

वेस्टर्न कोलफील्ड्स लिमिटेड

WESTERN COALFIELDS LIMITED

(मिनीरल कंपनी) (A Miniratna Company)

(कोल इंडिया लिमिटेड की अनुषंगी कंपनी)

(A Subsidiary of Coal India Limited)

उपक्षेत्रीय प्रबंधक कार्यालय, उमरेर उप क्षेत्र

पत्ता: वेकोली उमरेड क्षेत्र, पो. उमरेड तह. उमरेड

जिला नागपुर, महा. पिन-४४१२०४.



O/O THE SUB AREA MANAGER, UMRER SUB AREA

Address: WCL Umrer Area, PO: Umrer Dist. Nagpur, MH,

Pin. - 441204 AN ISO 9001-000 MINE

संदर्भ पत्र क्र. वेकोली/उक्षे/उउक्षे/उ.क्षे.प्र./२०२६/

दिनांक: 30.05.2026

प्रति,

The Additional Principal Chief Conservator of Forests

Ministry of Environment, Forest & Climate Change (MoEF& CC)

Integrated Regional Office

Ground Floor, East Wing,

"New Secretariat Building",

Civil Lines, Nagpur - 440001 (M.S.)

विषय: **Six Monthly Environmental Compliance Report of Umrer OC Project for the period from 01/10/2025 to 31/03/2026**

संदर्भ: **EC no. J-11015/86/2005-IA.II (M) dated 11/01/2019, 06/12/2019, 15/01/2021 and 01/04/2024.**

Dear Sir/Madam,

Please find enclosed herewith Six-Monthly Environmental Compliance Report of Umrer Opencast Project for the period from 01/10/2025 to 31/03/2026.

It is requested that the same may kindly be taken on record and accepted.

Thanking you.

भवदिय

[Handwritten Signature]

उपक्षेत्रीय प्रबंधक,

उमरेर क्षेत्र,

वेस्टर्न कोलफील्ड्स लिमिटेड

[Handwritten Date]
30/5/24

प्रतिलिपी:

- Area General Manager, W.C.L Umrer Area
- General Manager (Min)/ HOD (Envt.), WCL
- Area Nodal Officer (Envt), W.C.L Umrer Area

**WESTERN COALFIELDS LIMITED
(MINIRATNA COMPANY)**

**SIX MONTHLY ENVIRONMENTAL
COMPLIANCE REPORT
(From 01/10/2025 to 31/03/2026)**

IN RESPECT OF

UMRER OPEN CAST PROJECT

**UMRER SUB AREA
UMRER AREA**

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**Monitoring the Implementation of Environmental
Safeguards Ministry of Environment, Forest and
Climatic Change, Western Region, Regional Office,
Nagpur**

MONITORING REPORT

DATA SHEET

Name of the Project: Umrer OC Project, WCL

| S.n. | Particulars | Details |
|------|---|---|
| 1. | Project type: River- valley/ Mining/ Industry/ Thermal/ Nuclear/Other | Mining (Coal) |
| 2. | Name of the project | Umrer Open Cast Coal Mine Project |
| 3. | Clearance letter (s)/OM No. and dated | <ul style="list-style-type: none"> • MOEF OM No. J-11015/86/2005/IA-II-(M) dated 11/01/2019 (For 4.90 MTPA) • MOEF OM No. J-11015/86/2005-IA.II (M) dated 06/12/2019 (For 4.90 MTPA) and • MOEF OM No. J-11015/86/2005-IA.II (M) dated 15/01/2021(For 4.90 MTPA) • MOEF OM No. J-11015/86/2005-IA.II (M) dated 01/04/2024 (For 4.90 MTPA) |
| 4. | Location: <ul style="list-style-type: none"> a) Village b) Tehsil c) District d) State e) Location: Latitude/Longitude | Wayagaon/Ghoturl, Umrer Nagpur Maharashtra 20°50'45"and20°50'45"N 79°16'18"and79°16'18"E |
| 5. | Address for correspondence: <ul style="list-style-type: none"> a) Address of the Concerned Project Chief Engineer (with Pin Code and telephone) b) Address of Executive Project Engineer/ Manager (with Pin Code) | Sub Area Manager, Umrer Sub Area P.O.- Umrer Project, Tahsil- Umrer, Dist: Nagpur (MS) Pin No.- 441204 Phone: 07116 -247395 Colliery Manager, C/o Sub Area Manager, Umrer Sub Area P.O.- Umrer Project, Tahsil- Umrer, |

| | | |
|----|--|--|
| | | Dist: Nagpur (MS) Pin No.- 441204 Phone: 07116 -247395 |
| 6. | Salient features of the Environmental Management Plan | <p><u>Environmental Pollution Control Measures:</u></p> <p><i>Air/Dust pollution Control Measures:</i> Biological reclamation of OB dumps, Plantation along haul road, service road, OB dump, vacant land, township, industrial complex, Green belt around CHP, mobile and fixed water sprinkling on road, CHP, coal stock yard, workshop etc. Maintenance of HEMMs and transport vehicles.</p> <p><i>Water Pollution Control Measures:</i> Sedimentation pond for mine water Treatment, workshop ETP for industrial effluent treatment, Domestic sewage disposal arrangement for the township.</p> <p><i>Noise Pollution Control Measures:</i> Maintenance of HEMMs and Transport Vehicles. Development of green belt in between industrial complex and residential area, noise, absorbing pads for noise generating machines, ear plugs and helmets to the workers, noise cabins to the HEMM operators.</p> <p><i>Control of ground water depletion:</i> The water shortage in the village if any, the influence area is supplemented by supply of water by outside source or from to mine water after treatment. Regular well water monitoring in nearby villages is being carried out quarterly as per MOEF's guidelines.</p> <p><i>Disaster Management Plan:</i> Diversion of rainwater falling within the project area from quarry area by providing garland drains and collection towards low lying area. Sufficient space has been left between proposed quarry boundary and nallah to construct flood protection embankment, if required. Controlled blasting technique has to be practiced to minimized fly off rocks and ground vibration and keep them within safe limits.</p> |
| 7. | Breakup of the project area | <p>Total Mine Lease Area = 944.65ha</p> <p>a) Quarry Area = 356.96 ha</p> <p>b) External OB Dump = 139.52 ha</p> <p>c) Infrastructure including = 227.69 ha road and colony</p> <p>d) Blasting Zone and Rationalization = 220.48ha</p> |
| 8. | Breakup of the project affected population with enumeration of those losing houses/dwelling units only and agricultural land and landless laborers/artisans: | |

| | | |
|-----|---|--|
| | <p>a) SC,ST/Adivasi</p> <p>b) Others</p> <p>c) (Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and year of survey).</p> | <p>Not Applicable</p> <p>Not Applicable</p> |
| 9. | <p>Financial details:</p> <p>a) Project cost as originally planned and Subsequent revised estimates and the year of price reference.</p> <p>b) Environmental Management Plan cost.</p> <p>c) Benefit cost ratio/Internal rate of Return</p> | <p>25.48 crore at the year1962 93.04 crore at the year1971</p> <p>N.A.</p> <p>-----</p> |
| | <p>d) Weather (c) includes the cost of environmental management as shown in the above.</p> <p>e) Actual Expenditure incurred on project so far.</p> <p>Actual Expenditure incurred on Environmental Management Plan so far.</p> | <p>N.A.</p> <p>Capital cost: 325.34 Crore</p> <p>2.358 Crore</p> |
| 10. | <p>Forest land requirement</p> <p>a) The status of approval for diversion of forest land for non-forestry use</p> <p>b) The status of clearing felling</p> <p>c) The status of Compensatory, if any Afforestation</p> <p>d) Comments on the viability and sustainability of CA program in the light of actual field experience so far</p> | <p>The project does not have any forest land.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> |
| 11. | <p>Status of construction (Actual/ planned)</p> <p>a) Date of commencement</p> <p>b) Date of completion</p> | <p>14/04/63</p> <p>Not Applicable.</p> |
| 12. | <p>Reasons for delay if the project is yet to start.</p> | <p>Not applicable.</p> |
| 13. | <p>Dates of site visits:</p> <p>a) The dates on which the project was monitored by the Regional Office on previous occasions, if any.</p> <p>b) Date of site visit for this monitoring report.</p> | <p>07/06/2018, visited by MOEFand CC officials.</p> |
| 14. | <p>Details of correspondence with project authorities for obtaining action plans/ information on status of compliance to safeguards other than the routine letters for logistic support for site visits)</p> | <p>No correspondence received from MoEFand CC.</p> |

| | | |
|-----|---|------|
| 15. | The first monitoring report may contain the details of all the letters issued so far at the later reports may cover only the letters issued subsequently. | N.A. |
| 16. | Is there any court case pending? | Nil |

Environmental Clearance Compliance Report of Umrer OC Project (4.90 MTPA) of WCL, Umrer Area as on 31/09/2025

Ref: MOEF and CC Environment Clearance Letter No. J-11015/86/2005-IA.II (M) dated 11/01/2019, J-11015/86/2005-IA.II (M) dated 06/12/2019, J-11015/86/2005-IA.II (M) dated 15/01/2021 and MOEF OM No. J-11015/86/2005-IA.II (M) dated 01/04/2024

A. Specific Conditions:

| S.No | Compliance Condition | Status |
|------|---|---|
| i. | The project proponent shall collect and analyse one season data for environmental parameters and submit for consideration of the EAC before 31 st December, 2019. | <p>Complied.</p> <p>The one season data for environmental parameters / one season baseline data has been collected during Pre-Monsoon Season i.e. April 2019 to June 2019 by external agency M/s. IDMA Laboratories Limited, Panchkula and the analysis report is submitted to MoEF and CC on 23/09/19.</p> |
| ii. | The proponent shall obtain Consent to establish from the state pollution control boards for the proposed peak capacity of 4.9 MTPA prior to commencement of the increased production. | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Project was granted Consent to Operate for 4.9 MTPA from MPCB vide Consent No. Format 1.0/BO/CAC-Cell/CAC-UAN No.65263/CAC-1910000121 dt.03/10/19, which was valid up to 31/03/21(Copy Enclosed as Annexure-II).</p> <p>Subsequently, consent to renewal (1st) for 4.9 MTPA has been secured from MPCB vide letter no: Format 1.0/CAC/UAN No.0000107261/CR/2211000597 dated 09/11/2022 which was valid up to 31/03/2024 (Copy Enclosed as Annexure-III).</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2024.</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2025 (Copy Enclosed as Annexure-III).</p> <p>Mine discontinued due to exhaustion of reserves. Notice of Discontinuation is submitted to DGMS. CTO has been obtained for operation of Railway Siding vide letter Format1.0/CAC/UAN No. MPCB CONSENT-</p> |

| | | |
|----|---|---|
| | | 0000239378/CO/2507003287 dated 27/07/2025 with validity upto 31-03-2028. |
| i. | Transportation of coal from face to coal heap shall be carried out by truck. Further, the coal transportation from coal heap to Coal Handling Plant shall be carried out through covered trucks. | Complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. |
| 7. | To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers. | Complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. |
| 7. | Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding etc. | Complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. Only Railway siding is operational for limited period. Coal transportation is carried out strictly as per the provisions and routes specified in the approved Mining Plan. The RLS (Rapid loading system with belt conveyor and Silo), facilitating transportation of approximately 75–80% of the total coal production to major consumers. The remaining 20–25% is transported through covered trucks. The coal transportation road is well maintained and directly connected to the State Highway (BT road). A minimum quantity of coal from MKD-I and Dinesh OC transported by road passes through Umrer OC, which serves as the common exit point. Accordingly, adequate pollution control measures including regular water sprinkling, road sweeping, and dust suppression arrangements have been deployed at Umrer OC to ensure compliance with environmental norms. Mobile Water Sprinklers are used in all three shifts for dust suppression at approach roads. Details of Air pollution control measures installed at common exit point of Coal transportation Road: <ul style="list-style-type: none"> • Tyre washing system is installed at main check post of Umrer Area. • 2 No. of mobile water tankers of 10-28 KL capacity |

| | | <p>are in operation.</p> <ul style="list-style-type: none"> 75 nos. fixed sprinklers are installed along coal transportation road, railway siding, weigh bridge, dozer section and CHP, details are as follows: <table border="1"> <thead> <tr> <th>Location</th> <th>Nos. of fixed sprinklers</th> </tr> </thead> <tbody> <tr> <td>Weigh bridge to workshop</td> <td>14</td> </tr> <tr> <td>CHP</td> <td>10</td> </tr> <tr> <td>Dozer section</td> <td>7</td> </tr> <tr> <td>Wharf wall</td> <td>44</td> </tr> </tbody> </table> <ul style="list-style-type: none"> 3nos. of Trolley mounted mist/fog generator is provided at CHP and Siding. | Location | Nos. of fixed sprinklers | Weigh bridge to workshop | 14 | CHP | 10 | Dozer section | 7 | Wharf wall | 44 | | | | | | | | | | | | | | | | | | | |
|--------------------------|--|---|----------|----------------------------------|--------------------------|-----|-----|---------|---------------|-----|------------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|----|-----|---------|----|-----|
| Location | Nos. of fixed sprinklers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weigh bridge to workshop | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHP | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dozer section | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wharf wall | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 4.9 MTPA. | <p>Complied.</p> <p>Obtained NOC from CGWA for abstracting Ground Water (NOC No. CGWA/NOC/MIN/REN/2/2026/12083) which was valid up to 10/07/2027.</p> <p>Copy of NOC is enclosed as Annexure – IV.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured. | <p>Being complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Periodic medical examination is being done once in 3 years as per statute in all the mines.</p> <p>Details of IME/PME done in last 7 years are given below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">No. of workers (Dept. and Cont.)</th> </tr> <tr> <th>IME</th> <th>PME</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>121</td> <td>389</td> </tr> <tr> <td>2018-19</td> <td>363</td> <td>371</td> </tr> <tr> <td>2019-20</td> <td>205</td> <td>313</td> </tr> <tr> <td>2020-21</td> <td>150</td> <td>185</td> </tr> <tr> <td>2021-22</td> <td>117</td> <td>358</td> </tr> <tr> <td>2022-23</td> <td>150</td> <td>358</td> </tr> <tr> <td>2024-25</td> <td>99</td> <td>247</td> </tr> <tr> <td>2025-26</td> <td>13</td> <td>109</td> </tr> </tbody> </table> | Year | No. of workers (Dept. and Cont.) | | IME | PME | 2017-18 | 121 | 389 | 2018-19 | 363 | 371 | 2019-20 | 205 | 313 | 2020-21 | 150 | 185 | 2021-22 | 117 | 358 | 2022-23 | 150 | 358 | 2024-25 | 99 | 247 | 2025-26 | 13 | 109 |
| Year | No. of workers (Dept. and Cont.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | IME | PME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017-18 | 121 | 389 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018-19 | 363 | 371 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 205 | 313 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 150 | 185 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 117 | 358 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 150 | 358 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 99 | 247 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 13 | 109 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | Persons of nearby villages shall be given training on livelihood and skill development to make them employable. | <p>Being complied.</p> <p>Skill development training is being imparted in the villages and also in the Group VTC of Umrer Area for self-employment. Details of Skill Development programs are as</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | <p>follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Training Programs</th> <th>No. of beneficiaries</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>Apparel designing, Beauty parlor and Electrician</td> <td>85</td> </tr> <tr> <td>2017-18</td> <td>Office automation and Data entry operator</td> <td>26</td> </tr> <tr> <td>2018-19</td> <td>Tailoring and Apparel designing</td> <td>60</td> </tr> <tr> <td>2019-20</td> <td>Beauty parlor, Tailoring and Apparel designing</td> <td>240</td> </tr> <tr> <td>2020-21</td> <td rowspan="2">Not conducted due to restrictions imposed by the Govt in Covid 19 Pandemic period</td> <td rowspan="2">Nil</td> </tr> <tr> <td>2021-22</td> </tr> <tr> <td>2022-23</td> <td>Machine operator- Plastics Processing (MO-PP) and driver</td> <td>45</td> </tr> <tr> <td>2023-24</td> <td>Assistant Electrician</td> <td>04</td> </tr> <tr> <td>2024-25</td> <td>Tailoring</td> <td>12</td> </tr> </tbody> </table> | Year | Training Programs | No. of beneficiaries | 2016-17 | Apparel designing, Beauty parlor and Electrician | 85 | 2017-18 | Office automation and Data entry operator | 26 | 2018-19 | Tailoring and Apparel designing | 60 | 2019-20 | Beauty parlor, Tailoring and Apparel designing | 240 | 2020-21 | Not conducted due to restrictions imposed by the Govt in Covid 19 Pandemic period | Nil | 2021-22 | 2022-23 | Machine operator- Plastics Processing (MO-PP) and driver | 45 | 2023-24 | Assistant Electrician | 04 | 2024-25 | Tailoring | 12 | |
|---------|---|--|------|----------------------------------|----------------------|---------|--|---------|---------|---|---------|---------|---------------------------------|---------|---------|--|---------|---------|---|---------|---------|---------|--|-----|---------|-----------------------|----|---------|-----------|----|-----|
| Year | Training Programs | No. of beneficiaries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016-17 | Apparel designing, Beauty parlor and Electrician | 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017-18 | Office automation and Data entry operator | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018-19 | Tailoring and Apparel designing | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | Beauty parlor, Tailoring and Apparel designing | 240 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | Not conducted due to restrictions imposed by the Govt in Covid 19 Pandemic period | Nil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | Machine operator- Plastics Processing (MO-PP) and driver | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | Assistant Electrician | 04 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | Tailoring | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| k. | <p>To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.</p> | <p>Being complied.</p> <p>Medical camps are organized on regular basis by WCL, Umrer Area.</p> <p>Details of medical camps conducted in last 7 years are given below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">No. of workers (Dept. and Cont.)</th> </tr> <tr> <th>IME</th> <th>PME</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>121</td> <td>389</td> </tr> <tr> <td>2018-19</td> <td>363</td> <td>371</td> </tr> <tr> <td>2019-20</td> <td>205</td> <td>313</td> </tr> <tr> <td>2020-21</td> <td>150</td> <td>185</td> </tr> <tr> <td>2021-22</td> <td>117</td> <td>358</td> </tr> <tr> <td>2022-23</td> <td>150</td> <td>358</td> </tr> <tr> <td>2024-25</td> <td>99</td> <td>247</td> </tr> <tr> <td>2025-26</td> <td>13</td> <td>109</td> </tr> </tbody> </table> <p>*Due to Covid 19 pandemic, medical camps couldn't be conducted during lockdown period. Free covid 19 testing were conducted for nearby villagers on regular basis and a blood donation camp was also conducted.</p> <p>During the Covid 19 Pandemic period, following initiatives were taken to support State Government and Nearby Villagers.</p> | Year | No. of workers (Dept. and Cont.) | | IME | PME | 2017-18 | 121 | 389 | 2018-19 | 363 | 371 | 2019-20 | 205 | 313 | 2020-21 | 150 | 185 | 2021-22 | 117 | 358 | 2022-23 | 150 | 358 | 2024-25 | 99 | 247 | 2025-26 | 13 | 109 |
| Year | No. of workers (Dept. and Cont.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | IME | PME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2021-22 | 117 | 358 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 150 | 358 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 99 | 247 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 13 | 109 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

WCL Umrer Area initiatives during COVID-19

Period of Support – 2020-21, 2021-22

A. Support to State Government

| S No. | Particular | Remark |
|-------|--|--|
| 1 | Providing 5 BIPAP machine to State administration - BIPAP - bi-level positive airway pressure - This machine is used for supporting breathing for patients whose lungs are not operating efficiently | State Govt hospital, Umrer and Kuhi |
| 2 | 1) 2 nos. oxygen concentrator machine 2) 200 PPE kits 3) 25 hospital bed and mattress | Chimur tehsil office for support to setting up Covid Care Centre(CCC facility) |

B. Support to nearby communities

| S No | Particular | Count of packets |
|------|----------------|------------------|
| 1 | Ration packets | 852 |
| 2 | Food Packets | 4750 |

C. Support to ZP Schools

| S No. | Particular | Amount |
|-------|--|---|
| 1 | No. of schools supported | 11 |
| 2 | Mask and Sanitizer to Students | 1040 |
| 3 | Pulse Oximeter, Thermal Gun, Soap, Sodium Hypochlorite, Sanitiser bottle | Provided to administration for maintaining covid-19 protocols |

D. Support for COVID-19 testing and vaccination

| S No. | Particular | Nos. |
|-------|--|------|
| 1 | Testing for Covid-19 at WCL premises | 3317 |
| 2 | Vaccination administered at WCL premises | 1671 |

E. Fund transfer from WCL Umrer employees to PM-Cares fund

All the employees of Umrer Area contributed one day Basic salary to PM-Cares fund amounting to Rs. 34.31 Lakh.

Total Amount expended by WCL Umrer Area for Covid-19 Support

| S No. | Particular | Amount(Rs) |
|-------|------------------|-------------|
| 1 | Total of A+B+C+E | 47.23 Lakh |

Details of Medical camp conducted during the FY 23-24 is given below:

| Sl. No | Date | Name of Camp | No. of Beneficiaries |
|----------|----------|----------------------------|----------------------|
| APRIL-24 | 05-04-24 | GHCC at Piraya village | 110 |
| | 16/04/24 | GHCC at Kanwa village | 124 |
| MAY-24 | 08-05-24 | GHCC at Dahegaon village | 52 |
| | 21/05/24 | GHCC at Piraya village | 74 |
| Jun – 24 | 20/06/24 | GHCC at Shirpur village | 88 |
| | 25/06/24 | GHCC at Polgaon village | 54 |
| Jul-24 | 05-07-24 | GHCC at Kalamana Village | 84 |
| | 25/07/24 | GHCC at Piraya Village | 91 |
| | 30/07/24 | GHCC at Khandazari Village | 42 |
| Aug – 24 | 02-08-23 | GHCC at Kalamana village | 210 |
| | 07-08-23 | GHCC at Khursapar village | 108 |
| | 08-08-23 | GHCC at Kalamana village | 72 |
| | 12-08-24 | GHCC at Kanwa village | 91 |

| | | | | |
|--------|----------|----------|--|-----|
| | | 13.08.24 | GHCC at HEVATI village | 71 |
| | | 14.08.24 | GHCC at Piraya Village | 70 |
| | | 19.08.24 | GHCC at Kalmana village | 102 |
| | | 21.08.24 | GHCC at Shirpur village | 68 |
| | | 23.08.24 | GHCC at Bhagwanpur village | 137 |
| | | 29.08.24 | GHCC at Piraya Village | 77 |
| Sep-24 | 04-09-24 | | GHCC at Polgaon village | 76 |
| | | 06-09-24 | GHCC at Kalmana village | 82 |
| | | 11-09-24 | GHCC at Hewatii village | 130 |
| | | 20/09/24 | GHCC at Community Hall Umrer for sanitary and domestic worker | 53 |
| | | 27/09/24 | GHCC at Piraya Village | 119 |
| Oct-24 | 09-10-24 | | GHCC at Polgaon village | 48 |
| | | 16/10/24 | GHCC at Khandazari village | 64 |
| | | 17/10/24 | GHCC at Shirpur Village | 120 |
| | | 21/10/24 | GHCC at Kalamana Village | 130 |
| | | 23/10/24 | GHCC at Piraya Village | 131 |
| Nov-25 | 14/11/24 | | GHCC at Kanwa village | 69 |
| | | 18/11/24 | GHCC at Piraya village | 107 |
| | | 23/11/24 | GHCC at Khandazari village | 65 |
| | | 29/11/24 | GHCC at Zilla Parishad waigaon Ghoturli village- BI group-57, | 93 |
| Dec-25 | 06-12-24 | | GHCC at Polageon village | 68 |
| | | 13/12/24 | GHCC at Bhagwanpur village | 135 |
| | | 20/12/24 | GHCC camp at Saygaon Village | 79 |
| | | 27/12/24 | Cancer Detection Camp for CSR in 10 approx. 10 station with RST Cancer Hospital Nagpur at Ghoturli Village | 105 |
| JAN-25 | 07-01-24 | | GHCC at Kharkada Village | 66 |
| | | 11-01-25 | GHCC at Pirawa Village | 97 |

| | | 13/01/25 | GHCC at Kanwa Village | 91 | | | | | | | | | | | | | | | | | | |
|--|--|---|---|-------------|------|---|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|-------|---------|-------|
| | | 16/01/25 | GHCC at UDASA ASHRAM SHALA UDASA | 433 | | | | | | | | | | | | | | | | | | |
| | | 23/01/25 | Osteoporosis Awareness and Check-Up Camp by Choudhari Hospital Nagpur | 47 | | | | | | | | | | | | | | | | | | |
| Feb-25 | 07-02-25 | | GHCC at Saykii village general awareness on Tuberculosis | 110 | | | | | | | | | | | | | | | | | | |
| | 27/02/25 | | GHCC at Kalamana Village | 155 | | | | | | | | | | | | | | | | | | |
| MAR-25 | 11-03-25 | | GHCC at Pirawa Village | | | | | | | | | | | | | | | | | | | |
| | | | Total | 4743 | | | | | | | | | | | | | | | | | | |
| <p>OPD facility is also provided for surrounding villages. No. of beneficiaries are mentioned below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>No. of Beneficiaries who availed OPD facility</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>2499</td> </tr> <tr> <td>2019-20</td> <td>2691</td> </tr> <tr> <td>2020-21</td> <td>1587</td> </tr> <tr> <td>2021-22</td> <td>2890</td> </tr> <tr> <td>2022-23</td> <td>3118</td> </tr> <tr> <td>2023-24</td> <td>2904</td> </tr> <tr> <td>2024-25</td> <td>35815</td> </tr> <tr> <td>2025-26</td> <td>38603</td> </tr> </tbody> </table> | | | | | Year | No. of Beneficiaries who availed OPD facility | 2018-19 | 2499 | 2019-20 | 2691 | 2020-21 | 1587 | 2021-22 | 2890 | 2022-23 | 3118 | 2023-24 | 2904 | 2024-25 | 35815 | 2025-26 | 38603 |
| Year | No. of Beneficiaries who availed OPD facility | | | | | | | | | | | | | | | | | | | | | |
| 2018-19 | 2499 | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 2691 | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 1587 | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 2890 | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 3118 | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 2904 | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 35815 | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 38603 | | | | | | | | | | | | | | | | | | | | | |
| k. | Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution. | <p>Being complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Undisturbed area of 108.36 Ha is brought under plantation which includes plantation on vacant land, embankments, township, plantation along the roads and mine boundary.</p> <p>Thick green belt is developed all along the mine boundary to provide a buffer against dust pollution. The overall length of this green belt is 11 approx.. 9.5 kms and width ranges from 200 m to 30 m in the downwind direction.</p> <p>Plantation details are enclosed as Annexure -V.</p> | | | | | | | | | | | | | | | | | | | | |
| i. | Efforts shall be made for utilizing alternate source of surface water, abandoned mines or else whatsoever and thus | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> | | | | | | | | | | | | | | | | | | | | |

| | | |
|----|--|---|
| | minimizing the dependability on a single source. | <p>Mine discharge water is being used mainly for dust suppression . Mine water is collected in 02 nos. of sumps in the quarry area of mine (Central quarry sump = 96.158 Million gallons capacity, Eastern quarry sump = 122.69 Million gallons capacity). These sumps allow settlement of suspended particles present in water. The supernatant from these sumps is then pumped out on surface and fed into the surface sedimentation tank. This mine water is used for industrial purposes such as dust suppression, fire fighting and plantation etc.</p> <p>Domestic requirement of water is fulfilled by 02 nos. of tube well in Umrer Colony.</p> |
| i. | A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI/NEERI/IIT or any other expert agency identified by the Ministry. | <p>Being Complied.</p> <p>The third part assessment of EC compliance is being undertaken once in three years through CSIR-NEERI (Expert Agency identified by Ministry).</p> <ul style="list-style-type: none"> • FY 2019-20: The inspection has been carried out by CSIR-NEERI for assessment of EC compliance in respect of Umrer Opencast on 30.08.2019 and The third party assessment of EC compliance report has been secured from CSIR-NEERI vide its letter dated 25.09.2019. • FY 2022-23: Work for Third Party Assessment of EC compliance in respect of Umrer OC is awarded to CSIR-NEERI vide Work order no. 1325- 1336 dated 22.12.2022. The inspection has been carried out on 07/02/2023. |

B. General Conditions:

| S.No | Compliance Condition | Status |
|------|--|--|
| (a) | Mining | |
| i. | Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there– under as applicable. | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Mining is carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there– under as applicable.</p> |

| | | |
|------------|--|---|
| | | |
| ii. | No change in mining method, Calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change. | Complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. |
| iii. | Mining shall be carried out as per the approved mining plan including mine closure plan, abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS). | Complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. Mining and mine closure is carried out as per the approved mining plan as well as by abiding to the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS). |
| iv. | No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian forest act, 1927. | Not applicable as the project does not have any forest land. |
| (b) | Land Management and Water Conservation | |
| i. | Digital survey of entire lease hold area/ core zone using Satellite Remote sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale shall be submitted to Ministry of Environment, Forest and Climate Change/ Regional Office (RO). | Being complied. Digital processing of the entire lease area using Remote sensing technique is done every year by CMPDIL. Reports of which are available on WCL website. The same is submitted to Ministry of Environment, Forest and Climate Change/ Regional Office on regular basis. Land Restoration / Reclamation monitoring report of Umrer OC mine based on satellite data for the year 2024 is enclosed as Annexure –VI. |
| ii. | The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, | Complied. The surface drainage plan considering the presence of any river/ rivulet/ pond/ lake etc., is prepared and implemented by the project proponent to withstand the peak water flow and prevent |

| | | |
|------|--|--|
| | <p>considering the presence of any river/ rivulet/ pond/lake etc., shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority.</p> <p>The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS.</p> | <p>mine inundation.</p> <p>Umrer OCM was restricted on three sides by Amb River which was diverted in phased manner to extract 20.58 M.te. of coal. The diversion was completed in 2016 (Phase-IV). The Amb river was diverted in the rise side of the existing mine through non- coal bearing area as per CDO, Nasik design.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>There are no changes in the surface drainage plan.</p> <p>The embankment all along the river boundary is constructed as per the provision of approved Mining Plan and as per the permission of DGMS. The HFL of Amb river is 274.68 meters at railway bridge and 270.63 meters at PWD bridge above mean sea level. The height of the embankment provided along the Amb river to protect the mine along its boundary has been kept 6.00 meters above the HFL of the river. The width of embankment has been kept 30.00 m which is sufficient to protect the mine from peak flow of the river.</p> |
| iii. | <p>The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40m, adequate engineering interventions shall be provided for sustenance of adequate life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purpose and shall be handled over to the respective state government as specified in the guidelines for preparation of mine closure plan issued by the ministry of coal dated 27th August, 2009 and subsequent amendments.</p> | <p>Being complied.</p> <p>Backfilling has been done as per the Mine Closure Plan which is approved by WCL Board and included along with EMP.</p> <p>Mine Closure Plan was approved by the WCL Board along with opening of an Escrow account, A/c no. 08973161002614 at the Oriental Bank of Commerce, Jaripataka Branch, Nagpur. The total corpus amounts available in the account as on 31/03/2026 is Rs. 70,23,22,733.13 (Principal and interest).</p> <p>The mine is in last phase of operation and has reached the final quarry edge. Undisturbed area of 108.36 Ha is brought under plantation which includes plantation on vacant land, embankments, township, along the roads and mine boundary. Plantation is done on External OB dumps covering an area of 106.64 Ha.</p> <p>Till date 63.80 ha of backfilled area has been biologically reclaimed, remaining quarry area will be backfilled to ground level and reclaimed with plantation as per EMP. 95.52 ha of decoaled void will be left as water body which will be gently sloped and upper benches stabilized with plantation.</p> |
| iv. | <p>The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the</p> | <p>Being complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> |

| | <p>“during mining”/ “post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status € the post mining land use pattern shall be submitted to the Ministry of Environment, Forest and climate change/ Regional Office on six monthly basis.</p> | <p>Progressive compliance status of land use pattern is submitted regularly to the Ministry of Environment, Forest and climate change/ Regional Office along with Six Monthly compliance Report. Land Restoration / Reclamation monitoring report of Umrer OC mine based on satellite data for the year 2023 enclosed as Annexure –VI.</p> | | | | | | | | |
|------------------|--|--|---|------|---------------|---------|------------------|--------|----------|---|
| v. | <p>The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. The top soil shall be used for land reclamation and plantation purposes.</p> <p>Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to Ministry of Environment, Forest and Climate Change/ Regional Office on six monthly basis.</p> | <p>Complied.</p> <p>There is no fresh cutting of surface as the mine has exhausted so there is no excavation of top soil at present. Top soil excavated till date has been spread over OB dump sites for plantation purpose.</p> <p>Presently there are no active OB dumps. For rehabilitation of these OB dumps plantation is done covering an area of 15pprox.. 106.64 Ha and the plantation has become self-sustaining in which chances of siltation and sediment flows are very less.</p> <p>Details of the plantation are as follows:</p> <table border="1"> <thead> <tr> <th>Type of land</th> <th>Area</th> <th>No. of plants</th> <th>Species</th> </tr> </thead> <tbody> <tr> <td>External OB Dump</td> <td>114.64</td> <td>4,30,600</td> <td>Sisu, Sivan, Neem, Karanj, Custard apple, Jamun, Cassia, Raintree, Amrud, Amala</td> </tr> </tbody> </table> | Type of land | Area | No. of plants | Species | External OB Dump | 114.64 | 4,30,600 | Sisu, Sivan, Neem, Karanj, Custard apple, Jamun, Cassia, Raintree, Amrud, Amala |
| Type of land | Area | No. of plants | Species | | | | | | | |
| External OB Dump | 114.64 | 4,30,600 | Sisu, Sivan, Neem, Karanj, Custard apple, Jamun, Cassia, Raintree, Amrud, Amala | | | | | | | |
| € | Emissions, Effluents, and Waste Disposal | | | | | | | | | |
| i. | <p>Transporting of coal, to the extent permitted by road, shall be carried out by covered trucks/ conveyors.</p> <p>Effective control measures such as regular water/mist sprinkling/rain gun etc. shall</p> | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>All the vehicles transporting coal are loaded within permissible limit and trucks leaving the mine premises are covered with tarpaulin. It is ensured by using CCTV cameras. At present four</p> | | | | | | | | |

| | <p>be carried out in critical areas prone to air pollution (with higher values PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/ State Pollution Control Board.</p> | <p>nos of CCTV Cameras are installed at main check post of Umrer Area. CCTV footages are regularly monitored. Security guards are also deployed at main check post to check whether all the trucks leaving the mine premises are properly covered or not.</p> <p>Fugitive dust emissions from all the dust generating sources are controlled by Fixed Water Sprinklers along weigh bridge, approach road and coal transportation road. Rain guns are provided at railway siding and Mist spray arrangement is provided at all transfer points of CHP to prevent the dust formation.</p> <p>In addition to fixed water sprinklers and rain guns, Mobile Water Sprinklers are used in all three shifts for dust suppression at approach roads, haul roads, coal transportation roads and coal stock yard. The Fugitive dust is also monitored regularly and is kept under control.</p> <p>Details of Air pollution control measures installed:</p> <ul style="list-style-type: none"> • Tyre washing system is installed at main check post of Umrer Area. • 2 No of mobile water tankers of 10-28 KL capacity are in operation. • 75 nos. fixed sprinklers are installed along coal transportation road, railway siding, weigh bridge, dozer section and CHP, details are as follows: <table border="1" data-bbox="824 995 1354 1245"> <thead> <tr> <th>Location</th> <th>Nos. of fixed sprinklers</th> </tr> </thead> <tbody> <tr> <td>Weigh bridge to workshop</td> <td>14</td> </tr> <tr> <td>CHP</td> <td>10</td> </tr> <tr> <td>Dozer section</td> <td>7</td> </tr> <tr> <td>Wharf wall</td> <td>44</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Trolley mounted mist/fog generators are provided at CHP and Siding. | Location | Nos. of fixed sprinklers | Weigh bridge to workshop | 14 | CHP | 10 | Dozer section | 7 | Wharf wall | 44 |
|--------------------------|---|---|----------|--------------------------|--------------------------|----|-----|----|---------------|---|------------|----|
| Location | Nos. of fixed sprinklers | | | | | | | | | | | |
| Weigh bridge to workshop | 14 | | | | | | | | | | | |
| CHP | 10 | | | | | | | | | | | |
| Dozer section | 7 | | | | | | | | | | | |
| Wharf wall | 44 | | | | | | | | | | | |
| ii. | <p>Greenbelt, consisting of 3-tier plantation, of width not less than 7.5m, shall be developed all along the mine lease area in a phased manner. The green belt comprising of a mix of native species shall be developed all along the major approach / coal transportation roads.</p> | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Undisturbed area of 108.36 Ha is brought under plantation which includes plantation on vacant land, embankments, township, plantation along the roads and mine boundary.</p> <p>Thick green belt is developed all along the mine boundary to provide a buffer against dust pollution. The overall length of this green belt is 16 approx.. 9.5 kms and width ranges from 210 m to 25 m.</p> <p>This plantation is done in consultation with State Forest</p> | | | | | | | | | | |

| | | |
|------|--|---|
| | | <p>Department. Density of the plants is maintained at 2500 plants per ha. The species planted are Sisu, Sivan, Neem, Karanj, Custard apple, Jamun, Cassia, Raintree, Amrud, Amala.</p> <p>Plantation details are enclosed as Annexure – V.</p> |
| iii. | <p>The transportation of coal shall be carried out as per the provisions and route proposed in the approved mining plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a “bypass” road, it should be constructed so that the impact of sound, dust and accidents could be appropriately mitigated.</p> | <p>Complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>Coal transportation is carried out strictly as per the provisions and routes specified in the approved Mining Plan. The RLS (Rapid loading system with belt conveyor and Silo), facilitating transportation of approximately 75–80% of the total coal production to major consumers. The remaining 20–25% is transported through covered trucks. The coal transportation road is well maintained and directly connected to the State Highway (BT road).</p> <p>There are no villages within the Mine Lease area, and coal is not transported through any habitation; therefore, no bypass road is required.</p> <p>A minimum quantity of coal from MKD-I and Dinesh OC transported by road passes through Umrer OC, which serves as the common exit point. Accordingly, adequate pollution control measures including regular water sprinkling, road sweeping, and dust suppression arrangements have been deployed at Umrer OC to ensure compliance with environmental norms.</p> <p>There is no village in the mine lease area and coal is not transported through any village/ habitation there is no need for bypass road.</p> |
| iv. | <p>Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining “PUC” certificate from the authorized pollution testing centres.</p> | <p>Complied.</p> <p>Vehicular emissions are regularly monitored and kept under control. PUC are obtained for the vehicles engaged in mining and allied activities.</p> |
| v. | <p>Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provide with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne</p> | <p>Complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>Coal transportation is carried out strictly as per the provisions and routes specified in the approved Mining Plan. The RLS (Rapid loading system with belt conveyor and Silo), facilitating transportation of approximately 75–80% of the total coal production to major consumers. The remaining 20–25% is transported through covered trucks. The coal transportation road</p> |

| | <p>dust. Drills shall be wet operated or fitted with dust extractors.</p> | <p>is well maintained and directly connected to the State Highway (BT road).</p> <p>There are no villages within the Mine Lease area, and coal is not transported through any habitation; therefore, no bypass road is required.</p> <p>A minimum quantity of coal from MKD-I and Dinesh OC transported by road passes through Umrer OC, which serves as the common exit point. Accordingly, adequate pollution control measures including regular water sprinkling, road sweeping, and dust suppression arrangements have been deployed at Umrer OC to ensure compliance with environmental norms.</p> <p>Details of Air pollution control measures installed:</p> <ul style="list-style-type: none"> • Tyre washing system is installed at main check post of Umrer Area. • 2 No of mobile water tankers of 10-28 KL capacity are in operation. • 75 nos. fixed sprinklers are installed along coal transportation road, railway siding, weigh bridge, dozer section and CHP, details are as follows: <table border="1" data-bbox="784 842 1382 1058"> <thead> <tr> <th>Location</th> <th>Nos. of fixed sprinklers</th> </tr> </thead> <tbody> <tr> <td>Weigh bridge to workshop</td> <td>14</td> </tr> <tr> <td>CHP</td> <td>10</td> </tr> <tr> <td>Dozer section</td> <td>7</td> </tr> <tr> <td>Wharf wall</td> <td>44</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Mist Spray Arrangement system (150 nozzles) is provided at CHP. • Trolley mounted mist/fog generators are provided at CHP and siding. | Location | Nos. of fixed sprinklers | Weigh bridge to workshop | 14 | CHP | 10 | Dozer section | 7 | Wharf wall | 44 |
|--------------------------|--|---|----------|--------------------------|--------------------------|----|-----|----|---------------|---|------------|----|
| Location | Nos. of fixed sprinklers | | | | | | | | | | | |
| Weigh bridge to workshop | 14 | | | | | | | | | | | |
| CHP | 10 | | | | | | | | | | | |
| Dozer section | 7 | | | | | | | | | | | |
| Wharf wall | 44 | | | | | | | | | | | |
| vi. | <p>Coal Handling Plant shall be operated with effective measures viz. bag filters/ water or mist sprinkling system etc. to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.</p> | <p>Complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> | | | | | | | | | | |
| vii. | <p>Ground water, excluding mine water, shall not be used for mining operations.</p> <p>Rainwater harvesting shall be implemented for construction and</p> | <p>Complied.</p> <p>Ground water is not used for any mining operations. There has been no impact on ground water level in buffer zone villages.</p> <p>Rainwater harvesting measures implemented are listed below:</p> <ul style="list-style-type: none"> • The Mine sumps are unlined and have potential for augmentation of ground water resources.(Central quarry | | | | | | | | | | |

| | | |
|-------|---|---|
| | <p>augmentation of ground water resources.</p> | <p>sump = 96.158 Million gallons capacity Eastern quarry sump = 122.69 Million gallons capacity)</p> <ul style="list-style-type: none"> • A Check Dam is also provided at Lal Puliya Railway Bridge. Dimensions (Length-55 m, height-1.2m from river bed) • In addition to this Roof top Rainwater harvesting system is provided at AGM Office. |
| viii. | <p>Catch/ garland drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps and OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ponds so constructed shall be regularly desilted particularly before onset of monsoon and maintained properly.</p> <p>Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression measures and green belt development. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.</p> | <p>Complied.</p> <p>Catch drains are constructed around periphery of the OB dumps (top width 2 m, bottom width 1 m and height 1 m) to arrest silt and sediment flows from the respective dump sites. In addition to this, garland drains of size (top width 2.5 m, bottom width 1.5 m and height 1.5 m) are constructed around the periphery of the mine area. The catch drains/ garland drains mentioned above are desilted before onset of every monsoon.</p> <p>In case of OB benches in the quarry, cross drainage are provided which carries silt and sediments into the main sump made at the floor which accumulates all the silt and acts as first stage settling pond. The size of sumps are as follows:</p> <ul style="list-style-type: none"> • Central quarry sump = 96.158 Million gallons capacity (5.160 ha). • Eastern quarry sump = 122.69 Million gallons capacity (4.044 ha). <p>The water is then be pumped out onto the surface and is collected into sedimentation tank for final settling. The size of the sedimentation tank is 30 m X 8 m X 2.5 m.</p> <p>Treated Mine water is used for dust suppression, fire fighting and plantation etc. and the quality of which is monitored on fortnightly basis by CMPDIL.</p> <p>Copy of Monitoring Report is enclosed as Annexure-VII.</p> <p>On date, all inactive OB dumps are covered with vegetation which has become self-sustained. Chances of siltation and sediment flows are very less.</p> |

| | | |
|--|---|--|
| ix. | <p>Industrial waste water from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms.</p> <p>Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.</p> | <p>Being complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>The effluent from workshop is treated in ETP provided with oil and grease trap (capacity: 150 KLD). Treated effluent is recycled and used in workshop for washing of HEMM.</p> <p>The quality water is monitored fortnightly and adequate measures will be taken (if need arises) to maintain the quality of water within permissible limits.</p> <p>Copy of Monitoring Report is enclosed as Annexure-VII.</p> <p>The domestic sewage disposal arrangement of 0.3 MLD using Phytorid technology is provided in combined township of Umrer Area.</p> |
| x. | <p>Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.</p> | <p>Complied.</p> <p>Groundwater recharge measures taken up are listed below:</p> <ul style="list-style-type: none"> • The Mine sumps are unlined and have potential for augmentation of ground water resources. (Central quarry sump = 96.158 Million gallons capacity Eastern quarry sump = 122.69 Million gallons capacity) • A Check Dam is also provided at Lal Puliya Railway Bridge. Dimensions (Length-55 m, height-1.2 m from river bed) • In addition to this Roof top Rainwater harvesting system is provided at AGM Office and Canteen building of Umrer OCM. <p>There has been no impact on ground water level in buffer zone villages. However the water shortage in the villages, if any will be supplemented by project authorities.</p> |
| (d) Illumination, Noise and Vibration Control | | |
| i. | <p>Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry and its RO on six-monthly basis.</p> | <p>Being complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>Adequate lighting arrangements are provided in mine premises to meet DGMS standards. These are monitored regularly by lux meter.</p> |

| ii. | Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/ muffs in conformity with the prescribed norms/ guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored. | <p>Being complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>Numbers of Ear plugs issued in last 6 years are given below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Ear Plugs Issued</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>500</td> </tr> <tr> <td>2020-21</td> <td>50</td> </tr> <tr> <td>2021-22</td> <td>250</td> </tr> <tr> <td>2022-23</td> <td>155</td> </tr> <tr> <td>2023-24</td> <td>200</td> </tr> <tr> <td>2024-25</td> <td>100</td> </tr> <tr> <td>2025-26</td> <td>Mine has been discontinued.</td> </tr> </tbody> </table> <p>As per statute all personnel working in mines is given training and retraining for safety aspects as being done presently in other operating mines of the company.</p> <p>Number of persons given training in last 5 year are given below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="3">No. of workers</th> </tr> <tr> <th>Departmental</th> <th>Contractual</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>149</td> <td>565</td> <td>714</td> </tr> <tr> <td>2020-21</td> <td>127</td> <td>292</td> <td>419</td> </tr> <tr> <td>2021-22</td> <td>161</td> <td>117</td> <td>278</td> </tr> <tr> <td>2022-23</td> <td>141</td> <td>150</td> <td>291</td> </tr> <tr> <td>2023-24</td> <td>199</td> <td>132</td> <td>331</td> </tr> <tr> <td>2024-25</td> <td>55</td> <td>116</td> <td>171</td> </tr> <tr> <td>2025-26</td> <td>72</td> <td>20</td> <td>92</td> </tr> </tbody> </table> | Year | Ear Plugs Issued | 2019-20 | 500 | 2020-21 | 50 | 2021-22 | 250 | 2022-23 | 155 | 2023-24 | 200 | 2024-25 | 100 | 2025-26 | Mine has been discontinued. | Year | No. of workers | | | Departmental | Contractual | Total | 2019-20 | 149 | 565 | 714 | 2020-21 | 127 | 292 | 419 | 2021-22 | 161 | 117 | 278 | 2022-23 | 141 | 150 | 291 | 2023-24 | 199 | 132 | 331 | 2024-25 | 55 | 116 | 171 | 2025-26 | 72 | 20 | 92 |
|---------|--|---|-------|------------------|---------|-----|---------|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----------------------------|------|----------------|--|--|--------------|-------------|-------|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|----|-----|-----|---------|----|----|----|
| Year | Ear Plugs Issued | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 155 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | Mine has been discontinued. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | No. of workers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Departmental | Contractual | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 149 | 565 | 714 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 127 | 292 | 419 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 161 | 117 | 278 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 141 | 150 | 291 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 199 | 132 | 331 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 55 | 116 | 171 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 72 | 20 | 92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| iii. | Controlled blasting techniques shall be practiced in order to Mitigative ground vibrations and fly rocks as per the guidelines prescribed by the DGMS. | <p>Complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>No blasting is being carried out.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| iv. | The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises and report in this regard shall | <p>Being complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|----------|--|---|
| | be submitted to this Ministry/ RO on six-monthly basis. | Noise level monitoring station is established at CHP and WCL Colony. Day time and night time noise level data are monitored fortnightly as per Env. (protection) Amendment Rule, 2000. Report of the same is being submitted to MoEFand CC on six-monthly basis. Copy of Monitoring Report is enclosed as Annexure-VII . |
| € | Occupational Health and Safety | |
| i. | The project Proponent shall undertake occupational health survey for initial and periodical medical examination of the workers engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS Circulars. Besides regular periodic health check-up, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any. | <p>Being complied.</p> <p>The mine was discontinued due to the exhaustion of coal reserves, and the Notice of Discontinuance has already been submitted to DGMS. Final mine closure activities are presently underway.</p> <p>For surveillance of occupational health among workers, Periodical Medical Examination (PME) is carried out compulsorily for each employee once in three year with the purpose of detecting and keeping records of diseases with specific importance of Coal Workers Pneumoconiosis. This is covered under Statute.</p> <p>Moreover, for every new employee Initial Medical Examination (IME) is also carried out for both departmental and contractual employee as per the provisions of the statute.</p> <p>During PME, the candidates are subjected to complete clinical examination (including acuity of vision and hearing) radiological examination of chest and routine examination of blood and urine.</p> <p>All the activities within the mine are carried out with complying safety aspect and regular awareness is created among employees regarding safety and to avoid any accidents. All the employees working in projects are provided with PPE like mask, ear muffs, helmets and protective shoes.</p> <p>Various national and International Days are observed to increase awareness and educate general population (e.g. No Tobacco Day/ No Smoking Day, World AIDS day, World Breast Feeding Week etc.).</p> <p>Regular Family Welfare (L.T.T.) Camps organized with the help of State Govt. Full Co-operation is extended to State Govt. for Pulse Polio immunization. Medical facilities are being extended to non-employees in all sorts of acute emergencies.</p> <p>The details of the set up at Umrer Area Hospital are as follows:</p> <ul style="list-style-type: none"> • Periodical Medical Examination (PME) Centres: 1 (Occupational Health Centres) • No. of Doctor engaged in Periodical Medical Examination: 3 • No. of Doctor trained in Periodical Medical Examination: 2 • No. of X-Ray machines (500 mA): 1 • No. of Audiometer units: 1 |

- No. of Spirometer units: 1
- No. of pathology Labs: 1
- No. of X-Ray Technicians: 1
- No. of Laboratory Technicians: 3
- No of ECG Technicians:2

As seen from the above details that Area Hospital, Umrer Area, WCL is having all the infrastructural facilities to comply all the statutory obligations regarding occupational health survey of all employees.

Details of IME/PME done in last 6 years are given below:

| Year | No. of workers (Dept. and Cont.) | |
|---------|----------------------------------|-----|
| | IME | PME |
| 2019-20 | 205 | 155 |
| 2020-21 | 150 | 185 |
| 2021-22 | 117 | 358 |
| 2022-23 | 150 | 358 |
| 2023-24 | 179 | 309 |
| 2024-25 | 99 | 247 |
| 2025-26 | 13 | 109 |

ii. Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

Being complied.

Persons exposed to dusty areas are provided with protective gears like dust masks with goggles.

Numbers of Dust Masks issued in last 5 years are given below:

| Year | Dust Masks Issued |
|---------|-----------------------------|
| 2019-20 | 289 |
| 2020-21 | 110 |
| 2021-22 | 150 |
| 2022-23 | 220 |
| 2023-24 | 200 |
| 2024-25 | 100 |
| 2025-26 | Mine has been discontinued. |

As per statute all personnel working in mines are given training for safety and health aspects.

