

Date: 20.03.2017

**Divisional Forest Officer**  
Cuttack Forest Division  
Ghatakula, Nuapada  
Cuttack-753010

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Sub: Diversion of balance 7.397 Ha of Sabik Kissam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38 Ha for Chromite mining in Mahagiri Mines(Chromite) of 73.777 Ha in Jajpur district, Odisha by M/s.IMFA Ltd. Regarding:-submission of Stage-I Compliance.

Ref:- (1) Stage-I approval issued by MoEF&CC, GoI vide letter No.F. No. 8-116/2002-FC (Vol.I)dated 20.10.2016.  
(2) Stage-I approval communicated from F&E Deptt, GoO to PCCF, Odisha vide letter No.20022 dated 01.11.2016.  
(3) Stage-I approval communicated from O/o PCCF, Odisha to RCCF, Angul & DFO, Cuttack vide letter No.21245 dated 15.11.2016.

Dear Sir,

In inviting reference to the letters cited above on the captioned subject, we are furnishing herewith the point-wise stage-I compliance of above diversion proposal as mentioned below.

**Condition No.(i)**

***Legal status of the diverted forest land shall remain unchanged.***

**Compliance:**

Agreed. Legal status of the diverted forest land will remain unchanged. Undertaking is enclosed as **Annexure-A**.

**Condition No.(ii)**

***Compensatory Afforestation over the non-forest land equal in extent to the forest land being diverted shall be raised and maintained by the State Forest Department at the cost of the User Agency within three years of stage-II clearance.***

**Compliance.**

An amount of **Rs.23,32,800/-** (Rupees twenty-three lakhs thirty-two thousand and eight hundreds only) has been deposited in designated Ad-hoc CAMPA account through e-portal vide UTR No. SBINR52016122000039035 by RTGS dated 20.12.2016 towards approved cost for implementation of Compensatory Afforestation over an area of 6.787 Ha of Govt non-forest land in village Panturi under Dharmasala Tahasil of Jajpur District under Cuttack Forest Division against the demand raised by DFO, Cuttack Forest Division vide letter memo no.11022/5F(Misc)/2016 dated 08.12.2016.

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Copy of the letter to DFO, Cuttack Forest Division dated 21 12 2016 along with the proof of e-payment i.e. e-payment challan, certificate provided by State Bank of India and transaction acknowledgment slip towards deposit of above amount in designated Ad-hoc CAMPA account are enclosed as **Annexure-B.**

**Condition No.(iii)**

***The land identified for the purpose of CA shall be clearly depicted on the Survey of India topo-sheet of 1:50,000 scale.***

**Compliance:**

The land identified for the purpose of CA has been clearly depicted on the Survey of India toposheet no. 73L/1(New No-F45U1) in 1:50,000 scale. Toposheet map as mentioned above showing CA land over an area 6.787 Ha (one patch) identified in village Panturi under Dharmasala Tahasil in Jajpur District under Cuttack Forest Division is enclosed as **Annexure-C.**

**Condition No.(iv)**

***The non-forest land identified for raising Compensatory Afforestation shall be transferred and mutated in favour of the State Forest Department before issue of the Stage-II clearance.***

**Compliance:**

6.787Ha of Govt non-forest land identified for raising Compensatory Afforestation in village Panturi (one patch) under Dharmasala Tehsil of Jajpur District under Cuttack Forest Division has been alienated in favour of Forest & Environment Department, Govt of Odisha by issuance of letter from Tahasildar, Dharmasala to DFO, Cuttack Forest Division vide letter no.1707 dated 15.03.2017.

Copy of the above letter of Tahasildar, Dharmasala with cc marked to User Agency vide memo no.1710 dtd 15.03.2017 for alienation of non-forest Govt land in favour of F&E Deptt,GoO for compensatory afforestation for Mahagiri Mines(Chromite) is enclosed as **Annexure-D.**

**Condition No.(v)**

***The non-forest land identified for raising Compensatory Afforestation shall be notified by the State Government as R.F. Under Section-4 or PF under Section-20 of the Indian Forest Act,1927 or under the relevant section(s) of the local Forest Act, as the case may be, within a period of six months. The Nodal Officer(Forest Conservation) shall report compliance in this regard.***

**Compliance:**

Necessary action is to be taken-up by the DFO,Cuttack Forest Division in this regard.



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**Condition No.(vi)**

*The User Agency shall transfer the cost of raising and maintaining the Compensatory Afforestation at the current wage rate in consultation with State Forest Department in the account of Ad-hoc CAMPA of the concerned State through online portal. The scheme may include appropriate provision for anticipated cost increase for works scheduled for subsequent years.*

**Compliance:**

An amount of **Rs.23,32,800/-** ( Rupees twenty-three lakhs thirty-two thousand and eight hundreds only) has been deposited in designated Ad-hoc CAMPA account through e-portal vide UTR No. SBINR52016122000039035 by RTGS dated 20.12.2016 towards approved cost for implementation of Compensatory Afforestation over an area of 6.787 Ha of Govt non-forest land in village Panturi under Dharmasala Tahasil of Jajpur District under Cuttack Forest Division against the demand raised by DFO, Cuttack Forest Division vide letter memo no.11022/5F(Misc)/2016 dated 08.12.2016.

Payment particulars enclosed as **Annexure-B** under the compliance condition No.(ii) may be referred.

**Condition No.(vii)**

*The User Agency shall transfer online, the Net Present Value(NPV) of the forest land being diverted under this proposal, as per the orders of Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No.5-3/2007-FC dated 05.02.2009. The requisite funds shall be transferred through online portal into Ad-hoc CAMPA account of the State Concerned.*

**Compliance:**

An amount of Rs.53,99,810/- ( Rupees fifty-three lakh ninety-nine thousand eight hundreds only) has been deposited in designated Ad-hoc CAMPA account through RTGS mode vide UTR No.SBIN415141893624 dated 21.05.2015 towards the cost of Net Present Value (NPV) for the forest land over 7.397 Ha as per sabik record as on 25.10.1980 against the demand raised by DFO, Cuttack Forest Division vide his letter no.4738/5F(Misc)/2015 dated 19.05.2015.

The copy of the letter to DFO, Cuttack Division dated 22.05.2015 along with the certificate provided by State Bank of India towards deposit of above amount in designated Ad-hoc CAMPA account through RTGS mode is enclosed as **Annexure-E**.

**Condition No.(viii)**

*At the time of payment of Net Present Value(NPV) at the then prevailing rate, the User Agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of Hon'ble Supreme Court of India.*

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**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-F.**

**Condition No.(ix)**

***The User Agency shall pay NPV at the rate 20 percent for each year since the violation of Forest (Conservation) Act,1980 has commenced.***

**Compliance:**

User Agency has submitted representation vide letter dated 23.11.2016 to the Forest & Environment Department, Govt of Odisha to recommend to MoEF &CC, Govt. of India for deletion of above condition on the basis of law & justice.

Subsequently, F&E Deptt, Govt of Odisha has intimated the recommendation to the AIG of Forests, MoEF&CC, Govt of India vide letter memo no. 22691 dated 05.12.2016 to be considered for deletion of above condition no.(ix) of stage-I approval.

Now the matter is pending before MoEF & CC, Govt of India.

Our representation letter to Govt of Odisha & recommendation of Govt of Odisha to Govt of India relating to this condition are enclosed as **Annexure-G.**

**Condition No.(x)**

***The User Agency shall raise penal CA equivalent to the land utilised in violation of the provision of Forest (Conservation) Act,1980.***

**Compliance:**

User Agency has submitted representation vide letter dated 23.11.2016 to the Forest & Environment Department, Govt of Odisha to recommend to MoEF &CC, Govt. of India for deletion of above condition on the basis of law & justice.

Subsequently, F&E Deptt, Govt of Odisha has intimated the recommendation to the AIG of Forests, MoEF&CC, Govt of India vide letter memo no. 22691 dated 05.12.2016 to be considered for deletion of above condition no.(x) of stage-I approval.

Now the matter is pending before MoEF & CC, Govt of India.

Our representation letter to Govt of Odisha & recommendation of Govt of Odisha to Govt of India relating to this condition are enclosed as **Annexure-H.**



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**Condition No.(xi)**

***Fencing, Protection and regeneration of the safety zone area (7.5 meters strip all along the outer boundary of the mining lease area as recommended by the State Government) shall be done within three years at the project cost from the issue of Stage-II Clearance. Besides this afforestation on degraded forest land to be selected elsewhere measuring one & a half times the area under safety zone shall also be done at the project cost; The degraded forest land(DFL) so selected will be informed to the MoEF & CC with shape files and afforestation will be done within three years from the date of issue of Stage-II Clearance.***

**Compliance:**

(a) Total safety zone all around the mining lease area comes to 3.08 ha, out of which 2.47 ha of forest land has already been diverted and maintained, balance 0.61 ha safety zone is proposed to be maintained in this present diversion proposal.

Accordingly the scheme for fencing, protection & regeneration of said safety zone over 0.61 ha around the lease hold area has been duly approved by the RCCF,Angul vide his letter memo no. 34 dated 02.01.2017 with a financial outlay of Rs.29,150/- (Rupees twenty nine thousand one hundred fifty only). Approval letter of RCCF,Angul is enclosed as **Annexure-I**.

An undertaking towards implementation of scheme by User agency is enclosed as **Annexure-J**

(b) Scheme for afforestation over 0.915 Ha i.e. one & half times the area of forest land (0.61 Ha) within safety zone identified in the degraded forest land in Mahagiri DPF under Sukinda Tehsil of Jajpur District has been duly approved by RCCF, Angul vide memo no.31 dated 02.01.2017 with a financial outlay of Rs.1,73,145/- ( Rupees one lakh seventy three thousand one hundred fortyfive only).The approval letter of RCCF, Angul is enclosed as **Annexure-K**.

An amount of Rs.1,73,145/- ( Rupees one lakh seventy three thousand one hundred fortyfive only)has been deposited in designated Ad-hoc CAMPA account through e-portal vide UTR No SBIN717019283826 by RTGS dated 19.01.2017 towards approved cost for implementation of 1.5 times safety zone scheme against the demand raised by DFO, Cuttack vide his letter memo no. 327 /5F(Misc) dated 10.01.2017.

Copy of our letter to DFO, Cuttack Forest Division dated 20.01.2017 along with proof of e-payment i.e. e-payment challan along and the certificate provided by State Bank of India towards deposit of above amount in designated Ad-hoc CAMPA account are enclosed as **Annexure-L**.

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**Condition No.(xii)**

*Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease granted under Mines and Minerals ( Development & Regulation) Act,1957, as amended and the rules framed there-under.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-M.**

**Condition No.(xiii)**

*Any fund received from the user agency under the project and deposited in the State Forest Department account, except the funds realized for generation/ demarcation of safety zone, shall be transferred through online portal into Ad-hoc CAMPA account of the State concerned.*

**Compliance:**

The fund relating to NPV, Cost of CA or related to any schemes to be implemented by the State Forest Department ( DFO, Cuttack Forest Division) at the project cost have been deposited in the designated Ad-hoc CAMPA account through e-module/RTGS basing on the demands, so raised by the DFO, Cuttack Forest Division.

Details on funds deposited in designated Ad-hoc CAMPA account in the specified format of CAMPA is enclosed as **Annexure-N.**

**Condition No.(xiv)**

*The user agency shall obtain the Environment Clearance as per the provisions of Environmental (Protection) Act,1986, if required.*

**Compliance:**

User Agency has obtained the Environmental Clearance as per the provisions of Environmental (Protection) Act,1986.

Environmental Clearance orders vide letter no.J-11015/345/2007-IA.II(M) dated 29.10.2012 and letter no.J-11015/345/2007-IA-II(M) dated 17.03.2015 are enclosed as **Annexure-O.**

**Condition No.(xv)**

*No labour camp shall be established on the forest land.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-P.**

**Condition No.(xvi)**

*The User Agency shall provide fuels preferably alternate fuels to the labourers and the staffs working at the site so as to avoid any damage and pressure on the nearby forest areas.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-Q.**



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**Condition No.(xvii)**

*The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by creating four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates.*

**Compliance:**

The boundary of the mining lease, forest land already diverted & applied for diversion and safety zone as applicable, have already been demarcated on ground at the project cost, by creating four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates.

In this regard, a joint DGPS survey of M.L. area of Mahagiri Mines (Chromite) has been undertaken in presence of officials of forest, mining and revenue departments. The lease area is already ground posted with four feet high reinforced cement concrete pillars embedded two feet inside the soil, each inscribed with its serial numbers, forward and backward bearings and distance from pillars to pillar & GPS co-ordinates.

Joint surveyed DGPS map of M.L. area authenticated by ORSAC showing forest, non-forest & the area earmarked as safety zone land along with shape file indicating all surveyed data showing latitude & longitude of each pillars has already been enclosed as plate no-IV in the forest diversion proposal of Mahagiri Mines ( Chromite). Further the same authenticated DGPS map and shape file are enclosed as **Annexure-R**.

