### INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

### Review and updation of Mining Plan REPORT

## Kolkata regional office

|    | Mine f                                 | file No : KOL/JHK/SB(W   | 7)/1             | FE(T-1)   | Mine code : 30JHK18007 |
|----|--|--|------------------|---|------------------------|
|    | (i)                                    | Name of the Inspecting Officer and ID No.  | :                | KQ3 ) G. S. KANNAN  |                        |
|    | (ii)                                   | Designation  | :                | Senior Mining Geologist   |                        |
|    | (iii)                                  | Accompaning mine<br>Official with<br>Designation   | :                | Shri.Sawari, AGM & Shri.  | Tanveer, Geologist     |
|    | (iv)                                   | Date of Inspection   | :                | 20/11/2021  |                        |
|    | (v)                                    | Prev.inspection date   | :                | 11/11/2019  |                        |
|    |  | PAI  | RT-              | I : GENERAL INFORMATIO  | N                      |
| 1. | (a)                                    | Mine Name  |                  | TOPAILORE   |                        |
|    | (b)                                    | Registration NO.   | :                | IBM/5662/2011   |                        |
|    | (c)<br>(d)<br>(e)<br>(f)<br>(g)<br>(h) | Category<br>Type of Working<br>Postal address<br>State<br>District<br>Village<br>Taluka<br>Post office<br>Pin Code<br>FAX No.<br>E-mail<br>Phone<br>Police Station<br>First opening date<br>Weekly day of rest | :<br>:<br>:<br>: | Opencast<br>JHARKHAND<br>SINGHBHUM (WEST)<br>GUA<br>NOAMUNDI<br>GUA<br>833213<br>06596-263714 |                        |
| 2. |  | ess for<br>espondance  | :                |   |                        |
| 3. | (a)<br>(b)<br>(c)<br>(d)               |  | :                | JHK0005<br>14.15<br>08/03/2040  |                        |
| 4. | Miner                                  | ral worked   | :                | IRON ORE M  | ain                    |

| 5. | Name | and | Address | of | the |   |
|----|------|-----|---------|----|-----|---|
|    |      | -   |         |    |     | ~ |

| Lessee | <pre>STEEL AUTHORITY OF INDIA LTD.<br/>INDUSTRY HOUSE 5TH &amp; 6TH<br/>FLOOR 10, CAMAC STREET<br/>KOLKATA WEST BENGAL<br/>Phone:033-22822316/0462/3385<br/>FAX :033-22822316/0462</pre> |
|--------|--|
| Owner  | : Amarendu Prakash<br>Steel Authority Of India<br>Limited Bokaro Steel Plant<br>Bokaro-827001 SINGHBHUM<br>(WEST) JHARKHAND<br>Phone: 05642240300,024<br>FAX : (06542)240/82             |