Number of persons given training in last 6 year are given below:

| Year | No of workers | | |
|---------|---------------|-------------|-------|
| | Departmental | Contractual | Total |
| 2019-20 | 149 | 565 | 714 |
| 2020-21 | 127 | 292 | 419 |
| 2021-22 | 161 | 117 | 278 |
| 2022-23 | 141 | 150 | 291 |
| 2023-24 | 199 | 132 | 331 |

| | | <table border="1"> <tr> <td>2024-25</td> <td>55</td> <td>116</td> <td>171</td> </tr> <tr> <td>2025-26</td> <td>72</td> <td>20</td> <td>92</td> </tr> </table> | 2024-25 | 55 | 116 | 171 | 2025-26 | 72 | 20 | 92 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|---------|---------------|-----|-----|--------------|-------------|-------|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|----|-----|-----|---------|----|----|----|
| 2024-25 | 55 | 116 | 171 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 72 | 20 | 92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| iii. | <p>Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.</p> | <p>Being complied.</p> <p>Skill training as per safety norms specified by DGMS is given to workmen including the outsourcing employees to ensure high safety standards in mines. Number of persons given training in last 5 year are given below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="3">No of workers</th> </tr> <tr> <th>Departmental</th> <th>Contractual</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>149</td> <td>565</td> <td>714</td> </tr> <tr> <td>2020-21</td> <td>127</td> <td>292</td> <td>419</td> </tr> <tr> <td>2021-22</td> <td>161</td> <td>117</td> <td>278</td> </tr> <tr> <td>2022-23</td> <td>141</td> <td>150</td> <td>291</td> </tr> <tr> <td>2023-24</td> <td>199</td> <td>132</td> <td>331</td> </tr> <tr> <td>2024-25</td> <td>55</td> <td>116</td> <td>171</td> </tr> <tr> <td>2025-26</td> <td>72</td> <td>20</td> <td>92</td> </tr> </tbody> </table> | Year | No of workers | | | Departmental | Contractual | Total | 2019-20 | 149 | 565 | 714 | 2020-21 | 127 | 292 | 419 | 2021-22 | 161 | 117 | 278 | 2022-23 | 141 | 150 | 291 | 2023-24 | 199 | 132 | 331 | 2024-25 | 55 | 116 | 171 | 2025-26 | 72 | 20 | 92 |
| Year | No of workers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Departmental | Contractual | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 149 | 565 | 714 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 127 | 292 | 419 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 161 | 117 | 278 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 141 | 150 | 291 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 199 | 132 | 331 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 55 | 116 | 171 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 72 | 20 | 92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (f) | Ecosystem and Biodiversity conservation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | <p>The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. Action plan, in this regard, if any shall be prepared and implemented in consultation with the State Forest and Wildlife Department.</p> | <p>Not applicable.</p> <p>Not applicable as there are no endangered flora/ fauna in core and buffer zone as per baseline data generated in EIA/EMP. As such, no precautionary measures are needed for conservation and protection of endangered flora / fauna.</p> <p>The study details of flora and fauna of core and buffer zone are enclosed as Annexure -VIII.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (g) | Public Hearing, Rand R and CSR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| i. | <p>Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall undertake all the tasks/measures as per the Action Plan submitted with budgetary provisions during the Public Hearing.</p> <p>Land oustees shall be compensated as per the norms laid out Rand R Policy of the Company/ or the National Rand R</p> | <p>Complied.</p> <p>Public hearing was conducted on 23rd September, 2004 for 944.65 ha land. Issues raised during the Public Hearing were addressed by Project Proponent. ATR for the same was submitted to Regional Office of MoEFand CC. Copy of ATR is Enclosed as Annexure - IX.</p> <p>Umrer OC Project was started in 1963 and all the land oustees were compensated as per the norms laid down by State Government/CIL as applicable at the time of acquisition.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | Policy/Rand R Policy of the State Government, as applicable. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|---|--|------|--------------|---------|--------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|------|---------|------|---------|-------|---------|--------|---------|--------|---------|-------|---------|-------|
| ii. | The project proponent shall ensure that the expenditure towards, socio-economic development in and around the mine, in every financial year as per the Corporate Social Responsibility policy as per the provisions under Section 135 of the Components Act,2013. | <p>Being Complied.</p> <p>The activities undertaken for the specific villages adopted under CSR are displayed on the company website and are updated accordingly.</p> <p>In every year area-wise detailed CSR plan is prepared after due consultation with local beneficiaries. Umrer Area has spent the following under CSR in last 12 years:</p> <table border="1" data-bbox="901 541 1263 1165"> <thead> <tr> <th>Year</th> <th>Rs. In lakhs</th> </tr> </thead> <tbody> <tr><td>2025-26</td><td>136.36</td></tr> <tr><td>2024-25</td><td>71.58</td></tr> <tr><td>2023-24</td><td>59.50</td></tr> <tr><td>2022-23</td><td>54.79</td></tr> <tr><td>2021-22</td><td>46.84</td></tr> <tr><td>2020-21</td><td>53.17</td></tr> <tr><td>2019-20</td><td>64.80</td></tr> <tr><td>2018-19</td><td>12.01</td></tr> <tr><td>2017-18</td><td>15.84</td></tr> <tr><td>2016-17</td><td>6.09</td></tr> <tr><td>2015-16</td><td>8.46</td></tr> <tr><td>2014-15</td><td>39.98</td></tr> <tr><td>2013-14</td><td>216.88</td></tr> <tr><td>2012-13</td><td>152.98</td></tr> <tr><td>2011-12</td><td>85.80</td></tr> <tr><td>2010-11</td><td>49.59</td></tr> </tbody> </table> <p>*CSR funds for the year 2015-16 and 2016-17 were diverted to Swaccha Bharat Abhiyan.</p> <p>The activities broadly include:</p> <ul style="list-style-type: none"> • Construction of WBM and CC road at nearby villages • Construction of Well and Storage arrangement and pipe line for providing drinking water • Installation of RO plant at nearby villages and ZP schools. • Construction of Green Haat at village • Construction of Compound wall at ZP Schools. • Skill development training for nearby villagers. <p>Details enclosed as Annexure X.</p> | Year | Rs. In lakhs | 2025-26 | 136.36 | 2024-25 | 71.58 | 2023-24 | 59.50 | 2022-23 | 54.79 | 2021-22 | 46.84 | 2020-21 | 53.17 | 2019-20 | 64.80 | 2018-19 | 12.01 | 2017-18 | 15.84 | 2016-17 | 6.09 | 2015-16 | 8.46 | 2014-15 | 39.98 | 2013-14 | 216.88 | 2012-13 | 152.98 | 2011-12 | 85.80 | 2010-11 | 49.59 |
| Year | Rs. In lakhs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 136.36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 71.58 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 59.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 54.79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 46.84 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020-21 | 53.17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019-20 | 64.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018-19 | 12.01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017-18 | 15.84 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016-17 | 6.09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015-16 | 8.46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014-15 | 39.98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013-14 | 216.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 152.98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011-12 | 85.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2010-11 | 49.59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| iii. | The project proponent shall follow the mitigation measures provided in the Ministries OM No.Z-11013/57/2014-IA.II(M), dated 29 th October, 2014, titled “Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area”. | <p>Complied.</p> <p>Mining operations discontinued due to exhaustion of reserves.</p> <p>Umrer OC Project was started in 1963 and all the land was acquired prior to that. As such there is no village in the mine lease area or surrounded by the mine lease area.</p> <p>Railway siding is within the Mine Lease area, 75 – 80% coal is transported through rail to all the major consumers. The remaining 20 – 25% coal is transported through covered trucks. The coal transportation road is properly maintained and it is directly connected to State Highways (BT road).</p> <p>Nearest villages are 750 m to 950 m away from the mine boundary.</p> |
| iv. | The Project Proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, the Project Proponent shall implement the directions of the Hon’ble Supreme Court with regard to acquiring grazing land. | <p>Not applicable.</p> <p>Umrer OC Project was started in 1963 and all the land was acquired prior to that. There is no grazing land in the core zone of the project. So, there is no necessity of making alternate arrangement for livestock grazing.</p> |
| (h) Corporate Environment Responsibility | | |
| i. | The Company shall have a well laid down Environment Policy duly approved by the Board of Directors. The Environment Policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/26i olative of the environmental or forest norms/conditions. Also the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders or stakeholders. | <p>Complied.</p> <p>Coal India Limited has framed an Environment Policy which is being complied within all the mines. Copy is enclosed as Annexure – XI.</p> <p>To deal with environmental issues and for ensuring compliance with environmental clearance conditions, At corporate level (at HQ), there is a fully fledged Environment Department which is headed by General Manager (Env.) with a multi-disciplinary team of qualified and experienced engineers. The head of Corporate Environment department reports directly the Director (Tech), who is nominated owner of the company.</p> <p>At Area level, the Environmental management cell is headed by Area General Manager, Umrer Area, assisted by Area Nodal Officer (Environment) Umrer Area, Project Officer/Sub Area Manager, Umrer Sub Area, Staff Officer (Civil), Umrer Area.</p> <p>At Project level, it is headed by Sub-Area Manager, Umrer Sub Area and assisted by Mine Manager/Safety Officer, Umrer Sub</p> |

| | | Area, Survey Officer, Umrer Sub Area and Nodal Officer (Environment) of the project. | | | | |
|---------|--|--|------|------------------------|---------|-------|
| ii. | The project proponent shall comply with the provisions contained in this Ministry's OM dated 1 st May, 2018, as applicable, regarding Corporate Environment Responsibility. | <p>Not applicable.</p> <p>As per the O.M dated 1st May 2018, the provision of CER is not applicable as mention in clause no. (ix) of the O.M i.e there is no additional capital investment for proposed expansion which has been duly approved by WCL Board vide its resolution no. WCL / BD/ SECTT./ BM-303/2018/93 dated 31.05.2018.</p> <p>Board approval along with Mining plan is enclosed as Annexure – XII.</p> | | | | |
| iii. | The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company. | <p>Complied.</p> <p>The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions is displayed on company website www.westerncoal.in.</p> | | | | |
| iv. | A separate environmental management cell, both at the project level and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization. | <p>Complied.</p> <p>The Environmental Management cell at corporate level is headed by GM (Env) and assisted by a multidisciplinary team of qualified and trained engineers under the control of Director (Tech.).</p> <p>At Area level, the cell is headed by Area General Manager, Umrer Area, assisted by Area Nodal Officer (Environment) Umrer Area, Project Officer/Sub Area Manager, Umrer Sub Area, Staff Officer (Civil), Umrer Area.</p> <p>At Project level, it is headed by Sub-Area Manager, Umrer Sub Area and assisted by Mine Manager/Safety Officer, Umrer Sub Area, Survey Officer, Umrer Sub Area and Nodal Officer (Environment) of the project.</p> | | | | |
| v. | Action plan for implementing the EMP and environmental clearance conditions shall be prepared and shall be duly approved by the competent authority. The Year-wise funds earmarked for environmental protection measures shall be kept in separate account and not be diverted for any other purpose. Year wise progress | <p>Being complied.</p> <p>The funds earmarked for environment protection measures are not diverted for other works. The environment expenditure is reported in six monthly compliance report sent to RO, MOEF and CC.</p> <p>The capital expenditure for last 08 FYs are included here with this report.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>Expenditure (in Lakhs)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>55.46</td> </tr> </tbody> </table> | Year | Expenditure (in Lakhs) | 2017-18 | 55.46 |
| Year | Expenditure (in Lakhs) | | | | | |
| 2017-18 | 55.46 | | | | | |

| | | | | | |
|------------|---|---|---------|-------|--|
| | of implementation of action plan shall be reported to the Ministry / Regional Office along with the SixMonthly Compliance Report. | | 2018-19 | - | |
| | | | 2019-20 | - | |
| | | | 2020-21 | - | |
| | | | 2021-22 | 5.79 | |
| | | | 2022-23 | - | |
| | | | 2023-24 | - | |
| | | | 2024-25 | 75.12 | |
| | | | 2025-26 | - | |
| vi. | Self-Environmental Audit shall be conducted annually. Every three years, a third party environmental audit shall be carried out. | <p>Being complied.</p> <p>Internal environmental audit system has been setup in the company recently. At Area level, a multi-disciplinary committee has been constituted by order of competent authority to review the compliance status and Inter-area inspection to review compliance status is being done on quarterly basis.</p> <p>The report of the inspection is put up to the subsidiary level apex committee which has been constituted under the chairmanship of Director (Technical), WCL.</p> <p>Every three years the third party assessment of EC compliance will be carried out.</p> <ul style="list-style-type: none"> • FY 2019-20: The inspection has been carried out by CSIR-NEERI for assessment of EC compliance in respect of Umrer Opencast on 30.08.2019 and The third party assessment of EC compliance report has been secured from CSIR-NEERI vide its letter dated 25.09.2019. • FY 2022-23: Work for Third Party Assessment of EC compliance in respect of Umrer OC is awarded to CSIR-NEERI vide Work order no. 1325- 1336 dated 22.12.2022. The inspection has been carried out on 07/02/2023. | | | |
| (i) | Statutory Obligations | | | | |
| i. | Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law, from time to time, and as applicable to this project. | Noted | | | |
| ii. | This Environmental Clearance shall be obtaining wildlife Clearance, if applicable from the Standing Committee of National Board for Wildlife. | <p>Not Applicable.</p> <p>Not applicable as there are no endangered flora/ fauna in core and buffer zone as per baseline data generated for EIA/EMP.</p> <p>The study details of flora and fauna of core and buffer zone are enclosed as Annexure –VIII.</p> | | | |
| iii. | The Project Proponent shall obtain Consent to Establish/Operate under the | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final</p> | | | |

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| | Air Act, 1981 and water Act, 1974 from the concerned State Pollution Control Board. | <p>Mine closure related activities are being undertaken.</p> <p>Project was granted Consent to Operate for 4.9 MTPA from MPCB vide Consent No. Format 1.0/BO/CAC-Cell/CAC-UAN No.65263/CAC-1910000121 dt.03/10/19, which was valid up to 31/03/21(Copy Enclosed as Annexure-II).</p> <p>Subsequently, consent to renewal (1st) for 4.9 MTPA has been secured from MPCB vide letter no: Format 1.0/CAC/UAN No.0000107261/CR/2211000597 dated 09/11/2022 which was valid up to 31/03/2024 (Copy Enclosed as Annexure-III).</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2024.</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2025 (Copy Enclosed as Annexure-III).</p> <p>Mine discontinued due to exhaustion of reserves. Notice of Discontinuation is submitted to DGMS.</p> <p>CTO has been obtained for operation of Railway Siding vide letter Format1.0/CAC/UAN No.MPCB CONSENT-0000239378/CO/2507003287 dated 27/07/2025 with validity upto 31-03-2028.</p> |
| iv. | The project proponent shall obtain necessary permission of the Central Ground Water Authority (CGWA). | <p>Complied.</p> <p>Obtained NOC from CGWA for abstracting Ground Water (NOC No. CGWA/NOC/MIN/ORIG/2019/5653) and the same was renewed vide NOC No. CGWA/NOC/MIN/REN/1/2023/7384 which was valid up to 10/07/2023.</p> <p>Renewal application (2nd Renewal) was submitted to CGWA through NOCAP portal, which is under process.</p> <p>Copy enclosed as Annexure –III.</p> |
| (j) | Monitoring of Project | |
| i. | Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM ₁₀ ,PM _{2.5} , SO ₂ , and NO _x . Location of the stations shall be decided based on | <p>Being complied.</p> <p>Four nos. of ambient air quality monitoring stations were established in consultation with MPCB Officials. considering meteorological data, Topographical features and environmentally and ecologically sensitive targets which are as follows:</p> <ul style="list-style-type: none"> • Umrer Manager Office • Near Workshop |

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| | <p>the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.</p> <p>Online ambient air quality monitoring station/ stations may also be installed in addition to the regular air monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. to be carried out at least once in six months.</p> | <ul style="list-style-type: none"> • Kanwa Village • Near Pump House/ Colony <p>Copy of Monitoring Report is enclosed as Annexure-VII.</p> <p>Monitoring of heavy metals is being carried out once in six months by CMPDIL. Copy of heavy metal monitoring report is enclosed as Annexure – XIII.</p> |
| ii. | <p>The Ambient Air Quality Monitoring in the core zone shall be carried out to ensure the coal industry standards notified vide GSR 742(E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/ Regional Office and to CPCB/SPCB.</p> | <p>Being complied.</p> <p>Ambient air quality is being monitored as per the coal industry standards notified vide GSR 742(E) dated 25.9.2000 and reports are submitted to MOEF and CC (WZ) Nagpur and Maharashtra Pollution Control Board.</p> <p>Copy of Monitoring Report is enclosed as Annexure - VII.</p> <p>Monitoring of heavy metals is being carried out once in six months by CMPDIL and the report of the same is submitted to MOEF and CC (WZ) Nagpur and Maharashtra Pollution Control Board. Copy of heavy metal monitoring report is enclosed as Annexure - XIII.</p> |
| iii. | <p>Effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standard notified vide GSR 742(E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.</p> | <p>Being complied.</p> <p>The quality of mine discharge water is monitored fortnightly basis as per GSR 742(E) of dated 25-05-2000.</p> <p>Copy of Monitoring Report is enclosed as Annexure - VII.</p> |
| | <p>The monitoring data shall be updated on the</p> | <p>Complied.</p> |

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| iv. | company's website and displayed at the project site. The circular No: J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance. | Monitoring data is being regularly uploaded at WCL official website www.westerncoal.in and also displayed at the office of Sub Area Manager. |
| v. | Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of groundwater levels shall be carried out four times in a year i.e, pre-monsoon, monsoon, post-monsoon and winter and the ground water quality shall be monitored once in a year and data thus collected shall be sent regularly to Ministry of Environment, Forest and Climate Change / Regional Office. | <p>Being complied.</p> <p>Regular monitoring of ground water level from existing wells at 32 locations of Buffer zone is being done, for four times a year i.e. during pre-monsoon (May), monsoon (August), post-monsoon (November), and winter (January).</p> <p>Quality of groundwater as per IS: 10500: 2012 is analysed for 33 locations in Buffer zone once in a year.</p> <p>Ground water level and quality monitoring report is being sent to R.O., MoEFand CC, Nagpur and CGWA on regular basis.</p> <p>Groundwater monitoring report is enclosed as Annexure: XIV</p> |
| vi. | Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring date shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change / Regional Office. | <p>Being complied.</p> <p>Water quality is monitored fortnightly basis and report is sent to Ministry of Environment, Forest and Climate Change / Regional Office.</p> <p>Copy of Surface water Monitoring Report is enclosed as Annexure –XV</p> |
| vii. | The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/ Regional | <p>Being complied.</p> <p>Six monthly reports on the status of the implementation of the stipulated environmental safeguards are submitted regularly to Regional office of Ministry of Environment, Forest and Climate Change.</p> |

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| | Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to march of the financial years. | The six monthly report for the period from October 2024 to March 2025 is submitted to MoEFand CC vide letter dated 29/05/2025 and April 2025 to September 2025 is submitted to MoEF & CC through parivesh portal and vide letter dated 29-11-2025. |
| viii. | The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/information/monitoring reports. | Complied. Inspection has been carried out by RO, MoEFand CC, Nagpur on dated 23.09.2019 for issuance of certified copy of compliance in respect of Umrer OC. |
| (k) | Miscellaneous | |
| i. | Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy. | Complied. Efforts are being made for the uses of Solar energy and conventional light bulbs are replaced by LEDs to reduce energy consumption. 01 no of 40 KWp On-Grid-Connected Roof Top Mounted solar power plant is installed at AGM Office of Umrer area and 01 no of 12 KWp On-Grid-Connected Roof Top Mounted solar power plant is installed at Area Hospital, Umrer Area. Copy of the commissioning report of solar plant is enclosed as Annexure - XVI. |
| ii. | The project authorities shall inform to the Regional Office regarding commencement of mining operations. | Noted and complied. |
| iii. | A copy of Environment Clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional office, District Industry sector and Collector's office/Tehsildar Office for information in public domain within 30 days. | Complied. A copy of Environmental Clearance letter has marked to concerned Panchayat on 04/02/2019 and the copy of the same is circulated to Maharashtra Pollution Control Board, Regional office. Copy enclosed as Annexure – XVII. |
| iv. | The Environmental Clearance shall be uploaded | Being complied. |

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| | on the company's website. The, compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. | The clearance letter and the six monthly compliance report had been uploaded on the company's website so as to bring the same in the public domain. |
| v. | The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this clearance, informing that the project has been accorded environmental clearance and a copy of the same is available with the State Pollution Control Board and also at website of the Ministry. | <p>Complied. The same had been done after receipt of EC.</p> <p>Advertisements are given in the following News Papers:</p> <ul style="list-style-type: none"> • 'The Times of India' (English daily, Nagpur) dated 22/01/19 • 'Tarunbharat' (Marathi daily, Nagpur) dated 23/01/19 <p>Copy Enclosed as Annexure – XVIII.</p> |
| vi. | The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the Project Proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF and CC by e-mail. Concerns raised during public hearing | <p>Complied.</p> <p>The environmental statement for each financial year is submitted regularly to the MOEF's Regional Office, Nagpur along with the status of compliance of EC conditions as being practiced in all operating mines and uploaded in Western Coalfields Limited official website.</p> <p>The Audit report for year 2025-26 was submitted online on 29.09.2025. Copy Enclosed as Annexure-XIX.</p> |

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| vii. | The above conditions will be enforced inter-alia, under the provisions of the Water (Preventions and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court and any other Court of Law relating to the subject matter. | Noted and agreed. |
| 5 | The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit. | Noted and agreed |
| 6 | The proponent shall obtain all necessary clearances/ approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection | <p>Complied.</p> <p>The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken.</p> <p>Project was granted Consent to Operate for 4.9 MTPA from MPCB vide Consent No. Format 1.0/BO/CAC-Cell/CAC-UAN No.65263/CAC-1910000121 dt.03/10/19, which was valid up to 31/03/21(Copy Enclosed as Annexure-II).</p> <p>Subsequently, consent to renewal (1st) for 4.9 MTPA has been secured from MPCB vide letter no: Format 1.0/CAC/UAN No.0000107261/CR/2211000597 dated 09/11/2022 which was valid up to 31/03/2024 (Copy Enclosed as Annexure-III).</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2024.</p> <p>Further, consent to renewal (2nd) for 4.9 MTPA has been secured from MPCB vide letter no: Format1.0/CAC/UAN No.MPCB CONSENT-0000196660/CR/2502002259 dated 26/02/2025 which was valid up to 31/03/2025 (Copy Enclosed as Annexure-III).</p> |

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| | | <p>Mine discontinued due to exhaustion of reserves. Notice of Discontinuation is submitted to DGMS. CTO has been obtained for operation of Railway Siding vide letter Format1.0/CAC/UAN No.MPCB CONSENT-0000239378/CO/2507003287 dated 27/07/2025 with validity upto 31-03-2028.</p> <p>NOC from CGWA for abstracting Ground Water (NOC No. CGWA/NOC/MIN/ORIG/2019/5653) was obtained and the same was renewed vide NOC No. CGWA/NOC/MIN/REN/1/2023/7384 which was valid up to 10/07/2023.</p> <p>Renewal application (3rd Renewal) was submitted to CGWA through NOCAP portal, which is under process.</p> <p>Copy of NOC is enclosed as Annexure – IV.</p> |
| 7 | Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010. | Noted. |
| 8 | The coal company/ project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2 nd August 2017 of Hon'ble Supreme Court in WP (Civil) No. 114/2014 in the matter of 'Common Cause Vs Union of India and others. | Noted. |

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| 9 | The concerned state government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining and Geology, in strict compliance of the judgement of Hon'ble Supreme Court. | Does not pertain to the project |
| 10 | This environmental clearance shall not be operational till such time the project proponent complies with the above said judgement of Hon'ble Supreme Court, as applicable, and other statutory requirements. | Noted. |
| 11 | This issues in supersession of the earlier EC granted vide letter dated 20 th May, 2005. | Noted. |

**Ref: MOEF and CC Environment Clearance Letter No. J-11015/86/2005-IA.II (M)
dated 15/01/2021**

| S.No | Compliance Condition | Status |
|------|--|--|
| 4 | | |
| | No untreated mine water shall be discharged in Amb river which is adjacent to the boundary of the mine. | Agreed. No mine water is discharged into Amb river without proper treatment. Sedimentation tank of capacity 600 m ³ and retention time of min. 2 hours is provided for treating mine water. |
| | Hon'ble Supreme Court in an Writ Petition (s) Civil No. 114/ 2014, Common Cause vs Union of India and Ors vide its judgement dated 8 th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition | Being complied. The mine discontinued due to exhaustion of coal reserves and notice of discontinuance has been submitted to DGMS. Final Mine closure related activities are being undertaken. Total area of 296.80 Ha is brought under plantation |

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| <p>in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/ Project Proponent”.</p> | <p>which includes plantation on OB dump, backfilled area, vacant land, embankments, township, plantation along the roads and mine boundary.</p> <p>Backfilling of decoaled area is in progress, grassing / plantation of this remaining area will be taken up after the dump becomes inactive.</p> |
|--|--|

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: <http://mpcb.gov.in>
Email: cac-cell@mpcb.gov.in



Kalpataru Point, 2nd, 3rd
and 4th floor, Opp. Cine
Planet Cinema, Near Sion
Circle, Sion (E),
Mumbai-400022

RED/L.S.I (R35)/ Rev. RED/I.S./ (88.3)
No:- Format1.0/CAC/UAN No.MPCB-
CONSENT-0000239378/CO/2507003287

Date: 27/07/2025

To,
M/s. Umred Open Cast Mine,
Western Coal Fields Ltd.
Rev. Survey P.C. 21 & 22, Sirpur,
Tal-Umred, Dist-Nagpur.



Sub: Renewal of Consent to Operate.

- Ref:**
1. Earlier consent granted by Board vide No. Format1.0/CAC/UAN No.MPCB-CONSENT-0000196660/CR/2502002259 dated 26/02/2025.
 2. Approval for Revision in Mining Plan (including Mine Closure Plan) Dec, 2023 for Umred Expansion OCP, Umred Area vide WCL/Office of CS/BM-359/2023-24/ 1023 dtd. 12/01/2024.
 3. Minutes of 3rd CAC Meeting of 2025-26 (Booklet No. 3) dtd. 10.06.2025.

Your application No.MPCB-CONSENT-0000239378 Dated 08.03.2025

For: Grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The consent to operate is granted for a period up to 31/03/2028**
2. **The capital investment of the project is Rs.38.95 Crs. (As per C.A Certificate submitted by industry Existing CI-307.29 Cr + Decrease in C.I.- 268.34 Crs.)**
3. **Consent is valid for the manufacture of:**

| Sr No | Product | Maximum Quantity | UOM |
|----------|--|------------------|--------|
| Products | | | |
| 1 | Operation of Railway Siding and Coal Handling Plan(CHP) activity located within Mine Area. | 0 | --NA-- |

(Existing mining activity shall be closed in accordance with the Approved Mine Closure Plan issued by the concerned competent authority)

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

| <i>Sr No</i> | <i>Description</i> | <i>Permitted (in CMD)</i> | <i>Standards to</i> | <i>Disposal Path</i> |
|--------------|--------------------|---------------------------|---------------------|-----------------------------------|
| 1. | Trade effluent | 150 | As per Schedule-I | 100 % Recycle for vehicle washing |
| 2. | Domestic effluent | 296.42 | As per Schedule-I | On land for gardening |

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

| <i>Sr No.</i> | <i>Stack No.</i> | <i>Description of stack / source</i> | <i>Number of Stack</i> | <i>Standards to be achieved</i> |
|---------------|------------------|--------------------------------------|------------------------|---------------------------------|
| NA | | | | |

6. **Non-Hazardous Wastes:**

| <i>Sr No</i> | <i>Type of Waste</i> | <i>Quantity</i> | <i>UoM</i> | <i>Treatment</i> | <i>Disposal</i> |
|--------------|----------------------|-----------------|------------|------------------|-------------------------------------|
| 1 | Overburden | 110000 | m3/month | Landfill | Backfilling and Reclamation of Land |

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

| <i>Sr No</i> | <i>Category No./ Type</i> | <i>Quantity</i> | <i>UoM</i> | <i>Treatment</i> | <i>Disposal</i> |
|--------------|---|-----------------|------------|------------------|--------------------------|
| 1 | 5.1 Used or spent oil | 50 | Lit/Day | Recycle | Sale to authorised party |
| 2 | 35.3 Chemical sludge from waste water treatment | 120 | Kg/Day | Landfill | CHWTSDF |

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
10. The applicant shall comply with the conditions of the Environmental Clearance granted by MoEF&CC, GoI vide letter No. J -11015/86/2005-IA-II(M) dated 11/01/2019.
11. PP shall carry out plantation as per EC condition before ensuing monsoon.
12. PP shall carry out over burden dump management as per CPCB guidelines.
13. The applicant shall not carry out any excess production without obtaining Consent of the Board and without obtaining Environmental Clearance wherever it applicable.
14. PP shall ensure that existing mining activity shall be closed in accordance with the Approved Mine Closure Plan issued by the concerned competent authority
15. This consent is issued pursuant to the decision of the 3rd CAC Meeting of 2025-26 (Booklet No. 3) dtd. 10.06.2025.

16. The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent.
17. The industry shall create an Environment Cell by appointing an Environmental Engineer OR Expert for looking after day-to-day activities related to Environment OR Pollution control.

This consent is issued on the basis of information/documents submitted by the Applicant/Project Proponent, if it has been observed that the information submitted by the Applicant/Project Proponent is false, misleading or fraudulent, the Board reserves its right to revoke the consent & further legal action will be initiated against the Applicant/Project Proponent.



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Signed by: Dr. Avinash Dhakne
Member Secretary
For and on behalf of,
Maharashtra Pollution Control Board
ms@mpcb.gov.in
2025-07-27 21:55:27 IST

Received Consent fee of -

| Sr.No | Amount(Rs.) | Transaction/DR.No. | Date | Transaction Type |
|-------|-------------|--------------------|------------|------------------|
| 1 | 375000.00 | MPCB-DR-32810 | 19/03/2025 | NEFT |

Previous balance consent fee as per UAN No.MPCB-CONSENT-0000196660 with Board is Rs. 1,10,893/- is considered in this renewal of consent. Now balance consent fee with Board is Rs. 2,60,893/- and same shall be consider at the time of next renewal of consent.

Copy to:

1. Regional Officer, MPCB, Nagpur and Sub-Regional Officer, MPCB, Nagpur II
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Sion, Mumbai
3. CAC desk - for record & website updation purpose.

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] As per application, you have provided the ETP of capacity 150 CMD for treatment of workshop effluent and provided Sedimentation tank of capacity 600 m³ for treatment of mine water.
- B] The Applicant shall operate the effluent treatment plant (ETP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent:

| Sr.No | Parameters | Limiting concentration not to exceed in mg/l, except for pH |
|--------------|------------------------|--|
| (1) | pH | 5.5 to 9.0 |
| (2) | Oil & Grease | 10 |
| (3) | BOD (3 days 27°C) | 30 |
| (4) | COD | 250 |
| (5) | Total Suspended solids | 100 |
| (6) | Total Dissolved solids | 2100 |

- C] The Industry shall ensure separate energy meter for pollution control system.
 - D] The treated effluent shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, effluent shall find its way to outside factory premises.
2. A] As per your application, you have provided Sewage Treatment Plant of designed capacity 300 CMD for the treatment of 296.42 CMD of sewage.
 - B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

| Sr.No | Parameters | Standards (mg/l) | |
|--------------|--------------------|-------------------------|-----|
| 1 | BOD (3 days 27°C) | Not to exceed | 30 |
| 2 | COD | Not to exceed | 100 |
| 3 | SS | Not to exceed | 50 |

- C] The treated sewage shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, sewage shall find its way to outside factory premises.
3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.

4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

| Sr. No. | Purpose for water consumed | Water consumption quantity (CMD) |
|----------------|--|---|
| 1. | Industrial Cooling, spraying in mine pits or boiler feed | 2080.00 |
| 2. | Domestic purpose | 423.45 |
| 3. | Processing whereby water gets polluted & pollutants are easily biodegradable | 2646.00 |
| 4. | Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic | 0.00 |
| 5. | Gardening | 0.00 |

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.



SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

| Stack No. | Source | APC System provided/proposed | Stack Height(in mtr) | Type of Fuel | Sulphur Content(in %) | Pollutant | Standard |
|------------------|---------------|-------------------------------------|-----------------------------|---------------------|------------------------------|------------------|-----------------|
| NA | NA | | 0.00 | - | - | NA | - |

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. Control Equipments
- Coal handling plant shall be provided with automatic water sprinkler system (Mist type) and shall be operated continuously.
 - Scientific spraying of water on all working area, dump area, stock piles with the help of appropriate dust suppression system.
 - Minerals shall be properly covered during transportation. Overloading of dumpers shall be avoided to prevent spillages.
 - The applicant shall carry out tree plantation along road side, around dumps or compulsory afforestation as per proposal approved by Forest Department. The tree plantation programme shall be taken up well in advance of the actual mining activity, so that green belt of sufficient width & height is developed between mining area/road and surrounding environment.
 - Black topped metal roads provided shall be well maintained to prevent dust formation.
6. Standards for Ambient Air Pollutants:

The Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur dioxide (SO₂) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall not exceed the standards specified in the table given below:

Dust Generating Sources:

Loading or unloading, Haul Road, coal transportation road, Coal handling plant (CHP), Railway Sliding, Blasting, Drilling, Overburden dumps, or any other dust generating external sources like coke ovens (hard as well as soft), briquette industry, nearby road etc.

| Pollutant | Time weighted average | Concentration in Ambient Air |
|--|------------------------------|-------------------------------------|
| Suspended Particulates Matter (SPM) | Annual Average | 360 µg/m ³ |
| | 24 hours | 500 µg/m ³ |
| Respirable Particulate Matter (size less than 10 µm) (RPM) | Annual Average | 180 µg/m ³ |
| | 24 hours | 250 µg/m ³ |
| Sulphur Dioxide (SO ₂) | Annual Average | 80 µg/m ³ |
| | 24 hours | 120 µg/m ³ |
| Oxides of Nitrogen as NO _x | Annual Average | 80 µg/m ³ |
| | 24 hours | 120 µg/m ³ |

- i. In case of any residential or commercial or industrial place falls within 500 metres of any dust generating sources, the National Ambient Air Quality Standards notified vide MOEFCC GOI notification dtd 16.11.2009 as ammended shall be made applicable.
- ii. The applicant shall provide minimum three ambient air quality monitoring stations within mining area which should be monitored for SPM, RSPM, SO₂, NO_x, HC, CO etc. The Annual Arithmetic Mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval shall conform to the National Ambient Air Quality Standards prescribed under Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986. The records of results of monitoring done shall be made available for inspection to the officers of the Board.

7. The applicant shall take adequate measures for control of noise levels from its own sources as follows:

| Sr. No | Location | Permissible Norms [in dB (A)] | Desired minimum thickness of green belt (m) |
|---------------|-----------------------|--------------------------------------|--|
| 1. | Along Road side | 65 (Commercial Area) | 20 |
| 2. | In colonies | 55 (Residential Area) | 20 |
| 3. | Near Opencast Mines | 75 (Industrial Area) | 10 |
| 4. | Near CHPs | 75 | 30 |
| 5. | Near Shaft | 75 | 20 |
| 6. | Near Mine exhaust fan | 75 | > 50 |

8. Other conditions:

- i Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess standards laid down, such information shall be forthwith reported to Board, concerned Police station, office of Directorate of Health services, Dept. of explosives, Inspectorate of Factories & Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.

SCHEDULE-III
Details of Bank Guarantees:

| Sr. No | Consent (C2E/C2O/C2R) | Amt of BG Imposed | Submission Period | Purpose of BG | Compliance Period | Validity Date |
|---------------|------------------------------|--------------------------|--------------------------|---|--------------------------|----------------------|
| 1 | C2R | Rs. 2.0 Lakh | 15 days | Regular monitoring of ground water level and quality should be carried out 6 Monthly basis by establishing the network of existing wells and piezometers. | Regular Activity | 31.03.2029 |
| 2 | C2R | Rs.5.0 Lakh | 15 days | Catch drain and situation ponds of appropriate size should be constructed to arrest silt and sediment flow from soil, OB and mineral dumps. Water so collected should be utilized for watering of the mining area, roads green belt developers etc. | Regular Activity | 31.03.2029 |
| 3 | C2R | Rs.5.0 Lakh | 15 days | Coal transportation shall be done by covered trucks. Overloading of coal transport truck shall be avoided to prevent spillages. | Regular Activity | 31.03.2029 |
| 4 | C2R | Rs.5.0 Lakh | 15 days | Convert and regular operation of existing water sprinkling arrangement into chemical fogging arrangement (MgCl ₂) | Regular Activity | 31.03.2029 |
| 5 | C2R | Rs.5.0 Lakh | 15 days | Deploying & Operation of mechanized sweepers which are automated suction sweeper for cleaning the coal dust from road. | Regular Activity | 31.03.2029 |
| 6 | C2R | Rs.5.0 Lakh | 15 days | Adoption & Continuous Maintenance of of Bioswales technology on the road sides. Bioswales is a land scape element of construction design, primarily a run off conveyance system by the sides of road, to remove dust ,silt and debris. | Regular Activity | 31.03.2029 |

| Sr. No | Consent (C2E/C2O/C2R) | Amt of BG Imposed | Submission Period | Purpose of BG | Compliance Period | Validity Date |
|--------|-----------------------|-------------------|-------------------|--|-------------------|---------------|
| 7 | C2R | Rs.5.0 Lakh | 15 days | Over burden (OB) should be stacked at earmarked dumpsites only and should not be kept active for long period. Proper terracing of OB should be carried out so that the overall slope will come down to 28°. Over Burden shall be disposed by way of backfilling. | Regular Activity | 31.03.2029 |
| 8 | C2R | Rs.25.0 Lakh | 15 days | Towards Operation and Maintenance of pollution control system & compliance of consent and Environment Clearance conditions | Regular Activity | 31.03.2029 |

****Existing BG obtained for above purpose if any, may be extended for period of validity as above.**

If the above Bank Guarantee is not submitted within stipulated period, then 12% interest will be levied as a penalty as per circular dtd 29/02/2024 No. BO/MPCB/AS(T)/Circular/B-240229FTS0122

BG Forfeiture History

| Srno. | Consent (C2E/C2O/C2R) | Amount of BG imposed | Submission Period | Purpose of BG | Amount of BG Forfeiture | Reason of BG Forfeiture |
|-------|-----------------------|----------------------|-------------------|---------------|-------------------------|-------------------------|
| NA | | | | | | |

BG Return details

| Srno. | Consent (C2E/C2O/C2R) | BG imposed | Purpose of BG | Amount of BG Returned |
|-------|-----------------------|------------|---------------|-----------------------|
| NA | | | | |

SCHEDULE-IV

General Conditions:

1. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2. If the MIDC pipeline is broken/ overflowing chamber, in such cases industry shall not discharge their treated effluent into MIDC drain, it shall be sent to CETP by tanker.
3. Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
4. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
5. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipment, the production process connected to it shall be stopped.
6. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
7. The firm shall submit to this office, the 30th day of September every year, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
8. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the H&OW(M&TM) Rules 2016, which can be recycled/processed/ reused/ recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/ reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
9. The industry should comply with the Hazardous & Other Wastes (M & TM) Rules, 2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous & Other Wastes (M & TM) Rules, 2016 for the preceding year April to March in Form-IV by 30th June of every year.
10. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
11. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.
12. Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
13. The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.

14. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
15. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
16. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
17. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
18. The industry should not cause any nuisance in surrounding area.
19. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
20. The applicant shall maintain good housekeeping.
21. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end
22. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
23. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipment provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.

24. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises
25. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
26. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dtd. 18.11.2009 as amended.

This certificate is digitally & electronically signed.



F. No.J-11015/86/2005-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan
Jorbagh Road, N Delhi - 3
Dated: 11th January, 2019

To

The General Manger (Environment)
Western Coalfields Limited,
Koyla Vihar, Civil Lines,
Nagpur - 440 001 (Maharashtra)

Email: gmenvironment@westerncoal.gov.in

Sub: Expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited in Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra) - Environmental Clearance - reg.

Sir,

This refers to your letter No.Vekoli/Mukhayalya/Paryavaran/9-F&20-C/710-712 dated 12th June, 20th July, 19th October, 5th November, 2018 along with online proposal No. IA/MH/CMIN/75384/2018 dated 20th July, 2018 on the above mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for revalidation of environmental clearance dated 20th May, 2005 as mandated under the Ministry's Notification dated 6th April, 2018, and the proposal for grant of environmental clearance to expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited in an area of 944.65 ha located in Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra).

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its meeting held during 13-14 December, 2018. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) The proposal is for revalidation of existing environmental clearance as mandated under the Ministry's Notification dated 6th April, 2018 and grant of environment clearance to expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited in an area of 944.65 ha located in Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra).

(ii) Earlier, Umrer Opencast Coal Mining Project was accorded environment clearance by the Ministry vide letter dated 20th May, 2005 for production capacity of 3.50 MTPA in mine lease area of 944.65 ha. Now, the project proponent has proposed for increase in production capacity by 40% i.e. from 3.5 MTPA to 4.9 MTPA.

(iii) The project area is covered in Survey of India Topo Sheet No.55 P/05 with geographical coordinates ranging from 20°50'56" - 20°52'58"N and 79°15'55"-79°18'9" E. Mine falls in Umrer block of Umrer Coalfields in Nagpur district. The mine is situated at 45 km South-East of Nagpur and easily approachable by all Maharashtra State Highway No. 9. Mine is connected by a broad gauge railway siding to Butibori Railway Station in Nagpur- Wardha Section of Central Railway.



- (iv) Coal linkage of the Umrer Opencast Coal Mining Project mainly lies with Thermal Power Plants of MAHAGENCO. In addition, coal from the mine will be supplied to other consumers.
- (v) No joint venture cartel has been formed to operate the mine. Umrer OC Expansion Mine Project has been proposed to be operated solely by the M/s WCL.
- (vi) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (vii) With regards to employment generation, it is mentioned that existing manpower engaged in the project is reported to be 1,036 persons.
- (viii) The project is reported to be beneficial in terms of bridging the demand-supply gap of non-coking coal for the power houses and other bulk consumers of western and southern part of the country.
- (ix) Land use details during pre and post mining operations will be as under:

Pre mining

| S. No | Particulars | Existing land use as on 1 st April, 2018 (ha) | Land use during mining (ha) |
|-------|--|--|-----------------------------|
| 1 | Quarry area | 319.60 | 362.00 |
| 2 | External OB Dump | 139.52* | 139.52* |
| 3 | Infrastructure including road and colony | 227.69 | 227.69 |
| 4 | Blasting Zone and Rationalization | 257.84 | 215.44 |
| | Total | 944.65 | 944.65 |

*The area also includes 32.88 ha for external OB dump of Makardhokra-II OC as per EC granted to Makardhokra-II OC dated 10th February, 2009.

Post mining:

| S. No. | Particulars of activities | Land use (ha) | | | | |
|--------|---|---------------|--------------|------------|---------------|---------------|
| | | Plantation | Water Body | Public use | Undisturbed | Total |
| 1 | External OB Dump | 139.52 | - | - | - | 139.52 |
| 2 | Top soil dump | - | - | - | - | - |
| 3 | Excavation | 150.0 | 95.52 | - | 116.48* | 362.00 |
| 4 | Built up area including Road & Township | 20.0 | - | - | 207.69 | 227.69 |
| 5 | Green Belt | - | - | - | - | - |
| 6 | Undisturbed Area | 88.36 | - | - | 127.08 | 215.44 |
| | Total | 397.88 | 95.52 | - | 451.25 | 944.65 |

*116.48 ha land will be technically reclaimed and stabilized.

- (x) Total balance mineable reserve as on 1st April, 2018 is 11.68 MT with extraction percentage of 100%.
- (xi) Mining Plan for the project, including Progressive Mine Closure Plan, for the production capacity of 4.90 MTPA in the existing mine lease area of 944.65 ha, has been approved by WCL Board in its 300th meeting held on 24th May, 2018.
- (xii) Application for dewatering of groundwater has been submitted to the Central Ground Water Authority on 13th June, 2016.
- (xiii) Amb river flows through the project area. It has been diverted from southern part of the quarry to northern part of quarry for a length of 2.4 km. The ground water level has been

SKD

reported to be varying between 2.2-10.4 m during pre-monsoon season and between 3.35 m to 10.2 m during post-monsoon season. Total water requirement for the project has been reported to be 1126 cum/day.

(xiv) Geo-mining parameters of the mine are given as under:

| S. No | Particulars | Total quarry |
|-------|---|-------------------|
| 1 | Area of the Quarry | |
| | a) On floor (ha) | 211.83 |
| | b) On surface (ha) | 319.6 |
| 2 | Depth (m) | |
| | a) Initial | 26 |
| | b) Final | 145 |
| 3 | Average gradient of Seam | 1 in 2 to 1 in 12 |
| 4 | Average thickness of seam (m) | |
| | Seam II & I | 17 |
| | Seam III | 5.5 |
| | Seam IV | 7.5 |
| 5 | Average Strike length (m) | 2800 |
| 6 | Width on surface (m) (Dip Rise) | 1600 |
| 7 | Width on floor (m) (Dip Rise) | 600 |
| 8 | Coal Quality | G-8 / G-9 |
| 9 | Balance Mineable reserves (Mt) as on 1.4.2018 | 11.68 |
| 10 | Balance OB (Cum) as on 1.4.2018 | 16.97 |
| 11 | Average S.R. m ³ /t. | 1.453 |

(xv) Method of mining will be opencast with shovel-dumper combination.

(xvi) Life of mine is 2 years at normative capacity of 4.9 MTPA.

(xvii) The project has 5 external OB dumps in an area of 106.64 ha with 60 m height and 42.213 Mm³ of OB. Additional area of 32.88 ha from Makardhokra-II OC also included in the Umrer OC, thereby total no of external OBs increased to 6 with area of 139.52 ha. One internal OB in an area of 266.48 ha with 165.97 Mm³ of OB. The PP has mentioned that out of 266.48 ha, 150 ha will be biologically reclaimed and remaining 116.48 ha will be technically reclaimed.

(xviii) Total quarry area is 362.0 ha, out of which, 266.48 ha would be backfilled while final mine void will be created in an area of 95.52 ha with 145 m depth which will be converted into a water body.

(xix) No forest land is reported to be involved in the project.

(xx) Afforestation plan over a total area of 397.88 ha has been proposed to be implemented by the end of mining operations with density of 2500 plants per ha.

(xxi) Transportation of coal in mine pit head has been proposed by dumpers, surface to sidings by tippers at siding by Pay loader.

(xxii) The project does not involve project affected families.

(xxiii) Total cost of the project is Rs. 186.65 crores, cost of production is Rs.1065.48 per tonne, CSR cost is Rs.2 per tonne, Environment Management Cost is Rs. 2.76 crores. The PP has reported no court cases, violation cases are pending against the project of the PP.

(xxiv) Public hearing was conducted on 23rd September, 2004 while consideration of the earlier proposal for EC to the project for its capacity of 3.5 MTPA in an area of 944.65 ha. The issues raised therein have been duly addressed.

(xxv) The Ministry's Regional Office (WCZ), Nagpur has conducted site inspection in February, 2018 to assess the status of compliance of conditions stipulated in the environment clearance

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dated 20th May, 2005, and submitted inspection report on 7th February, 2018. The action taken report has been submitted by the project proponent to the Regional Office on 2nd July, 2018.

4. The sectoral Expert Appraisal Committee in its meeting held on 13-14 December, 2018 has recommended for revalidation of the existing environmental clearance as mandated under the Ministry's Notification dated 6th April, 2018 and grant of environmental clearance to the expansion project. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval for revalidation of the existing environmental clearance dated 20th May, 2005, and grant of environmental clearance to the expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Ltd in an area of 944.65 ha located in village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra), for a period of one year, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the terms & conditions and environmental safeguards as under:-

- (i) The project proponent shall collect and analyze one season data for environmental parameters and submit for consideration of the EAC before 31st December, 2019.
- (ii) The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 4.90 MTPA prior to commencement of the increased production.
- (iii) Transportation of coal from face to Coal heap shall be carried out by truck. Further, the coal transportation from Coal heap to Coal Handling Plant shall be carried out through covered trucks.
- (iv) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (v) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.
- (vi) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 4.90 MTPA.
- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (x) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (xi) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.
- (xii) A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.

4.1 The grant of environmental clearance is further subject to compliance of the generic conditions as under:

(a) Mining

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

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(ii) No change in mining method, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change.

(iii) Mining shall be carried out as per the approved mining plan including Mine Closure Plan, abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iv) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.

(b) Land reclamation and water conservation

(i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale shall be submitted to Ministry of Environment, Forest and Climate Change/Regional Office (RO).

(ii) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS.

(iii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective state government as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iv) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the Ministry of Environment, Forest and Climate Change/Regional Office on six monthly basis.

(v) The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office on six monthly basis.

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(c) Emissions, effluents, and waste disposal

- (i) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area in a phased manner. The green belt comprising a mix of native species shall be developed all along the major approach/ coal transportation roads.
- (iii) The transportation of coal shall be carried out as per the provisions and route proposed in the approved Mining Plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (iv) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (v) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- (vi) Coal handling plant shall be operated with effective control measures viz. bag filters/water or mist sprinkling system etc to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.
- (vii) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- (viii) Catch/garland drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression measures and green belt development. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
- (ix) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.

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(x) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

(d) Illumination, noise & vibration

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.

(ii) Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(iii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations and fly rocks as per the guidelines prescribed by the DGMS.

(iv) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Occupational health & safety

(i) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the workers engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.

(ii) Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iii) Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

(f) Ecosystem and biodiversity conservation

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(g) Public hearing, R&R and CSR

(i) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

(ii) The project proponent shall ensure the expenditure towards socio-economic development in and around the mine, in every financial year as per the Corporate Social Responsibility Policy as per the provisions under Section 135 of the Companies Act, 2013

(iii) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(iv) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(h) Corporate environment responsibility

(i) The Company shall have a well laid down environment policy duly approved by Board of Directors. The environment policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. Also, the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders/stakeholders.

(ii) The project proponent shall comply with the provisions contained in this Ministry's OM dated 1st May, 2018, as applicable, regarding Corporate Environment Responsibility.

(iii) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.

(iv) A separate environmental management cell both at the project and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

(v) Action plan for implementing EMP and environmental conditions shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(vi) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(i) Statutory Obligations

(i) The environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law from time to time, and as applicable to the project.

(ii) This environmental clearance shall be subject to obtaining wildlife clearance, if applicable, from the Standing Committee of National Board for Wildlife.



(iii) The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the concerned State Pollution Control Board.

(iv) The project proponent shall obtain the necessary permission from the Central Ground Water Authority (CGWA).

(j) Monitoring of project

(i) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

(iii) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.

(iv) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(v) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to Ministry of Environment, Forest and Climate Change/Regional Office.

(vi) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(vii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/Regional Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years.

(viii) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.



(k) Miscellaneous

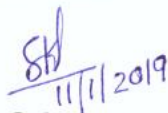
- (i) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.
- (ii) The project authorities shall inform to the Regional Office regarding commencement of mining operations.
- (iii) A copy of the environmental clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.
- (iv) The EC shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain.
- (v) The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this clearance, informing that the project has been accorded environmental clearance and a copy of the same is available with the State Pollution Control Board and also at website of the Ministry.
- (vi) The environmental statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail. Concerns raised during public hearing.
- (vii) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.
5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.
6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
7. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.



9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

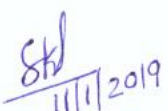
10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

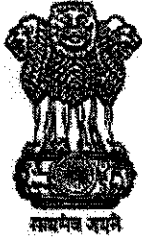
11. This issues in supersession of the earlier EC granted vide letter dated 20th May, 2005.


(S. K. Srivastava)
Scientist E

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Principal Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg, Madam Cama Road, Mantralaya, Mumbai - 32 (Maharashtra)
3. The Additional PCCF (Central), Ministry of Environment, Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-1 (Maharashtra)
4. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, Vikas Marg, Laxmi Nagar, New Delhi
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The Member Secretary, Maharashtra State Pollution Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
8. The District Collector, Nagpur, Government of Maharashtra
9. Monitoring File 10. Guard File 11. Record File 12. Notice Board


(S. K. Srivastava)
Scientist E



F. No.J-11015/86/2005-IA-II(M) Pt.
Government of India
Ministry of Environment, Forest and Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 6th December, 2019

To

The General Manger (Environment)
Western Coalfields Limited,
Koyla Vihar, Civil Lines,
Nagpur - 440 001 (Maharashtra)

Email: gmenvironment@westerncoal.gov.in

Sub: Expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited In Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No. IA/MH/CMIN/119667/2019 dated 27th September, 2019 on the above-mentioned subject.

2. The Ministry of Environment, Forest and Climate Change vide letter dated 11th January, 2019, has granted environmental clearance to the Expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited in Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra), for a period of one year and subject to compliance of certain terms and conditions, which *inter-alia* included the following and other conditions:-

The project proponent shall collect and analyze one season data for environmental parameters and submit for consideration of the EAC before 31st December, 2019.

3. In line with the above condition, Project Proponent submitted the compliance of all the specifics conditions including one season baseline data and The third part assessment of EC compliance through CSIR-NEERI. Site inspection was carried out by CSIR-NEERI for assessment of EC compliance in respect of Umrer Opencast on 30th August, 2019 and compliance report from CSIR-NEERI vide its letter dated 25.09.2019.

4. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its meeting held on 22nd October, 2019 and recommended for continuance of the project and validity of environmental clearance dated 11th

January, 2019 for a period of 30 years or life of the mine, whichever is earlier subject to the terms and conditions stipulated therein remaining the same. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval for continuance of the Expansion of Umrer Opencast Coal Mining Project from 3.50 MTPA to 4.90 MTPA of M/s Western Coalfields Limited in Village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra), for a period of 30 years or life of the mine, whichever is earlier, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto,

5. All other terms and conditions stipulated in the said environmental clearance dated 11th January, 2019 shall remain unchanged.

6. This issues with the approval of the competent authority.


(Dr. R.B.Lal)
Scientist E

(डा. आर. बी. लाल)
(Dr. R. B. LAL)
वैज्ञानिक 'ई'/Scientist E
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
Min. of Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Principal Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg, Madam Cama Road, Mantralaya, Mumbai - 32 (Maharashtra)
3. The Additional PCCF (Central), Ministry of Environment, Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-1 (Maharashtra)
4. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, Vikas Marg, Laxmi Nagar, New Delhi
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The Member Secretary, Maharashtra State Pollution Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
8. The District Collector, Nagpur, Government of Maharashtra
9. Monitoring File 10. Guard File 11. Record File 12. Notice Board


(Dr. R.B.Lal)
Scientist E



No. J-11015/86/2005-IA-II(M)

Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

Indira ParyavaranBhawan,
Jorbagh Road, N Delhi – 3
Email: lk.bokolia@nic.in Tel: 01124695301

Dated: 15th January, 2021

To,

The General Manager (Environment),
M/s Western Coalfields Ltd.,
Coal Estate, 9th Floor, Civil Lines,
Nagpur - 1 (Maharashtra)
Email: gmenvironment.wcl@nic.in; wclenv@yahoo.in

Sub: Umrer Opencast coal mine project of 4.90 MTPA in an area of 944.65 ha of M/s Western Coalfields Limited located in Village Kanhwa Tehshil Umrer District Nagpur(Maharashtra) – Extension of Validity of Environment Clearance –reg

Sir,

This is with reference to your online application No. IA/MH/CMIN/166052/2020 dated 31st July, 2020, on the above mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has granted Environment Clearance (EC) to the project on 11th January, 2019 to Expansion of Expansion of Umrer Opencast coal mine project from 3.50 MTPA to 4.90 MTPA in an area of 944.65 ha M/s Western Coalfields Limited located in Village Kanhwa Tehshil Umrer District Nagpur(Maharashtra). The life of the mine was 2 Years as per EC.

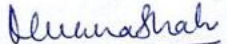
3. Now, project proponent has submitted that mine is in its last phase of operation. The reserves are being extracted with due consideration of conservation of coal before final closure of the mine. In this case, the mine proposed for end of mining operation by FY 2020-21 with production of 1.88 MT. But now, it is seen that there is about 3.0 MT (precisely 3.12 MT) of Coal, which was locked up for safety issues (barrier etc.). And while retreating, this additional coal of 3.12 MT needs to be extracted before finally closing the mine for better conservation of Coal reserves. Life of mine for extraction of coal reserves and OB removal is 03 years from 01.04.2020 i.e. till 2023.

Mining Plan (Including Progressive Mine Closure Plan) (pertaining to enhancement in production capacity from 3.50 to 4.90 MTPA within the existing ML area of 944.65 ha) has been approved by the WCL Board on 24-05-2018 as communicated vide letter no WCL/BD/SECTT/BM-300/2018/93 dated 31st May, 2018

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4. The proposal was considered by the sectoral Expert Appraisal Committee in its 2nd meeting held on 28-29 September, 2020 through video conferencing wherein the Committee recommended the proposal for extension in validity of Environment Clearance. Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for the extension of validity to Expansion of Umrer Opencast coal mine project from 3.50 to 4.90 MTPA capacity in mine lease area of 944.65 ha of M/s Western Coalfields Limited located in village Kanhwa, Tehsil Umrer, District Nagpur (Maharashtra) for life of the mine (three years i.e. till 2023 as project proponent committed that evacuation of mineral will be completed in three years during presentation in EAC) or 30 years whichever is earlier as per EIA Notification, 2006 with all the condition stipulated in EC dated 11th January, 2019 shall remain the same and subject to additional conditions as mentioned below for environment safeguards: -

- No untreated mine water shall be discharged in Amb river which is adjacent to the boundary of the mine.
- Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent".


(Munna Kumar Shah)
Scientist D

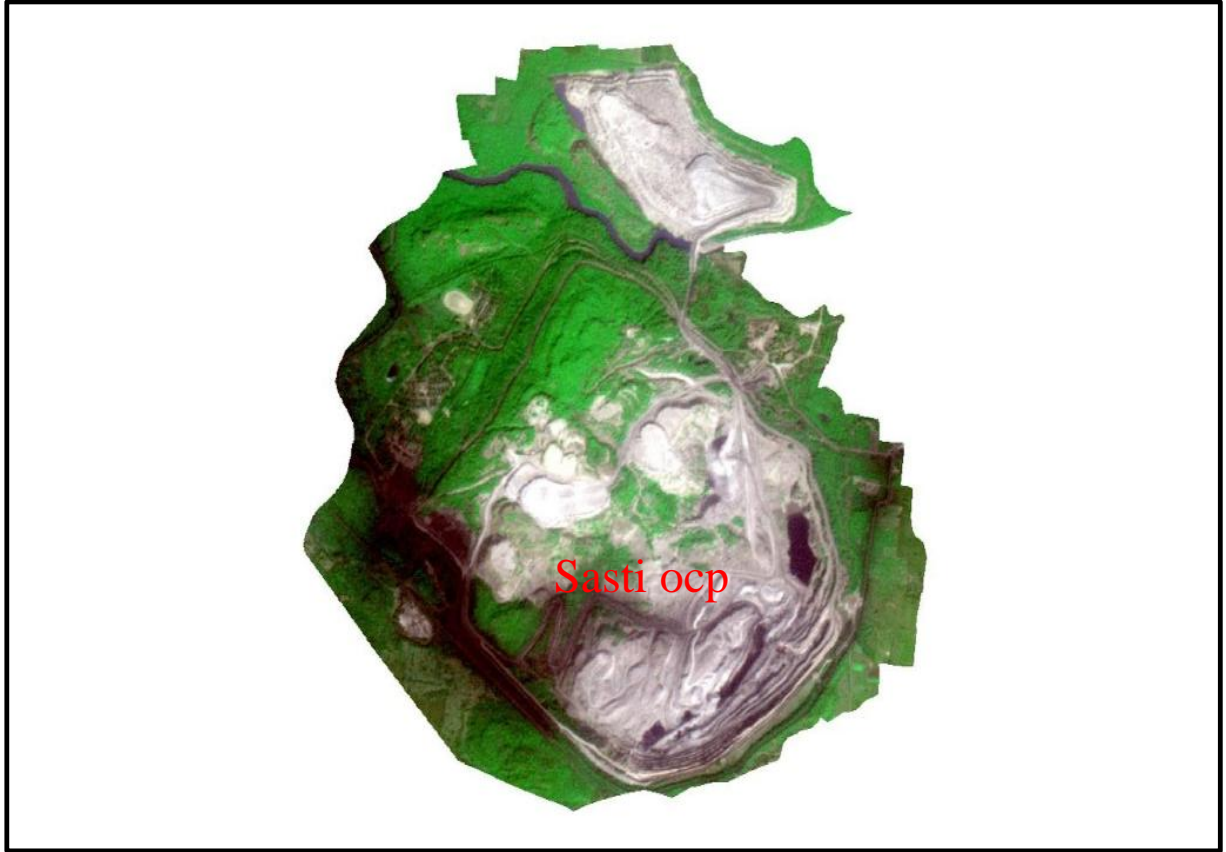
Copy to:

1. The Secretary, Ministry of Coal, ShastriBhawan, New Delhi
2. The Principal Secretary, Department of Environment, Government of Maharashtra, 15thFloor, New Admn. Bldg, Madam Cama Road, Mantralaya, Mumbai - 32 (Maharashtra)
3. The Additional PCCF (Central), Ministry of Environment Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-1 (Maharashtra)
4. CMD, WCL, Nagpur
5. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
6. The Chairman, Maharashtra State Pollution Control Board, Kalapataru Point, 3rd & 4thFloors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
7. The District Collector, Chandrapur, Government of Maharashtra
8. Monitoring File/Guard File 9.PARIVESH


(Munna Kumar Shah)
Scientist D

**Land Restoration/Reclamation Monitoring of more than
5 million cu.m. (Coal+OB) Capacity Opencast Coal Mines of Western
Coalfields Limited based on Satellite Data of the Year 2023**

वेस्टर्न कोल्फील्ड्स लिमिटेड के ५ मिलियन घनमीटर (कोल+अधिभार) से अधिक उत्पादन क्षमतावाले १४ खुली खदानों के भूमि पुनरूद्धार हेतु २०२३ के उपग्रह डाटा के आधार पर निगरानी का वार्षिक प्रतिवेदन



Submitted to
Western Coalfields Limited



**Land Restoration/Reclamation Monitoring of more than
5 million cu.m. (Coal+OB) Capacity Opencast Coal Mines of Western Coalfields
Limited based on Satellite Data of the Year 2023**

वेस्टर्न कोल्फील्ड्स लिमिटेड के ५ मिलियन घनमीटर (कोल+अधिभार) से अधिक उत्पादन क्षमता वाले १४ खुली खदानों की भूमि पुनरूद्धार हेतु २०२३ के उपग्रह डाटा के आधार पर निगरानी का वार्षिक प्रतिवेदन

March 2024

**Remote Sensing Cell
Geomatics Division
CMPDI, Ranchi**



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कार्यकारी सारांश

1.0 परियोजना

वेस्टर्न कोल्फ्रील्ड्स लिमिटेड के ५ मिलियन घन मीटर (कोल+अधिभार) से अधिक क्षमता वाले १४ खुली खदानों के लिये भूमि पुनरुद्धार हेतु वर्ष २०२३ के उपग्रह डाटा पर आधारित प्रत्येक वर्ष के लिए भूमि पुनरुद्धार की नियमित निगरानी किया जाता है! उपरोक्त १४ खुली में से ४ परियोजनाएँ जिन्हें यकोना -१ तथा २(एकीकृत) ,न्यू माजरी यू जी टू ओसी, पौनी -२ (विस्तार) तथा मकरधोकरा -१ (विस्तार) खुली खदानों के नाम से जाना जाता है उन्हें ५ मिलियन घन मीटर (कोल+अधिभार) से अधिक क्षमता वाले खदानों के श्रेणी में पहली बार शामिल किया गया है

2.0 उद्देश्य

भूमि पुनरुद्धार (लैंड रिक्लेमेशन) का उद्देश्य कुल पट्टा क्षेत्र में बैकफील ,ब्रिक्सारोपण ,सामाजिक वानिकी,सक्रिय खनन क्षेत्र, जलनिकाय (वाटर ड्रेनेज) ,बंजर भूमि और जंगल के विभिन्न प्रकार के वितरण प्रणाली के क्षेत्र का आकलन के लिए है ! यह अध्ययन न केवल उपरोक्त सभी परियोजनाओं के भूमि पुनरुद्धार(लैंड रिक्लेमेशन) का निगरानी के प्रगति का आकलन में मदद करेगा बल्कि पर्यावरण संरक्षण के लिए आवश्यक उपचारात्मक उपायों को करने में सहायता प्रदान करेगा ! .