**Condition No.(xviii)**

*The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act,1980, in the concerned State Government and the concerned regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-S**.

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**Condition No.(xix)**

***The layout plan of the mining plan/proposal shall not be changed without the prior approval of the Central Government.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-T.**

**Condition No.(xx)**

***The forest land shall not be used for any purpose other than that specified in the proposal.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-U.**

**Condition No.(xxi)**

***The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without the prior approval of the Central Government.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-V.**

**Condition No.(xxii)**

***No damage to the flora and fauna of the adjoining area shall be caused.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-W.**

**Condition No.(xxiii)**

***Any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-X.**

**Condition No.(xxiv)**

***The User Agency will abide by the applicable recommendations of the State Government.***

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-Y.**





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**Condition No.(xxv)**

***Following activities, as per approved plan/schemes, shall be undertaken by the User Agency under the supervision of the State Forest Department.***

(a) ***Mitigative measures to minimize soil erosion and choking of streams shall be implemented within a period of three years with effect from the issue of Stage-II clearance in accordance with the approved plan in consultation with the State Forest Department.***

**Compliance:**

Scheme for mitigative measures to minimize soil erosion and choking of Nala inside the mining lease area prepared as per approved mining scheme and has been approved by RCCF, Angul vide memo no.6487 dated 27.12.2016 with a financial outlay of Rs.10,26,000/- (Rupees ten lakh twenty-six thousands only). Out of six copies of approved schemes, we have only received three copies from the DFO, Cuttack Forest Division vide his letter memo no.43/5F(Misc) dated 03.01.2017. Approval letter of RCCF, Angul and letter of DFO, Cuttack Forest Division are enclosed as **Annexure-Z**. Three sets of approved scheme have been enclosed with the Annexure-Z i.e. one-each in three sets of annexures out of six sets attached to the stage-I compliance.

An undertaking towards implementation of scheme by User Agency has been enclosed as **Annexure-A1**.

(b) ***Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme.***

**Compliance:**

Scheme for checking of soil erosion by planting of adequate drought hardy plant species and sowing of seeds inside the mining lease area prepared as per approved mining scheme and has been approved by RCCF, Angul vide letter memo no.6487 dated 27.12.2016 with a financial outlay of Rs.14,90,000/- (Rupees fourteen lakh ninety thousand only). Out of six copies of approved schemes, we have only received three copies from the DFO, Cuttack Forest Division vide his letter memo no 43/5F(Misc) dated 03.01.2017. Approval letter of RCCF, Angul and letter of DFO, Cuttack Forest Division are enclosed as **Annexure-A2**. Three sets of approved scheme have been enclosed with the Annexure- A2 i.e. one-each in three sets of annexures out of six sets attached to the stage-I compliance.

An undertaking towards implementation of scheme by User Agency has been enclosed as **Annexure-A3**.

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(c) ***Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme.***

**Compliance:**

Scheme for construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour within the mining lease area prepared as per approved mining scheme and has been approved by RCCF, Angul vide letter memo no.34 dated 02.01.2017 with a financial outlay of Rs.1,20,000/-/(Rupees one lakh twenty thousand only).The approval letter of RCCF, Angul is enclosed as **Annexure-A4**.

An undertaking towards implementation of scheme by User Agency is enclosed as **Annexure- A5**.

(d) ***Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 20° and***

**Compliance:**

Scheme for stabilization of overburden dumps by appropriate grading/benching within mining lease area prepared as per approved mining scheme and has been approved by RCCF, Angul vide letter memo no.34 dated 02.01.2017 with a financial outlay of Rs.8,55,00,000/-/(Rupees eight crore fifty-five lakh only).The approval letter of RCCF, Angul is enclosed as **Annexure-A6**.

An undertaking towards implementation of scheme by User Agency has been enclosed as **Annexure-A7**.

(e) ***No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.***

**Compliance:**

The scheme for top-soil management inside the mining lease area prepared as per approved mining scheme and has been approved by RCCF, Angul vide memo no.34 dated 02.01.2017 without any activities therein. The approval letter of RCCF, Angul is enclosed as **Annexure-A8**.

Since top soil is not present in the quarry area, hence there is no generation of top soil in this mines. So implementation of top soil management plan is not applicable in case of Mahagiri Mines(Chromite).





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**Condition No.(xxvi)**

***The State Government shall complete settlement of rights ,in terms of the Scheduled Tribes and Other Traditional Forest Dwellers ( Recognition of Forest Rights) Act, 2006, if any, on the forest land to be diverted and submit the documentary evidence as prescribed by this Ministry in its letter No.11-9/1998-FC (pt.) dated 03.08.2009 read with 05.07.2013. in support thereof.***

**Compliance:**

Letter issued by Collectorate, Jajpur vide memo no. 362 dated 26.02 2016 enclosed with Collector's certificate in model form-II vide letter no. 358 dated 25.02.2016 under FRA,2006 along with Gram Sabha Resolution dated 07.10.2015 of Kaliapani Village in odia language with signature of all the members present, english version of Gram Sabha Resolution and proceeding of SDLC meeting & DLC meeting are enclosed as **Annexure-A9**.

**Condition No.(xxvii)**

***User Agency either himself or through the State Forest Department shall undertake the gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests ( having crown density less than 0.40), if any, located in the area within 100 meters from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF & CC before Stage-II Clearance.***

**Compliance:**

Three sides of mining lease area of Mahagiri Mines(Chromite) is surrounded by other leases such as Retrenched block of M/s.TISCO in the east, Kaliapani Chromite Mines of M/s. Balasore Alloys Ltd in the west and Sukinda Mines (Chromite) of M/s. IMFA Ltd in the north. The forest area Mahagiri DPF exists on the southern side of lease area which is only possible to undertake for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forest.

Hence the scheme with activities on the southern side of lease has been approved by RCCF, Angul vide letter memo no.6487 dated 27.12.2016 with a financial outlay of Rs.5,81,000/- ( Rupees five lakh eightyone thousand only).

Out of six copies of approved schemes, we have only received three copies from the DFO, Cuttack Forest Division vide his letter no 43/5F(Misc) dated 03.01.2017.Approval letter of RCCF, Angul and letter of DFO,Cuttack Forest Division are enclosed as **Annexure-A10**. Three sets of approved scheme have been enclosed with the Annexure-A10 i.e. one-each in three sets of annexures out of six sets attached to the stage-I compliance.

An undertaking towards implementation of scheme by User Agency has been enclosed as **Annexure-A11**.

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**Condition No.(xxviii)**

*The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act,1980, in the concerned State Government and concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation are not being executed by the User Agency, the Nodal Officer or the Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed.*

**Compliance:**

The undertaking enclosed as **Annexure-S** under the compliance condition no.(xviii) may be referred.

**Condition No.(xxix)**

*The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within 5 km. from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF & CC before Stage-II approval.*

**Compliance:**

Scheme/plan for de-siltation of village ponds/water bodies with their GPS co-ordinates located within 5km. from the lease boundary of Sukinda Mines(Chromite) duly verified by Divisional Forest Officer, Cuttack Forest Division has been approved by RCCF, Angul vide memo no.6487 dated 27.12.2016 with a financial outlay for Rs.8,38,000/- (Rupees eight lakh thirtyeight thousand only).

Out of six copies of approved schemes, we have only received three copies from the DFO, Cuttack Forest Division vide his letter no.43/5F(Misc) dated 03.01.2017. Approval letter of RCCF, Angul and letter of DFO, Cuttack Forest Division are enclosed as **Annexure-A12**. Three sets of approved scheme have been enclosed with the Annexure-A12 i.e. one-each in three sets of annexures out of six sets attached to the stage-I compliance.

Undertaking towards implementation of approved scheme by user agency is enclosed as **Annexure-A13**.



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**Condition No.(xxx)**

*The User Agency shall submit the annual self compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-A14.**

**Condition No.(xxxi)**

*Any other condition that the concerned Regional Office of this Ministry may stipulate, from time to time, in the interest of conservation, protection and development of forests & wildlife.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-A15.**

**Condition No.(xxxii)**

*The User Agency shall comply all provisions of all Acts, Rules, Regulations, Guidelines & Hon'ble Court Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.*

**Compliance:**

Agreed. Undertaking in this regard is enclosed as **Annexure-A16.**

**Additional Conditions imposed by Forest & Environment Department, Govt. of Odisha.****Condition No.(A)**

*The User Agency shall pay the differential cost towards appropriate cost of implementation of Regional Wildlife Management Plan at revised rate.*

**Compliance:**

An amount of Rs.12,54,209/-(Rupees twelve lakh fiftyfour thousand two hundred and nine only) has been deposited in designated Ad-hoc CAMPA account through e-portal vide UTR No SBINR52016091634462538 by RTGS dated 16.09.2016 towards differential cost of appropriate contribution for implementation of Regional Wild Life Management Plan at revised rate of Rs.43,000/- against the demand raised by DFO,Cuttack Forest Division vide letter memo no. 7703 dated 10.08.2016.

Copy of our letter to DFO, Cuttack Forest Division dated 19.09.2016 along with e-payment challan and the certificate provided by State Bank of India towards deposit of above amount in designated Ad-hoc CAMPA account are enclosed as **Annexure-A17.**



IMFA Building  
Bhubaneswar -751010  
Odisha, India

Corporate Identity No.  
L27101OR1961PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

**Condition No.(B)**

*Since the previous forest clearance obtained was not for underground mining and environmental clearance order indicates about change of mode of mining to underground, details of underground mining activities taken place already in this mine, shall be furnished along with proposal for change of land use pattern for consideration of MoEF & CC.*

**Compliance:**

In compliance to the above, a Proposal on change of land use pattern from opencast to underground mining and details of underground mining activities taken place has been recommended by Forest & Environment Department, Govt of Odisha to MoEF&CC, Govt.of India for their approval.

The recommendation of F&E Department, Govt of Odisha vide letter memo no.3114 dated 14.02.2017 is enclosed as **Annexure-18**.

Thanking you.

Yours faithfully,  
for **Indian Metals & Ferro Alloys Ltd.**

  
(Sanjeev Das)  
**Sr. Vice President & Constituted Attorney**

Enclosed : Annexures in six sets.

cc: The Principal Secretary, F&E Deptt, GoO, Bhubaneswar  
cc: The PCCF, Odisha, Aranya Bhawan, CS Pur, Bhubaneswar  
cc: Addl PCCF(FD & NO, FC Act), Aranya Bhawan, CS Pur, Bhubaneswar.  
cc: RCCF, Angul Forest Circle, Angul





IMFA Building  
Bhubaneswar - 751010  
Odisha, India

Corporate Identity No.  
L27101OR19619L000428

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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A**

**UNDERTAKING**

*We do hereby undertake to state that Legal status of the diverted forest land will remain unchanged within the lease hold area.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*

Ref No:-IMFA/MPC/2016-112  
Date: 21.12.2016

imfa

IMFA Building  
Bhubaneswar - 751010  
Odisha, IndiaCorporate Identity No  
EPH010K001ELC000122  
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+91 674 2551001  
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+91 674 2550145

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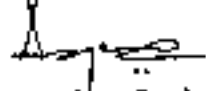
To  
The Divisional Forest Officer  
Cuttack Forest Division  
Ghatikula, Nuapada  
Cuttack-753010Sub:- Deposit of Rs.23,32,800/- in Ad-hoc ORISSA CAMPA Account  
required for to comply the condition no.-2(vi) of Stage-I clearance  
of Mahagiri Mines (Chromite) of M/s.IMFA Ltd.Ref:- (1) Stage-I approval issued by MoEF&CC, Govt vide letter No.F No.8-  
116/2002-FC(Vol) dated 20.10.2016.  
(2) Stage-I approval intimated from F&E Deptt, Govt to PCCF, Odisha  
vide Memo No.20026 dated 01.11.2016.  
(3) Stage-I approval intimated from O/o PCCF, Odisha to RCCF, Angul &  
DFO, Cuttack vide memo No.21248 dated 15.11.2016.  
(4) Your office demand letter memo no. 11022/SF (Misc)/2016  
dated 08.12.2016.

Dear Sir,

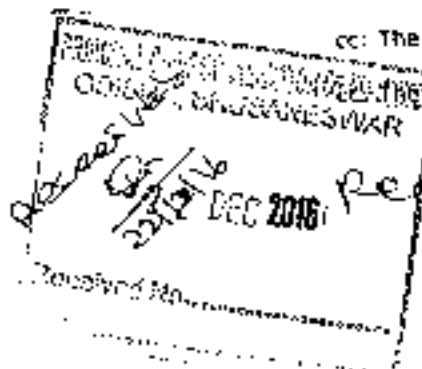
With reference to the above cited letters, we would like to inform you that a sum of Rs.23,32,800/- (Rupees twenty three lakh thirty two thousands eight hundreds only) has been deposited in Ad-hoc Orissa CAMPA account through e-portal after generating e-challan dated 19.12.2016 vide UTR No. SBINR52016122000039035 by RTGS dated 20.12.2016 towards payment of approved financial outlay for cost of raising and maintaining the compensatory afforestation in compliance to the condition No. 2(vi) imposed in the stage-I clearance in respect of diversion of forest land over 7.397 Ha in respect of Mahagiri Mines(Chromite) of M/s.IMFA Ltd against your demand letter memo no. 11022/SF (Misc)/2016 dated 08.12.2016.

