Ref No : ESTIL/MIN/09/2019
Date : 17/01/2019

To
The Member Secretary
IA – Division (Non- Coal Mining Sector)
Indira Paryavaran Bhawan
Ministry of Environment, Forest & Climate Change
New Delhi – 110003

Sub : Compliances for Additional Document Sought by Member Secretary for Proposal No :
IA/OR/MIN/56152/2016 & File No J- 11015/192/2015-IA-II (M)

Dear Sir

With reference to the above cited subject we are hereby submitting the following documents:

1. Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “
Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in
Koraput, Sundargarh & Mayurbhanj District of Odisha”

2. Copy of the request letter submitted by us vide Letter MOEF – CC / 2/ November/2018, Dt. 9th
November’2018 for appraising our proposal in Expert Appraisal Committee (Non-Coal Mining).

We once again request you to include our proposal in the forthcoming EAC (Non-Coal Mining) Meeting.

Thanking You

( Sabyasachi Mohanty)
Authorised Signatory

Ends : As above
08\textsuperscript{th} November 2018

MoEF-CC/2/November/2018

To,

The Secretary
Ministry of Environment, Forest & Climate Change
Government of India
New Delhi

Subject: Environment clearance & clearance of Forest Diversion Proposal for Ghoraburani – Sagasahi iron ore block and Expansion of Dabuna beneficiation plant of Essar Steel India Ltd in Odisha.

Please refer to our earlier representation regarding inclusion of Ghoraburani – Sagasahi new mine for consideration by EAC (Non-Coal Mining) where you had so graciously agreed to consider in EAC of August -18. But due to ongoing CIRP process initiated by NCLT, MoEF&CC opined not to take up projects of ESTIL for consideration.

Regarding this, we would like to highlight that LOI issued to us by Government of Odisha will expire in March -19. We have also paid part revenue for this mine which will give inhouse raw material to the plant rather than buying from outside at a higher cost. Resolution Professional appointed by court and who is now in charge of the plant has also independently recommended and urged the Ministry for continued consideration of our cases.

Let me highlight that Government will also earn 44.35% (excluding normal taxes & duties) of revenue from the production from this new mine that was allocated to us through auction route based on amended MMDR Act. Therefore putting EC/FC on hold due to CIRP and wait for its culmination indefinitely will cause delay in accrual of revenue for the Government. By securitizing raw material, the financial position of the plant will improve increasing its margins and debt servicing capabilities that will not only help the plant but also the government and the creditors alike.

In view of aforesaid, we humbly urge and request you to please continue considering our projects for EC/FC and not wait indefinitely for closure of CIRP under NCLT. Our new mine project is pending for EAC and expansion of Dabuna unit pending for grant of ToR Amendment Letter.

Hoping for an urgent and positive consideration.

Regards,

[DILIP COMMIN]
MANAGING DIRECTOR
ESSAR STEEL INDIA LIMITED

02
12/01/18
## Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on "Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha"

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<tr>
<td>1 Department of Steel &amp; Mines, Govt. of Odisha should prepare 5 years regional plan for annual iron ore requirement from the state, which in turn shall be met from different mines/zones (e.g. Joda, K ira.) in the state. Accordingly, sustainable annual production (SAP) for each zone/mine may be followed adopting necessary environmental protection measures.</td>
<td>Ghoraburhani – Sagasahi will be a captive mine for which a Mine Development &amp; Production Agreement will be signed with Govt of Odisha in accordance with the Approved Mining Plan.</td>
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<td>2 The expansion or opening of new manganese ore mines may be considered only when the actual production of about 80% is achieved. Further, the mines that have not produced Mn ore for last two years and have no commitment in the current year as well; EC capacity in such cases may be reviewed. The Department of Steel &amp; Mines, Govt. of Odisha shall submit the Annual Report on this issue to the MoEF&amp;CC for further necessary action</td>
<td>Not applicable</td>
</tr>
<tr>
<td>3 Analysis of baseline environmental quality data for the year 2014 and 2016 indicates that existing mining activities appear to have little / no potential impact on environmental quality, except on air environment, which was mainly due to re-suspension of road dust. Therefore, all the working mines can continue to operate with strict compliance to monitoring of environmental quality parameters as per EC and CTE/CTO conditions of the respective mine, and implementation of suggested measures for control of road dust and air pollution. Odisha State Pollution Control Board has to ensure the compliance of CTE/CTO. Regional office of the MoEF&amp;CC, Bhubaneswar shall monitor the compliance of the EC conditions. Regional office of the Indian Bureau of Mines (IBM) shall monitor the compliance of mining plan and progressive mine closure plan. Any violation by mine lease holder may invite actions per the provisions of applicable acts</td>
<td>All data as required by SPCB and/ or other agencies Govt of Odisha periodically to fulfill the data and analysis requirement will be furnished. Further measures as suggested by these agencies to control the pollution level will be implemented.</td>
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Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>4. Considering the existing environmental quality, EC capacity, production rate, iron ore resources availability and transport infrastructure availability, the share of Joda and Koira sector works out to be 70% and 30% respectively for the existing scenario for the year 2015-16. However, for additional EC capacity, it can be 50:50 subject to commensurate infrastructure improvement (viz. SOTM, pollution free road transport, enhancement of rail network etc.) in the respective regions.</td>
<td>Measures as stipulated in SOTM guideline will be followed as detailed under Sl No 7 in this compliance report.</td>
</tr>
<tr>
<td>5. Continuous monitoring of different environmental quality parameters as per EC and CTE/CTO conditions with respect to air, noise, water (surface &amp; ground water) and soil quality in each region shall be done. The environmental quality parameters should not indicate any adverse impact on the environment. Monitoring within the mines should be done by individual mine lease holders, whereas outside the mine lease area, monitoring should be done by the Govt. of Odisha through various concerned departments/ authorized agencies. Various monitoring/ studies should be conducted through national reputed institutes, NABET/ MoEF&amp;CC accredited laboratories/organizations. The reports submitted by individual mine lease holders and study reports prepared by other concerned departments/agency for each of the regions should be evaluated and examined by SPCB/ MoEF&amp;CC.</td>
<td>Monitoring of all the environmental parameters will be done in the core as well as buffer zone of the ML are will be done as mentioned in EIA report.</td>
</tr>
<tr>
<td>6. Construction of cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development along the roads and also construction of road minimum 300 m inside the mine should be done. This should be done within one year for existing mines and new mine should have since beginning. The concerned departments should extend full support; wherever the land does not</td>
<td>A cement concrete road runs centrally through the Mining Lease which has divided Mining into Pit 1 and Pit 2. This road will be connected to both Pit 1 and Pit 2 through a 9 m wide cement concrete Road 50 m inside Pit 1 and 250 m inside Pit 2, which will serve as two way movement of vehicle. This will be constructed immediately on execution of Mining Lease. (A drawing in this regard is attached).</td>
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<td>The Mining Lease area, particularly the mineralized</td>
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Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>belong to the respective mine lease holders. The Department of Steel &amp; Mines, Govt. of Odisha should ensure the compliance and should not issue the Mining Permits, if mine lease holder has not constructed proper cement concrete road as suggested above.</td>
<td>northern part of lease being small, it is difficult to assign longer patch of access road for cement concreting so as to be used over long years.</td>
</tr>
<tr>
<td>7 In view of high dust pollution and noise generation due to road transport, it is proposed to regulate/guide the movement of iron and manganese ore material based on the EC capacity of the mines. Accordingly, ore transport mode has been suggested, as given below in Table. It is mentioned by State Govt. of Odisha that currently about 45% of the iron ore is dispatched using rail network and progressively it will be increased to about 60% by rail/slurry over a period of 5 years, taking into account time required to set up more railway sidings.</td>
<td>The approved IBM Mining Plan incorporates grinding and concentration / beneficiation of product from 4th year onwards. In compliance to CSIR – NEERI recommendation it is planned that concentrate will be transported in slurry mode through pipe line to Dabuna (captive beneficiation and slurry pumping station) for onward pumping to Captive Pellet plant at Paradeep. The EC approval for the purpose is being sought along with capacity expansion of Dabuna plant, for which TOR has been issued and modification of said TOR is pending with M OEF &amp; CC,GoI (Copy of TOR attached). In this connection, following approvals have already been obtained from different competent authorities:</td>
</tr>
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<td>In view of present ore transport practices and practical limitations, all the existing mines should ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years. Table : EC Capacity based Suggested Ore Transport Mode (SOTM)</td>
<td>• Permission from Executive engineer PWD, Keonjhar for the Pipeline route passing thro PWD area. • Permission from Executive engineer RWD, Keonjhar for the Pipeline route passing thro RWD area. • Application submitted for Diversion of forest area of the pipeline line route • Approval of compensatory afforestation land for the above forest area. • Certificate under Forest Right Act from District Collector Keonjhar &amp; Sundargrah for the above purpose.</td>
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<td>Copy of all these approvals are attached.</td>
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## NEERI RECOMMENDATION

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<tr>
<th>Code</th>
<th>EC</th>
<th>Suggested Ore Transport Mode</th>
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<tbody>
<tr>
<td>SOT M 1</td>
<td>≥ 5 MTPA</td>
<td>100% by private railway siding or conveyor belt up to public railway siding or pipeline for captive mines and 70% for non-captive mines</td>
</tr>
<tr>
<td>SOT M 2</td>
<td>Between 3 and &lt;5 MTPA</td>
<td>Minimum 70% by public railway siding, through conveyor belt and maximum 30% by road - direct to destination or other public railway siding or above option</td>
</tr>
<tr>
<td>SOT M 3</td>
<td>Between 1 and &lt;3 MTPA</td>
<td>Minimum 70% by public railway siding and maximum 30% by road - direct to destination or by other public railway siding or above options</td>
</tr>
<tr>
<td>SOT M 4</td>
<td>&lt;1 MTPA</td>
<td>100% by 10/17 Ton Trucks or above options</td>
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It is mentioned by State Govt. of Odisha that currently about 45% of the iron ore is despatched using rail network and progressively it will be increased to about 60% by rail/slurry over a period of 5 years, taking into account time required to set up more railway sidings.