3.0 मुख्य निष्कर्ष

- वर्ष २०२३-२०२४ के लिए भूमि पुनरुद्धार(लैंड रिक्लेमेशन) की निगरानी हेतु डब्ल्यू.सी.एल के १४ खुली परियोजनाएँ जिनका नाम सस्ती,पद्मापुर,दुर्गापुर,मुगोली, उमरेड,उकनी, निलजय,यकोना- १ तथा २ (एकीकृत) ,न्यू माजरी यूजी टू ओसी ,पौनी -२(विस्तार) तथा मकरधोकरा - १(विस्तार) है इनके कुल पट्टा क्षेत्र १५०.९९ वर्ग किलोमीटर में से ३९.२९ वर्गकिलोमीटर उत्खनित क्षेत्र है जिसमें क्रमशः१२.२६ वर्गकिलोमीटर (३१.२०%) बैकफील क्षेत्र,४.२४ वर्गकिलोमीटर(१०.७९%) बृक्षारोपण (जैविक रूप से भूमि पुनरुद्धार) का क्षेत्र तथा २२.७९ वर्गकिलोमीटर (५८.००%) सक्रिय खनन क्षेत्र के अंतर्गत पाया गया ! इस विश्लेषण से स्पष्ट है कि कुल खुली खदानों के उत्खनित क्षेत्र में से ४२.००प्रतिशत का क्षेत्र जैविक और तकनीकी रूप से भूमि पुनरुद्धार का कार्य हो गया है और शेष ५८.०० प्रतिशत का क्षेत्र सक्रिय खनन के अंतर्गत है ! परियोजनावार विवरण तालिका -१ और चित्र-१ दर्शाया गया है(तुलनात्मक अध्ययन के उद्देश्य के लिए तालिका -१ देखें)

- विभिन्न परियोजनाओं के लिए वर्ष २०२२ के सापेक्ष में वर्ष २०२३ में किये गए भूमि पुनरुद्धार की स्थिति की तुलना करने के पश्चात विश्लेषण से यह स्पष्ट है कि भूमि पुनरुद्धार के अंतर्गत वर्ष २०२२ के कुल क्षेत्र १६.१० वर्ग किलोमीटर से बढ़कर वर्ष २०२३ में १६.५० वर्गकिलोमीटर तथा हो गया है! डब्लू.सी.एल के १४ खुली परियोजनाओं में से सस्ती खुली खदान में भूमि पुनरुद्धार का कार्य अधिकतम ८७.३४ प्रतिशत हुआ है अतः इसे शीर्ष स्थान पर रखा गया है इसके बाद क्रमशः उमरेड तथा मुगोली खुली परियोजनाओं का स्थान है जिनके भूमि पुनरुद्धार का क्षेत्र क्रमशः ६५.०१ तथा ४६.५८ प्रतिशत है!
- वर्ष २०२२ के कुल जैविक भूमि पुनरुद्धार (बृक्षारोपण) के अंतर्गत का क्षेत्र ४.२३ वर्ग किलोमीटर के तुलना में वर्ष २०२३ में बढ़कर ४.२४ वर्ग किलोमीटर हो गया है जबकि वर्ष २०२२ के तकनीकी पुनरुद्धार (बैकफील के अंतर्गत क्षेत्र)का क्षेत्र ११.८७ वर्ग किलोमीटर से बढ़कर वर्ष २०२३ में १२.२६ वर्ग किलोमीटर हो गया है ! भूमि पुनरुद्धार के अंतर्गत ०.४० वर्ग किलोमीटर की यह बृद्धि पर्यावरण संरक्षण के दिशा में वेस्टर्न कोलफील्ड्स लिमिटेड के द्वारा उठाये गए सकारात्मक प्रयासों का परिणाम है!

Executive Summary

- 1.0 Project** Land restoration / reclamation monitoring of 14 opencast coal mines of Western Coalfields Ltd. (WCL) producing 5 million cu.m. and more (Coal+OB) per year based on satellite data, regularly on annual basis. Among 14 opencast coal mines projects, 4 projects namely Yekona-I & II (Amal), New Majri UG to OC, Pauni-II (Expn) and MKD-I (Expn) have been included in 2021 for the first time as their capacity (Coal+OB) have been increased to category of more than 5 million cubic meter from category of less than 5 million cu.m. per year.
- 2.0 Objective** Objective of the land restoration / reclamation monitoring is to assess the area of backfilled, plantation, social forestry, active mining area, water bodies, and distribution of wasteland, agricultural land and forest in the leasehold area of the project. This will help in assessing the progressive status of mined land reclamation and to take up remedial measures, if any, required for environmental protection.
- 3.0 Salient Findings**
- Out of total leasehold area of 150.99 Km² of 14 projects of WCL viz. Sasti, Padmapur, Durgapur, Mugoli, Umrer, Ukni, Niljai, New Majri. Makardhokra-III, Penganga, Yekona-I & II (Amal), New Majri UG to OC, Pauni-II (Expn.) and MKD-I (Expn.) considered for monitoring during 2023-24; the total excavated area is 39.29 Km² out of which 12.26 Km² area (31.20%) is backfilled, 4.24 Km² area (10.79%) has been planted and 22.79 Km² area (58.00%) is under active mining. It is evident from the analysis that 42.00% area of the OC projects has been reclaimed (biological and technical) and balance 58.00% area is under active mining. Project wise details are given in Table-1 & Fig-1. (For comparison purpose, refer Table-1).
 - On comparing the status of land reclamation for the year 2023 with respect to the year 2022 in different projects, it is evident from the analysis that total area under land reclamation has increased from 16.10 Km² (Yr. 2022) to 16.50 Km² (Yr.2023). Out of 14 projects of WCL, Sasti OC ranks on top for land reclamation (87.34%) followed by Umrer OC (65.01%) and Mugoli OC (46.58%).
 - Area under biological reclamation (plantation) has increased from 4.23 Km² (Yr. 2022) to 4.24 Km² (Yr. 2023) whereas area of technical reclamation (area under backfilling) has increased from 11.87 Km² (Yr. 2022) to 12.26 Km² (Yr. 2023) in WCL. The total increase of 0.40 Km² under reclamation is the result of the efforts of the Western Coalfields Ltd. taken up towards environmental protection.

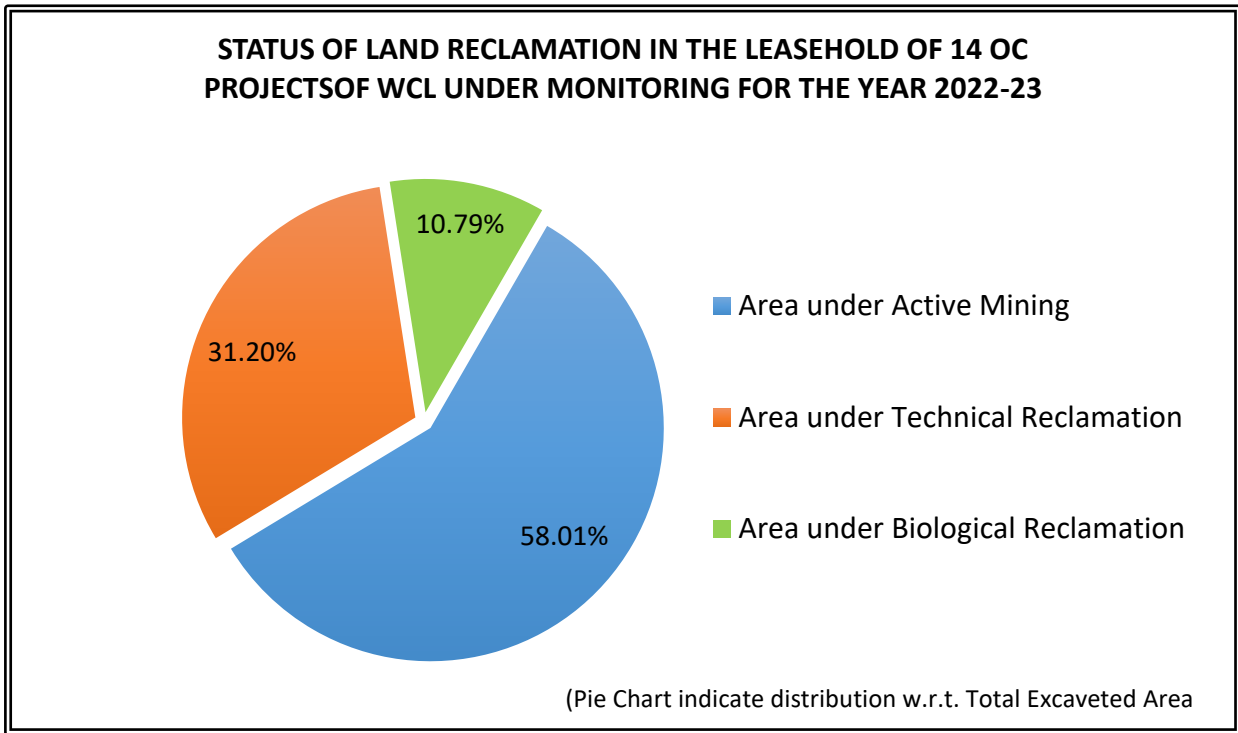


Fig.1: Pie Chart indicating distribution (%) of reclamation activities in 14 OC Mines of WCL

Table-1
Projectwise Land Reclamation Status in Opencast Projects of WCL
(>5 Million Cubic Metre Coal+OB) based on Satellite Data of the year 2023

(Area in Sq. Kms.)

| Sl. No. | Project | Total Leasehold Area | | Technical Reclamation | | Biological Reclamation | | Plantation | | | | Area under Active Mining | | Total Excavated Area | | Total Area under Plantation | | Total Area under Reclamation | |
|---------|--------------------|----------------------|---------------|------------------------|--------------|---|-------------|-------------------|--------------|--|--------------|--------------------------|--------------|----------------------|--------------|-----------------------------|--------------|------------------------------|--------------|
| | | | | Area under Backfilling | | Plantation on Excavated / Backfilled Area | | Other Plantations | | (% Green Cover Generated in Leasehold) | | | | | | | | | |
| | | | | 2022 | 2023 | 2022 | 2023 | 2022 | 2023 | 2022 | 2023 | | | | | 2022 | 2023 | | |
| 1 | Sasti | 9.20 | 9.20 | 2.62 | 2.72 | 0.83 | 0.73 | 1.70 | 1.68 | 0.67 | 0.68 | 0.35 | 0.50 | 3.80 | 3.95 | 3.20 | 3.09 | 3.45 | 3.45 |
| | | | | 68.95% | 68.86% | 21.84% | 18.48% | | | | | 9.21% | 12.66% | | | 34.78% | 33.59% | 90.79% | 87.34% |
| 2 | Padmapur | 8.29 | 8.29 | 0.59 | 0.65 | 0.28 | 0.28 | 2.14 | 2.21 | 0.83 | 0.83 | 1.18 | 1.12 | 2.05 | 2.05 | 3.25 | 3.32 | 0.87 | 0.93 |
| | | | | 28.78% | 31.71% | 13.66% | 13.66% | | | | | 57.56% | 54.63% | | | 39.20% | 40.05% | 42.44% | 45.37% |
| 3 | Durgapur | 15.50 | 15.50 | 1.17 | 1.04 | 0.93 | 1.06 | 2.72 | 2.81 | 1.19 | 1.19 | 2.53 | 2.57 | 4.63 | 4.67 | 4.84 | 5.06 | 2.10 | 2.10 |
| | | | | 25.27% | 22.27% | 20.09% | 22.70% | | | | | 54.64% | 55.03% | | | 31.23% | 32.65% | 45.36% | 44.97% |
| 4 | Mugoli | 12.55 | 12.55 | 1.46 | 1.53 | 0.14 | 0.17 | 1.81 | 1.90 | 0.56 | 0.61 | 1.85 | 1.95 | 3.45 | 3.65 | 2.51 | 2.68 | 1.60 | 1.70 |
| | | | | 42.32% | 41.92% | 4.06% | 4.66% | | | | | 53.62% | 53.42% | | | 20.00% | 21.35% | 46.38% | 46.58% |
| 5 | Umrer | 9.45 | 9.45 | 1.50 | 1.51 | 1.58 | 1.63 | 1.45 | 1.45 | 2.31 | 2.32 | 1.72 | 1.69 | 4.80 | 4.83 | 5.34 | 5.40 | 3.08 | 3.14 |
| | | | | 31.25% | 31.26% | 32.92% | 33.75% | | | | | 35.83% | 34.99% | | | 56.51% | 57.14% | 64.17% | 65.01% |
| 6 | Ukni | 12.85 | 12.85 | 0.52 | 0.54 | 0.00 | 0.00 | 1.66 | 1.74 | 0.86 | 0.91 | 1.94 | 2.15 | 2.46 | 2.69 | 2.52 | 2.65 | 0.52 | 0.54 |
| | | | | 21.14% | 20.07% | 0.00% | 0.00% | | | | | 78.86% | 79.93% | | | 19.61% | 20.62% | 21.14% | 20.07% |
| 7 | Niljai | 17.61 | 17.61 | 1.44 | 1.46 | 0.11 | 0.13 | 2.04 | 2.11 | 1.23 | 1.25 | 2.84 | 2.99 | 4.39 | 4.58 | 3.38 | 3.49 | 1.55 | 1.59 |
| | | | | 32.80% | 31.88% | 2.51% | 2.84% | | | | | 64.69% | 65.28% | | | 19.19% | 19.82% | 35.31% | 34.72% |
| 8 | New Majri | 7.74 | 7.74 | 1.52 | 1.64 | 0.36 | 0.24 | 1.24 | 0.97 | 1.47 | 1.47 | 2.10 | 2.22 | 3.98 | 4.10 | 3.07 | 2.68 | 1.88 | 1.88 |
| | | | | 38.19% | 40.00% | 9.05% | 5.85% | | | | | 52.76% | 54.15% | | | 39.66% | 34.63% | 47.24% | 45.85% |
| 9 | MKD-III | 9.23 | 9.23 | 0.37 | 0.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.12 | 1.01 | 1.09 | 1.38 | 1.50 | 0.07 | 0.12 | 0.37 | 0.41 |
| | | | | 26.81% | 27.33% | 0.00% | 0.00% | | | | | 73.19% | 72.67% | | | 0.76% | 1.30% | 26.81% | 27.33% |
| 10 | Penganga | 7.63 | 7.63 | 0.67 | 0.75 | 0.00 | 0.00 | 0.00 | 0.49 | 0.49 | 0.55 | 0.90 | 1.25 | 1.57 | 2.00 | 0.49 | 1.04 | 0.67 | 0.75 |
| | | | | 42.68% | 37.50% | 0.00% | 0.00% | | | | | 57.32% | 62.50% | | | 6.42% | 13.63% | 42.68% | 37.50% |
| 11 | Yekona-I&II(Amal) | 16.79 | 16.79 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 1.11 | 1.29 | 1.12 | 1.30 | 0.03 | 0.03 | 0.01 | 0.01 |
| | | | | - | 0.77% | - | 0.00% | | | | | - | 99.23% | | | 0.18% | 0.18% | 0.89% | 0.77% |
| 12 | New Majri UG to OC | 7.06 | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.37 | 0.37 | 1.03 | 1.06 | 1.03 | 1.06 | 0.37 | 0.64 | 0.00 | 0.00 |
| | | | | - | 0.00% | - | 0.00% | | | | | - | 100.00% | | | 5.24% | 9.07% | 0.00% | 0.00% |
| 13 | Pauni -II (Expn) | 10.95 | 10.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.18 | 0.18 | 0.22 | 1.17 | 1.34 | 1.17 | 1.34 | 0.31 | 0.40 | 0.00 | 0.00 |
| | | | | - | 0.00% | - | 0.00% | | | | | - | 100.00% | | | 2.83% | 3.65% | 0.00% | 0.00% |
| 14 | MKD-1 (Expn) OC | 6.14 | 6.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.00 | 1.34 | 1.57 | 1.34 | 1.57 | 0.10 | 0.10 | 0.00 | 0.00 |
| | | | | - | 0.00% | - | 0.00% | | | | | - | 100.00% | | | 1.63% | 1.63% | 0.00% | 0.00% |
| | Total | 150.99 | 150.99 | 11.87 | 12.26 | 4.23 | 4.24 | 14.99 | 15.91 | 10.26 | 10.55 | 21.07 | 22.79 | 37.17 | 39.29 | 29.48 | 30.70 | 16.10 | 16.50 |
| | | | | 31.93% | 31.20% | 11.38% | 10.79% | | | | | 56.69% | 58.00% | | | 19.52% | 20.33% | 43.31% | 42.00% |

Note : In reference of the above Table-1, different parameters are classified as follows

- 1 Area under Biological Reclamation includes area under plantation done on backfilled area only.
- 2 Area under Technical Reclamation includes areas under barren backfill only.
- 3 Area under Active Mining includes coal quarry, advance quarry & quarry filled with water etc.
- 4 Social forestry and plantation on external OB dump are not included in biological reclamation and are put under other plantation.
- 5 % calculated in respect to total excavated area except for "Total area under plantation" where % is in terms of leasehold area.

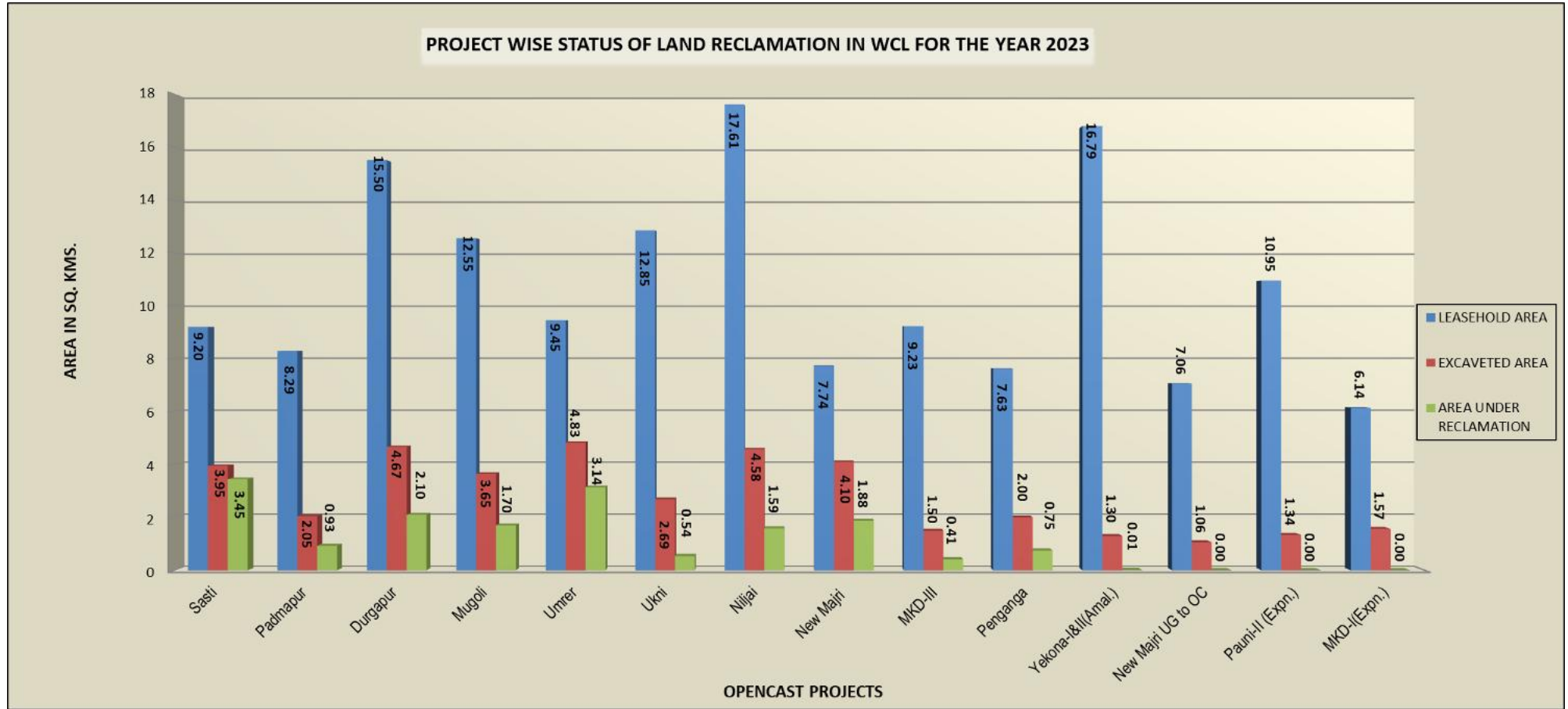


Fig.2: Land reclamation status in 14OC projects of WCL for the year 2023

1.0 Background

- 1.1** Land is the most important natural resource which embodies soil, water, flora, fauna and total ecosystem. All human activities are based on the land which is the scarcest natural resource in our country. Mining is a site specific industry and it could not be shifted anywhere else from the location where mineral occurs. It is a fact that surface mining activities do effect the land environment due to ground breaking. Therefore, there is an urgent need to reclaim and restore the mined out land for its productive use for sustainable development of mining. This will not only mitigate environmental degradation, but would also help in creating a more congenial environment for land acquisition by coal companies in future.
- 1.2** Keeping above in view, Coal India Ltd. (CIL) issued a work order vide letter no. CIL/WBP/Env/2009/2428 dated 29.12.2009 to Central Mine Planning & Design Institute (CMPDI), Ranchi, for monitoring land reclamation. status of all the opencast coal mines having production of more than 5 million m³ per annum (coal + OB taken together per annum) based on remote sensing satellite data, regularly on annual basis for sustainable development of mining. Further, another work order vide letter no. CIL/WBP/ENV./2011 dated 23/08/11 was issued by CIL for monitoring of less than 5 million m³ per annum capacity (Coal +OB) projects from the year 2011 at interval of three years. This order has been renewed in CIL letter no. CIL/WBP/Env/2011/4706 dated 12.10.2012 for the next five years. Again this work order has been renewed vide letter no. CIL/WBP/Env/2017/DP/8391 dated 22.06.2017 for a period next five years starting from 2017-18 to 2021-22. The work order was renewed vide letter no. CIL/ ENVT/2022-23/W.O/10899 dated 06.07.2022 for a period of 2 more years from 2022-23 to 2023-24. The result of land reclamation status of all such mines is put on the websites of **CIL**, (www.coalindia.in), **CMPDI** (www.cmpdi.co.in) and the concerned coal companies in public domain. Detailed report is submitted to Coal India and respective subsidiaries.

- 1.3** Land reclamation monitoring of all opencast coal mining projects would also comply the statutory requirements of Ministry of Environment & Forest (MoEF).Such monitoring would not only facilitate in taking timely mitigation measures against environmental degradation, but would also enable coal companies to utilize the reclaimed land for larger socio-economic benefits in a planned way.
- 1.4** Present report is embodying the finding of the study based on satellite data of the year 2023 carried out for all the OC projects producing more than 5 mcm (Coal+OB) for Western Coalfields Ltd.

2.0 Objective

Objective of the land reclamation/restoration monitoring is to assess the area of backfilled, plantation, OB dumps, social forestry, active mining area, settlements and water bodies, distribution of wasteland, agricultural land and forest land in the leasehold area of the project. This is an important step taken up for assessing the progressive status of mined land reclamation and for taking up remedial measures, if any, required for environmental protection.

3.0 Methodology

There are number of steps involved between raw satellite data procurement and preparation of final map. National Remote Sensing Centre (NRSC) Hyderabad, being the nodal agency for satellite data supply in India, provides only raw digital satellite data, which needs further digital image processing for extracting the information and map preparation before uploading the same in the website. Methodology for land reclamation monitoring is given in Fig 2. Following steps are involved in land reclamation /restoration monitoring:

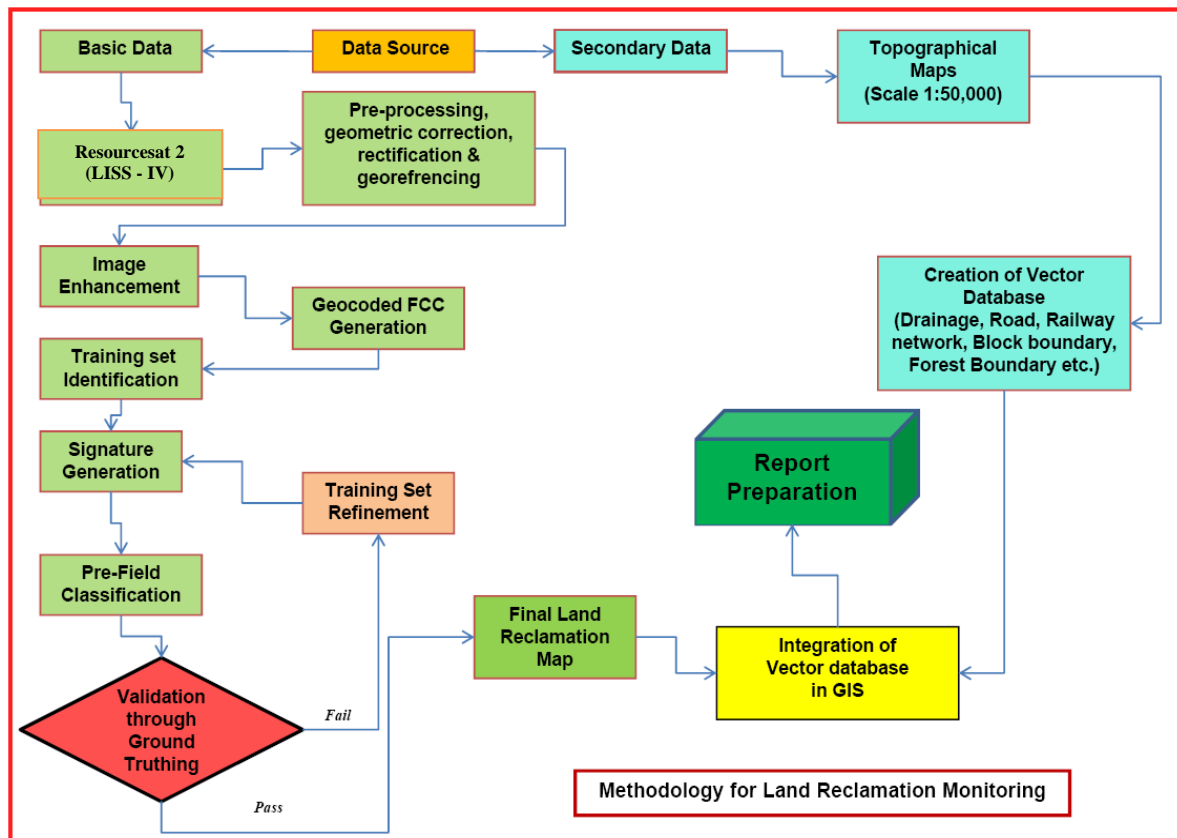


Figure: 3- **Methodology for Land Reclamation Monitoring**

3.1 Data Procurement: After browsing the data quality and date of pass on internet, supply order for data is placed to NRSC. Secondary data like leasehold boundary, topo sheets are procured for creation of vector database.

3.2 Satellite Data Processing: Satellite data are processed using ERDAS IMAGINE 2014 digital image processing s/w. Methodology involves the following major steps:

- Rectification & Georeferencing:** Inaccuracies in digital imagery may occur due to 'systematic errors' attributed to earth curvature and rotation as well as 'non-systematic errors' attributed to satellite receiving station itself. Raw digital images contain geometric distortions, which make them unusable as maps. Therefore, georeferencing is required for correction of image data using ground control points (GCP) to make it compatible to Soltoposheet.

- **Image enhancement:**

To improve the interpretability of the raw data, image enhancement is necessary. Local operations modify the value of each pixel based on brightness value of neighbouring pixels using ERDAS IMAGINE 2014 s/w. and enhance the image quality for interpretation.

- **Training set selection**

Training set requires to be selected, so that software can classify the image data accurately. The image data are analysed based on the interpretation keys. These keys are evolved from certain fundamental image-elements such as tone/colour, size, shape, texture, pattern, location, association and shadow. Based on the image-elements and other geo-technical elements like land form, drainage pattern and physiography; training sets were selected/identified for each land use/cover class. Field survey was carried out by taking selective traverses in order to collect the ground information (or reference data) so that training sets are selected accurately in the image. This was intended to serve as an aid for classification.

- **Classification and Accuracy assessment**

Image classification is carried out using the maximum likelihood algorithm. The classification proceeds through the following steps: (a) calculation of statistics [i.e. signature generation] for the identified training areas, and (b) the decision boundary of maximum probability based on the mean vector, variance, covariance and correlation matrix of the pixels. After evaluating the statistical parameters of the training sets, reliability test of training sets is conducted by measuring the statistical separation between the classes that resulted from computing divergence matrix. The overall accuracy of the classification was finally assessed with reference to ground truth data.

- **Area calculation**

The area of each land use class in the leasehold is determined using ERDAS IMAGINE v.2014 software.

- **Overlay of Vector data base**

Vector data base created based on secondary data. Vector layer like drainage, railway line, leasehold boundary, forest boundary etc. are superimposed on the image as vector layer in the Arc GIS 10.2 database.

- **Pre-field map preparation**

Pre-field map is prepared for validation of the classification result

3.3 Ground Truthing:

Selective ground verification of the land use classes is carried out in the field and necessary corrections if required, are incorporated before map finalization.

3.4 Land reclamation database on GIS:

Land reclamation database is created on GIS platform to identify the temporal changes identified from satellite data of different cut-of dates.

4.0 Work Plan

Fourteen opencast projects of WCL producing more than 5 million cubic m. (Coal + OB together) have been taken up for land reclamation/ restoration monitoring in 2022-23, based on the Resourcesat-2/2A(L-IV) Satellite data, using ERDAS Imaging digital image processing s/w and ArcGIS 10.2 platform. Land reclamation monitoring will be carried out regularly on annual basis to assess the progressive status of land reclamation/ restoration in the above OC mines. The report of this study has been uploaded on the websites of CMPDI, CIL & WCL in public domain.

5.0 Land Reclamation Status in Western Coalfields Limited

5.1 Following 14 OC projects producing more than 5 million cubic m. (Coal + OB together) of Western Coalfields Ltd. have been taken up for land reclamation monitoring based on Satellite Data of the year 2023:

- Sasti
- Padmapur
- Durgapur
- Mugoli
- Umrer
- Ukni
- Niljai
- New Majri
- MKD-III
- Penganga
- Yekona-I&II (Amal.)
- New Majri UG to OC
- Pauni-II (Expn.)
- MKD-I(Expn.)

5.2 Project wise Land Reclamation status in WCL for the year 2022 is given in Table 1 and also shown graphically in Fig 1. Area statistics of different land use class present in the mine leasehold of the above projects for the year 2022 are shown in the Table 2. It is important to mention here that leasehold boundaries of Yekona-I&II (Amal), New Majri UG to OC and MKD-I (Expn.) projects have been modified as per latest EC. Land use maps derived from satellite data are shown in Plate 1-14. Year wise changes in the different land use classes based on satellite data are depicted in Bar Charts in Fig.4–17 for the last three years only.

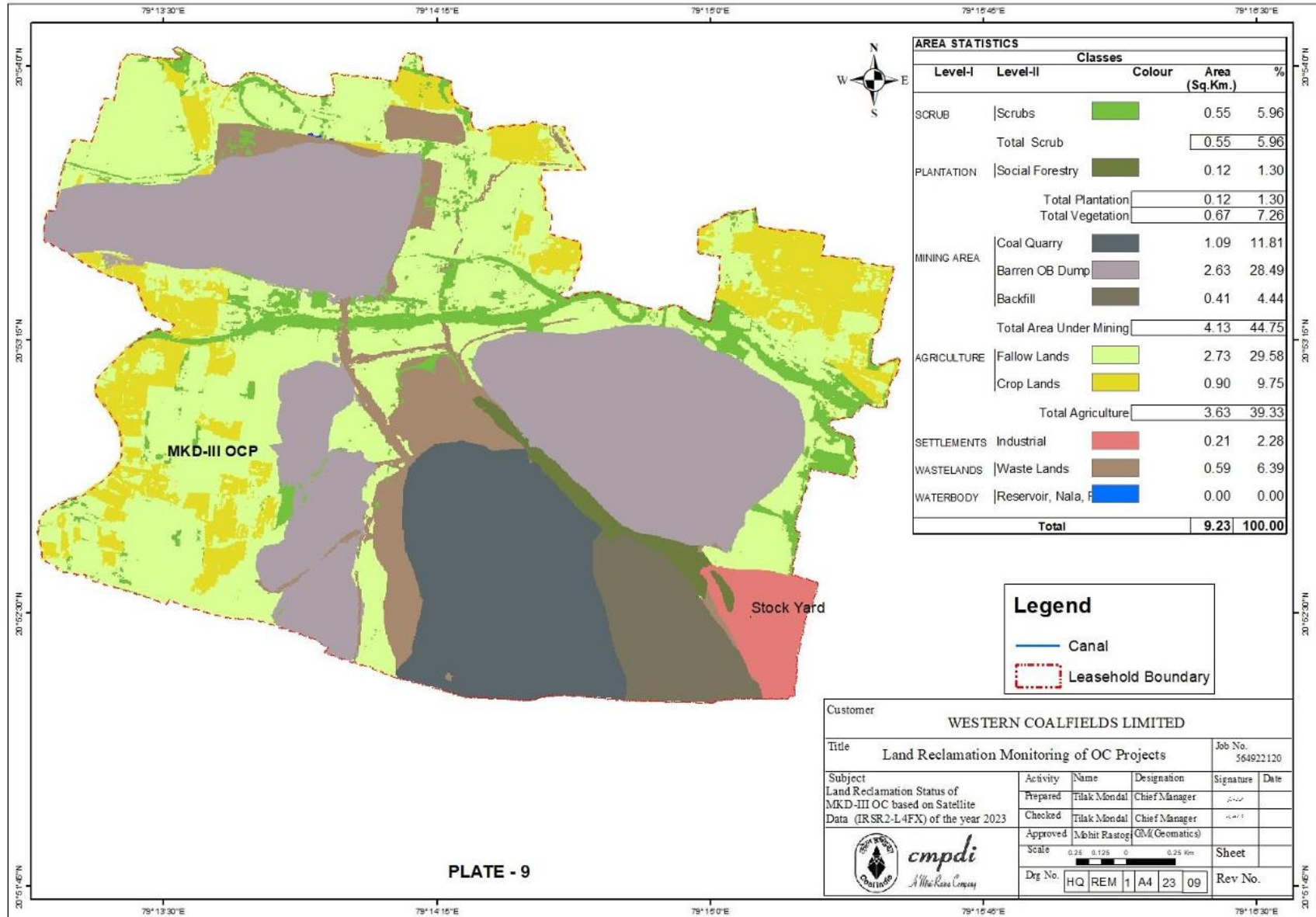
- 5.3** Study reveals that 16.50 Km² (42.00%) of excavated area has been under reclamation in the above mentioned mines of WCL out of which 4.24 Km²(10.79%) area has been revegetated and 12.26 Km² (31.20%) area is under backfilling. There is an overall increase of 0.40Km² in area under reclamation in WCL in the year 2023 with respect to the year 2022, out of which there is an increase of 0.39 Km² in area under technical reclamation (Barren Backfilling) and an increase of 0.01 Km² in area under biological reclamation (Plantation on Backfilled Areas) (Refer Table-1). In Sasti OC project, plantation on OB has been reduced by 0.02 Km² on account of OB dumping on vegetated OB dump area due to constraint of dumping space and plantation on backfilled area has also been reduced by 0.10 Km² on account of tree felling for the purpose of coal mining. In New Majri OC project, plantation on OB has been reduced by 0.27 Km² on account of OB dumping on vegetated OB dump area due to constraint of dumping space and plantation on backfilled area has also been reduced by 0.12 Km² on account of tree felling for the purpose of coal mining.
- 5.4** Analysis of satellite data also indicates that total area under active mining has increased from 21.07 Km² (Yr.2022) to 22.79 Km² (Yr.2023). In Padmapur OC project area under active mining has reduced due to increase in area under backfilling.
- 5.5** After comparing the satellite data of year 2023 vs. 2022, study also reveals that area under backfilling has increased from 11.87 Km² (Yr.2022) to 12.26 Km² (Yr.2023).
- 5.6** Total area under biological reclamation has increased from 4.23 Km² (Yr.2022) to 4.24 Km² (Yr.2023). There is no biological reclamation in Yekona-I&II (Amal.), New Majri UG to OC, Pauni-II (Expn.), MKD-I and MKD-III OC& Penganga OC.
- 5.7** Analysis of satellite data also indicates that total area under plantation (Green Cover) has increased from 29.48Km² (Yr.2022) to 30.70Km² (Yr.2023). The increase of 1.22Km² area under Green Cover areas may be attributed to continuous effort of WCL towards environmental protection.

- 5.8** After comparing the satellite data of year 2023 vs. 2022, it is evident that total area under plantation (Green Cover) in Padmapur, Durgapur, Mugoli, Umrer, Ukni, Niljai, Makardhokra-III, Penganga, New Majri UG to OC and Pauni-II(Expn.) Opencast Projects has increased. It has been also observed in some of the projects natural vegetation has also started growing on stabilized old backfilled areas and overburden dumps due to high soil fertility.
- 5.9** On comparing the status of land reclamation for the year 2023 with respect to the year 2022 in different projects, it is evident that the total area under reclamation has increased from 16.10 Km² (Yr. 2022) to 16.50 Km² (Yr. 2023).
- 5.10** Out of 14 projects of WCL, maximum area under reclamation is in Sasti Opencast Project (87.34%) followed by Umrer OC (65.01%) and Mugoli OC (46.58%).

TABLE - 2
Status of Land Use / Reclamation in OC Mines(>5mcu.m) of Western Coalfields Ltd based on Satellite data of the Year 2023

(Area in Sq.Km)

| | | Sasti | | Padmapur | | Durgapur | | Mugoli | | Umrer | | Ukni | | Niljai | | New Majri | | MKD-III | | Penganga | | Yekona-I&II (Amal) | | MKD-I (Expn.) | | New Majri Ug to OC | | Pauni -II (Expn) | | Total | | |
|--------------------------|---|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|--------------------|--------------|---------------|--------------|--------------------|--------------|------------------|---------------|---------------|--------------|------|
| | | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | Area | % | |
| FORESTS | Dense Forest | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 8.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.84 |
| | Open Forest | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| | Total Forest | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 8.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.84 | |
| SCRUBS | Scrubs | 0.66 | 7.17 | 0.69 | 8.32 | 0.51 | 3.29 | 1.78 | 14.18 | 0.00 | 0.00 | 1.68 | 13.07 | 1.56 | 8.86 | 0.06 | 0.78 | 0.55 | 5.96 | 1.09 | 14.29 | 2.44 | 14.53 | 0.72 | 11.73 | 0.74 | 10.48 | 1.11 | 10.14 | 13.59 | 9.00 | |
| PLANTATION | Social Forestry | 0.68 | 7.39 | 0.83 | 10.01 | 1.19 | 7.68 | 0.61 | 4.86 | 2.32 | 24.55 | 0.91 | 7.08 | 1.25 | 7.10 | 1.47 | 18.99 | 0.12 | 1.30 | 0.55 | 7.21 | 0.03 | 0.18 | 0.00 | 0.00 | 0.37 | 5.24 | 0.22 | 2.01 | 10.55 | 6.99 | |
| | Plantation on OB Dump | 1.68 | 18.26 | 2.21 | 26.66 | 2.81 | 18.13 | 1.90 | 15.14 | 1.45 | 15.34 | 1.74 | 13.54 | 2.11 | 11.98 | 0.97 | 12.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 1.63 | 0.27 | 3.82 | 0.18 | 1.64 | 15.42 | 10.21 | |
| | Plantation on Backfill (Biological Reclamation) | 0.73 | 7.93 | 0.28 | 3.38 | 1.06 | 6.84 | 0.17 | 1.35 | 1.63 | 17.25 | 0.00 | 0.00 | 0.13 | 0.74 | 0.24 | 3.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.24 | 2.81 | |
| | Total Plantation | 3.09 | 33.59 | 3.32 | 40.05 | 5.06 | 32.65 | 2.68 | 21.35 | 5.40 | 57.14 | 2.65 | 20.62 | 3.49 | 19.82 | 2.68 | 34.63 | 0.12 | 1.30 | 0.55 | 7.21 | 0.03 | 0.18 | 0.10 | 1.63 | 0.64 | 9.07 | 0.40 | 3.65 | 30.21 | 20.01 | |
| Total Vegetation | 3.75 | 40.76 | 4.01 | 48.37 | 6.84 | 44.13 | 4.46 | 35.54 | 5.40 | 57.14 | 4.33 | 33.70 | 5.05 | 28.68 | 2.74 | 35.40 | 0.67 | 7.26 | 1.64 | 21.49 | 2.47 | 14.71 | 0.82 | 13.36 | 1.38 | 19.55 | 1.51 | 13.79 | 45.07 | 29.85 | | |
| ACTIVE MINING | Coal Quarry | 0.50 | 5.43 | 0.91 | 10.98 | 2.07 | 13.35 | 1.95 | 15.54 | 1.58 | 16.72 | 1.99 | 15.49 | 2.78 | 15.79 | 2.10 | 27.13 | 1.09 | 11.81 | 1.02 | 13.37 | 1.12 | 6.67 | 1.46 | 23.78 | 1.03 | 14.59 | 1.18 | 10.78 | 20.78 | 13.76 | |
| | Coal Dump | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.32 | 0.00 | 0.00 | 0.10 | 1.06 | 0.10 | 0.78 | 0.11 | 0.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 3.01 | 0.17 | 1.01 | 0.00 | 0.00 | 0.05 | 0.71 | 0.16 | 1.46 | 0.97 | 0.64 | |
| | Advance Quarry Site | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| | Quarry Filled With Water | 0.00 | 0.00 | 0.21 | 2.53 | 0.45 | 2.90 | 0.00 | 0.00 | 0.01 | 0.11 | 0.06 | 0.47 | 0.10 | 0.57 | 0.12 | 1.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 1.79 | 0.00 | 0.00 | 0.00 | 0.00 | 1.06 | 0.70 | |
| | Total Area under Active Mining | 0.50 | 5.43 | 1.12 | 13.51 | 2.57 | 16.58 | 1.95 | 15.54 | 1.69 | 17.88 | 2.15 | 16.73 | 2.99 | 16.98 | 2.22 | 28.68 | 1.09 | 11.81 | 1.25 | 16.38 | 1.29 | 7.68 | 1.57 | 25.57 | 1.08 | 15.30 | 1.34 | 12.24 | 22.81 | 15.11 | |
| WASTELANDS | Barren OB Dump | 0.70 | 7.61 | 1.75 | 21.11 | 1.83 | 11.81 | 2.19 | 17.45 | 0.12 | 1.27 | 3.57 | 27.78 | 3.89 | 22.09 | 0.61 | 7.88 | 2.63 | 28.49 | 1.72 | 22.54 | 1.87 | 11.14 | 0.64 | 10.42 | 0.93 | 13.17 | 2.49 | 22.74 | 24.94 | 16.52 | |
| | Barren Backfilled Area (Technical Reclamation) | 2.72 | 29.57 | 0.65 | 7.84 | 1.04 | 6.71 | 1.53 | 12.19 | 1.51 | 15.98 | 0.54 | 4.20 | 1.46 | 8.29 | 1.64 | 21.19 | 0.41 | 4.44 | 0.75 | 9.83 | 0.01 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.26 | 8.12 | |
| | Total Area Under Mine Operation | 3.42 | 37.17 | 2.40 | 28.95 | 2.87 | 18.52 | 3.72 | 29.64 | 1.63 | 17.25 | 4.11 | 31.98 | 5.35 | 30.38 | 2.25 | 29.07 | 3.04 | 32.94 | 2.47 | 32.37 | 1.88 | 11.20 | 0.64 | 10.42 | 0.93 | 13.17 | 2.49 | 22.74 | 37.20 | 24.64 | |
| Total Wasteland | 3.92 | 42.61 | 3.52 | 42.46 | 5.44 | 35.10 | 5.67 | 45.18 | 3.32 | 35.13 | 6.26 | 48.72 | 8.34 | 47.36 | 4.47 | 57.75 | 4.13 | 44.75 | 3.72 | 48.75 | 3.17 | 18.88 | 2.21 | 35.99 | 2.01 | 28.47 | 3.83 | 34.98 | 60.01 | 39.74 | | |
| WATERBODIES | Waste Lands | 0.92 | 10.00 | 0.35 | 4.22 | 1.36 | 8.77 | 0.29 | 2.31 | 0.27 | 2.86 | 0.93 | 7.24 | 1.40 | 7.95 | 0.14 | 1.81 | 0.59 | 6.39 | 1.45 | 19.00 | 1.01 | 6.02 | 0.16 | 2.61 | 0.48 | 6.80 | 0.60 | 5.48 | 9.95 | 6.59 | |
| | Fly Ash Pond / Sand Body | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.98 | 0.05 | 0.71 | 0.05 | 0.46 | 0.16 | 0.11 | |
| Total Waterbodies | 0.92 | 10.00 | 0.35 | 4.22 | 1.36 | 8.77 | 0.29 | 2.31 | 0.27 | 2.86 | 0.93 | 7.24 | 1.40 | 7.95 | 0.14 | 1.81 | 0.59 | 6.39 | 1.45 | 19.00 | 1.01 | 6.02 | 0.22 | 3.58 | 0.53 | 7.51 | 0.65 | 5.94 | 10.11 | 6.70 | | |
| AGRICULTURE | Reservoir, nallah, ponds | 0.06 | 0.65 | 0.12 | 1.45 | 0.05 | 0.32 | 0.00 | 0.00 | 0.20 | 2.12 | 0.00 | 0.00 | 0.03 | 0.17 | 0.01 | 0.13 | 0.00 | 0.00 | 0.12 | 1.57 | 0.12 | 0.71 | 0.09 | 1.47 | 0.03 | 0.42 | 0.23 | 2.10 | 1.06 | 0.70 | |
| | Total Waterbodies | 0.06 | 0.65 | 0.12 | 1.45 | 0.05 | 0.32 | 0.00 | 0.00 | 0.20 | 2.12 | 0.00 | 0.00 | 0.03 | 0.17 | 0.01 | 0.13 | 0.00 | 0.00 | 0.12 | 1.57 | 0.12 | 0.71 | 0.09 | 1.47 | 0.03 | 0.42 | 0.23 | 2.10 | 1.06 | 0.70 | |
| | Crop Lands | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 9.75 | 0.00 | 0.00 | 3.32 | 19.77 | 0.54 | 8.79 | 0.94 | 13.31 | 0.51 | 4.66 | 6.21 | 4.11 | |
| Fallow Lands | 0.00 | 0.00 | 0.00 | 0.00 | 1.22 | 7.87 | 1.80 | 14.34 | 0.00 | 0.00 | 1.13 | 8.79 | 1.76 | 9.99 | 0.00 | 0.00 | 2.73 | 29.58 | 0.55 | 7.21 | 6.65 | 39.61 | 2.26 | 36.81 | 2.09 | 29.60 | 4.13 | 37.72 | 24.32 | 16.11 | | |
| Total Agriculture | 0.00 | 0.00 | 0.00 | 0.00 | 1.22 | 7.87 | 1.80 | 14.34 | 0.00 | 0.00 | 1.13 | 8.79 | 1.76 | 9.99 | 0.00 | 0.00 | 3.63 | 39.33 | 0.55 | 7.21 | 9.97 | 59.38 | 2.80 | 45.60 | 3.03 | 42.92 | 4.64 | 42.37 | 30.53 | 20.22 | | |
| SETTLEMENTS | Urban Settlement | 0.09 | 0.98 | 0.00 | 0.00 | 0.39 | 2.52 | 0.12 | 0.96 | 0.15 | 1.59 | 0.00 | 0.00 | 0.34 | 1.93 | 0.34 | 4.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.06 | 0.00 | 0.00 | 0.07 | 0.99 | 0.02 | 0.18 | 1.53 | 1.01 | |
| | Rural Settlement | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.32 | 0.03 | 0.24 | 0.00 | 0.00 | 0.02 | 0.16 | 0.20 | 1.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.39 | 0.03 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.24 | |
| | Industrial Settlement | 0.46 | 5.00 | 0.29 | 3.50 | 0.15 | 0.97 | 0.18 | 1.43 | 0.11 | 1.16 | 0.18 | 1.40 | 0.49 | 2.78 | 0.04 | 0.52 | 0.21 | 2.28 | 0.12 | 1.57 | 0.01 | 0.06 | 0.00 | 0.00 | 0.01 | 0.14 | 0.07 | 0.64 | 2.32 | 1.54 | |
| Total Settlement | 0.55 | 5.98 | 0.29 | 3.50 | 0.59 | 3.81 | 0.33 | 2.63 | 0.26 | 2.75 | 0.20 | 1.56 | 1.03 | 5.85 | 0.38 | 4.91 | 0.21 | 2.28 | 0.15 | 1.97 | 0.05 | 0.30 | 0.00 | 0.00 | 0.08 | 1.13 | 0.09 | 0.82 | 4.21 | 2.79 | | |
| Grand Total | 9.20 | 100.00 | 8.29 | 100.00 | 15.50 | 100.00 | 12.55 | 100.00 | 9.45 | 100.00 | 12.85 | 100.00 | 17.61 | 100.00 | 7.74 | 100.00 | 9.23 | 100.00 | 7.63 | 100.00 | 16.79 | 100.00 | 6.14 | 100.00 | 7.06 | 100.00 | 10.95 | 100.00 | 150.99 | 100.00 | | |



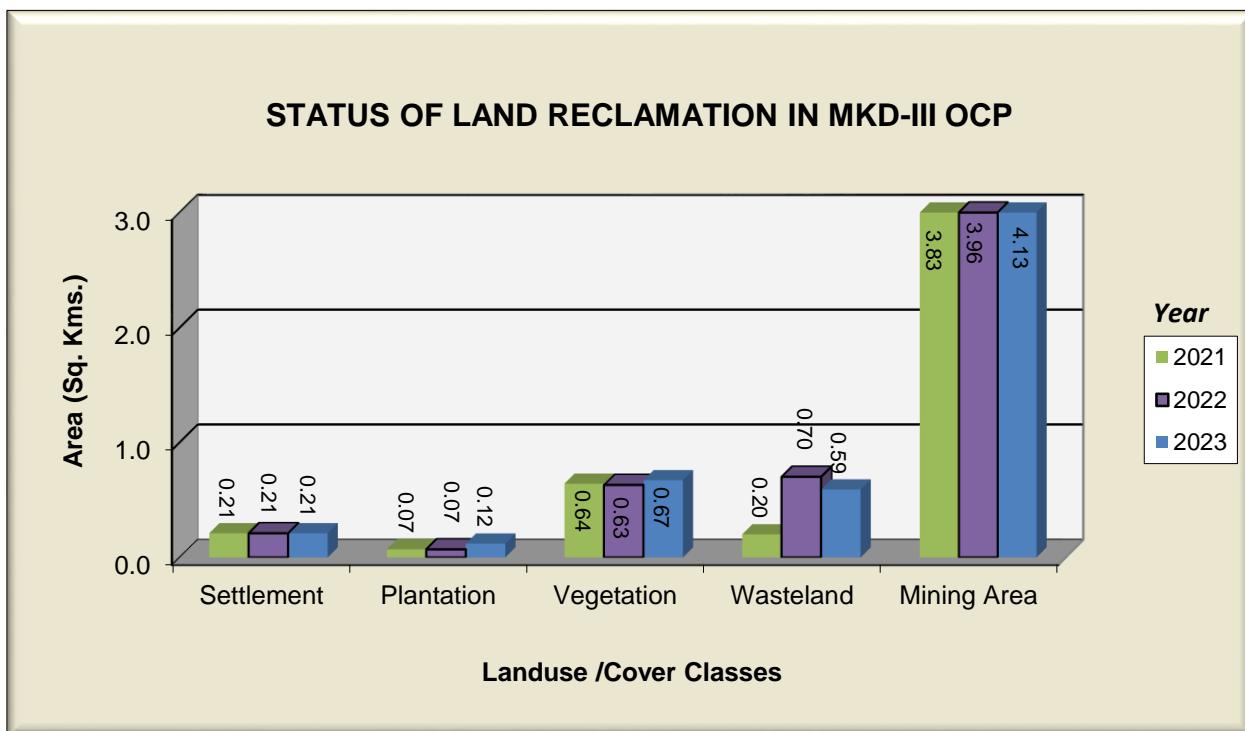


Figure 12

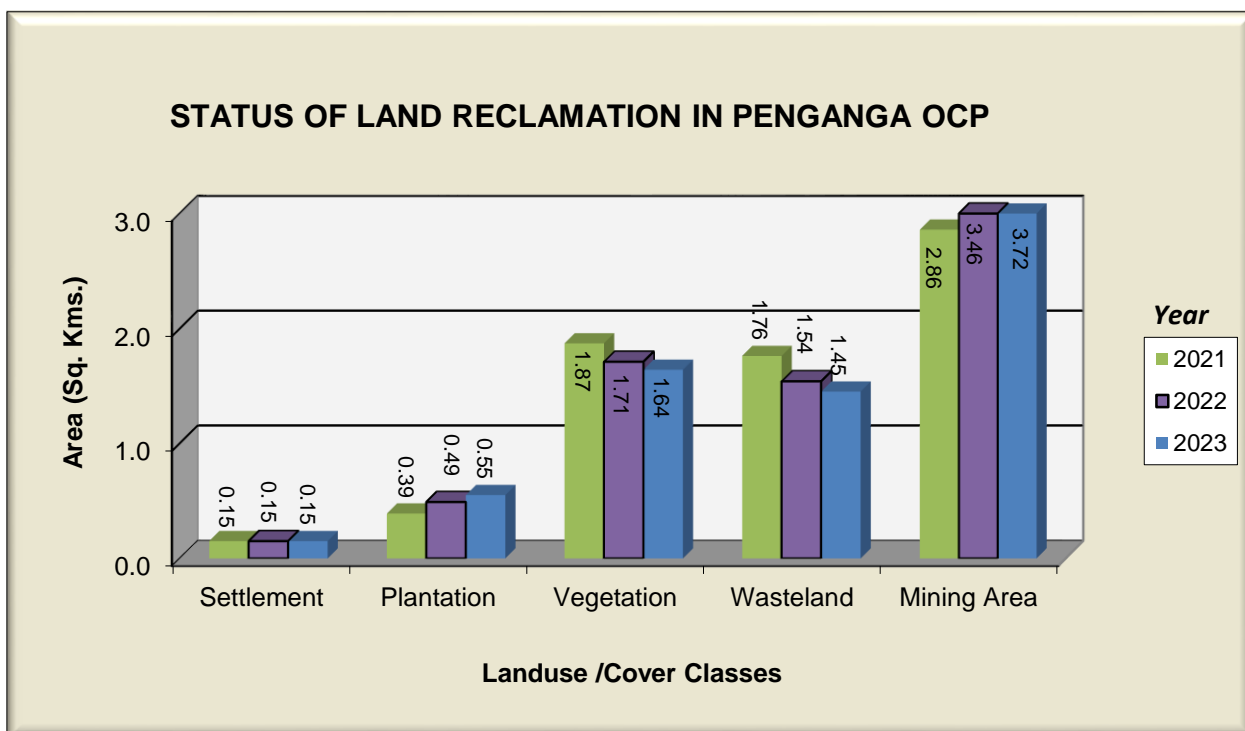


Figure 13



Photograph-9: Plantation on OB dump(Penganga OCP)



