15	10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	<0.005	<0.005	<0.005	<0.005	0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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35021



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1238	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Mar-24
Customer	CCL	Date of Receipt:	15-01-2024
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	15.01.24-20.03.24
Testing/ Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

## TEST RESULT

The sample has been tested with the following results: -

Area :

B&amp;K

Project:

Konar Expansion  
OCP

Stations:

1. Well at Barwabera Village

Date of Sampling:

08-01-2024

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3			
1	Boron (as B), mg/l	<0.20			0.20	0.5, Max	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004			0.0004	0.003, Max	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	78.4			1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl <sup>-</sup> ), mg/l	92			2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02			0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F <sup>-</sup> ) mg/l	0.79			0.02	1.0, Max	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02			0.02	0.2, Min	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04			0.04	0.3, Max	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001			0.001	0.01, Max	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01			0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003			0.003	0.02, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO <sub>3</sub> <sup>-</sup> ), mg/l	75.60			0.5	45, Max	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	8.2			1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	<0.001			0.001	0.001, Max	APHA, 23rd Edition, 4-Amino Autipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005			0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO <sub>4</sub> <sup>2-</sup> ) mg/l	195			2.00	200, Max	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO <sub>3</sub> ), mg/l	148			4.00	200, Max	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002			0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002			0.002	0.05, Max	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	737			25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO <sub>3</sub> ), mg/l	372			4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	1			1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	<0.005			0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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# 35022



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

## TEST REPORT

<b>03/24 Test Report No. 1200</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Kargali OC

**Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	02/01/24	02/01/24	02/01/24	<20	0.422	<19.62	E to W
Jan.'24 2nd FN	16/01/24	16/01/24	16/01/24	<20	0.439	<19.62	W to E
Feb.'24 3rd FN	01/02/24	01/02/24	01/02/24	<20	0.455	<19.62	E to W
Feb.'24 4th FN	17/02/24	17/02/24	17/02/24	<20	0.471	<19.62	E to W
March '24 5th FN	01/03/24	01/03/24	01/03/24	<20	0.498	<19.62	E to W
March '24 6th FN	18/03/24	18/03/24	18/03/24	<20	0.510	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35023



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

03/24 Test Report No. 1201	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	02/01/24	02/01/24	02/01/24	<20	0.522	<19.62	E to W
Jan.'24 2nd FN	16/01/24	16/01/24	16/01/24	<20	0.540	<19.62	W to E
Feb.'24 3rd FN	01/02/24	01/02/24	01/02/24	<20	0.551	<19.62	E to W
Feb.'24 4th FN	17/02/24	17/02/24	17/02/24	<20	0.566	<19.62	E to W
March '24 5th FN	01/03/24	01/03/24	01/03/24	<20	0.582	<19.62	E to W
March '24 6th FN	18/03/24	18/03/24	18/03/24	<20	0.600	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TC - 7470

35024

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

cmpdi  
A Mini Ratna Company**TEST REPORT**

03/24 Test Report No. 1202	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: I W S P Kargali

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	02/01/24	02/01/24	02/01/24	<20	0.443	<19.62	E to W
Jan.'24 2nd FN	16/01/24	16/01/24	16/01/24	<20	0.455	<19.62	W to E
Feb.'24 3rd FN	01/02/24	01/02/24	01/02/24	<20	0.469	<19.62	E to W
Feb.'24 4th FN	17/02/24	17/02/24	17/02/24	<20	0.481	<19.62	E to W
March '24 5th FN	01/03/24	01/03/24	01/03/24	<20	0.503	<19.62	E to W
March '24 6th FN	18/03/24	18/03/24	18/03/24	<20	0.518	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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35025



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1203	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali OC

Stations: Phusro Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	03/01/24	03/01/24	03/01/24	<20	0.470	<19.62	E to W
Jan.'24 2nd FN	17/01/24	17/01/24	17/01/24	<20	0.488	<19.62	W to E
Feb.'24 3rd FN	02/02/24	02/02/24	02/02/24	<20	0.502	<19.62	E to W
Feb.'24 4th FN	18/02/24	18/02/24	18/02/24	<20	0.519	<19.62	E to W
March '24 5th FN	02/03/24	02/03/24	02/03/24	<20	0.531	<19.62	E to W
March '24 6th FN	19/03/24	19/03/24	19/03/24	<20	0.546	<19.62	E to W

## Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35026



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1204	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Kargali OC                      **Stations:** Jawahar Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	03/01/24	03/01/24	03/01/24	<20	0.458	<19.62	E to W
Jan.'24 2nd FN	17/01/24	17/01/24	17/01/24	<20	0.469	<19.62	E to W
Feb.'24 3rd FN	02/02/24	02/02/24	02/02/24	<20	0.488	<19.62	E to W
Feb.'24 4th FN	18/02/24	18/02/24	18/02/24	<20	0.500	<19.62	E to W
March '24 5th FN	02/03/24	02/03/24	02/03/24	<20	0.514	<19.62	E to W
March '24 6th FN	19/03/24	19/03/24	19/03/24	<20	0.531	<19.62	E to W

**Note:** -

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

## TEST REPORT

03/24 Test Report No. 1205	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Bokaro OC                      **Stations:** Hind Strip Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	03/01/24	03/01/24	03/01/24	<20	0.419	<19.62	E to W
Jan.'24 2nd FN	17/01/24	17/01/24	17/01/24	<20	0.433	<19.62	E to W
Feb.'24 3rd FN	02/02/24	02/02/24	02/02/24	<20	0.449	<19.62	E to W
Feb.'24 4th FN	18/02/24	18/02/24	18/02/24	<20	0.464	<19.62	E to W
March '24 5th FN	02/03/24	02/03/24	02/03/24	<20	0.478	<19.62	E to W
March '24 6th FN	19/03/24	19/03/24	19/03/24	<20	0.499	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TC - 7470

35028

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

cmpdi  
A Mini Ratna Company**TEST REPORT**

03/24 Test Report No. 1206	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K**Project:** Bokaro OC**Stations:** Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	04/01/24	04/01/24	04/01/24	<20	0.486	<19.62	E to W
Jan.'24 2nd FN	18/01/24	18/01/24	18/01/24	<20	0.500	<19.62	E to W
Feb.'24 3rd FN	03/02/24	03/02/24	03/02/24	<20	0.517	<19.62	E to W
Feb.'24 4th FN	19/02/24	19/02/24	19/02/24	<20	0.530	<19.62	E to W
March '24 5th FN	03/03/24	03/03/24	03/03/24	<20	0.542	<19.62	E to W
March '24 6th FN	20/03/24	20/03/24	20/03/24	<20	0.561	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35029



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1207	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Bokaro OC                      **Stations:** Gandhinagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	04/01/24	04/01/24	04/01/24	<20	0.402	<19.62	E to W
Jan.'24 2nd FN	18/01/24	18/01/24	18/01/24	<20	0.421	<19.62	E to W
Feb.'24 3rd FN	03/02/24	03/02/24	03/02/24	<20	0.433	<19.62	E to W
Feb.'24 4th FN	19/02/24	19/02/24	19/02/24	<20	0.454	<19.62	E to W
March '24 5th FN	03/03/24	03/03/24	03/03/24	<20	0.469	<19.62	E to W
March '24 6th FN	20/03/24	20/03/24	20/03/24	<20	0.481	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

<b>03/24 Test Report No. 1208</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Karo - I                      **Stations:** Karo Seam Incline

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	04/01/24	04/01/24	04/01/24	<20	0.458	<19.62	E to W
Jan.'24 2nd FN	18/01/24	18/01/24	18/01/24	<20	0.471	<19.62	E to W
Feb.'24 3rd FN	03/02/24	03/02/24	03/02/24	<20	0.490	<19.62	E to W
Feb.'24 4th FN	19/02/24	19/02/24	19/02/24	<20	0.511	<19.62	E to W
March '24 5th FN	03/03/24	03/03/24	03/03/24	<20	0.527	<19.62	E to W
March '24 6th FN	20/03/24	20/03/24	20/03/24	<20	0.544	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35031



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1209	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

Area : B&K

Project: Karo - I

Stations: Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.541	<19.62	E to W
Jan.'24 2nd FN	27/01/24	27/01/24	27/01/24	<20	0.555	<19.62	E to W
Feb.'24 3rd FN	04/02/24	04/02/24	04/02/24	<20	0.568	<19.62	E to W
Feb.'24 4th FN	20/02/24	20/02/24	20/02/24	<20	0.580	<19.62	E to W
March '24 5th FN	04/03/24	04/03/24	04/03/24	<20	0.598	<19.62	E to W
March '24 6th FN	21/03/24	21/03/24	21/03/24	<20	0.609	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TC - 7470

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

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A Mini Ratna Company**TEST REPORT**

03/24 Test Report No. 1210	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Karo - I                      **Stations:** New Karo Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.3700	<19.62	E to W
Jan.'24 2nd FN	27/01/24	27/01/24	27/01/24	<20	0.388	<19.62	E to W
Feb.'24 3rd FN	04/02/24	04/02/24	04/02/24	<20	0.407	<19.62	E to W
Feb.'24 4th FN	20/02/24	20/02/24	20/02/24	<20	0.420	<19.62	E to W
March '24 5th FN	04/03/24	04/03/24	04/03/24	<20	0.432	<19.62	E to W
March '24 6th FN	21/03/24	21/03/24	21/03/24	<20	0.448	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