In view of present ore transport practices and practical limitations, all the existing mines should
Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years. However, the State Govt. of Odisha shall ensure dust free roads in mining areas wherever the road transportation of mineral is involved. The road shoulders shall be paved with fence besides compliance with IRC guidelines. All the roads should have proper drainage system and apart from paving of entire carriage width the remaining right of way should have native plantation (dust capturing species). Further, regular maintenance should also be ensured by the Govt. of Odisha.</td>
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<tr>
<td>Transportation of iron &amp; manganese ore through river (jetty) to nearest Sea port (Sea cargo option) may be explored or connecting Sea ports with Railway network from the mines to be improved further so that burden on existing road and rail network and also pollution thereof can be minimized.</td>
<td></td>
</tr>
<tr>
<td>Progress on development of dust free roads, implementation of SOTM, increased use of existing rail network, development of additional railway network/conveyor belt/pipelines etc. shall be submitted periodically to MoEF&amp;CC.</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibility:</strong> Department of Steel &amp; Mines, Govt. of Odisha; Time Period: 5 Years for developing railway/conveyor belt facilities</td>
<td></td>
</tr>
</tbody>
</table>

8 Development of parking plazas for trucks with proper basic amenities/facilities should be done inside mine. This should be done within one year for existing mines and new mines should have parking plazas within next 5 years. A Parking Plaza (100 m x 30 m) with basic amenities has been planned adjacent to mine access road in Pit 2 which will be constructed as soon as mine operator starts once Mining Lease is executed. (Drawing)
Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>have since beginning. Small capacity mines (in terms of lease area or production) not having enough space within the mine lease areas should develop parking plaza at a common place within the region with requisite facilities. <strong>Responsibility: Individual Mine Lease Holders; Time Period: 1 Year</strong></td>
<td><strong>attacked).</strong></td>
</tr>
<tr>
<td>9 Construction of NH 215 as minimum 4 lane road with proper drainage system and plantation and subsequent regular maintenance of the road as per IRC guidelines. Construction of other mineral carrying roads with proper width and drainage system along with road side plantation to be carried out. <strong>Responsibility: Department of Steel &amp; Mines with PWD / NHAI Time Period: 2 Years.</strong></td>
<td>In line with the recommendation of NEERI, the State Govt has already taken steps and four lane of NH-215 is underway.</td>
</tr>
<tr>
<td>10 Regular vacuum cleaning of all mineral carrying roads aiming at “Zero Dust Resuspension” may be considered. <strong>Responsibility: PWD / NHAI/ Mine Lease Holders ; Time Period: 3 months for existing roads</strong></td>
<td>Measures as suggested will be adopted.</td>
</tr>
<tr>
<td>11 Expansion of existing mines and new mines should be considered after conducting recent EIA Study (as per the provisions of EIA Notification 2006, as amended time to time) with proper justification on demand scenario for iron ore requirement and availability of pollution free transport network in the region. <strong>Responsibility: IBM, Department of Steel &amp; Mines and MoEF&amp;CC, New Delhi.</strong></td>
<td>This mine has been auctioned under Captive Category by Government of Odisha in which EIA study has been conducted based on approved TOR dated 16th January’2017 and further notification thereof. Products of the mine will be consumed in company’s Steel Plant at Hazira.</td>
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<td><strong>12</strong> Mine-wise Allocation of Annual Production: In case the total requirement of iron ore exceeds the suggested limit for that year, permission for annual production by an individual mine may be decided depending on approved EC capacity (for total actual dispatch) and actual production rate of individual mine during last year or any other criteria set by the State Govt., i.e. Dept. of Steel &amp; Mines. Department of Steel and Mines in consultation with Indian Bureau of Mines-RO should prepare in advance mine-wise annual production scenario as suggested in Table, so that demand for iron ore can be anticipated, and actual production/dispatch does not exceed the suggested annual production.</td>
<td>This mine has been auctioned under Captive Category by Government of Odisha. Products of the mine will be consumed in company’s Steel Plant at Hazira. Therefore provision of allocation should not apply to this mine.</td>
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Table: Allocation of Production to Different Mines for 5 Years (as per approved Mining Plan)

<table>
<thead>
<tr>
<th>Mine</th>
<th>EC Capacity</th>
<th>Suggested Annual Production (MT)</th>
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<tbody>
<tr>
<td>Mine 1</td>
<td>X 1</td>
<td>2016-17 Yr 1: 120</td>
</tr>
<tr>
<td>Mine 2</td>
<td>X 2</td>
<td>2017-18 Yr 2: 129</td>
</tr>
<tr>
<td>Mine 3</td>
<td>X 3</td>
<td>2018-19 Yr 3: 153</td>
</tr>
<tr>
<td>Mine n</td>
<td>X n</td>
<td>2019-20 Yr 4: 177</td>
</tr>
<tr>
<td>Total</td>
<td>160 dX</td>
<td>2020-21 Yr 5: 201</td>
</tr>
<tr>
<td></td>
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<td>Next year allocation = Average of EC Capacity and Last year production</td>
</tr>
</tbody>
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| **13** Expansion of Existing Mines having Validity up to 2020: In view of implementation of MMDR Act 2015, wherein many non-captive mines are expected to be closed by March 2020, total iron ore production scenario has been. It is expected that the non-captive mines having validity till 2020 shall try to maximize their production (limited to EC capacity) in the remaining period. Further, depending upon | Not Applicable as it is a New Mine. |
availability of iron ore resources, these mines may also seek expansion of EC capacity. It may be noted here that total EC capacity of existing 25 working mines having validity upto 2020 is about 85 MTPA, whereas actual production from these mines has been only 44.677 MT (52.6%) during 2015-16 and 57.07 MT (67.1%) during 2016-17. Also, it is expected that these mines would not even be able to achieve ore production as per existing EC capacity till March 2020. Therefore, these existing mines should go for production to the fullest extent to meet the requisite demand from the State. However, where EC limit is exhausted, application for expansion may be considered. Further, the EC process (i.e. Grant of TOR, Baseline data collection, Mining plan/scheme approval, Public hearing, preparation of EIA/EMP Report, Appraisal by the EAC and grant of EC) takes about one year time. Under such circumstances, it is suggested that further applications for grant of TOR or grant of EC for expansion of production capacity of the mine should be considered for those existing mines, which have exhausted their capacity subject to consideration of all environmental aspects. **Responsibility: Department of Steel & Mines and MoEF&CC, New Delhi.**

14 Sustained Iron Ore Production beyond 2020: Considering the implementation of MMDR Act 2015, total production of iron ore in Odisha State is anticipated to be about 111 MT during 2016-17 (actual production was – 102.663 MT), 136 MT during 2017-18, 146 MT during 2018-19 and 146 MT during 2019-20. Then there will be substantial drop in total production (to the tune of 73 MT during 2020-21 onwards) due to closure of mines, which are valid up to 2020. Therefore, in order to maintain operation/sustained growth of downstream industries, iron ore mining in the region needs to be continued at a sustainable rate. **The State Govt. through Department of Steel and Mines should initiate appropriate action to ensure continued availability of iron**
Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>ore from the region, as per suggested sustainable annual production</td>
<td>For this mine (Ghoraburhani – Sagsahi Iron Ore Block) Geological exploration has been conducted by GSI under G2 level and Reserves has been estimated as per UNFC code with respect to quality and quantity. As a part of Standard TOR hydrological study has been conducted. Further IBM has instructed to undertake G1 level exploration which will be done after operation of the mine.</td>
</tr>
<tr>
<td>15 Reserves Estimation–Mining Plan and Exploration: Appropriate actions (geo-technical investigation for qualitative and quantitative resource estimation &amp; other preparations for auction of mines), may be initiated taken into account the existing working mines, and the mines which were operational at some point of time (but closed presently due to various reasons). The total iron ore reserves/ resources available within the total lease area of each mine should be estimated by State Govt./NMET/ GSI (or any other approved agency) with respect to: (i) Total lease area of mine (surface), (ii) Maximum depth to which resources could be available, (iii) Resources below the ground water table (if intersected), (iv) Reserves are to be estimated as per UNFC code with respect to quantity and quality (% Fe content), (v) Maximum mining rate and area for auction (after 2020) will be calculated based on total resources available and proposed life of mine leading to closure of mine in a stipulated time period. Responsibility: Department of Steel &amp; Mines, IBM and GSI; Time frame: 1 year for the mines to be auctioned for next 2 years. The above mentioned organizations shall ensure the compliance with respect to timelines for implementations.</td>
<td>Hydro-geological Study has been done and NOC for withdrawal of ground water has been obtained from CGWA vide NOC No CGWA/ NOC/ MIN/OR/G/2018/3118, Dt. 07.02.2018 (Copy attached) Further, Mining has been planned in two pits namely Pit -1 and Pit – 2 in which excavation in Pit -1 will be faster and will be exhausted in first five years. Whereas excavations in Pit -2 will be in slower pace during the first five years. This has been already incorporated in Approved Mining Plan and also in EIA / EMP.</td>
</tr>
<tr>
<td>16 Depending upon availability of extractable iron ore resources within a mine, mining below the ground water table may be permitted after conducting necessary geological and hydro-geological study by GSI and requisite approval from the CGWB/CGWA (Central Ground Water Board/Authority). This can be explored at least in few mines on trial/pilot basis. Further, within a mine, it will be desirable to operate one pit at a time, and next pit should be opened after extracting maximum possible resources from the first pit, so that the exhausted pit can be used for Hydro-geological Study has been done and NOC for withdrawal of ground water has been obtained from CGWA vide NOC No CGWA/ NOC/ MIN/OR/G/2018/3118, Dt. 07.02.2018 (Copy attached) Further, Mining has been planned in two pits namely Pit -1 and Pit – 2 in which excavation in Pit -1 will be faster and will be exhausted in first five years. Whereas excavations in Pit -2 will be in slower pace during the first five years. This has been already incorporated in Approved Mining Plan and also in EIA / EMP.</td>
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<td>back filling/ storing of low grade iron ore. However, depending upon the quantity and/or quality of iron/ manganese ore, other mine pits in the same mine lease may also be opened for sustainable scientific mining, as per approved mining plan/scheme of mining by IBM. The Department of Steel &amp; Mines, Govt. of Odisha should initiate the pilot project so that minerals are fully utilized</td>
<td>A preliminary bench scale study has already been done through IMMT using available Bore hole core samples. However detailed study is proposed once bulk sample of representative ore is possible after Mining Lease is executed</td>
</tr>
<tr>
<td>17 Commercial Utilization of Low Grade Ore: R&amp;D studies towards utilization of low-grade iron ore should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore (Fe content upto 45% by 2020 and up to 40% by 2025). In fact, life cycle assessment of whole process including environmental considerations should be done for techno-economic and environmental viability. R&amp;D studies on utilization of mine wastewater having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical; paint industry should also be explored. Responsibility: IBM, Dept. of Steel &amp; Mines, Individual Mine Lease Holders</td>
<td></td>
</tr>
<tr>
<td>18 The mining activity in Joda-Koira sector is expected to continue for another 100 years, therefore, it will be desirable to develop proper rail network in the region. Rail transport shall not only be pollution free mode but also will be much economical option for iron ore transport. The rail network and/or conveyor belt system up to public railway siding needs to be created. The total length of the conveyor belt system/ rail network to be developed from mines to nearest railway sidings by 11 mines in Joda region is estimated to be about 64 km. Similarly, in Koira region, total length of rail network/ conveyor system for 8 mines (under SOTM 1 &amp; 2) is estimated to be around 95 km. Further, it is suggested to develop a rail network connecting</td>
<td>Noted</td>
</tr>
<tr>
<td>NEERI RECOMMENDATION</td>
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<td>Banspani (Joda region) and Roxy railway sidings in Koira region. <strong>Responsibility:</strong> Dept. of Steel &amp; Mines, Govt. of Odisha and Concerned Mines along with Indian Railways. <strong>Time Period:</strong> Maximum 7 years (by 2025). The Department of Steel &amp; Mines, Govt. of Odisha should follow-up with the concerned Departments and railways so that proposed proper rail network is in place by 2025</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>19 State Govt. of Odisha shall make all efforts to ensure exhausting all the iron &amp; manganese ore resources in the existing working mines and from disturbed mining leases/zones in Joda and Koira region. The criteria suggested shall be applicable while suggesting appropriate lease area and sustainable mining rate. <strong>Responsibility:</strong> Dept. of Steel &amp; Mines, Govt. of Odisha</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>20 Large and medium mine leases contribute to better implementation of reclamation and rehabilitation plans to sustain the ecology for scientific and sustainable mining. The small leases do not possess scientific capability of environmentally sustainable mining. Therefore, new mine leases having more than 50 ha area should be encouraged, as far as possible. This will ensure inter-generational resource availability to some extent. <strong>Responsibility:</strong> Dept. of Steel &amp; Mines, Govt. of Odisha</td>
<td>Not applicable.</td>
</tr>
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</table>
| 21 **Mining Operations/Process Related:** (i) Appropriate mining process and machinery (viz. right capacity, fuel efficient) should be selected to carry out various mining operations that generate minimal dust/air pollution, noise, wastewater and solid waste. e.g. drills should either be operated with dust extractors or equipped with water injection system. (ii) After commencement of mining operation, a study should be conducted to assess and quantify emission load generation (in terms of air pollution, noise, waste water and solid waste) | i) Appropriate Mining Process and machineries of right capacity and fuel efficient which generates minimal dust/air , noise pollution , waste water / solid wastes has been planned.  