6. Date of approval of Mining : MP modif under 17(3) MCR 2016 26/12/2019 Plan/Scheme of Mining

### PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

# Exploration :

| Sl.No. | Item  | Proposals   | Actual work  | Remarks  |
|--------|---|---|--|--|
| la     | Backlog of<br>previous year   | 28 Boreholes<br>has Proposed<br>during 2020-<br>2021  | No Boreholes has<br>drilled.   | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027)  |
| 1b     | Exploration over<br>lease area for<br>geological axis 1<br>or 2                 | 28 boreholes<br>was proposed<br>during 2020-<br>2021 in the<br>lease area<br>for<br>Geological<br>axis - 1  | No additional boreholes<br>have been drilled in the<br>lease area.   | Based on existing<br>drilled boreholes,<br>the entire lease<br>area is considered<br>as G-1  |
| lc     | Exploration<br>Agencies and<br>Expenditure in<br>lakh rupees<br>during the year | Own drilling<br>and/ or<br>Contract<br>drilling<br>machines were<br>used for<br>Exploration<br>in the past.   | 14 Boreholes were<br>drilled past and<br>expenditure details are<br>not available.   | MECL has drilled<br>14 boreholes for<br>total meterage of<br>383.95 meters to<br>assess the<br>quantity & quality<br>of iron ore fines<br>stacked in the<br>lease. |
| ld     | Balance area to<br>be explored to<br>bring Geological<br>axis in 1 or 2         | Exploration<br>was proposed<br>out at 100m X<br>100m grid<br>interval. 28<br>Additional<br>exploration<br>was proposed<br>in plan<br>period (2020-<br>2021)   | Exploration was not<br>carried out at 100m X<br>100m grid interval. Due<br>to want of Statuary<br>Clearances.  | MECL has drilled<br>14 boreholes for<br>total meterage of<br>383.95 meters to<br>assess the<br>quantity & quality<br>of iron ore fines<br>stacked in the<br>lease. |
| le     | Balance reserve<br>as on 01/04/20   | Reserves &<br>Resources as<br>on 01.04.2021<br>Proved<br>Mineral<br>Reserves<br>(111) = 3.76<br>million tons<br>Probable<br>Mineral<br>Reserves<br>(121) = 0.95<br>million tons<br>Inferred<br>Mineral<br>Resources<br>(333) = 1.95<br>million tons | Reserves & Resources as<br>on 01.04.2021<br>Proved Mineral Reserves<br>(111) = 5.11 million<br>tons<br>Probable Mineral<br>Reserves (121) = 0.95<br>million tons<br>Inferred Mineral<br>Resources (333) = 1.95<br>million tons | Mine is non-<br>working to delay<br>in want of<br>Statuary<br>Clearances. Hence<br>there is no mining<br>activity; R & R<br>has not been<br>changed.               |

| lf | General remarks<br>of inspecting<br>officers on<br>geology,<br>exploration etc | Topailore<br>Iron ore<br>deposit is<br>not a result<br>of a   | Iron ore fines are<br>carried to Topailore by<br>process of natural<br>sliding aided by<br>precipitation. Shale is | Nil |
|----|--|---|--|-----|
|    |  | conventional<br>Geological<br>Formation;<br>rather it is<br>result of<br>deposition of<br>Iron Ore<br>fines of -<br>10mm produced<br>in the | overlain.  |     |
|    |  | adjacent<br>lease.  |  |     |

# Development :

| Sl.No. | Item   | Propasals   | Actual work  | Remarks   |
|--------|--|---|--|---|
| 2a     | Location of<br>development<br>w.r.t.lease area   | Proposed to<br>work on North<br>of earthen<br>bundh-2 and<br>between<br>earthen bundh-<br>2 & 3 during<br>2020-2021 | Nil  | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 2b     | Separate benches<br>in topsoil,<br>overburden and<br>minerals (Rule<br>15)                             | It is proposed<br>to form 4<br>benches in<br>mineral.   | Nil  | Nil   |
| 2c     | Stripping ratio<br>or ore to OB<br>ratio   | No proposal,<br>there is no<br>OB/ waste in<br>this mines.  | Nil  | Nil   |
| 2d     | Quantity of<br>topsoil<br>generation in m3   | No proposal,<br>there is no<br>Topsoil<br>generation in<br>this mines.  | Nil  | Nil   |
| 2e     | Quantity of<br>overburden<br>generation in m3  | No proposal,<br>there is no OB<br>generation in<br>this mines.  | Nil  | Nil   |
| 2f     | General remarks<br>of inspecting<br>officers on<br>development of<br>pit w.r.t. type<br>of deposit etc | Proposed to<br>work on North<br>of earthen<br>bundh-2 and<br>between<br>earthen bundh-<br>2 & 3 during<br>2020-2021 | There is no Topsoil & OB<br>generation in this mine. | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