03/24 Test Report No. 1211	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K**Project:** Karo - I**Stations:** Karo Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.411	<19.62	E to W
Jan.'24 2nd FN	27/01/24	27/01/24	27/01/24	<20	0.428	<19.62	E to W
Feb.'24 3rd FN	04/02/24	04/02/24	04/02/24	<20	0.437	<19.62	E to W
Feb.'24 4th FN	20/02/24	20/02/24	20/02/24	<20	0.450	<19.62	E to W
March '24 5th FN	04/03/24	04/03/24	04/03/24	<20	0.462	<19.62	E to W
March '24 6th FN	21/03/24	21/03/24	21/03/24	<20	0.483	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35034



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

## TEST REPORT

<b>03/24 Test Report No. 1212</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Karo Special

**Stations:** Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.491	<19.62	E to W
Jan.'24 2nd FN	28/01/24	28/01/24	28/01/24	<20	0.501	<19.62	E to W
Feb.'24 3rd FN	05/02/24	05/02/24	05/02/24	<20	0.517	<19.62	E to W
Feb.'24 4th FN	21/02/24	21/02/24	21/02/24	<20	0.530	<19.62	E to W
March '24 5th FN	05/03/24	05/03/24	05/03/24	<20	0.547	<19.62	E to W
March '24 6th FN	22/03/24	22/03/24	22/03/24	<20	0.561	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35035



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

## TEST REPORT

<b>03/24 Test Report No. 1213</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Karo Special

**Stations:** P.O. Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.499	<19.62	N to S
Jan.'24 2nd FN	28/01/24	28/01/24	28/01/24	<20	0.519	<19.62	E to W
Feb.'24 3rd FN	05/02/24	05/02/24	05/02/24	<20	0.538	<19.62	E to W
Feb.'24 4th FN	21/02/24	21/02/24	21/02/24	<20	0.550	<19.62	E to W
March '24 5th FN	05/03/24	05/03/24	05/03/24	<20	0.564	<19.62	E to W
March '24 6th FN	22/03/24	22/03/24	22/03/24	<20	0.577	<19.62	E to W

### Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

03/24 Test Report No. 1214	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Karo Special                      **Stations:** Central School

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	05/01/24	05/01/24	05/01/24	<20	0.366	<19.62	N to S
Jan.'24 2nd FN	28/01/24	28/01/24	28/01/24	<20	0.379	<19.62	E to W
Feb.'24 3rd FN	05/02/24	05/02/24	05/02/24	<20	0.395	<19.62	E to W
Feb.'24 4th FN	21/02/24	21/02/24	21/02/24	<20	0.402	<19.62	E to W
March '24 5th FN	05/03/24	05/03/24	05/03/24	<20	0.429	<19.62	E to W
March '24 6th FN	22/03/24	22/03/24	22/03/24	<20	0.441	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35037



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

## TEST REPORT

<b>03/24 Test Report No. 1215</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Kargali Washery

**Stations:** Subhas Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	06/01/24	06/01/24	06/01/24	<20	0.358	<19.62	N to S
Jan.'24 2nd FN	29/01/24	29/01/24	29/01/24	<20	0.371	<19.62	E to W
Feb.'24 3rd FN	06/02/24	06/02/24	06/02/24	<20	0.383	<19.62	E to W
Feb.'24 4th FN	22/02/24	22/02/24	22/02/24	<20	0.412	<19.62	E to W
March '24 5th FN	06/03/24	06/03/24	06/03/24	<20	0.433	<19.62	E to W
March '24 6th FN	23/03/24	23/03/24	23/03/24	<20	0.440	<19.62	E to W

### Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35038



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

## TEST REPORT

<b>03/24 Test Report No. 1216</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

## TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Kargali Washery

**Stations:** Dhori G.M.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$ )	CO (in $\text{mg}/\text{m}^3$ )	Ozone (in $\mu\text{g}/\text{m}^3$ )	
Jan.'24 1st FN	12/01/24	12/01/24	12/01/24	<20	0.397	<19.62	N to S
Jan.'24 2nd FN	24/01/24	24/01/24	24/01/24	<20	0.412	<19.62	E to W
Feb.'24 3rd FN	14/02/24	14/02/24	14/02/24	<20	0.462	<19.62	E to W
Feb.'24 4th FN	28/02/24	28/02/24	28/02/24	<20	0.477	<19.62	E to W
March '24 5th FN	14/03/24	14/03/24	14/03/24	<20	0.484	<19.62	E to W
March '24 6th FN	29/03/24	29/03/24	29/03/24	<20	0.493	<19.62	W to E

### Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

03/24 Test Report No. 1217	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

Area : B&amp;K

Project: Kargali Washery

Stations: Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	02/01/24	02/01/24	02/01/24	<20	0.522	<19.62	E to W
Jan.'24 2nd FN	16/01/24	16/01/24	16/01/24	<20	0.540	<19.62	W to E
Feb.'24 3rd FN	01/02/24	01/02/24	01/02/24	<20	0.551	<19.62	E to W
Feb.'24 4th FN	17/02/24	17/02/24	17/02/24	<20	0.566	<19.62	E to W
March '24 5th FN	01/03/24	01/03/24	01/03/24	<20	0.582	<19.62	E to W
March '24 6th FN	18/03/24	18/03/24	18/03/24	<20	0.600	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35040



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

### TEST REPORT

<b>03/24 Test Report No. 1218</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K

**Project:** Kargali Washery

**Stations:** Phusro Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	03/01/24	03/01/24	03/01/24	<20	0.470	<19.62	E to W
Jan.'24 2nd FN	17/01/24	17/01/24	17/01/24	<20	0.488	<19.62	W to E
Feb.'24 3rd FN	02/02/24	02/02/24	02/02/24	<20	0.502	<19.62	E to W
Feb.'24 4th FN	18/02/24	18/02/24	18/02/24	<20	0.519	<19.62	E to W
March '24 5th FN	02/03/24	02/03/24	02/03/24	<20	0.531	<19.62	E to W
March '24 6th FN	19/03/24	19/03/24	19/03/24	<20	0.546	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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35041



ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

**TEST REPORT**

03/24 Test Report No. 1219	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

**TEST RESULT**

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Konar Expansion OCP                      **Stations:** Rest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	06/01/24	06/01/24	06/01/24	<20	0.332	<19.62	N to S
Jan.'24 2nd FN	29/01/24	29/01/24	29/01/24	<20	0.358	<19.62	E to W
Feb.'24 3rd FN	06/02/24	06/02/24	06/02/24	<20	0.379	<19.62	E to W
Feb.'24 4th FN	22/02/24	22/02/24	22/02/24	<20	0.394	<19.62	E to W
March '24 5th FN	06/03/24	06/03/24	06/03/24	<20	0.407	<19.62	E to W
March '24 6th FN	23/03/24	23/03/24	23/03/24	<20	0.420	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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# 35042



**ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI**

### TEST REPORT

<b>03/24 Test Report No. 1220</b>	<b>Job No. 094323120</b>	<b>Year</b>	<b>FY2023-24</b>
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Konar Expansion OCP                      **Stations:** P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	06/01/24	06/01/24	06/01/24	<20	0.428	<19.62	N to S
Jan.'24 2nd FN	29/01/24	29/01/24	29/01/24	<20	0.440	<19.62	E to W
Feb.'24 3rd FN	06/02/24	06/02/24	06/02/24	<20	0.452	<19.62	E to W
Feb.'24 4th FN	22/02/24	22/02/24	22/02/24	<20	0.464	<19.62	E to W
March '24 5th FN	06/03/24	06/03/24	06/03/24	<20	0.476	<19.62	E to W
March '24 6th FN	23/03/24	23/03/24	23/03/24	<20	0.490	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

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# 35043



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1221	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Konar Expansion OCP                      **Stations:** Barwabera Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	07/01/24	07/01/24	07/01/24	<20	0.462	<19.62	N to S
Jan.'24 2nd FN	30/01/24	30/01/24	30/01/24	<20	0.479	<19.62	E to W
Feb.'24 3rd FN	07/02/24	07/02/24	07/02/24	<20	0.496	<19.62	E to W
Feb.'24 4th FN	23/02/24	23/02/24	23/02/24	<20	0.503	<19.62	E to W
March '24 5th FN	07/03/24	07/03/24	07/03/24	<20	0.526	<19.62	E to W
March '24 6th FN	24/03/24	24/03/24	24/03/24	<20	0.544	<19.62	E to W

**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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# 35044



## ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

### TEST REPORT

03/24 Test Report No. 1222	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	March-24
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