Photograph-10: Avenue Plantation (MKD-IIIOCP)

शब्द-कोष

| | | |
|----|------------------------|------------------------------|
| 1 | Land Reclamation | भूमि पुनरुद्धार |
| 2 | Over Burden | अधिभार |
| 3 | Monitoring | निगरानी |
| 4 | Report | प्रतिवेदन |
| 5 | Executive Summary | कार्यकारी सारांश |
| 6 | Opencast Mine | खुली खदान |
| 7 | Objective | उद्देश्य |
| 8 | Methodology | कार्य प्रणाली अथवा प्रक्रिया |
| 9 | Table | तालिका |
| 10 | List of Tables | तालिकाओं की सूची |
| 11 | Map | मानचित्र |
| 12 | Social Forestry | सामाजिक वानिकी |
| 13 | Plantation | पौधारोपण |
| 14 | Million | घनमीटर |
| 15 | Background | पृष्ठभूमि |
| 16 | Planning | योजनाबद्ध |
| 17 | Asses | आकलन |
| 18 | Status | स्थिति |
| 19 | Regularly | निरंतर |
| 20 | Satellite | उपग्रह |
| 21 | Subsidiary | अनुषांगिक |
| 22 | Production | उत्पादन |
| 23 | Biological Reclamation | जैविक पुनरुद्धार |
| 24 | Technical Reclamation | तकनीकी पुनरुद्धार |

| | | |
|----|-----------------------------------|------------------------|
| 25 | Leasehold Area | पट्टा क्षेत्र |
| 26 | Excavated Area | उत्खनन क्षेत्र |
| 27 | Active mining | सक्रिय खनन |
| 28 | Environmental Protection | पर्यावरण संरक्षण |
| 29 | Remedial Measure | उपचारात्मक उपाय |
| 30 | Interval | अंतराल |
| 31 | Systematic Error | व्यवस्थित त्रुटियाँ। |
| 32 | Error | अशुद्धियाँ |
| 33 | Curvature | वक्रता |
| 34 | Geometric | ज्यामितिक |
| 35 | Distortion | विरूपण |
| 36 | Plantation | पौधारोपण |
| 37 | Capacity | क्षमता |
| 38 | Software | सॉफ्टवेयर |
| 39 | Class | वर्ग |
| 40 | Accuracy | सटीकता |
| 41 | Statistical Separation | सांख्यिकीय पृथक्करण |
| 42 | Cubic meter | घनमीटर |
| 43 | Depicted | दर्शाया गया |
| 44 | Percentage | प्रतिशत |
| 45 | Salient Findings | मुख्य निष्कर्ष |
| 46 | Methodology | पद्धति |
| 47 | Data Procurement | डाटा क्रय |
| 48 | Satellite data Processing | उपग्रह डेटा प्रसंस्करण |
| 49 | Rectification and geo-referencing | सुधार और भूसन्दर्भ- |

| | | |
|----|--|--------------------------------------|
| 50 | Image enhancement | छविगुण - बृद्धि |
| 51 | Training set selection | प्रशिक्षण सेट का चयन |
| 52 | Classification and Accuracy assessment | वर्गीकरण और मूल्यांकन की सटीकता |
| 53 | Area calculation | क्षेत्र गणना |
| 54 | Temporal | लौकिक |
| 55 | Processing | प्रसंस्करण |
| 56 | Overlay of Vector data base | वेक्टर डेटा बेस का अरोपन |
| 57 | Area calculation | क्षेत्रगणना- |
| 58 | Pre-field map preparation | क्षेत्र जाने के पहले नक्शे की तैयारी |
| 59 | Ground Truthing | भू-सत्यापन |
| 60 | Ground Information | भू-सूचना |
| 61 | Interpretation | व्याख्या |
| 62 | Eco-system | पारिस्थितिकी तंत्र |
| 63 | Minor | मामुली |
| 64 | Water Drainage | जल निकाय |
| 65 | Interval | अंतराल |
| 66 | Maximum | अधिकतम |
| 67 | Coal field | कोयला क्षेत्र |
| 68 | Design | परिकल्पना |
| 69 | Superimpose | आरोपित |
| 70 | Update | अद्यतनीकरण/नवीनीकरण |
| 71 | Cumulative | संचयित |
| 72 | Embankment | तटबंध |
| 73 | Cluster | खुली तथा भूमिगत खदानों के समूह |

ABBREVIATIONS

| | |
|----------|--|
| Sol | Survey of India |
| MoEF&CC | Ministry of Environment, Forest & Climate Change |
| CIL | Coal India Limited |
| ECL | Eastern Coalfields Limited |
| BCCL | Bharat Coking Coal Limited |
| CCL | Central Coalfields Limited |
| WCL | Western Coalfields Limited |
| SECL | South Eastern Coalfields Limited |
| NCL | Northern Coalfields Limited |
| MCL | Mahanadi Coalfields Limited |
| NEC | North Eastern Coalfields |
| CMPDIL | Central Mine Planning & Design Institute Ltd |
| NRSC | National Remote Sensing Centre |
| R2/ R2A | ResourceSat Satellites |
| LISS - 4 | Linear Imaging and Self Scanning Sensor |
| FCC | False Colour Composite |
| OCP | Opencast Project |
| UGP | Underground Project |
| OB | Over Burden |
| GCP | Ground Control points |
| GIS | Geographic Information System |
| WGS-84 | World Geodetic System |
| UTM | Universal Transverse Mercator |

GLOSSARY

| Sl. | Term | Definition |
|-----|--------------------------|---|
| 1. | Land Reclamation | To manage, reclaim and restore mined out/ degraded land as close as possible to its original stage. |
| 2. | Over Burden | The material that lies above the coal seam/ deposit |
| 3. | Monitoring | A process of evaluation to check or keep record for a period of time. |
| 4. | Opencast Coal Mine | Open-pit mining, also known as opencast mining, is a surface mining technique that extracts minerals from an open pit in the ground. |
| 5. | Social Forestry | Social forestry is the management and protection of forests and afforestation of barren and deforested lands with the purpose of helping environmental, social and rural development. Plantation (Social/ Avenue or other) carried out outside mining area. |
| 6. | Biological Reclamation | Plantation on Backfilled areas (Stabilised Internal Dumps) |
| 7. | Technical Reclamation | Area under backfilling (Over burden dumped inside the mine voids) in mining area. |
| 8. | Green Cover Generated | Total Plantation carried out in the lease area of Project. This includes Plantation on Backfill, Plantation on OB and Social Forestry. |
| 9. | Leasehold Area | The area, for which lease is granted for the purpose of undertaking mining and allied operations. |
| 10. | Excavated area | Mined out area which includes active mining, area under backfilling and plantation on backfilled areas |
| 11. | Active Mining | Mining areas which include Coal Quarry, Advance Quarry, Quarry Filled with Water etc. |
| 12. | Environmental Protection | It is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to mitigate damage and reverse trends. |
| 13. | Remedial Measure | Any measure or action required or undertaken to investigate, monitor, clean up, remove, treat, prevent, contain or otherwise remediate the presence or release of any hazardous substance or activity. |
| 14. | Systematic Error | Every measurement differing from the true measurement in the same direction, and even by the same amount in some cases. |

| | | |
|-----|-----------------------------------|--|
| 15. | Geometric Distortion | It refers to the improper positioning of any image with respect to their true geographic position when viewed in a properly scaled common image display plane. |
| 16. | Land Use/Cover Class | Land cover is what covers the surface of the earth and land use describes how the land is used. |
| 17. | Accuracy | The closeness of agreement between a measured quantity value and a true quantity value. |
| 18. | Environmental Clearance | Environmental Clearance (EC) for any developmental projects like coal mining projects etc. has been made mandatory by the Ministry of Environment, Forests and Climate Change (MoEF& CC) through its Notification issued on 27.01.1994 under the provisions of Environment (Protection) Act, 1986. |
| 19. | Rectification and Geo-referencing | Geo-referencing is the assigning of absolute location of a data point or data points. Geo-rectification refers to the removal of geometric distortions between sets of data points, most often the removal of terrain, platform, and sensor induced distortions from remote sensing imagery. |
| 20. | Image Enhancement | It is the process of modifying digital images so that the results are more suitable for processing or further image analysis. |
| 21. | Training set selection | It is a portion of a data set used to fit or train a model for prediction or classification of values that are known in the training set, but unknown in other (future) data. |
| 22. | Image Classification | It refers to the task of extracting information classes from a multiband raster image. The resulting raster from image classification can be used to create thematic maps. |
| 23. | Temporal Changes | The 'temporal change' means the change in any entity with a period of time. |
| 24. | Ground Truthing | Collection of primary/ basic information from ground realities for satellite image interpretation and thematic mapping. |
| 25. | Cluster | Group of opencast and/ or underground mines clubbed together for administrative purposes. |
| 26. | Arc GIS | GIS Software used for Map preparation |
| 27. | ERDAS IMAGINE | Satellite Image Data Classification Software |



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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




OCTOBER 2023

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY


| | | | | | |
|---|--|--------------------|------------|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/OCT-23/16 | DATE OF ISSUE | 28-11-2023 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-10-23 TO 15-11-23 | |

| UMRER MANAGER OFFICE | | UUOA1 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-10-2023 | 04-10-2023 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 17-10-2023 | 18-10-2023 | 245 | 142 | 42 | 12 | 10 | Clear / Light breeze |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP | | UUOA2 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-10-2023 | 04-10-2023 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 17-10-2023 | 18-10-2023 | 255 | 154 | 44 | 12 | 10 | Clear / Light breeze |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE | | UUOA3 | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-10-2023 | 04-10-2023 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 17-10-2023 | 18-10-2023 | 76 | 26 | 8 | BDL | Clear / Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

| NEAR PUMP HOUSE COLONY | | UUOA4 | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-10-2023 | 04-10-2023 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 17-10-2023 | 18-10-2023 | 78 | 28 | 8 | BDL | Clear / Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |



Analysed by

| | | |
|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

FUGITIVE DUST MONITORING


| | | | |
|--------------------------|--|----------------------|--|
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017) & PM2.5: USEPA Quality Assurance guidance document volume- | | |
| SAMPLE DESCRIPTION | Air sample(Fugitive) | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-10-23 TO 15-11-23 | |

| WEIGH BRIDGE UUOF1 | | | | |
|----------------------------|------------|--|------------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | 5 | 5 | |
| 17-10-2023 | 18-10-2023 | 366 | 252 | CLOUDY / CALM |

| RAILWAY SIDING UUOF2 | | | | |
|----------------------------|------------|--|------------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | 5 | 5 | |
| 17-10-2023 | 18-10-2023 | 382 | 270 | CLOUDY / CALM |

| CHP UUOF3 | | | | |
|----------------------------|------------|--|------------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | 5 | 5 | |
| 17-10-2023 | 18-10-2023 | 372 | 265 | CLOUDY / CALM |


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| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

| | | | |
|--------------------|--|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-10-23 TO 15-11-23 |


| MINE WATER DISCHARGE: | | UUOW1 | | | |
|---|-----------|------------------|--------------|----------------|--|
| DATE OF SAMPLE COLLECTION | pH | ANALYSIS RESULTS | | | |
| | | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) | |
| DETECTION LIMIT | 2 | 10 | 4 | 2 | |
| 05-10-2023 | 7.98 | 24 | 36 | BDL | |
| 18-10-2023 | 7.7 | 28 | 32 | BDL | |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 | |

| ETP: | | UUOW2 | | | |
|---|-----------|------------------|--------------|----------------|--|
| DATE OF SAMPLE COLLECTION | pH | ANALYSIS RESULTS | | | |
| | | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) | |
| DETECTION LIMIT | 2 | 10 | 4 | 2 | |
| 05-10-2023 | 8.15 | 22 | 32 | BDL | |
| 18-10-2023 | 7.57 | 26 | 36 | BDL | |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 | |

| STP: | | UUOW3 | |
|---|---------------|------------------|--|
| DATE OF SAMPLE COLLECTION | TSS (in mg/l) | ANALYSIS RESULTS | |
| | | BOD(in mg/l) | |
| DETECTION LIMIT | 10 | 2 | |
| 05-10-2023 | 30 | 11.4 | |
| 18-10-2023 | 28 | 12.6 | |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 | |

J. Shany

Analysed by

| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

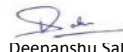
| | |
|--------------------|--|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015 |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | OCT'2023 | 11-10-2023 | 66.5 |
| OCT'2023 | 25-10-2023 | 67.2 | 65.9 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | OCT'2023 | 11-10-2023 | 43.4 |
| OCT'2023 | 25-10-2023 | 43.8 | 42.1 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |



Ashwin B Wasnik
Reviewed by



Deepanshu Sahu
Authorised by

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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068



JANUARY 2024




Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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| | | | | |
|---|--|----------------------|----------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 |
| TEST REPORT NO. | RIN/TR/JAN-24/16 | DATE OF ISSUE | 24-02-24 | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | |
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017) | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-01-24 TO 15-02-24 | | |

| UMRER MANAGER OFFICE UJUA1 | | | | | | | |
|--|----------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 09-01-24 | 10-01-24 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 23-01-24 | 24-01-24 | 238 | 132 | 38 | 12 | 10 | |
| 23-01-24 | 24-01-24 | 245 | 144 | 40 | 13 | 11 | Cloudy / calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP UJUA2 | | | | | | | |
|--|----------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 09-01-24 | 10-01-24 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 23-01-24 | 24-01-24 | 254 | 151 | 46 | 13 | 11 | |
| 23-01-24 | 24-01-24 | 232 | 136 | 32 | 11 | 10 | Cloudy / calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE UJUA3 | | | | | | | |
|----------------------------|----------|--|-------------------|-----------------|-----------------|---------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 09-01-24 | 10-01-24 | 5 | 2 | 6 | 10 | Cloudy / calm | |
| 23-01-24 | 24-01-24 | 78 | 28 | 8 | BDL | | |
| 23-01-24 | 24-01-24 | 74 | 74 | 7 | BDL | Cloudy / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

| NEAR PUMP HOUSE COLONY UJUA4 | | | | | | | |
|--------------------------------|----------|--|-------------------|-----------------|-----------------|---------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 09-01-24 | 10-01-24 | 5 | 2 | 6 | 10 | Cloudy / calm | |
| 23-01-24 | 24-01-24 | 72 | 22 | 7 | BDL | | |
| 23-01-24 | 24-01-24 | 76 | 26 | 8 | BDL | Cloudy / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

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|---|--------------------|--|


FUGITIVE DUST MONITORING


| | | | |
|--------------------------|--|----------------------|--|
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017) & PM2.5: USEPA Quality Assurance guidance document volume- | | |
| SAMPLE DESCRIPTION | Air sample(Fugitive) | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-01-24 TO 15-02-24 | |

| WEIGH BRIDGE UUOF1 | | | | |
|----------------------------|----------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 23-01-24 | 24-01-24 | 410 | 288 | Cloudy / calm |

| RAILWAY SIDING UUOF2 | | | | |
|----------------------------|----------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 23-01-24 | 24-01-24 | 390 | 265 | Cloudy / calm |

| CHP UUOF3 | | | | |
|----------------------------|----------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 23-01-24 | 24-01-24 | 385 | 272 | Cloudy / calm |


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|---|--------------------|--|


| | | | |
|--------------------|--|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-01-24 TO 15-02-24 |

| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 09-01-24 | 8.3 | 18 | 32 | BDL |
| 23-01-24 | 8.13 | 20 | 36 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 09-01-24 | 8.24 | 22 | 36 | BDL |
| 23-01-24 | 8.31 | 24 | 40 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 09-01-24 | 20 | 11.8 |
| 23-01-24 | 22 | 12.4 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015 |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UJON1 | |
|---|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | JAN'2024 | 09-01-24 | 66.2 |
| JAN'2024 | 22-01-24 | 65.8 | 64.6 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UJON2 | |
|---|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | JAN'2024 | 09-01-24 | 42.2 |
| JAN'2024 | 22-01-24 | 42.5 | 41.6 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |



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3. This report refers to the values related to the items tested.

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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




FEBRUARY 2024

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

| | | | | |
|---|--|----------------------|------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 |
| TEST REPORT NO. | RIN/TR/FEB-24/16 | DATE OF ISSUE | 28-03-2024 | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | |
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017) | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-02-24 TO 15-03-24 | | |

| UMRER MANAGER OFFICE UJUA1 | | | | | | | |
|--|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-02-2024 | 07-02-2024 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 20-02-2024 | 21-02-2024 | 243 | 142 | 42 | 13 | 11 | |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |


| NEAR WORKSHOP UJUA2 | | | | | | | |
|--|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-02-2024 | 07-02-2024 | 5 | 5 | 2 | 6 | 10 | Cloudy / calm |
| 20-02-2024 | 21-02-2024 | 238 | 136 | 38 | 12 | 10 | |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE UJUA3 | | | | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|---------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 06-02-2024 | 07-02-2024 | 5 | 2 | 6 | BDL | Cloudy / calm | |
| 20-02-2024 | 21-02-2024 | 82 | 26 | 6 | BDL | | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

| NEAR PUMP HOUSE COLONY UJUA4 | | | | | | | |
|--------------------------------|------------|--|-------------------|-----------------|-----------------|---------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 06-02-2024 | 07-02-2024 | 5 | 2 | 6 | BDL | Cloudy / calm | |
| 20-02-2024 | 21-02-2024 | 78 | 24 | 6 | BDL | | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

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|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|


| | | | |
|--------------------|--|--|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-02-24 TO 15-03-24 |

| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-02-2024 | 8.03 | 16 | 28 | BDL |
| 20-02-2024 | 8.07 | 22 | 32 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-02-2024 | 8.2 | 18 | 24 | BDL |
| 20-02-2024 | 7.75 | 26 | 36 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 06-02-2024 | 26 | 10.8 |
| 20-02-2024 | 28 | 11.2 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |


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| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015 |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UJON1 | | |
|---|---------------------------|----------------------------------|------------------------------------|------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME | |
| | | DETECTION LIMIT | 20 | 20 |
| | FEB'24 | 07-02-2024 | 64.8 | 60.2 |
| FEB'24 | 21-02-2024 | 63.8 | 59.8 | |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 | |

| COLONY: | | UJON2 | | |
|---|---------------------------|----------------------------------|------------------------------------|------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME | |
| | | DETECTION LIMIT | 20 | 20 |
| | FEB'24 | | 48.5 | 41.2 |
| FEB'24 | | 48.1 | 42.2 | |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 | |



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9.0 FLORA & FAUNA OF CORE AND BUFFER ZONE

A natural ecosystem is a structural and functional unit of nature. It has components, which exists in harmony and survives by interdependence. Ecosystems have self-sustaining ability and control the numbers of organisms at any level by cybernetic rule. The effects of this are that an ecosystem does not become imbalance.

The study area for the Flora and Fauna of Core and Buffer Zone covers 10 KM radius of the Umrer project. Generation of primary data to understand baseline ecological status, important floristic and faunal elements, sensitive habitats and rare species was carried out during May 2005. Primary survey was conducted to:

- υ Walk through primary to assess the biological resources, which includes Flora Plants and animals.
- υ Study Fauna; and
- υ Collect ethno-botanical data.

VEGETATION PATTERN (FLORA)

The core area of Umrer project contains floristic component composed of grass and weeds generally Erograstis, Apula etc. The area is practically devoid of trees. However, the prevailing vegetation cover over the surrounding area mainly consists of trees of dry deciduous type. These are Pongamia pinnata, Zizyphus jujuba, Bambusa arundinaceae, Tamarindus indica, Peltroforum pterocarpum and Ailanthus excelsa.

The buffer zone has a wider vegetation pattern as indicated in Table – 9.1.

ENDANGERED PLANTS

As per Botanical Survey of India records and available published literature pertaining to the study area (Core and Buffer Zone), no threatened, endangered and rare plant species were observed.



FAUNA

The Fauna of core area appear negligible except for few species of rodents listed as under:

| Sl. No. | Common Name | Schedule as per Wild Life (Protection) Act, 1972 |
|---------|----------------------|--|
| 01. | Indian Mouse | Schedule-V, Section 6 |
| 02. | Jackal | Schedule-II, Part II, Section 2B |
| 03. | Jungle Cat | Schedule-II, Part II, Section 2C |
| 04. | Indian Grey Mongoose | Schedule-IV, Section 6A |
| 05. | House Rat | Schedule-V, Section 6 |
| 06. | Fulvous Fruit Bat | Schedule-V, Section 3 |
| 07. | Kawa | Schedule-V, Section 1 |
| 08. | Common Langoor | Schedule-II, Part I, Section 1A |

The Fauna of buffer zone on the other hand has a wide spectrum as shown in Table – 9.2.

ENDANGERED ANIMALS

A Comprehensive Central Legislation namely Wild Life (Protection) Act was enforced in 1972. This law is to provide protection to wild animals and for matters related to their ancillary or incidental death. Schedule-I of this Act included the list of rare and endangered species, which are completely protected. On comparison of the checklist given in the Schedule-I of the Act and the list of the wild life recorded in 10 KM radius of the project, it can be concluded that there is no endangered wild animals in Core and Buffer Zone of the study area.

TABLE – 9.1

LIST OF FLORA SURROUNDING THE CORE & BUFFER ZONE

‘A’ TREES

| SL. No. | SCIENTIFIC NAME | COMMON NAME |
|---------|----------------------------|-------------------|
| 1 | Anigissus pendulawall | Dakra |
| 2 | Anogessus lattoliawall | Dawra |
| 3 | Aeglemarnelos correa | Bell |
| 4 | Azadirachta indica ajuss | Neem |
| 5 | Acacia Catecha, Wild | Khoer |
| 6 | Acacia leuenphliea | White Khoer |
| 7 | Albizza lebbek | Black Siris |
| 8 | Albizza Procora Benth | White Siris |
| 9 | Anona squamosa | Sita fruit |
| 10 | Basic latiftia, Roxb | Mahua |
| 11 | Banhinia Veriegata Linn | Kachnan |
| 12 | Boawellia Serrala | Salar |
| 13 | Balanites rox Burglii Roxb | Got |
| 14 | Bombax ceiba | Shimul |
| 15 | Buteca trondosa, koeing | Palas |
| 16 | Cardia myxa | Kasura |
| 17 | Cassia tistnea | Amal tas |
| 18 | Diospyros melanoxylon | Tendus |
| 19 | Diospyrous tonentos | Tendus (Poission) |
| 20 | Dalbergia sissoo | Sissoo |
| 21 | Polythia Longifolia | Ashok |
| 22 | Nelumbonucifera | Kamal |
| 23 | Crateva nurvala Buch | Chhota barna |
| 24 | Casearia elliptica | Chilla |
| 25 | Portulaca pilosa | Lunka |
| 26 | Portulaca quadrifida | Lunkhi |
| 27 | Abelmoschus crinitus | Jangli Bhindi |
| 28 | Althaea ludwigii | Gulkurra |
| 29 | Sida acuta | Bal |
| 30 | Grewia hirsuta vaw | Gursharia |
| 31 | Citrus Medica | Nimbu |
| 32 | Citrus Sinensis | Mousambi |
| 33 | Ventilago Denticulata | Kalibel |
| 34 | Schleichera Oleosa | Kusum |
| 35 | Mangifera indica | Aam |
| 36 | Crotolaria medicaginea | Gulati |
| 37 | Dalbergia Sericea | Sissu |



| | | |
|----|----------------------|--------|
| 38 | Derris indica | Karanj |
| 39 | Indigofera tinctoria | Neel |

'B' SHRUB

| SL. No. | LOCAL NAME | BOTANICAL NAME |
|---------|-----------------------|-------------------------|
| 1 | Dudhi / Kalakuda | Wrightia Tinctoria |
| 2 | Gautri | Grewia Hirsuta |
| 3 | Ghaneri / Ulta | Lantana Camera |
| 4 | Kaladhotra | Daturametel |
| 5 | Kharasani / Kharasi | Nyctanthes Arbortristis |
| 6 | Muradsheng / Marophal | Helicteres |
| 7 | Nirgudi | Vitex Negundo |
| 8 | Rui | Calotropis Procera |
| 9 | Waghnakhi | Martynia Annua |

'C' HERBS

| SL. No. | LOCAL NAME | BOTANICAL NAME |
|---------|----------------------|--------------------------|
| 1 | Divali | Tephrosia Hamiltonia |
| 2 | Gajarawat | Parthenium Hysterophorus |
| 3 | Gokru | Tribulus Terrestris |
| 4 | Hamata | Stylosanthes Hamata |
| 5 | Kamarmodi | Tridax Procumbens |
| 6 | Pivladhotra | Argemone Mexicana |
| 7 | Pivilitilwan | Cleome Viscosa |
| 8 | Rantulas / Bantulasi | Hyptis Suaveolins |
| 9 | Rantur | Atylosia Scarabacoides |

'D' BAMBOO AND GRASSES

| SL. No. | LOCAL NAME | BOTANICAL NAME |
|---------|---------------|-------------------------|
| 1 | Bars / Bamboo | Dendrocalmus |
| 2 | Bhurbhusi | Eragrostic Tenella |
| 3 | Diwartan | Andropogan Pumilus |
| 4 | Fuler | Arundinella Setosa |
| 5 | Katang Bamboo | Bamboosa Arundinacea |
| 6 | Khas | Netiveria Zizaniodes |
| 7 | Phulkia | Apludarmutica |
| 8 | Sabal / Sum | Ischaemum Angustipolium |

'E' CLIMBER

| SL. No. | LOCAL NAME | BOTANICAL NAME |
|---------|----------------------------|-----------------------|
| 1 | Chilati | Mimosa Hamata |
| 2 | Dhimarwel / Malkagni | Celastrus Paniculatus |
| 3 | Dhudhi / Bokadwel / Nagwel | Cryptolepis Buchanani |
| 4 | Gunj | Abrus Trecatorius |
| 5 | Kajkuri | Mucuna Pruriens |



| | | |
|---|----------|-------------------|
| 6 | Mahulbel | Bauhinia Vahli |
| 7 | Vasanvel | Cocculus Hirsutus |

TABLE – 9.2

LIST OF FAUNA IN THE CORE & BUFFER ZONE

‘A’ ANIMAL

| SL. No. | LOCAL NAME | BOTANICAL NAME |
|---------|---------------|---------------------------|
| 1 | Jackal | Canis Aureus |
| 2 | Fox | Vulper Bevgalensis |
| 3 | Jungle Cat | Felis Chaus |
| 4 | Nilgai | Boselaphus Tragolam Clues |
| 5 | Sambhar | Cervus Unicolor |
| 6 | Langur | Prebytis Entellus |
| 7 | Palm Squirrel | Funambulus Palmarum |
| 8 | Hare | Lepus Ruficaudatus |

‘B’ AVIANS

| Scientific Names | Local Names |
|-----------------------|-------------|
| Aeridotheres tristis | Maina |
| Octagypus Caluvus | Gidhad |
| Miluvus Govinda | Ghar |
| Falco pere Grinator | Sasna |
| Symium indrani | Ghabad |
| Upupa epops | Sutar |
| Eudinamis Scolppaceus | Kokila |
| Gallus domesticus | Mamboda |
| Bubulcus ibis | Bagla. |

‘B’ HYPERTOFAUNA

| Scientific Names | English Name |
|-------------------------------|----------------------|
| Calotes Versicololer (Daudin) | Common Garden Lizard |
| Varanus griseus (Daudin) | Varanus Lizard |
| Ptyas Mucocus | Dhaman |
| Naja Naja | Nag |
| Vipera Russelii | Ghonas |

ATR OF PUBLIC HEARING
UMRER OC MINE, UMRER AREA

| Sl. No. | Compliance conditions | Action Taken Report |
|---------|--|---|
| 1 | WCL shall carry out massive tree plantation especially between villages & mine. OB dumps and avenue plantation outside the area which will be helpful in maintaining ecological balance. | Till date 577820 nos. of saplings were planted covering an area of 231.00 ha covering external OB dumps, mine lease boundary, embankment, workshop, roads, township etc. by planting native species. Plantation has been done in consultation with the local DFO/Agriculture department. |
| 2 | WCL shall provide adequate fixed water sprinklers at CHPs. Coal transportation roads, weigh bridge, haul roads etc. to control fugitive dust emission. | Fugitive dust emissions from all the dust generating sources are controlled by Fixed Water Sprinklers along weigh bridge, approach road & coal transportation road. Rain Guns are provided in railway siding and coal transportation road. All transfer points of conveyor belts at CHP are provided with sprinkling nozzles to prevent the dust formation during loading of coal in wagons. In addition to fixed water sprinklers & rain guns, Mobile Water Sprinklers are used in all three shifts for dust suppression at approach roads, haul roads, coal transportation roads and coal stock yard. The Fugitive dust is also monitored regularly and is kept under control. Details of Air pollution control measures installed: <ul style="list-style-type: none"> • 42 nos. fixed sprinklers installed along coal transportation road, railway siding and CHP • 3 No of mobile sprinklers of 28 KL capacity are in operation. |
| 3 | WCL shall ensure that, all the trucks carrying coal shall be covered with tarpaulins properly to avoid spillage of coal on the roads and overloading of coal shall be strictly avoided. | All the vehicles transporting coal are properly covered with tarpaulin and are loaded within permissible limit. |
| 4 | WCL shall take care to avoid flood situation in the adjoining villages due to overburden. | OB was stacked at designated external OB dump sites and the dumps are constructed as per the specified norms stipulated by DGMS. The height of external dumps is 30 meters in single stage and the ultimate slopes of the dumps are not greater than 28 degree. For stabilization of these OB dumps 3,06,600 nos. of saplings were planted covering an area of approx. 122.64 ha. In addition, stone walls (made of boulders) have been constructed along the toe of the dumps for stabilization. All dumps are away from Amb river and are obstruction free. There is no flood like |

| | | |
|---|---|---|
| | | <p>situation due to OB dumps.</p> <p>On date, all the OB dumps are reclaimed biologically and the vegetation has become self-sustained. Chances of siltation & sediment flows are very less. Presently the OB is being backfilled in the decoaled area of the mine.</p> <p>Till date, based on routine monitoring of groundwater there is no reported negative impact on the surrounding area ground water levels.</p> <p>However if there is any water shortage in future it will be supplemented by necessary arrangement.</p> <p>After reclamation of the mined out area, remaining void area will serve as water recharging structure.</p> <p>In addition to this for maintaining ground water level, 2 nos of check dams on the diverted route of Amb river are constructed.</p> |
| 5 | <p>WCL shall take massive ground water table recharging works and effective utilization of mine water discharge such as imagination at nearby villages. WCL shall also ensure that in case of scarcity of water due to depletion of ground water level due to mining activities they supply water to the affected villages.</p> | <p>OB was stacked at designated external OB dump sites and the dumps are constructed as per the specified norms stipulated by DGMS.</p> <p>The height of external dumps is 30 meters in single stage and the ultimate slopes of the dumps are not greater than 28 degree. For stabilization of these OB dumps 3,06,600 nos. of saplings were planted covering an area of approx. 122.64 ha. In addition, stone walls (made of boulders) have been constructed along the toe of the dumps for stabilization.</p> <p>On date, all the OB dumps are reclaimed biologically and the vegetation has become self-sustained.</p> <p>Presently the OB is being backfilled in the decoaled area of the mine.</p> |
| 6 | <p>WCL shall maintain overburden dumps to avoid nuisance to villages and carry out massive tree plantation on overburden.</p> | <p>Controlled blasting techniques with use of delay detonators are being practiced during day time to control the ground vibration and to arrest the fly rocks. Controlled blasting technique as permitted by DGMS is adapted.</p> <p>Records of ground vibration using vibrometer are maintained.</p> |
| 7 | <p>WCL shall carry out blasting in the day time only using advanced technology to avoid ill effects due to blasting to nearby residents WCL shall also maintain the record of blasting using vibrometer.</p> | <p>Four nos. of ambient air quality monitoring stations has been established in consultation with MPCB Officials. considering meteorological data, topographical features and environmentally and ecologically sensitive targets which are as follows:</p> <ul style="list-style-type: none"> • Colony • Kanwa Village |
| 8 | <p>WCL shall install continuous air monitoring stations in the vicinity of the mines and adjoining villages.</p> | |

| | | |
|----|---|--|
| | | <ul style="list-style-type: none"> • Near Workshop • Umrer Manager Office |
| 9 | WCL shall immediately initiate mass community development programmes in the vicinity of the affected villages in consultation with district administration, MPCB and local body and submit the yearly proposal for approval of the district administration. | <p>Health checkup camps are conducted regularly for nearby villages.</p> <p>In 2016-17, 85 persons were trained for Apparel designing, beauty parlor and electrician.</p> <p>In 2017-18, 26 persons were trained for office automation and data entry operator.</p> <p>Sports are conducted in nearby villages on regular basis.</p> |
| 10 | WCL should implement above recommendation as suggested by the public hearing panel. | Noted for compliance. |


 Sub Area Manager

Umrer Sub Area



वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

(मिनीरत्न कंपनी) (A Miniratna Company)
(कोल इंडिया लि. की अनुषंगी कंपनी)
(A Subsidiary of Coal India Limited)



पर्यावरण विभाग

आईएसओ 9001:2015 प्रमाणित

Email- gmenvironment@westerncoal.gov.in
CIN - U10100MH1975GOI018626

Environment Department

ISO 9001:2015 Certified

TELE/FAX: 0712 -2510151
www.westerncoal.nic.in

पंजी. का. : कोयला विहार, सिविल लाइन्स, नागपुर (महाराष्ट्र) - 440001/ Regd. Off. : Coal Estate, Civil Lines, Nagpur (MS) - 440001

संदर्भ संख्या /Ref.No.: वेकोलि/ मुख्यालय/ पर्यावरण/15-A-14-E/ दिनांक /Date :13.03.2024

प्रति,

373-385

1. क्षेत्रीय महाप्रबंधक,
वेस्टर्न कोलफील्ड्स लिमिटेड,
बल्लारपुर /वणी / वणी नॉर्थ / चंद्रपुर / माजरी /
नागपुर / उमरेड / कन्हान / पाथाखेडा एवं पेंच क्षेत्र
2. महाप्रबंधक, सेन्ट्रल वर्कशॉप, टडाली ।

विषय:- Corporate Environment Policy (CEP) 2023 of Coal India Limited ratified in WCL Board meeting held on 24th February'2024 for its implementation in WCL.

संदर्भ :- Relevant excerpt from the minutes of 361st meeting of the Board of Directors of WCL held on 24th February'2024 issued vide no. WCL/ Office of CS/BM-361/2023-24/1187 dated 06.03.2024


Dear Sir,

This has reference to the Corporate Environment Policy - (CEP) 2023 (Revision of CEP – 2018) of Coal India Limited which has been approved by CIL Board in its 460th Meeting of Board of Directors held on 29th Dec'2023 and further ratified the same in the 361st meeting of the Board of Directors of WCL held on 24th February'2024 for its implementation in WCL (Annexure – A).

In view of the above, please find attached herewith copy of Corporate Environment Policy - (CEP) 2023 (Annexure-B) for wide circulation among the employees for implementation of the same and updating the progress of implementation, every month for intimating / submitting the same in every board meeting.

Enclosed as above.

भवदीय,


13.03.2024

महाप्रबंधक / विभागाध्यक्ष (पर्यावरण)

प्रतिलिपि :

1. तकनिकी सचिव - निदेशक (तकनिकी) / संचालन, वेकोलि (मु.), नागपुर.
2. तकनिकी सचिव - निदेशक (तकनिकी) परियोजना एवं योजना, वेकोलि (मु.), नागपुर.



COAL INDIA LIMITED



CORPORATE ENVIRONMENT POLICY

2023

Back Ground:

Coal India Limited subscribes to the view of Sustainable Development. Unless the environment can sustain all the developmental activities, any pursuit of development in isolation can cause irreparable damage to the ecosystem and associated environmental attributes. Keeping this view in mind, Coal India Limited attaches top priority towards sustainable development and approved its 'Corporate Environmental Policy' in December 1995, which was subsequently revised in 2012 and 2018. The present policy is the revision of the Corporate Environment Policy 2018 and is complimentary to the National Environmental Policy, 2006.

This modification in the present policy is the outcome of the experience gained since 2018 keeping in view the modifications / amendments made time to time in environmental policies and additional stipulations notified by MoEF&CC (Ministry of Environment, Forest & Climate Change) and other organizations concerning mine closure, reclamation of degraded land, environmental clearance etc. and also with the objective of revisiting the corporate policy. Government of India is signatory to few international conventions/agreements relevant to CIL amongst others and activities associated with such conventions/agreements are embodied in the present policy

This Policy has a vision of Green Mining and mission of 100% compliance of environmental statutes applicable to coal mining industry.

Policy Statement:

Coal India Limited (CIL) is committed to promote low carbon, sustainable and socially inclusive coal mining by protecting the environment through integrated project planning & design, prevention/mitigation of pollution, conservation of natural resources, restoration of ecology & biodiversity, recycling/ proper disposal of wastes, addressing climate change and inclusive growth. It also aims to bringing awareness amongst its stakeholders for continual improvement in environmental performances following good environmental practices.

Objectives:

CIL shall endeavor to-

- 1. Plan & design projects with due consideration to environmental and social concerns for Sustainable Development and reduction in emission intensity of its operations.*

2. *Conduct mining and associated operation in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects.*
3. *Prevent pollution in surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.*
4. *Ensure effective implementation of Environment Management Plans (EMPs) in all our mines / projects to mitigate pollution, conservation of natural resources and restoration of ecology & biodiversity.*
5. *Ensure compliance of all statutory conditions prescribed by regulatory agencies.*
6. *Ensure waste management in each unit on the principle of REDUCE, REUSE, RECYCLE and SAFE DISPOSAL.*
7. *Put special thrusts on efficient energy utilization / renewable energy and other measures to reduce carbon foot-print.*
8. *Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective action.*
9. *Take measures to gainful repurposing of land and render productive post mining land use for ensuring environmentally sustainable and socially acceptable closure of mine.*
10. *Ensure implementation of activities applicable to CIL arising out of International Conventions.*
11. *Create environmental awareness and ensure environmental education among the employees, local communities and other stakeholders through pro-active communication and training.*
12. *Promote R&D projects/innovations addressing various environmental concerns like minimization of carbon footprints of CIL and environmental issues in mining & surrounding areas.*
13. *Ensure transparency in Environmental reporting / disclosure to stakeholders.*

Review of Environmental Policy:

In view of the present fast changing social, economic and environmental scenario, this policy shall be reviewed every 5 years to incorporate the changes in the legal, technical, environmental, economic and social inputs prevailing at that time. Whenever, there is change in National Environmental Policy or other National / State relevant policies, Acts etc, this Corporate Environmental Policy would be reviewed and suitably revised.



वेस्टर्न कोलफील्ड्स लिमिटेड
Western Coalfields Limited

पंजी.का.: कोयला विहार, सिविल लाइन्स, नागपूर (महाराष्ट्र)-440001
Regd. Off.: Coal Estate, Civil Lines, Nagpur (MS) - 440001
CIN - U10100MH1975GOI018626 www.westerncoal.in

कंपनी सचिव का कार्यालय
Office of the Company Secretary

email - companysecretary.wcl@coalindia.in
☎/FAX: 0712 - 2511216

**BOARD MATTER
CONFIDENTIAL**

REF. WCL/Office of CS/BM-361/2023-24/ 1187

DATE: 06.03.2024.

Reproduced below is the relevant excerpt from the minutes of 361st meeting of the Board of Directors of WCL held on 24th February, 2024:

"ITEM NO.361/ C-6

SUB Proposal for ratification of Corporate Environment Policy (CEP) 2023 of Coal India Limited in WCL Board for its implementation in WCL.

- i) While deliberating on the proposal, Shri Anil Kumar Singh, Director (Technical) P&P apprised the salient features of the Corporate Environment Policy (CEP) 2023 of Coal India Limited to the Board.
- ii) Shri Balram Nandwani, Independent Director enquired about the strategy built up by WCL for implementation of Corporate Environment Policy (CEP), 2023 in the Company and suggested for updating the progress of implementation of such policy in every Board meeting.
- iii) Shri Binod Bihari Dash, Independent Director enquired about steps taken by Company on reduction of carbon emission. It was informed that it is incorporated in EC conditions of some mines to deploy at least 20% of overall fleet of dumpers / trucks / other vehicles as electrical or CNG/LNG based for transportation of Coal / OB etc.
- iv) The Board, after deliberation ratified the Corporate Environment Policy - 2023 (CEP - 2023) approved by CIL Board in its 460th meeting held on 29.12.2023, for circulation among employees for its implementation in WCL as brought out in the agenda note with a directive for keeping its updated/progressive implementation status in every Board Meeting.
- v) General Manager (Environment) to take necessary action in the matter."

Vijay
6/3/2024
COMPANY SECRETARY

GENERAL MANAGER (ENVIRONMENT)

CC: DIRECTOR (TECHNICAL) OP
DIRECTOR (FINANCE)
DIRECTOR (TECHNICAL) P&P
DIRECTOR (PERSONNEL)

कोयला इण्डिया लिमिटेड (प्रा.)/मुख्यालय/नागपूर
WCL/GM (Env)/HQ/Nagpur
प्राची/Rec. 93 दिनांक/Date 6/3/24

वेस्टर्न कोलफील्ड्स लिमिटेड
Western Coalfields Limited

बोर्ड सचिवालय
BOARD SECRETARIAT

पंजी कर्मालय
Bengal Office

कोल इस्टेट, सिविल लाईन्स, नागपुर - 440 001
Coal Estate, Civil Lines, Nagpur - 440 001

फ़ोन का/0 0712 - 2511216
e-Mail ramehar@westerncoal.gov.in

BOARD MATTER
CONFIDENTIAL

REF: WCL/BD/SECTT/BM-300/2018/93

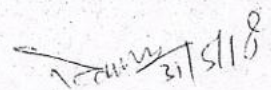
DATE: 31.05.2018

Reproduced below is the relevant excerpt from the minutes of 300th meeting of the Board of Directors of WCL held on 24th May, 2018:

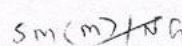
"ITEM NO 300/ C-15

SUB Approval for mining plan for obtaining environmental clearance from MOEF&CC to enhance capacity from 3.5 to 4.9 MTPA of Umrer Open Cast Mine, Umrer Area.

-
- While deliberating on the subject, Shri T.N. Jha, Director (Tech) P&P WCL apprised the Board that the capacity of Umrer OC Mine was enhanced from 2.34 MTPA to 3.50 MTPA and environmental clearance of 3.50 MTPA was obtained accordingly. Due to increase in demand from power and industrial sector and also considering the existing potential of the mine, the annual target is enhanced to 4.90 MTPA. It is proposed to obtain enhanced Environment Clearance of 4.90 MTPA.
 - In view of above, the Board, after deliberation approved the proposal for mining plan for obtaining Environmental Clearance from MOEF&CC to enhance capacity from 3.50 to 4.90 MTPA of Umrer Open Cast Mine, Umrer Area.
 - GM (P&P) to take necessary action in the matter."

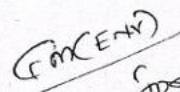
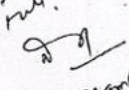

COMPANY SECRETARY

GENERAL MANAGER (P&P)


GM (P&P)


9/5/18

CC: DIRECTOR (TECHNICAL) OP
DIRECTOR (PERSONNEL)
DIRECTOR (FINANCE)
DIRECTOR (TECHNICAL) P&P


TDS med. mil.

S.M.G. (M/P&P)
10/5/2018

APPROVED MINING PLAN

(approved by WCL board in its 300th
meeting held on 24-05-2018 as
communicated vide letter no
WCL/BD/SECTT/BM-300/2018/93
dated 31-05-2018.)

MINING PLAN FOR UMRER OC FOR ENHANCED CAPACITY OF 4.90 MTY

Foreword

Umrer OC is an existing opencast coal mine of WCL opened in 1962. The project was granted Environmental Clearance vide MoEF&CC letter No J-11015/86/2005-IA-II(M) dated 20-05-2005 for production capacity of 3.50 MTPA within ML area of 944.65 ha under the provisions of EIA notification, 1994.

This mining plan has been prepared considering the present status of Umrer OC as on 31st March, 2018. In existing scenario Umrer OC has potential to achieve higher coal production capacity than its rated capacity. Hence this scheme/Mining Plan was prepared for the production capacity of 4.90 MTPA with mine life of 2-3 Years to extract 11.68 MT coal reserves within the existing ML area of 944.65 ha.

1. INTRODUCTION

Background of the Project

A Report for Umrer Opencast Project (under the administrative control of Umrer Area, WCL) was prepared in November, 1961 and sanctioned by Government of India (G.O.I) in August 1962. This report had envisaged a target production of 1.016 Mty at a stripping ratio of 2.29 m³/t. The estimated capital investment envisaged was Rs. 4.388 crores. The proposed method of work was by using Shovel- Dumper combination for coal and overburden above the middle seam. The parting between middle and bottom seams was to be taken by Dragline besides partings in bottom seam itself. Umrer Colliery started coal production in 1966 under NCDC.

Subsequently, a revised project report was prepared by NCDC in December 1971 based upon the method of work suggested by the Russian Experts during their visit to the colliery by the middle of 1971. But, the capacity remained unaltered. The capital estimate was Rs. 9.3045 crores.

To meet the shortfall from Wardha Valley Coalfields, a project report for Umrer Opencast Expansion was prepared in 1978 with a target capacity of 1.84 MTPA at a stripping ratio of 1.83 CuM/T. The report was sanctioned in December, 1979 for an estimated capital investment of Rs. 20.9976 crores. The method of work remained unaltered. In May 1983 Revised Cost Estimate (RCE) was prepared for a capital investment of Rs. 25.4382 crores and approved by the competent authority vide letter no.CPP-43011/26/83 dated 5.3.1985.

Later on the rated capacity of the mine was enhanced by 0.50 MTPA. With this, the sanctioned capacity of Umrer OCP became 2.34 MTPA at a stripping ratio of 1.98 CuM/T.

Umrer OCM was restricted on three sides by Amb River. In Phase-I Amb river on the eastern side was diverted through worked out area by using departmental HEMM in year 1991. In Phase II a part of river on the western side of quarry was diverted through non-coal bearing area by outsourcing work in 1997. In the year 2005-06 the Amb river diversion Phase-III was done towards dip side of property to release the balance reserves available in the Southern Extension of Umrer OCM.

Environment clearance of 3.5 MTY coal production has been granted vide J-11015/86/2005-IA-II(M) dt.20.05.2005 for 2.34 MTPA to 3.50 MTPA from Ministry of Environment, Forest & Climate Change(MoEF&CC), New Delhi. The total mine lease area of the project is 944.65 Ha.

The scheme for Amb River Diversion phase-IV at Umrer OC mine Umrer Area for extraction of 20.58 Mte of coal by the removal of 44.12 Mm3 over burden (incl.9.01 Mm3 rehandling) with a capital investment of Rs.64.1133 Crore was approved in 239th meeting of the Board of Director of WCL held on 27th July 2012.

Amb river diversion Phase-IV was completed in 2016 by outsourcing. The Amb river was diverted in the rise side of the existing mine through non- coal bearing area as per CDO, Nasik design to release 20.58 Mt. of coal reserve.

Presently Umrer OCM EC is 3.50 MTPA. In the year 2016-17 Umrer OCM coal production was 3.499 MT. In the year 2017-18 the coal production target was 3.5 MT

As per the direction of GOI, the production level of the Western Coalfields Ltd. must be increased to meet the demand of power and industrial sector. In order to bridge the gap between the supply and demand of coal, it is proposed to enhance the annual coal production of Umrer OCM urgently from 3.50 MTPA to 4.90 MTPA, as it has potential to achieve high coal production without any additional capital investment. Considering the potentiality of the project, this mining plan has been prepared and put up for approval by WCL board. After approval of this mining plan from WCL Board, the application u/s 7(ii) of EIA notification 2006 for 40% enhancement in capacity from 3.50 MTPA to 4.90 MTPA within the same leasehold area will be submitted after due certification of existing EC by RO,MOEF&CC, Nagpur.

No further land acquisition is required in this proposed scheme of Umrer OC.

2. NEED FOR ENHANCEMENT OF CAPACITY:

As per the direction of GOI, the production level of the Western Coalfields Ltd. must be increased to meet the demand of power & other industrial sectors. To bridge the gap between the supply and demand of coal it is proposed to obtain Environmental Clearance from MOEF&CC for enhancement of coal production from 3.50 to 4.90 MPTA.

3. ADVANTAGES /BENEFITS: Benefits for the enhanced capacity are given below:

1. Gainful utilization of existing departmental HEMM system capacity and manpower resources of Umrer OC Mine.
2. High rate of production would increase profitability and ensure early returns of the capital investment.
3. Coal production would ensure adequate supply of coal to power plants.

4. LOCATION OF MINE & COMMUNICATION:

Umrer Coalfields area is 903 hectares and falls in the Survey of India topo sheet No.55 P/5. It lies between latitudes 20 degree 50' 45 " N and 20 degree 52' 50" E and longitudes 79 degree 16' 00" E and 70 degree 18' 30" E. Umrer Opencast Mine is situated in Umrer Tahsil of Nagpur District in the state of Maharashtra. The mine is situated at 45 K.M. South –East of Nagpur and easily approachable by all Maharashtra State High way No. 9. For coal transport this mine is connected by a broad gauge railway siding to Butibori Railway Station in Nagpur-Wardha Section of Central Railway. The mine is supplying coal to powerhouses.

5. TOPOGRAPHY & DRAINAGE & CLIMATE :

Umrer Coalfield is more or less a level plain with depressions along the course of river & streams. The general elevation of the area varies from 270 m to 295 m above the MSL. Amb River along with a network of small tributaries is the main drainage system. The river however, a seasonal stream, becomes almost dry during the summer months. During the monsoon (mid June- mid September) heavy rainfall often causes flooding in the river. The HFL of Amb River was recorded to be 274.68 m above the MSL.

Presently two nallas flow in Dip side of the mine and merge with Amb River which flows in rise side through non coal bearing area.

The area has tropical climatic conditions. Temperature during summer month (April to June) rises to as much as 48 °Celsius and humidity falls less than 20%. Winters are mild and day temperature varies from 35 °Celsius to 39 °Celsius and night temperature varies from 4 °Celsius to 7 °Celsius. Average annual rainfall varies from 1500 mm to 1850 mm. Maximum rainfall in a day recorded was 275 mm on 17/07//2000.

6. STRIKE & DIP

The strike of the coal seam as determined from the floor contour plan is, almost NW-SE with local undulations and dipping south easterly. The dip varies from 10⁰ to 11° south east. The gradient of the seam normally varies from 1 in 10 to 1 in 12

7. GEOLOGY :

Geological report on Umrer Coalfields was prepared by NCDC in June, 1971. Subsequently DGM, Maharashtra drilled boreholes. Based on these boreholes, CMPDI, RI-IV prepared a geological note in May, 1983. As per these reports, there are 7 nos. of faults intersected in southern explored area in which Fault F1-

F1 is boundary fault with up throw of approx.. 60 m. The description of faults is as follows.

i) Position with respect of mine : Major fault on south side of opening causing washout of seams.

Major faults are F1-F1, F2-F2, F5-F5, F6-F6, F7-F7.

ii) Throw : Small fault in western property having throw from 3 m. to 50 mt.

iii) Hade Not known.

iv) All the seams are affected by fault.

Post slide incidence the geological note of CMPDIL on production support drilling of Umrer OCM was submitted in Nov2013 to confirm presence of Faults F1,F2,F5,F6 The report gave following interpretation :

1 Fault F5 and F6 are not present.

2 Change in tend and throw of fault F1,F2&F7 have been re-interpreted .

3 One additional fault FS-FS has been shown in the area

4 Possibility of existence of minor faults having less than 5M throw cannot be ruled out.

F1-F1-- throw not known,

F2-F2-- 10 to 65M throw,

FS-FS-- 02 to 05M throw,

F7-F7-- 00 to 55M throw.

8. SEAM LITHOLOGY AND PRESENT QUALITY OF COAL :

There are three main seams in the Umrer OCM namely Seam-IV (Top Seam), Seam-III(Middle seam), Seam I + II (Bottom Seam). Bottom seam has five sections namely section A,B,C,D & E.

Grade of composite coal seam: G-8 and G-9

9. BRIEF HISTORY OF UMRER OCM WITH BALANCE COAL RESERVE:

During the year 2009-10 Umrer Opencast Mine produced 3.16 Mt. of coal and 12.27 MM3 of OB was removed. OMS of the mine was 7.23 and it made a profit of Rs.287.04 crore.

On 28th September 2010 while the mine was in operation a massive land slide occurred in Eastern Sector causing failure of OB benches and embankment of diverted course of Amb river phase- III with heavy inrush of river water into the Eastern Sector causing its inundation. Since then the mining operation at Umrer OCM had been stopped by DGMS for instability of high wall slope and other safety reasons.

The mine had produced 10.59 Lt. of coal with 42.28 LM3 of removal of OB during 2010-11 till the date of closure of mine by DGMS post slide incidence.

A high powered committee was constituted by CMD, WCL, vide office memorandum no. WCL/CMD/0-3/SECY/242 dated 5/10/2010 to carry out the in depth examination of the accident that occurred on 28th September 2010 with reasons and circumstances leading to land slide causing failure of O.B benches,

to suggest measures to avoid its recurrence in future and also to suggest ways and means of extraction of balance coal reserve of the mine.

The high powered committee submitted its report suggesting ways and means of extraction of balance coal reserve of the mine apart from other recommendation relating to incident.

In Western Sector, Committee has suggested two options to extract balance coal reserve:-

OPTION – I : Full extraction of balance extractable coal reserve which works out to be 3.17 Mt, after considering 10% deduction due to geological uncertainties and 10% mining losses. Corresponding OB quantity works out to be 12.43 MM3 including in–seam partings. The stripping ratio works out to be 3.92 CuM/T. As per scientific study of CIMFR, full extraction of balance reserve of coal as per Option I from Western Sector was not possible for following reasons:-

- (i) Existing embankment had to be shifted about 40 m to 120 m further towards the southern side of the quarry.
- (ii) Accordingly, existing Amb river has to be further shifted towards south.
- (iii) For above execution of activities, additional land has to be acquired.
- (iv) An approved design of Amb river diversion and design of proposed embankment has to be obtained from CDO, Nasik.

In the prevailing situation neither the required land nor the approved design of Amb river diversion was available, hence Option I was ruled out at this stage and the full extraction of the balance coal reserve of 3.17 Mt., in Western Section will be feasible after the completion of Amb river diversion Phase –IV.

Option II: In this option, partial extraction of coal without disturbing existing embankment in the mine workings has been designed as per recommendation of scientific study report of CIMFR, Dhanbad.

The extractable coal reserve in option II works out to be 1.42 Mt., after considering 10% deduction due to geological uncertainties and 10% mining losses. OB quantity works out to be 4.29 MM3 including in seam parting. Stripping ratio works out to be 3.02 CuM/T.

The present status of extractable coal reserve at Umrer OCM as per report of high powered committee is given below:-

| S.No | Particulars | Extractable coal reserve | Corresponding OB with in seam partings. (Mm ³) |
|------|--|--------------------------|--|
| 1 | Balance reserve in the Barrier between the main quarry and Quarry no.2 | 10.24 | 20.85 |
| 2 | Balance reserve in the Eastern Sector. | 8.84 | 23.27 |

| S.No | Particulars | Extractable coal reserve | Corresponding OB with in seam partings. (Mm ³) |
|------|--|--------------------------|--|
| 3 | Balance reserve in the Barrier between the Eastern Sector and the Western Sector | 1.50 | 2.2 |
| 4 | Balance Reserve in the Western Sector | 3.17 | 12.43 |
| | Total | 23.75 | 56.55 |

After submission of above technical reports to DGMS, the permission has been granted to start mining operations in Western Sector. Accordingly, mining operations has been resumed w.e.f. 26 /11 /2011 in Western Section as per option II (partial extraction of coal without disturbing existing embankment on diverted course of Amb river) of the recommendation of high powered committee with certain terms and conditions as recommended by both CIMFR and high powered committee. Main mining operations (excavation) in this option will be limited between chainage 3029500 to 3030000.

Scientific Study of Western and Eastern Section Mine suggesting bench design was also done by BIT Mesra Ranchi.