# Exploitation:

| Sl.No. | Item  | Propasals   | Actual work                                 | Remarks   |
|--------|---|---|---|---|
| 3a     | Number of pit<br>proposed for<br>production   | Proposed to<br>work on North<br>of earthen<br>bundh-2 and<br>between<br>earthen bundh-<br>2 & 3 during<br>2020-2021 | Nil   | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 3b     | Quantity of ROM<br>mineral<br>production<br>proposed  | The total<br>target of ROM<br>Production was<br>600000 tons<br>during 2020-<br>2021.                                | Nil   | Nil   |
| 3c     | Recovery of<br>sailable/usable<br>mineral from ROM<br>production  | ROM Recovery<br>100%  | Nil   | Nil   |
| 3d     | Quantity of<br>mineral reject<br>generation   | No proposal<br>for mineral<br>reject during<br>2020-2021  | Nil   | Nil   |
| 3e     | Grade of mineral<br>rejects<br>generation and<br>threshold value<br>declared.                                     | No Proposal   | Nil   | Nil   |
| 3f     | Quantity of sub<br>grade mineral<br>generation.   | No Proposal   | Nil   | Nil   |
| 3g     | Grade of sub<br>grade mineral<br>generation   | No Proposal   | Nil   | Nil   |
| 3h     | Manual /<br>Mechanised<br>method adopted<br>for segregating<br>from ROM   | Mechanised  | Nil   | Nil   |
| 3i     | Any analysis or<br>beneficiation<br>study proposed<br>and carried out<br>for sub grade<br>mineral and<br>rejects. | There is no<br>proposal for<br>any<br>beneficiation<br>within lease<br>area   | Nil   | Nil   |
| 3j     | Provision of<br>drilling and<br>blasting in<br>mineral benches  | No Proposal   | It is accumulated fines,<br>so no blasting. | Nil   |

| 3k | Provision of<br>mining<br>machineries in<br>mineral benches  | Excavators<br>Maintenance<br>Van<br>Truck<br>Dozer<br>Dumper   | Nil   | Nil |
|----|--|--|---|-----|
| 31 | Whether height<br>of benches in<br>overburden and<br>mineral suitable<br>for method of<br>mining proposed<br>in MP/SOM | Bench height<br>of 5m was<br>proposed in<br>Mineral.   | Nil   | Nil |
| 3m | Total area<br>covered under<br>excavation/pits   | 6.00 hect area<br>is required<br>upto 2020-2021  | Nil   | Nil |
| 3n | Ore to OB ratio<br>for the pit/mine<br>during the year.  | No proposal,<br>there is no<br>OB/ waste in<br>this mines.   | Nil   | Nil |
| 30 | Total area put<br>in use under<br>different heads<br>at the end of<br>year   | Land use<br>Pattern as on<br>01.04.2021.<br>Mines = 6.00<br>hect<br>Road = 0.38<br>hect  | Mine is not started.  | Nil |
| Зp | Production of<br>ROM mineral<br>during the last<br>five year period<br>as applicable                                   | 2020-2021 =<br>600000 tons<br>2019-2020 =<br>600000 tons<br>2018-2019 =<br>150000 tons<br>2017-2018 =<br>Nil<br>2016-2017 =<br>Nil | 2020-2021 = Nil<br>2019-2020 = Nil<br>2018-2019 = Nil<br>2017-2018 = Nil<br>2016-2017 = Nil     | Nil |
| Зq | General remarks<br>of inspecting<br>officers on<br>method of mining<br>etc.  | Mechanised<br>Method is<br>Proposed  | Mine is not Working, for<br>want of Statuary<br>Clearances. RMP has<br>submitted for 2022-2027) | Nil |