All the drill machines will be provided with water injection system( Wet Drilling Method).  

ii) After commencement of mining operation, a study will
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<td>from each of the mining activity (including transportation) on annual basis. Efforts should be made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. This shall be ensured by the respective mine lease holders. (iii) Various machineries/equipment selected (viz. dumpers, excavators, crushers, screen plants etc.) and transport means should have optimum fuel/power consumption, and their fuel/power consumption should be recorded on monthly basis. Further, inspection and maintenance of all the machineries/ equipment/ transport vehicles should be followed as per manufacturer’s instructions/ recommended time schedule and record should be maintained by the respective mine lease holders. (iv) Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in 3 years for monitoring land use pattern and mining activity taken place. Further, the extent of pit area excavated should also be demarcated based on remote sensing analysis. This should be done by ORSAC (Odisha Space Applications Centre, Bhubaneswar) or an agency of national repute or if done by a private agency, the report shall be vetted/ authenticated by ORSAC, Bhubaneswar. Expenses towards the same shall be borne by the respective mine lease holders. <strong>Responsibility: Individual Mine Lease Holders</strong></td>
<td>be conducted to assess and quantify emission load generation (in terms of air pollution, noise, waste water and solid waste) from each of the mining activity (including transportation) on annual basis and accordingly efforts will be made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. iii) Fuel / power efficient equipments and machineries will be used . Further, inspection and maintenance of all the machineries/ equipment/ transport vehicles will be done as per manufacturer’s instructions/ recommended time schedule and record shall be maintained. iv) Digital processing of the entire lease area using remote sensing technique will be done regularly in 3 years for monitoring the land use pattern and the mining activity and also the area excavated in Pits will be demarcated based on the remote sensing analysis and the same will carried out by ORSAC or any agency of national repute for which expenses will be born by us. .</td>
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**Air Environment Related:**

(i) Fugitive dust emissions from all the sources should be controlled regularly on daily basis. Water spraying arrangement on haul roads, loading and unloading and at other transfer points should be provided and properly maintained. Further, it will be desirable to use water fogging system to minimize water consumption. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard. (ii) The core zone of mining activity i) Fugitive dust emissions from all the sources will be controlled regularly on daily basis. Provisions has been kept for water spraying arrangements will be made in haul roads, loading / unloading points and other transfer chutes . Provisions have been kept for dry fog system in the beneficiation plant. ii) An online Ambient air monitoring system will be installed inside Mining Lease area for monitoring PM10,
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<td>should be monitored on daily basis. Minimum four ambient air quality monitoring stations should be established in the core zone for SPM, PM10, PM2.5, SO2, NOx and CO monitoring. Location of air quality monitoring stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board (based on Emission Load Assessment Study). The number of monitoring locations may be more for larger capacity mines and working in larger area. Out of four stations, one should be online monitoring station in the mines having more than 3 MTPA EC Capacity. (iii) Monitoring in buffer zone should be carried out by SPCB or through NABET accredited agency. In addition, air quality parameters (SPM, PM10, PM2.5, SO2, NOx and CO) shall be regularly monitored at locations of nearest human habitation including schools and other public amenities located nearest to source of the dust generation as applicable. Further, 11 continuous air quality monitoring systems may be installed in Joda and Koira regions and one in Baripada/Rairangpur region. (iv) Emissions from vehicles as well as heavy machinery should be kept under control and regularly monitored. Measures should be taken for regular maintenance of vehicles used in mining operations and in transportation of mineral. (v) The vehicles shall be covered with a tarpaulin and should not be overloaded. Further, possibility of using closed container trucks should be explored for direct to destination movement of iron ore. Air quality monitoring at one location should also be carried out along the transport route within the mine (periodically, near truck entry and exit gate).</td>
<td>PM2.5, Sox and Nox in the core zone on daily basis. Adequate number (more than four) ambient air quality monitoring stations will be established in the core zone for SPM, PM10, PM2.5, SO2, NOx and CO monitoring. (iv) Emissions from vehicles as well as heavy machinery will be kept under control and regularly monitored. Measures will be taken for regular maintenance of vehicles used in mining operations and in transportation of mineral. (v) The vehicles will be covered with a tarpaulin and will not be overloaded. Air quality monitoring at one location along the transport route within the mine (periodically, near truck entry and exit gate) will be carried out.</td>
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Responsibility: Individual Mine Lease Holders
**NEERI RECOMMENDATION** | **COMPLIANCE**
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23 **Noise and Vibration Related:** (i) Blasting operation should be carried out only during daytime. Controlled blasting such as Nonel, should be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. (ii) Appropriate measures (detailed in Section 5.4) should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs. (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone. Further, date, time and distance of measurement should also be indicated with the noise levels in the report. The data should be used to map the noise generation from different activities and efforts should be made to maintain the noise levels with the acceptable limits of CPCB (CPCB, 2000) (iv) Similarly, vibration at various sensitive locations should be monitored atleast once in month, and mapped for any significant changes due to successive mining operations. **Responsibility: Individual Mine Lease Holders.**

i) Blasting operation will be carried out only during day time only. Blasting will be done using the controlled blasting technique. In this regard, one study has been made by CMFRI (Central Mining & Fuel Research Institute), Dhanbad has been done and recommendations therein will be followed (Details of the Study has been mentioned in the EIA /EMP).

ii) Monitoring of Noise level will be done as suggested. Also necessary efforts will be made to maintain the noise level with in the acceptable limits of CPCB (CPCB, 2000).

iv) Measurement & Monitoring of vibration level will be done as per the suggestion..

24 **Water/Wastewater Related:** (i) In general, the mining operations should be restricted to above ground water table and it should not intersect groundwater table. However, if enough resources are estimated below the ground water table, the same may be explored after conducting detailed geological studies by GSI and hydro-geological studies by CGWB or NIH or institute of national repute, and ensuring that no damage to the land stability/ water aquifer system shall happen. The details/ outcome of such study may be reflected/incorporated in the EIA/EMP report of the mine appropriately. (ii) Natural watercourse and/or water resources should not be obstructed due to any mining operations. Regular monitoring and
care

i) Hydrological study has been conducted. Lowest working level is 520 mRL whereas the ground water table starts at 480 mRL. Therefore mining operation will not intersect the ground water table.

ii) No perennial nala / stream passes through the Mining Lease area

iii) Regular monthly monitoring of ground water level and its quality will be carried out within the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation.

iv) Rain water harvesting will be done (Details
of the flow rate of the springs and perennial nallas should be carried out and records should be maintained. Further, regular monitoring of water quality of nallas and river passing thorough the mine lease area (upstream and downstream locations) should be carried out on monthly basis. (iii) Regular monitoring of ground water level and its quality should be carried out within the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out on monthly basis. (iv) In order to optimize water requirement, suitable conservation measures to augment ground water resources in the area should be undertaken in consultation with Central Ground Water Board (CGWB). (v) Suitable rainwater harvesting measures on long term basis should be planned and implemented in consultation with CGWB, to recharge the ground water source. Further, CGWB can prepare a comprehensive plan for the whole region. (vi) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of runoff etc.) should be taken to prevent pollution of nearby river/other water bodies. Water quality monitoring study should be conducted by State Pollution Control Board to ensure quality of surface and ground water sources on regular basis. The study can be conducted through NABL/NABET approved water testing laboratory. However, the report should be vetted by SPCB. (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated in ETP so as to conform to the discharge standards applicable. (viii) Oil and grease trap should be installed before discharge of workshop effluents. Further, sewage treatment plant should be installed for the employees/colony, wherever applicable. (ix) Mine lease holder should ensure that no silt originating due to mining activity is transported in the surface water course or any other water body. Appropriate measures for prevention and control of soil erosion and mentioned in the EIA / EMP).

v) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of runoff etc.) will be taken to prevent pollution of nearby river/other water bodies.

vi) Provisions will be made for collection & treatment of Industrial Waste water (Workshop & Waste water from the mine).
management of silt should be undertaken. Quantity of silt/soil generated should be measured on regular basis for its better utilization. (x) Erosion from dumps site should be protected by providing geo-textile matting or other suitable material, and thick plantation of native trees and shrubs should be carried out at the dump slopes. Further, dumps should be protected by retaining walls.(xi) Trenches / garland drain should be constructed at the foot of dumps to arrest silt from being carried to water bodies. Adequate number of check dams should be constructed across seasonal/perennial nallas (if any) flowing through the mine lease areas and silt be arrested. Desilting at regular intervals should be carried out and quantity should be recorded for its better utilization, after proper soil quality analysis. (xii) The water so collected in the reservoir within the mine should be utilized for the sprinkling on hauls roads, green belt development etc. (xiii) There should be zero waste water discharge from the mine. Based on actual water withdrawal and consumption/ utilization in different activities, water balance diagram should be prepared on monthly basis, and efforts should be made to optimize consumption of water per ton of ore production in successive years.