The copy of the proof of e-payment i.e. e-challan, the certificate provided by SBI towards payment and transaction acknowledgement slip of nic are enclosed herewith for your kind perusal.

Thanking you,

Yours faithfully,  
For: Indian Metals & Ferro Alloys Limited
  
(Sanjeev Das)  
Sr. Vice President  
Head- Mining Business Unit

Encl : As Above.

cc: The Addl.PCCF(FD & NO,FC Act), O/o The PCCF, Odisha, Aranya Bhawan,  
Bhubaneswar  
Regional Chief Conservator of Forests, Angul Forest Circle, Angul



AGENCY COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 12-12-2016	
Agency Name:	Indian Metals & Ferro Alloys Ltd
Application No.	MJN187292016835
Location:	ORRISA
Address:	Mines Manager, Sukinda Mines(Chromite), MTS-IMFA Jajpur
Amount(In Rs)	2222800/-
Amount in Words :Twenty-Three Lakh Thirty-Two Thousand Eight Hundred Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP000633
Pay to Account No.	16062MIN187292016835
Bank Name & Address:	Corporation Bank FC5 Bangalore 2nd, 3rd floor Jilla Towers Mission Road Bangalore -560027
* This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only	

BANK COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 12-12-2016	
Agency Name:	Indian Metals & Ferro Alloys Ltd
Application No.	MJN187292016835
Location:	ORRISA
Address:	Mines Manager, Sukinda Mines(Chromite), MTS-IMFA Jajpur
Amount(In Rs)	2222800/-
Amount in Words :Twenty-Three Lakh Thirty-Two Thousand Eight Hundred Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP000633
Pay to Account No.	16062MIN187292016835
Bank Name & Address:	Corporation Bank FC5 Bangalore 2nd, 3rd floor Jilla Towers Mission Road Bangalore -560027
* This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only	

After making successful payment, User Agencies may send a line of confirmation through Email: [helpdeskcampa@corpbank.co.in](mailto:helpdeskcampa@corpbank.co.in)



ଭାରତୀୟ ଷ୍ଟେଟ ବ୍ୟାଙ୍କ  
भारतीय स्टेट बैंक  
State Bank of India

ଭାରତୀୟ ଶାଖା : ଉତ୍କଳ ଶାଖା, ପ୍ଲଟ୍-୨, ଉତ୍କଳ ନଗର  
ଭୁବନେଶ୍ୱର - ୭୫୧ ୦୦୮, ଫିଲ୍ଡ - ୧୭୩୩ (୫୫୫୫)  
ସାମାଜିକ ଶାଖା : ଶ୍ରଦ୍ଧାଳୟ ଛାତ୍ର, ପ୍ଲଟ୍-୨, ଶାନ୍ତନୁ ନଗର  
ଭୁବନେଶ୍ୱର - ୭୫୧ ୦୦୮, ଫିଲ୍ଡ - ୧୭୩୩ (୫୫୫୫)  
Commercial Branch: 10000 House, Unit-1, Ashok Nagar  
Bhubaneswar - 751 008, Dist. Khurda (Odisha)

Tel: (0674) 2532416 (DGM), 2532409 (AGM & COO), 2532416 (AGM & RM-I), 2532409 (AGM & RM-II), 2532479 (AGM & RM-III), 2532412 (CM-III), 2532416 (CM-IV), Fax: (0674) 2532189, 2532416, 2532409, E-mail: sbi.06657@sbi.co.in, SBMS: GMS/1888113

### TO WHOMSOEVER IT MAY CONCERN

Certified that we have remitted a sum of Rs. 23,32,800/- In the Bank A/c of ORISSA CAMPA

Please find the details as mentioned below:

Beneficiary name	:	ORISSA CAMPA
Account no.	:	15002MIN187292016835
Bank	:	Corporation Bank
Branch	:	FCS Bangalore 21/1, 3 <sup>rd</sup> Floor Jellita Tower Mission Road Bangalore - 560027
IFSC Code	:	CORP0000633
Date of Remittance	:	20 <sup>th</sup> December 2016
UTR No.	:	SBINR52016122000039035

For State Bank of India

Authorised Signatory





From: [monitoring-fc@nic.in](mailto:monitoring-fc@nic.in) (mailto:[monitoring-fc@nic.in](mailto:monitoring-fc@nic.in))

Sent: Tuesday, December 20, 2016 5:10 PM

To: [sanjeevdas67@gmail.com](mailto:sanjeevdas67@gmail.com)

Cc: [monitoring-fc@nic.in](mailto:monitoring-fc@nic.in)

Subject: Email Alert of CL Payment

### Transaction Acknowledgement



Thank you. Your payment has been successfully deposited with the following details. Please quote your transaction reference number for any queries relating to this request.

Proposal No	FP/OR/MIN/18729/2016
Application No	MIN187292016835
Proposal Name	Mahagiri Mines (Chromite) of M/s. IMFA Ltd
Category	Mining
Submission Date	29 Mar 2016
Area Applied	7.197
Transaction Status	Transaction Successful
Transaction Reference Number	SBINR52016122000039035
Transaction Date	20 Dec 2016
Payment Amount(in Rs.)	2332800/-
Bank	Corporation Bank
Payment Mode	NEFT/RTGS (Challan)

Funds Demand Details

---

Compensatory Afforestation	: Rs. 2332800/-
Additional Compensatory Afforestation	: Rs. 0/-
Penal Compensatory Afforestation	: Rs. 0/-
Catchment Area Treatment	: Rs. 0/-
Safety Zone	: Rs. 0/-
Additional Charges for protected area	: Rs. 0/-
Net Present Value	: Rs. 0/-
Total Amount	: Rs. 2332800/-

\*\*\* This is a system generated email, please do not reply. \*\*\*







## OFFICE OF THE TAHASILDAR, DHARMASALA

No 1707 Date 15.03.17

To

The Divisional Forest Officer, Cuttack.

Sub:-

Alienation of following schedule Non-forest Government land for compensatory afforestation for Sukinda Mines(Chromite) and Mahagiri Mines (Chromite) of MS IMFA Ltd.

Ref:-

This Office Letter No 565 Dated 17.01.17.

Sir,

In inviting a reference to the letter on the subject cited above, I am to say, that the Collector Jajpur has been pleased to sanction alienation of following schedule land Government Land in favour of Forest Department in lieu of payment of premium and other dues by the User Agencies as mentioned against each cases

Lease Case	Sanction Order and Date	Village	Area	Total
05/16	136 Dt. 12.01.17	Panturi	97.25	43470750.00
06/16	131 Dt. 12.01.17	Panturi	16.77	7486190.00
07/16	126 Dt. 12.01.17	Anjira	178.00	79566000.00
Total			292.02	130532940.00

Further I am to intimate you that as per the demand notice and as per the direction of Hon'ble High Court Odisha passed in W.P.(C) No 1382 of 2017, the M/S IMFA Ltd has deposited Rs. 13,05,32,940.00 vide MR No 0572385 Dt. 14.02.17.


In this connection Government in Revenue and DM Department was moved for clarification vide this Office letter No 1576 Dt. 18.02.17. The Government in Revenue and DM Department has clarified the matter vide letter No 8169 Dt. 10.03.17 (Copy enclosed)

In view of above I am to say that since the User Agency has deposited premium and other dues necessary follow up action for granting of

forest clearance may be taken at your level for compliance of the order of the Hon'ble High Court Odisha at the earliest.


The Xerox copy of sanction order, Xerox copy of Money Receipt, Xerox copy of letter No 8169 Dt. 10.03.17 of Joint Secretary to Government Revenue and DM Department are enclosed herewith for your information.

Yours faithfully,

  
Tahasildar, Dharmasala


Memo No /Date

Copy submitted to the Collector and DM Jaipur for favour of kind information with reference to Memo No 8170 Dt. 10.03.17 of Joint Secretary to Government.

  
Tahasildar, Dharmasala


Memo No /Date

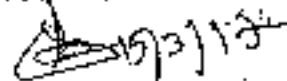
Copy submitted to the Joint Secretary to Government Revenue and DM Department for favour of kind information with reference to Memo No 8170 DL 10.03.17.

  
Tahasildar, Dharmasala

Memo No 1710 /Date 15.3.17

Copy forwarded to the User Agency M/S IMFA Ltd for information and necessary action. He is requested to pursue the matter in obedience to the order of the Hon'ble High Court in W.P.C No 1382/17 for grant of environmental clearance.

  
Tahasildar, Dharmasala



**COLLECTORATE, JAIPUR**

Ph.06726-222001 (O).222330 @ Fax-222087

E-mail: [dm-jaipur@nic.in](mailto:dm-jaipur@nic.in) web site [www.jaipur.nic.in](http://www.jaipur.nic.in)

(Revenue Section)

**ORDER**

No

131

Date

12.01.17

In exercise of the powers conferred in Rule-11 read with Schedule-I (a), of O.G.E.S Rules, 1983, sanction of alienation of Govt. land as scheduled below is hereby accorded below in favour of Forest Deptt., Odisha for diversion of equal extend forest land in favour of Mahagiri Mines(Chromite) of M/S IMFA Ltd for compensatory afforestation on payment of Premium, annual ground rent, cess and incidental charges as follows with following terms and conditions.

**LAND SCHEDULE**

Mouza	Khata No	Plot No	Area	Kisam
Panlaji	212(AAA)	368(p)	Ac 16.77 old Ac 34.11	Parbata-3
		Total	Ac 16.77	
1	Premium of Ac 16.77 dec of land @ Rs 4,00,000/- per Acre		Rs. 67,08,000/-	
2	Rent@1% of premium		Rs. 67,080/-	
3	Cess@75% of annual Rent		Rs. 50,310/-	
4	Incidental Charges 10% of the premium		Rs. 6,70,800/-	
5	Total Amount payable		Rs. 74,96,190/-	

**CONDITIONS**

1. The lease shall have the surface right only over the land.
2. In no circumstances, the land can be transferred to any individual or institution without prior permission of the Collector, Jaipur.
3. The land shall be reverted back to Govt. in Revenue and D.M. Department, if it is not utilised for the purpose for which, it is sanctioned within a period of one year.
4. In case of violation of any terms and conditions as laid down in this sanction order by the lessee, the Sanctioning authority will have power to cancel the lease and resume the land immediately without payment of any compensation for the structure or any development made in the land.


Memo No 132 Date 12.01.17

Copy forwarded to the Divisional Forest Officer, Cuttack for information and necessary action.


Collector, Jaipur  
12/1/2017Collector, Jaipur  
12/1/2017



Memo No 133 Rev/Date 11.01.17  
Copy along with the Lease Case Record bearing No 6/2016 forwarded to the Tahasildar,  
Dharmasata for information and necessary action

  
Collector, Balasore  
2

Memo No 134 Rev/Date 12.01.17  
Copy forwarded to the Secretary to Govt. In Revenue and D.M. Department, Odisha  
Bhubaneswar/ Secretary to Govt., Forest Department / Secretary, Board of Revenue, Odisha, Cuttack/  
Secretary to R.C.C.(CD), Cuttack for favour of information and necessary action.

  
Collector, Balasore  
2

Memo No 135 Date 12.01.17  
Copy to Guard file.

  
Collector, Balasore  
2

INDIAN METALS &amp; FERRO ALLOYS LIMITED



IMEA Building  
Bhubaneswar - 751010  
Odisha, India

Corporate Identity No.  
L27303OL14612LOC00428

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+91 674 2580145

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22<sup>nd</sup> May, 2015

The Divisional Forest Officer,  
Office of the DFO, Cuttack Forest Division,  
Ghatakula, Nuapada,  
Cuttack 753 010.

Sub: Payment of NPV for the forest kissam land as on 25.10.1980 and treated as non-forest Hal Settlement records in respect of Mahagiri Chromite Mines of M/s.ICCL now M/s.IMFA Ltd.

- Ref: i) Your Memo No.4738 dated 19<sup>th</sup> May, 2015  
vi) Memo No.5417 dt. 30.03.2015 of Govt of Odisha, F&E Dept.  
vii) F No.8-78/199-FC(pl.), GoI, MoEF & CC  
viii) Memo No.7031 dt. 20.04.2015 of the PCCF, Odisha  
ix) Our letter dated 06.04.2015.

Dear Sir,

As desired in your letter dated 19<sup>th</sup> May, 2015 we have deposited a sum of Rs.53,99,810/- (Rupees fifty three lakh ninety nine thousand eight hundred ten only) through RTGS in favour of Ad-hoc Body of Compensatory Afforestation Fund Management and Planning Authority (CAMPA) on 21<sup>st</sup> May, 2015. Certificate to that extent by State Bank of India along with the print out of the computer screen is attached for necessary action at your end.