Solid Waste Management - Dumping:

| Sl.No. | Item   | Propasals   | Actual work   | Remarks   |
|--------|--|-------------|---|---|
| 4a     | Separate dumping<br>of topsoil, OB<br>and mineral<br>rejects (Rule<br>32,33) | No Proposal | It is an accumulation of<br>fines materials from<br>adjoining lease, there<br>isn't any occurrence of<br>waste or overburden. | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

| 4b | Location of<br>topsoil, OB and<br>mineral reject<br>dumps                      | No Proposal  | Nil   | Nil   |
|----|--|--|---|---|
| 4c | Number of dumps<br>within lease<br>area and outside<br>of lease area           | Lease area<br>=Nil<br>Non Lease<br>area= Nil               | Lease area =Nil<br>Non Lease area= Nil  | Nil   |
| 4d | Location of<br>dumps w.r.t.<br>ultimate pit<br>limit (Rule 16)                 | No Proposal  | Nil   | Nil   |
| 4e | Number of active and alive dumps.  | No Proposal  | Nil   | Nil   |
| 4f | Number of dead<br>dumps.   | No Proposal  | Nil   | Nil   |
| 4g | Number of dumps<br>established.  | No Proposal  | Nil   | Nil   |
| 4h | Whether<br>Retaining wall<br>or garland drain<br>all along dumps<br>are there. | No Proposal  | Nil   | Nil   |
| 4i | Length of<br>Retaining wall<br>or garland drain<br>all along dumps             | No Proposal  | Nil   | Nil   |
| 4j | Number of<br>settling ponds  | No Proposal  | Nil   | Nil   |
| 4k | Specific<br>comments of<br>inspecting<br>officer on waste<br>dump management   | There is no<br>Topsoil & OB<br>generation in<br>this mine. | It is an accumulation of<br>fines materials from<br>adjoining lease, there<br>isn't any occurrence of<br>waste or overburden. | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

# Solid Waste Management - Backfilling:

| Sl.No. | Item  | Propasals   | Actual work | Remarks   |
|--------|---|-------------|-------------|---|
| 5a     | Status of part<br>or full<br>extraction of<br>mineral from<br>mined out area<br>before starting<br>backfilling. | No Proposal | Nil         | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 5b     | Area under<br>backfilling of<br>mined out area  | No Proposal | Nil         | Nil   |

| 5c | Concurrent use<br>of topsoil for<br>restoration or<br>rehabilitation<br>of mineral out<br>area (Rule 32) | No Proposal                                  | Nil | Nil   |
|----|--|--|-----|---|
| 5d | Total area<br>fully reclaimed<br>and<br>rehabilitated  | No Proposal                                  | Nil | Nil   |
| 5e | General remarks<br>of inspecting<br>officers on<br>backfilling and<br>reclamation etc.                   | proposed in<br>fines stack<br>only, so there | Nil | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

Progressive Mine Clousre Plan:

| Sl.No. | Item  | Propasals  | Actual work                       | Remarks   |
|--------|---|--|-----------------------------------|---|
| ба     | Whether Annual<br>report on PMCP<br>submitted on<br>time and<br>correctly. Rule<br>23 E(2).                                     | It should be<br>submitted on<br>or before 1st<br>July every<br>year. | Submitted for the year 2020-2021. | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 6b     | Area available<br>for<br>rehabilitation<br>(ha) .   | No Proposal  | Nil                               | Nil   |
| бс     | afforestation<br>done (ha).   | No Proposal  | Nil                               | Nil   |
| 6d     | No. of saplings<br>planted during<br>the year   | No Proposal  | Nil                               | Nil   |
| бе     | Cumulative no<br>.of plants   | No Proposal  | Nil                               | Nil   |
| 6f     | Any other method<br>of<br>rehabilitation  | No Proposal  | Nil                               | Nil   |
| бд     | Cost incurred on<br>watch and care<br>during the year   | No Proposal  | Nil                               | Nil   |
| 6h     | Compliance on<br>reclamation and<br>rehabilitation<br>by backfilling<br>(i) Voids<br>available for<br>backfilling ( Lx<br>B x D | No Proposal  | Nil. Mine is not<br>started       | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