**Responsibility: Individual Mine Lease Holders, SPCB and CGWB.**

<p>| Land/ Soil/ Overburden Related | (i) The top soil should temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years or as per provisions mentioned in the mine plan/ scheme). The topsoil should be used for land reclamation and plantation appropriately. (ii) Fodder plots should be developed in the non-mineralised area in lieu of use of grazing land, if any. (iii) Over burden/ low grade ore should be stacked at earmarked dump site(s) only and should not be kept active for long period. The dump height should be decided on case to case basis, depending on the size of mine |
| i) Top soil will be stored at extreme north end of the Mining Lease and the same will be re-utilised and spread over the OB dump as soon as the OB dump takes final shape. This will commence from 3rd year onwards. |
| ii) There are 3.444 ha of Fodder (Gochar) plots within the Mining Lease area. While acquiring these plots, as per rule substitute revenue plots from neighborhood villages has been acquired and brought under Fodder category. |</p>
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<td>and quantity of waste material generated. However, slope stability study should be conducted for larger heights, as per IBM approved mine plan and DGMS guidelines. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles should be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Proper records should be maintained regarding species, their growth, area coverage etc. (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine operation, soil, OB and mineral dumps. The water so collected can be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted, particularly after monsoon and should be maintained properly. Appropriate documents should be maintained. Garland drain of appropriate size, gradient and length should be constructed for mine pit, soil. OB and mineral dumps and sump capacity should be designed with appropriate safety margin based on long term rainfall data. Sump capacity should be provided for adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals. (v) Backfilling should be done as per approved mining plan/scheme. There should be no OB dumps outside the mine lease area. The backfilled area should be afforested, aiming to restore the normal ground level. Monitoring and management of rehabilitated areas should continue till the vegetation is established and becomes self-generating. (vi) Hazardous waste such as, waste oil, lubricants, resin, and coal tar etc. should be disposed off as per provisions of Hazardous Waste Management Rules, 2016, as amended from time to time. <strong>Responsibility:</strong> Individual Mine Lease Holders</td>
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<td>iii) OB/ Sub-grade Ore will be stacked in earmarked Dump yard as per the approved Mining Plan . Several such dumps will be created so that these take final shape early . Appropriate measures as suggested will be taken to take care of any erosion and for its stabilization. This has been explained in details in EIA / EMP report.. <strong>Further Slope Stability study for Mine and Dump has been carried out by CMFRI, Dhanbad and recommendations there in will be followed.</strong></td>
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<td>iv) Catch Drains and other appropriate measures have been provided at each permanent dump site and shown in detail in EIA report.</td>
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<td>v) Back filling of the area will be done as per the approved mining Plan. These have been provided at each permanent dump site and shown in detail in EIA report.</td>
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| vi) There will be minimum generation of Hazardous Wastes except in field machinery maintenance workshops, which will be separately handled with all precautionary measures as per guideline provided under “Hazardous waste Management Rule 2016”.
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<td><strong>Ecology/Biodiversity (Flora-Fauna) Related:</strong> (i) As per the Red List of IUCN (International Union for Conservation of Nature), six floral species and 21 faunal species have been reported to be under threatened, vulnerable &amp; endangered category. Protection of these floral and faunal species should be taken by the State Forest &amp; Wildlife Department on priority, particularly in the mining zones, if any. (ii) The mines falling within 5-10 km of the Karo-Karampada Elephant corridor buffer need to take precautionary measures during mining activities. The forest and existing elephant corridor routes are to be protected and conserved. Improvement of habitat by providing food, water and space for the elephants is required to be ensured to avoid Man-Elephant conflicts. Though as per the records of State Forest Department, movement of elephants in the Karo-Karampada elephant corridor within 10 km distance from the mines in Joda and Koira is not observed, the Forest Department shall further record and ensure that elephant’s movement is not affected due to mining activities. (iii) All precautionary measures should be taken during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna should be prepared and implemented in consultation with the State Forest and Wildlife Department within the mine lease area, whereas outside the mine lease area, the same should be maintained by State Forest Department. (iv) Afforestation is to be done by using local and mixed species saplings within and outside the mining lease area. The reclamation and afforestation is to be done in such a manner like exploring the growth of fruit bearing trees which will attract the fauna and thus maintaining the biodiversity of the area. As afforestation done so far is very less, forest department needs to identify adequate land and do afforestation by involving local people in a time bound manner. (v) Green belt development carried out by</td>
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<td>i) No such specie has been reported in the core zone as per Wild life Management study conducted over the area</td>
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<td>ii) Karo – Karampada elephant corridor is at 17.5 km from core zon</td>
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<td>iii) A detailed Site Specific Wild life Conservation Plan has been prepared for Flora and Fauna and is under process of approval.</td>
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<tr>
<td>iv) Afforestation is to be done by using local and mixed species saplings within and outside the mining lease area. Details of the afforestations and species details has been mentioned in the EIA/EMP report</td>
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<td>v) Green belt has been proposed all along the safety zone around the Mining Lease, along the central village road. This will be done during 1st year and their growth will be monitored every season.</td>
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<td>vi) Green belt over 6.755 Ha will be developed with the native species . Details of the Green belt has been mentioned in the EIA / EMP.</td>
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<td>vi) Financial outlay for Compensatory afforestation as approved in De-reservation Proposal is Rs 2,31,000 /</td>
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<td>Further, proposed budget for Wild life management plan is Rs 12.48 Cr .</td>
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Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on "Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha"

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<td>mines should be monitored regularly in every season and parameters like area under vegetation/plantation, type of plantation, type of tree species /grass species/scrubs etc., distance between the plants and survival rate should be recorded. (vi) Green belt is an important sink of air pollutants including noise. Development of green cover in mining area will not only help reducing air and noise pollution but also will improve the ecological conditions and prevent soil erosion to a greater extent. Further, selection of tree species for green belt should constitute dust removal/dust capturing plants since plants can act as efficient biological filters removing significant amounts of particulate pollution. Thus, the identified native trees in the mine area may be encouraged for plantation. Tree species having small leaf area, dense hair on leaf surface (rough surface), deep channels on leaves should be included for plantation. (vii) Vertiver plantation on inactive dumps may be encouraged as the grass species has high strength of anchoring besides medicinal value. (viii) Details of compensatory afforestation done should be recorded and documented by respective forest divisions, and State Forest Department should present mine-wise annual status, along with expenditure details. (ix) Similarly, Wildlife Department is also required to record and document annual status of wildlife in the region and should identify the need for wildlife management on regional level. (x) Maintenance of the ecology of the region is prime responsibility of the State Forest and Wildlife Department. They need to periodically review the status and identify the need for further improvement in the region. The required expenditure may be met from the funds already collected in the form of compensatory afforestation and wildlife management. Further, additional fund, if required can be sought from DMF. <strong>Responsibility: Individual Mine Lease Holders and State Forest &amp; Wildlife Department.</strong></td>
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| 27 | **Socio-Economic Related:** (i) Public interaction should be done on regular basis and social welfare activities should be done to meet the requirements of the local communities. Further, basic amenities and infrastructure facilities like education, medical, roads, safe drinking water, sanitation, employment, skill development, training institute etc. should be developed to alleviate the quality of life of the people of the region. (ii) Land outies and land losers/affected people, if any, should be compensated and rehabilitated as per the national/state policy on Resettlement and Rehabilitation. (iii) The socio-economic development in the region should be focused and aligned with the guidelines/initiatives of Govt. of India/ NITI Aayog / Hon’ble Prime Minister’s Vision centring around prosperity, equality, justice, cleanliness, transparency, employment, respect to women, hope etc. This can be achieved by providing adequate and quality facilities for education, medical and developing skills in the people of the region. District administration in association with mine lease holders should plan for “SamagraVikas” of these blocks well as other blocks of the district. While planning for different schemes in the region, the activities should be prioritized as per Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY), notified by Ministry of Mines, Govt. of India, vide letter no. 16/7/2017-M.VI (Part), dated September 16, 2015.  
**Responsibility:** District Administration and Individual Mine Lease Holders. |
|   | i) A well planned ESC / CSR program has been chalked out for Project Affected villages and its surrounding neighborhood which ensures that Rs 25 Cr will be spent over 10 years period covering Health, Education, Water supply, Electrification, skill development and employment generation. These have been designed after a detailed Socio-economic study as per approved TOR was undertaken.  
ii) There is no case of Displacement for the mine. For land losers, based on Social Impact Assessment study by recognized consultant appointed by Govt of Odisha has been completed. Accordingly, R & R package as per Odisha Right to Fair compensation and Transparency in Land Acquisition , Rehabilitation & Re-settlement Rules 2015 and amendment therein is under finalization.  
iii) As a part of ESC initiative, regular interaction with villagers and village committee (comprising representatives of three villages in immediate neighborhood) will be undertaken to assess requirement of welfare and development needs of villagers. |
| 28 | **Road Transport Related:** (i) All the mine lease holders should follow the suggested ore transport mode (SOTM), based on its EC capacity within next 5 years. (ii) The mine lease holders should ensure construction of cement road of appropriate width from and to the entry and exit gate of the mine, as suggested in Chapter 10. Further, maintenance of all the roads should be carried out as per the requirement to ensure dust free road transport. (iii) Transportation of ore should be  
|   | i) Transport mode planned to be adopted has been mentioned against Sl No 7 above  
ii) Action Plan mentioned against SL No 6 above  
iii) Transportation of ore will be done by covering the trucks with tarpaulin so that no spillage of ore/dust takes place. |
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<td>done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes place. Further, air quality in terms of dust, PM10 should be monitored near the roads towards entry &amp; exit gate on regular basis, and be maintained within the acceptable limits. <strong>Responsibility: Individual Mine Lease Holders and Dept. of Steel &amp; Mines.</strong></td>
<td>Further, air quality in terms of dust, PM10 will be monitored near the roads towards entry &amp; exit gate on regular basis, and will be maintained within the acceptable limits.</td>
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<td><strong>Occupational Health Related:</strong> (i) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects periodically. (ii) Occupational health surveillance program for all the employees/workers (including casual workers) should be undertaken periodically (on annual basis) to observe any changes due to exposure to dust, and corrective measures should be taken immediately, if needed. (iii) Occupational health and safety measures related awareness programs including identification of work related health hazard, training on malaria eradication, HIV and health effects on exposure to mineral dust etc., should be carried out for all the workers on regular basis. A full time qualified doctor should be engaged for the purpose. Periodic monitoring (on 6 monthly basis) for exposure to respirable minerals dust on the workers should be conducted and record should be maintained including health record of all the workers. Review of impact of various health measures undertaken (at an interval of 3 years or less) should be conducted followed by follow- up of actions, wherever required. Occupational health Centre should be established near mine site itself. <strong>Responsibility: Individual Mine Lease Holders and District Administration (District Medical Officer)</strong></td>
<td>A comprehensive study has been undertaken on Occupational health and safety in compliance of TOR conditions by appointing an expert agency. Detailed site specific measures as recommended by expert agency will be undertaken and same has been mentioned in EIA report.</td>
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<td><strong>Reporting of Environmental Sustainability Achievement:</strong> All the mines should prepare</td>
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Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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Annual environmental sustainability report (ESR), highlighting the efforts made towards environmental protection with respect to different environmental components vis-à-vis production performance of the mine on monthly basis. The data collected as per EC and CTE/CTO conditions should be utilized to prepare the annual sustainability report. The mines performing high with effective environmental safeguards may be suitably recognized/rewarded. “Star Rating Format” formulated by the Ministry of Mines along with environmental sustainability report may be used.

As suggested, Annual Environmental Sustainability Report (ESR) will be prepared highlighting the efforts made towards environmental protection with respect to different environmental components vis-à-vis production performance of the mine on monthly basis.