### TEST RESULT

The sample has been tested with the following results: -

**Area :** B&K                      **Project:** Konar Expansion OCP                      **Stations:** Lodherbera Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m <sup>3</sup> )	CO (in mg/m <sup>3</sup> )	Ozone (in µg/m <sup>3</sup> )	
Jan.'24 1st FN	07/01/24	07/01/24	07/01/24	<20	0.428	<19.62	N to S
Jan.'24 2nd FN	30/01/24	30/01/24	30/01/24	<20	0.444	<19.62	E to W
Feb.'24 3rd FN	07/02/24	07/02/24	07/02/24	<20	0.452	<19.62	E to W
Feb.'24 4th FN	23/02/24	23/02/24	23/02/24	<20	0.468	<19.62	E to W
March '24 5th FN	07/03/24	07/03/24	07/03/24	<20	0.488	<19.62	E to W
March '24 6th FN	24/03/24	24/03/24	24/03/24	<20	0.502	<19.62	E to W

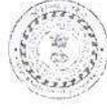
**Note:**

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

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उपायुक्त-सह-जिला दण्डाधिकारी का कार्यालय, बोकारो।

(राजस्व शाखा)

पत्रांक ...206.../रा0,

प्रेषक,

अपर समाहर्ता,  
बोकारो।

सेवा में,

सभी अंचल अधिकारी,  
बोकारो जिला।

बोकारो, दिनांक...22.../06/2024

विषय:- माननीय NGT, New Delhi के Original Application No.- 200/2014 में दिनांक 22.06.2024 को पारित आदेश के अनुपालन के संबंध में।

प्रसंग:- इस कार्यालय का पत्रांक-474/रा0, दिनांक 05.03.2024

महाशय,

उपर्युक्त विषय के संबंध में प्रासंगिक पत्र के द्वारा उपायुक्त बोकारो की अध्यक्षता में माननीय NGT, New Delhi के Original Application No.- 200/2014 में पारित आदेश के अनुपालन से संबंधित आयोजित बैठक की कार्यवाही की कण्डिका V. Regulation of Flood Plain Zone से संबंधित कृत कार्रवाई का प्रतिवेदन उपलब्ध कराने का निदेश दिया गया है जिसका अनुपालन प्रतिवेदन अभी तक अप्राप्त है।

उक्त के क्रम में पुनः उपायुक्त बोकारो का ज्ञापांक 932/विधि, दिनांक 22.06.2024 (छायाप्रति संलग्न) के द्वारा कण्डिका V. Regulation of Flood Plain Zone का अनुपालन प्रतिवेदन की मांग की गई है।

अतः निदेश है कि उक्त कण्डिका का अनुपालन प्रतिवेदन पत्र प्राप्ति के 24 घंटे के अन्दर उपलब्ध कराना सुनिश्चित करेंगे।

अनुलग्नक:-यथोक्त।

विश्वासभाजन

22/06/2024

अपर समाहर्ता,  
बोकारो।

## कार्यालय – असैनिक शल्य चिकित्सक-सह-मुख्य चिकित्सा पदाधिकारी, बोकारो

पत्रांक २०१२

प्रेषक,

असैनिक शल्य चिकित्सक-सह-मुख्य  
चिकित्सा पदाधिकारी, बोकारो।

सेवा में,

उपायुक्त,  
बोकारो

बोकारो/दिनांक ०२/०७/२५

विषय :-

दिनांक 14.06.2024 को भवदीया की अध्यक्षता में आयोजित माननीय NGT में विचाराधीन वाद O.A No. 200/2014-M.C Mehta Vs Union of India & Ors. में पारित आदेश के अनुपालन से संबंधित वॉछित प्रतिवेदन का प्रेषण।

प्रसंग :-

भवदीया के पत्रांक 932/विधि, दिनांक 22.06.2024।

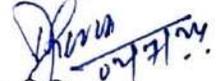
महाशय,

उपरोक्त विषयक एवं सदरित पत्र के आलोक में दिनांक 14.06.2024 को भवदीया की अध्यक्षता में आयोजित माननीय NGT में विचाराधीन वाद O.A No. 200/2014-M.C Mehta Vs Union of India & Ors. में पारित आदेश के अनुपालन से संबंधित वॉछित प्रतिवेदन निम्नरूपेण उपलब्ध कराई जा रही हैं।

कंडिका सं०	वॉछित प्रतिवेदन	अनुपालन प्रतिवेदन	अभ्युक्ति
VI	The per day total generation of Bio-medical waste in the district	The per day total generation of Bio-medical waste in the district is following - <b>Total collection KG /Year -29463.50 Kg</b> <b>Total collection KG/Day – 80.72 Kg</b>	
	The manner of its treatment and disposal	Biomedical Wastes are primarily segregated in Color Coded Bins and then autoclaved. Sharp Burial Pits and Deep Pits are used for disposal of hospital bio-wastes in all the government facilities. Incinerator is also functional in BGH and Bio-Genetic Pvt. Ltd. collects all the hospital bio- wastes from private hospitals and disposes off accordingly.	