Thanking you,

Yours faithfully,  
for Indian Metals & Ferro Alloys Ltd.,

(Sanjeev Das)  
Vice President,  
Head-Corporate Affairs & Legal

ODISHA, BHUBANESWAR

cc: Addl.Pr.CCF (Forest Diversion & Nodal Officer, FC Act), O/o. PCCF, Odisha, Bhubaneswar.

cc: Regional Chief Conservator of Forests, Angul.

Received on

26 MAY 2015

— 2 —



# STATE BANK OF INDIA

Commercial Branch (Code - 06657)

IDCOL House, Ashok Nagar, Unit - II

Bhubaneswar - 751 009, Odisha, India

E-mail: sbi.06657@sbi.co.in, Fax: 0674-2530803/616

IFSC : SBIN0006657, Swift : SBININBB119

Tel : (for Forex) : (91-674) 2532139, 2530412,

Tel : (for Inland LC/BG) : (91-674) 2535415

## WHOMSOEVER IT MAY CONCERN

Certified that the following RTGS is made in favour of Ad-hoc Body of Compensatory Afforestation Fund Management and Planning Authority ( CAMPA ) Corporation Bank A/c No.SB01025222 payable at New Delhi by debiting CC Account No.10229908780 of Indian Metals & Ferro Alloys Limited.

Favouring— Ad-hoc Body of Compensatory Afforestation Fund Management And Planning Authority ( CAMPA )

Date of payment	UTR No.	Amount (Rs)
21 May 15	SBIN415141893624	53,99,810/-

( RUPEES FIFTY THREE LAC NINETY NINE THOUSAND EIGHT HUNDRED TEN ONLY )

State Bank of India

By General Manager  
Commercial Branch  
Bhubaneswar





UTR Number	SBN415141803624	Trans Branch	36637
Value Date:	21/05/2015		
Amount	3399810.000	INR	
Commission	25.000		

Beneficiary Details

Beneficiary A/C:	SB01025222
Benef. Name And Address:	ADHOC BODY OF COMPENSATORY AFFORESTATION FUND MANAGEMENT AND PLANNING AUTHORITY WITH CORPORATION BANK NEW DELHI

Remitting Customer Details

Account Number:	00000010228806780
Remitter's Name And Address:	INDIAN METALS AND FERRO ALLOYS LTD WITH SEI COMM BRANCH BSR

Beneficiary bank/branch:

IFSC Code:	CORP0000371
------------	-------------

Details of Payment:


Sender's To Receiver Information


Error Code


Fund Status






IMFA Building  
Bhubaneswar - 751010  
Odisha, India

Corporate Identity No.  
L27101OR1961PL000428

TEL +91 674 3651000  
+91 674 2580100  
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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-F**

### **UNDERTAKING**

*We do hereby undertake to state that we have no objection to pay the additional amount of NPV, if so determined, as per the final decision of Hon,ble Supreme Court of India.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*

23<sup>rd</sup> November, 2016

IMEA Building  
Bhubaneswar-751010  
Odisha, India

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+91 674 2580145

ma@imfa.in

www.imfa.in

The Principal Secretary  
Forest and Environment Department  
Govt. of Odisha  
Bhubaneswar.

Sub: FAC recommendation in the meeting held on 24<sup>th</sup> August, 2016 and Stage-I clearance on 7.397 ha. of chromite mining in Mahagiri.

Ref: Our letter dated 23<sup>rd</sup> November, 2016 addressed to DG, MoEF&CC, FC Division, New Delhi.

Dear Sir,

We are in receipt of the recommendation of FAC in the meeting held on 24<sup>th</sup> August, 2016 and the Stage-I clearance granted for diversion of balance 7.397 ha. of Sabik forest land in Mahagiri Chromite mines and have the following observations:

- i) On the application made by Indian Charge Chrome Ltd. (ICCL) (subsequently merged with IMFA) dated 6<sup>th</sup> October, 1993 for grant of mining lease, terms and conditions were issued by Steel & Mines Department, Govt. of Odisha vide letter dated 24<sup>th</sup> May, 1999 to grant mining lease of chromite ore over an area of 73.777 ha. in village Kaliapani No.15 and Forest Block No.27 of Sukinda tahasil. After acceptance of terms & conditions, the State Government in Steel & Mines Department granted mining lease for chrome over an area of 73.777 ha for a period of 30 years vide proceeding dated 18<sup>th</sup> June, 2005. At the time of grant of this mining lease, out of the entire area 73.777 ha., 7.397 ha was treated as non-forest land and 66.380 ha was treated as forest land. Accordingly, the user agency has obtained forest clearance vide letter dated 18<sup>th</sup> May, 2005 over an area of 63.91 ha and vide letter dated 18<sup>th</sup> November, 2014 over an area of 2.47 ha (safety zone) and mining lease was executed between the Collector, Jaipur and ICCL on 20<sup>th</sup> September, 1999. Subsequently Transfer lease deed was executed in favour of IMFA on 19<sup>th</sup> November, 2015.



- ii) The Dy. Director of Mines, Govt. of Odisha vide his letter dated 10<sup>th</sup> October, 2005 and Collector, Jajpur vide his letter dated 6<sup>th</sup> October, 2005 issued surface right for mining operation over an area of 71.307 ha which includes 7.397 ha of non-forest land, after detailed field survey.
- iii) The area of 73.777 ha. of land was part of the lease out land granted to Tata since 1953 which was renewed in 1973.
- iv) MoEF, Govt of India vide letter dated 29<sup>th</sup> October, 2012, after examination of all documents; mentioned that 7.397 ha is wasteland (for which no forest clearance is required) and environmental clearance was issued, accordingly.
- v) For the first time in June, 2006, DFO, Govt of Odisha based on a letter of MoEF dated 7<sup>th</sup> May 2004 intimated to us that as per sabik record 7.397 ha. of land in Mahagiri Mines is coming under forest kism land. The DFO submitted a land schedule along with the comparative picture of hal and sabik records and mentioned that operation is violative of the guidelines and instructions from higher quarter.
- vi) A reply was made to the DFO in July 2006 detailing that the land schedule / classification of lease-hold area reflected in Tata's lease deed dated 15<sup>th</sup> April, 1977 prepared on the basis of sabik settlement records clearly indicates the area as non-forest. The Plot nos. in our leasehold area, translated to the Plot nos. in Tata area as per sabik records, clearly established the area as non-forest.
- vii) Further, the said land was nowhere appearing as a DLC land, as prepared by Govt of Odisha.
- viii) The Govt of Odisha being the owner of all land within the State published final record of right under the Odisha Survey Settlement Act on 26<sup>th</sup> March 1991 describing therein that the land is non-forest.
- ix) After the letters exchanged during June and July, 2006, there was no change in the land schedule of lease deed as executed between the user agency and the Govt of Odisha.

- x) Finally on 12<sup>th</sup> December, 2014 it was intimated by the DFO, Govt of Odisha again that the remaining forest area as per sabik settlement record is 7.397 ha.

Thus, the user agency is not at fault since the user agency signed the lease deed as per land records certified by the Government of Odisha. Further, the Government of Odisha discovered the sabik forest records and intimated to the user agency first time in 2006.

It is, therefore prayed that penal NPV should not be charged to the user agency as the period of violation, if at all, is not on account of the user agency. With the same logic penal compensatory afforestation is also not applicable because the user agency has acted in good faith based on the land schedules submitted by the Government of Odisha.


We, therefore, humbly pray that both the clauses ix and x of Stage-I clearance for Mahagiri Chromite Mines may be withdrawn.

- xi) The user agency has however, provided for raising of compensatory afforestation equivalent to the forest land as per sabik record, while submitting the diversion proposal.
- xii) As per Clause-xxvii, the user agency is to prepare a scheme / plan for restocking and rejuvenating degraded forest within 100 mtrs from outer parameter of the lease area. We would like to intimate you that the lease area has common mining lease boundary with Balasore Alloys Ltd. on the western side, common mining lease boundary of Sukinda Mines (Chromite) of IMFA on the northern side, non-allocated chromite ore area on the eastern side and Mahagiri Demarcated Protected Forest (DPF) on the southern side. The Government of Odisha has also intimated that the entire ore block is a cluster of mines.
- xiii) In view of the above facts, we would like to submit that Clause No. xvii should be deleted / modified while the user agency submits the compliance of Stage-I as directed.

We would like to request you to kindly recommend our case suitably to MoEF&CC, FC Division, Government of India, so as to enable Stage II Clearance.

With best regards,

Yours Sincerely,  
**For Indian Metals & Ferro Alloys Ltd.**

A handwritten signature in black ink, appearing to read "Sanjeev Das".

**(Sanjeev Das)**  
**Sr. Vice President,**  
**Head-Mining Business Unit**

Cc: P.C.C.F., Odisha, Aranya Bhawan, Chandrasekharpur,  
Bhubaneswar

Cc: Addl.P.C.C.F. (Forest Diversion & Nodal Officer, F.C.Act),  
Aranya Bhawan, Chandrasekharpur, Bhubaneswar

Cc: DFO, Cuttack Forest Division, Ghatakula, Nuapada, Cuttack,  
... for Information.



Government of Odisha  
Forest & Environment Department

-0-

No.10F (Cons) 61/2014 22686 F&E, Bhubaneswar, dated. 5.12.16  
From

Sri Debidutta Biswal, IFS,  
Special Secretary to Government.

To

The Assistant Inspector General of Forests,  
Govt. of India, Ministry of Environment & Forest and Climate Change  
(F.C.Division), Indira Paryavaran Bhawan,  
Jor Bagh, Aliganj Road  
New Delhi -110003

Sub: Proposal for diversion of balance 7.397ha. of sabik kisam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38ha. for Chromite mining in their Mahagiri Chromite Mine of 73.777ha. in Jajpur District, Odisha under Cuttack Forest Division by M/s Indian Metals & Ferro Alloys Ltd. (Proposal No. FP/ORMIN/18729/2016).

Sir,

I am directed to say that above mentioned forest diversion proposal has been furnished to MoEF&CC, Government of India vide F&E Department letter No.12033 dt. 29.6.2016 for consideration and approval under Section 2 of Forest Conservation Act, 1980 pursuant to guidelines bearing F. No. 8-78/1996-FC(Pt) dt. 10.3.2015 of MoEF&CC, Government of India. Further present status of compliance on account of additional conditions suggested by the State Government while recommending the above diversion proposal were also furnished to MoEF&CC, GoI vide F&E Department letter No.17325/F&E dt. 19.9.2016.

In this context, it is to state that MoEF&CC, GoI vide their letter F.No. 8-116/2002-FC(Vol.I) dt. 20.10.2016 has accorded Stage-I forest clearance for the above forest diversion proposal with a number of conditions. While the condition wise compliance to the stipulations of Stage-I order are under compilation in the field, the user agency vide its representation dt. 23.11.2016 has drawn attention of the State Government to the penal measures imposed by MoEF&CC vide condition No. 2(ix) and 2(x) of Stage-I orders and requested the State Government to move the MoEF&CC for withdrawal of these two conditions. The above two conditions are reproduced below.

- (1) The user agency shall pay NPV at the rate 20 per cent for each year since the violation of Forest Conservation Act, 1980 has commenced.
- (2) User agency shall raise penal CA equivalent to the land utilized in violation of the provisions of Forest Conservation Act, 1980.

In this context, it is stated that while forwarding this diversion proposal vide its letter dt. 29.6.2016, the State Government had indicated clearly that Mahagiri Chromite Mines of M/s

IMFA Ltd. is an ongoing mining project for production of Chromite ore over M.L. area of 73.777 ha comprising of 66.38 ha. forest land in Block No. 27, Compartment No. 9 of Mahagiri DPF and remaining 7.397ha. of non-forest land within the village limit of Kaliapani under Sukinda tehsil of Jajpur district as per Hal record. Pursuant to MoEF&CC guidelines bearing No. 8-78/1996-FC(pt.) dt. 10.3.2015, the 7.397ha. of non-forest land as per Hal record was found to be of sabik kisan revenue Forest land as on 25.10.1980. As per stipulation of MoEF guidelines dt. 10.3.2015 indicated above, this forest diversion proposal has been filed/processed for the 7.397ha. of sabik kisan forest land as on 25.10.1980 existing within the mining lease area.

In view of this, State Government, based on the report of field forest Officers, had not reported any violation in this mining lease.

In view of above, the copy of representation dt. 23.11.2016 of user agency is enclosed herewith for necessary consideration of the MoEF&CC, GoI.

Yours faithfully

Special Secretary to Government

Memo No. 22687 Dt. 5.12.16

Copy along with the copy of enclosures forwarded to the Additional Principal Chief Conservator of Forests (Central), Government of India, Ministry of Environment, Forests and Climate Change, A/3, Chandrasekharpur, Bhubaneswar for information and necessary action.

Special Secretary to Government

Memo No. 22688 P&E., Dated- 5.12.16

Copy forwarded to the Pr.C.C.F., Odisha /Principal Chief Conservator of Forests(WL) & CWLW, Odisha for information & necessary action.