In this regard, the data collected as per EC and CTE/CTO conditions will be utilized to prepare the above annual sustainability report.

31 Environmental Monitoring Requirements at Regional Level: Apart from strict compliance and monitoring by individual mine lease holder, there is a need for simultaneous monitoring in each of the regions by competent expert agencies under the guidance/ supervision of concerned regulatory agency. Details of the studies required to be done on regular basis (continuously for 5 years) through responsible agency (organization of national/state repute) and time frame are suggested in Table.

Table: Suggested Environmental Monitoring Requirements and Action Plans at Regional Level.

Noted..
Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

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<td>1</td>
<td>Environmental Quality Monitoring unit is to be set up at Ramnagar and Jharia with two stations (one at each) as per instructions given in NEERI report. Sample collection shall be done by the joint party. Monitoring reports shall be prepared by NAREH CEMC OPC Ltd. In addition, the monitoring of air quality shall be carried out by the facility and monitoring levels shall be maintained. Monitoring of water and air quality shall be carried out by the facility and monitoring levels shall be maintained.</td>
<td>Common (Annex-I)</td>
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<td>2</td>
<td>NEERI recommendations in the NEERI report are to be implemented. The facility shall be conducted in accordance with the NEERI report and the NEERI report.</td>
<td>Common (Annex-I)</td>
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<td>3</td>
<td>The facility shall comply with the NEERI report’s recommendations and shall be conducted in accordance with the NEERI report and the NEERI report.</td>
<td>Common (Annex-I)</td>
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<td>4</td>
<td>The facility shall comply with the NEERI report’s recommendations and shall be conducted in accordance with the NEERI report and the NEERI report.</td>
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<td>5</td>
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<td>9</td>
<td>The facility shall comply with the NEERI report’s recommendations and shall be conducted in accordance with the NEERI report and the NEERI report.</td>
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<td>10</td>
<td>The facility shall comply with the NEERI report’s recommendations and shall be conducted in accordance with the NEERI report and the NEERI report.</td>
<td>Common (Annex-I)</td>
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</table>

The data so generated for the region should be made available on the website of Department of Steel & Mines and also at MoEF&CC website, so that it can be effectively utilized by Individual Mine Lease Holders for preparing EIA/EMP reports. This will meet the requirement for separate one season baseline environmental quality data collection by the individual proponents, if the mine proposed is in the same study region. Further, MoEF&CC (through EAC) can also utilize the data base available in evaluating the proposals for expansion of existing mines or new mines while granting ToR or EC to the mine, taking an holistic view of the region. State Govt. of Odisha should bring out an integrated environmental sustainability report for each of the regions (mainly for Joda and Kolia region) incorporating ESR of individual mines and data collected in the region through various agencies, once in 5 years, to plan level of scientific and sustainable mining for the next 5 years.
Addendum to EIA Report with respect to Compliance for the recommendation of NEERI report on “Carrying Capacity Study for Environmentally Sustainable Iron & Manganese Ore Mining activity in Keonjhar, Sundargarh & Mayurbhanj District of Odisha”

<table>
<thead>
<tr>
<th>NEERI RECOMMENDATION</th>
<th>COMPLIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Mechanism for Implementation of Environmentally Sustainable Mining: The present study is not a one-time study, but a process to ensure environmentally sustainable mining activities in the region on long term basis. Looking into the large-scale mining activities and long term perspective for mining vis-à-vis environmentally sustainable mining and upliftment of people of the region, there is a need to create an agency, who will integrate all the aspects relating to sustainable mining in the region on long term basis. It could be a SPV of Govt. of Odisha or a cell within the overall control and supervision of Dept. of Steel &amp; Mines, with members from IBM, GSI, OSPCB, MoEF&amp;CC-RO and other concerned Departments and Mine Owners (EZMA), District Administration. It is found that the strong database available for the region needs to be taken into account to map and establish environmental quality of the region on daily, monthly, seasonal and annual basis. Further, the efforts and initiatives of the mines towards environmental protection as well as upliftment of the people of the region are required to be integrated, and a systematic plan at the block/regional level needs to be framed for the overall benefit of the local society, region, district, state and the country as a whole. It will be desirable to have proper environmental quality data management and analysis by NEERI or any other agency for next 5 years (six monthly compliance reports followed by field verification) ensuring sustainable mining practices in the region leading to an overall development of the region. District Mineral Funds should be utilized appropriately for various developmental activities/needs of the region. Further, an environmental sustainability report incorporating environmental status of region coupled with social upliftment may be brought out by SPCB or any other authorized agency on annual basis. This report can be used for supporting the regional EIA study, and also need for environmental quality monitoring by individual mine seeking.</td>
<td>Noted</td>
</tr>
</tbody>
</table>
environmental clearance for new mine/ expansion of mine, including public hearing. Since, outcome of the above study reports shall be in the overall interest of all the stakeholders (including local population) of the region. **Further planning for the region shall warrant cooperation and assistance of all the stakeholders (mine operators, industries, transporters, State & Central Government Offices, MoEF&CC, CPCB, SPCB, Dept. of Steel & Mines, IBM, IMD, NGOs and local people) in sharing the relevant data/information/ reports/documents etc. to continuously improve upon the environmentally sustainable development plan for economic growth in mining sector as well as for improvement in quality of life of the people of the region.**
F. No. J-11011/222/2016-IA. II(I)

Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110003
E-mail: sharath.kr@gov.in
Tel: 011-24695319

Dated: 20th July, 2017

To

M/s Essar Steel India Ltd.
3A, 3rd Floor, Fortune Towers,
Chandrakeshwar,
Bhubaneswar, Odisha- 751023.

Subject: Expansion of Iron Ore Beneficiation plant from the existing capacity of 10.7 MTPA (throughput) to 16.0 MTPA (throughput), Relocation of tailing Dam at Malda, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tail Dam & Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhanni- Sagasahi Iron Ore Block by M/s Essar Steel India Ltd. at Dabuna, Tehsil Barbil, District Kendujhar Odisha

This has reference to your online application No. IA/OR/IND/58662/2016 dated 29th August, 2016 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed TORs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S.No. 3(a), under category ‘A’ of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2.0 M/s Essar Steel India Limited proposes to expand the existing capacity of Beneficiation plant from 10.7 MTPA (throughput) to 16 MTPA (throughput) at Village – Dabuna, Keonjhar, Odisha & establishment of supporting infrastructure of Truck Unloading Station, Relocation of tailing Dam at Sankari Village in Phuljar Gram panchayat of Banspaal Tehsil of Keonjhar District, Laying of tailing pipeline and Return Water Pipeline from Beneficiation Plant to Tail Dam & Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhanni – Sagasahi Iron Ore Block. The existing Beneficiation Plant of 10.7 MTPA (throughput) capacity is situated over an area of 34.40 ha. Additional land of 110 ha at Sankari Village under Phuljar Gram panchayat in Banspaal Tehsil of Keonjhar district has been identified for establishing Tailing Dam. Out of 110 ha of total land, an area of 30.5 ha is forest land. The Truck un-loading station of 3000 TPH will be set up over an adjacent area (1.92 ha) to the Beneficiation Plant, Dabuna. The details are as given below:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Description (throughput Capacity)</th>
<th>As per EC obtained</th>
<th>Present Status</th>
<th>Proposed Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beneficiation Plant</td>
<td>10.7 MTPA; (Tailing max. 2.7 MTPA)</td>
<td>Installed</td>
<td>16 MTPA (Tailing max. 4.0 MTPA)</td>
</tr>
</tbody>
</table>

Page 1 of 10
<table>
<thead>
<tr>
<th></th>
<th>Location of Tailing</th>
<th>Basantpur (Keonjhar)</th>
<th>Land could not be acquired.</th>
<th>Village : Sankari Gram Panchayat: Phuljhar Tehsil : Banspal District : Keonjhar</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Water &amp; Slurry Pipelines from Dabuna Beneficiation Plant to Ghoraburhani – Sagasahi Iron Ore Block (captive), Tehsil: Koirala, Distt.: Sundargarh allotted to Essar Steel India Ltd during March, 2016</td>
<td>NA</td>
<td>NA</td>
<td>Water &amp; Slurry Pipelines from Dabuna Beneficiation Plant to Ghoraburhani – Sagasahi Iron Ore Block</td>
</tr>
<tr>
<td>4</td>
<td>Tailing &amp; Return Water Pipelines from Beneficiation Plant to Tailing Pond</td>
<td>Pipeline from Beneficiation Plant to Basantpur (Keonjhar) – 9 KM</td>
<td>Not Installed</td>
<td>Tailing &amp; Return Water Pipelines from Beneficiation Plant to Sankari Village in Phuljhar Grampanchayat of Banspal Tehsil of Keonjhar District.</td>
</tr>
<tr>
<td>5</td>
<td>Truck Unloading Station</td>
<td>-----</td>
<td>-----</td>
<td>3000 TPH</td>
</tr>
<tr>
<td>6</td>
<td>Total Land Involved</td>
<td>79 Acres – Plant area (31.9713 Ha)</td>
<td>Acquired</td>
<td>85 (79 + 6) + 4.75 = 89.75 Acres (36.32 Ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>215 acres – Tailing Dam (87.0105 Ha)</td>
<td>Not Acquired</td>
<td>271.8 Acres (110 Ha)</td>
</tr>
</tbody>
</table>

3.0 The Proposed Project cost is Rs. 357.62 Crores. The proposed direct and indirect employment due to the expansion project will be 450.

4.0 The electrical power requirement of 29.5 MW will be sourced from Odisha Power Transmission Corporation Ltd. Proposed raw material requirement is 16 MTPA of Iron ore fines, which will be sourced from various Iron ore mines in the vicinity as well as from the captive block called “Ghoraburhani – Sagasahi Iron ore Block” of Essar Steel India Limited. Water consumption will be 28800 KLD. It will be sourced from Baitarani River.

5.0 The proposal was considered by the Expert Appraisal Committee (Industry-I) during its 11th meeting held on 26th – 27th September, 2016 and Expert Appraisal Committee (Industry-I) during its 14th meeting held on 22nd – 23rd December, 2016 for prescribing TORs for undertaking detailed EIA/EMP study and recommended prescribing following specific TORs for undertaking detailed EIA and EMP study in addition to the generic TOR enclosed at Annexure 1 read with additional TORs at Annexure-2.

i. Public Hearing to be conducted in the two districts where the project is coming up by Odisha Pollution Control Board.
ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

iv. Data can be collected from the month of January, 2017 onwards is valid.

6.0 Further, the Minutes of Meeting of 14th EAC were confirmed in the 15th EAC meeting held during 2nd -3rd February 2017 with the modifications regarding the relocation of tailing dam site at Sankari Village in Phuljar Gram panchayat of Banspahal Tehsil of Keonjhar District, Odisha.

7.0 The undersigned is directed to inform that the Ministry of Environment, Forest and Climate Change (MoEFCC) after accepting the recommendation of the EAC (Industry-I), hereby decided to accord ToRs for the above project.