अतः भवदीया के सूचनार्थ एवं अग्रेतर कार्रवाई हेतु प्रेषित।

विश्वासभाजन



असैनिक शल्य चिकित्सक सह मुख्य  
चिकित्सा पदाधिकारी, बोकारो



दामोदर घाटी निगम / DAMODAR VALLEY CORPORATION  
 बोकारो ताप विद्युत केंद्र / BOKARO THERMAL POWER STATION  
 पोस्ट - बोकारो थर्मल, जिला : बोकारो (झारखण्ड) - 829107  
 P.O: BOKARO THERMAL, DIST: BOKARO (JHARKHAND) - 829107

सं०: बीटी / जीएम एवं एचओपी/ द्विभाषी/ 18/-51  
 No.: BT /GM & HOP/Bilingual /18/-51

दिनांक: 19.06.2024  
 Date: 19.06.2024

सेवा में,

सदस्य संयोजक,

जिला गंगा समिति सह वन प्रमण्डल पदाधिकारी,

ब्लॉक - A, बोकारो वन प्रमण्डल, बोकारो।

वन भवन, पुरुलिया रोड, चास,

बोकारो स्टील सिटी,

पीन नं.- 827013, झारखंड ।



विषय:- जिला गंगा समिति की दिनांक 14.06.2024 को सम्पन्न बैठक में दिए गए निर्देश के आलोक में अधतनप्रतिवेदन उपलब्ध कराने के सम्बंध में ।

संदर्भ:- 1. जिला गंगा समिति, ज्ञापांक 1166 दिनांक 11.06.2024.

2. पत्रांक सं. SMCG/UDHD/NGT MOM/08/2021-72 दिनांक 26.04.2024.

महोदय,

उपरोक्त विषय संबंधित पत्र हमारे कार्यालय को प्राप्त हुआ जिसमें जिला गंगा समिति की दिनांक 14.06.2024 को आहुत बैठक का कार्यवृत्त संलग्न है ।

इस संदर्भ में बोकारो ताप विद्युत केंद्र, डीवीसी से संबंधित बिंदुओं का अनुपालन प्रतिवेदन संलग्नित है जिसे प्राप्त करने की कृपा की जाए ।

धन्यवाद/Thanking you,

भवदीय/ Yours faithfully,

*Anand Mohan Prasad*  
 17/6/2024

(आनंद मोहन प्रसाद / Anand Mohan Prasad)

वरिष्ठ महाप्रबंधक एवं परियोजना प्रधान / Sr. General Manager & HOP  
 दाघानि, बोताविके / DVC, BTPS.

प्रतिलिपि:

1. उपायुक्त, बोकारो, अध्यक्ष, जिला गंगा समिति, कैम्प -II रोड, बोकारो सेक्टर 1, बोकारो स्टील सिटी, पीन नं.- 827001, झारखंड ।

**Compliance report of points of NGT (Vide letter no. SMCg/UDHD/NGT MOM/08/2021-72 Dated 26.04.2024) in connection with District Ganga Committee in respect to Bokaro Thermal Power Station, DVC**