It is requested to kindly furnish views on the plea of user agency pertaining to safety zone to be maintained in this lease.

Special Secretary to Government

Memo No. 22689 /Dated. 5.12.16

Copy forwarded to the Regional Chief Conservator of Forests, Angul Circle/ Divisional Forest Officer, Cuttack Forest Division for information and necessary action.

Special Secretary to Government

Memo No. 22690 /Dated. 5.12.16

Copy forwarded to the Steel & Mines Department/ Collector, Jajpur for information and necessary action.

Special Secretary to Government

Memo No. 22691 /Dated. 5.12.16

Copy forwarded to the M/s Indian Metals & Ferro Alloys Ltd, IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar-751016, Odisha for information and necessary action with reference to their representation dt. 23.11.2016 to F&E Department.

Special Secretary to Government

IMFA Building  
Bhubaneswar - 751010  
Odisha, India

Corporate Identity No.  
L27160OD1951PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

23<sup>rd</sup> November, 2016

The Principal Secretary  
Forest and Environment Department  
Govt. of Odisha  
Bhubaneswar.

**Sub:** FAC recommendation in the meeting held on 24<sup>th</sup> August, 2016 and Stage-I clearance on 7.397 ha. of chromite mining in Mahagiri.

**Ref:** Our letter dated 23<sup>rd</sup> November, 2016 addressed to DG, MoEF&CC, FC Division, New Delhi.

Dear Sir,

We are in receipt of the recommendation of FAC in the meeting held on 24<sup>th</sup> August, 2016 and the Stage-I clearance granted for diversion of balance 7.397 ha. of Sabilk forest land in Mahagiri Chromite mines and have the following observations:

- i) On the application made by Indian Charge Chrome Ltd. (ICCL) (subsequently merged with IMFA) dated 6<sup>th</sup> October, 1993 for grant of mining lease, terms and conditions were issued by Steel & Mines Department, Govt. of Odisha vide letter dated 24<sup>th</sup> May, 1999 to grant mining lease of chromite ore over an area of 73.777 ha. in village Kallapani No.15 and Forest Block No.27 of Sukinda tahasil. After acceptance of terms & conditions, the State Government in Steel & Mines Department granted mining lease for chrome over an area of 73.777 ha for a period of 30 years vide proceeding dated 18<sup>th</sup> June, 2005. At the time of grant of this mining lease, out of the entire area 73.777 ha., 7.397 ha was treated as non-forest land and 66.380 ha was treated as forest land. Accordingly, the user agency has obtained forest clearance vide letter dated 18<sup>th</sup> May, 2005 over an area of 63.91 ha and vide letter dated 18<sup>th</sup> November, 2014 over an area of 2.47 ha (safety zone) and mining lease was executed between the Collector, Jaipur and ICCL on 20<sup>th</sup> September, 1999. Subsequently Transfer lease deed was executed in favour of IMFA on 19<sup>th</sup> November, 2015.

Recd  
25/11/16  
24/11/16  
24/11/16



- II) The Dy. Director of Mines, Govt. of Odisha vide his letter dated 10<sup>th</sup> October, 2005 and Collector, Jajpur vide his letter dated 6<sup>th</sup> October, 2005 issued surface right for mining operation over an area of 71.307 ha which includes 7.397 ha of non-forest land, after detailed field survey.
- III) The area of 73.777 ha. of land was part of the lease out land granted to Tata since 1953 which was renewed in 1973.
- IV) MoEF, Govt of India vide letter dated 29<sup>th</sup> October, 2012, after examination of all documents; mentioned that 7.397 ha is wasteland (for which no forest clearance is required) and environmental clearance was issued, accordingly.
- V) For the first time in June, 2006, DFO, Govt of Odisha based on a letter of MoEF dated 7<sup>th</sup> May 2004 intimated to us that as per sabik record 7.397 ha. of land in Mahagiri Mines is coming under forest kism land. The DFO submitted a land schedule along with the comparative picture of hal and sabik records and mentioned that operation is violative of the guidelines and instructions from higher quarter.
- VI) A reply was made to the DFO in July 2006 detailing that the land schedule / classification of lease-hold area reflected in Tata's lease deed dated 15<sup>th</sup> April, 1977 prepared on the basis of sabik settlement records clearly indicates the area as non-forest. The Plot nos. in our leasehold area, translated to the Plot nos. in Tata area as per sabik records, clearly established the area as non-forest.
- VII) Further, the said land was nowhere appearing as a DLC land, as prepared by Govt of Odisha.
- VIII) The Govt of Odisha being the owner of all land within the State published final record of right under the Odisha Survey Settlement Act on 26<sup>th</sup> March 1991 describing therein that the land is non-forest.
- IX) After the letters exchanged during June and July, 2006, there was no change in the land schedule of lease deed as executed between the user agency and the Govt of Odisha.

- x) Finally on 12<sup>th</sup> December, 2014 it was intimated by the DFO, Govt of Odisha again that the remaining forest area as per sabik settlement record is 7.397 ha.

Thus, the user agency is not at fault since the user agency signed the lease deed as per land records certified by the Government of Odisha. Further, the Government of Odisha discovered the sabik forest records and intimated to the user agency first time in 2006.

It is, therefore prayed that penal NPV should not be charged to the user agency as the period of violation, if at all, is not on account of the user agency. With the same logic penal compensatory afforestation is also not applicable because the user agency has acted in good faith based on the land schedules submitted by the Government of Odisha.

We, therefore, humbly pray that both the clauses ix and x of Stage-I clearance for Mahagiri Chromite Mines may be withdrawn.

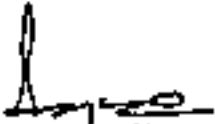
- xi) The user agency has however, provided for raising of compensatory afforestation equivalent to the forest land as per sabik record, while submitting the diversion proposal.
- xii) As per Clause-xxvii, the user agency is to prepare a scheme / plan for restocking and rejuvenating degraded forest within 100 mtrs from outer parameter of the lease area. We would like to intimate you that the lease area has common mining lease boundary with Balasore Alloys Ltd. on the western side, common mining lease boundary of Sukinda Mines (Chromite) of IMFA on the northern side, non-allocated chromite ore area on the eastern side and Mahagiri Demarcated Protected Forest (DPF) on the southern side. The Government of Odisha has also intimated that the entire ore block is a cluster of mines.
- xiii) In view of the above facts, we would like to submit that Clause No. xvii should be deleted / modified while the user agency submits the compliance of Stage-I as directed.



We would like to request you to kindly recommend our case suitably to MoEF&CC, FC Division, Government of India, so as to enable Stage II Clearance.

With best regards,

Yours Sincerely,  
For Indian Metals & Ferro Alloys Ltd.

  
(Sanjeev Das)  
Sr. Vice President,  
Head-Mining Business Unit

Cc: P.C.C.F., Odisha, Aranya Bhawan, Chandrasekharpur,  
Bhubaneswar

Cc: Addl.P.C.C.F. (Forest Diversion & Nodal Officer, F.C.Act),  
Aranya Bhawan, Chandrasekharpur, Bhubaneswar

Cc: DFO, Cuttack Forest Division, Ghatakula, Nuapada, Cuttack.  
... for information.

Government of Odisha  
Forest & Environment Department

-0-

No.10F (Cons) 61/2014 92686 /F&E, Bhubaneswar, dated. 5.12.16  
From

Sri Debidutta Biswal, IPS,  
Special Secretary to Government.

To

The Assistant Inspector General of Forests,  
Govt. of India, Ministry of Environment & Forest and Climate Change  
(F.C.Division), Indira Paryavaran Bhawan,  
Jor Bagh, Aliganj Road  
New Delhi -110003

Sub: Proposal for diversion of balance 7.397ha. of sabik kisan forest land as on 25.10.1980 in addition to already diverted forest land of 66.38ha. for Chromite mining in their Mahagiri Chromite Mine of 73.777ha.in Jajpur District, Odisha under Cuttack Forest Division by M/s Indian Metals & Ferro Alloys Ltd. (Proposal No. FP/OR/MIN/18729/2016).

Sir,

I am directed to say that above mentioned forest diversion proposal has been furnished to MoEF&CC, Government of India vide F&E Department letter No.12033 dt. 29.6.2016 for consideration and approval under Section 2 of Forest Conservation Act, 1980 pursuant to guidelines bearing F. No. 8-78/1996-FC(Pt) dt. 10.3.2015 of MoEF&CC, Government of India. Further present status of compliance on account of additional conditions suggested by the State Government while recommending the above diversion proposal were also furnished to MoEF&CC, GoI vide F&E Department letter No.17325/F&E dt. 19.9.2016.

In this context, it is to state that MoEF&CC, GoI vide their letter F.No. 8-116/2002-FC(Vol.I) dt. 20.10.2016 has accorded Stage-I forest clearance for the above forest diversion proposal with a number of conditions. While the condition wise compliance to the stipulations of Stage-I order are under compilation in the field, the user agency vide its representation dt. 23.11.2016 has drawn attention of the State Government to the penal measures imposed by MoEF&CC vide condition No. 2(ix) and 2(x) of Stage-I orders and requested the State Government to move the MoEF&CC for withdrawal of these two conditions. The above two conditions are reproduced below.

- (1) The user agency shall pay NPV at the rate 20 per cent for each year since the violation of Forest Conservation Act, 1980 has commenced.
- (2) User agency shall raise penal CA equivalent to the land utilized in violation of the provisions of Forest Conservation Act, 1980.

In this context, it is stated that while forwarding this diversion proposal vide its letter dt. 29.6.2016, the State Government had indicated clearly that Mahagiri Chromite Mines of M/s



IMFA Ltd. is an ongoing mining project for production of Chromite ore over M.L area of 73.777 ha comprising of 66.38 ha. forest land in Block No. 27, Compartment No. 9 of Mahanadi DPL and remaining 7.397ha. of non-forest land within the village limit of Kallaponi under Sukinda tehsil of Jajpur district as per Hal record. Pursuant to MoEF&CC guidelines bearing No. 8-78/1996-FC(pt.) dt. 10.3.2015, the 7.397ha. of non-forest land as per Hal record was found to be of sabik kism revenue Forest land as on 25.10.1980. As per stipulation of MoEF guidelines dt. 10.3.2015 indicated above, this forest diversion proposal has been filed/processed for the 7.397ha. of sabik kism forest land as on 25.10.1980 existing within the mining lease area.

In view of this, State Government, based on the report of field forest Officers, had not reported any violation in this mining lease.

In view of above, the copy of representation dt. 23.11.2016 of user agency is enclosed herewith for necessary consideration of the MoEF&CC, Govt.

Yours faithfully

Special Secretary to Government

Memo No. 22687 Dt. 5.12.16

Copy along with the copy of enclosures forwarded to the Additional Principal Chief Conservator of Forests (Central), Government of India, Ministry of Environment, Forests and Climate Change, A/3, Chandrasekharpur, Bhubaneswar for information and necessary action.

Special Secretary to Government

Memo No. 22688 F&E., Dated- 5.12.16

Copy forwarded to the Pr.C.C.F., Odisha /Principal Chief Conservator of Forests(WL) & CWLW, Odisha for information & necessary action.

It is requested to kindly furnish views on the plea of user agency pertaining to safety zone to be maintained in this lease.

Special Secretary to Government

Memo No. 22689 Dated. 5.12.16

Copy forwarded to the Regional Chief Conservator of Forests, Angul Circle/ Divisional Forest Officer, Cuttack Forest Division for information and necessary action.

Special Secretary to Government

Memo No. 22690 Dated. 5.12.16

Copy forwarded to the Steel & Mines Department/ Collector, Jajpur for information and necessary action.

Special Secretary to Government

Memo No. 22691 Dated. 5.12.16

Copy forwarded to the M/s Indian Metals & Ferro Alloys Ltd, IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar-751010, Odisha for information and necessary action with reference to their representation dt. 23.11.2016 to F&E Department.

Special Secretary to Government

Office of the Regional Chief Conservator of Forests, Angul

Memo No. 32 /SF/FC/(MG)27/2014 dated 02.01.16

To

The Divisional Forest Officer,  
Cuttack Division

Subj: Proposal for diversion of balance 7.397 ha of Sapik kisam forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in their Mahagin Chromite Mines of 73.777 ha by M/s IMFA in Jajpur District, Odisha.


Ref: Your Memo Nos 12515 and 12517 both dated 24.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action

S.No	Condition No	Name of the Scheme	Financial outlay
1	xi(a)	Fencing, protection and regeneration of safety zone area.	Rs. 29,150/-
2	xi(b)	Afforestation on degraded forest land over one and half time safety zone	Rs. 1,73,145/-
3	xxv(c)	Construction of check dam, retention/ toe walls to arrest sliding down of the excavated material along the contour.	Rs. 1,20,000/-
4	xxv(d)	Stabilise the over burden dumps by appropriate grading/benching	Rs. 8,55,00,000/-
5	xxv(e)	Top soil management	

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

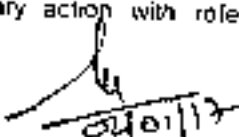
Encl: As above.