8.0 It is requested that the draft EIA Report may be prepared in accordance with the above mentioned specific TORs, enclosed generic TORs and additional TORs and thereafter further necessary action including conduct of public consultation may be taken for obtaining Environment Clearance in accordance with the procedure prescribed under the EIA Notification, 2006 as amended.

9.0 The TORs are valid for a period of three years from today i.e., 20th July 2017 and will expire on 19th July 2020. However, this period could be further extended by a maximum period of one year provided an application is made by the project proponent at least three months before the expiry of the validity period, together with updated Form-I, based on proper justification.

(Sharath Kumar Pallerla)  
Scientist ‘F’/Director

Copy to:-

1. The Secretary, Department of Environment, Government of Orissa.
2. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3 Chandersekharpur, Bhubaneswar - 751023.

(Sharath Kumar Pallerla)  
Scientist ‘F’/Director
1. Executive Summary
2. Introduction
   i. Details of the EIA Consultant including NABET accreditation
   ii. Information about the project proponent
   iii. Importance and benefits of the project
3. Project Description
   i. Cost of project and time of completion.
   ii. Products with capacities for the proposed project.
   iii. If expansion project, details of existing products with capacities and whether adequate
        land is available for expansion, reference of earlier EC if any.
   iv. List of raw materials required and their source along with mode of transportation.
   v. Other chemicals and materials required with quantities and storage capacities
   vi. Details of Emission, effluents, hazardous waste generation and their management.
   vii. Requirement of water, power, with source of supply, status of approval, water balance
        diagram, man-power requirement (regular and contract)
   viii. The project proponent shall furnish the requisite documents from the competent authority
        in support of draw of ground water and surface water and supply of electricity.
   ix. Process description along with major equipment and machineries, process flow sheet
        (Quantitative) from raw material to products to be provided
   x. Hazard identification and details of proposed safety systems.
   xi. Expansion/modernization proposals:
       a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for
          the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy
          of the latest Monitoring Report of the Regional Office of the Ministry of Environment,
          Forest and Climate Change as per circular dated 30th May, 2012 on the status of
          compliance of conditions stipulated in all the existing environmental clearances
          including Amendments shall be provided. In addition, status of compliance of Consent
          to Operate for the ongoing/existing operation of the project from SPCB/PCC shall be
          attached with the EIA-EMP report.
       b. In case the existing project has not obtained environmental clearance, reasons for not
          taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification
          2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and
          Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and
          CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance
          report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
   i. Location of the project site covering village, Taluka/Tehsil, District and State,
      Justification for selecting the site, whether other sites were considered.
   ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000
       scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive
       places)
   iii. Co-ordinates (lat-long) of all four corners of the site.
   iv. Google map-Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

ix. Geological features and Geo-hydrological status of the study area shall be included.

tax. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland *in case of projects involving forest land more than 40 ha.*

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-a-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM_{10}, PM_{2.5}, SO_{2}, NO_{x}, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iv. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum-road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control.

vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and
also to use for the various activities at the project site to conserve fresh water and reduce
the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures
shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency
Management Plan including Risk Assessment and damage control. Disaster management
plan should be linked with District Disaster Management Plan.

8. Occupational health
   i. Details of existing Occupational & Safety Hazards. What are the exposure levels of
      above mentioned hazards and whether they are within Permissible Exposure level
      (PEL). If these are not within PEL, what measures the company has adopted to keep
      them within PEL so that health of the workers can be preserved,

   ii. Details of exposure specific health status evaluation of worker. If the workers’ health
      is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry,
      Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG,
      during pre-placement and periodical examinations give the details of the same.
      Details regarding last month analyzed data of abovementioned parameters as per age,
      sex, duration of exposure and department wise.

   iii. Annual report of health status of workers with special reference to Occupational
      Health and Safety.

   iv. Plan and fund allocation to ensure the occupational health & safety of all contract and
      casual workers.

9. Corporate Environment Policy
   i. Does the company have a well laid down Environment Policy approved by its Board
      of Directors? If so, it may be detailed in the EIA report.

   ii. Does the Environment Policy prescribe for standard operating process / procedures
      to bring into focus any infringement / deviation / violation of the environmental or
      forest norms / conditions? If so, it may be detailed in the EIA.

   iii. What is the hierarchical system or Administrative order of the company to deal with
      the environmental issues and for ensuring compliance with the environmental
      clearance conditions? Details of this system may be given.

   iv. Does the company have system of reporting of non-compliances / violations of
      environmental norms to the Board of Directors of the company and / or shareholders
      or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided
    to the labour force during construction as well as to the casual workers including truck drivers
during operation phase.

11. Enterprise Social Commitment (ESC)
   i. To address the Public Hearing issues, 2.5% of the total project cost of
      (Rs. ............creses), amounting to Rs. ............creses, shall be earmarked by
      the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC
      projects shall be carved out based on the local public hearing issues. Project estimate shall
      be prepared based on PWD schedule of rates for each distinct item and schedule for time
      bound action plan shall be prepared. These ESC projects
as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry’s Regional Office. No free distribution/donations and or free camps shall be included in the above ESC budget.

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13. A tabular chart with index for point wise compliance of above ToRs.

14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

i. All documents shall be properly indexed, page numbered.

ii. Period/date of data collection shall be clearly indicated.

iii. Authenticated English translation of all material in Regional languages shall be provided.

iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.

v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.

vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-I.A.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the hard copy of the presentation material for EC presentation.

ix. ToRs’ prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the ‘Generic Structure of EIA’ given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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ANNEXURE-2

ADDITIONAL TO RS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM$_{10}$ and PM$_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM$_{10}$ to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.
Executive Summary

Executive summary of the report in about 8-10 pages incorporating the following:

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)

ii. Products and capacities. If expansion proposal then existing products with capacities and reference to earlier EC.

iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)

iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.

v. Measures for mitigating the impact on the environment and mode of discharge or disposal.

vi. Capital cost of the project, estimated time of completion

vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)

viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population

ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.

x. Likely impact of the project on air, water, land, flora-fauna and nearby population

xi. Emergency preparedness plan in case of natural or in plant emergencies

xii. Issues raised during public hearing (if applicable) and response given

xiii. CSR plan with proposed expenditure.

xiv. Occupational Health Measures

xv. Post project monitoring plan

******
OFFICE OF THE EXECUTIVE ENGINEER : P.W.D. (R & B)
DIVISION : KEONJHAR

No. ESIL-01 I dated, Keonjhar the 26.10.2016

From
Executive Engineer,
Keonjhar (R&B) Division
Keonjhar - 758001 (Odisha)
Tel:+91-6766-255473(O) Fax 255472

To

The Essar steel India Limited,
3A 3rd Floor, Fortune Towers,
Chandrasekharpur, Bhubaneswar,
Odisha - 751023.

Sub: Permission for laying of 20" dia iron Ore slurry and water pipeline, Power and Communication cables along/across the side of P.W.D. Road from Joda to Bamebari (13/600 Km. to 18/00 Km.) on Joda - Bamebari Road, Kalimati to Bamebari (22/122 Km. to 27/00 Km.) on Palaspanga - Kalimati - Bamebari Road and Dubuna to Kalimati (62/00 Km. to 64/00 Km.) on Suakati - Dubuna Road.

Sir,

With reference to the subject cited above, it is to intimate you that the permission for laying of 20" dia iron ore slurry and water pipe line, Power, Communication cables along/across the side of PWD. Road from Joda to Bamebari (13/600 Km. to 18/0 Km.) on Joda - Bamebari Road, Kalimati to Bamebari (22/122 Km. to 27/00 Km.) on Palaspanga - Kalimati - Bamebari Road and Dubuna to Kalimati (62/00 Km. to 64/00 Km.) on Suakati - Dubuna Road has been accorded by Chief Engineer, (D.P.I & Roads), Odisha vide his letter No. 44063 dt. 04.10.2016 with term & conditions (copy of letter enclosed).

Hence you are further requested to deposit an amount of Rs. 11,27,800.00 only towards performance security and an amount of Rs. 6,20,290/- as licence fee in favour of the Executive Engineer, Keonjhar (R&B) Division, Keonjhar towards security deposit to use a length of 11.278 Km. of road strictly adhering to term and conditions laid down in the letter of the Chief Engineer,(D.P.I & Roads), Odisha, Bhubaneswar.

Encl: As above

Yours faithfully,

Executive Engineer,
Keonjhar(R&B)Division

Contd...P/2
Memo No. / Date

Copy submitted to the Chief Engineer, (D.P.I & Roads), Odisha, Bhubaneswar for favour of kind information and necessary action with reference to the Memo No. 44064 dt. 04.10.2016.

Executive Engineer,
Keonjhar(R&B)Division

Memo No. / Date

Copy submitted to the Superintending Engineer, Keonjhar (R&B) Circle, Keonjhar for favour of kind information and necessary action with reference to the letter No. 2911/WE dt. 18.10.2016.

Executive Engineer,
Keonjhar(R&B)Division

Jahur/2570
Letter No. 21/13/WE// Date. 13/06/2017

To
The General Manager
M/s Essar Steel India Ltd
3-A, 3rd Floor, Fortune Towers
Chandrasekharapur, Bhubaneswar,
Odisha-75102

Sub: Permission for laying of 20" dia. Iron Ore slurry & water pipelines, power and communication cables along /across the side of RD Road from Koida to Pattabeda Chhack from 7/00 Km to 16/750 Km.) of Koida-Kalamang-Malda-Ganua-Pattamunda road of M/s Essar Steel India Ltd.

Sir,

Under the above reference, it is to intimate that, permission for laying of 20" dia. Iron Ore Slurry & water Pipelines, Power and communication cables along /across the side of RD Road from Koida to Pattabeda Chhack from Km 7/00 to Km. 16/750 ) of Koida-Kalamang-Malda-Ganua-Pattamunda road has been accorded by the Engineer –In-Chief, Rural Works, Bhubaneswar, Odisha vide his letter No. 4667 dated 20.03.2017 subject to the conditions laid down in the Circular F. No. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016 of the ministry of Road Transport & Highways.

You are hereby requested to deposit an amount of Rs. 48, 75,000/- (Forty Eight Lac Seventy Five Thousands) only towards performance security and an amount of Rs. 14, 46, 283/- (Fourteen Lac Forty Six thousand Two Hundred Eighty Three) only towards Licensee fee for the initial 5 years, in favour of the Executive Engineer, Rural Works Division-II, Sundargarh at Rourkela towards security deposit to use a length of 9.75 Km of row of the road. You are also requested to execute an agreement with the undersigned strictly adhering to terms and conditions laid down in the Ministry Circular as mentioned above.

P.T.O.
The Performance Bank Guarantee and Licensee fees should be deposited in the account no. 31114757291 of State Bank of India, Udinagar Branch (07474), IFSC Code (SBIN 0007474) at Rourkela in favour of Executive Engineer, Rural Works Division-II, Sundargarh at Rourkela.