The mine since then has taken various permission from DGMS to work in chainages from E3029500 to E 3030230 upto coal bottom. The mine also had permission to work in Eastern sector with HOE.

| ITEM | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---------------------------------------|---------|---------|---------|---------|---------|
| <i>Coal production in Lakh Tonnes</i> | 9.18 | 11.29 | 14.60 | 34.99 | 34.99 |
| O.B. in L.CuM | 19.11 | 20.92 | 12.51 | 30.75 | 24.70 |
| O.M.S | 3.76 | 5.15 | 3.86 | 7.93 | 7.99 |
| <i>Cost of Production Rs./Tonne</i> | 1061 | 1239 | 1182.07 | 2691.30 | 969.36 |
| <i>Net profit Rs./Tonne</i> | 540 | 336 | 249.30 | 679.79 | 646.37 |

However post CMR 2017, no further permission is required except scientific study base for benching and dumping.

5. GEO-MINING PARAMETERS

The geo-mining parameters of the existing quarry are as follows:

| Sl.No | PARTICULARS | TOTAL QUARRY |
|-------|------------------------------|--------------|
| 1 | Area of the Quarry(Existing) | |
| a) | On floor (Ha.) | 211.83 |
| b) | On surface (Ha.) | 319.6 |

| Sl.No | PARTICULARS | TOTAL QUARRY |
|-------|---|-------------------|
| 2 | Depth (m) | 143 |
| a) | Initial | 26 |
| b) | Final | 145 |
| 3 | Average gradient of Seam | 1 in 2 to 1 in 12 |
| 4 | Average thickness of seam (m) Seam II & I Seam III Seam IV | 17 5.5 7.5 |
| 5 | Average Strike length (m) | 2800 |
| 6 | Width on surface (m) (Dip Rise) | 1600 |
| 7 | Width on floor (m) (Dip Rise) | 600 |
| 8 | GCV (k Cal/ kg) (Overall) | G-8&G-9 |
| 9 | Balance Mineable reserves (Mt) as on 1.4.2018 | 11.68 |
| 10 | Balance OB(Cum) as on 1.4.2018 | 16.97 |
| 11 | Average S.R. m ³ /t. | 1.453 |

6. COAL RESERVES

As per report of high powered committee on accident at Umrer OC mine WCL (28.9.2010). The balance net in-situ geological reserves in Umrer OC Mine as on 01.04.2012 are 23.75 Mt. The total balance mineable reserves as on 01/04/2018 is 11.68 Mt.

7. TARGET CAPACITY

The target capacity of approved scheme for Umrer OC is 3.5 MTPA. In the proposed Umrer OC Mine, the enhanced annual target of Coal production has been kept as 4.90 Mty and OB Removal is 7.120 Mm³/ annum. The total balance mineable reserves as on 01/04/2018 is 11.68 Mt and balance life of mine would be 2.22 years. OB to extracted by partially Hiring of equipment.

8. DRILLING & BLASTING

The degree of fragmentation in opencast mine has to be optimized so that total cost of drilling, blasting, excavating, transport and crushing as a total system is minimized. In order to reduce the excessive vibrations at nearby surface structures, river, road, etc. and also to achieve stability of benches in coal and O/B due geological disturbances fold and faults an optimized control blasting system using combination of delays and relays has been suggested by CMPDIL. The powder factor for coal and OB has been considered as 8.60 Te/kg and 2.44 CuM/kg respectively..

9. COAL HANDLING PLANT

A departmental Coal Handling Plant is presently under operation in Umrer OC Mine with effective crushing capacity of 1200 TPH. Annual capacity of coal crushing is 4.90MTPA

At present (-) 100 mm size crushed ROM coal is also being dispatched.

10. LAND REQUIRMENT

Total requirement of land for Umrer OC Project is 944.65 Ha Existing Leasehold Area of Umrer OC is as follows:

| Sl. No. | Particulars | Tenancy Land | Govt. Land | Forest Land | Total |
|---------|--|--------------|------------|-------------|--------|
| 1 | Land Already acquired by existing Umrer OC Mine (Ha) | 870.90 | 73.75 | 0.00 | 944.65 |

No additional land is required for enhancement of production from 3.5 Mty to 4.90 Mty.

Umrer OC mine is having Environmental clearance vide letter No. J-11015/86/2005-1A.II (M) dated 20th May, 2005 from Additional Director (MOEF), New Delhi for production capacity of 3.5 Mty and total leasehold area of 944.65 ha.

11. PRESENT LAND USE PATTERN

The existing land use plan with respect to the present Project is as below:

| Sl. No | Particulars | Land Area (ha) |
|--------|---------------------------------------|------------------|
| 1 | Quarry area | 362.0 |
| 2 | External OB Dump & Embankment | 77.81 |
| 3 | Infrastructure, Townships & Roads | 227.69 |
| 4 | Safety Zone and area under plantation | 464.84 |
| | Land | 40.00 |
| | Total | 944.65 ha |

12. CALENDAR PROGRAMME OF EXCAVATION AND OB DUMPING

The calendar programme of excavation and OB dumping is as follows:

Stripping ratio was revised vide approval letter no: NGP/WCL/P&P/MR/16-17/1506 dt 31/03/2017. Revised stripping ratio is 1.453

| Sl. No. | Year | Coal Production (Mt) | OB Dumping (Mm ³) | | |
|--------------|----------|----------------------|-------------------------------|----------|--------------|
| | | | Internal | External | Total |
| 1 | 2018-19 | 4.90 | 7.120 | - | 7.120 |
| 2 | 2019-20 | 4.90 | 7.120 | - | 7.120 |
| 3 | 2020 -21 | 1.88 | 2.732 | - | 2.732 |
| Total | | 11.68 | 16.97 | - | 16.97 |

13. ADDITIONAL CAPITAL

No additional capital is involved for enhanced coal production, as mining operation for enhanced capacity of coal production shall be carried out within the existing leasehold area. No additional land is required but HEMM equipment /HOE help may be required to overcome the gap in capacity for enhancement of coal production from 3.5 Mty to 4.90 Mty .

14. MINE CLOSURE PLANNING

The mine closure cost will cover the following activities for which a corpus fund will be created by opening an escrow account with the coal controller organization in nationalized bank. In case of mines having acid mine drainage, post closure acid mine drainage management cost shall also be included in the total closure cost. An amount @ 6.00 lakhs per Ha of the Project area will be deposited in this account for final mine closure. Progressive mine closure will be done with the fund provided in Approved report.

The balance life of the project is 5 years and mine closure fund has been assessed based on existing project life. However the mine life is not likely to be extended beyond next three years. As such the progressive closure under the present condition will continue and final closure will be planned at the cessation of mining activity.

The above rate has been taken from Circular No. 55011-01-2009- CPAM, Government Of India, Ministry of coal dated 27 August 2009, duly updated on 25 April 2012.

The total project area is 944.65 Ha. So the corpus based on August, 2009 rate is 5667.9 Lakh @ 6.0 Lakh Rs/Ha of project Area. The wholesale price Index in August, 2009 is 129.6 and the latest Provisional WPI, for the month of July 2012 available in the website of Office of Economic Adviser, Ministry of Commerce, Government of India is 164.80. So the current value of corpus is Rs. $5667.9 \times 164.80 / 129.6$ Lakhs, which comes to Rs. 7207.32 lakhs. This corpus is to be divided by the life of mine i.e. 5 years. So dividing by 5 years, the annual corpus comes to Rs 1441.47 lakhs. This amount is to be deposited in escrow account every year with 5% escalation.

The financial provision for closure of Umred OC Mine comes to around Rs. 7965.01 lakhs (**Based on July(Provisional) WPI**) at the @ Rs 6 lakh/ Ha.

Capacity of mine: 3.50 MTPA

Life of the Mine : 5 years as on 01.04. 2012

15. Existing Mine Closure Corpus

For 944.65 ha land of Umred OC mine for the Mine Closure Corpus amount deposited in the Escrow A/c upto 2016-17 are tabulated below :

| S.NO. | FINANCIAL YEAR | AMOUNTS IN LAKHS |
|-------|----------------|------------------|
| 1 | 2012-13 | 1441.47 |
| 2 | 2013-14 | 1513.54 |
| 3 | 2014-15 | 1589.22 |
| 4 | 2015-16 | 1668.68 |
| 5 | 2016-17 | 1752.11 |
| TOTAL | | 7965.01 |

16. MINE CLOSURE COST ACTIVITIES AND BREAK UP:

Mine closure cost Break – up for Umred OC mine is hereunder

| S. N. | Activity | % of Total Mine Closure Cost | Amount (In Rs) | Remarks |
|-------|--|------------------------------|----------------|---|
| A | Dismantling of structures | | | |
| | Service Building | 0.2 | 18,64,894.35 | To be included in final mine closure plan |
| | Residential Building | 2.67 | 2,48,96,339.60 | To be included in final mine closure plan |
| | Industrial Structures like Workshop, Field substation, | 0.3 | 27,97,341.53 | To be included in final mine closure plan |

| S. N. | Activity | % of Total Mine Closure Cost | Amount (In Rs) | Remarks |
|-------|---|------------------------------|-----------------|---|
| | etc. | | | |
| B | Permanent Fencing of mine void and other dangerous area | | | |
| | Random rubble masonry of height 1.2 meter including leveling up in cement concrete 1:6:12 in mud mortar | 1.5 | 1,39,86,707.64 | To be included in final mine closure plan |
| C | Grading of highwall slopes | | | |
| | Levelling and grading of highwall slopes | 1.77 | 1,65,04,315.02 | To be included in final mine closure plan |
| D | OB Dump Reclamation | | | |
| | Handling/Dozing of OB Dump into mine void and preparation of Internal dump for reclamation | 88.66 | 82,67,07,666.24 | 71% for progressive and 17.66% for final mine closure |
| | Technical and Bio-reclamation including plantation and post care | 0.4 | 37,29,788.70 | Equal weightage throughout the life of mine. |
| E | Landscaping | | | |
| | Landscaping of the open space in leasehold area for improving its aesthetic and eco value | 0.3 | 27,97,341.53 | Equal weightage throughout the life of mine. |
| F | Plantation | | | |
| | Plantation over cleared area obtained after dismantling | 0.5 | 46,62,235.88 | To be included in final mine closure plan |
| | Plantation around the quarry area and in safety zone | 0.2 | 18,64,894.35 | Equal weightage throughout the life of mine. |
| | Plantation over the external OB Dump | 0.02 | 1,86,489.44 | Equal weightage throughout the life of mine. |
| G | Post Closure Env. Monitoring/Testing of Parametrs for three years | | | |
| | Air Quality | 0.22 | 20,51,383.79 | Done for three years after mine closure |
| | Water Quality | 0.2 | 18,64,894.35 | Done for three years after mine closure |

| S. N. | Activity | % of Total Mine Closure Cost | Amount (In Rs) | Remarks |
|--------------|---|------------------------------|-----------------|--|
| H | Entrepreneurship development (vocational/skill development) Training for sustainable income of affected people. | 0.26 | 24,24,362.66 | Equal weightage throughout the life of mine. |
| I | Miscellaneous and other mitigative measures. | 2 | 1,86,48,943.52 | Equal weightage throughout the life of mine. |
| J | Man power cost for supervision | 0.8 | 74,59,577.41 | To be included in final mine closure plan |
| Total | | 100 | 93,24,47,176.00 | |

Note- The above cost expenditure will be met from the corpus fund deposited in the escrow account by the mine operator. However, the additional amount beyond the escrow account will be provided by the mine operator after estimating the final mine closure cost (as per the mine closure guideline).

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ENVIRONMENTAL MONITORING REPORT
w.r.t.HEAVY METALS IN AMBIENT AIR
UMRER AREA

WESTERN COALFIELDS LTD.



OCTOBER 2023 TO DECEMBER 2023

Environment Laboratory

NABL Accredited vide Cert. No. TC-7102

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

INDEX

| Sl. No. | PARTICULARS | PAGE NO. |
|---------|-----------------------------|----------|
| 1 | HEAVY METAL ANALYSIS REPORT | 1 TO 10 |

| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------------|------------|
| TEST REPORT NO. | RIN/TR/DEC /HM21 | DATE OF ISSUE | 25-01-24 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : LSOP 4 | |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN : LQR 47 | |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------------|---------------|------------------|
| 1 | Umrer Manger Office | UUOA-1 | 03-10-23 |
| 2 | Near workshop | UUOA-2 | 03-10-23 |
| 3 | Near pump house/colony | UUOA-3 | 03-10-23 |
| 4 | Kanwa Village | UUOA-4 | 03-10-23 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|--|--------------------|---------------------------------|----------------|--------|--------|--------|---|
| | | | | UUOA-1 | UUOA-2 | UUOA-3 | UUOA-4 | |
| 1 | Arsenic, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | 0.006 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 2 | Lead, $\mu\text{g}/\text{m}^3$ | IS 5182 PART 22 | 7.0 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | 1.0 $\mu\text{g}/\text{m}^3$ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.007 $\mu\text{g}/\text{m}^3$ | BDL | 0.0071 | BDL | BDL | 0.02 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 4 | Total Chromium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0045 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |
| 5 | Cadmium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0015 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



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| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------------|------------|
| TEST REPORT NO. | RIN/TR/DEC /HM27 | DATE OF ISSUE | 25-01-24 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : LSOP 4 | |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN : LQR 47 | |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------|---------------|------------------|
| 1 | CHP | UUOF-1 | 17-10-23 |
| 2 | WEIGH BRIDGE | UUOF-2 | 17-10-23 |
| 3 | RAILWAY SIDING | UUOF-3 | 17-10-23 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|--------|--------|--|
| | | | | UUOF-1 | UUOF-2 | UUOF-3 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | BDL | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | 0.0076 | BDL | 0.0075 | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | BDL | BDL | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | BDL | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | ** |

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SURFACE WATER MONITORING REPORT

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO.4634420034



QE-DECEMBER 2023

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
CMPDI
REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
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| | | |
|---|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Surface water quality monitoring data |  TC-7103 |
|---|--|--|

| | | | |
|------------------|---------------------------|-------------------------|--------------|
| TEST REPORT NO. | RIN/TR/DEC-23/SW29 | DATE OF ISSUE | 30-12-23 |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | WATER SAMPLE |
| NAME OF AREA | UMRER | SAMPLING METHOD: LSOP 5 | |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN: LQR 47 | |
| NO. OF PAGES | 1 | | |

| NAME OF LOCATION: UP STREAM OF AMB RIVER WRT MINE DISCHARGE | | SAMPLING DATE: 03-10-23 | | |
|---|--|--|-----------------|-----------------|
| SL. NO. | PARAMETER | TEST METHOD | DETECTION LIMIT | ANALYSIS RESULT |
| 1 | pH Value | IS 3025 Part-11 Electrometric Method: 2017 | 2 | 7.93 |
| 2 | Colour (Hazen) | IS 3025 Part-4 Pt-Co Method: 2017 | 1 | 2 |
| 3 | TDS -mg/l | IS 3025 Part-16 Gravimetric Method: 2017 | 25 | 340 |
| 4 | Oil & Greese - mg/l | IS 3025 (Part 39): 1991 (RA 2003) Partition gravimetric Method | 2 | BDL |
| 5 | Dissolved Oxygen - mg/l | IS 3025 (Part-38):1989 (RA 2003) Winkler Azide Method | 0.1 | 4.6 |
| 6 | B.O.D. (3 days at 27°C) - mg/l | IS 3025 Part 44 : 1993 (RA 2014) | 2 | 5.1 |
| 7 | Arsenic (As)-mg/l | APHA, 23rd Edition 3114 C AAS-VGA Method:2017 | 0.005 | BDL |
| 8 | Lead as (Pb) -mg/l | APHA, 23rd Edition 3113 B AAS GTA Method:2017 | 0.005 | BDL |
| 9 | Hexavalent Chromium -mg/l | APHA, 23rd Edition 3500-Cr B Colorimetric Method: 2017 | 0.01 | BDL |
| 10 | Copper (as Cu) -mg/l | IS 3025 Part-42 AAS Flame Method :2014 | 0.03 | BDL |
| 11 | Zinc as (Zn) -mg/l | IS 3025 Part-49 AAS Flame Method:2014 | 0.01 | BDL |
| 12 | Selenium (Se) -mg/l | APHA, 23rd Edition 3114 C AAS-VGA Method:2017 | 0.005 | BDL |
| 13 | Cadmium as (Cd) -mg/l | APHA, 23rd Edition 3113 B AAS GTA Method:2017 | 0.0005 | BDL |
| 14 | Fluoride (as F ⁻) - mg/l | APHA, 23rd Edition 4500-F D SPADNS Method: 2017 | 0.02 | 0.352 |
| 15 | Iron (as Fe) -mg/l | IS 3025 Part-53 AAS Flame Method:2014 | 0.06 | BDL |
| 16 | Nitrate Nitrogen - mg/l | APHA, 23rd Edition 4500-NO ³ B UV Spectrophotometric Method: 2017 | 0.5 | 2.665 |
| 17 | Sulphate (as SO ₄ ²⁻) -mg/l | APHA (23rd Edition) 4500E Turbidimetric Method:2017 | 2 | 60 |
| 18 | Chlorides (as Cl ⁻) -mg/l | IS 3025 Part-32 1988 Argentometric Method:2014 | 2 | 32 |

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| | | |
|---|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Surface water quality monitoring data |  TC-7103 |
|---|--|--|

| | | | |
|------------------|---------------------------|-------------------------|--------------|
| TEST REPORT NO. | RIN/TR/DEC-23/SW30 | DATE OF ISSUE | 30-12-23 |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | WATER SAMPLE |
| NAME OF AREA | UMRER | SAMPLING METHOD: LSOP 5 | |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN: LQR 47 | |
| NO. OF PAGES | 1 | | |

| NAME OF LOCATION: | | DOWN STREAM OF AMB RIVER WRT MINE DISCHARGE | SAMPLING DATE: | | 03-10-23 |
|-------------------|--|--|-----------------|-----------------|----------|
| SL. NO. | PARAMETER | TEST METHOD | DETECTION LIMIT | ANALYSIS RESULT | |
| 1 | pH Value | IS 3025 Part-11 Electrometric Method: 2017 | 2 | 7.83 | |
| 2 | Colour (Hazen) | IS 3025 Part-4 Pt-Co Method: 2017 | 1 | 3 | |
| 3 | TDS -mg/l | IS 3025 Part-16 Gravimetric Method: 2017 | 25 | 510 | |
| 4 | Oil & Greese - mg/l | IS 3025 (Part 39): 1991 (RA 2003) Partition gravimetric Method | 2 | BDL | |
| 5 | Dissolved Oxygen - mg/l | IS 3025 (Part-38):1989 (RA 2003) Winkler Azide Method | 0.1 | 4.3 | |
| 6 | B.O.D. (3 days at 27°C) - mg/l | IS 3025 Part 44 : 1993 (RA 2014) | 2 | 8 | |
| 7 | Arsenic (As)-mg/l | APHA, 23rd Edition 3114 C AAS-VGA Method:2017 | 0.005 | BDL | |
| 8 | Lead as (Pb) -mg/l | APHA, 23rd Edition 3113 B AAS GTA Method:2017 | 0.005 | BDL | |
| 9 | Hexavalent Chromium -mg/l | APHA, 23rd Edition 3500-Cr B Colorimetric Method: 2017 | 0.01 | BDL | |
| 10 | Copper (as Cu) -mg/l | IS 3025 Part-42 AAS Flame Method :2014 | 0.03 | BDL | |
| 11 | Zinc as (Zn) -mg/l | IS 3025 Part-49 AAS Flame Method:2014 | 0.01 | BDL | |
| 12 | Selenium (Se) -mg/l | APHA, 23rd Edition 3114 C AAS-VGA Method:2017 | 0.005 | BDL | |
| 13 | Cadmium as (Cd)- mg/l | APHA, 23rd Edition 3113 B AAS GTA Method:2017 | 0.0005 | BDL | |
| 14 | Fluoride (as F ⁻) - mg/l | APHA, 23rd Edition 4500-F D SPADNS Method: 2017 | 0.02 | 0.421 | |
| 15 | Iron (as Fe) -mg/l | IS 3025 Part-53 AAS Flame Method:2014 | 0.06 | BDL | |
| 16 | Nitrate Nitrogen - mg/l | APHA, 23rd Edition 4500-NO ³ B UV Spectrophotometric Method: 2017 | 0.5 | 2.098 | |
| 17 | Sulphate (as SO ₄ ²⁻) -mg/l | APHA (23rd Edition) 4500E Turbidimetric Method:2017 | 2 | 127 | |
| 18 | Chlorides (as Cl ⁻) - mg/l | IS 3025 Part-32 1988 Argentometric Method:2014 | 2 | 52 | |

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AUTHORIZED SIGNATORY

- | | |
|---|--|
| 1 | This Report refers to the values related to the items tested. |
| 2 | This Report cannot be reproduced in part or full without written permission of the management. |



WESTERN COALFIELDS LIMITED

Under Jurisdiction of Nagpur Court only.

Office of Area General Manager
UMRER AREA
P.O. Umrer Project.
Dist: NAGPUR(MS).
Pin: 441204.

Regd. Office : Coal Estate, Civil Lines, Nagpur - 440001

Ref. No. : WCL/AGM-UA/E&M/Solar Power Plant/2018-19/ 1474 Date : 28.03.2019
29

Commissioning Report.

Ref. :- Supply Order No. 11000114917161 dated 16.01.2018 supplied by M/s. Jain Irrigation Systems Ltd., Jalgaon.

As per supply order No. 11000114917161 dated 16.01.2018 the Solar Plant installed should generate 4.1 per kwh/kwp *per day*

1. Solar Plant 12 kwp Umrer Hospital should generate 49.2 KWH per day ($\pm 5\%$) and
2. Solar Plant 40 kwp AGM Office Umrer should generate 164 KWH per day ($\pm 5\%$)

The Bar chart showing solar power generation for the month February, 2019(Till 27th February) of both solar power plants is enclosed with the commissioning report. From the Bar Chart we find that from 18th February, 2019 onwards the solar power generation is up to the mark. Hence, commissioning report may please be processed.

| Sl. No. | Description | Qty. | Place of Installation | Date of commissioning |
|---------|--|-------------|----------------------------|-------------------------------------|
| 1. | 40 KWp On-Grid-Connected Roof Top Mounted Solar Power Plant. | 01 (One) | AGM Office, Umrer Area. | 16.01.2019 |
| 2. | 12 KWp On-Grid-Connected Roof Top Mounted Solar Power Plant. | 01 (One) | Area Hospital, Umrer Area. | 11.12.2019 11.12.2018 |

23/3/19
Staff Officer(E&M),
Umrer Area.

Area General Manager,
Umrer Area

28/03/19
Chief Manager(E&M),
Umrer Area.

Copy to :-

- 1) General Manager(E&M) HOD HQ, Nagpur.
- 2) Depot Officer, Regional Store, Umrer Area.
- 3) Central Stores, Tadali.

सेवा में

प्रमाणित करवाया जायेगा,
जमाना - कानपुर, जिला पंचायत - शिरपुर
तहसिल - उमरेड
जिला - गोरखपुर
उत्तरांचल

विषय :- उमरेड सोपन कारखाना की उत्पादन क्षमता
3.50 MTPA से 4.90 MTPA तक बढ़ाने के
लिए पर्यावरण मंजूरी संतुष्ट पत्र

महोदयजी,

विषयांतर्गत आपको सूचित करते हैं कि
उमरेड सोपन कारखाना की उत्पादन क्षमता 3.50
मि.टन प्रति वर्ष से बढ़कर 4.90 मि.टन
प्रति वर्ष करने हेतु भारत सरकार के पर्यावरण
विभाग में आवेदन किया गया था। जिसकी पर्यावरण
मंजूरी पर्यावरण मंत्रालय द्वारा प्रदान की गई है।

इस संदर्भ में इस पर्यावरण मंजूरी का
विवरण पत्र आपकी जानकारी हेतु संलग्न है।

कृपया पत्र प्राप्त करे एवं प्राप्ति की
जानकारी दें।

धन्यवाद.

01/11/19

11/11/2019

कार्यालय

गठ प्राण - गिरपुर

राज्य - उत्तरांचल

संज्ञक

1) पर्यावरण मंजूरी पत्र

विनित

अपक्षीय प्रबंधक
उमरेड उपक्षेत्र

२ >> बुधवार, २३ जानेवारी २०१९



वेस्टर्न कोलफील्ड्स लिमिटेड
(कोल इंडिया लिमिटेड की सहायक कंपनी)



सूचना

वेस्टर्न कोलफील्ड्स लिमिटेडच्या उमरेड क्षेत्रांतर्गत उमरेड विस्तारीत खुली खान (उत्पादन क्षमता ३.५० मिलियन टन प्रति वर्ष पासून ४.९० मिलियन टन प्रतिवर्ष पर्यंत व ९४४.६५ हे. क्षेत्रामध्ये) साठी पर्यावरण व वन मंत्रालयाद्वारे पत्र क्रमांक J-11015/86/2005-IA.II (M) दिनांक ११/०१/२०१९ अनुसार पर्यावरण स्विकृती दिली आहे. पर्यावरण स्विकृतीच्या पत्राची प्रत महाराष्ट्र प्रदुषण नियंत्रण मंडल यांच्या कडे उपलब्ध आहे आणि पर्यावरण, वन व जलवायु परिवर्तन मंत्रालयाच्या खाली दिलेल्या वेबसाईट वर पाहू शकता <http://environmentclearance.nic.in>

नक्षल

◆ भामरागड, २२ पोलिसांचे खब संशयावरून नक्षलवा येथील तीन ग्रामस्थां केल्याची घटना अलापल्ली या मु

www.tarunbharat.net
तरुण भारत



e-TENDER NOTICE - 0119 / 2018

Following e-tenders are being published on our website. Interested vendors are requested to register with MSPGCL to participate in e-tender. For more details log on to <https://sets.mahagenco.in>.

| e-Tender No. | e-Tender Code | Particulars of Work / Supply | Estt. (In) |
|----------------|---------------|--|------------|
| TND670 CHP1 | 80901 | Work of sealing to coal loaded trucks with necessary security seals. | |

Note » Tender cost is ₹. 1,000/- + GST.

Chief Engineer (O & M), MSPGCL, TPS Khape

कार्यालय नगर परिषद उमरेड

निविदा सूचना क्र. १०

संगणक विभाग सन २०१९-२०

नगर परिषद उमरेडला खालीलप्रमाणे काम करावयाचे आहे. तरी इच्छुक मान्यता प्राप्त/पंजीकृत कंत्राटदारामार्फत /पुरवठाधारकाकडून एकत्रित दराचे सिलबंद निविदा मागविण्यात येत आहे. कोरे निविदा दिनांक २३/०१/२०१९ ते दिनांक ०४/०२/२०१९ ला दुपारी ३.०० वाजेपर्यंत प्राप्त होईल. निविदा दिनांक ०५/०२/२०१९ ला दुपारी ४.०० वाजेपर्यंत स्वीकारण्यात येईल व निविदा शक्यतोवर त्या उघडण्यात येईल.

| अ. क्र. | कामाचा तपशील | अनामत रक्कम | निविदा प्रपत्र किंमत | कामाचा का |
|---------|---|-------------|----------------------|---------------------------------|
| १ | कार्यालयातील संगणक, लॅपटॉप, प्रिंटर, युपीएस सर्वर, ऑनलाईन युपीएस, कारटेज रिफिलींग, लॅन व स्कॅनर देखभाल दुरुस्ती व त्यासंबंधी साहित्य पुरवठा | २००० | ५०० | ०१/०४/२०१९ ३१/०३/२०२० पर्यंत |
| २ | नगर परिषद कार्यालयाकरिता बल्क एसएमएस पुरवठा करण्याबाबत | ५०० | १०० | ०१/०४/२०१९ ३१/०३/२०२० |

- Note : १. विशेष माहितीकरिता संगणक विभागाशी संपर्क साधावा.
२. निविदा दोन लिफाफे पद्धतीने सादर करावे.
३. निविदा पत्रामध्ये सविस्तर अटी व शर्ती दिलेल्या असून त्या निविदेचा भाग राहतील.

अध्यक्ष
नगर परिषद, उमरेड
क्र.एमसीयु/१९८२/२०१९, दि. २२/०१/२०१९

उपाध्यक्ष
नगर परिषद, उमरेड

मुख्याधिकारी
नगर परिषद, उमरेड

लिलाव विक्रीकरिता जाहीर सूचना

ज्या अर्थी, खाली सही करणारे हे आदित्य बिला फायनान्स लिमिटेडचे अधिकृत अधिकारी असून, त्यांचे व्यवसायाचे एक कार्यालय आर. हॉटेल सेंटर पॉईंट समोर, सेंट्रल बझार रोड, रामदासपेट, नागपूर - ४४००१० येथे आहे. (ह्यानंतर एबीएफएल असे संबोधित) आदित्य बिला फायनान्स लि. चे प्राधिकृत अधिकारी असलेल्या खालील सही करणाऱ्यांनी सिक्युरिटायझेशन अँड रिकन्स्ट्रक्शन सिक्युरिटी इंटरस्ट अँक्ट २००२ नुसार व सिक्युरिटी इंटरस्ट (एनफोर्समेंट) नियम २००२ च्या नियम ९ सोबत वाचावयाच्या अंमलबजावणी करताना येथील कर्जदार श्री मिलींद विजयकुमार अग्रवाल, श्री विजयकुमार जयकिशन अग्रवाल, श्रीमती विणादे राहणार नागपूर यांना मागणी सूचना दि. ८ फेब्रुवारी २०१८ रोजी निर्गमित करून सूचनेत नमुद केलेली रक्कम रु. ५,९५,०२,०२, तीनशे तेरा फक्त) त्यांचेवरील थकीत मुद्दल, त्यावरील अंरीअरस् (एकत्रित जमा बिलंब शुल्कासह) व त्यावरील दि. ३१ परतफेड करतील तोंडा पर्यंतचे व्याज कर्जदाराने सूचना मिळावयाच्या तारखेपासून ६० दिवसांचे आत परत करावे.

बॅनरही लावले. या बॅनरवर म्हटले आहे की, २१ एप्रिल २०१८ रोजी कसनूर- तुमिरगुंडा येथे पोलिसांनी ४० नक्षलवाद्यांना मारले. या घटनेसाठी दोषी असलेल्या या तीन ग्रामस्थांना मृत्यूदंडाची शिक्षा दिली आहे. ते तिघेही पोलिसांचे खबरी म्हणून काम करत होते, असे म्हटले आहे.

एप्रिल २०१८ मध्ये काय घडले? भामरागड-एटापल्ली तालुक्यांच्या सीमावर्ती भागातील बोरिया जंगलात गडचिरोली पोलिसांच्या सी-६० पथकाने २१ एप्रिल २०१८ रोजी रात्रीपासून शोधमोहीम राबवली होती. या दरम्यान, नक्षलवाद्यांनी पोलिस पथकावर गोळीबार केला. त्याला प्रत्युत्तर देताना पोलिसांनी चारही बाजूंनी घेरून नक्षलवांवर गोळीबार केला. यामध्ये ४० नक्षलवादी ठार झाले होते. सदर घटनेचा बदला म्हणून नक्षलवाद्यांनी हे कृत्य केले आहे. या घटनेमुळे परिसरात दहशतीचे वातावरण निर्माण झाले आहे. (तभा वृत्तसेवा)

प्रथमेश जवकार

रौप्यपदकाचा मानकरी
एका गुणांनी हुकले सुवर्णपदक

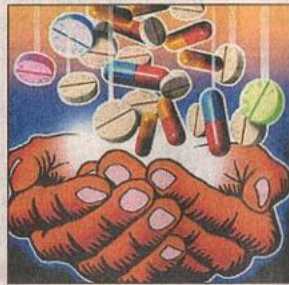


Govt forms Niti-led group to monitor drugs prices

Rupali Mukherjee
@timesgroup.com

New Delhi: The government on Monday constituted a standing committee headed by Niti Aayog to oversee the drug pricing regime, a move which could clip the powers of drug pricing regulator, National Pharmaceutical Pricing Authority (NPPA).

The Standing Committee on Affordable Medicines and Health Products will be headed by NITI Aayog member (health), and includes chief economic adviser, besides secretary department of health research, director general of



KEEPING A VIGIL

will be "a recommending body to NPPA, regarding prices of drugs and health products", and may examine issues suo-motuo or on recommendation of department of pharma NPPA

(Out of 11 posts, one Post is reserved for PwD-persons with disabilities)

* For other details and conditions etc., see below.

** Please see age relaxation under relaxation column.

For further details please visit our website <http://www.crridom.gov.in> application form. The detailed advertisement, terms and conditions/ instructions available on the Institute's website.

Cont

TIRUPATI URBAN

H.O.:- 172, Shradhanand Peth, South Ambazari Road
Mobile no. : 9158884853, 9158004147

Appendix IV [Refer Rule 8(1)]

ATTENTION

or killing ing meat

group that led us to them. They were arrested with the men from Oodlabari on Sunday evening," said Belakoba, forest ranger Sanjay Dutta, who led the operation. The men, residents of Latauri and Nagrakata in Jaljiguri district, had killed the animal six days ago.

"The arrest will dispel misconceptions among people (about its aphrodisiacal properties). We will so launch a campaign to show the belief has no basis," said a senior wildlife division officer.

Though the demand for cat body parts as an

TIMES NEWS NETWORK

Bhopal: A group of local Congress leaders has requested AICC chief Rahul Gandhi to field Bollywood actress **Kareena Kapoor Khan** as the party's Lok Sabha candidate from Bhopal.

Kareena is married to Saif Ali Khan, scion of the erstwhile ruling family of Bhopal. Saif's father, legendary cricketer Mansoor Ali Khan Pataudi, was born in Bhopal and had contested the Lok Sabha election from Bhopal on a Congress ticket in 1996.

He lost to former bureaucrat and four-time BJP MP S C Verma. BJP has never been



charm can turn the tide.

One of the signatories of the letter, Yogendra Singh 'Guddu', a Congress councillor in Bhopal Municipal Corporation (BMC), told TOI: "Congress has not won Bhopal seat in 25-30 years. We wish that a new face is fielded as Congress candidate to wrest the seat from BJP. Kareena is Bhopal's bahu and we are sure she can do the job for Congress. We have written to our leader Rahul Gandhi."

State Congress media in-

that effect to AICC, but there is no proposal of this kind at the party level. "As far as I know, nobody from the party has contacted her (Kareena) and vice versa, though both her families (Kapoor and Khan) have Congress ideology and her father-in-law even contested the election from Bhopal," Oza said.

Local BJP MP Alok Sanjar said: "It only proves that Congress doesn't have a face, a leader in Bhopal who can take on BJP. And if they are bringing in any celebrity, they should not forget that BJP has more celebrities to campaign for the party than Congress could ever have besides a committed

भारतीय खाद्य निगम



FOOD CORPORATION OF INDIA

Regional Office, West Bengal, 6 Royd Street, Kolkata-700016

Pf/J. Gupta/2016

NOTICE

Date : 17.01.2019

Smt. Jyoti Gupta AG-II (Hindi), attached to FCI Regional Office, West Bengal Region is being found absconding from Service of the Corporation since May 2018.

The above Official is hereby directed to resume her duty and report to Asstt. General Manager (Pers), FCI, RO (WB), 6, Royd Street, Kolkata - 700016, within 15 (fifteen) days from the date of publication of this Notice positively, failing which disciplinary action will be initiated against her in terms of FCI rules and Regulation.

-S/d-
Asstt. Genl. Manager (Pers.)



Western Coalfields Limited
(A Subsidiary of Coal India Ltd.)



NOTICE

Environmental Clearance has been accorded for Expansion of Umrer OC Mine (From 3.50 MTPA to 4.90 MTPA in an area of 944.65 ha) under Umrer Area of M/s Western Coalfields Limited, by Ministry of Environment & Forests vide letter no J- 11015/86/2005-IA.II (M) dated 11/01/2019 and a copy of the clearance letter is available with the Maharashtra Pollution Control Board and may also be seen at website of the Ministry of Environment Forests & Climate Change (MoEF&CC) at <http://environmentclearance.nic.in>

PUBLIC NOTICE FOR AUCTION SALE

WHEREAS

The undersigned is the Authorized Officer of Aditya Birla Housing Finance Limited, having one of its place of business at Shriram Shyam Tower, 1st Floor, Near NIT

Cumulative Status of reclamation up to 31/03/2025

| Project | Area affected by Mining and other allied activities | | | Reclamation of area affected by mining and other allied activities | | | | Un-disturbed Area brought under Plantation | |
|-----------------|--|-------------------------|--------------|---|-------------------|--|-------------------|---|-------------------|
| | Excavated | External OB dump | Total | Excavated area | OB dump | Total Reclamation in disturbed area | | | |
| | | | | Biological | Biological | | | | |
| | Ha | Ha | Ha | Ha | Ha | Area | Plantation | Area | Plantation |
| | | | | | | | | | |
| Umrer OC | 319.6 | 106.64 | 426.24 | 63.8 | 106.64 | 180.44 | 4,51,100 | 108.36 | 2,70,900 |



भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

| | | | | | | | | | | | | | |
|---|---|---------------------|----------------------|-----------------------------|----------------------|---------------------|--------------------------|--------|---------------------|----|----|-----|--|
| Project Name: | Umrer Oc Expansion | | | | | | | | | | | | |
| Project Address: | Near Kanhwa Village, Bander Coalfield | | | | | | | | | | | | |
| Village: | Kanhwa | Block: | Umred | | | | | | | | | | |
| District: | Nagpur | State: | Maharashtra | | | | | | | | | | |
| Pin Code: | | | | | | | | | | | | | |
| Communication Address: | Office Of The Sub Area Manager, Umrer Sub Area, Po-umrer Project, Umred, Nagpur, Maharashtra - 441204 | | | | | | | | | | | | |
| Address of CGWB Regional Office : | Central Ground Water Board Central Region, N.s. Building, Civil Lines, Nagpur, Maharashtra - 440001 | | | | | | | | | | | | |
| 1. NOC No.: | CGWA/NOC/MIN/REN/2/2026/12083 | | | 2. Date of Issuance | 14/05/2026 | | | | | | | | |
| 3. Application No.: | 21-4/348/MH/MIN/2016 | | | 4. Category: (GWRE 2025) | Safe | | | | | | | | |
| 5. Project Status: | Existing With Additional Ground Water Requirment | | | 6. NOC Type: | Renewal | | | | | | | | |
| 7. Valid from: | 11/07/2025 | | | 8. Valid up to: | 10/07/2027 | | | | | | | | |
| 9. Ground Water Abstraction Permitted: | | | | | | | | | | | | | |
| Fresh Water | | Saline Water | | Dewatering | | Total | | | | | | | |
| m ³ /day | m ³ /year | m ³ /day | m ³ /year | m ³ /day | m ³ /year | m ³ /day | m ³ /year | | | | | | |
| 100.80 | 36792.00 | | | 2680.00 | 978200.00 | 2780.80 | 1014992.00 | | | | | | |
| 10. Details of ground water abstraction /Dewatering structures | | | | | | | | | | | | | |
| Total Existing No | | | | | | | Total Proposed No | | | | | | |
| | DW | DCB | BW | TW | MP | MPu | DW | DCB | BW | TW | MP | MPu | |
| Abstraction Structure* | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Dewatering Structure* | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| *DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps | | | | | | | | | | | | | |
| 11. Ground Water Abstraction/Restoration Charges paid (Rs.): | | | | | | | 11134317.00 | | | | | | |
| 12. Environment Compensation (if applicable) paid (Rs.): | | | | | | | 0.00 | | | | | | |
| 13. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism. | No. of Piezometers | | | | | | Monitoring Mechanism | | | | | | |
| | | | | | | | Manual | DWLR** | DWLR With Telemetry | | | | |
| **DWLR - Digital Water Level Recorder | 2 | | | | | | 0 | 1 | 1 | | | | |

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

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CENTRAL GROUND WATER AUTHORITY

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(Compliance Conditions given overleaf)

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Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m³/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m³/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).
- 31) In the self-compliance report, the PP shall submit details of Drilling Agency/ Agencies, which has/ have constructed BW(s)/ TW(s) along with undertaking to the effect that all necessary measures have been taken as per directions of Hon'ble Supreme Court provided in Annexure-VII of guidelines dated 24.09.2020 in respect of abandoned/ failed BW(s)/ TW(s)/Piezometer(s), if any. The PP is advised to engage registered drilling agency/ agencies. In the event of any mishap/ unfortunate incident due to negligence in taking measures for prevention of accident due to falling in Bore Well, both PP and concerned drilling agency shall jointly be held responsible and penal action as per extant Government rules shall be taken.

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

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SAVE WATER - SAVE LIFE

CENTRAL GROUND WATER AUTHORITY
Department of Water Resources, River Development and Ganga Rejuvenation
Ministry of Jal Shakti, Govt. of India

Receipt

(As per the guideline Gazette Notification S.O. 3281(E) regarding the New Guidelines dated 24.09.2020 of CGWA, MoJS, Govt. of India)
<https://cgwa-noc.gov.in>

| | | | |
|-----------------------------------|----------------------|-------------------|------------|
| Application No.: | 21-4/348/MH/MIN/2016 | Date of Issuance: | 14/05/2026 |
| Name of Firm: | UMRER OC EXPANSION | | |
| AppType Category: | Coal | | |
| Application Type: | Mining | | |
| PAN/GSTIN No. of Firm/Individual: | / | | |

| S N | Description | Amount (Rs.) |
|---|---|--------------------|
| 1. | Application Processing Fee | 5000.00 |
| 2. | Ground Water Abstraction charges | 11134317.00 |
| 3. | Ground Water Restoration charges | 0 |
| 4. | Environmental Compensation Charges (ECRGW) (Date From to) Days- | |
| 5. | Penalty for non-Compliance of NOC conditions Condition to be mentioned | 350000.00 |
| 6. | Adjustment Charges | |
| 7. | Rebate | |
| 8. | Charges for correction/modification in the existing issued No Objection Certificate | |
| S.No. | Description | Rate |
| (i) | Change in User ID | Rs. 1000 |
| (ii) | Change in firm Name | Rs. 5000 |
| (iii) | Extension of No Objection Certificate | Rs. 5000 |
| (iv) | Issuance of duplicate No Objection Certificate | Rs. 5000 |
| (v) | Issuance of corrigendum to No Objection Certificate | Rs. 5000 |
| (vi) | Any other items/correction etc. | Rs. 500 |
| Rs. Rupees One Crore Fourteen Lakh Eighty Nine Thousand Three Hundred Seventeen Only | | 11489317.00 |

This is an system generated invoice, hence, does not require ink signed.

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Term and conditions:

- i. All disputes are subject to Delhi Jurisdiction.
- ii. Any complaint in regard to the rates will not be entertained.

Member-Secretary
CGWA, New Delhi

CENTRAL GROUND WATER AUTHORITY

| CSR expenditure statement 2025-26 (Nov -25) | | | | | |
|---|---|-----------------------------|--------------------|------------------------|---|
| SI No. | CSR Activity Details | Sanction Amount in Rs Lakhs | WO value (Rs Lakh) | Expenditure (Rs Lakh) | Status |
| 1 | Swachta Activities | 3.5 | 3.20 | 1.86 | 1) Swachta Pakhwada Bill Submitted for Rs 82601/- Work completed 2) Fogging machine Through GeM Rs 86679/-,Work Completed 3) Hand Wash Station Estimated 1.327 Lakh - Work started at site 4) Swachta He Sewa Bill submitted for Rs 17740/- Work completed |
| 2 | Organizing Medical Camps at nearby villages of mines and also providing service under CSR clinic at Area Hospital | 5 | 4.49 | 4.47 | Work order of Rs. 4,49,282 issued to KAPL Rest of the amount will be utilised for Special Camps (Ortho, Cancer etc) |
| 3 | Providing 8 nos. Smart Class equipment to Schools Near Umrer Area ZP Rajurwadi-1, ZP Kalamna-1, ZP Bhagwanpur-1, Ashramshala Tribal Udasa-2, ZP Dhammangoan-1, ZP Dahegaon -1, ZP Kanva -1 | 10.5 | 10.479 | 10.48 | Work order issued Rs 10,47,840 Work completed |
| 4 | Making drinking water provision by providing RO plant at Hewati Village of Hewati grampanchayat (Only RO Machine to be installed - Room already available) | 7 | 5.438 | 4.61 | Work Order - Rs 5,43,707.49 , Work Started at site Liability Booked - |
| 5 | Making stage for cultural activities/wholistic development of students at ZP Dahegaon school of Saiki Grampanchayat | 3 | 2.08 | 1.76 | Work Order Rs 2,07,537.56, Work Completed Liability booked |
| 6 | Providing and fixing paver block and making structural steel at Jawaher Vidyalaya of Makardhokda Village under CSR activity for MKD-III OCM of Umrer Ar-ee. | 11 | 6.32 | 4.47 | Work Awarded Rs. 6,31,052.85 , Work Started at site Liability booked |
| 7 | Solar Panel for RO plant facility of Ghoturli village of Waigaon Ghoturli Grampanchayat | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/-, Work Completed |
| 8 | Solar Panel for ZP school Kanva village Shirpur Grampanchayat | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Completed |
| 9 | Solar Panel for RO plant facility at Bhagwanpur village of Bhagwanpur Grampanchayat | 10.5 | 8.5 | 0 | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- 0 Work Completed |
| 10 | Making drinking water provision by providing RO Plant with Solar Panel for Nand Village of Nand Grampanchayat | 11 | 9.12 | 0 | Work Awarded Rs 9,11,764.53 , Site handover done |
| 11 | Making stage for cultural activities/wholistic development of students at ZP Saiki school of Saiki Grampanchayat | 5 | 4.01 | 3.39 | Work Awarded Rs 4,00,041.52.00, Work Started at Site Liability booked |
| 12 | Making Toilet and Handwashing facility at ZP Saigaon of Bhagwanpur Gram Panchyat | 8.5 | 5.47 | 0.82 | Work Awarded Rs 5,46,459.70,Work Started at Site |

| | | | | | |
|--------------|--|-------------------------|-------|--------------|---|
| 13 | Making Toilet and Handwashing facility at ZP Kharkhada of Bhagwanpur Grampanchayat | 8.5 | 5.98 | 1.79 | Work Awarded Rs 5,95,936.45 , Work Started at Site Liability booked |
| 14 | Providing Solar Pump and associated tank at Besur village of Besur Grampanchayat | 6 | 2.25 | 0 | Work Awarded Rs 2,24,275.77 , Site handover done |
| 15 | Making drinking water provision by providing RO plant for Saigaon Village Bhagwanpur of Grampanchayat with Solar Panel | 11 | 9.57 | 0 | Work Awarded Rs 9,56,971.50 , Work Started at Site |
| 16 | Making drinking water provision by providing RO plant for Kharkhada Village of Bhagwanpur Grampanchayat with Solar Panel | 11 | 9.78 | 1.47 | Work Awarded Rs 9,77,559.73 , Work Started at Site Liability booked |
| 17 | 56 Cycle for students of ZP school ZP Nand of Nand Grampanchayat | 3 | 2.324 | 2.324 | Work completed |
| 18 | Open air gym equipment at Borebatti of Waigaon Ghoturli Grampanchayat | 6 | 4.15 | 0 | Work Awarded Rs 4,14,432.90 , Site handover done |
| 19 | Drinking water facility for public by providing 8 nos. water purifier at police station Bhiwapur(1no), Land Record Office at Bhiwapur(1no.), Land record office at Umred(1), and students of ZP Dhammangao (1), ZP Besur (1 no), ZP Khursapar (1 no.), ZP Welsakhra (1 no) ZP Nand Primary(1 no.) respectively | 10.5 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| 20 | Making Bus-Stand at Nand Village of Nand Grampanchayat | 3 | 2.69 | 0 | Work Awarded Rs 2,68,002.55 , site handover done |
| 21 | Making drinking water provision by providing RO plant at Chichala Village with Solar Panel in Chichala Grampanchayat | 11 | 9.25 | 1.92 | Work Awarded Rs 9,24,291.76 , Work Started at Site Liability booked |
| | Total (A) | 145 | | 39.37 | |
| | | | | | |
| | | | | | |
| | | | | | |
| S No. | Panchtatva | Budget(Rs Lakh) | | | Remark |
| 1 | Installation of RO purifier at Jawahar school | 2 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| 2 | Installation of Solar panel at Jawahar school | 6.5 | 2.65 | 2.65 | Work Awarded Rs 2.65 Lakh. Work completed |
| 3 | Providing Nutrition kit for students at Jawahar School, ZP Pachgaon School, ZP school Nand | 16 | 16 | 0 | Rs12.80 Lakh transferred (80%) to Annamrita foundation |
| 4 | Installation of RO Purifier at ZP school Nand | 2 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| | Total(B) | 26.5 | | 2.65 | |
| | | | | | |
| | Total (A+B) | 171.5 | | 42.02 | |

| | | | | |
|-----------------------------------|--|--|--|-------|
| Liability Reversal of 2024-25(C) | | | | 0 |
| A+B-C | | | | 42.02 |

[Signature]
29/11/25
AFM
Umrer Area

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SD (Civil)
Umrer Area

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29/11/25
ANO (Env)
Umrer Area

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29/11/25
AMO/UA
Umrer Area

[Signature]
29.11.2025
AHRM
Umrer Area

CSR DETAILS OF UMRER AREA

Expenditure incurred for works carried out in Umrer Area under CSR since 2013-14 is given below:

| UMRER AREA CSR ACTIVITIES AT A GLANCE 2013-14 | | | | | |
|--|--|---------------------|-----------------|---|---|
| SI No | CSR activities work | Village name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2013-14 (Fig. in Rs Lakhs) |
| 1 | Making Compound wall for Z.P. school building at Amgaon village (194 mtr) | Amgaon | Nagpur | Within 25 Km | 7.79 |
| 2 | Compound wall for School Building at Murpar village | Murpar | Nagpur | Within 25 Km | -0.06 |
| 3 | Plantation on 100 Ha. Degraded forest land | Forest | Nagpur | Within 25 Km | 31.00 |
| 4 | Expenditure for Medicines & Allied | Various Villages | Nagpur | Within 25 Km | 2.18 |
| 5 | Mobile Medical Van | Various Villages | Nagpur | Within 25 Km | 9.29 |
| 6 | Mobile Medical Van Hiring | Various Villages | Nagpur | Within 25 Km | 4.09 |
| 7 | 24 No. Health Camps in different Villages | Various Villages | Nagpur | Within 25 Km | 2.00 |
| 8 | Making Community Hall at Khadsangi village of Umrer Area. | Khadsangi | Nagpur | Within 25 Km | -0.13 |
| 9 | Construction of Community Hall for WaigoanGhoturli G. P. At Umrer Area (12 Mt. X 6 Mtr) | Waigoan | Nagpur | Within 25 Km | 14.24 |
| 10 | Infrastructural help for GYM at Makardhokda Village | Makardhoka | Nagpur | Within 25 Km | 0.86 |
| 11 | Making CC road for Salki at Makardhokda village of Umrer Area (170 mtr.) | Makardhokda | Nagpur | Within 25 Km | -1.08 |
| 12 | Making CC road (200 mtr length) at Navegaon Sadhu Gram Panchayat | Navegaon | Nagpur | Within 25 Km | 4.32 |
| 13 | Making CC road (200 mtr) at Dewali village | Dewali | Nagpur | Within 25 Km | 0.12 |
| 14 | Construction of Cement Concrete Road for Thirkhura Village under Navegaon Sadhu G.P atUmrer Area (120Mtrs.) | Thikara | Nagpur | Within 25 Km | 0.08 |
| 15 | Cement Concrete Road and Drain for Lohara Village under MKD Sub Area of Umrer Area (300 | Lohara | Nagpur | Within 25 Km | 6.52 |

| | | | | | |
|----|--|-----------|--------|--------------|-------|
| | Mtrs.Road and 150 Mtrs. Drain) | | | | |
| 16 | Cement Concrete Road & Drain for Dhurkheda Village under MKD Sub Area of Umrer Area.(300 Mtrs. Road and 150 Mtrs. Drain) | Dhurkheda | Nagpur | Within 25 Km | 5.89 |
| 17 | Construction of Cement Concret Road for Kalamna G.P. At Umrer Area (300Mtrs.) | Kalamna | Nagpur | Within 25 Km | -0.08 |
| 18 | Cement Concrete Road and Drain for Mohapa Village under Dhurkheda G. P atUmrer Area (300 Mtrs.) | Mohapa | Nagpur | Within 25 Km | 0.42 |
| 19 | Cement Concrete Road for MKD Village at Umrer Area (400 Mtr.) | MKD | Nagpur | Within 25 Km | 0.11 |
| 20 | Cement Concrete Road at Pitichuha Village under Murpar Sub Area of UmrerArea(400 Mtr.) | Pitichuha | Nagpur | Within 25 Km | 7.73 |
| 21 | Cement Concrete for Bamhani Village at Umrer Area(400 Mtrs) | Bamhani | Nagpur | Within 25 Km | -0.40 |
| 22 | Cement Concrete Road and Drain for Kotegaon Village under Gaonsut G.P.at Umrer Area (300 Mtrs& 150 Mtrs Drain) | Kotegaon | Nagpur | Within 25 Km | 7.91 |
| 23 | Cement concrete Road for Paradgaon Village of Saiki G.P. Of Umrer Area) | Paradgaon | Nagpur | Within 25 Km | 7.13 |
| 24 | Cement Concrete Road for Aaptur Gram Panchayat of Umrer Area (400 Mtr) | Aaptur | Nagpur | Within 25 Km | 0.02 |
| 25 | Cement Concrete for Saiki G.P. At Umrer Area(400 Mtr) | Saiki | Nagpur | Within 25 Km | 0.35 |
| 26 | Cement Concrete Road for NirwahGrampanchayat of Umrer Area(400 Mtr) | Nirwah | Nagpur | Within 25 Km | 5.40 |
| 27 | Cement Concrete Road at Shedegaon Village under Murpar Sub Area of Umrer Area (400 Mtr) | Shedegaon | Nagpur | Within 25 Km | 8.88 |
| 28 | Cement Concrete Road and Drain for Thombara Village at Umrer Area (300 Mtrs.& 150 Mtrs Drain) | Thombara | Nagpur | Within 25 Km | 0.96 |
| 29 | Construction of 400 Mtr Cement Concrete Road & 150 Mtr. Cement Concrete Drain at Waigaon village of Umrer Area | Waigaon | Nagpur | Within 25 Km | 1.04 |
| 30 | Cement concrete Road for Kumbhari Village under Dhurkheda G.P atUmrer Area | Kumbhari | Nagpur | Within 25 Km | 7.40 |
| 31 | Cement Concrete road for Bhivagade village under Deoli G.P. | Bhivagade | Nagpur | Within 25 Km | 12.35 |

| | | | | | |
|----|--|------------------|---------------------|--------------|-------|
| 32 | Cement concrete Road and drain for Pipardoh village Under Khursapar G.P. | Pipardoh | Nagpur | Within 25 Km | 15.59 |
| 33 | Construction of Cement Concrete Road & Drain for Shirpur G.P. | Shirpur | Nagpur | Within 25 Km | 12.07 |
| 34 | Construction of Cement Concrete Road for Thirkura Village under Navegaon G.P | Thirkura | Nagpur | Within 25 Km | 11.21 |
| 35 | Construction of WBM Road for Boribatathi Village under Waigoan-Ghoturli G.P. At Umrer Area (300 Mtrs.) | Boribatathi | Nagpur | Within 25 Km | 0.11 |
| 36 | WBM Road for Welsakhara Village under MKD Sub Area of Umrer Area(400 Mtrs.) | Welsakhara | Nagpur | Within 25 Km | 0.11 |
| 37 | 2 No. Awareness Camps in villages under umrer area and educational help for poor children | Umrer | Nagpur | Within 25 Km | 0.50 |
| 38 | Distribution of blankets under CSR policy to MKD Sirpur, Khursapar, Kanwa Village | Various Villages | Nagpur | Within 25 Km | 0.22 |
| 39 | 2 No. Of Sports Camps and 1 No. Kabbadi Tournament in villages under umrer Area | Umrer | Nagpur | Within 25 Km | 0.76 |
| 40 | Infrastructure help for Wild Life at MKD Village of Umrer Area (1 No. Pond & 1 No. Borewell) | MKD | Nagpur | Within 25 Km | 7.29 |
| 41 | 2 No. Hand Pumps for Waigaon-Ghotuli of UA | Waigaon-Ghoturi | Nagpur | Within 25 Km | 2.50 |
| 42 | 2 No. Hand Pumps & Common toilets For ladies of Haladgaon Village. | Haladgaon | Nagpur | Within 25 Km | 4.20 |
| 43 | Construction of Well and Storage arrangement and pipe line for Akola | Akola | Nagpur | Within 25 Km | 9.45 |
| 44 | Construction of Well & Storage arrangement and pipe line for Nirwah | Nirwah | Nagpur | Within 25 Km | 6.30 |
| 45 | Making RCC over head tank (50000 Ltr capacity) at Udasa village of Umrer Area. | Udasa | Nagpur ³ | Within 25 Km | 0.20 |
| 46 | Making RCC over head tank (Capacity 40000Ltr) for Kanwa village of Umrer Area. | Kanwa | Nagpur | Within 25 Km | 0.04 |