  
Regional Chief Conservator of Forests  
Angul

Memo No. 33 /dated 02.01.16

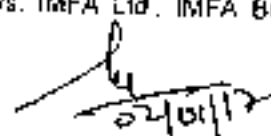
Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No.21245/9F(MG)360/2016 dated 15.11.2016.

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 34 /dated 02.01.16

Copy forwarded to the Vice-President, M/s. IMFA Ltd. IMFA Building, Bomikhal, Rasulgari, Bhubaneswar for information

  
Regional Chief Conservator of Forests  
Angul

**SCHEME FOR ANR AFFORESTATION  
FOR  
MAINTAINING SAFETY ZONE AS GREEN BELT  
IN RESPECT OF  
MAHAGIRI MINES (CHROMITE)  
OF  
M/s. INDIAN METALS & FERRO ALLOYS LTD.,  
IN VILLAGE KALIAPANI OF JAJPUR DISTRICT, ODISHA  
  
OVER AN AREA OF 0.61 HECTARE  
AGAINST  
DIVERSION OF 7.397 Ha. OF FOREST LAND**

**Compliance to :  
Condition No.xii of in-principle Approval of MoEF & CC,  
Govt. of India vide letter No.8-16/2002-FC (Vol.I)**

**Scheme for ANR Afforestation for Maintaining Safety Zone around mining Lease areas as "Green Belt" in respect of Mahagiri Mines (Chromite) of M/s.IMFA Ltd.**

**Scheme for maintaining Safety Zone around mining lease area as "Green Belt" in respect of Mahagiri Mines (Chromite) of M/s. Indian Metals & Ferro Alloys Ltd., in village Kallapani, under Sukinda Tahasil of Dist: Jajpur**

**1.Introduction :**

Mahagiri Mines (Chromite) of M/s. Indian Metals & Ferro Alloys Ltd has been granted a Mining Lease over an area of 73.777 Ha comprising 66.38 Ha forest land and 7.397 Ha non-forest land. But as per Sabik settlement record the entire ML area of 73.777 Ha is found to be forest land. Out of the above forest land, the first forest clearance over an area of 63.91 Ha has been granted by MoEF, Govt. of India vide letter no.F.No.8-116/2002-FC dt.18.05.2005. Subsequently forest clearance for forest land measuring 2.47 Ha earmarked for safety zone within the ML area has been obtained from MoEF&CC vide letter no.F.No.8-116/2000-FC(vol) dt.18.11.2014. Now the Ministry of Environment, Forests & Climate Change has Issued "in principle Approval" for diversion of balance forest area of 7.397 Ha including 0.61 Ha of Safety Zone. As per Guide lines of Govt of India every mine is to maintain a safety zone at a width of 7.5 meter all along the boundary of ML area. In the "in principle Approval" order MoEF&CC has imposed condition, which reads as follows:

*Condition No.(xi) : Fencing, protection and regeneration of the safety zone area (7.5 meters strip all along the outer boundary of the mining lease area as recommended by the State Govt) shall be done within three year at the project cost from the issue of Stage-II Clearance. Besides this afforestation on degraded forest land to be selected elsewhere measuring one & a half times the area under safety zone shall also be done at the project cost. The degraded forest land (DFL) so selected will be informed to the MoEF&CC with shape files and afforestation will be done within three years from the date of issue of Stage-II clearance.*



**Scheme for ANR Afforestation for Maintaining Safety Zone around mining Lease areas as "Green Belt" in respect of Mahagiri Mines (Chromite) of M/s.IMFA Ltd.**

**2.Extent of Area to be covered:**

The area under safety zone to be maintained as "Green Belt" within the Mining Lease area is 0.61 Ha. All are of forest status within the Mining Lease area.

**3.Present Condition of Safety Zone Area :**

The existing vegetation in the earmarked safety zone(0.61Ha) consists of some natural vegetation such as Mahula, Bahada, Amba, Kendu, San Chakunda, Lagerstroemia, Atandl etc and exists in a scattered manner. The average crop density is around 0.15 to 0.20. The terrain is plain and undulating. The location of Safety Zone In Mining Lease area has been marked in the map enclosed as **Annexure-II.**

**4.Objectives :**

The objectives has been enumerated in the condition itself. It is now reproduce to emphasize the importance. The objectives are

- Maintain the area as a thick Green Belt
- Improve crop density above 0.40, preferable it is to be maintained above 0.50.
- Natural regeneration to be allowed to grow and regeneration to be supplemented artificially.

**5.Techniques to be adopted :**

it is observed that the natural vegetation are in scattered manner and of stunted growth. It is proposed to supplement the existing crop with species that can withstand dry climatic condition and survive any adverse situation. It is also required that species should be of good crown size, heavy foliage and comparatively fast growing. It is suggested for ANR afforestation to plant 600 plants per hectare on gaps available.

**Scheme for ANR Afforestation for Maintaining Safety Zone around mining Lease areas as "Green Belt" in respect of Mahagiri Mines (Chromite) of M/s.IMFA Ltd.**

**6.Choice of Species & Methodology :**

A. The following species are suitable for the locality:

- i. *Erithrina subroja* (Paldhua)
- ii. *Mangifera indica* (Amba)
- iii. *Artocarpus hetrophila* (Panas)
- iv. *Albizia lebek* (Sirisa)
- v. *Samania saman* (Bada Chakunda)
- vi. *Bombax ceiba* (Simili)
- vii. *Dalbergia latifolia* (Pahadi Siso)
- viii. *Alstonia scholaris* (Chatiana)
- ix. *Delonix regia* (Krushna Chuda)
- x. *Glaricidia maculate*
- xi. *Peltoferum ferogenium* (Radha chuda)
- xii. *Casia slamia* (San chakunda)

B. Total number of plant to be planted:

It is recommended to plant @ 600 plants per hectare at a spacing of 2.5m x 2.5m in the available gap. Hence  $600 \times 0.61 = 366$  plants will be planted in the 1st year to cover up the area shortly. Seedlings to be procured from Forest Department central nursery or private nursery according to availability. Good quality seedlings to be ensured.

C. Pitting: Pitting should be taken up during march - April. Size of Pit: 30cm x 30cm x 30cm.

D. Planting: Planting is to be carried out during July strictly. Planting at a belated rainy season will hamper the establishment of plant and check its growth. A basal doze of 30 gms of chemical fertilizer (NPK) is recommended.

E. In post planting operation soil working around plants at a radius of 50cm with 9" deep soil loosening, application of chemical fertilizer @ 50gms in two doses will enhance speedy growth.

F. Provision for watering once in a week to be ensured. It will be implemented by dust suppression tanker.

**SCHEME FOR ANR AFFORESTATION IN SAFETY ZONE AROUND THE MINING LEASE AREA OVER 0.61 HA. FOR MAINTAINING AS GREEN BELT IN REVENUE FOREST LAND OF VILLAGE KALIAPANI UNDER SUKINDA TAHASIL OF JAJPUR DISTRICT UNDER CUTTACK FOREST DIVISION AGAINST THE DIVERSION OF 7,397 HA OF FOREST LAND IN RESPECT OF MAHAGIRI MINES(CHROMITE) OF M/S. IMFA LTD.**

Name of the Scheme :-	Scheme for ANR Afforestation for maintaining Safety Zone as Green Belt.
Name of the Project :-	Proposal for ANR Afforestation in Safety Zone around the mining lease area over 0.61 Ha for maintaining as Green Belt in Revenue Forest land of village Kaliapani under Sukinda Tahasil of Jajpur District under Cuttack Forest Division in respect of diversion of Forest land over 7,397 Ha of Mahagiri Mines(Chromite) of M/S. IMFA Ltd.
Name of Implementing Agency:-	Divisional Forest Officer,Cuttack Forest Division

1. NO. OF PLANTS PER HA.	600
2. TOTAL AREA TO BE PLANTED(In HA.)	0.61
3. TOTAL NOS. OF PLANTS TO BE PLANTED	366
4. SPACING TO BE ADOPTED	2.5 Mtr. X 2.5 Mtr.
5. WAGE RATE PER MANDAY	200.00

Sl. No.	Item of activities	Manday	Amount in Rs. 200.00	Cost of materials in Rs.	Total cost in Rs.
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**0<sup>th</sup> Year**

1	Survey, Demarcation and Pillar Posting, GPS Reading with mapping(Nov/Dec)	2	400.00	0.00	400.00
2	Site Preparation(Nov/Dec)	2	400.00	0.00	400.00
3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling	5	1,000.00	0.00	1,000.00
4	Nursery cost ( 8 months old seedling) @ Rs 9.45/- seedling(Rs.8.67 in 0 <sup>th</sup> year + Rs. 2.78 in 1 <sup>st</sup> year) for 880 seedlings (800+80) (Nov/Mar)	16.5	3,300.00	1,102.00	4,402.00
5	Contingency & unforeseen Expenditures		0.00	198.00	198.00
Sub-Total:-		25.5	5,100.00	1,300.00	6,400.00

**1<sup>st</sup> Year**

1	Nursery Cost (8 month old seedling) balance @ 2.78 for 880 seedlings (April-Jul)	8	1,800.00	235.00	1,835.00
2	Piling 30 cm cube size ( Feb/ Mar)	18	3,600.00	0.00	3,600.00
3	Carriage and planting including casualty replacement (Jul/Aug)	15	3,000.00	0.00	3,000.00
4	Complete weeding, Soil working, Manuring ( Aug/Sep)	18	3,600.00	0.00	3,600.00
5	Cost of Vermo compost 200gm/plant @ Rs. 20/- per kg = Rs. 2400.00 ( Aug/ Sep) and Granular insecticide 5grms/plant @ Rs. 80/-per Kg= Rs.240.00		0.00	2,840.00	2,840.00

**TOTAL PROJECT COST FOR 0.61 HA.**

Year	Labour Cost	Material Cost	Mandays to be generated	Total Cost
0th Year	3,111.00	793.00	15.56	3,904.00
1st Year	12,688.00	2,562.00	63.44	15,250.00
2nd Year	3,782.00	1,942.24	18.91	5,724.24
3rd Year	1,708.00	0.00	8.54	1,708.00
4th Year	366.00	0.00	1.83	366.00
5th Year	366.00	0.00	1.83	366.00
6th Year	366.00	0.00	1.83	366.00
7th Year	366.00	0.00	1.83	366.00
8th Year	366.00	0.00	1.83	366.00
9th Year	366.00	0.00	1.83	366.00
10th Year	366.00	0.00	1.83	366.00
Total:-	23,851.00	5,297.24	119.26	29,148.24
			OR	29,150.00

(Rupees Twenty Nine Thousand One Hundred Fifty) only.

  
Forest Range Officer  
Sukinda Range

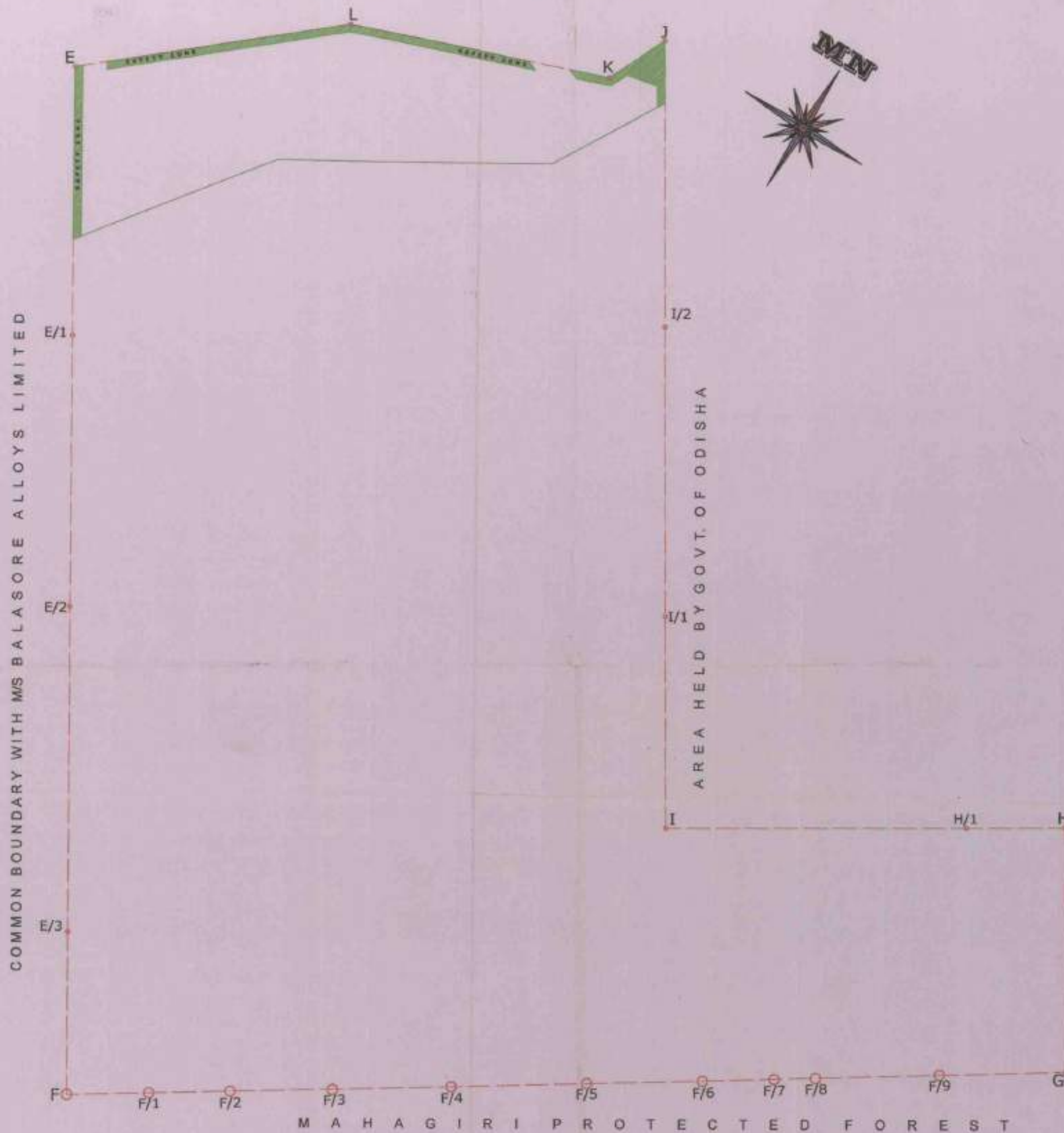
  
Asst. Conservator of Forests  
Cuttack Forest Division.