Yours Faithfully,

[Signature]
Executive Engineer
R.W. Division, Rourkela

Memo No. ................../ Date. ................../

Copy submitted to the Engineer-in-Chief, Rural Works, Odisha, Bhubaneswar for favour of kind information and necessary action with reference to his letter No. 4667 Dt. 20-03-2017.

[Signature]
Executive Engineer
R.W. Division, Rourkela

Memo No. ................../ Date. ................../

Copy submitted to the Superintending Engineer, Rural Works Circle, Sundargarh for favour of kind information and necessary action with reference to his memo no. 4668 Dt. 20-03-2017.

[Signature]
Executive Engineer
R.W. Division, Rourkela
FORM - A

Form for seeking prior approval of Central Government under section 2 of the Forest (Conservation) Act, 1980 for Diversion of fresh forest area

PART - I
(To be filled up by User Agency)

A. General Details

A-1. Project Details


(ii). Name of Project for which Forest Land is required : Kalamang (Sagashahi)-Dabuna Slurry & Water Pipelines Project of M/s Essar Steel India Ltd.

(iii). Short narrative of the proposal and Project/scheme for which the forest land is required : Forest Diversion proposal of 16.466 Ha. for laying 20" dia. dual pipelines (Slurry & Water), power, and communication cables from Kalamang Ghoraburuni-Sagashahi Block, Kola Tahsil, Sundargarh district to Beneficent plant at Dabuna under Barbil Tahsil of Keonjhar District.

(iv). State : Orissa

(v). Category of the Project : Others

(vi). Shape of forest land proposed to be diverted : Linear

(vii). Estimated cost of the Project (Rupees in lacs) : 10000

(viii). Area of forest land proposed for diversion (in ha.) : 16.466

(ix). Non-forest land required for this project (in ha.) : 7.437

(x). Total period for which the forest land is proposed to be diverted (in years) : 99

A-2. Details of User Agency

(i). Name : ESSAR STEEL INDIA LIMITED

(ii). Address 1 : Udaya Bata, Paradeep-754142, Dist- Jagatsinghpur

(iii). Address 2 : NIL

(iv). State : Orissa

(v). District : Jagatsinghpur

(vi). Pin : 754142

(vii). Landmark : NIL

(viii). Email address : pramod.gupta@essar.com

(ix). Landline Telephone No. : 9722-227001

(x). Fax No. : 9722-

(xi). Mobile No. : 9777456100

(xii). Website (if any) : www.essar.com

(xiii). Legal status of User Agency : Private

A-3. Details of Person Making Application

(i). First Name: Pramod

(ii). Middle Name: NIL

(iii). Last Name: Gupta

(iv). Gender: Male

(v). Designation: Chief-Projects & Corporate Serv

(vi). Address 1: Udata Bata, Paradeep-754142, Dist- Jagatsinghpur

(vii). Address 2: NIL

(viii). State: Orissa

(ix). District: Jagatsinghpur

(x). Tehsil: Kujang

(xi). Pin: 754142

(xii). Landmark: NIL

(xiii). Email Address: pramod.gupta@essar.com

(xiv). Landline Telephone No.: 6722-227001

(xv). Fax No.: NIL

(xvi). Mobile No.: 9777456100

(xvii). Copy of documents in support of the competence/authority of the person making this application to make application on behalf of the User Agency:

B. Details of land required for the Project

B-1. Details of proposal seeking prior approval of Central Government under the Act for diversion of forest land for the Project already submitted in the past

<table>
<thead>
<tr>
<th>S.no</th>
<th>Proposal Status</th>
<th>Proposal No.</th>
<th>MoEF File No.</th>
<th>Area Proposed for Diversion (Ha.)</th>
<th>Area Diverted (Ha.)</th>
<th>Date of In-Principle Approval</th>
<th>Date of Final Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B-2. Details of forest land proposed to be diverted

B-2.1 Details of Divisions involved

<table>
<thead>
<tr>
<th>S.no</th>
<th>Division Name</th>
<th>Forest Land (ha.)</th>
<th>Non-Forest Land (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Keonjhar</td>
<td>12.65</td>
<td>1.587</td>
</tr>
<tr>
<td>2.</td>
<td>Bonai</td>
<td>3.816</td>
<td>5.85</td>
</tr>
</tbody>
</table>

B-2.2 Details of Districts involved

<table>
<thead>
<tr>
<th>S.no</th>
<th>District Name</th>
<th>Forest Land (ha.)</th>
<th>Non-Forest Land (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Keonjhar</td>
<td>12.65</td>
<td>1.587</td>
</tr>
<tr>
<td>2.</td>
<td>Sundargarh</td>
<td>3.816</td>
<td>5.85</td>
</tr>
</tbody>
</table>

B-2.3 Village wise breakup

<table>
<thead>
<tr>
<th>S.no</th>
<th>Village</th>
<th>Forest Land (ha.)</th>
<th>Non-Forest Land (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Purunadini</td>
<td>0.056</td>
<td>0.006</td>
</tr>
<tr>
<td>2</td>
<td>Dubuna</td>
<td>0.778</td>
<td>0.15</td>
</tr>
<tr>
<td>3</td>
<td>Badakalimiti</td>
<td>0.829</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Nayagarh</td>
<td>0.324</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Belda</td>
<td>1.005</td>
<td>0.373</td>
</tr>
<tr>
<td>6</td>
<td>Unchabali</td>
<td>0.35</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Kundapori</td>
<td>0.465</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Palasa (Ko)</td>
<td>1.104</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Jadibahal</td>
<td>2.3</td>
<td>0.151</td>
</tr>
<tr>
<td>10</td>
<td>Palasa (Kha)</td>
<td>1.234</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Guruda</td>
<td>2.614</td>
<td>0.25</td>
</tr>
<tr>
<td>12</td>
<td>Khandebandh</td>
<td>1.591</td>
<td>0.057</td>
</tr>
<tr>
<td>13</td>
<td>Patabeda</td>
<td>1.839</td>
<td>1.325</td>
</tr>
<tr>
<td>14</td>
<td>Gana</td>
<td>0</td>
<td>0.312</td>
</tr>
<tr>
<td>15</td>
<td>Deoghari</td>
<td>0.082</td>
<td>0.117</td>
</tr>
<tr>
<td>16</td>
<td>Malda</td>
<td>0.846</td>
<td>1.752</td>
</tr>
</tbody>
</table>
8.2.4 Component wise breakup

<table>
<thead>
<tr>
<th>S.no</th>
<th>Component</th>
<th>Forest Land (ha.)</th>
<th>Non-Forest Land (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Laying 20&quot; dia. dual pipelines (Slurry &amp; Water), p</td>
<td>16.453</td>
<td>7.39704</td>
</tr>
</tbody>
</table>

C. Maps of forest land proposed to be diverted

**Division 1. : Keonjhar**

(i). Area of forest land proposed to be diverted (in ha.) : 12.65

(ii). Nature of the Project: Linear

(b). No. of Segments : One

<table>
<thead>
<tr>
<th>Segments</th>
<th>Segment Area (in ha.)</th>
<th>Kml File of Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.65</td>
<td>View File</td>
</tr>
</tbody>
</table>

(iii). Copy of Survey of India Toposheet indicating boundary of forest land proposed to be diverted: [Map]

(iv). Scanned copy of the Geo-referenced map of the forest land proposed to be diverted prepared by using GPS or Total Station: [Map]

**Division 2. : Boral**

(i). Area of forest land proposed to be diverted (in ha.) : 3.816

(ii). Nature of the Project: Linear

(b). No. of Segments : One

<table>
<thead>
<tr>
<th>Segments</th>
<th>Segment Area (in ha.)</th>
<th>Kml File of Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.816</td>
<td>View File</td>
</tr>
</tbody>
</table>

(iii). Copy of Survey of India Toposheet indicating boundary of forest land proposed to be diverted: [Map]

(iv). Scanned copy of the Geo-referenced map of the forest land proposed to be diverted prepared by using GPS or Total Station: [Map]
(I). Copy of note containing justification for locating the Project in forest land:

(II). Whether a copy of map indicating location of alternative examine is required to be provided: Yes

(a). Copy of map indicating location of alternative examined:

E. Employment likely to be generated

(i). Whether the Project is likely to generate employment?: Yes

(ii). Permanent/Regular Employment(Number of persons): 20

(iii). Temporary Employment(Number of person-days): 100

F. Displacement of People due to the Project, if any

(i). Whether Project involves displacement?: No

G. Details of Cost-Benefit analysis for the Project

(i). Whether the Project requires Cost-Benefit analysis?: Yes

(a). Copy of Cost-Benefit analysis:

H. Status of Environmental Clearance

(i). Whether the Project requires Clearance under the Environment (Protection) Act 1986 ?: No

I. Status of Wildelife Clearance

(i). Whether the Project or a part thereof is located in any Protected Area or their Eco sensitive zone?: No

J. Applicability of special provisions governing Scheduled Areas

(i). Whether the Project or a part thereof is located in a Scheduled Area?: No

K. Status of settlement of rights under the Forest Rights Act, 2006 on the forest land proposed to be diverted

(i). Whether the process for settlement of Rights under the Forest Rights Acts 2006 on the forest land proposed to be diverted has been completed?: No

L. Details of land identified for Compensatory Afforestation

(i). Whether non-forest or Revenue forest land is required to be provided by User Agency?: Yes
(ii). Whether the area of non-forest land or Revenue forest land required to be provided by User Agency for raising Compensatory Afforestation is less than area of forest land proposed to be diverted?: Yes

(a). Provide reasons thereof: Forest land diverted under FC Act, 1980 for the no

(b). Area of non-forest or Revenue forest land required to be provided by User Agency for raising Compensatory Afforestation: 16.466

(iii). No. of districts involved for raising Compensatory Afforestation: 1

(iv). No. of patches: One

<table>
<thead>
<tr>
<th>District</th>
<th>: Keonjhar</th>
</tr>
</thead>
</table>

(a). Village: Pitanali

(b). Area (in ha.): 16.466

(c). Copy of KML file of the patch: [View File]

(d). Khasra details: 64, 65

(e). Present owner: Others

(f). Copy of ownership proof: [Image]

(g). Copy of Mou/agreement executed between the Present owner and the User Agency: [Image]

(h). Copy of non encumbrance certificate for the forest land: [Image]

(v). Scanned copy of the map of the land identified for creation of Compensatory Afforestation prepared by using GPS or Total Station: [Image]

(vi). Copy of Survey of India Toposheet in 1:50,000 scale indicating location of the land identified for creation of Compensatory Afforestation: [Image]

Additional Information Details

<table>
<thead>
<tr>
<th>Documents</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.No 1</td>
<td>Agreement with Works Department for laying pipeline in non-forest land</td>
</tr>
</tbody>
</table>
FORM NO.1
(for linear projects)
Government of Odisha
Office of the District Collector, Keonjhar
----
No. 2064
Dt. 15.12.2017

TO WHOMSOEVER IT MAY CONCERN

In compliance of the Ministry of Environment and Forests (MoEF), Government of India’s letter No.11-9/98-FC{(Pt) dt.3rd August, 2009 wherein the MoEF issued guidelines on submission of evidences for having initiated and completed the process of settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights Act), 2006 (‘FRA’ for short) on the forest land proposed to be diverted for non-forest purposes, read with MoEF’s letter dated 5th February 2013 wherein MoEF issued certain relaxation in respect of linear projects, it is certified that 12.650 hectares of forest land proposed to be diverted in favour of M/s Essar Steel Ltd. for laying of 27 Km long dual 20” dia (Slurry & water) Pipe lines, Power & Communication cables from Ghoraburini-Sagasa Block mine (Kalamang) under Koirab Tahasil in Sundargarh District in their beneficiation plant at Dabuna in Keonjhar District falls within jurisdiction of Dabuna, Purunadihi, Badakalimati, Balada, Unchabali, Kundaposi, Palasa(ka), Palasa(Kha), Guruda, Jadibahal and Khandabandha villages in Barbil Tahasil and Nayagarh village in Jhupura Tahasil

It is further certified that

(a) The complete process for identification and settlement of rights under the FRA has been carried out for the entire 12.650 hectares of forest land proposed for diversion. A copy of report of each of the panchayat samiti, Joda and Jhupura, a copy of the proceeding of SDLC, Champua meeting and a copy of the proceeding of DLC meeting are enclosed as annexure I to annexure IV.