UMRER AREA CSR ACTIVITIES AT A GLANCE 2014-15

| SI No | Csr Activities Work | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2014-15 (Fig. In Rs Lakhs) |
|-------|---------------------|--------------|----------|--|--|
|-------|---------------------|--------------|----------|--|--|

| | | | | | |
|----|--|------------------|--------|--------------|-------|
| 1 | Mobile Van (Hiring Charges for 2 Years) | Various Villages | Nagpur | Within 25 km | 8.44 |
| 2 | Mobile Medical Van | Various Villages | Nagpur | Within 25 km | 4.17 |
| 3 | Construction of Community Hall for WaigoanGhoturli G. P. At Umrer Area (12 Mt. X 6 Mtr) | Waigoan | Nagpur | Within 25 km | 0.75 |
| 4 | Cement Concrete Road at Shedegaon Village under Murpar Sub Area of Umrer Area (400 Mtr) | Shedegaon | Nagpur | Within 25 km | -0.29 |
| 5 | Cement Concrete Road for Nirwah Grampanchayat of Umrer Area(400 Mtr) | Nirwah | Nagpur | Within 25 km | 0.02 |
| 6 | Cement concrete Road for Kumbhari Village under Dhurkheda G.P atUmrer Area | Kumbhari | Nagpur | Within 25 km | 1.44 |
| 7 | Cement Concrete road for Bhivagade village under DeoliG.p. | Bhivagade | Nagpur | Within 25 km | 0.10 |
| 8 | Cement concrete Road and drain for Pipardoh village Under Khursapar G.P. | Pipardoh | Nagpur | Within 25 km | 0.68 |
| 9 | Construction of Cement Concrete Road & Drain for Shirpur G.P. | Shirpur | Nagpur | Within 25 km | 0.51 |
| 10 | Construction of Cement concrete road at Lohara village to Khursapur G.P | Khusarpur | Nagpur | Within 25 km | 9.08 |
| 11 | Constsruction of Cement Concrete Road for Thirkura Village under Navegaon G.P | Thirkura | Nagpur | Within 25 km | 0.28 |
| 12 | 2 No. Hand Pumps for Waigaon-Ghotuli of UA | Waigaon-Ghoturi | Nagpur | Within 25 km | 0.004 |
| 13 | 2 No. Hand Pumps & Common toilets For ladies of Haladgaon Village. | Haladgaon | Nagpur | Within 25 km | 4.72 |
| 14 | Construction of Well and Storage arrangement and pipe line for Akola | Akola | Nagpur | Within 25 km | 1.64 |

| | | | | | |
|----|---|--------|--------|--------------|------|
| 15 | Construction of Well & Storage arrangement and pipe line for Nirwah | Nirwah | Nagpur | Within 25 km | 8.24 |
|----|---|--------|--------|--------------|------|

UMRER AREA CSR ACTIVITIES AT A GLANCE 2015-16

| SI No | CSR Activities Work | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2016-17(Fig. In Rs Lakhs) |
|-------|---|------------------|----------|--|---|
| 1 | Mobile van Hiring Charges and diesel | Various villages | Nagpur | within 25 km | 5.88 |
| 2 | Cement Concrete Road at Shedegaon Village under Murpar Sub Area of Umrer Area | Shedegaon | Nagpur | within 25 km | 0.21 |

UMRER AREA CSR ACTIVITIES AT A GLANCE 2016-17

| SI No | CSR Activities Work | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2016-17(Fig. In Rs Lakhs) |
|-------|--|----------------------|----------|--|---|
| 1 | Hiring charges for Mobile Van Ambulance for 2 years | Various villages | Nagpur | within 25 km | 7.18 |
| 2 | MCED Skill Development training for Villagers/PAPs of Besur piraya & Hewat | Besur Piraya & Hewat | Nagpur | within 25 km | 1.28 |

UMRER AREA CSR ACTIVITIES AT A GLANCE 2017-18

| SI No | CSR Activities Work | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2017-18 (Fig. In Rs Lakhs) |
|-------|--|--|----------|--|--|
| 1 | Library in Waigaon, Ghotrulli and Makardhokda Village | Waigaon, Ghotrulli and Makardhkd Village | Nagpur | within 25 km | 4.58 |
| 2 | Construction of septic tanks in Tribal Ashramshala School in Udasa Village | Udasa Village | Nagpur | within 25 km | 3.18 |
| 3 | High Mast Light in Waigaon Ghotrulli Village | Waigaon Ghotrulli Village | Nagpur | within 25 km | 2.97 |
| 4 | Swachta I | - | - | - | 2.65 |

| | | | | | |
|---|-----------------------|---|---|---|------|
| 5 | Swachta II | - | - | - | 0.74 |
| 6 | Community Development | - | - | - | 1.72 |

| UMRER AREA CSR ACTIVITIES ATA GLANCE 2018-19 | | | | | |
|---|---------------------------------|---------------------|-----------------|---|---|
| SI No | CSR Activities Work | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Exp. Incurred 2017-18 (Fig. In Rs Lakhs) |
| 1 | Compound wall at Nand ZP School | Nand | Nagpur | within 25 km | 10.54 |
| 2 | Medical Camps | Various villages | Nagpur | within 25 km | 0.49 |
| 3 | Swachta | - | - | - | 0.98 |

| UMRER AREA CSR ACTIVITIES AT A GLANCE 2019-20 | | | | | |
|--|--|---------------------|-----------------|---|--|
| SI No. | Name of activity | Village Name | DISTRICT | Activities Within 25 Kms/Beyond 25 Kms | Expenditure (Rs. Lakh)(2019-20) |
| 1 | Compound wall of ZP school Nand (Carry forward Work) | Nand | Nagpur | within 25 km | 1.44 |
| 2 | Green Haat at Besur Village | Besur | Nagpur | within 25 km | 7.17 |
| 1 | Medical Camp in Village /CSR clinic/treatment facility for village patients | Various Villages | Nagpur | within 25 km | 2.3 |
| 2 | RO Plant in Piraya Village | Piraya | Nagpur | within 25 km | 10.93 |
| 3 | RO plant in Makardhokada village | Makardhokada | Nagpur | within 25 km | 11.66 |
| 4 | RO plant at Waigaon Ghotrulli village(room already available) | Waigaon Ghotrulli | Nagpur | within 25 km | 4.52 |
| 5 | Solar water pump at Murpar village | Murpar | Nagpur | within 25 km | 4.62 |
| 6 | Village sports kabbadi/others | Various Villages | Nagpur | within 25 km | 0.90 |
| 7 | Solar panel on community hall building Bhagwanpur. (New activity approved in place of deepening of pond) | Bhagwanpur | Nagpur | within 25 km | 2.41 |
| 8 | IEC activities of Umrer Area | Various Villages | Nagpur | within 25 km | 0.48 |

| | | | | | |
|----|---|------------------|--------|--------------|-------|
| 9 | RO plant for ZP Govt school Umrer Area | Various Villages | Nagpur | within 25 km | 1.85 |
| 10 | Skill Development Programmes 8 Nos. of programme completed | Various Villages | Nagpur | within 25 km | 12.02 |
| 11 | Support to community during lockdown due to Corona Virus | Various Villages | Nagpur | within 25 km | 4.50 |

| UMRER AREA CSR ACTIVITIES AT A GLANCE 2020-21 | | | | | |
|--|--|---------------------|-----------------|---|---|
| SI No. | Name of activity | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Expenditure (Rs. Lakh) (2020-21) |
| 1 | Covid -19 crisis | Various villages | Nagpur | within 25 km | 1.19 |
| 2 | Organizing Medical Camps | Various villages | Nagpur | within 25 km | 0.63 |
| 3 | Village sports –cricket/football | Various villages | Nagpur | within 25 km | 0.93 |
| 4 | Financial assistance to Panchayat samiti for construction of magic pits(water harvesting) structure in different villages | | Nagpur | within 25 km | 1.19 |
| 5 | Installation of RO plant at ZP school Kanvha | Kanvha | Nagpur | within 25 km | 0.40 |
| 6 | Public toilet construction for gents and ladies at Makardhokada village | Makardhokda | Nagpur | within 25 km | 14.40 (Work under execution) |
| 7 | Construction of concrete road 250mts at Nand village | Nand | Nagpur | within 25 km | 7.73 |
| 8 | Construction of compound wall at ZP school Bandar | Bandar | Nagpur | within 25 km | 3.4 |
| 9 | Toilet construction at ZP school Bandar | Bandar | Nagpur | within 25 km | 4.82(Work under execution) |
| 10 | Toilet construction at ZP school (high school) Nand | Nand | Nagpur | within 25 km | 11.79 |
| 11 | E-rickshaw for Garbage collection to nearby village | WaigaonGhotrulli | Nagpur | within 25 km | 1.77 |
| 12 | Financial support to Panchayat Samiti Umred Plastic Baler machine for disposing/transporting for recycle and alternate usage | | Nagpur | within 25 km | 3.00 |
| 13 | IEC activities (Swachta material, cotton cloth bag, awareness campaign, rallies, competition) etc in nearby schools and villages | Various Villages | Nagpur | within 25 km | 0.42 |

| UMRER AREA CSR ACTIVITIES AT A GLANCE 2021-22 | | | | | |
|--|--|------------------------------|-----------------|---|---|
| SI No. | Name of activity | Village Name | District | Activities Within 25 Kms/Beyond 25 Kms | Expenditure (Rs. Lakh) (2021-22) |
| 1 | Covid 19 relief | Various villages | Nagpur | within 25 km | 8.198 |
| 2 | 02 nos of RO plants for khadasanghi and Amdi (bedge) villages | khadasanghi and Amdi (bedge) | Nagpur | within 25 km | 13.65 |
| 3 | IEC activities in nearby schools and villages | Various villages | Nagpur | within 25 km | 0.44 |
| 4 | RO Plant in ZP School, Shirpur | Shirpur | Nagpur | within 25 km | 0.5 |
| 5 | Installation of submersible pump, GI pipe connection and hand washing pipe | | Nagpur | within 25 km | 1.99 |
| 6 | Distribution of 20 nos of sewing machine | Various villages | Nagpur | within 25 km | 1.36 |

| UMRER AREA CSR ACTIVITIES AT A GLANCE 2022-23 | | | | | |
|--|---|---------------------|-----------------|--|---|
| Sl. No. | Name of activity | Village Name | District | Activities Within 25 Kms/ Beyond 25 Kms | Expenditure (Rs. Lakh) (2022-23) |
| 1 | Swachtha Action Plan activities | Various villages | Nagpur | within 25 km | 1.46 |
| 2 | Medical Camps related to Osteoporosis, Cancer Detection etc | Various villages | Nagpur | within 25 km | 1.99 |
| 3 | 01 no of RO Plant at polgaon village | Polgaon | Nagpur | within 25 km | 8.73 |
| 4 | 01 no of RO Plant at Kanwa village | Kanwa | Nagpur | within 25 km | 4.99 |
| 5 | GYM equipment at Shirpur Village | Shirpur | Nagpur | within 25 km | 1.12 |
| 6 | 02 nos. solar pump in existing handpump and associated tank along with stand at Bhagwanpur village | Bhagwanpur | Nagpur | within 25 km | 8.96 |
| 7 | 01 no of RO Plant at ZP school Kalamna, RO plant at ZP school Khursapur-Lohara, Nagpur Parishad school Waghmare | Various villages | Nagpur | within 25 km | 1.09 |
| 8 | Solar lamp post at Besur Village | Besur | Nagpur | Within 25 Km | 1.34 |
| 9 | 6 nos of handpump at Murpar village | Mupar | Chandrapur | Within 25 Km | 6.27 |
| 10 | 01 no of solar pump, borewell and associated tank along with stand at Shivapur (Bandar) village | Shivapur | Chandrapur | Within 25 Km | 5.30 |

| | | | | | |
|----|--|------------------|--------|--------------|------|
| 11 | 35 nos of Bi cycle for school students | Various villages | Nagpur | Within 25 Km | 1.78 |
| 12 | 1 No borewell along with solar pump at Sayki Village | Sayki Village | Nagpur | Within 25 Km | 9.38 |
| 13 | Borewell development at Bhagwanpur Village | Bhagwanpur | Nagpur | Within 25 Km | 8.99 |

UMRER AREA CSR ACTIVITIES AT A GLANCE 2023-24

| Sl. No. | Name of activity | Village Name | District | Activities Within 25 Kms/ Beyond 25 Kms | Expenditure (Rs. Lakh) (2023-24) |
|---------|--|---------------------|----------|---|----------------------------------|
| 1 | 1 no of smart class and digital content for Gurukul Ashramshal School at Udasava Village | Udasava | Nagpur | Within 25 Km | 2.38 |
| 2 | Swachtha Action Plan activities | Various villages | Nagpur | within 25 km | 2.00 |
| 3 | Water cooler with in built safe water arrangement for ensuring potable water for students to reduce water borne diseases for 6 nos of ZP school (Lohara, Kalamna, Dhavda, Kanwa, Pahami, Nagar parishad waghmare school) | Various villages | Nagpur | within 25 km | 5.93 |
| 4 | Smart class equipment for 3 ZP school (Shirpur, Waigaon- Ghoturli & Pahami) | Various villages | Nagpur | within 25 km | 6.30 |
| 5 | Sanitary pads incinerator Machine/ vending machine for improved hygiene and health for Girl students in educational institution and rural hospital through HLL life care | Various villages | Nagpur | within 25 km | 3.00 |
| 6 | Nutritional support to pregnant women in coordination with rural hospital Umred | Umred | Nagpur | within 25 km | 3.95 |
| 7 | TV Screen for spreading awareness of various IEC activities to patients visiting Rural Hospital Umred | Umred | Nagpur | within 25 km | 1.40 |
| 8 | Installation of solar pump & making water collection point for villagers in Polgaon- Bhagwanpur (GP) | Polgaon- Bhagwanpur | Nagpur | within 25 km | 3.00 |
| 9 | Construction of toilet and handwashing station for ZP school Kanwa-Shirpur (GP) | Kanwa-Shirpur | Nagpur | within 25 km | 4.75 |
| 10 | Access to potable water for reducing water borne diseases by providing RO treated water along with water supply arrangement for Bhagwanpur villagers | Bhagwanpur | Nagpur | within 25 km | 7.03 |
| 11 | Access to potable water for reducing water borne diseases by providing RO treated water along with water supply arrangement for Sayki villagers | Sayki | Nagpur | within 25 km | 10.06 |

| | | | | | |
|----|---|----------------------------|--------|--------------|--------------|
| 12 | Solar pump on existing borewell for supplying water for Besur villagers | Besur | Nagpur | Within 25 Km | 3.22 |
| 13 | Support to SHGs by providing machine/appliance to improve for their livelihood activity | Various villages | Nagpur | Within 25 Km | 3.38 |
| 14 | 17 nos Bi-cycle distribution to School students of Khandjhari Village- Piraya (GP) | Khandjhari Village- Piraya | Nagpur | Within 25 Km | 1.08 |
| 15 | Medical Camp in nearby villages | Various villages | Nagpur | Within 25 Km | 1.98 |
| | TOTAL | | | | 59.50 |

| CSR expenditure statement 2025-26 (Nov -25) | | | | | |
|---|---|-----------------------------|--------------------|------------------------|---|
| SI No. | CSR Activity Details | Sanction Amount in Rs Lakhs | WO value (Rs Lakh) | Expenditure (Rs Lakh) | Status |
| 1 | Swachta Activities | 3.5 | 3.20 | 1.86 | 1) Swachta Pakhwada Bill Submitted for Rs 82601/- Work completed 2) Fogging machine Through GeM Rs 86679/-,Work Completed 3) Hand Wash Station Estimated 1.327 Lakh - Work started at site 4) Swachta He Sewa Bill submitted for Rs 17740/- Work completed |
| 2 | Organizing Medical Camps at nearby villages of mines and also providing service under CSR clinic at Area Hospital | 5 | 4.49 | 4.47 | Work order of Rs. 4,49,282 issued to KAPL Rest of the amount will be utilised for Special Camps (Ortho, Cancer etc) |
| 3 | Providing 8 nos. Smart Class equipment to Schools Near Umrer Area ZP Rajurwadi-1, ZP Kalamna-1, ZP Bhagwanpur-1, Ashramshala Tribal Udasa-2, ZP Dhammangoan-1, ZP Dahegaon -1, ZP Kanva -1 | 10.5 | 10.479 | 10.48 | Work order issued Rs 10,47,840 Work completed |
| 4 | Making drinking water provision by providing RO plant at Hewati Village of Hewati grampanchayat (Only RO Machine to be installed - Room already available) | 7 | 5.438 | 4.61 | Work Order - Rs 5,43,707.49 , Work Started at site Liability Booked - |
| 5 | Making stage for cultural activities/wholistic development of students at ZP Dahegaon school of Saiki Grampanchayat | 3 | 2.08 | 1.76 | Work Order Rs 2,07,537.56, Work Completed Liability booked |
| 6 | Providing and fixing paver block and making structural steel at Jawaher Vidyalaya of Makardhokda Village under CSR activity for MKD-III OCM of Umrer Ar-ee. | 11 | 6.32 | 4.47 | Work Awarded Rs. 6,31,052.85 , Work Started at site Liability booked |
| 7 | Solar Panel for RO plant facility of Ghoturli village of Waigaon Ghoturli Grampanchayat | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/-, Work Completed |
| 8 | Solar Panel for ZP school Kanva village Shirpur Grampanchayat | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Completed |
| 9 | Solar Panel for RO plant facility at Bhagwanpur village of Bhagwanpur Grampanchayat | 10.5 | 8.5 | 0 | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- 0 Work Completed |
| 10 | Making drinking water provision by providing RO Plant with Solar Panel for Nand Village of Nand Grampanchayat | 11 | 9.12 | 0 | Work Awarded Rs 9,11,764.53 , Site handover done |
| 11 | Making stage for cultural activities/wholistic development of students at ZP Saiki school of Saiki Grampanchayat | 5 | 4.01 | 3.39 | Work Awarded Rs 4,00,041.52.00, Work Started at Site Liability booked |
| 12 | Making Toilet and Handwashing facility at ZP Saigaon of Bhagwanpur Gram Panchyat | 8.5 | 5.47 | 0.82 | Work Awarded Rs 5,46,459.70,Work Started at Site |

| | | | | | |
|--------------|--|-------------------------|-------|--------------|---|
| 13 | Making Toilet and Handwashing facility at ZP Kharkhada of Bhagwanpur Grampanchayat | 8.5 | 5.98 | 1.79 | Work Awarded Rs 5,95,936.45 , Work Started at Site Liability booked |
| 14 | Providing Solar Pump and associated tank at Besur village of Besur Grampanchayat | 6 | 2.25 | 0 | Work Awarded Rs 2,24,275.77 , Site handover done |
| 15 | Making drinking water provision by providing RO plant for Saigaon Village Bhagwanpur of Grampanchayat with Solar Panel | 11 | 9.57 | 0 | Work Awarded Rs 9,56,971.50 , Work Started at Site |
| 16 | Making drinking water provision by providing RO plant for Kharkhada Village of Bhagwanpur Grampanchayat with Solar Panel | 11 | 9.78 | 1.47 | Work Awarded Rs 9,77,559.73 , Work Started at Site Liability booked |
| 17 | 56 Cycle for students of ZP school ZP Nand of Nand Grampanchayat | 3 | 2.324 | 2.324 | Work completed |
| 18 | Open air gym equipment at Borebatti of Waigaon Ghoturli Grampanchayat | 6 | 4.15 | 0 | Work Awarded Rs 4,14,432.90 , Site handover done |
| 19 | Drinking water facility for public by providing 8 nos. water purifier at police station Bhiwapur(1no), Land Record Office at Bhiwapur(1no.), Land record office at Umred(1), and students of ZP Dhammangao (1), ZP Besur (1 no), ZP Khursapar (1 no.), ZP Welsakhra (1 no) ZP Nand Primary(1 no.) respectively | 10.5 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| 20 | Making Bus-Stand at Nand Village of Nand Grampanchayat | 3 | 2.69 | 0 | Work Awarded Rs 2,68,002.55 , site handover done |
| 21 | Making drinking water provision by providing RO plant at Chichala Village with Solar Panel in Chichala Grampanchayat | 11 | 9.25 | 1.92 | Work Awarded Rs 9,24,291.76 , Work Started at Site Liability booked |
| | Total (A) | 145 | | 39.37 | |
| | | | | | |
| | | | | | |
| | | | | | |
| S No. | Panchtatva | Budget(Rs Lakh) | | | Remark |
| 1 | Installation of RO purifier at Jawahar school | 2 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| 2 | Installation of Solar panel at Jawahar school | 6.5 | 2.65 | 2.65 | Work Awarded Rs 2.65 Lakh. Work completed |
| 3 | Providing Nutrition kit for students at Jawahar School, ZP Pachgaon School, ZP school Nand | 16 | 16 | 0 | Rs12.80 Lakh transferred (80%) to Annamrita foundation |
| 4 | Installation of RO Purifier at ZP school Nand | 2 | 0 | 0 | 1st Bid Failed 2nd Bid opened on 29th Nov 25 |
| | Total(B) | 26.5 | | 2.65 | |
| | | | | | |
| | Total (A+B) | 171.5 | | 42.02 | |

| | | | | |
|-----------------------------------|--|--|--|-------|
| Liability Reversal of 2024-25(C) | | | | 0 |
| A+B-C | | | | 42.02 |

[Signature]
29/11/25
AFM
Umrer Area

[Signature]
29/11/25
SD (Civil)
Umrer Area

[Signature]
29/11/25
ANO (Env)
Umrer Area

[Signature]
29/11/25
AMO/UA
Umrer Area

[Signature]
29.11.2025
AHRM
Umrer Area



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2025

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000087608

Submitted Date

29-09-2025

PART A

Company Information

Company Name

M/s. Western Coalfields Limited, Umrer Opencast Mine

Application UAN number

MPCB-CONSENT-0000107261

Address

Sub Area Manager, Umrer OC Mine, Near village WayagaonGhoturli, P.O. Umrer Project, Tehsil: Umred, Dist. Nagpur, Pin 441204, Maharashtra.

Plot no

-

Taluka

Umred

Village

Shirpur

Capital Investment (In lakhs)

30729

Scale

LSI

City

Nagpur

Pincode

441204

Person Name

Amarnath Yadav

Designation

Sub Area Manager

Telephone Number

7587707124

Fax Number

07116247374

Email

samusawcl@gmail.com

Region

SRO-Nagpur II

Industry Category

Red

Industry Type

R35 Mining and ore beneficiation

Last Environmental statement submitted online

yes

Consent Number

Format 1.0/BO/CAC-Cell/CAC-UAN no.65263/CAC-1910000121

Consent Issue Date

2025-02-26

Consent Valid Upto

2025-03-31

Establishment Year

1963

Date of last environment statement submitted

Sep 30 2024 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name

Coal

Consent Quantity

4.90

Actual Quantity

2.602

UOM

MT/A

By-product Information

By Product Name

NA

Consent Quantity

0

Actual Quantity

0

UOM

CMD

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

| Water Consumption for Process | Consent Quantity in m3/day | Actual Quantity in m3/day |
|-------------------------------|----------------------------|---------------------------|
| Cooling | 700.00 | 700.00 |
| Domestic | 0.00 | 0.00 |
| All others | 726.00 | 726.00 |
| Total | 0.00 | 0.00 |
| | 1426.00 | 1426.00 |

2) Effluent Generation in CMD / MLD

| Particulars | Consent Quantity | Actual Quantity | UOM |
|----------------|------------------|-----------------|-----|
| Mine Discharge | 2650 | 2650 | CMD |

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

| Name of Products (Production) | During the Previous financial Year | During the current Financial year | UOM |
|-------------------------------|------------------------------------|-----------------------------------|-----|
| Coal(Cubic meter/Tone) | 0.208 | 0.371 | CMD |

3) Raw Material Consumption (Consumption of raw material per unit of product)

| Name of Raw Materials | During the Previous financial Year | During the current Financial year | UOM |
|-----------------------|------------------------------------|-----------------------------------|-----|
| Explosive(Kg/Tonne) | 0.290 | 0.214 | |

4) Fuel Consumption

| Fuel Name | Consent quantity | Actual Quantity | UOM |
|-----------|------------------|-----------------|-----|
| - | 0 | 0 | CMD |

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

| Pollutants Detail | Quantity of Pollutants discharged (kL/day) Quantity | Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour Concentration | Percentage of variation from prescribed standards with reasons %variation | Standard | Reason |
|-------------------|---|--|---|----------|--------|
| Report Enclosed | 0 | 0 | 0 | 0 | 0 |

[B] Air (Stack)

| Pollutants Detail | Quantity of Pollutants discharged (kL/day) Quantity | Concentration of Pollutants discharged(Mg/NM3) Concentration | Percentage of variation from prescribed standards with reasons %variation | Standard | Reason |
|-------------------|---|--|---|----------|--------|
| Not Applicable | 0 | 0 | 0 | 0 | 0 |

Part-D

HAZARDOUS WASTES

1) From Process

| Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|----------------------|--------------------------------------|-------------------------------------|-----|
| 0 | 0 | 0 | CMD |

2) From Pollution Control Facilities

| Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---|---|--|------------|
| 5.1 Used or spent oil | 18.08 | 9.24 | KL/A |
| 35.3 Chemical sludge from waste water treatment | 42.51 | 9.05 | Ton/Y |
| 5.2 Wastes or residues containing oil | 4.11 | 4.66 | Ton/Y |

Part-E

SOLID WASTES

1) From Process

| Non Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---------------------------------|---|--|------------|
| Overburden | 3087250.5 | 2598840 | M3/Anum |

2) From Pollution Control Facilities

| Non Hazardous Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|---------------------------------|---|--|------------|
| - | 0 | 0 | CMD |

3) Quantity Recycled or Re-utilized within the unit

| Waste Type | Total During Previous Financial year | Total During Current Financial year | UOM |
|-------------------|---|--|------------|
| 0 | 0 | 0 | CMD |

Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

| Type of Hazardous Waste Generated | Qty of Hazardous Waste | UOM | Concentration of Hazardous Waste |
|--|-------------------------------|------------|---|
| 5.1 Used oil/spent oil | 9.24 | KL/A | Sold to authorized recycler |
| 35.3 Chemical Sludge from Wastewater treatment | 9.05 | Ton/Y | Disposed at CHWTSDF |
| 35.3 Chemical Sludge from Wastewater treatment | 4.66 | Ton/Y | Disposed at CHWTSDF |

2) Solid Waste

| Type of Solid Waste Generated | Qty of Solid Waste | UOM | Concentration of Solid Waste |
|--------------------------------------|---------------------------|------------|-------------------------------------|
| Over Burden | 2598840 | M3/Anum | Onsite OB dump (Back filling) |

Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

| Description | Reduction in Water Consumption (M3/day) | Reduction in Fuel & Solvent Consumption (KL/day) | Reduction in Raw Material (Kg) | Reduction in Power Consumption (KWH) | Capital Investment(in Lacs) | Reduction in Maintenance(in Lacs) |
|--------------------|--|---|---------------------------------------|---|------------------------------------|--|
| - | 0 | 0 | 0 | 0 | 0 | 0 |

Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

[A] Investment made during the period of Environmental Statement

| <i>Detail of measures for Environmental Protection</i> | <i>Environmental Protection Measures</i> | <i>Capital Investment (Lacks)</i> |
|---|---|--|
| Capital Expenditure | Environmental Works | 0 |
| Revenue Expenditure | Plantation and Dust suppression | 205 |

[B] Investment Proposed for next Year

| <i>Detail of measures for Environmental Protection</i> | <i>Environmental Protection Measures</i> | <i>Capital Investment (Lacks)</i> |
|---|---|--|
| Proposed Capital Budget | Environmental works | 1 |
| Proposed Revenue Budget | Plantation and Dust suppression | 100 |

Part-I

Any other particulars for improving the quality of the environment.

Particulars

-

Name & Designation

Amarnath Yadav, Sub Area Manager, Umrer Sub Area

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000087608

Submitted On:

29-09-2025

**REPORT ON
MONITORING OF GROUND WATER LEVEL
OF
EXPN. OF UMRER OC MINE,
UMRER AREA**

WESTERN COALFIELDS LTD.



**PERIOD- DEC 2022 (POST-MONSOON), JAN-FEB -2023 (WINTER) , MAY-
2023 (PRE-MONSOON) AUG-23 (MONSOON) NOV 2023 (POST-
MONSOON) ,JAN 2024 (WINTER) ,MAY 2024(PRE MONSOON) & AUG 2024
(MONSOON)**



M/s Anacon Laboratories Pvt. Ltd., Nagpur

**MoEF&CC (GOI) Recognized Laboratory
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018
Lab. & Consultancy: FP-34, 35, Food Park,
MIDC, Butibori, Nagpur – 441122
Mob: +91-9372960077
Email: ngp@anacon.in
Website: www.anaconlaboratories.com
Report No. ANqr /PD/20A/2023/199**

2022-23 & 2023-24

Certificate

Groundwater level monitoring has been conducted with due diligence, and a comprehensive report on the monitoring of groundwater levels in all observation wells has been prepared as per the scope of work outlined in work order no. वेकोलि/मुख्यालय/पर्यावरण/14-L/77, dated 08.12.2022

The report includes the monitoring of groundwater levels and water quality analysis of observation wells pertaining to EXPN. OF UMRER OC MINE, of UMRER Area, Maharashtra State.

The groundwater level monitoring was meticulously carried out by Anacon Laboratories Pvt. Ltd., and the analysis of the samples was performed by Skylab Analytical Laboratory, Bhiwandi, Kalyan a NABL Accredited Laboratory. (NABL Certificate no. TC-5150)

Anacon Laboratories Pvt. Ltd. gratefully acknowledges the full cooperation rendered by the concerned WCL officials, which facilitated the timely completion of the project.



Atharva Nayab
(Geologist)



Gyanchand Bohra
NABET Accredited EIA Expert
for Hydrogeology & Geology

Nagpur
Aug-Sept-2024



(Dr. D. G. Garway)
Head of Organization
Anacon Laboratories Pvt. Ltd., Nagpur

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|--------------|--------------------------|--|----------|
| TABLE/FIGURE | NAME OF SUB MINE PROJECT | GROUND WATER MONITORING DETAILS OF WELL | Page No. |
| I-FIGURE | EXPN. OF UMRER OC MINE, | GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF EXPN. OF UMRER OC MINE, | 7 |
| I-TABLE | EXPN. OF UMRER OC MINE, | PERIOD- DEC 2022 (POST-MONSOON), JAN-FEB -2023 (WINTER) , MAY-2023 (PRE-MONSOON) AUG-23 (MONSOON) NOV 2023 (POST-MONSOON) ,JAN 2024 (WINTER) ,MAY 2024(PRE MONSOON) & AUG 2024 (MONSOON) | 8 |



Ganway



Gawary

INTRODUCTION

Western Coalfields Limited (WCL) is one of the eight Subsidiary Companies of Coal India Limited (CIL) which is under administrative control of Ministry of Coal. The Company incorporated under the Companies Act, 1956 has its registered office at Coal Estate, Civil Lines, Nagpur-440001. WCL has been conferred "Mini-ratna" status on 15 March 2008. It has mining operation spread over the states of Maharashtra (in Nagpur, Chandrapur & Yeotmal Districts) and Madhya Pradesh (in Betul and Chhindwara Districts). It has been divided into 10 administrative areas. The Company is a major source of supplies of coal to the industries located in Western India in the States of Maharashtra, Madhya Pradesh, Gujarat and also in Southern India in the States of Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. A large numbers of Power Houses under Maharashtra, Madhya Pradesh, Gujarat, Karnataka, Punjab and Uttar Pradesh - Electricity Boards are major consumers of its coal along with cement, steel, chemical, fertilizer, paper and brick Industries in these states.

M/s Anacon Laboratories Pvt. Ltd. has been awarded the Work of "Groundwater level Monitoring (i.e. bore well / piezometer Water levels) and Water quality analysis (as per IS10500) for 76 projects / mines of WCL (situated in the state of Madhya Pradesh – Chhindwara & Betul districts and Maharashtra – Nagpur, Chandrapur & Yeotmal districts) for one year as per condition stipulated in Environmental Clearance letters issued by MoEF & CC & NOC issued by CGWA" vide work order वेकोलि/मुख्यालय/पर्यावरण/14-L/77 on date: 08.12.2022.

This Ground Water Level Monitoring report is prepared EXPN. OF UMRER OC MINE, of UMRER AREA of WCL for 8 seasons i.e., PERIOD- DEC 2022 (POST-MONSOON), JAN-FEB -2023 (WINTER) , MAY-2023 (PRE-MONSOON) AUG-23 (MONSOON) NOV 2023 (POST-MONSOON) ,JAN 2024 (WINTER) ,MAY 2024(PRE MONSOON) & AUG 2024 (MONSOON).The mine is located in Nagpur District of Maharashtra.

GENERAL GROUND WATER CONDITION

The important water bearing formations of Nagpur district are discussed below.

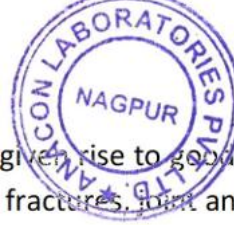
Consolidated Formations Archeans and the Deccan trap basalts are the two consolidated formations, which form the Hard rock aquifers occurring in the district.

a) Archaean

The crystalline rocks comprising of gneiss, schist, pegmatite and quartzite are the main formations occurring in north-eastern and south eastern parts of the district. In these rocks, weathered zone which is down to a depth of 25 m bgl, forms the important shallow aquifer for dugwells. In unweathered crystalline rocks, the occurrence of ground water is mainly controlled by joints and fractures. Higher yields are generally associated with lineaments. Ground water at places occurs in fractured zones at depth in semi-confined to confined conditions.

b) Deccan Traps

Basalt is the main formation of the district and occupies an area of about 4300 sq. km. Ground water occurs under phreatic conditions in the exposed lava flows and in semi-confined to confined state in the subsurface flows. Ground water is present in pore spaces in the vesicular unit of each flow and in the jointed and fractured portions of massive unit. However, secondary porosity and permeability developed on account of weathering, fracturing and joints play a very important role



Gaurav

in the storage and movement of ground water. This has given rise to good aquifers. Weathering not only produces granular materials but also widens the fractures, joints and shear zones.

Semi-Consolidated Formations-

Two types of semi-consolidated formations i.e. Lameta and Gondwanas occur in the district. They along with the unconsolidated Alluvial formation form the soft rock aquifers occurring in the district.

a) Lameta beds- Lameta beds, found to the north of the district in a small patch are compact, clayey and poor in permeability. Hence it is not a good water bearing formation

b) Gondwana Sediments- Gondwana formation, occupying a total area of about 470 sq.km, occurs in the northern part of the Nagpur city extending from Kamptee to Saoner, and an isolated patch also occurs near north of Sathnaori. Among the Gondwanas, the Barakar and Kamthi generally consist of medium to coarse-grained friable sandstone. These constitute the important water bearing formations in the district. Barakars are usually associated with coal seams of economic importance.

Unconsolidated Alluvial Formations

Alluvium consisting of sand, silt, clay and kankar forms the potential water bearing formations and occurs in southern part of the district from Butibori to Bela. The alluvium of recent to sub-recent age and are found to have been deposited along the Kanhan and Pench Rivers and their tributaries. They overlie the older formations such as Archeans, Gondwana and Basalt and have thickness more than 25 m. These formations are highly productive aquifers and sustain long duration pumping with very less drawdown and fast recuperation. Ground water occurs in water table and semi-confined conditions in the alluvial formation.

**EXPN. OF UMRER OC MINE,
UMRER AREA
WESTERN COALFIELDS LTD.**

**PERIOD- DEC 2022 (POST-MONSOON), JAN-FEB -2023 (WINTER) , MAY-2023 (PRE-MONSOON) AUG-23
(MONSOON) NOV 2023 (POST-MONSOON) ,JAN 2024 (WINTER) & MAY 2024(PRE MONSOON)**



J. Gaurav

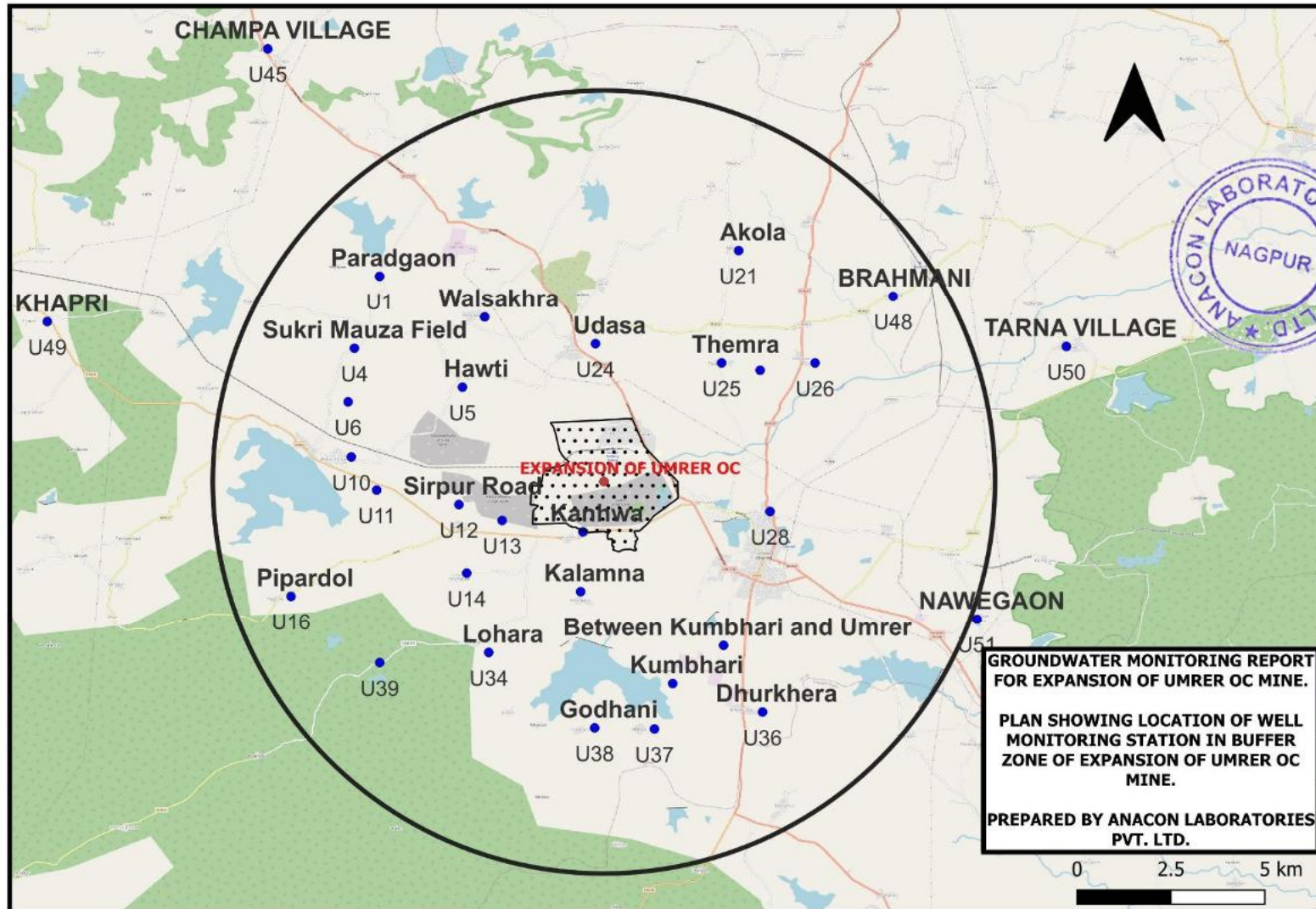


FIGURE-I: GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF EXPN. OF UMRER OC MINE)

Table-I-A: Groundwater level monitoring data of dugwells in buffer zone of Expansion of Umrer OC , Umrer Area, WCL

| Sr. No | Well No. U | Name of village | Well location | Lat | | | Long | | | R.L. | Well dia (m) | Well depth (m bgl) | MP height (m agl) | Formation | Depth to Water Level (m bgl) | | | | | | | UTILIT Y | |
|--------|------------|----------------------------|---|-----|-----|-------|------|------|-------|------|--------------|--------------------|-------------------|-----------|------------------------------|------------|--------|--------|--------|--------|--------|----------|----------|
| | | | | Deg | Min | Sec | De g | Mi n | Sec | | | | | | DEC-22 | JAN-FEB-23 | May 23 | Aug-23 | Nov-23 | Jan-24 | May-24 | | Aug-24 |
| 1 | U1 | Paradgaon | Adjacent to Nagpur-MKD road (W), about 1 km S of village, near nalla | 20 | 55 | 9.16 | 79 | 13 | 35.28 | 256 | 3.60 | 8.15 | 0.30 | BASALT | 3.90 | 3.15 | 5.20 | 2.55 | 4.00 | 3.80 | 5.40 | 2.70 | DOMESTIC |
| 2 | U4 | Sukri Mauza Field | About 1 km from X-roads, 30 m E of MKD road in the field, 600 m N of irrigation canal | 20 | 54 | 2.54 | 79 | 13 | 12.10 | 245 | 4.90 | 8.30 | 0.50 | BASALT | 5.60 | 4.20 | 4.65 | 3.40 | 3.80 | 4.10 | 5.30 | 3.00 | DOMESTIC |
| 3 | U5 | Hawti | S edge of village, adjacent to water supply borewell & road, in low lying area | 20 | 53 | 26.83 | 79 | 14 | 51.56 | 265 | 2.60 | 11.10 | 0.60 | BASALT | 4.80 | 5.50 | 7.20 | 4.40 | 5.00 | 5.40 | 7.60 | 4.20 | DOMESTIC |
| 4 | U5A | Hawti | 20 away from U5 in NE | 20 | 53 | 60.25 | 79 | 15 | 2.66 | 256 | 3.60 | 9.70 | 0.40 | BASALT | 4.70 | 5.20 | 6.30 | 3.10 | 3.30 | 4.80 | 6.80 | 3.00 | DOMESTIC |
| 5 | U6 | Makardhokra Paradgaon Road | About 2 km N of village, 120 m E of MKD-Nagpur road in the field of Eknath | 20 | 53 | 13.34 | 79 | 13 | 6.29 | 224 | 4.10 | 13.40 | 0.90 | BASALT | 5.50 | 6.40 | 7.80 | 3.60 | 4.00 | 5.50 | 8.00 | 3.55 | DOMESTIC |
| 6 | U10 | Makardhokra Bazar | C of village, adjacent to village road | 20 | 52 | 22.79 | 79 | 13 | 9.27 | 259 | 4.20 | 12.50 | 0.60 | BASALT | 4.00 | 6.15 | 8.30 | 3.00 | 3.30 | 4.80 | 5.50 | 3.10 | DOMESTIC |
| 7 | U11 | Makardhokra Bus stand | Adjacent (S) of Umrer-Butibori road, near to village road junction | 20 | 51 | 52.42 | 79 | 13 | 32.66 | 269 | 4.10 | 13.40 | 0.90 | BASALT | 5.00 | 5.60 | 7.70 | 3.90 | 4.80 | 5.45 | 7.90 | 3.80 | DOMESTIC |
| 8 | U12 | Sirpur Road | About 1 km W of village, about 15 m N of Umrer-Butibori road in the field | 20 | 51 | 39.08 | 79 | 14 | 48.28 | 276 | 3.90 | 15.10 | 0.60 | BASALT | 5.50 | 3.90 | 6.95 | 3.10 | 5.00 | 5.10 | 6.80 | 2.70 | DOMESTIC |
| 9 | U13 | Sirpur | E of village, about 50 m N of Umrer road, (Water injection well) | 20 | 51 | 24.55 | 79 | 15 | 28.06 | 280 | 3.55 | 11.50 | 0.40 | BASALT | 5.10 | 4.20 | 5.80 | 4.10 | 4.50 | 4.80 | 6.00 | 3.95 | DOMESTIC |

| Sr. No | Well No. U | Name of village | Well location | Lat | | | Long | | | R.L. | Well dia (m) | Well depth (m bgl) | MP height (m agl) | Formation | Depth to Water Level (m bgl) | | | | | | | UTILIT Y | |
|--------|------------|----------------------------------|--|-----|-----|-------|------|------|-------|------|--------------|--------------------|-------------------|-----------|------------------------------|------------|--------|--------|--------|--------|--------|----------|----------|
| | | | | Deg | Min | Sec | De g | Mi n | Sec | | | | | | DEC-22 | JAN-FEB-23 | May 23 | Aug-23 | Nov-23 | Jan-24 | May-24 | | Aug-24 |
| 10 | U14 | Khursapar | E of village, in Bhim part (Budh Vihar) | 20 | 50 | 36.17 | 79 | 14 | 55.49 | 284 | 2.30 | 6.40 | 0.45 | BASALT | 4.00 | 2.90 | 3.50 | 2.50 | 4.00 | 4.40 | 3.70 | 2.00 | DOMESTIC |
| 11 | U16 | Pipardol | Out side the village (East), E of Devli road, Twin wells (first) | 20 | 50 | 14.73 | 79 | 12 | 13.80 | 289 | 2.10 | 8.20 | 0.60 | BASALT | 3.30 | 3.25 | 4.25 | 3.00 | 2.80 | 3.20 | 4.80 | 2.85 | DOMESTIC |
| 12 | U21 | Akola | C of village, about 70 m E of Barwha road | 20 | 55 | 32.97 | 79 | 19 | 5.79 | 240 | 3.60 | 7.50 | 0.70 | BASALT | 4.10 | 4.10 | 5.15 | 2.70 | 3.40 | 3.90 | 6.10 | 2.60 | DOMESTIC |
| 13 | U22 | Whirli | C of village, in front of school/GP office | 20 | 53 | 42.31 | 79 | 19 | 25.54 | 248 | 3.90 | 6.40 | 0.65 | BASALT | 4.30 | 3.60 | 5.00 | 2.60 | 3.20 | 3.50 | 5.10 | 2.40 | DOMESTIC |
| 14 | U23 | Walsakhra | SE corner of village, adjacent to village road in field | 20 | 54 | 31.40 | 79 | 15 | 12.01 | 254 | 3.30 | 6.90 | 0.90 | BASALT | 3.20 | 3.80 | 4.40 | 3.20 | 4.00 | 4.10 | 5.00 | 3.05 | DOMESTIC |
| 15 | U24 | Udasa | About 800 m NE of village (outside), about 50 m S of Themra road in field Back side of Shiv Asthal | 20 | 54 | 6.73 | 79 | 16 | 53.98 | 267 | 2.10 | 9.80 | 0.75 | BASALT | 3.50 | 4.40 | 5.60 | 3.00 | 4.40 | 4.60 | 6.20 | 1.90 | DOMESTIC |
| 16 | U25 | Themra | SW of village, near Hanuman Mandir | 20 | 53 | 49.08 | 79 | 18 | 50.08 | 251 | 2.20 | 9.10 | 0.60 | BASALT | 2.50 | 3.80 | 4.45 | 2.90 | 3.70 | 3.90 | 5.50 | 2.80 | DOMESTIC |
| 17 | U26 | Kodgaon | C of village, about 100 m E of main road opp. House of Suman Panase | 20 | 53 | 49.02 | 79 | 20 | 16.13 | 264 | 2.80 | 8.00 | 0.70 | BASALT | 2.10 | 2.85 | 4.58 | 2.10 | 3.30 | 3.05 | 4.50 | 2.00 | DOMESTIC |
| 18 | U28 | Umrer (New Budhwari Peth) Mandir | NE corner of the town, near Hanuman temple | 20 | 51 | 32.75 | 79 | 19 | 34.67 | 250 | 2.90 | 12.40 | 0.80 | BASALT | 4.00 | 5.45 | 6.40 | 3.05 | 3.50 | 5.00 | 6.80 | 2.90 | DOMESTIC |
| 19 | U30 | Kanhwa | Adjacent (N) to Umrer road, E edge of village Dr. Ambedkar Statue | 20 | 51 | 14.07 | 79 | 16 | 42.47 | 251 | 2.90 | 13.10 | 0.50 | BASALT | 5.10 | 5.80 | 7.10 | 4.40 | 5.05 | 5.40 | 8.20 | 4.25 | DOMESTIC |

| Sr. No | Well No. U | Name of village | Well location | Lat | | | Long | | | R.L. | Well dia (m) | Well depth (m bgl) | MP height (m agl) | Formation | Depth to Water Level (m bgl) | | | | | | | UTILITY | |
|--------|------------|----------------------------|--|-----|-----|-------|------|-----|-------|------|--------------|--------------------|-------------------|-----------|------------------------------|------------|--------|--------|--------|--------|--------|---------|----------|
| | | | | Deg | Min | Sec | Deg | Min | Sec | | | | | | DEC-22 | JAN-FEB-23 | May 23 | Aug-23 | Nov-23 | Jan-24 | May-24 | | Aug-24 |
| 20 | U32 | Between Kumbhari and Umrer | Adjacent (W) to Umrer-Mohpa road in the field, About 1 km NE of Kumbhari village | 20 | 49 | 29.26 | 79 | 18 | 51.90 | 239 | 7.50 | 6.50 | 0.40 | BASALT | 3.30 | 5.50 | 4.65 | 2.80 | 4.10 | 5.00 | 5.10 | 2.60 | DOMESTIC |
| 21 | U33 | Kalamna | N side of village, adjacent to village road, near to primary school | 20 | 50 | 19.14 | 79 | 16 | 40.30 | 238 | 2.65 | 9.60 | 0.75 | BASALT | 3.10 | 4.50 | 3.85 | 2.60 | 3.25 | 4.10 | 4.50 | 2.50 | DOMESTIC |
| 22 | U34 | Lohara | C of village, Forest office compound | 20 | 49 | 22.73 | 79 | 15 | 15.76 | 234 | 6.50 | 9.00 | 0.50 | BASALT | 5.80 | 5.00 | 6.80 | 4.00 | 5.20 | 5.10 | 7.10 | 3.70 | DOMESTIC |
| 23 | U35 | Kumbhari | About 300 m S of village (outside), near nala P.W.S well | 20 | 48 | 54.24 | 79 | 18 | 5.06 | 268 | 2.80 | 8.40 | 0.75 | BASALT | 4.00 | 3.60 | 4.50 | 2.90 | 4.00 | 4.20 | 5.80 | 2.85 | DOMESTIC |
| 24 | U36 | Dhurkhera | Adjacent (E) of Girad road, In school premises | 20 | 48 | 28.14 | 79 | 19 | 27.76 | 267 | 7.10 | 7.30 | 0.40 | BASALT | 2.20 | 2.80 | 3.80 | 1.60 | 2.60 | 2.90 | 4.20 | 1.30 | DOMESTIC |
| 25 | U37 | Mohpa | NE edge of village, adjacent to village road | 20 | 48 | 12.63 | 79 | 17 | 48.31 | 283 | 2.70 | 9.30 | 0.30 | BASALT | 3.20 | 5.00 | 5.65 | 1.80 | 2.90 | 4.00 | 4.30 | 1.40 | DOMESTIC |
| 26 | U38 | Godhani | About 300 m N of village (out side), adjacent to nala | 20 | 48 | 13.63 | 79 | 16 | 53.27 | 276 | 4.30 | 11.50 | 0.80 | BASALT | 3.40 | 5.80 | 6.70 | 2.20 | 3.40 | 5.30 | 6.50 | 2.00 | DOMESTIC |
| 27 | U39 | Lohara Dongargao n Road | Right side of road near nala and Mandir | 20 | 49 | 13.43 | 79 | 13 | 35.41 | 271 | 2.40 | 7.20 | 0.40 | BASALT | 3.00 | 2.70 | 4.10 | 2.75 | 3.10 | 3.00 | 4.90 | 2.60 | DOMESTIC |
| 28 | U45 | CHAMPA VILLAGE | NEAR BHARAT RADIATORS ADJACENT TO UMRERROAD | 20 | 58 | 38.60 | 79 | 11 | 52.34 | 280 | 4.10 | 9.50 | 0.50 | BASALT | 3.90 | 3.10 | 5.25 | 3.00 | 4.00 | 4.30 | 5.80 | 2.90 | DOMESTIC |
| 29 | U48 | BRAHMANI | NEAR LAL BAHADUR VIDYALAYA AND JR COLLAGE | 20 | 54 | 50.46 | 79 | 21 | 27.98 | 256 | 6.00 | 9.60 | 0.30 | BASALT | 2.70 | 5.10 | 4.85 | 1.60 | 2.50 | 4.50 | 5.20 | 1.50 | DOMESTIC |
| 30 | U49 | KHAPRI | NEAR JUNCTION OF THE ROAD OR CHOWK | 20 | 54 | 27.02 | 79 | 8 | 29.46 | 285 | 5.60 | 9.65 | 0.60 | BASALT | 3.00 | 5.25 | 6.15 | 3.50 | 4.10 | 4.70 | 6.20 | 3.10 | DOMESTIC |

| Sr. No | Well No. U | Name of village | Well location | Lat | | | Long | | | R.L. | Well dia (m) | Well depth (m bgl) | MP height (m agl) | Formation | Depth to Water Level (m bgl) | | | | | | | UTILITY | |
|---|------------|-----------------|--|-----|-----|-------|------|------|-------|------|--------------|--------------------|-------------------|-----------|------------------------------|------------|--------|--------|--------|--------|--------|---------|----------|
| | | | | Deg | Min | Sec | De g | Mi n | Sec | | | | | | DEC-22 | JAN-FEB-23 | May 23 | Aug-23 | Nov-23 | Jan-24 | May-24 | | Aug-24 |
| 31 | U50 | TARNA VILLAGE | NEAR POST OFFICE TARNA 300 METER | 20 | 54 | 4.19 | 79 | 24 | 7.41 | 265 | 3.20 | 11.20 | 0.60 | BASALT | 4.50 | 5.10 | 7.20 | 3.80 | 4.90 | 5.05 | 6.90 | 3.65 | DOMESTIC |
| 32 | U51 | NAWEGAO N | LEFT SIDE OF GOVT HOSPITAL ON THE ROAD NEAR HANUMAN MANDIR | 20 | 49 | 53.50 | 79 | 22 | 45.18 | 258 | 4.00 | 14.00 | 0.90 | BASALT | 3.80 | 6.50 | 7.55 | 4.10 | 5.30 | 6.00 | 5.80 | 3.90 | DOMESTIC |
| <p align="center">Note :- m.bmp - metre below measuring point, m.agl -metre above ground level, m.bgl - metre below ground level ,PO-Pump On, B-Barakar, T-Talchir, M-Metamorphics, NA-Not Accessible, GL-Ground Level</p> | | | | | | | | | | | | | | | | | | | | | | | |

ULR:TC51502400000848F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-848)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-848)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Paradgaon - (Umred Area) Well No.: U1,
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 343.25 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 179.87 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 110.4 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.76 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.32 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 3.42 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.57 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 45.69 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 751 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 0.1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 372 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.43 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.31 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

1. This report reflects findings only for the above sample tested/monitored and only for time and place of monitoring/testing. 2. This report is confidential & cannot be reproduced in part or full without permission of SKYLAB Analytical Laboratory. 3. Any attempt of forgery or misleading use of this report by any person/organization etc will attract suitable legal action against them by SkyLab Analytical Laboratory. 4. #Permissible limit in absence of an alternate source for drinking water. 5 'mg/l' is equivalent to 'ppm'. 6 BDL- Below detection limit. 7 DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

SALAC24230916331

202, CFC-3, Asmeeta Texpa, Addl.Kalyan-Bhiwandi Industrial Area, MIDC, Village Kon, Tal. Bhiwandi, Dist., Thane, Maharashtra, INDIA. Pincod-421311.