бi Compliance on No Proposal Nil Nil reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings Nil бj Compliance on No Proposal Nil reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area 6k Compliance on Nil No Proposal Nil reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir 61 Compliance on No Proposal Nil Nil reclamation and rehabilitation by backfilling (v)any other specific means. Compliance of бm 250 saplings 50 saplings inside the Mine is not rehabilitation proposed in lease area and 100 Working, for want of waste land safety barrier saplings outside the of Statuary area for 2020- lease area. within lease Clearances. RMP (i)afforestation 2021 has submitted for 2022-2027) бn Compliance of Proposed 0.25 As per proposal Nil rehabilitation hect in 2020- plantation has done on of waste land safety barrier 2021 within lease (ii)Area rehabilitation (ha) 60 Compliance of Nil Nil Nil rehabilitation of waste land within lease (iii)Method of rehabilitation бр Compliance of Bi-Annually Environment monitoring Nil environmental Survey is carried out through monitoring (core own as well as private zone and buffer agency. zone)

| 6q | General remarks  | Environment    | 50 saplings inside the | Mine is not       |  |
|----|------------------|----------------|------------------------|-------------------|--|
|    | of inspecting    | monitoring is  | lease area and 100     | Working, for want |  |
|    | officers on PMCP | carried out    | saplings outside the   | of Statuary       |  |
|    | compliance and   | through own as | lease area.            | Clearances. RMP   |  |
|    | progressive      | well as        |                        | has submitted for |  |
|    | closure          | private        |                        | 2022-2027)        |  |
|    | operations etc.  | agency.        |                        |                   |  |

## Mineral Conservation:

| Sl.No. | Item   | Propasals  | Actual work                      | Remarks   |
|--------|--|--|----------------------------------|---|
| 7a     | ROM Mineral<br>dispatch or<br>grade-wise<br>sorting within<br>lease area                                 | The total<br>target of ROM<br>Production was<br>600000 tons<br>during 2020-<br>2021. | Nil                              | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 7b     | Method of grade-<br>wise mineral<br>sorting i.e.<br>manual or<br>mechanical.                             | Mechanical<br>Process  | Nil                              | Nil   |
| 7c     | Different grade<br>of mineral<br>sorted out at<br>mines.   | Fe = 57.24%<br>Al2O3 = 5.22%<br>Proposed<br>during 2020-<br>2021                     | Nil                              | Nil   |
| 7d     | Any<br>beneficiation<br>process at mines   | No Processing<br>proposed,<br>already it is<br>size range of<br>-10mm.               | Nil                              | Nil   |
| 7e     | General remarks<br>of inspecting<br>officer on<br>Mineral<br>conservation and<br>beneficiation<br>issues | Production was 600000 tons   | No Production has<br>carried out | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

Environment:

| Sl.No. | Item   | Propasals   | Actual work   | Remarks   |
|--------|--|-------------|---|---|
| 8a     | Separate removal<br>and utilization<br>of topsoil (Rule<br>32) | No Proposal | It is an accumulation of<br>fines materials from<br>adjoining lease, there<br>isn't any occurrence of<br>waste or overburden. | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |

| 8b | Concurrent use<br>or storage of<br>topsoil   | No Proposal   | Nil   | Nil  |
|----|--|---|---|--|
| 8c | Separate dumps<br>for overburden,<br>waste rock,<br>rejects and<br>fines (Rule 33)   | No Proposal   | It is an accumulation of<br>fines materials from<br>adjoining lease, there<br>isn't any occurrence of<br>waste or overburden. | Nil  |
| 8d | Use of<br>overburden,<br>waste rock,<br>rejects and<br>fines dumps for<br>restoring the<br>land to its<br>original use                 | No Proposal   | It is an accumulation of<br>fines materials from<br>adjoining lease, there<br>isn't any occurrence of<br>waste or overburden. | Nil  |
| 8e | Phased<br>restoration,<br>reclamation and<br>rehabilitation<br>of lands<br>affected by<br>mining<br>operations<br>(Pits, dumps<br>etc) | No Proposal   | Nil   | Nil  |
| 8f | Baseline<br>information on<br>existence of<br>plantation and<br>additional<br>plantation done<br>(Rule 41)                             | 250 saplings/<br>year have<br>proposed.                               | 50 saplings inside the<br>lease area and 100<br>saplings outside the<br>lease area.   | Nil  |
| 8g | Survival rate  | No such<br>proposal in<br>the approved<br>document                    | 65% within lease area   | Nil  |
| 8h | Water sprinkling<br>on roads to<br>control airborne<br>dust  | proposed for  | Water sprinkling on road<br>is observed during the<br>inspection.   | Nil  |
| 8i | General remarks<br>of inspecting<br>officer on<br>aesthetic beauty<br>in and around<br>mines area                                      | Scanty<br>vegetation,<br>agriculture<br>are observed<br>in lease area | Surrounding area beyond<br>lease area is greenery.<br>The area is flat<br>undulating terrain.                                 | Area is in forest<br>and there is no<br>agricultural land<br>within the lease. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|        |      |           |             |         |

| 9a | Status of<br>submission of<br>Monthly and<br>Annual returns  | MR Submitted Both Annual & Monthly<br>up to = returns are submitting<br>October 2021 in online system.<br>AR Submitted<br>up to = 2020-<br>2021 |  | Nil   |
|----|--|---|--|---|
| 9b | Scrutiny of<br>Annual return<br>for information<br>on Mining<br>Engineer,<br>Geologist and<br>Manager        | Full time<br>Mining<br>Engineer and<br>Geologist has<br>shown   | As per record Mining<br>Engineer and Geologist<br>are present during<br>Inspection | Mine is not<br>Working, for want<br>of Statuary<br>Clearances. RMP<br>has submitted for<br>2022-2027) |
| 9c | Scrutiny of<br>Annual return on<br>land use pattern<br>for area under<br>pits, reclaimed<br>area, dumps etc. | -   | Landuse pattern is<br>filled as per approved<br>mining plan                        | Nil   |
| 9d | Scrutiny of<br>Annual return on<br>afforestation   | 50 saplings<br>achieved<br>during 2020-<br>2021 inside<br>the lease area<br>and 100<br>outside the<br>lease area.                               | It is advised to plant<br>as per proposal.   | Nil   |
| 9e | Scrutiny of<br>Annual return on<br>mineral reject<br>generation<br>(Grade and<br>quantity)                   | There is no<br>Mineral<br>Rejects<br>Generation   | There is no Mineral<br>Rejects Generation  | Nil   |
| 9f | Scrutiny of<br>Annual return on<br>ROM stock and/or<br>graded ore  | as on   | Due to Non-Working from<br>2000, there is no ROM<br>stock and all are nil<br>only. | Nil   |
| 9g | Scrutiny of<br>Annual return on<br>sale value, Ex.<br>Mine price and<br>production cost                      | Cost of<br>Production &<br>Ex. Mine Price<br>has Zero   | It is captive mine of<br>SAIL.   | Nil   |
| 9h | Scrutiny of<br>Annual return on<br>fixed assets  | Fixed Assets<br>is given  | Fixed Assets is filled   | Nil   |
| 9k | Scrutiny of<br>Annual return on<br>mining<br>machineries   | Machineries<br>details not<br>given   | Due to Non-Working,<br>there is no availability<br>of machineries in field.        | Nil   |

| Details of violations observed during current inspection and compliance position of violation pointed out |           |            |    |          |                         |  |
|---|-----------|------------|----|----------|-------------------------|--|
| Violation observed  |           |            |    | Show o   | couse position          |  |
| Rule NO.  | Issued on | Compliance | on | Rule NO. | Issued on Compliance on |  |

#### Date :

### (G. S. KANNAN)

Indian Bureau of Mines