SL. NO.	ISSUES/POINTS	COMPLIANCE STATUS AS ON DATE
1	Fly Ash from (TTP) i.e. BTPS	<p>(a) Dry Fly Ash generated is conveyed pneumatically through Dry Fly Ash Collection system and subsequently, collected in two (2) no. of silos of capacity 2x1200 MT. Dry fly ash is being taken by outside engaged cement/bricks manufacturing agencies.</p> <p>Apart from above, Dry fly ash is being provided to many fly ash based brick plants through engaging an entrepreneur M/s B. K. Maho, BTPS, Bokaro. In addition to the above, we have approached many entrepreneurs in nearby villages and aware them about benefits of fly ash bricks resulting some people have established their brick manufacturing units. Also, through Expression Of Interest(EOI) we have opened facilities for more utilisation of Dry Fly Ash by agencies and M/s S.D. Enterprises is also engaged in lifting of Dry Fly Ash.</p> <p>(b) Pond ash is being utilized in filling of low lying areas in Khutri near Jenamore, JIADABIADA near Balidih and in NHAI Dhanbad &amp; Ramgarh. MoU has been made with NHAI Dhanbad &amp; Ramgarh for a quantity of 20 Lacs MT &amp; 10 Lacs MT respectively. BTPS is trying to maximize the utilization of fly ash.</p> <p>(c) Ash utilization is around 125.296 % of total fly ash generation in FY 2023-24 (till 31.03.2024).</p> <p>(d) Pond ash transportation is being done in environment friendly manner and in full supervision of BTPS with proper cleaning of vehicles at ash pond site and fully covered with tarpaulin/other foolproof arrangement so that any kind of spillage of Fly Ash could not take place during transportation.</p>
2	River passes through West Bokaro and East Bokaro flows into Konar River shortly before the latter flows into the Damodar River, pollute with industrial and domestic effluents.	<p>(a) BTPS Ash pond is ZLD complied. Ash Water Recirculation System (AWRS) is in service. All ash ponds have garlanding system for ash slurry discharge in proper manner to control air pollution as well as any kind of water pollution.</p> <p>(b) Installation work of 02 numbers of Sewage Treatment Plant (STP) is under progress at BTPS. Probable date of completion is 05.12.2024.</p> <p>(c) Rain Water Harvesting Pond is in service at BTPS.</p> <p>(d) In house monitoring as well as monitoring of effluent parameters by Third Party is being done regularly, report of which is being sent regularly to the regulatory bodies like MOEF&amp;CC, CPCB, JSPCB, etc.. Presently environmental monitoring work is being carried out by M/s Biocrat Environmental Services (approved by JSPCB and NABL accredited). The test results in respect of the Pollution related parameters have been found well within permissible limit. A copy of test report for the month of May, 2024 is enclosed herewith.</p> <p>(e) In addition to the above, System for display of Continuous Online Monitoring Data for effluent to JSPCB and CPCB has been installed at BTPS and functioning well and real-time data is being transferred online to the pollution control boards.</p>
3	<b>Industrial profile of Damodar River Basin:-</b> BTPS Bokaro Thermal power Plant discharges into Ganga river (BSP) EC imposed.	Compliance as stated in Point No. (2) Above. However, BTPS is very much careful to the protection of Damodar River.
4	<b>Key Pollution issues:-</b> Disposal of Fly Ash from (TTP),	Compliance as stated in Point No. (1) above

SL. NO.	ISSUES/POINTS	COMPLIANCE STATUS AS ON DATE
5	The over burden of mines, the rejects of coal washeries and ash of thermal power plants are kept either on riverbed or near the river which sooner or later goes to river, further 11 sewage of towns, townships and suburbs, finds way to downstream through septic tank, and soak pits.	The fly ash is being disposed in confined and well maintained 02 numbers Ash Ponds with protection of two numbers of double decantation ponds provided for each. The ash ponds are being taking in service alternatively. The effluent after settlement in original pond gets double decanted in double decantation pond and clear water is recirculated through Ash Water Recirculation System (AWRS) into the plant for reusing it for making ash slurry. The distance between ash ponds and River has been maintained such a way that direct flow of effluent may be restricted as per guidelines of MOEF&CC. The distance between ash ponds and River is approx. 07 KMs.
6	Sewage	The Installation work of 02 numbers of Sewage Treatment Plant (STP) is under progress at BTPS. Around 65% of overall work is completed. The Civil work of STP# 2 is almost completed whereas civil work for STP# 1 is 25% completed. Electro-mechanical work is also in progress side by side. Every effort is being made to complete the project within the extended period i.e. 05.12.2024 including trial run of 03 months. The time bound plan for STP project completion is attached. Capacity of Sewage Treatment Plant (STP) under construction:- STP I = 1,865 mld STP II = 2,358 mld
7	Municipal Solid Waste Disposal	Per day generation of solid waste is about 12 to 15 cubic metre. Most of the solid waste generated at BTPS are bio-degradable which are collected and dumped at abandoned land with earth cover within the outskirts of BTPS Township. There is no legacy waste stored at BTPS.
8	Construction and Demolition waste	The amount of demolition waste in terms of debris containing concrete & bricks / day = 700 kg / day approximately. The left over debris (containing concrete & bricks) is used for filling up the pits created during the process of demolition/dismantling of the decommissioned plant. In the process of demolition, the glass wool thus generated has been stored by the dismantling/ lifting Agency and they ensured that it will be sold off to the JSPCB authorised dealers.
9	Industrial Effluent Discharge	Daily Generation of Effluent from BTPS is around 6 MLD. ETP is under construction for which capacity of Effluent Discharge pump is 250 m <sup>3</sup> /hr. A Work Order has been issued on 23/11/2023 to M/s BTL EPC Ltd., Kolkata for supply, installation, testing and commissioning of balance electrical, mechanical and C&I equipment/system of PT&ETP package of BTPS 'A'. Electromechanical work is on progress. The date of completion of the work is 22/11/2024 i.e. 12 months from the date of LOA. Another Work Order w.r.t. Balance civil works of PT Plant Package of 1X500 MW BTPS-A Plant was issued on 15.12.2023 to M/s B Yadav, Bokaro Thermal. Civil Work is on progress and around 20% work has been completed. The date of completion of civil work is 14/02/2025.
10	Bio-Medical Waste	Per day generation of Bio-medical waste in DVC, BTPS is around 2.9 kg. The generated bio-medical waste is outsourced under Common Bio-Medical Waste Treatment Facility (CBMWTF) through M/s Bio-genetica Laboratories Pvt. Ltd., Dhanbad, Jharkhand.