Mob. : 9867577309-312 / 8422929165. Email : mails@skylabenviro.com, Website : www.skylabenviro.com

SKYLAB is always subject to improvement. For better customer satisfaction, we welcome your feedback on : feedback@skylabenviro.com

ULR:TC51502400000850F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-850)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-850)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Sukri Mauza Field - (Umred Area) Well No.: U4,
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivas-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 349.25 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 179.87 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 22.3 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.84 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 22.35 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.12 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.49 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 44.45 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 873 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 456 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.14 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.11 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.19 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Total dissolved solids, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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SALAC24230916333

ULR:TC51502400000851F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-851)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-851)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Hawti - (Umred Area) Well No.: U5,
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 391 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 80.60 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 79.30 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.32 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 29.42 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 3.58 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.49 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 24.69 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 787 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 0.1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 364 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000852F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-852)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-852)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Hawti - (Umred Area) Well No.: USA,
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 396 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 109.74 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 94 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.21 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.40 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.09 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.63 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 17.95 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 798 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 0.1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 340 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.26 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.30 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.07 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.10 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000853F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-853)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-853)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Makardhokra Paradgaon Road - (Umred Area) Well No.: U6
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 396 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 109.74 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 94 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.21 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.40 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.09 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.63 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 17.95 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 798 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 0.1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 340 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.26 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.30 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.07 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.10 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000857F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-857)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-857)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Makardhokra Bazar - (Umred Area) Well No.: U10
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 106.25 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 184.05 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 114.20 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.43 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 13.20 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.30 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.78 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 28.97 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 886 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 0.1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 350 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.36 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.28 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.07 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Calcium, Total dissolved solids, Metal-Aluminium, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000858F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL) (Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-858)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-858)
SAMPLING PLAN & METHOD NO.: IS 3025 Part 1
SAMPLING DATE : 15/05/2024
SAMPLE RECEIPT DATE : 16/05/2024
ANALYSIS START DATE : 16/05/2024
ANALYSIS COMPLETE DATE : 20/05/2024

GROUND WATER ANALYSIS

LOCATION : Makardhokra Bus Stand - (Umred Area) Well No.: U11
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 343 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 104.40 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 110.72 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.47 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 9.64 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.49 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.21 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO ₄ | mg/L | 29.73 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 824 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 334 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.25 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.28 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.06 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000859F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S.), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-859)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-859)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Sirpur Road - (Umred Area) Well No.: U12
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 50 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 24.26 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 81.6 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.51 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 24.68 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | BDL(DL- 2) | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.14 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 21.37 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 880 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 0.1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 334 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.17 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000860F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-860)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-860)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Sirpur - (Umred Area) Well No.: U13
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 258 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 36.39 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 97.6 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.43 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 24.3 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.05 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.52 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 17.57 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 849 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 342 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.83 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.10 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000861F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-861)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-861)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Khursapar- (Umred Area) Well No.: U14
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 372 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 142.22 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 94.80 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.23 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 24.26 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.34 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.93 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 30.01 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 828 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 330 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.13 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity ,Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000862F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-862)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-862)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Pipardol - (Umred Area) Well No.: U16
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 56.25 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 33.88 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 96.8 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.54 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 24.3 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 3.70 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.73 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 26.59 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 820 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 342 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.37 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.14 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.06 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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SALAC24230916345

ULR:TC51502400000864F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-864)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-864)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Akola - (Umred Area) Well No.: U21
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 294 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 154.77 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 85.62 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.61 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 21.18 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 5.10 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.83 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 30.58 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 856 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 310 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC515024000000865F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-865)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-865)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Whirli - (Umred Area) Well No.: U22
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 249 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 32.62 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 91.2 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.55 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 28.18 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.12 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.21 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 19.28 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 819 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 344 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.30 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.37 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000866F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-866)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-866)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Walsakhra - (Umred Area) Well No.: U23
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 354 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 30.53 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 97.6 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.51 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 27.21 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.42 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.32 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 23.36 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 824 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 0.3 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 356 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.06 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000867F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL) (Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-867)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-867)
SAMPLING PLAN & METHOD NO.: IS 3025 Part 1
SAMPLING DATE : 15/05/2024
SAMPLE RECEIPT DATE : 16/05/2024
ANALYSIS START DATE : 16/05/2024
ANALYSIS COMPLETE DATE : 20/05/2024

GROUND WATER ANALYSIS

LOCATION : Udas - (Umred Area) Well No.: U24
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr. Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 309 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 17.12 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 97 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.45 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.98 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.17 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 8.11 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO ₄ | mg/L | 32.10 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 874 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 356 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.19 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000868F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-868)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-868)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Themra - (Umred Area) Well No.: U25
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 309 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 17.12 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 97 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.45 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.98 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.17 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 8.11 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 32.10 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 874 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 356 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.19 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000869F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-869)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-869)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Kodgaon - (Umred Area) Well No.: U26
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 320 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 32.62 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 284.94 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.78 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 36.17 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.19 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.43 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 15.76 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 852 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 360 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.36 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.13 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Metal-Magnesium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000870F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-870)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-870)

GROUND WATER ANALYSIS

LOCATION : Umrer (New Budhwari Peth Mandir)- (Umred Area) Well
 No.: U28

SAMPLE SPECIFICATION : Ground Water

SAMPLING PLAN & METHOD NO.: IS 3025 Part 1

SAMPLING DATE :15/05/2024

SAMPLE RECEIPT DATE :16/05/2024

ANALYSIS START DATE :16/05/2024

ANALYSIS COMPLETE DATE :20/05/2024

SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory

SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 324 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 25.93 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 85.92 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.43 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 37.10 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | BDL(DL- 2) | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.16 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 19.75 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 842 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 362.5 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Metal-Magnesium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000871F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-871)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-871)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Kanhwa - (Umred Area) Well No.: U30
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivias-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 248 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 22.58 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 97.6 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.54 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 24.3 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.10 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.74 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 21.18 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 889 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 344 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | BDL(DL- 0.01) | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.22 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | 0.06 | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Metal-Magnesium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000872F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL) (Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-872)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-872)
SAMPLING PLAN & METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

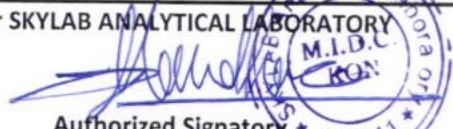
LOCATION : Between Kumbhari & Umred - (Umred Area) Well No.: U32
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 276 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 19.66 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 87.20 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.17 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 32.24 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.84 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.25 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 17.00 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 880 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 247 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.14 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.12 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.06 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Metal-Magnesium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

 Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

 Authorized Signatory * 421311

END OF REPORT

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ULR:TC51502400000873F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-873)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-873)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Kalamna - (Umred Area) Well No.: U33
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 384 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 30.53 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 110.20 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.67 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 19.92 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.44 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.88 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 14.05 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 857 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 364 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.11 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000874F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-874)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

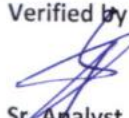
SAMPLE REGISTRATION NO. : 05/GW(24-25-874)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

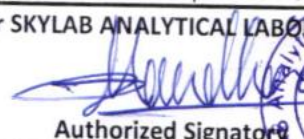
GROUND WATER ANALYSIS

LOCATION : Lohara - (Umred Area) Well No.: U34
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 247 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 108.76 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 83.444 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.45 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 32.12 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 5.58 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.96 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 40.56 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 890 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 324.4 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.22 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.34 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Metal-Magnesium, Total dissolved solids, Metal-Aluminium, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

 Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

 Authorized Signatory

END OF REPORT

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ULR:TC51502400000875F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-875)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-875)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS


LOCATION : Kumbhari - (Umred Area) Well No.: U35
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 289 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 25.93 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 103.2 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.34 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 27.12 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 3.89 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.08 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 19.56 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 894 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 370 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.14 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.10 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

 Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

 Authorized Signatory

END OF REPORT

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SALAC24230916358

ULR:TC51502400000876F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-876)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-876)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

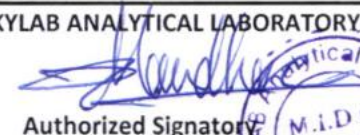
LOCATION : Durkhhera - (Umred Area) Well No.: U36
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

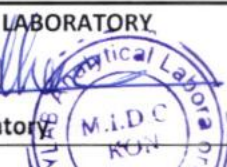
| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 240 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 31.79 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 91.62 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.38 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 20.94 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.20 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.44 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 15.95 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 898 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 315 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.16 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.11 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory



END OF REPORT

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ULR:TC51502400000877F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-877)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-877)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Mohpa - (Umred Area) Well No.: U37
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivasa-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 340 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 33.88 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 86.54 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.61 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 21.19 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.65 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.18 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 19.18 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 890 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 330 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.13 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.17 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000878F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL) (Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-878)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-878)
SAMPLING PLAN & METHOD NO.: IS 3025 Part 1
SAMPLING DATE : 15/05/2024
SAMPLE RECEIPT DATE : 16/05/2024
ANALYSIS START DATE : 16/05/2024
ANALYSIS COMPLETE DATE : 20/05/2024

GROUND WATER ANALYSIS

LOCATION : Godhani - (Umred Area) Well No.: U38
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 279 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 92.02 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 103.12 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.61 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 18.92 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 5.08 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.88 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO ₄ | mg/L | 38.66 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 884 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 390 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.11 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | 0.10 | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium, Boron as B & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000879F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
M/s Western Coalfields Limited (WCL)(Umred Area)
Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
(M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-879)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-879)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Lohara Dongargaon Road - (Umred Area) Well No.: U39
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 380 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 117 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 94 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.78 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 23.42 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.36 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.76 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 20.89 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 828 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | 1 | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 226 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.09 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |


Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Metal-Aluminium, & Hardness(total) are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by



Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY



Authorized Signatory

END OF REPORT

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SALAC24230916362

ULR:TC51502400000881F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-881)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-881)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Champa Village - (Umred Area) Well No.: U45
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 218 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 38.90 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 107.20 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.51 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 20.42 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.05 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.71 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 13.86 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 890 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 340 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.12 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Hardness(total), Aluminium are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000884F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-884)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

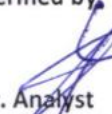
SAMPLE REGISTRATION NO. : 05/GW(24-25-884)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

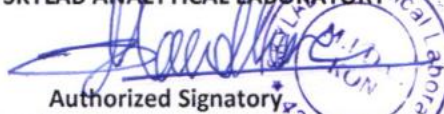
GROUND WATER ANALYSIS

LOCATION : Brahmani - (Umred Area) Well No.: U48
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 390 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | 1 | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 150.59 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 98.4 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.61 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 18.24 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.56 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 8.12 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 41.89 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 870 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 317 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.23 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.40 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Hardness(total), Aluminium are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

 Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

 Authorized Signatory

END OF REPORT

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SALAC24230916367

ULR:TC51502400000885F

TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.
REPORT NO :SAL/MSP19/FMD/05/GW(24-25-885)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-885)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Khapri - (Umred Area) Well No.: U49
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 240 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 32.20 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 78.4 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.34 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 28.67 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 3.14 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 7.31 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 26.97 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 872 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 314 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.10 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.10 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Hardness(total), Aluminium are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000886F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-886)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-886)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Tarna Village - (Umred Area) Well No.: U50
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 364 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 36.39 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 102.4 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.48 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 15.06 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 2.81 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 8.11 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 24.98 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 894 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 318 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.14 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | 0.16 | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | BDL(DL- 0.05) | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids, Hardness(total), Aluminium are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

Authorized Signatory

END OF REPORT

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ULR:TC51502400000887F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s Western Coalfields Limited (WCL)(Umred Area)
 Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ
 (M.S), 440001.

REPORT NO :SAL/MSP19/FMD/05/GW(24-25-887)
REPORT DATE : 20/05/2024
CUSTOMER REF : Verbal
REF DATE : NA

SAMPLE TYPE:

SAMPLE REGISTRATION NO. : 05/GW(24-25-887)
SAMPLING PLAN& METHOD NO.: IS 3025 Part 1
SAMPLING DATE :15/05/2024
SAMPLE RECEIPT DATE :16/05/2024
ANALYSIS START DATE :16/05/2024
ANALYSIS COMPLETE DATE :20/05/2024

GROUND WATER ANALYSIS

LOCATION : Nawegaon - (Umred Area) Well No.: U51
SAMPLE SPECIFICATION : Ground Water
SAMPLE COLLECTED BY : Mr.Kartik Shrivastava-Anacon Laboratory
SAMPLE QUANTITY : 1 Ltrs

| Sr. No. | Test Parameter | Unit | Result | Acceptable Limit # | Permissible Limit # | Reference Method |
|---------|------------------------------|------------|---------------|--------------------|---------------------|-------------------|
| 1 | Alkalinity | mg/L | 379 | 200 | 600 | IS 3025 (Part 23) |
| 2 | Colour | Hazen Unit | BDL(DL- 1) | 5 | 15 | IS 3025 (Part 4) |
| 3 | Chloride | mg/L | 43.50 | 250 | 1000 | IS 3025 (Part 32) |
| 4 | Calcium | mg/L | 94.4 | 75 | 200 | IS 3025 (Part 40) |
| 5 | Residual free chlorine (RFC) | mg/L | BDL(DL- 0.1) | >0.2 | 1 | IS 3025 (Part 26) |
| 6 | Fluoride | mg/L | 0.62 | 1.0 | 1.5 | IS 3025 (Part 60) |
| 7 | Metal-Magnesium | mg/L | 19.44 | 30 | 100 | IS 3025 (Part 46) |
| 8 | Nitrate | mg/L | 4.08 | 45 | No Relaxation | IS 3025 (Part 34) |
| 9 | Odour | - | Agreeable | Agreeable | Agreeable | IS 3025 (Part 5) |
| 10 | pH | - | 8.22 | 6.5 - 8.5 | No Relaxation | IS 3025 (Part 11) |
| 11 | Sulphate, SO4 | mg/L | 31.15 | 200 | 400 | IS 3025 (Part 24) |
| 12 | Total dissolved solids | mg/L | 874 | 500 | 2000 | IS 3025 (Part 16) |
| 13 | Turbidity | NTU | BDL(DL- 1) | 1 | 5 | IS 3025 (Part 10) |
| 14 | Hardness (total) | mg/L | 316 | 200 | 600 | IS 3025 (Part 21) |
| 15 | Metal-Arsenic | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 16 | Metal-Aluminium | mg/L | 0.10 | 0.03 | 0.2 | IS 3025 (Part 2) |
| 17 | Boron as B | mg/L | BDL(DL- 0.1) | 0.5 | 2.4 | IS 3025 (Part 2) |
| 18 | Metal-Copper | mg/L | BDL(DL- 0.05) | 0.05 | 1.5 | IS 3025 (Part 2) |
| 19 | Metal-Cadmium | mg/L | BDL(DL-0.003) | 0.003 | No Relaxation | IS 3025 (Part 2) |
| 20 | Metal-Iron | mg/L | BDL(DL- 0.1) | 1.0 | No Relaxation | IS 3025 (Part 2) |
| 21 | Metal-Lead | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 22 | Metal-Manganese | mg/L | 0.06 | 0.1 | 0.3 | IS 3025 (Part 2) |
| 23 | Metal-Nickel | mg/L | BDL(DL- 0.02) | 0.02 | No Relaxation | IS 3025 (Part 2) |
| 24 | Metal-Selenium | mg/L | BDL(DL- 0.01) | 0.01 | No Relaxation | IS 3025 (Part 2) |
| 25 | Chromium | mg/L | BDL(DL- 0.05) | 0.05 | No Relaxation | IS 3025 (Part 2) |
| 26 | Zinc | mg/L | BDL(DL- 0.05) | 5 | 15 | IS 3025 (Part 2) |

Opinion/Observation: Analyzed parameters in above tested sample As per IS 10500: 2012 Alkalinity, Calcium, Total dissolved solids ,Hardness(total) ,Aluminium are Exceeds acceptable limit, however, the result is within permissible limit.

Verified by

Sr. Analyst

For SKYLAB ANALYTICAL LABORATORY

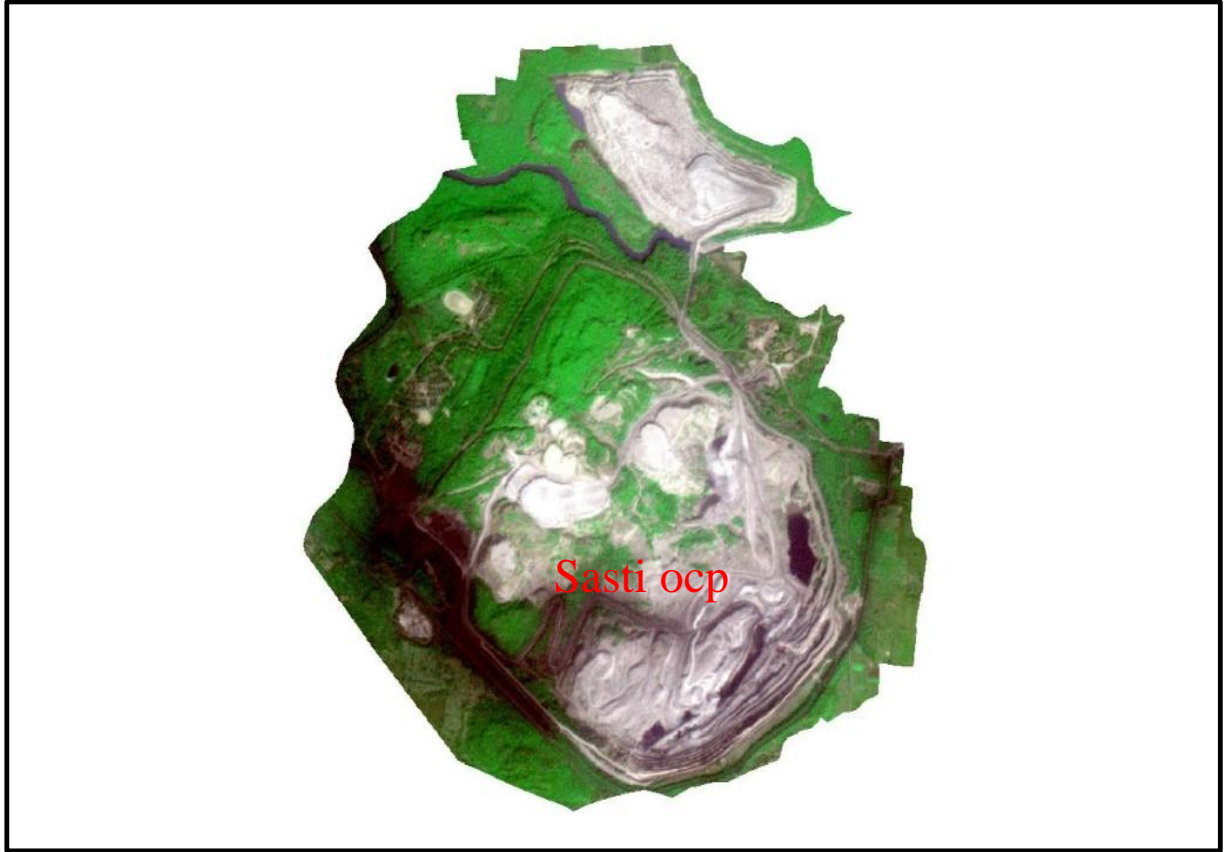
Authorized Signatory

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**Land Restoration/Reclamation Monitoring of more than
5 million cu.m. (Coal+OB) Capacity Opencast Coal Mines of Western
Coalfields Limited based on Satellite Data of the Year 2023**

वेस्टर्न कोल्फील्ड्स लिमिटेड के ५ मिलियन घनमीटर (कोल+अधिभार) से अधिक उत्पादन क्षमतावाले १४ खुली खदानों के भूमि पुनरूद्धार हेतु २०२३ के उपग्रह डाटा के आधार पर निगरानी का वार्षिक प्रतिवेदन



Submitted to
Western Coalfields Limited





Cumulative Status of reclamation up to 31/09/2025

| Project | Area affected by Mining and other allied activities | | | Reclamation of area affected by mining and other allied activities | | | | Un-disturbed Area brought under Plantation | |
|----------|---|------------------|--------|--|------------|-------------------------------------|------------|--|------------|
| | Excavated | External OB dump | Total | Excavated area | OB dump | Total Reclamation in disturbed area | | | |
| | | | | Biological | Biological | Area | Plantation | Area | Plantation |
| | Ha | Ha | Ha | Ha | Ha | Ha | Nos. | Ha | Nos. |
| Umrer OC | 319.6 | 114.64 | 426.24 | 63.8 | 106.64 | 180.44 | 4,51,100 | 108.36 | 2,70,900 |

STATUS OF LAND AS ON 10.05.2024 (IN HA) IN RESPECT OF UMRER AREA

| Sr. No. | Name of Project | LA ACT | | | CBA ACT | | | Railway land | DIRECT PURCHASE | | | Total |
|----------------------------------|------------------------------|----------------|--------------|-------------|----------------|---------------|---------------|--------------|-----------------|-------------|-------------|----------------|
| | | Ten. Land | Govt. Land | Forest Land | Ten. Land | Govt. Land | Forest Land | | Ten. Land | Govt. Land | Forest Land | |
| A | MKD-I | 80.95 | 3.91 | 0.00 | 509.02 | 20.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 614.1 |
| | MKD-I (Balance Land) | 0.00 | 0.00 | 0.00 | 22.76 | 8.91 | 5.44 | 0.00 | 0.00 | 0.00 | 0.00 | 37.11 |
| | MKD-I Expansion | 0.00 | 0.00 | 0.00 | 101.89 | 2.05 | 0.00 | 16.83 | 0.00 | 0.00 | 0.00 | 120.77 |
| | Total A | 80.95 | 3.91 | 0.00 | 633.67 | 31.18 | 5.44 | 16.83 | 0.00 | 0.00 | 0.00 | 771.98 |
| B | MKD-II | 109.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 146.57 | 0.00 | 0.00 | 256.21 |
| | Total B | 109.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 146.57 | 0.00 | 0.00 | 256.21 |
| C | MKD-III | 0.00 | 0.00 | 0.00 | 1385.37 | 104.34 | 106.29 | 0.00 | 19.6 | 0.00 | 0.00 | 1615.60 |
| | MKD-III Expansion | 0.00 | 0.00 | 0.00 | 149.31 | 4.48 | 29.27 | 0.00 | 0.00 | 0.00 | 0.00 | 183.06 |
| | Total C | 0.00 | 0.00 | 0.00 | 1534.68 | 108.82 | 135.56 | 0.00 | 19.60 | 0.00 | 0.00 | 1798.66 |
| D | Gokul OCM | 0.00 | 0.00 | 0.00 | 695.89 | 33.06 | 11.9 | 0.00 | 0.00 | 0.00 | 0.00 | 740.85 |
| | Gokul OCM (Nand) | 0.00 | 0.00 | 0.00 | 16.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.00 |
| | Gokul Extension (2 MTY) | 0.00 | 0.00 | 0.00 | 208.33 | 17.68 | 2.11 | 0.00 | 0.00 | 0.00 | 0.00 | 228.12 |
| | Total D | 0.00 | 0.00 | 0.00 | 920.22 | 50.74 | 14.01 | 0.00 | 0.00 | 0.00 | 0.00 | 984.97 |
| E | Umrer OCM | 811.12 | 73.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.42 | 0.00 | 0.00 | 887.30 |
| | Total E | 811.12 | 73.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.42 | 0.00 | 0.00 | 887.30 |
| F | Murpar UG Mine | 0.00 | 0.00 | 0.00 | 29.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.17 |
| | Total F | 0.00 | 0.00 | 0.00 | 29.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.17 |
| Grand Total A+B+C+D+E+F = | | 1001.71 | 77.67 | 0.00 | 3117.74 | 190.74 | 155.01 | 16.83 | 168.59 | 0.00 | 0.00 | 4728.29 |

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: <http://mpcb.gov.in>
Email: cac-cell@mpcb.gov.in



Kalpataru Point, 2nd, 3rd
and 4th floor, Opp. Cine
Planet Cinema, Near Sion
Circle, Sion (E),
Mumbai-400022

RED/L.S.I (R35)
No:- Format1.0/CAC/UAN No.MPCB-
CONSENT-0000196660/CR/2502002259

Date: 26/02/2025

To,
M/s. Umred Open Cast Mine,
Western Coal Fields Ltd.
Rev. Survey P.C. 21 & 22, Sirpur,
Tal-Umred, Dist-Nagpur.



Sub: Renewal of Consent to Operate

- Ref:**
1. Earlier consent granted by Board vide No.Format1.0/CAC/UAN No.0000107261/CR/2211000597 dated 09/11/2022.
 2. The Minutes of 7th Consent Appraisal Committee (CAC) Meeting held on 24.09.2024.

Your application No.MPCB-CONSENT-0000196660 Dated 31.01.2024

For: Grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The consent to renewal is granted for a period up to 31/03/2025**
2. **The capital investment of the project is Rs.307.29 Crs. (As per C.A Certificate submitted by industry Existing CI-354.12 Cr + Decrease in C.I.- 46.83 Crs.)**
3. **Consent is valid for the manufacture of:**

| Sr No | Product | Maximum Quantity | UOM |
|----------|---------|------------------|------|
| Products | | | |
| 1 | Coal | 4.9 | MTPA |

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

| Sr No | Description | Permitted (in CMD) | Standards to | Disposal Path |
|-------|----------------|--------------------|-------------------|---|
| 1. | Trade effluent | 2200 | As per Schedule-I | Recycle for dust suppression, greening, green belt development and plantation |

| Sr No | Description | Permitted | Standards to | Disposal |
|--------------|--------------------|------------------|---------------------|--|
| 2. | Domestic effluent | 508 | As per Schedule-I | Recycle for dust suppression, Fire Fighting, green belt development and plantation |

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

| Sr No. | Stack No. | Description of stack / source | Number of Stack | Standards to be achieved |
|---------------|------------------|--------------------------------------|------------------------|---------------------------------|
| NA | | | | |

6. **Non-Hazardous Wastes:**

| Sr No | Type of Waste | Quantity | UoM | Treatment | Disposal |
|--------------|----------------------|-----------------|------------|------------------|-------------------------------------|
| 1 | Overburden | 110000 | m3/month | Landfill | Backfilling and Reclamation of Land |

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

| Sr No | Category No./ Type | Quantity | UoM | Treatment | Disposal |
|--------------|---|-----------------|------------|------------------|--------------------------|
| 1 | 5.1 Used or spent oil | 50 | Lit/Day | Recycle | Sale to authorised party |
| 2 | 35.3 Chemical sludge from waste water treatment | 120 | Kg/Day | Landfill | CHWTSDf |

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
10. The applicant shall comply with the conditions of the Environmental Clearance granted by MoEF&CC, GoI vide letter No. J -11015/86/2005-IA-II(M) dated 11/01/2019.
11. PP shall carry out plantation as per EC condition before ensuing monsoon.
12. PP shall carry out over burden dump management as per CPCB guidelines.
13. The applicant shall not carry out any excess production without obtaining Consent of the Board and without obtaining Environmental Clearance wherever it applicable.
14. This consent is issued pursuant to the decision of the 7th Consent Appraisal Committee (CAC) Meeting held on dtd. 24/09/2024.
15. The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent.



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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




MARCH 2025

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY


| | | | | | |
|---|--|--------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/MAR-25/16 | DATE OF ISSUE | 15-04-2025 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-03-25 TO 15-04-25 | |

| UMRER MANAGER OFFICE UJOOA1 | | | | | | | |
|--|------------|---|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in µg/m ³) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 02-03-2025 | 03-03-2025 | 290 | 183 | 55 | 17 | 14 | Cloudy sky / Calm |
| 16-03-2025 | 17-03-2025 | 282 | 176 | 49 | 15 | 12 | Clear sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP UJOOA2 | | | | | | | |
|--|------------|---|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in µg/m ³) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 02-03-2025 | 03-03-2025 | 312 | 195 | 56 | 18 | 15 | Cloudy sky / Calm |
| 16-03-2025 | 17-03-2025 | 301 | 186 | 50 | 16 | 13 | Clear sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE UJOOA3 | | | | | | |
|----------------------------|------------|---|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in µg/m ³) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-03-2025 | 04-03-2025 | 87 | 26 | 6 | BDL | Clear sky / Light breeze |
| 04-03-2025 | 05-03-2025 | 89 | 29 | 8 | BDL | Clear sky / Light breeze |
| 09-03-2025 | 10-03-2025 | 86 | 27 | 7 | BDL | Clear sky / Light breeze |
| 10-03-2025 | 11-03-2025 | 90 | 30 | 9 | BDL | Clear sky / Light breeze |
| 16-03-2025 | 17-03-2025 | 92 | 32 | 10 | BDL | Clear sky / Light breeze |
| 17-03-2025 | 18-03-2025 | 88 | 29 | 9 | BDL | Clear sky / Light breeze |
| 22-03-2025 | 23-03-2025 | 92 | 31 | 10 | BDL | Clear sky / Light breeze |
| 23-03-2025 | 24-03-2025 | 91 | 28 | 8 | BDL | Clear sky / Light breeze |
| 28-03-2025 | 29-03-2025 | 93 | 33 | 13 | 11 | Clear sky / Light breeze |
| 29-03-2025 | 30-03-2025 | 94 | 34 | 14 | 12 | Clear sky / Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

| NEAR PUMP HOUSE COLONY UJOOA4 | | | | | | |
|---------------------------------|------------|---|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in µg/m ³) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03-03-2025 | 04-03-2025 | 85 | 25 | 7 | BDL | Clear sky / Light breeze |
| 04-03-2025 | 05-03-2025 | 88 | 28 | 9 | BDL | Clear sky / Light breeze |
| 09-03-2025 | 10-03-2025 | 90 | 31 | 12 | 10 | Clear sky / Light breeze |
| 10-03-2025 | 11-03-2025 | 92 | 33 | 14 | 11 | Clear sky / Light breeze |
| 16-03-2025 | 17-03-2025 | 91 | 29 | 8 | BDL | Clear sky / Light breeze |
| 17-03-2025 | 18-03-2025 | 93 | 34 | 15 | 12 | Clear sky / Light breeze |
| 22-03-2025 | 23-03-2025 | 89 | 30 | 10 | BDL | Clear sky / Light breeze |
| 23-03-2025 | 24-03-2025 | 92 | 34 | 12 | BDL | Clear sky / Light breeze |
| 28-03-2025 | 29-03-2025 | 91 | 29 | 10 | BDL | Clear sky / Light breeze |
| 29-03-2025 | 30-03-2025 | 95 | 35 | 13 | 10 | Clear sky / Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |


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| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|


FUGITIVE DUST MONITORING

| | | | |
|--------------------------|---|----------------------|--|
| TEST REQUIRED | SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017) & M2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016 | | |
| SAMPLE DESCRIPTION | Air sample(Fugitive) | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-03-25 TO 15-04-25 | |

| WEIGH BRIDGE UUOF1 | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hrs vol in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 26-03-2025 | 27-03-2025 | 332 | 228 | Clear sky / Light breeze |

| RAILWAY SIDING UUOF2 | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hrs vol in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 26-03-2025 | 27-03-2025 | 351 | 247 | Clear sky / Light breeze |

| CHP UUOF3 | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hrs vol in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| | | SPM | PM ₁₀ | |
| FROM | TO | s | s | |
| 26-03-2025 | 27-03-2025 | 345 | 233 | Clear sky / Light breeze |


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| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

| | | | |
|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017, O ₂ : IS 3025-Part 39:1991(RA 2019) &BOD: IS 3025 (Part 44): 1993 (RA 2019) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-03-25 TO 15-04-25 |


| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|--------------------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O ₂ (in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 04-03-2025 | 7.75 | 27 | 40 | BDL |
| 16-03-2025 | 7.85 | 31 | 44 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|--------------------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O ₂ (in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 04-03-2025 | 7.98 | 24 | 32 | BDL |
| 16-03-2025 | 7.89 | 22 | 28 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 04-03-2025 | 23 | 11.2 |
| 16-03-2025 | 27 | 12.8 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

J. Singh

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| | | |
|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|


NOISE LEVEL MONITORING DATA

| | |
|--------------------|--|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015 |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| MAR'25 | 09-03-2025 | 66.8 | 60.8 |
| MAR'25 | 21-03-2025 | 65.7 | 61.4 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| MAR'25 | 09-03-2025 | 50.5 | 43.9 |
| MAR'25 | 21-03-2025 | 48.4 | 42.7 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


Amol Kamble
Reviewed by


M. Rabbani
Authorised by

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ENVIRONMENTAL MONITORING REPORT
w.r.t.HEAVY METALS IN AMBIENT AIR
UMRER AREA

WESTERN COALFIELDS LTD.



HALF YEARLY (APRIL 24-SEPT 24)

Environment Laboratory

NABL Accredited vide Cert. No. TC-7102

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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INDEX

| Sl. No. | PARTICULARS | PAGE NO. |
|---------|-----------------------------|----------|
| 1 | HEAVY METAL ANALYSIS REPORT | 3 TO 10 |

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|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM21 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : | LSOP 4 |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN : | LQR 47 |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------------|---------------|------------------|
| 1 | Umrer Manger Office | UUOA-1 | 01-04-2024 |
| 2 | Near workshop | UUOA-2 | 01-04-2024 |
| 3 | Near pump house/colony | UUOA-3 | 03-04-2024 |
| 4 | Kanwa Village | UUOA-4 | 03-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|--------|--------|--------|--|
| | | | | UUOA-1 | UUOA-2 | UUOA-3 | UUOA-4 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | BDL | BDL | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | BDL | BDL | BDL | BDL | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | BDL | BDL | BDL | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



DEEPANSHU SAHU
AUTHORIZED SIGNATORY

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| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM22 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : LSOP 4 | |
| NAME OF PROJECT | MAKARDHOKARA-II | SAMPLING PLAN : LQR 47 | |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|---------------------|---------------|------------------|
| 1 | NEAR MANAGER OFFICE | UMOA-1 | 01-04-2024 |
| 2 | SAM OFFICE | UMOA-2 | 02-04-2024 |
| 3 | SUBSTATION | UM10A-6 | 02-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|--------|---------|--|
| | | | | UMOA-1 | UMOA-2 | UM10A-6 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | BDL | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | 0.0077 | BDL | BDL | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | 0.0046 | BDL | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | BDL | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals | |  TC-7102 |
| | | | |

| | | | |
|-------------------------------|--|--------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM23 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : | LSOP 4 |
| NAME OF PROJECT | MAKARDHOKRA-I OC | SAMPLING PLAN : | LQR 47 |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|-------------------|---------------|------------------|
| 1 | PIT OFFICE | UM10A-1 | 01-04-2024 |
| 2 | KALMANA VILLAGE | UM10A-2 | 01-04-2024 |
| 3 | SIRPUR VILLAGE | UM10A-3 | 01-04-2024 |
| 4 | KHURSAPAR VILLAGE | UM10A-4 | 01-04-2024 |
| 5 | HEOTI VILLAGE | UM10A-5 | 01-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|--|--------------------|---------------------------------|----------------|---------|---------|---------|---------|---|
| | | | | UM10A-1 | UM10A-2 | UM10A-3 | UM10A-4 | UM10A-5 | |
| 1 | Arsenic, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | BDL | 0.006 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 2 | Lead, $\mu\text{g}/\text{m}^3$ | IS 5182 PART 22 | 7.0 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | BDL | 1.0 $\mu\text{g}/\text{m}^3$ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.007 $\mu\text{g}/\text{m}^3$ | 0.0072 | BDL | BDL | BDL | BDL | 0.02 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 4 | Total Chromium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0045 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | BDL | ** |
| 5 | Cadmium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0015 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report | |  TC-7102 |
| | Ambient Air Quality Monitoring Data For Heavy Metals | | |

| | | | |
|-------------------------------|--|--------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM24 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : | LSOP 4 |
| NAME OF PROJECT | DINESH OC | SAMPLING PLAN : | LQR 47 |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|---------------------------|---------------|------------------|
| 1 | MANAGER OFFICE | UM30A-1 | 03-04-2024 |
| 2 | NEAR RAILWAY WEIGH BRIDGE | UM30A-2 | 03-04-2024 |
| 3 | PIPARDOL VILLAGE | UM30A-3 | 01-04-2024 |
| 4 | WELSAKRA VILLAGE | UM30A-4 | 01-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|---------|---------|---------|--|
| | | | | UM30A-1 | UM30A-2 | UM30A-3 | UM30A-4 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | BDL | BDL | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | BDL | BDL | BDL | BDL | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | BDL | 0.0049 | BDL | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



DEEPANSHU SAHU
AUTHORIZED SIGNATORY

| | |
|---|--|
| 1 | This Report refers to the values related to the items tested. |
| 2 | This Report cannot be reproduced in part or full without written permission of the management. |
| 3 | ** This parameter not regulated as per NAAQS |

| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM25 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : | LSOP 4 |
| NAME OF PROJECT | GOKUL OC | SAMPLING PLAN : | LQR 47 |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------|---------------|------------------|
| 1 | CONTRACTOR CAMP | UGOA-1 | 02-04-2024 |
| 2 | BESUR VILLAGE | UGOA-2 | 03-04-2024 |
| 3 | NAND VILLAGE | UGOA-3 | 03-04-2024 |
| 4 | POLGAON VILLAGE | UGOA-4 | 03-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|--|--------------------|---------------------------------|----------------|--------|--------|--------|---|
| | | | | UGOA-1 | UGOA-2 | UGOA-3 | UGOA-4 | |
| 1 | Arsenic, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | 0.006 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 2 | Lead, $\mu\text{g}/\text{m}^3$ | IS 5182 PART 22 | 7.0 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | 1.0 $\mu\text{g}/\text{m}^3$ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | 0.02 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 4 | Total Chromium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0045 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |
| 5 | Cadmium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0015 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



DEEPANSHU SAHU
AUTHORIZED SIGNATORY

| | |
|---|--|
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| 2 | This Report cannot be reproduced in part or full without written permission of the management. |
| 3 | ** This parameter not regulated as per NAAQS |

| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM25a | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : LSOP 4 | |
| NAME OF PROJECT | GOKUL OC | SAMPLING PLAN : LQR 47 | |
| No. of Pages | 1 | | |

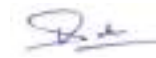
| | | | |
|--------|------------------|---------------|------------------|
| Sl No. | Name of location | Location Code | Date of sampling |
| 5 | NEAR VIEW POINT | UGOA-5 | 02-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|--|
| | | | | UGOA-5 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | BDL | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



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| | |
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| 3 | ** This parameter not regulated as per NAAQS |

| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM26 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : | LSOP 4 |
| NAME OF PROJECT | MORPAR UG | SAMPLING PLAN : | LQR 47 |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------------|---------------|------------------|
| 1 | NEAR PIT OFFICE | UMUA-1 | 04-04-2024 |
| 2 | NEAR MAGAZINE BUILDING | UMUA-2 | 04-04-2024 |
| 3 | COLONY | UMUA-3 | 04-04-2024 |
| 4 | MORPAR VILLAGE | UMUA-4 | 04-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|-----------------------------------|--------------------|--------------------------|----------------|--------|--------|--------|--|
| | | | | UMUA-1 | UMUA-2 | UMUA-3 | UMUA-4 | |
| 1 | Arsenic, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | 0.006 µg/m ³ (Annual average) |
| 2 | Lead, µg/m ³ | IS 5182 PART 22 | 7.0 µg/m ³ | BDL | BDL | BDL | BDL | 1.0 µg/m ³ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, µg/m ³ | ASTM D 4185 | 0.007 µg/m ³ | BDL | BDL | BDL | BDL | 0.02 µg/m ³ (Annual average) |
| 4 | Total Chromium, µg/m ³ | ASTM D 4185 | 0.0045 µg/m ³ | BDL | BDL | BDL | BDL | ** |
| 5 | Cadmium, µg/m ³ | ASTM D 4185 | 0.0015 µg/m ³ | BDL | BDL | BDL | BDL | ** |
| 6 | Mercury, µg/m ³ | ASTM D 4185 | 0.0007 µg/m ³ | BDL | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



DEEPANSHU SAHU
AUTHORIZED SIGNATORY

| | |
|---|--|
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| 3 | ** This parameter not regulated as per NAAQS |

| | | |
|---|---|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report Ambient Air Quality Monitoring Data For Heavy Metals |  TC-7102 |
|---|---|--|

| | | | |
|-------------------------------|--|--------------------------|------------|
| TEST REPORT NO. | RIN/TR/JUNE /HM27 | DATE OF ISSUE | 30-07-2024 |
| NAME OF CUSTOMER | GM(ENV.),WCL(HQ), NAGPUR | SAMPLE DESCRIPTION | AIR SAMPLE |
| CUSTOMER LETTER REFERENCE NO. | WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022 | | |
| TEST REQUIRED | Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185) | | |
| NAME OF AREA | UMRER | SAMPLING METHOD : LSOP 4 | |
| NAME OF PROJECT | UMRER OC | SAMPLING PLAN : LQR 47 | |
| No. of Pages | 1 | | |

| Sl No. | Name of location | Location Code | Date of sampling |
|--------|------------------|---------------|------------------|
| 1 | CHP | UUOF-1 | 01-04-2024 |
| 2 | WEIGH BRIDGE | UUOF-2 | 01-04-2024 |
| 3 | RAILWAY SIDING | UUOF-3 | 02-04-2024 |

| Sl. No. | Parameter | Method of analysis | Detection limit | Observed Value | | | National Ambient Air Quality Standard NAAQS, 2009 |
|---------|--|--------------------|---------------------------------|----------------|--------|--------|---|
| | | | | UUOF-1 | UUOF-2 | UUOF-3 | |
| 1 | Arsenic, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | 0.006 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 2 | Lead, $\mu\text{g}/\text{m}^3$ | IS 5182 PART 22 | 7.0 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | 1.0 $\mu\text{g}/\text{m}^3$ ⁽²⁴⁾ Hourly average) |
| 3 | Nickle, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.007 $\mu\text{g}/\text{m}^3$ | 0.0084 | 0.0076 | 0.0071 | 0.02 $\mu\text{g}/\text{m}^3$ (Annual average) |
| 4 | Total Chromium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0045 $\mu\text{g}/\text{m}^3$ | 0.0047 | 0.0045 | 0.0045 | ** |
| 5 | Cadmium, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0015 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | ** |
| 6 | Mercury, $\mu\text{g}/\text{m}^3$ | ASTM D 4185 | 0.0007 $\mu\text{g}/\text{m}^3$ | BDL | BDL | BDL | ** |

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT



DEEPANSHU SAHU
AUTHORIZED SIGNATORY

| | |
|---|--|
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| 3 | ** This parameter not regulated as per NAAQS |



उपक्षेत्रीय प्रबंधक का कार्यालय
उमरेर उपक्षेत्र
पो : उमरेर ओपनकोस्ट प्रोजेक्ट
जि : नागपुर (महा.) पिन - 441204

"Under Jurisdiction of Nagpur Courts only"
वेस्टर्नकोलफील्ड्स लिमिटेड
WESTERN COALFIELDS LIMITED
(A Mini Ratna Company)
(Government of India Undertaki
(कोल इंडिया की अनुषंगी कंपनी)
A Subsidiary of Coal India Limit



Office of the Sub Area Manager
Umrer Sub Area
PO: Umrer Project
Dist: Nagpur (MS) Pin-441204

AN ISO 9001:2015 & 14001:2015 CERTIFIED MIN

पत्र क्र. : वेकोली/उमरेर/उप.क्षे.प्र./२०२५/ २१२

दिनांक :- ०१.०४.२०२५

From:

Sub Area Manager,/ Agent
Umrer Opencast Mine,
Umrer Sub Area,
Umrer Area, WCL .

To,

1. The Chief Inspector of Mines/DGMS, Dhanbad, E.Rly.(Jharkhand-826001)
2. The Regional Inspector of Mines
Nagpur Region-I, Western Zone, CGO Complex (A Block),
6th Floor, Seminary Hills,
Nagpur - 440006
3. District Magistrate, Nagpur District- 440001

Respected Sir,

Please find enclosed herewith the **Form 1C (Notice of Closure/abandoned)** and **Form 1D (Notice of Discontinuance)** as per Regulation 5 of CMR 2017 in respect of Umrer OCM

This is for your kind information, please.

Thanking you

Yours faithfully

Amarnath Ratanlal Yadav
01/04/25

Amarnath Ratanlal Yadav
Sub Area Manager/ Agent,
Umrer OCM

Enclosure: As above

Cc.

1. Dy. Director of Mines NR-I, Nagpur- 440006
2. Area General Manager , Umrer Area
3. General Manager (S & C), WCL, Nagpur.
4. Area Safety Officer, Umrer Area.
5. Colliery Manager, Umrer OCM
6. Safety Officer, Umrer OCM
7. Office copy.

WESTERN COALFIELDS LIMITED**FORM -1C**

(Notice of Closure/abandoned)

(See Regulation 5)

No. UMR/Mine Dept./Closure/Abandon/25/ 2/13

Date: 30.03.2025

01/4

From,

Name - Shri Amarnath Ratanlal Yadav
(Owner, Agent or Manager)

Postal Address - Agent,
Umrer Opencast Mine
Umrer Area, WCL.

District - Nagpur
State - Maharashtra
PIN - 4410204
Mobile No. - 7587707124
Telephone No. (Landline) - 07116-247395
Email ID - samusawcl@gmail.com

To,

1. The Chief Inspector of Mines/DGMS, Dhanbad, E.Rly.(Jharkhand-826001)
2. The Regional Inspector of Mines
Nagpur Region-I, Western Zone, CGO Complex (A Block), 6th Floor, Seminary Hills, Nagpur - 440006
3. District Magistrate

Dear Sir,

I have to furnish the following particulars in respect of Closure/abandoned of Umrer Opencast Mine of M/S Western Coalfields Limited.


1. Name of Mine : Umrer Opencast Mine
2. Name of the Owner/company/firm/association: Western Coalfields Limited
3. Location of Mine : Order No. 502244 Dated: 10.07.1962
Lease number(s) : Umrer Project
Village/Area/Road : Umrer Project
Post Office : Umrer Project
Police Station : Umrer
Sub Division (Taluqa) : Umrer
Railway Station (Nearest) : Umrer/Nagpur
District : Nagpur
State : Maharashtra
PIN Code : 441204
4. Labour identification Number : 1-4633-5279-1
5. Mine Code : 010628

6. Details of Owner, Agent, Manager

| | Particulars | Owner | Nominated Owner | Agent | Manager |
|-------|---------------------------|--|--|--|--|
| i. | Name | Shri Anandji Prasad | Shri Anandji Prasad | Shri Amarnath Ratanlal Yadav | Shri Jitendrakumar Charde |
| ii. | Father's Name | Shri Harihar Prasad | Shri Harihar Prasad | Shri Ratanlal Yadav | Shri Yashvant Charde |
| iii. | Aadhar No. | 7450 8758 6804 | 7450 8758 6804 | 691912687945 | 240777843057 |
| iv. | Address | Bungalow No. 5, MRS Colony Indora Complex, Kalpana Nagar | Bungalow No. 5, MRS Colony Indora Complex, Kalpana Nagar | Bungalow No. D-3, Umrer Colliery Colony, Umrer Area, WCL. | Bungalow No. D-5 Umrer Colliery Colony, Umrer Area, WCL. |
| | Village/Area/Road | Nagpur | Nagpur | Umrer Project | Umrer Project |
| | Post Office | Uppalwadi | Uppalwadi | Umrer Project | Umrer Project |
| | Police Station | Kapil Nagar | Kapil Nagar | Umrer Town | Umrer Town |
| | Sub Division (Taluqa) | Nagpur | Nagpur | Umrer | Umrer |
| | Railway Station (Nearest) | Nagpur Railway Station | Nagpur Railway Station | Umrer/Nagpur | Umrer/Nagpur |
| | District | Nagpur | Nagpur | Nagpur | Nagpur |
| | State | Maharashtra | Maharashtra | Maharashtra | Maharashtra |
| | PIN Code | 440026 | 440026 | 441204 | 441204 |
| v. | Mobile No. | | | 7587707124 | 9309722365 |
| vi. | Telephone No. (Landline) | 0712 2510438 | 0712 2510438 | 07116-247395 | |
| vii. | Fax No. | 0712 2511527 | 0712 2511527 | | |
| viii. | Emal Id | dtp@coalindia.in | dtp@coalindia.in | samusawcl@gmail.com | uocm1963@gmail.com |

7. Date on which it is intended to close/abandon : 01.05.2025
8. Actual date closure/abandon : 01.05.2025
9. Number of persons likely to be affected : Out of 852 persons approx. 450 persons may likely be affected
10. Reasons for closure/abandonment : The property of mine is exhausted

Yours faithfully


01/04/25

Name: Amarnath Ratanlal Yadav

Signature:

Designation : Owner /Agent /Manager

Date:

Copy:

1. Dy. Director of Mines Safety, NR-I, Nagpur-6
2. General Manager (S&C), WCL HQ, Nagpur.
3. Area General Manger, Umrer Area,
4. Area Safety Officer, UA
5. Colliery Manager, UOCM
6. Safety Officer, UOCM.
7. Person concerned.
8. OC

WESTERN COALFIELDS LIMITED

FORM -1D

(Notice of Discontinuance)

(See Regulation 5)

No. UMR/Mine Dept./ Discontinuance /25/ 2/14

Date: 30.03.2025

2/14

From,

Name - Shri Amarnath Ratanlal Yadav
(Owner, Agent or Manager)
Postal Address - Agent.
Umrer Opencast Mine
Umrer Area, WCL.
District - Nagpur
State - Maharashtra
PIN - 4410204
Mobile No. - 7587707124
Telephone No. (Landline) - 07116-247395
Email ID - samusawcl@gmail.com

To,

3. The Chief Inspector of Mines/DGMS, Dhanbad, E.Rly.(Jharkhand-826001)
4. The Regional Inspector of Mines
Nagpur Region-I, Western Zone, CGO Complex (A Block), 6th Floor, Seminary Hills, Nagpur - 440006
3. District Magistrate

Dear Sir,

I have to furnish the following particulars in respect of discontinuance of Umrer Opencast Mine of M/S Western Coalfields Limited.)

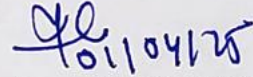
6. Name of Mine : Umrer Opencast Mine
7. Name of the Owner/company/firm/association: Western Coalfields Limited
8. Location of Mine
Lease number(s) : Order No. 502244 Dated: 10.07.1962
Village/Area/Road : Umrer Project
Post Office : Umrer Project
Police Station : Umrer
Sub Division (Taluqa) : Umrer
Railway Station (Nearest) : Umrer/Nagpur
District : Nagpur
State : Maharashtra
PIN Code : 441204
9. Labour identification Number : 1-4633-5279-1
10. Mine Code : 010628

6. Details of Owner, Agent, Manager

| | Particulars | Owner | Nominated Owner | Agent | Manager |
|-------|---------------------------|--|--|--|--|
| i. | Name | Shri Anandji Prasad | Shri Anandji Prasad | Shri Amarnath Ratanlal Yadav | Shri Jitendrakumar Charde |
| ii. | Father's Name | Shri Harihar Prasad | Shri Harihar Prasad | Shri Ratanlal Yadav | Shri Yashvant Charde |
| iii. | Aadhar No. | 7450 8758 6804 | 7450 8758 6804 | 691912687945 | 240777843057 |
| iv. | Address | Bungalow No. 5, MRS Colony Indora Complex, Kalpana Nagar | Bungalow No. 5, MRS Colony Indora Complex, Kalpana Nagar | Bungalow No. D-3, Umrer Colliery Colony, Umrer Area, WCL | Bungalow No. D-5 Umrer Colliery Colony, Umrer Area, WCL |
| | Village/Area/Road | Nagpur | Nagpur | Umrer Project | Umrer Project |
| | Post Office | Uppalwadi | Uppalwadi | Umrer Project | Umrer Project |
| | Police Station | Kapil Nagar | Kapil Nagar | Umrer Town | Umrer Town |
| | Sub Division (Taluqa) | Nagpur | Nagpur | Umrer | Umrer |
| | Railway Station (Nearest) | Nagpur Railway Station | Nagpur Railway Station | Umrer/Nagpur | Umrer/Nagpur |
| | District | Nagpur | Nagpur | Nagpur | Nagpur |
| | State | Maharashtra | Maharashtra | Maharashtra | Maharashtra |
| | PIN Code | 440026 | 440026 | 441204 | 441204 |
| v. | Mobile No. | | | 7587707124 | 9309722365 |
| vi. | Telephone No. (Landline) | 0712 2510438 | 0712 2510438 | 07116-247395 | - |
| vii. | Fax No. | 0712 2511527 | 0712 2511527 | - | - |
| viii. | Emal Id | dtp@coalindia.in | dtp@coalindia.in | samusawcl@gmail.com | uocm1963@gmail.com |

7. Date on which it is intended to discontinue the mine : 01.05.2025
8. Actual date of discontinuance : 01.05.2025
9. Number of persons likely to be affected : Out of 852 persons approx. 450 persons may likely be affected
10. Reasons for discontinuance : The property of mine is exhausted
11. Updated plans enclosed as required under Regulation : Y/s/No
66 of CMR, 2017
11.1 If Yes, Specify the Plan(s) reference number(s) :

Yours faithfully



Name: Amarnath Ratanlal Yadav

Signature:

Designation : Owner /Agent /Manager

Date:

Copy:

1. Dy. Director of Mines Safety, NR-I, Nagpur-6
2. General Manager (S&C), WCL HQ, Nagpur.
3. Area General Manger, Umrer Area,
4. Area Safety Officer, UA
5. Colliery Manager, UOCM
6. Safety Officer, UOCM.
7. Person concerned.
8. OC

CSR 2025-26 Umrer Area - Audited 2025- 2026

| Sl. No. | CSR Activity Details | Sanction Amount in | Final Sanction Value kept amount after Surrender | WO value (Rs Lakh) includes | Expenditure (Rs) | PO | Status |
|---------|--|------------------------|--|-----------------------------|------------------|--------------------------|--|
| 1 | Swachta Activities | 3.5 | 3.5 | 3.45 | 344016.58 | 5600091960 5800344714 | 1) Swachta Pakhwada Bill Submitted for Rs 82601/- Work completed 2) Fogging machine Through GeM Rs 86679/-, Work Completed 3) Hand Wash Station 1.327 Lakh - Work completed 4) Swachta He Sewa Bill submitted for Rs 17740/- Work completed 5) Swachta items for school 24921/- work completed |
| 2 | Organizing Medical Camps at nearby villages of mines and also providing service under CS | 5 | 5 | 4.83 | 483702 | 5800331893 | Work order of Rs. 4,49,282 issued to KAPL- completed Medicine for Tribal school-Skin disease camp- Rs 13728/- completed Medical camp Cancer Rs 20,871- completed |
| 3 | Providing 8 nos. Smart Class equipment to Schools Near Umrer Area ZP Rajurwadi-1, ZP Kalamna-1, ZP Bhagwanpur-1, Ashramshala Tribal Udasa- 2, ZP Dhammangoan-1, ZP Dahegaon -1, ZP Kanva -1 | 10.5 | 10.5 | 10.48 | 1047840 | 5800349356 | Work order issued Rs 10,47,840 Work completed |
| 4 | Making drinking water provision by providing RO plant at Hewati Village of Hewati grampanch | 7 | 5.7 | 5.53 | 552943 | 5600089538 | Work Order - Rs 5,43,707.49 , Work completed RE under process |
| 5 | Making stage for cultural activities/wholistic development of students at ZP Dahegaon schoo | 3 | 2.18 | 2.17 | 216271 | 5600089195 | Work Order Rs 2,07,537.56, Work Completed RE under process |
| 6 | Providing and fixing paver block and making structural steel at Jawahar Vidyalaya of Makard Umrer Area. | 11 | 6.55 | 6.32 | 632844 | 5600089087 | Work Awarded Rs. 6,31,052.85 . Work completed RE under process |
| 7 | Solar Panel for RO plant facility of Ghoturli village of Waigaon Ghoturli Grampanchayat | | | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/-, Work Completed |
| 8 | Solar Panel for ZP school Kanva village Shirpur Grampanchayat | | | | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Comple |
| 9 | Solar Panel for RO plant facility at Bhagwanpur village of Bhagwanpur Grampanchayat | 10.5 | 8.5 | 8.5 | 849954 | 5700482238 | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Comple |
| 10 | Making drinking water provision by providing RO Plant with Solar Panel for Nand Village of f | 11 | 9.58 | 9.57 | 957218 | 5600092259 | Work Awarded Rs 9,11,764.53 , Work completed |
| 11 | Making stage for cultural activities/wholistic development of students at ZP Saiki school of S | 5 | 4.28 | 4.28 | 427625 | 5600089194 | Work Awarded Rs 4,00,041.52.00, Work completed, RE under process |
| 12 | Making Toilet and Handwashing facility at ZP Saigaon of Bhagwanpur Gram Panchyat | 8.5 | 5.74 | 5.64 | 564748 | 5600089950 | Work Awarded Rs 5,46,459.70, Work Completed RE under process |
| 13 | Making Toilet and Handwashing facility at ZP Kharkhada of Bhagwanpur Grampanchayat | 8.5 | 6.25 | 5.91 | 591303 | 5600089944 | Work Awarded Rs 5,95,936.45 , Work Completed RE under process |
| 14 | Providing Solar Pump and associated tank at Besur village of Besur Grampanchayat | 6 | 2.35 | 2.24 | 224273 | 5600092201 | Work Awarded Rs 2,24,275.77 , Work completed, RE under process |
| 15 | Making drinking water provision by providing RO plant for Saigaon Village Bhagwanpur of G | 11 | 10.04 | 9.65 | 985380 | 5600089942 | Work Awarded Rs 9,56,971.50 , Work completed, RE under process |
| 16 | Making drinking water provision by providing RO plant for Kharkhada Village of Bhagwanpur | 11 | 10.26 | 9.01 | 901141 | 5600092951 | Work Awarded Rs 9,77,559.73 , Work Completed Work completed, RE under |
| 17 | Making drinking water provision by providing RO plant for Kharkhada Village of Bhagwanpur | 3 | 2.324 | 2.324 | 232344 | 5800344689 | Work completed |
| 18 | 56 Cycle for students of ZP school ZP Nand of Nand Grampanchayat | | | | | | |
| 19 | Open air gym equipment at Borebatti of Waigaon Ghoturli Grampanchayat | 6 | 4.35 | 4.35 | 434958.00 | 5600091985 | Work Awarded Rs 4,14,432.90 , Work completed, RE under process |
| 20 | Drinking water facility for public by providing 8 nos. water purifier at police station Bhiwapur(1no), Land Record Office at Bhiwapur(1no.), Land record office at Umred(1), and students of ZP Dhammangao (1), ZP Besur (1 no), ZP Khursapar (1 no.), ZP Welsakhra (1 no) ,ZP Nand Primary(1 no.) respectively | 10.5 | 10.5 | 9.84 | 744015 | 5800371716 | Work Completed for 6 for Rs 7,44,015 Order issued from GeM 2 no. RO for Rs. 120,000 |
| 21 | Making Bus-Stand at Nand Village of Nand Grampanchayat | 3 | 2.82 | 2.67 | 266500 | 5600092258 | Work Awarded Rs 2,68,002.55 , Work Completed |
| 22 | Making drinking water provision by providing RO plant at Chichala Village with Solar Panel in Chichala Grampanchayat | 11 | 9.71 | 9.51 | 951709 | 5600092285 | Work Awarded Rs 9,24,291.76 , Work completed, RE under process |
| 23 | Making drinking water provision by providing RO plant for APMC market Bhiwapur | 0 | 3.66 | 2.85 | 284868 | 5600096438 | Work completed |
| 24 | Water cooler cum purifier to Poilice station Umred | 0 | 0.48 | 0.47 | 46700 | 5800379358 | Work completed |
| | Total (A) | 145 | 124.27 | 120.59 | 11820356 | | |
| | | udget(Rs Lakh) | | | | | Remark |
| S No. | Panchtatva | 2 | 2 | 0.6 | 0 | | Work order Issued from GeM |
| 1 | Installation of RO purifier at Jawahar school | 6.5 | 2.65 | 2.55 | 26500 | 5700459406 | Work completed |
| 2 | Installation of Solar pane: at Jawahar school | | | | | | UC received Work Completed |
| 3 | Providing Nutrition kit for students at Jawahar School, ZP Pachgaon School, ZP school Nand | 16 | 16 | 16 | 1600000 | | Work order Issued from GeM |
| 4 | Installation of RO Purifier at ZP school Nand | 2 | 2 | 0.6 | 0 | | |

| | | | | |
|--|-------|--------|--------|-------------|
| Total (B) | 26.5 | 22.65 | 19.85 | 1865001 |
| Total (A+B) | 171.5 | 146.92 | 140.44 | 13685357 |
| Rs. 28,70470 surrendered as part of Savings in 1st phase under CSR 2025-26 | | | | 49352 |
| Reverse Liability of 2024-25 | | | | |
| Total | | | | 13636005.50 |

[Signature]
 AFM
 Umrer Area
 23/4/2026

[Signature]
 ANO(Env)
 Umrer Area
 24.04.2026

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 AMO
 Umrer Area
 23/4/26

[Signature]
 SO(C)
 Umrer Area
 23/04/26

[Signature]
 AHRM
 Umrer Area
 23/4/26

[Signature]
 Area General Manager
 Umrer Area
 23/04/2026



वेस्टर्न कोलफील्ड्स लिमिटेड/Western Coalfields Limited

मिनिरत्न कम्पनी (A Miniratna Company)

कोल इंडिया लिमिटेड की अनुषंगी कम्पनी (A Subsidiary of Coal India Limited)

CIN-U10100MH1975GOI018626

क्षेत्रीय महाप्रबन्धक का कार्यालय, उमरेर क्षेत्र

पता: वे को लि., उमरेर क्षेत्र, पो: उमरेर, जिला-नागपुर, महाराष्ट्र, पिन-441204

Email: apnwclua@gmail.com

कार्मिक विभाग (Personnel Department)

Address: WCL, Umrer Area, PO: Umrer, Dist: Nagpur, MS, PIN: 441204

Fax: 07116-247374, Phone: 07116-247429, 07116-247374



सन्दर्भ सं: वेकोलि/उमरेर/कार्मिक/2023-24/ 179

दिनांक: 22-07-2024

प्रति,

विभागाध्यक्ष (कल्याण/सीएसआर)

वेकोली मुख्यालय, नागपुर

विषय : सी.एस.आर Audited Expenditure रिपोर्ट 2023-24

महोदय,

The details regarding the expenditure of the Umrer area are being submitted. The total expenditure is 59.43 Lakhs. The details are mentioned in the attached annexure I.