(b) No such facilities managed by Government requiring diversion of forest land u/s 3(2) of Forest Rights Act, 2006 exist over the forest land proposed for diversion

(c) the proposal does not involve recognized rights of Primitive Tribal Groups and Pre-agricultural communities.

(Dr. N. Thirumaladhi Naik)
Collector, Keonjhar

[Signature]

Memo No. 2065
Rev. 01.15.12.2017

Copy of the certificate alongwith related documents (enclosed) is forwarded to the O.F.O. Maonikan Division, Keonjhar for information.

[Signature]

15.12.17
GD 31, Dist. Magist. Odii
With reference to the letters on the subject cited above, I am to say that the following schedule of non-forest government land measuring 150.032 Ha. in village Podadihi under Banspal Tahasill has been identified for raising Compensatory afforestation in lieu of forest land to be diverted for the three projects of Essar Steel India Limited. namely 1. Ghoburhuni-Sagasaahi Iron Ore block- (120.838 ha.), 2. Slurry, Water Pipelines, power & communication cables from Kalamang(Ghoroburuni-Sagasaahi Block) under Koiral Tahasil in Sundargarh District to their Beneficiation plant Dabuna under Barbil Tahasil in Keonjhar District.(16.466ha.) and 3. Tailing, Water pipelines, Power & Communication cables from their Beneficiation Plant at Dabuna to proposed Tailing Pond at Sankhari (12.728 ha.) The land has been jointly verified by the Tahasilbar, Banspal and Range Officer, BJP Range on dt.21.7.2017.Copy of the joint verification report is enclosed for reference.

<table>
<thead>
<tr>
<th>Khata No</th>
<th>Plot No</th>
<th>Area in Acre</th>
<th>Kisam</th>
<th>Name of the project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>329(P)</td>
<td>15.200</td>
<td>Parbat-I</td>
<td>For Ghoroburhuni- Sagasaahi Iron Ore Block</td>
</tr>
<tr>
<td></td>
<td>361(P)</td>
<td>2.400</td>
<td>Parbat-I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>537(P)</td>
<td>3.600</td>
<td>Parbat-II</td>
<td></td>
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<tr>
<td></td>
<td>538</td>
<td>12.780</td>
<td>Parbat-I</td>
<td></td>
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<td></td>
<td>539</td>
<td>14.519</td>
<td>Parbat-I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>565</td>
<td>16.800</td>
<td>Parbat-I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>566(P)</td>
<td>8.701</td>
<td>Parbat-II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>499(P)</td>
<td>18.040</td>
<td>Parbat-I</td>
<td></td>
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<tr>
<td></td>
<td>500(P)</td>
<td>13.538</td>
<td>Parbat-II</td>
<td></td>
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<tr>
<td></td>
<td>501</td>
<td>15.260</td>
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<td></td>
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<tr>
<td>Total</td>
<td>67(AAA)</td>
<td>120.838</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>502</td>
<td>8.100</td>
<td>Parbat-I</td>
<td>For laying of Slurry, Water pipelines, Power &amp; communication cable from Kalamang to Dabuna under Barbil</td>
</tr>
<tr>
<td></td>
<td>503(P)</td>
<td>8.366</td>
<td>Parbat-I</td>
<td>For laying of Tailings Water pipelines, Power &amp; communication cable from Beneficiation plant at Dabuna to proposed Tailing pond at Sankhari under Barbil</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16.466</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>503(P)</td>
<td>0.548</td>
<td>Parbat-I</td>
<td></td>
</tr>
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<td></td>
<td>504(P)</td>
<td>5.000</td>
<td>Parbat-I</td>
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<tr>
<td></td>
<td>505(P)</td>
<td>7.188</td>
<td>Parbat-I</td>
<td></td>
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<tr>
<td>Total</td>
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<td>12.738</td>
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<td></td>
</tr>
<tr>
<td>G.Total</td>
<td></td>
<td>150.032</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Further, in pursuance of guideline issued vide letter F.No.11-306/2014-FC dated 07.10.2014 of MOEF &CC, Govt. of India, I am to say that the above schedule of non-forest land identified for the purpose stated above will be transferred and mutated in favour of the State Forest & Environment Department for creation of CA against the projects indicated in the land schedule on payment of premium of the land by the project proponent immediately on receipt of stage-I approval under the FC Act for diversion of forest land required by the project proponent.

Accordingly you are requested to prepare a scheme of compensatory afforestation in respect of the project Ghorburhani-Sagasahi Iron Ore block and transmit the same to the D.F.O., Bonai Division for incorporation of the scheme in FC Act proposal.

You are also requested to file requisition before the Tahasildar, Banskul for sanction of alienation in favour of the State Forest & Environment Department after receipt of receipt of Stage-I approval under F.C. Act.

The commitment made vide this office letter No.2224/Rev.Dt.18.10.2016 and letter No.565/Rev.Dt.5.4.2017 for mutation and transfer of the non-forest Government land measuring 16,466 ha. in village pitanali, 7,796 ha. in village Saplangi and 120,838 ha. in village pitanali under Telkoi Tahasal in favour of the State Forest & Environment Department for raising compensatory afforestation towards the above stated projects is withdrawn.

Yours faithfully,

[Signature]

Memo No 1360 /Rev/Dt 01.09.17

Copy submitted to the Joint Secretary to Government, Revenue & D.M. Department, Odisha, Bhubaneswar for information with reference to this office memo No.566 dt.5.4.17

[Signature]

Memo No 1361 /Rev/Dt 01.09.17

Copy forwarded to the Collector, Sundargarh/D.F.O., Bonai Division, Sundargarh for information with reference to this office memo No.567 dt.5.4.17

[Signature]

Addl. District Magistrate, Keonjhar

Memo No 1382 /Rev/Dt 01.09.17

Copy forwarded to the Sub-Collector, Keonjhar/Tahasildar, Telkoi for information and necessary action with reference this office memo No.568 dt.5.4.17

Copy forwarded to the Tahasildar, Banskul for information and necessary action with reference to his letter No.1379 dt.26.7.2017.

Copy forwarded to Mining Officer, Keonjhar for information

Copy to Guard File (Lease Branch).

[Signature]

Addl. District Magistrate, Keonjhar
Memo No 1083 /Rev/Dt 01.04.17

Copy forwarded to the General Manager, M/s Essar Steel India Ltd., 3A, 3rd Floor, Fortune Tower, Chandrasekharpur, Bhubaneswar-751023 for information and necessary action with reference to his letter No.59 dt. 23.6.2017.

22.8.17
Addl. District Magistrate,
Keonjhar
DISTRICT OFFICE, SUNDARGARH
(REVENUE SECTION)

To

The Divisional Forest Officer
Bonai Forest Division.

Sub: Diversion of forest land measuring 3.816 Ha of Forest Land under Forest Conservation Act-1980 in favour of Essar Steel India Ltd., Bhubaneswar for laying 27 KMs long dual (Slurry & water) pipelines, power & communication cables from Ghoraburuhani-Sagasahi Block Mine.

Sir,

With reference to the letter on the subject cited above, I am to furnish herewith the certificate regarding compliance of Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Rights) Act 2006 in favour of Essar Steel India Ltd., Bhubaneswar for laying 27 KMs long dual (Slurry & Water) pipelines, power & communication cables from Ghoraburuhani-Sagasahi Block Mine in village Patabeda, Deoghar, Malda and Kalamang under Koira Tehsil in Sundargarh District for taking further necessary action at your end.

Yours faithfully,

Addl. District Magistrate,
Sundargarh.

Memo No. 480 Dt. 31/03/2017
Copy forwarded to Essar Steel India Ltd., At/po-Dabuna, via-Joda, Dist-
Keonjhar for information and necessary action.

Addl. District Magistrate,
Sundargarh
Form-I
For Linear Projects
Government of Odisha
Office of the District Collector, Sundargarh
No.1/3215/2017….SSD Dtd.04.03.2017.

TO WHOMSOEVER IT MAY CONCERNED

In compliance of the Ministry of Environment and Forests (MoEF), Government of India's letter No.11-9/08-FC(plt) dated 3rd August 2009 wherein the MoEF issued guidelines on submission of evidences for having initiated and completed the process of settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 (FRA for short) on the forest land proposed to be diverted for non-forest purposes read with MoEF's letter no. F.NO.11-09/08-FC(plt) dated 28.10.2014, wherein MoEF issues certain relaxation in respect of linear projects, it is certified that 3.816 hectares of forest land proposed to be diverted in favour of Essar Steel India Ltd., Bhubaneswar for construction laying 27 Kms long Dual (Slurry & water) pipelines, Power & Communication Cables from Ghoraburuhani-Sagasahi Block Mine Kalamang in Village Patabeda, Deoghar, Malda and Kalamang under Koira Tahasil in Bonai forest division which are as follows;

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of Tahasil</th>
<th>Name of Village</th>
<th>Khata No</th>
<th>Plot No</th>
<th>Kisam</th>
<th>Remarks</th>
<th>Area in Ha</th>
</tr>
</thead>
<tbody>
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<td>01</td>
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<td>63</td>
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<td>Chhota jungle</td>
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</tbody>
</table>

Total: 3.816

It is further certified that,

(a) The complete process for identification and settlement of rights under the FRA has been carried out for the entire 3.816 hectares of forest land proposed for diversion. No title has been issued on the forest land proposed for diversion. Copy of the joint field enquiry report of nine villages and the list of title holders are enclosed herewith for reference.

(b) The diversion of forest land for facilities managed by the Government as required under section 23 of the Act have been completed.

(c) The proposal does not involve recognized rights of Primitive Tribal Groups and Pre-agricultural

Signature: [Handwritten]

Digitally signed by: [Handwritten]

Date: 2017.03.02 14:42:15 IST

Reason: Approved

(Signature and official seal of the District Collector)

COLLECTOR
SUNDARGARH