Manager (M), EM&PC  
DVC, BTPS

*PMS*  
9/06/24

Dy. General Manager (M), EM&PC  
DVC, BTPS

*J. H. S.*  
19.06.2024



## जिला खनन् कार्यालय, बोकारो।

पत्रांक 969/खनन्

बोकारो

दिनांक 22/06/24

प्रेषक,

जिला खनन् पदाधिकारी,  
बोकारो।

सेवा में,

प्रभारी पदाधिकारी,  
विधि शाखा, बोकारो।

**विषय :-** मान्नीय NGT, New Delhi के Original Application No. 200/2014 में दिनांक 20/02/2024 को पारित आदेश के अनुपालन में जिला खनन कार्यालय, बोकारो से संबंधित वांछित प्रतिवेदन उपलब्ध कराने के संबंध में।

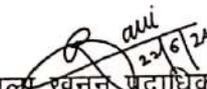
**प्रसंग :-** उपायुक्त-सह-जिला दण्डाधिकारी का कार्यालय (विधि शाखा), बोकारो का ज्ञापांक 932/विधि, बोकारो, दिनांक 22/06/2024

महाशय,

उपर्युक्त विषयक मान्नीय NGT, New Delhi (PB) के Original Application No. 200/2014 में दिनांक 20/02/2024 को पारित आदेश के अनुपालन में जिला खनन कार्यालय, बोकारो से संबंधित वांछित प्रतिवेदन इस पत्र के साथ संलग्न कर अग्रेतर कार्रवाई हेतु उपलब्ध करायी जा रही है।

अनुलग्नक :- यथोक्त

विश्वासभाजन,

  
जिला खनन पदाधिकारी,  
बोकारो।

ज्ञापांक 969/खनन्

बोकारो

दिनांक 22/06/24

प्रतिलिपि :- उपायुक्त, बोकारो को सादर सूचनार्थ प्रेषित।

  
जिला खनन पदाधिकारी,  
बोकारो।

**District Mining Office, Bokaro**

VII. Mining and Stone Crushing in river bed and flood plain zone of River Ganga and its tributaries:

No Stone or clay mining leases have been granted in the river bed and/or flood plain zone of the tributaries of River Ganga falling in the district of Bokaro.

District Survey Report (Sand) has been prepared for the district of Bokaro in terms of Enforcement of EMGSM 2020 and Sustainable sand mining management guidelines, 2016. As per the DSR (Sand) there are 06 Category I sand ghats and 07 Category II sand ghats in the district of Bokaro.

The financial bidding of Category II sand ghats has been completed by the district level committee and the proposal has been sent to Jharkhand State Mineral Development Corporation for further action. Environmental clearance certificate has not been issued for the Category II sand ghats in absence of the SEIAA/SEAC committee for the State of Jharkhand.

Action is taken against instances of illegal mining, transportation and storage of minor mineral sand by the District Task Force constituted under the Chairmanship of Deputy Commissioner, Bokaro.

The details of action taken against illegal mining, transportation and storage of minor mineral sand are enumerated below:-

Financial Year	Name of mineral	Qty. of mineral	No. of Vehicles Seized	No. of FIR	Penalty realized	Remarks
2021-22	Sand	449.20 Tonne	115	11	12,79,000	
2022-23	Sand	12142.80 Tonne	126	81	61,85,000	
2023-24	Sand	6785 Tonne	109	50	47,16,000	
2024-25 (Upto May, 2024)	Sand	153 Tonne	14	5	30,000	

In addition to this, Confiscation proceedings have been initiated against vehicles found involved in illegal mining, transportation and storage of minor mineral sand. In order to prevent illegal mining, transportation and storage of minerals various check posts were established vide memo no. 1668, dated 31/05/2022, at the identified routes and Magistrates deputed to keep strict vigil and to take action against any such instances.

  
 District Mining Officer,  
 Bokaro.