  
Divisional Forest Officer  
Cuttack Forest Division

*Approved for Rs. 29,150/-  
(Rupees Twenty Nine Thousand and one  
hundred fifty) only.*

  
Regional  
Chief Conservator of Forests  
Aneul Circle.

COMMON BOUNDARY WITH SUKINDA MINES (CHROMITE) M/S IMFA LTD.



*S. N. D.*  
Forest Range Officer  
Sukinda Range

*[Signature]*  
Asst. Conservator of Forests  
Cuttack Forest Division

*[Signature]*  
Divisional Forest Officer  
Cuttack Forest Division

## INDEX

- M.L. BOUNDARY
- SAFETY ZONE

SAFETY ZONE AREA (0.610 Ha.)

## MAHAGIRI MINES (CHROMITE)

M/S INDIAN METALS &amp; FERRO ALLOYS LIMITED

PLAN SHOWING SAFETY ZONE AREA WITHIN PROPOSED FOREST  
AREA 7.397 Ha. TO BE DIVERTED WITHIN THE M.L. AREA 73.777 Ha.

SCALE - 1:4000

PLATE NO - XII





IMFA Building  
Bhubaneswar -751010  
Odisha, India

Corporate Identity No.  
L271010X1961PLC000428

TEL. +91 674 3051000  
+91 674 2580100  
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mail@imfa.in

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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s, Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-J**

**UNDERTAKING**

*We do hereby undertake to state that we would implement and execute the approved cost of scheme for fencing, protection and regeneration of the safety zone area all along the boundary of the mining lease area, as recommended by the State Government within three years from the issue of Stage-II Clearance.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**

# ANNEXURE-K

Office of the Regional Chief Conservator of Forests, Angul

Memo No. 32 /dated 02.01.17

To

The Divisional Forest Officer,  
Cuttack Division.

Sub:- Proposal for diversion of balance 7397 ha of Sanik Kisan forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 73777 ha by M/s IMFA in Jajpur District, Odisha.

Ref:- Your Memo Nos 12515 and 12517 both dated 24.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action.

SING	Condition No	Name of the Scheme.	Financial outlay
1	xi(a)	Fencing, protection and regeneration of safety zone area.	Rs. 29,150/-
2	xii(b)	Afforestation on degraded forest land over one and half time safety zone.	Rs. 1,73,145/-
3	xxv(c)	Construction of check dam, retention toe walls to arrest sliding down of the excavated material along the contour.	Rs. 1,20,000/-
4	xxv(d)	Stabilise the over burden dumps by appropriate grading/benching	Rs 8,55,00,000/-
5	xxv(e)	Top soil management	

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

Encl: As above.

Regional Chief Conservator of Forests  
Angul

Memo No. 33 /dated 02.01.17

Copy along with the above approved scheme forwarded to the Adl Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No 21245/9F(MG)360/2016 dated 15.11.2016.

Encl: As above

Regional Chief Conservator of Forests  
Angul

Memo No. 34 /dated 02.01.17

Copy forwarded to the Vice-President, M/s. IMFA Ltd., IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar for information.

Regional Chief Conservator of Forests  
Angul

**SCHEME FOR ANR AFFORESTATION  
ON  
DEGRADED FOREST LAND  
OVER 0.915 HA.  
IDENTIFIED IN MAHAGIRI DPF UNDER SUKINDA RANGE OF  
CUTTACK FOREST DIVISION  
AGAINST DIVERSION OF 7.397 HECTARE OF FOREST LAND  
PERTAINING TO  
MAHAGIRI MINES (CHROMITE) OF M/S IMFA LTD  
IN JAJPUR DISTRICT, ODISHA.**

**Compliance :**

To condition No.(xi) of in-principle Approval of MoEF&CC, Govt. of India vide letter no.F.No. 8-116/2002-FC(Vol.I) dated 20<sup>th</sup> October, 2016.

**SCHEME FOR ANR AFFORESTATION ON DEGRADED FOREST LAND OVER ONE AND HALF TIMES OF SAFETY ZONE AREA EARMARKED AGAINST MAHAGIRI MINES (CHROMITE) LEASE OF M/S. IMFA LTD. IN JAJPUR DISTRICT, ODISHA.**

**1. Introduction:**

Mahagiri Mines (Chromite) mining lease of M/s IMFA Ltd. has to maintain a safety zone over 0.61 Ha. of forest land earmarked as safety zone area. As per the condition, one and half times of the area earmarked for safety zone is to be afforested on degraded forest land selected elsewhere. The condition as imposed in the "In principle approval" order of MoEF & CC, Govt of India vide letter no.letter no.F. No.8-116/2002-FC(Vol-I) dated 20.10.2016 is read as follows:

*Condition No.xi : Fencing, protection and regeneration of the safety zone area (7.5 meters strip all along the outer boundary of the mining lease area as recommended by the State Govt) shall be done within three year at the project cost from the issue of Stage-II Clearance. Besides this afforestation on degraded forest land to be selected elsewhere measuring one & a half times the area under safety zone shall also be done at the project cost. The degraded forest land (DFL) so selected will be informed to the MoEF & CC with shape files and afforestation will be done within three years from the date of issue of Stage-II clearance.*

Therefore plantation over 1.5 times of safety zone area 0.61 Ha = 0.915 Ha. of degraded forest land is to be taken up by the Forest & Environment Deptt. at the project cost.

The ANR plantation @ 800 nos. of seedlings per hectare will be taken up over 0.915 Ha of degraded forest area with a maintenance period of 10 Yrs. The cost estimate for this ANR plantation is enclosed as Annexure-I.

**Identification of the degraded forest area:**

The degraded forest land for this purpose has been identified in Mahagiri DPF over 0.915. The location details of selected site are as follows:

Location	: Topo Sheet No.73G/16(New No.F45N16)
Forest Division	: Cuttack
Forest Range	: Sukinda
Name of Forest	: Mahagiri DPF
Topography	: Gentle Slope
Soil Quality	: Lateritic Soil
Crop Density of the vegetation of the site	: Dense growth of weeds like <i>Lantana camara</i> and <i>Eupatorium</i>
Area to be covered	: 0.915 Hectare

Toposheet map showing location of degraded forest identified for ANR afforestation over 1.5 times of safty zone is enclosed as Annexure-II.

The DGPS surveyed map along with shape file of the identified degraded forest area for ANR afforestation of 1.5 times of forest area of safety zone is enclosed as Annexure-III.



## 2. Objective:

As mentioned in the introductory paragraph, this scheme aims to comply the condition no (xii) as imposed vide letter No. F.No. 8-116/2002-FC(Vol.I) dated 20<sup>th</sup> October, 2016 of MoEF&CC. The degraded forest is to be restocked by ANR Plantation with a density of 800 plants/ hectare with soil & moisture conservation measures along with site specific Afforestation programme to conserve soil water recharging ground water table, to check erosion and thereby to improve the vegetation of the area.

In addition, due to implementation of the work, the following benefits will also accrue.

- a) Improvement of the micro edaphic condition,
- b) Checking of illicit felling, fire occurrence and further degradation of the area,
- c) Employment generation for the local people mainly to ST/ST
- d) Awareness of villagers will be boosted for protection of planted area and other areas of the DPF with active participation of VSS members.

## 3. Technique to be adopted:

As indicated, ANR planting will be taken up @ 800 seedlings per hectare over 0.915 Ha of area. It is proposed for planting of hardy and non-browse able species. This plantation is to be maintained for a period of 10 years to achieve the objectives.

### 4. A. Survey, Demarcation & Pillar Posting

Survey, Demarcation and Pillar posting works will be taken up by the Forest & Environment Deptt. at the project cost. Pillars are to be fixed at corner & conspicuous places of the boundary. One sign board is to be displayed at the site at appropriate place. Pillars will be numbered serially as per the map of the planting site.

### 4. B. Site Clearance

The area is covered with dense weeds like *Lantana camara*, *Casia tora* and *Eupatorium*. Extra fund is required for site clearance. Eradication of weeds is badly needed to prevent their interference in the growth of planted species. The best time to take up the above works is October-December.

### 4. C. Plantation

Attempts will be made to plant species that can withstand moisture stress condition. Accordingly after field visit and observation in the field the following species are proposed to be planted.

1. *Tectona grandis*
2. *Emblica officinalis*
3. *Cassia siamea*
4. *Dalberia sissoo*
5. *Pongamia pinnata*
6. *Azadirachta indica*
7. *Dendrocalamus strictus* etc



Before taking of plantation the following Pre-planting operation are required to be taken up.

## **5. Pre-Planting Operation**

### **a) *Raising of nursery***

A temporary nursery will be raised near perennial water source as near the plantation as possible. Nursery works will commence one year ahead of planting season to get second year seedling for plantation. 10% excess of seedling to be raised than required for replacement of casualty. Seedlings required:  $0.915\text{ha} \times 800 + 10\% \text{ extra} = 805 \text{ nos.}$

### **b) *Alignment, Pit-marking and Pitting***

This will be taken up in the month of March-April. Pits of size 30cm X 30cm X 30cm to be dug out.

## **6. Planting Operation**

Plantation will be done after first regular shower of monsoon and to be completed within a week. Basal dose of NPK/DAP fertilizer @50gm per plant to be given. Utmost care is to be taken to apply insecticides @5gm per pit. Casualty replacement to be taken up during 1<sup>st</sup> year of plantation just after one month of planting. 10% casualty replacement is also suggested during 2<sup>nd</sup> year.

## **7. Post Planting Operation**

### **a. *Weeding, soil working and manuring***

post planting operation is most vital in success of any planting programme. It is proposed to carry out two weeding during first year. One weeding and soil working has to be done in second year and third year of plantation. Application of 30gms of NPK/CAP to be added to the soil per plant at the time of soil working during 1<sup>st</sup> & 2<sup>nd</sup> year of plantation.

### **b. *Application of insecticides***

To prevent infestation of planted seedlings with diseases due to influx of insects and pests into the area, it is required to apply insecticides like phorate at the time of planting. Foliar spraying of insecticides may be done if badly necessary.

### **c. *Fire line tracing and maintenance***

Tender seedlings planted are subject to damage by ground fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundary of the plantation and several internal lines need to be scrapped to a width of 2mtr during February-March. The cut back materials and dry leaves along with fire lines should be separated and dumped in pits outside the plantation area.

**d. Watch and Ward**

Watch and ward is necessary to protect the area from grazing, fire accident and other biotic interference. Cost of watch & ward per hectare for the present plantation site is high because the plantation area is small.

**e. Soil & Moisture Conservation**

In order to enhance soil moisture, check run off and arrest carrying of silt in the flow water it is required to have staggered trenches (size 2m long X 0.50m width X 0.5m Deep) along the contour. Line to line interval 4m or as required depending the degree of slope of the land.

**8. Executing Agency**

This programme will be implemented by the Forest & Environment Deptt. at the project cost.

**9. Inspection monitoring and evaluation**


The plantations to be periodically inspected by the authority & plantation journal is to be maintained as per prevailing practice.

**10. Barbed wire fencing**

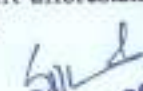
In addition to the norm provision, barbed wire fencing is adopted for better safe guard of plantation. The details of cost towards barbed wire fencing is also mentioned in the **Annexure-I**.

**10. Financial forecast**

The project will be for a period of ten years and the total Project Cost is **Rs. 1,73,145.00 (Rupees One Lakh Seventy Three Thousand One Hundred Forty Five)** only for ANR afforestation over 0.915 ha @800 plants per ha. The detail estimate is enclosed as **Annexure-I**.