भवदीय

[Handwritten Signature]

क्षेत्रीय कार्मिक प्रबंधक

उमरेर क्षेत्र

प्रतिलिपि :-

- 1) महाप्रबंधक (संचालन), उमरेर क्षेत्र
- 2) क्षेत्रीय कार्मिक प्रबंधक, उमरेर क्षेत्र
- 3) क्षेत्रीय वित्त प्रबंधक, उमरेर क्षेत्र
- 4) क्षेत्रीय चिकित्सा अधिकारी, उमरेर क्षेत्र
- 5) अमला अधिकारी (सिविल), उमरेर क्षेत्र
- 6) अमला अधिकारी (वि एवं यां), उमरेर क्षेत्र
- 7) क्षेत्रीय नोडल अधिकारी (पर्यावरण), उमरेर क्षेत्र
- 8) उप प्रबंधक (सी.डी.), उमरेर क्षेत्र
- 9) प्रबंधक (वित्त), उमरेर क्षेत्र - बिल सीएसआर
- 10) अमला अधिकारी (एम.एम), उमरेर क्षेत्र
- 11) अधिनस्त अभियंता (सिविल), उमरेर क्षेत्र
- 12) अधिनस्त अभियंता (सिविल), उमरेर उपक्षेत्र

Name of Area : Umrer Area

Audited CSR Expenditure Report 2023-24

| Fund Details | |
|---------------------|------------|
| Particular | Rs (Lakh) |
| Initial Sanction | 6849000 |
| Surrendered | 765000 |
| Final Sanction | 6084000.00 |
| Expenditure 2023-24 | 5943555 |
| Fund Utilised(%) | 98% |

| # | CSR Activity Detail | Sanctioned Budget (In Rs) | Work Order Value (In Rs) | Expenditure (In Rs) | Current Status |
|----------------|--|---------------------------|--------------------------|---------------------|----------------------------------|
| 1 | Providing 1 No. Smart Class and digital content for Gurukul Ashramshah School at Udasa Village | 238000 | 238000 | 238000 | Carry Forward Activity Completed |
| Total I | | 238000 | 238000 | 238000 | |

| | | | | | |
|---------------------|---|----------------|----------------|----------------|--|
| 1 | Swachh Action Plan Activities | 200000 | 199991 | 199991 | Work Completed |
| 2 | Medical Camps in nearby villages Cancer Detection, Osteoporosis, etc | 200000 | 199897 | 198400 | Work Completed. |
| 3 | Providing Water Cooler with in-built safe water arrangement for ensuring potable water for students to reduce water borne diseases for 6 nos. ZP School (ZP School Lohara, Kalamna, Dhavda, Kanyha, Pahami, Nagar parishad Waghmare School) | 600000 | 593100 | 593100 | Work Completed. |
| 4 | Providing Smart Class equipment for 3 ZP schools (Shirpur, Waigaon-Ghoturli & Pahami) of through Nomination(EdCIL -PSU) or GeM portal | 750000 | 630000 | 630000 | Work Completed |
| 5 | Providing of Sanitary Pads/ Incinerator Machine/Vending Machine for improved hygiene and health for Girl Students in Educational Institution and Rural hospital through HLL Life care (SUS) | 300000 | 299999.99 | 300,000 | Work Completed |
| 6 | Providing nutritional Support to Pregnant women in co-ordination with Rural hospital Umred(State Govt) to improve Mother and Child health | 400000 | 394002 | 394002 | Work Completed |
| 7 | Providing TV Screen for spreading awareness of various IEC activities to patients visiting Rural hospital Umred (State Govt) | 150000 | 140500 | 140500 | Work Completed |
| 8 | Installation of solar pump & making water collection point for villagers in Polgaon- Bhagwanpur(GP) | 300000 | 301596.79 | 300000 | Work Completed |
| 9 | Construction of Toilet and Handwashing Station for school students at ZP school Kanwa-Shirpur(GP) | 600000 | 462321.64 | 474592 | Expenditure booked after R.E. approval, Work Completed |
| 10 | Access to Potable Water for reducing water borne diseases by providing RO treated water along with water supply arrangement for Bhagwanpur Villagers | 1000000 | 690356.4 | 705106 | Expenditure booked after R.E. approval, Work Completed |
| 11 | Access to Potable Water for reducing water borne diseases by providing RO treated water along with water supply arrangement for Sayki Villagers | 1100000 | 922359.98 | 1006064 | Expenditure booked after R.E. approval, Work Completed |
| 12 | Solar Pump on Existing borewell for supplying water for Villagers in Besur | 500000 | 364069.18 | 321159 | Work Completed Expenditure for activity is Rs.326105/-, but GST of Rs 4946 has been booked in April 24. Hence, Rs 321159/- mentioned as expenditure |
| 13 | Support to SHGs by providing machinery/appliance to improve for their livelihood activity | 400000 | 338016 | 338016 | Work Completed |
| 14 | 17 nos. Bi-Cycle distribution to School Students of Khandjhari Village- Piraya (GP) | 111000 | 108630 | 108630 | Work Completed |
| Total II | | 6611000 | 5644840 | 5707560 | |
| Total I + II | | 6849000 | 5882840 | 5945560 | |

| Liability Reversal/Payment | | |
|----------------------------|---------------------------------------|---------------------------------|
| S.NO. | Activity | Liability Reversal and Payments |
| 1 | Development of Borewell at Bhagwanpur | -2005 |
| Total III | | -2005 |

| Total expenditure for 2023-24 | |
|--|----------------|
| Grand Total (I+II+III) Expenditure as per GL account in 2023-24 | 5943555 |

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AFM
Umrer Area
22/4/24

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SO(CIL)
Umrer Area
22/04/24

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22/4/24
ANO(Eav)
Umrer Area

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22/4/24
AMC
APM
Umrer Area
Umrer Area
22.4.2024



वेस्टर्नकोलफील्ड्सलिमिटेड/Western Coalfields Limited

मिनिरत्नकम्पनी (A Miniratna Company)

कोलइंडियालिमिटेडकीअनुषंगीकम्पनी (A Subsidiary of Coal India Limited)

CIN-U10100MH1975GOI018626

क्षेत्रीयमहाप्रबंधककार्यालय, उमरेरक्षेत्र

कार्मिकविभाग (Personnel Department)

पता: वे.को.लि., उमरेरक्षेत्र, पो. उमरेर, जिला नागपुर, महाराष्ट्र, पिन.441204

Email: apmwclua@gmail.com

Address: WCL, Umrer Area, PO:Umrer, Dist: Nagpur, MS, PIN:441204

Fax:07116-247374, Phone: 07116-247429, 07116-247374

सन्दर्भसं: वेकोलि/उमरेर/कार्मिक/2023-24/ 229

दिनांक: 29-04-2023

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प्रति,

विभागाध्यक्ष (कल्याण/सीएसआर)

वेकोली मुख्यालय, नागपुर

विषय : FY 2022-2023 सी.एस.आर Expenditure रिपोर्ट

महोदय,

The details regarding the expenditure of Umrer area are being submitted. The details are mentioned in below Table 1.

भव दी य

9.5.2023
क्षेत्रीय कार्मिक प्रबंधक

उमरेर क्षेत्र

प्रतिलिपि :-

- 1) महाप्रबंधक (संचालन), उमरेर क्षेत्र
- 2) क्षेत्रीय कार्मिक प्रबंधक, उमरेर क्षेत्र
- 3) क्षेत्रीय वित्त प्रबंधक, उमरेर क्षेत्र
- 4) क्षेत्रीय चिकित्सा अधिकारी, उमरेर क्षेत्र
- 5) अमला अधिकारी (सिविल), उमरेर क्षेत्र
- 6) अमला अधिकारी (वि एवं यां), उमरेर क्षेत्र
- 7) क्षेत्रीय नोडल अधिकारी (पर्यावरण), उमरेर क्षेत्र
- 8) उप प्रबंधक (सी.डी.), उमरेर क्षेत्र
- 9) प्रबंधक (वित्त), उमरेर क्षेत्र - बिल सीएसआर
- 10) अमला अधिकारी (एम.एम), उमरेर क्षेत्र
- 11) अधिनस्त अभियंता (सिविल), उमरेर क्षेत्र
- 12) अधिनस्त अभियंता (सिविल), उमरेर उपक्षेत्र

Table 1: Activities of CSR FY 2022-23

| Sl No. | CSR activity Details | Sanction CSR Budget(Rs Lakhs) | Expenditure (Rs) Booked | Expenditure Booked for RE and Liability | Total Expenditure for FY 2022-23(Rs) | Remarks |
|-----------------------|--|-------------------------------|-------------------------|---|--------------------------------------|---------------------|
| 1 | Swachtha Action Plan activities | 1.50 | 146023.29 | 0.0 | 146023.29 | |
| 2 | Medical camps related to Osteoporosis, Cancer Detection,etc. | 2.00 | 199120.72 | 0.0 | 199120.72 | |
| 3 | 1 no. RO Plant at polgaon Village | 8.78 | 827094.99 | 46128.08 | 873223.07 | RE approved |
| 4 | 1 no. Ro Plant at Kanyha Village | 5.01 | 462212.94 | 36856.7 | 499069.64 | RE approved |
| 5 | Gym equipment at Shirpur Village | 1.13 | 112549.01 | 0.0 | 112549.01 | |
| 6 | 2 no.Solar Pump in existing handpump and associated tank along with stand at Bhagwanpur | 8.97 | 845648.77 | 50738.58 | 896387.03 | RE approved |
| 7 | 1 no.RO plant at ZP school Kalamna,RO plant at ZP school khursapur-Lohara,Nagar parishad school Waghmare | 1.10 | 109186.46 | 0.0 | 109186.46 | |
| 8 | Solar lamp post at Besur Village | 1.50 | 134520 | 0.0 | 134520 | |
| 9 | 6 nos. handpump at Murpar Village | 6.46 | 551882.17 | 75426.5 | 627308.67 | RE approved |
| 10 | 1 no. Solar pump, borewell and associated tank along with stand at Shivapur(Bandar) | 5.46 | 495969.32 | 34760.64 | 530729.96 | RE approved |
| 11 | 35 no. Bi-cycle for school students | 1.82 | 178500 | 0.0 | 178500 | |
| 12 | 1 No. borewell along with Solar Pump at Sayaki Village (Sanctioned in Oct 2022) | 10.00 | 938203.27 | | 938203.27 | RE approved |
| New Activities | | | | | | |
| 13 | Smart Class equipment at Udasa Ashramshala | 2.40 | 0.0 | 0.0 | 0.0 | Carry Forwarded |
| 14 | Borewell development at Bhagwanpur Village | 0.91 | 0.0 | 899943.88 | 899943.88 | Booked in Liability |
| | Total(A) | 57.04 | 5000910.06 | 333854.06 | 5334765 | |

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3/5/23

h

RE payments Within Sanction

| S No. | Activity | Liability reversal & payments |
|-------|--|-------------------------------|
| 1 | Construction of Public Toilet at Makardhokda | 94,613.19 |
| 2 | RO plant at Khadsangi and Ambdi(B) village | 7922.81 |
| 3 | Toilet Construction at ZP Nand | 109561.23 |
| | Total(B) | 212097.23 |

Liabilities Reversal/Payments

| S No. | Activity | Liability reversal & Payments |
|-------|------------------------|-------------------------------|
| 1 | RO plant at ZP Shirpur | -1307.88 |
| 2 | GI Pipeline Pahami | -527.45 |
| 3 | Green haat | -65410.81 |
| | Total(C) | -67246.14 |

Total Expenditure for FY 2022-23(Rs)

Grand Total (A+B+C) Rs 5479616.09

W 3.5.2023
क्षेत्रीय कार्मिक प्रबंधक
उमरेर क्षेत्र

A 4/5/23
क्षेत्रीय वित्त प्रबंधक
उमरेर क्षेत्र

the d 3.5.2023
क्षेत्रीय चिकित्सा अधिकारी
उमरेर क्षेत्र

W 2/5/23
अमला अधिकारी (सिविल)
उमरेर क्षेत्र

W 3-5-23
क्षेत्रीय नोडल अधिकारी (पर्यावरण)
उमरेर क्षेत्र

केवल नागपुर कोर्ट के अधिकार क्षेत्र में
Court Only



वेस्टर्न कोलफील्ड्स लिमिटेड/Western Coalfields Limited
मिनिरात कंपनी (A Miniratna Company)

कोल इंडिया लिमिटेड की अनुषंगी कम्पनी (A Subsidiary of Coal India Limited)

10MH1975GOI018626

मानव संसाधन विभाग

Address: WCL, Umrer Area, PO:Umrer, Dist:

पता : वेकोलि, उमरेर क्षेत्र, पो. उमरेर, जिला-नागपुर, महाराष्ट्र, पिन-441204

Nagpur, MS, PIN-441204

Email: apmwclua@gmail.com

Fax: 07116-247374, Phone: 07116-247429, 07116-247374

संदर्भ सं: वेकोलि/उमरेर/मा.सं./2025-26/CSR / 2110

दिनांक :- 29.12.25

प्रति,

विभागाध्यक्ष (कल्याण/सीएसआर)

वेकोली मुख्यालय, नागपुर

विषय : Expenditure Report CSR 2025-2026- Dec 25

महोदय,

The details regarding the expenditure of the Umrer area are being submitted. The details are mentioned in the enclosed prescribed format.

29.12.25

क्षेत्रीय मानव संसाधन प्रबंधक

उमरेर क्षेत्र

प्रतिलिपि :-

- 1) महाप्रबंधक (संचालन), उमरेर क्षेत्र
- 2) क्षेत्रीय कार्मिक प्रबंधक, उमरेर क्षेत्र
- 3) क्षेत्रीय वित्त प्रबंधक, उमरेर क्षेत्र
- 4) क्षेत्रीय चिकित्सा अधिकारी, उमरेर क्षेत्र
- 5) अमला अधिकारी (सिविल), उमरेर क्षेत्र
- 6) अमला अधिकारी (वि एवं यां), उमरेर क्षेत्र
- 7) क्षेत्रीय नोडल अधिकारी (पर्यावरण), उमरेर क्षेत्र
- 8) प्रबंधक (सी.डी.), उमरेर क्षेत्र
- 9) प्रबंधक (वित्त), उमरेर क्षेत्र - बिल सीएसआर
- 10) अमला अधिकारी (एम.एम), उमरेर क्षेत्र

CSR 2025-26 Umrer Area - Dec 2025

| Sl No. | CSR Activity Details | Sanction Amount in Rs Lakhs | WO value (Rs Lakh) | Status | Expenditure (Rs Lakh) | Difference (Sanction) | Additional 5% Amount added for RE | Amount to be Returned | Expected Work complete expenditure will booked by | Photo of Work |
|-------------------|---|-----------------------------|--------------------|--|-----------------------|-----------------------|-----------------------------------|-----------------------|---|---------------|
| 1 | Swachta Activities | | | 1) Swachta Pakhwada Bill Submitted for Rs 8260/- Work completed 2) Fogging machine Through GeM Rs 86679/- Work Completed 3) Hand Wash Station Estimated 1.327 Lakh - Site Handover done 4) Swachta He Sewa Bill submitted for Rs 17740/- Work completed | | | | | 31st Dec 25 | |
| 2 | Organizing Medical Camps at nearby villages of mines and also providing service under CSR clinic at Area Hospital | 3.5 | 3.20 | Work order of Rs. 4,49,282 issued to KAPL Rest of the amount will be utilised for Special Camps (Ortho, Cancer etc) | 3.09 | 30282 | 0 | 0 | 2 medical camps planned Jan 25 & Feb 25 | |
| 3 | Providing 8 nos. Smart Class equipment to Schools Near Umrer Area ZP Rajawade-1, ZP Kalamna-1, ZP Bhagwanpur-1, Ashramshala Tribal Udase-2, ZP Dhammangan-1, ZP Dahegaon-1, ZP Kanva -1 | 5 | 4.49 | Work order issued Rs 10,47,840 Work completed | 4.47 | 51000 | 0 | 0 | | |
| 4 | Making drinking water provision by providing RO plant at Hewati Village of Hewati Grampanchayat (Only RO Machine to be installed - Room already available) | 10.5 | 10.479 | Work Order - Rs 5,43,707.49 , Work in Progress Liability Booked - | 10.48 | 2100 | 0 | 0 | 31st Dec 25 | Yes |
| 5 | Making stage for cultural activities/wholistic development of students at ZP Dahegaon school of Saiki Grampanchayat | 7 | 5.438 | Work Order Rs 2,07,537.56, Work Completed Liability booked | 4.61 | 156200 | 570892.35 | 129108 | 31st Dec 25 | Yes |
| 6 | Providing and fixing paver block and making structural steel at Jawahar Vidyalaya of Makardhokda Village under CSR activity for MKD-III OCM of Umrer Ar-aa. | 3 | 2.08 | Work Awarded Rs. 6,31,052.85 , Work in Progress Liability booked | 1.76 | 92000 | 217913.85 | 82086 | 31st Dec 25 | Yes |
| 7 | Solar Panel for RO plant facility of Ghoturi village of Waigaon Ghoturi Grampanchayat | 11 | 6.32 | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/-, Work Completed | 4.72 | 468000 | 662604.6 | 437395 | 31st Dec 25 | Yes |
| 8 | Solar Panel for ZP school Kanva village Shirpur Grampanchayat | | | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Completed | 0 | | | | | Yes |
| 9 | Solar Panel for RO plant facility at Bhagwanpur village of Bhagwanpur Grampanchayat | 10.5 | 8.5 | Work Awarded For 3 solar projects sl no. 7,8,9 for Rs 849954/- Work Completed | 0 | 200000 | 0 | 200000 | 5th Jan 26 | Yes |
| 10 | Making drinking water provision by providing RO Plant with Solar Panel for Nand Village of Nand Grampanchayat | 11 | 9.12 | Work Awarded Rs 9,11,764.53 , Site handover done | 0 | 188000 | 957353.25 | 142647 | 5th Jan 26 | |
| 11 | Making stage for cultural activities/wholistic development of students at ZP Saiki school of Saiki Grampanchayat | 5 | 4.01 | Work Awarded Rs 4,00,041.52.00, Work Started at Site Liability booked | 3.39 | 99000 | 420043.05 | 79957 | 31st Dec 25 | Yes |
| 12 | Making Toilet and Handwashing facility at ZP Saigaon of Bhagwanpur Gram Panchyat | 8.5 | 5.47 | Work Awarded Rs 5,46,459.70, Work Started at Site Liability booked | 5.46 | 303000 | 573783 | 276217 | 31st Dec 25 | |
| 13 | Making Toilet and Handwashing facility at ZP Kharkhada of Bhagwanpur Grampanchayat | 8.5 | 5.96 | Work Awarded Rs 5,95,938.45 , Work Started at Site Liability booked | 5.96 | 254000 | 625732.8 | 224267 | 31st Dec 25 | |
| 14 | Providing Solar Pump and associated tank at Besur village of Besur Grampanchayat | 6 | 2.25 | Work Awarded Rs 2,24,275.77 , Site handover done | 0 | 375000 | 235488.75 | 364511 | 31st Dec 25 | Yes |
| 15 | Making drinking water provision by providing RO plant for Saigaon Village Bhagwanpur of Grampanchayat with Solar Panel | 11 | 9.57 | Work Awarded Rs 9,56,971.50 , Work Started at Site Liability booked | 9.57 | 143000 | 1004819.55 | 95180 | 5th Jan 26 | |
| 16 | Making drinking water provision by providing RO plant for Kharkhada Village of Bhagwanpur Grampanchayat with Solar Panel | 11 | 9.78 | Work Awarded Rs 9,77,559.73 , Work Started at Site Liability booked | 9.78 | 122000 | 1026436.95 | 73563 | 5th Jan 26 | |
| 17 | 56 Cycle for students of ZP school ZP Nand of Nand Grampanchayat | 3 | 2.324 | Work completed | 2.324 | 67600 | 0 | 67600 | 0 | |
| 18 | Open air gym equipment at Borebatti of Waigaon Ghoturi Grampanchayat | 6 | 4.15 | Work Awarded Rs 4,14,432.90 , Site handover done | 0.67 | 185000 | 435153.6 | 164846 | 31st Dec 25 | |
| 19 | Drinking water facility for public by providing 8 nos. water purifier at police station Bhiwapur(1no), Land Record Office at Bhiwapur(1no.), Land record office at Umrer(1), and students of ZP Dhammangan(1), ZP Besur (1 no), ZP Khursapur (1 no.), ZP Welsakhra (1 no) ZP Nand Primary(1 no.) respectively | 10.5 | 0 | 1st Bid Failed 2nd Bid Commercial scrutiny | 0 | 0 | 0 | 0 | Work to be completed b 15th Jan 26 | |
| 20 | Making Bus-Stand at Nand Village of Nand Grampanchayat | 3 | 2.69 | Work Awarded Rs 2,68,002.55 , Work In progress | 0 | 31000 | 281402.1 | 18598 | 31st Dec 25 | |
| 21 | Making drinking water provision by providing RO plant at Chichala Village with Solar Panel in Chichala Grampanchayat | 11 | 9.25 | Work Awarded Rs 9,24,291.76 , Work In progress Liability booked | 0 | 175000 | 970505.55 | 129494 | 31st Dec 25 | |
| Total (A) | | 145 | 105.08 | | 66.29 | 2942182 | | 2485470.6 | 0 | |
| Sl No. | Panchayats | Budget(Rs Lakh) | Remark | | | | | | | |
| 1 | Installation of RO purifier at Jawahar school | 2 | 0 | 1st Bid Failed 2nd Bid Commercial scrutiny | 0 | 0 | 0 | 0 | Work to be completed by 15th Jan 26 | |
| 2 | Installation of Solar panel at Jawahar school | 6.5 | 2.65 | Work completed | 2.65 | 385000 | 0 | 385000 | 5th Jan 26 | |
| 3 | Providing Nutrition kit for students at Jawahar School, ZP Pachgaon School, ZP school Nand | 16 | 16 | MoU vetted, signing done. Fund transfer done for Rs 12.80 Lakh | 0 | 0 | 0 | 0 | 1st UC by 15th Feb 26 2nd UC by 10th March 26 | |

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Expenditure CSR 2024-25 -2 no new Activity Planning against Savings Included - Umrer Area

| # | CSR Activity Detail | Sanctioned Budget (In Rs Lakhs) | Updated Sanction value after activity 15 &16 | Work Order Value (In Rs Lakhs) | Funds Released (In Rs Lakhs) | Progressive Expenditure (In Rs Lakhs) | Surrendered | Current Status |
|----|--|---------------------------------|--|--------------------------------|------------------------------|---------------------------------------|-------------|--|
| 1 | Swachta Action Plan Activities | 2 | 2 | 197470 | 0 | 197470 | 0 | Work Completed |
| 2 | Medical Camps related to osteoporosis, cancer detection etc. | 4 | 4 | 395720.91 | | 393941 | 0 | Work Completed |
| 3 | Providing 3 no. of Smart Class equipment for ZP schools | 8.5 | 6.9 | 690000 | 0 | 690000 | 0 | Work completed |
| 4 | Providing BP recording machine for Rural Hospital of state government | 1.8 | 1.7 | 169728 | 0 | 169728 | 0 | Work completed |
| 5 | Making Toilet and Handwashing facility at ZP Nand School (for improving students' health and hygiene) | 7 | 7.06 | 703652.59 | 0 | 703652 | 0 | Work Completed |
| 6 | Providing Solar Pump in Khursapar village | 4 | 3.72 | 371700 | 0 | 371700 | 0 | Work Completed |
| 7 | Making drinking water provision through RO plant for villagers in Khandarhari Village | 8 | 6.85 | 684206.21 | 0 | 684206 | 0 | Work Completed |
| 8 | Providing protein powder to patients (pregnant, lactating women, children, etc.) through Rural Hospital (State government hospital in Umred) | 2 | 2 | 199975 | 0 | 199975 | 0 | Work Completed |
| 9 | Providing 7 no. water cooler cum purifier to ZP schools/ hospital/ public office. | 10 | 9.74 | 939000 | 0 | 939000 | 0 | Work completed |
| 10 | Providing bi-cycles to school students | 1.5 | 1.12 | 112068 | 0 | 112068 | 0 | Work completed |
| 11 | Support to SHGs by providing machinery/appliance to support their livelihood activities | 2 | 2 | 198000 | 0 | 198000 | 0 | Work Completed Billing Value - 198000/- (2 se -Atta Chakki - 135000/- - Kandap Machine-63000/- |

| | | | | | | | | | |
|----|--|--------------|--------------|-------------------|----------|----------------|----------|----------|----------------|
| 13 | Providing solar High mast in Waigaon- Ghoturli GP and Shirpur GP | 8.5 | 6.22 | 621388 | 0 | 621388 | 0 | 0 | Work Completed |
| 14 | Making Toilet and Handwashing facility at ZP Lohara (Khursapar GP) School (for improving students' health and hygiene) | 7 | 5.09 | 508764.03 | 0 | 508763 | 0 | 0 | Work Completed |
| 15 | Installing of Solar panels for pump in Besur village | 6.25 | 4.41 | 441060 | 0 | 441060 | 0 | 0 | Work Completed |
| 16 | Bicycle for ZP pachgaon school | | 4.78 | 438980 | 0 | 438980 | 0 | 0 | Work completed |
| | 4 no. Smart class for schools | | 4.96 | 483800 | 0 | 483800 | 0 | 0 | Work completed |
| | Total | 72.55 | 72.55 | 7155512.74 | 0 | 7153731 | 0 | 0 | |

GST portion was booked In April 24 for SI no. 12 of CSR AAP 2023-24 (II)

4945

Grand total (I+II) & Total in SAP reconciled

7158676

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APM
Umrer Area

[Signature]
ANO(Env)
Umrer Area

[Signature]
ANO
Umrer Area

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SO(Chg)
Umrer Area

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APM
Umrer Area
2.4.2025



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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




OCTOBER 2025

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

| | | | | | |
|---|---|--------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/OCT-25/16 | DATE OF ISSUE | 25.11.2025 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO ₂ : IS 5182 (Part-06), SO ₂ :IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-10-25 TO 15-11-25 | |

| UMRER MANAGER OFFICE UJ00A1 | | | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03.10.2025 | 04.10.2025 | 285 | 168 | 45 | 16 | 12 | Cloudy sky / Light breeze |
| 18.10.2025 | 19.10.2025 | 297 | 180 | 48 | 18 | 13 | Clear sky / Light breeze |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH OCTember 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP UJ00A2 | | | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 03.10.2025 | 04.10.2025 | 322 | 188 | 58 | 23 | 15 | Cloudy sky / Light breeze |
| 18.10.2025 | 19.10.2025 | 305 | 179 | 50 | 19 | 14 | Clear sky / Light breeze |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH OCTember 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE UJ00A3 | | | | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 05.10.2025 | 06.10.2025 | 68 | 23 | 6 | BDL | Clear sky / Calm | |
| 06.10.2025 | 07.10.2025 | 71 | 25 | 7 | BDL | Clear sky / Calm | |
| 11.10.2025 | 12.10.2025 | 75 | 28 | 7 | BDL | Clear sky / Calm | |
| 12.10.2025 | 13.10.2025 | 80 | 30 | 9 | BDL | Clear sky / Calm | |
| 19.10.2025 | 20.10.2025 | 79 | 29 | 9 | BDL | Clear sky / Calm | |
| 20.10.2025 | 21.10.2025 | 83 | 33 | 12 | 10 | Clear sky / Calm | |
| 26.10.2025 | 27.10.2025 | 85 | 35 | 13 | 11 | Clear sky / Calm | |
| 27.10.2025 | 28.10.2025 | 81 | 31 | 10 | BDL | Clear sky / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

| NEAR PUMP HOUSE COLONY UJ00A4 | | | | | | | |
|---------------------------------|------------|--|-------------------|-----------------|-----------------|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 05.10.2025 | 06.10.2025 | 72 | 26 | 6 | BDL | Clear sky / Calm | |
| 06.10.2025 | 07.10.2025 | 74 | 28 | 7 | BDL | Clear sky / Calm | |
| 11.10.2025 | 12.10.2025 | 82 | 32 | 12 | 10 | Clear sky / Calm | |
| 12.10.2025 | 13.10.2025 | 84 | 34 | 13 | 10 | Clear sky / Calm | |
| 19.10.2025 | 20.10.2025 | 78 | 27 | 7 | BDL | Clear sky / Calm | |
| 20.10.2025 | 21.10.2025 | 75 | 24 | 6 | BDL | Clear sky / Calm | |
| 26.10.2025 | 27.10.2025 | 80 | 31 | 11 | BDL | Clear sky / Calm | |
| 27.10.2025 | 28.10.2025 | 83 | 32 | 12 | BDL | Clear sky / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
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FUGITIVE DUST MONITORING

| | | | |
|--------------------------|---|----------------------|--|
| TEST REQUIRED | SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23, PM2.5: IS 5182 Part 24 | | |
| SAMPLE DESCRIPTION | Air sample(Fugitive) | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-10-25 TO 15-11-25 | |

| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|------------------|-----------------------------------|
| FROM | TO | SPM | PM ₁₀ | |
| 11.10.2025 | 12.10.2025 | 385 | 277 | CLOUDY / CALM |

| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|------------------|-----------------------------------|
| FROM | TO | SPM | PM ₁₀ | |
| 11.10.2025 | 12.10.2025 | 370 | 262 | CLOUDY / CALM |

| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|------------------|-----------------------------------|
| FROM | TO | SPM | PM ₁₀ | |
| 11.10.2025 | 12.10.2025 | 392 | 290 | CLOUDY / CALM |

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|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
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|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-10-25 TO 15-11-25 |


| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 04.10.2025 | 7.92 | 23 | 32 | BDL |
| 18.10.2025 | 7.81 | 29 | 36 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 04.10.2025 | 7.62 | 17 | 24 | BDL |
| 18.10.2025 | 7.53 | 15 | 20 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 04.10.2025 | 27 | 12.3 |
| 18.10.2025 | 23 | 13.4 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| OCT'25 | 11.10.2025 | 67.1 | 59.8 |
| OCT'25 | 27.10.2025 | 68.5 | 61.0 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| OCT'25 | 11.10.2025 | 53.0 | 44.1 |
| OCT'25 | 27.10.2025 | 53.4 | 42.8 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


Yogesh Pidurkar
Reviewed by


Amol Kamble
Authorised by

1. This report cannot be reproduced in part or full without written of the management.
2. Laboratory activities are performed at the Laboratory permanent facility that is ground floor Environment Lab, CMPDI RI-IV, Nagpur.
3. This report refers to the values related to the items tested.
***** End of report *****



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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




NOVEMBER 2025

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

| | | | | | |
|---|---|--------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/NOV-25/16 | DATE OF ISSUE | 24-12-2025 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | LQR 47 | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-11-25 TO 15-12-25 | |

| UMRER MANAGER OFFICE | | UUOA1 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 08-11-2025 | 09-11-2025 | 266 | 152 | 42 | 20 | 11 | Clear sky / Calm |
| 21-11-2025 | 22-11-2025 | 278 | 166 | 45 | 25 | 12 | Clear sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH NOVember 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP | | UUOA2 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 08-11-2025 | 09-11-2025 | 285 | 179 | 49 | 23 | 14 | Clear sky / Calm |
| 21-11-2025 | 22-11-2025 | 272 | 169 | 43 | 21 | 16 | Clear sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH NOVember 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE | | UUOA3 | | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 05-11-2025 | 06-11-2025 | 70 | 26 | 8 | BDL | Clear sky / Calm | |
| 06-11-2025 | 07-11-2025 | 72 | 29 | 9 | BDL | Clear sky / Calm | |
| 14-11-2025 | 15-11-2025 | 65 | 23 | 6 | BDL | Clear sky / Calm | |
| 15-11-2025 | 16-11-2025 | 69 | 25 | 7 | BDL | Clear sky / Calm | |
| 22-11-2025 | 23-11-2025 | 77 | 30 | 10 | BDL | Clear sky / Calm | |
| 23-11-2025 | 24-11-2025 | 80 | 32 | 11 | BDL | Clear sky / Calm | |
| 28-11-2025 | 29-11-2025 | 82 | 35 | 13 | 11 | Clear sky / Calm | |
| 29-11-2025 | 30-11-2025 | 85 | 37 | 14 | 12 | Clear sky / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

| NEAR PUMP HOUSE COLONY | | UUOA4 | | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|------------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 05-11-2025 | 06-11-2025 | 65 | 23 | 6 | BDL | Clear sky / Calm | |
| 06-11-2025 | 07-11-2025 | 69 | 25 | 7 | BDL | Clear sky / Calm | |
| 14-11-2025 | 15-11-2025 | 75 | 28 | 8 | BDL | Clear sky / Calm | |
| 15-11-2025 | 16-11-2025 | 80 | 30 | 10 | BDL | Clear sky / Calm | |
| 22-11-2025 | 23-11-2025 | 77 | 28 | 7 | BDL | Clear sky / Calm | |
| 23-11-2025 | 24-11-2025 | 82 | 30 | 9 | BDL | Clear sky / Calm | |
| 28-11-2025 | 29-11-2025 | 85 | 33 | 12 | 10 | Clear sky / Calm | |
| 29-11-2025 | 30-11-2025 | 87 | 36 | 13 | 11 | Clear sky / Calm | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

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|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

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|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-11-25 TO 15-12-25 |

| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 08-11-2025 | 7.41 | 16 | 40 | BDL |
| 23-11-2025 | 6.51 | 22 | 32 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 08-11-2025 | 7.1 | 19 | 28 | BDL |
| 23-11-2025 | 7.24 | 16 | 24 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 08-11-2025 | 25 | 10.8 |
| 23-11-2025 | 18 | 11.7 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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| | | |
|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| NOV'25 | 11-11-2025 | 67.9 | 60.5 |
| NOV'25 | 27-11-2025 | 69.3 | 61.7 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| NOV'25 | 11-11-2025 | 54.8 | 43.2 |
| NOV'25 | 27-11-2025 | 53.3 | 52.8 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




DECEMBER 2025

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
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| | | | | | |
|---|---|----------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/DEC-25/16 | DATE OF ISSUE | 25-01-2026 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | LQR 47 | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-12-25 TO 15-01-26 | | | |

| UMRER MANAGER OFFICE | | UJUA1 | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-12-2025 | 07-12-2025 | 295 | 189 | 52 | 28 | 17 | Cloudy sky / Calm |
| 21-12-2025 | 22-12-2025 | 283 | 177 | 48 | 25 | 15 | Cloudy sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP | | UJUA2 | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-12-2025 | 07-12-2025 | 264 | 163 | 42 | 22 | 14 | Cloudy sky / Calm |
| 21-12-2025 | 22-12-2025 | 258 | 157 | 40 | 19 | 13 | Cloudy sky / Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE | | UJUA3 | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 07-12-2025 | 08-12-2025 | 83 | 34 | 21 | 13 | Clear/ Calm |
| 08-12-2025 | 09-12-2025 | 77 | 29 | 15 | BDL | Clear/ Calm |
| 13-12-2025 | 14-12-2025 | 75 | 27 | 16 | BDL | Clear/ Calm |
| 14-12-2025 | 15-12-2025 | 69 | 26 | 17 | BDL | Clear/ Calm |
| 19-12-2025 | 20-12-2025 | 80 | 32 | 19 | 12 | Clear/ Light breeze |
| 20-12-2025 | 21-12-2025 | 74 | 29 | 15 | BDL | Clear/ Light breeze |
| 26-12-2025 | 27-12-2025 | 71 | 28 | 14 | BDL | Clear/ Light breeze |
| 27-12-2025 | 28-12-2025 | 81 | 31 | 16 | 11 | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

| NEAR PUMP HOUSE COLONY | | UJUA4 | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 07-12-2025 | 08-12-2025 | 80 | 31 | 17 | 11 | Clear/ Calm |
| 08-12-2025 | 09-12-2025 | 83 | 34 | 18 | 12 | Clear/ Calm |
| 13-12-2025 | 14-12-2025 | 84 | 36 | 20 | 13 | Clear/ Calm |
| 14-12-2025 | 15-12-2025 | 78 | 27 | 15 | BDL | Clear/ Calm |
| 19-12-2025 | 20-12-2025 | 72 | 25 | 14 | BDL | Clear/ Light breeze |
| 20-12-2025 | 21-12-2025 | 75 | 26 | 16 | BDL | Clear/ Light breeze |
| 26-12-2025 | 27-12-2025 | 76 | 29 | 14 | BDL | Clear/ Light breeze |
| 27-12-2025 | 28-12-2025 | 68 | 27 | 13 | BDL | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

| | | | |
|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-12-25 TO 15-01-26 |

| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-12-2025 | 7.78 | 30 | 48 | BDL |
| 21-12-2025 | 7.67 | 28 | 44 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-12-2025 | 7.2 | 14 | 20 | BDL |
| 21-12-2025 | 7.35 | 19 | 32 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 06-12-2025 | 27 | 12.3 |
| 21-12-2025 | 21 | 10.8 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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|---|--------------------|---|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| DEC'25 | 12-12-2025 | 68.8 | 61.8 |
| DEC'25 | 26-12-2025 | 68.1 | 60.5 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| DEC'25 | 12-12-2025 | 51.2 | 43.9 |
| DEC'25 | 26-12-2025 | 52.2 | 44.2 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




JANUARY 2026

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
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|---|---|--------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/JAN-26/16 | DATE OF ISSUE | 25-02-2026 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO ₂ : IS 5182 (Part-06), SO ₂ :IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-01-26 TO 15-02-26 | |

| UMRER MANAGER OFFICE | | UUOA1 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-01-2026 | 07-01-2026 | 324 | 199 | 56 | 26 | 18 | Clear/ Calm |
| 27-01-2026 | 28-01-2026 | 302 | 186 | 50 | 23 | 16 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |


| NEAR WORKSHOP | | UUOA2 | | | | | |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-01-2026 | 07-01-2026 | 290 | 177 | 48 | 24 | 17 | Clear/ Calm |
| 27-01-2026 | 28-01-2026 | 283 | 169 | 44 | 20 | 15 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE | | UUOA3 | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 04-01-2026 | 05-01-2026 | 79 | 29 | 14 | BDL | Clear/ Light breeze |
| 05-01-2026 | 06-01-2026 | 84 | 36 | 16 | 11 | Clear/ Light breeze |
| 10-01-2026 | 11-01-2026 | 76 | 27 | 15 | BDL | Clear/ Light breeze |
| 11-01-2026 | 12-01-2026 | 82 | 31 | 14 | BDL | Clear/ Light breeze |
| 15-01-2026 | 16-01-2026 | 83 | 33 | 16 | BDL | Clear/ Light breeze |
| 17-01-2026 | 18-01-2026 | 77 | 28 | 12 | BDL | Clear/ Light breeze |
| 21-01-2026 | 22-01-2026 | 81 | 30 | 13 | BDL | Clear/ Light breeze |
| 22-01-2026 | 23-01-2026 | 85 | 36 | 14 | 12 | Clear/ Light breeze |
| 29-01-2026 | 30-01-2026 | 86 | 37 | 18 | 13 | Clear/ Light breeze |
| 30-01-2026 | 31-01-2026 | 78 | 28 | 13 | BDL | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

| NEAR PUMP HOUSE COLONY | | UUOA4 | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 04-01-2026 | 05-01-2026 | 84 | 35 | 18 | 10 | Clear/ Light breeze |
| 05-01-2026 | 06-01-2026 | 80 | 30 | 14 | BDL | Clear/ Light breeze |
| 10-01-2026 | 11-01-2026 | 76 | 25 | 10 | BDL | Clear/ Light breeze |
| 11-01-2026 | 12-01-2026 | 78 | 27 | 11 | BDL | Clear/ Light breeze |
| 15-01-2026 | 16-01-2026 | 85 | 34 | 19 | 11 | Clear/ Light breeze |
| 17-01-2026 | 18-01-2026 | 83 | 31 | 17 | BDL | Clear/ Light breeze |
| 21-01-2026 | 22-01-2026 | 79 | 28 | 13 | BDL | Clear/ Light breeze |
| 22-01-2026 | 23-01-2026 | 80 | 31 | 14 | BDL | Clear/ Light breeze |
| 29-01-2026 | 30-01-2026 | 81 | 32 | 15 | BDL | Clear/ Light breeze |
| 30-01-2026 | 31-01-2026 | 75 | 26 | 12 | BDL | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |



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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  EC-7102 |
|---|--------------------|--|

FUGITIVE DUST MONITORING

| | | | |
|--------------------------|---|----------------------|--|
| TEST REQUIRED | SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23, PM2.5: IS 5182 Part 24 | | |
| SAMPLE DESCRIPTION | Air sample(Fugitive) | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-01-26 TO 15-02-26 | |

| WEIGH BRIDGE UUOF1 | | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|--|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) | |
| FROM | TO | SPM | PM ₁₀ | | |
| 06-01-2026 | 07-01-2026 | 375 | 264 | Clear/ Calm | |

| RAILWAY SIDING UUOF2 | | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|--|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) | |
| FROM | TO | SPM | PM ₁₀ | | |
| 07-01-2026 | 08-01-2026 | 362 | 253 | Clear/ Calm | |

| CHP UUOF3 | | | | | |
|----------------------------|------------|--|------------------|-----------------------------------|--|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | ENVIRONMENT CONDITIONS (Sky/Wind) | |
| FROM | TO | SPM | PM ₁₀ | | |
| 07-01-2026 | 08-01-2026 | 382 | 271 | Clear/ Calm | |



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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

| | | | |
|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-01-26 TO 15-02-26 |


| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-01-2026 | 7.01 | 28 | 40 | BDL |
| 27-01-2026 | 7.14 | 32 | 44 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 06-01-2026 | 7.43 | 26 | 36 | BDL |
| 27-01-2026 | 7.34 | 22 | 32 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 06-01-2026 | 20 | 10.2 |
| 27-01-2026 | 22 | 11.4 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|---|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| JAN'26 | 11-01-2026 | 66.8 | 60.5 |
| JAN'26 | 22-01-2026 | 67.3 | 61.7 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|---|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | | DETECTION LIMIT | 20 |
| JAN'26 | 11-01-2026 | 53.3 | 44.2 |
| JAN'26 | 22-01-2026 | 51.8 | 43.8 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




FEBRUARY 2026

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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|---|---|--------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/FEB-26/16 | DATE OF ISSUE | 25-03-2026 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO ₂ : IS 5182 (Part-06), SO ₂ :IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | | LQR 47 | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | | | 16-02-26 TO 15-03-26 | |

| UMRER MANAGER OFFICE | | UJOOA1 | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 07-02-2026 | 08-02-2026 | 295 | 180 | 54 | 20 | 16 | Clear/ Calm |
| 20-02-2026 | 21-02-2026 | 287 | 172 | 47 | 18 | 14 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| NEAR WORKSHOP | | UJOOA2 | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|---|------------|--|------------------|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 07-02-2026 | 08-02-2026 | 277 | 165 | 44 | 19 | 15 | Clear/ Calm |
| 20-02-2026 | 21-02-2026 | 269 | 152 | 42 | 17 | 13 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE | | UJOOA3 | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 04-02-2026 | 05-02-2026 | 82 | 32 | 13 | BDL | Clear/ Light breeze |
| 05-02-2026 | 06-02-2026 | 80 | 30 | 12 | BDL | Clear/ Light breeze |
| 11-02-2026 | 12-02-2026 | 77 | 29 | 10 | BDL | Clear/ Light breeze |
| 12-02-2026 | 13-02-2026 | 76 | 27 | 9 | BDL | Clear/ Light breeze |
| 18-02-2026 | 19-02-2026 | 81 | 31 | 10 | BDL | Clear/ Light breeze |
| 19-02-2026 | 20-02-2026 | 78 | 27 | 9 | BDL | Clear/ Light breeze |
| 26-02-2026 | 27-02-2026 | 75 | 26 | 9 | BDL | Clear/ Light breeze |
| 27-02-2026 | 28-02-2026 | 74 | 25 | 8 | BDL | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

| NEAR PUMP HOUSE COLONY | | UJOOA4 | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
|----------------------------|------------|--|-------------------|-----------------|-----------------|-----------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 04-02-2026 | 05-02-2026 | 83 | 33 | 14 | BDL | Clear/ Light breeze |
| 05-02-2026 | 06-02-2026 | 81 | 29 | 12 | BDL | Clear/ Light breeze |
| 11-02-2026 | 12-02-2026 | 78 | 28 | 10 | BDL | Clear/ Light breeze |
| 12-02-2026 | 13-02-2026 | 76 | 26 | 10 | BDL | Clear/ Light breeze |
| 18-02-2026 | 19-02-2026 | 80 | 31 | 11 | BDL | Clear/ Light breeze |
| 19-02-2026 | 20-02-2026 | 77 | 28 | 10 | BDL | Clear/ Light breeze |
| 26-02-2026 | 27-02-2026 | 75 | 24 | 9 | BDL | Clear/ Light breeze |
| 27-02-2026 | 28-02-2026 | 76 | 27 | 9 | BDL | Clear/ Light breeze |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | |

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|---|--------------------|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

| | | | |
|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-02-26 TO 15-03-26 |


| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 08-02-2026 | 8.12 | 34 | 52 | BDL |
| 21-02-2026 | 7.8 | 30 | 48 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 08-02-2026 | 7.71 | 24 | 32 | BDL |
| 21-02-2026 | 7.87 | 20 | 28 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 08-02-2026 | 28 | 12.8 |
| 21-02-2026 | 32 | 10.6 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | FEB'26 | 04-02-2026 | 64.8 |
| FEB'26 | 19-02-2026 | 65.0 | 64.4 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 |

| COLONY: | | UUON2 | |
|--|---------------------------|----------------------------------|------------------------------------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME |
| | DETECTION LIMIT | 20 | 20 |
| | FEB'26 | 04-02-2026 | 47.2 |
| FEB'26 | 19-02-2026 | 46.7 | 43.2 |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 |


Yogesh Pidurkar
Reviewed by


Amol Kamble
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ENVIRONMENTAL MONITORING REPORT

UMRER OC

UMRER AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




MARCH 2026

Environment Laboratory

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

| | | | | | |
|---|---|----------------------|------------|--|--|
| Environment Laboratory CMPDI RI-IV, NAGPUR | | Test Report | |  TC-7102 | |
| TEST REPORT NO. | RIN/TR/MAR-26/16 | DATE OF ISSUE | 25-04-2026 | | |
| NAME OF CUSTOMER | GM(ENV.), WCL(HQ), NAGPUR | | | | |
| TEST REQUIRED | SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2) | | | | |
| SAMPLE DESCRIPTION | AIR SAMPLE | SAMPLING PLAN : | LQR 47 | | |
| SAMPLING METHOD : LSOP 4 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES: | 16-03-26 TO 15-04-26 | | | |

| UMRER MANAGER OFFICE UJOOA1 | | | | | | | |
|--|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-03-2026 | 07-03-2026 | 302 | 192 | 48 | 21 | 15 | Clear/ Calm |
| 20-03-2026 | 21-03-2026 | 321 | 222 | 55 | 27 | 19 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |


| NEAR WORKSHOP UJOOA2 | | | | | | | |
|--|------------|--|------------------|-------------------|-----------------|-----------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | SPM | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | |
| 06-03-2026 | 07-03-2026 | 290 | 188 | 49 | 20 | 16 | Clear/ Calm |
| 20-03-2026 | 21-03-2026 | 315 | 210 | 52 | 24 | 18 | Clear/ Calm |
| STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECEMBER 2000 | | 600 | 300 | - | 120 | 120 | |

| KANWA VILLAGE UJOOA3 | | | | | | | |
|----------------------------|------------|--|-------------------|-----------------|-----------------|---------------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 04-03-2026 | 05-03-2026 | 74 | 24 | 8 | BDL | Clear/ Light breeze | |
| 05-03-2026 | 06-03-2026 | 77 | 26 | 9 | BDL | Clear/ Light breeze | |
| 10-03-2026 | 11-03-2026 | 79 | 28 | 9 | BDL | Clear/ Light breeze | |
| 11-03-2026 | 12-03-2026 | 82 | 31 | 11 | BDL | Clear/ Light breeze | |
| 17-03-2026 | 18-03-2026 | 80 | 30 | 10 | BDL | Clear/ Light breeze | |
| 18-03-2026 | 19-03-2026 | 84 | 32 | 12 | BDL | Clear/ Light breeze | |
| 21-03-2026 | 22-03-2026 | 83 | 31 | 13 | BDL | Clear/ Light breeze | |
| 22-03-2026 | 23-03-2026 | 85 | 35 | 14 | 10 | Clear/ Light breeze | |
| 26-03-2026 | 27-03-2026 | 81 | 32 | 12 | BDL | Clear/ Light breeze | |
| 27-03-2026 | 28-03-2026 | 86 | 36 | 14 | 11 | Clear/ Light breeze | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |

| NEAR PUMP HOUSE COLONY UJOOA4 | | | | | | | |
|---------------------------------|------------|--|-------------------|-----------------|-----------------|---------------------|--------------------------------------|
| DATE(dd:mm:yy) OF SAMPLING | | PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$) | | | | | ENVIRONMENT CONDITIONS (Sky/Wind) |
| FROM | TO | PM ₁₀ | PM _{2.5} | NO ₂ | SO ₂ | | |
| 04-03-2026 | 05-03-2026 | 72 | 22 | 9 | BDL | Clear/ Light breeze | |
| 05-03-2026 | 06-03-2026 | 75 | 25 | 10 | BDL | Clear/ Light breeze | |
| 10-03-2026 | 11-03-2026 | 78 | 27 | 10 | BDL | Clear/ Light breeze | |
| 11-03-2026 | 12-03-2026 | 81 | 31 | 11 | BDL | Clear/ Light breeze | |
| 17-03-2026 | 18-03-2026 | 83 | 32 | 12 | BDL | Clear/ Light breeze | |
| 18-03-2026 | 19-03-2026 | 80 | 31 | 13 | BDL | Clear/ Light breeze | |
| 21-03-2026 | 22-03-2026 | 82 | 30 | 11 | BDL | Clear/ Light breeze | |
| 22-03-2026 | 23-03-2026 | 84 | 33 | 12 | BDL | Clear/ Light breeze | |
| 26-03-2026 | 27-03-2026 | 85 | 34 | 15 | 12 | Clear/ Light breeze | |
| 27-03-2026 | 28-03-2026 | 83 | 32 | 14 | 11 | Clear/ Light breeze | |
| NAAQS, 2009 | | 100 | 60 | 80 | 80 | | |



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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  TC-7102 |
|---|--------------------|--|

| | | | |
|--------------------|---|---|----------------------|
| SAMPLE DESCRIPTION | Water sample | | |
| Test Required | pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44) | | |
| SAMPLING METHOD | LSOP 5 | PERIOD OF PERFORMANCE OF LAB ACTIVITIES : | 16-03-26 TO 15-04-26 |


| MINE WATER DISCHARGE: UUOW1 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 07-03-2026 | 7.59 | 40 | 52 | BDL |
| 21-03-2026 | 7.21 | 32 | 44 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| ETP: UUOW2 | | | | |
|---|------------------|---------------|--------------|----------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | | | |
| | pH | TSS (in mg/l) | COD(in mg/l) | O & G(in mg/l) |
| DETECTION LIMIT | 2 | 10 | 4 | 2 |
| 07-03-2026 | 7.43 | 22 | 28 | BDL |
| 21-03-2026 | 7.88 | 26 | 36 | BDL |
| STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000 | 5.5 - 9.0 | 100 | 250 | 10 |

| STP: UUOW3 | | |
|---|------------------|--------------|
| DATE OF SAMPLE COLLECTION | ANALYSIS RESULTS | |
| | TSS (in mg/l) | BOD(in mg/l) |
| DETECTION LIMIT | 10 | 2 |
| 07-03-2026 | 34 | 11.6 |
| 21-03-2026 | 36 | 12.4 |
| GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993 | 100 | 30 |

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| Environment Laboratory CMPDI RI-IV, NAGPUR | Test Report |  |
|---|--------------------|---|

NOISE LEVEL MONITORING DATA

| | |
|--------------------|---|
| SAMPLE DESCRIPTION | NOISE SAMPLE |
| Test Required | CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT |
| SAMPLING METHOD | LSOP 6 |

| CHP: | | UUON1 | | |
|--|---------------------------|----------------------------------|------------------------------------|------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME | |
| | | DETECTION LIMIT | 20 | 20 |
| | MAR'26 | 04-03-2026 | 62.7 | 61.1 |
| MAR'26 | 27-03-2026 | 64.4 | 62.7 | |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 75 | 70 | |

| COLONY: | | UUON2 | | |
|--|---------------------------|----------------------------------|------------------------------------|------|
| MONTH | DATE OF SAMPLE COLLECTION | NOISE LEVEL IN dB(A) DAY TIME | NOISE LEVEL IN dB(A) NIGHT TIME | |
| | | DETECTION LIMIT | 20 | 20 |
| | MAR'26 | 04-03-2026 | 49.7 | 44.3 |
| MAR'26 | 27-03-2026 | 48.7 | 44.1 | |
| NOISE POLLUTION (REGULATION AND CONTROL) RULES | | 55 | 45 | |


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