  
Asst. Conservator of Forest  
Cuttack Forest Division

  
Divisional Forest Officer  
Cuttack Forest Division

  
Forest Range Officer  
Sukinda Range



**SCHEME FOR ANR AFFORESTATION OF 1.5 TIMES OF SAFETY ZONE FOREST AREA OVER 0.915HA ON DEGRADED FOREST LAND IN MAHAGIRI D.P.F. OF SUKINDA RANGE OF CUTTACK FOREST DIVISION UNDER JAJPUR DISTRICT**

Name of the Scheme :-	Scheme for Afforestation on Degraded Forest Area
Name of the Project :-	Proposal for ANR Afforestation on degraded Forest area over 0.915 Ha( i.e.1.5 times Safety Zone Forest Land) selected in Mahagiri DPF of Sukinda Tahasil under Jajpur District in respect of diversion of Forest land over 7.397 Ha of Mahagiri Mines(Chromite) of M/S. IMFA Ltd.
Name of Implementing Agency:-	Divisional Forest Officer,Cuttack Forest Division

1. NO. OF PLANTS PER HA.	800
2. TOTAL AREA TO BE PLANTED(In HA.)	0.915
3. TOTAL NOS. OF PLANTS TO BE PLANTED	732
4. SPACING TO BE ADOPTED	2.5 Mtr. X 2.5 Mtr.
5. WAGE RATE PER MANDAY	200.00

Sl. No.	Item of activities	Manday	Amount in Rs. 200.00	Cost of materials in Rs.	Total cost in Rs.
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**0<sup>th</sup> Year**

1	Survey, Demarcation and Pillar Posting, GPS Reading with mapping(Nov/Dec)	2	400.00	0.00	400.00
2	Site Preparation(Nov/Dec)	2	400.00	0.00	400.00
3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.(Jan/Feb)	5	1,000.00	0.00	1,000.00
4	Nursery cost ( 8 months old seedling) @ Rs.9.45/- seedling(Rs.6.67 in 0th year + Rs. 2.78 in 1st year) for 880 seedlings (800+80) (Nov/Mar)	22	4,400.00	1,470.00	5,870.00
5	Contingency & unforeseen Expenditures		0.00	230.00	230.00
<b>Sub-Total:-</b>		<b>31</b>	<b>6,200.00</b>	<b>1,700.00</b>	<b>7,900.00</b>

**1<sup>st</sup> Year**

1	Nursery Cost (8 month old seedling) balance @ 2.78 for 880 seedlings (April-Jul)	11	2,200.00	246.00	2,446.00
2	Pitting 30 cm cube size ( Feb/ Mar)	24	4,800.00	0.00	4,800.00
3	Carriage and planting including casualty replacement (Jul/Aug)	20	4,000.00	0.00	4,000.00
4	Complete weeding, Soil working, Manuring ( Aug/Sep)	24	4,800.00	0.00	4,800.00
5	Cost of Vermi compost 200gm/plant @ Rs. 20/- per kg = Rs. 3200.00 ( Aug/ Sep) and Granular Insecticide 5grms/plant @ Rs. 80/-per Kg= Rs.320.00.		0.00	3,520.00	3,520.00

Sl. No.	Item of activities	Manday	Amount in Rs. 200.00	Cost of materials in Rs.	Total cost in Rs.
6	Cost of chemical fertilizer (a) Urea 70 gms/ plant in two subsequent does @ Rs. 6/- per kg = Rs. 336.00 (b) NPK 50gms/plant @ Rs.24/-per kg = Rs. 960.00 as basal dose ( Feb/Mar)		0.00	1,296.00	1,296.00
7	Fire line tracing & inspection path	3	600.00	0.00	600.00
8	Silvicultural Operation involving clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	15	3,000.00	0.00	3,000.00
9	Soil conservation measures (Staggered trenches of dimension 2 m x 0.5 m x 0.5 m @ 60nos per ha) or its equivalent	20	4,000.00	0.00	4,000.00
10	Watch & Ward	7	1,400.00	0.00	1,400.00
11	Contingency & unforeseen Expenditures		0.00	338.00	338.00
12	Cost of Barbed wire fencing over 292 Rmt (Details calculation given below)		0.00	1,21,070.00	1,21,070.00
Sub-Total:-		124	24,800.00	1,26,470.00	1,51,270.00

### 2<sup>nd</sup> Year

1	Casualty Replacement including cost of seeding, carriage and planting	4	800.00	756.00	1,556.00
2	Complete weeding and cultural operations	8	1,600.00	0.00	1,600.00
3	Soil working & Manuring	8	1,600.00	0.00	1,600.00
4	Cost of fertilizer and insecticide (a) Vermi compost 200gm/plant @ Rs. 20/- per kg = Rs. 3200.00 (b) Granular insecticide 5gms/plant for 80 plants 400 gms @ Rs. 80/-per Kg= Rs.32.00.		0.00	3,232.00	3,232.00
5	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
6	Soil conservation measures (Renovation of Staggered trenches etc.)	8	1,600.00	0.00	1,600.00
7	Watch & Ward (Whole year)	7	1,400.00	0.00	1,400.00
8	Contingency & unforeseen Expenditures		0.00	224.00	224.00
Sub-total:-		36	7,200.00	4,212.00	11,412.00

### 3<sup>rd</sup> Year

1	Complete Weeding & Puring	4	800.00	0.00	800.00
2	Soil Working	4	800.00	0.00	800.00
3	Soil conservation measures (Renovation of Staggered trenches etc.)	1	200.00	0.00	200.00
4	Watch & Ward (Whole year)	7	1,400.00	0.00	1,400.00
Sub-Total:-		16	3,200.00	0.00	3,200.00

### 4<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00

### 5<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00



Sl. No.	Item of activities	Manday	Amount in Rs. 200.00	Cost of materials in Rs.	Total cost in Rs.
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### 6<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00

### 7<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00

### 8<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00

### 9<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00

### 10<sup>th</sup> Year

1	Fireline Tracing and Inspection Path	1	200.00	0.00	200.00
2	Prunning, Watch & Ward	2	400.00	0.00	400.00
Sub-Total:-		3	600.00	0.00	600.00
Grand Total:-		228	45,600.00	1,32,382.00	1,77,982.00

### TOTAL COST FOR 1 HA.

Year	Labour Cost	Material Cost	Mandays to be generated	Total Cost
0th Year	6,200.00	1,700.00	31	7,900.00
1st Year	24,800.00	1,26,470.00	124	1,51,270.00
2nd Year	7,200.00	4,212.00	36	11,412.00
3rd Year	3,200.00	0.00	16	3,200.00
4th Year	600.00	0.00	3	600.00
5th Year	600.00	0.00	3	600.00
6th Year	600.00	0.00	3	600.00
7th Year	600.00	0.00	3	600.00
8th Year	600.00	0.00	3	600.00
9th Year	600.00	0.00	3	600.00
10th Year	600.00	0.00	3	600.00
Total:-	45,600.00	1,32,382.00	228	1,77,982.00



### TOTAL PROJECT COST FOR 0.915 HA.

Year	Labour Cost	Material Cost	Mandays to be generated	Total Cost
0th Year	5,673.00	1,555.50	26.37	7,228.50
1st Year	22,692.00	1,26,011.00	113.46	1,48,703.00
2nd Year	6,588.00	3,853.98	32.94	10,441.98
3rd Year	2,928.00	0.00	14.84	2,928.00
4th Year	549.00	0.00	2.75	549.00
5th Year	549.00	0.00	2.75	549.00
6th Year	549.00	0.00	2.75	549.00
7th Year	549.00	0.00	2.75	549.00
8th Year	549.00	0.00	2.75	549.00
9th Year	549.00	0.00	2.75	549.00
10th Year	549.00	0.00	2.75	549.00
<b>Total:-</b>	<b>41,724.00</b>	<b>1,31,420.48</b>	<b>208.62</b>	<b>1,73,144.48</b>
			<b>OR</b>	<b>1,73,145.00</b>

(Rupees One Lakh Seventy Three Thousand One Hundred Forty Five)only.

### Details of Calculation of Barbed wire fencing for 292 Rmt.

Particulars of work	Unit	Rate/ each	Amount
1-Cost of RCC fence post size 7" X 6" X 4" (1 post over 2 meter)	146	325.00	47,450.00
2-Cost of Barbed wire for 292 Rmt. with 7 layer & cross section (292 X 7=2044 Rmt = 408.8 Kg. (5mtr=1 Kg appx.))	408.8	100.00	40,880.00
3-Fixing of RCC Pillar	146	100.00	14,600.00
4-Fixing barbed wire with fence post	146	90.00	13,140.00
5-Painting & numbering on L.S.			5,000.00
<b>Total:-</b>			<b>1,21,070.00</b>

*SIL*  
Forest Range Officer  
Sukinda Range

*[Signature]*  
Asst. Conservator of Forests  
Cuttack Forest Division

*[Signature]*  
Divisional Forest Officer  
Cuttack Forest Division

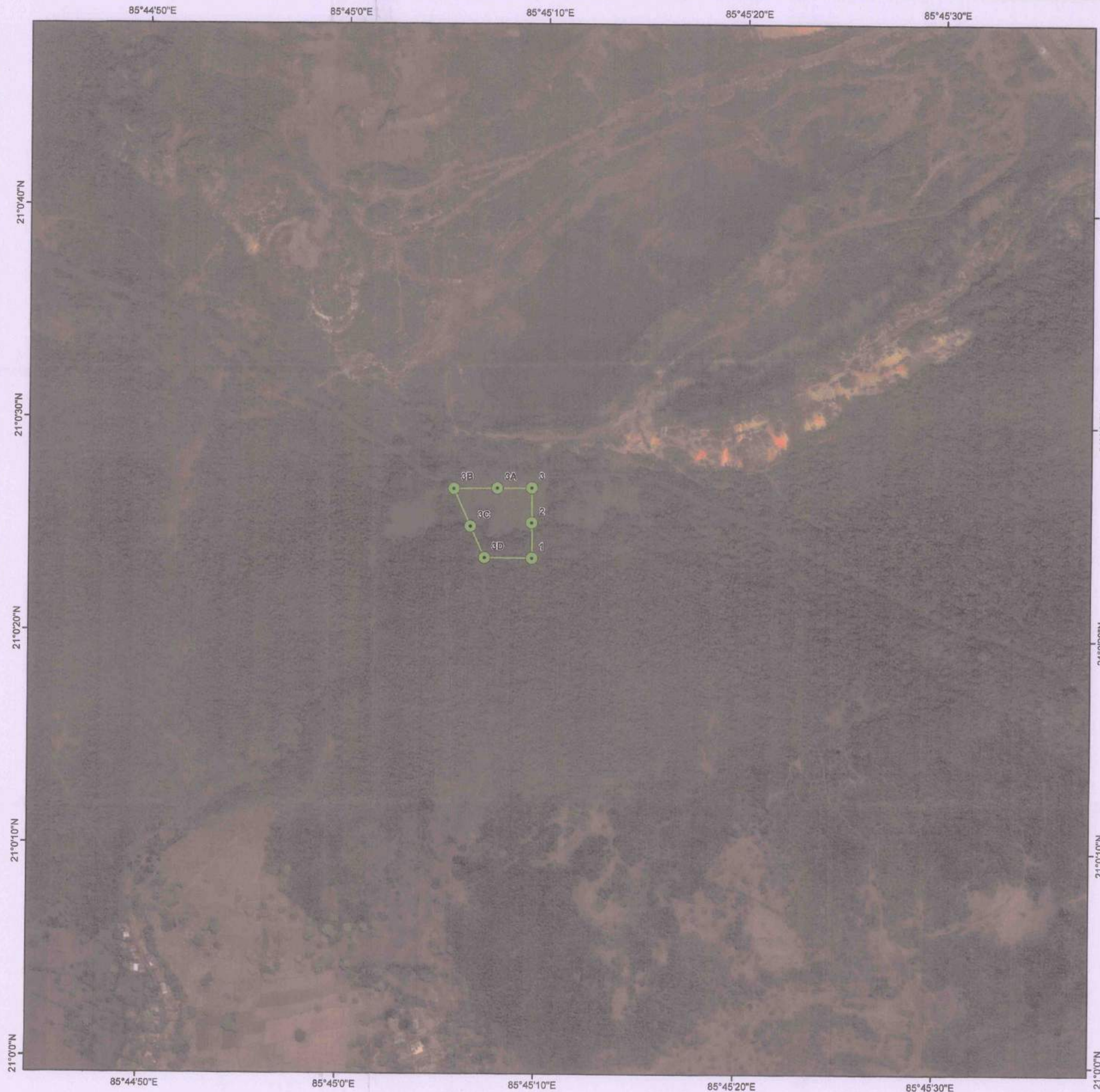
*Approved for Rs. 1,73,145/-  
(Rupees One Lakh Seventy Three Thousand &  
One Hundred Forty Five) only.*

*[Signature]*  
Regional  
Chief Conservator of Forests  
Angul Circle.

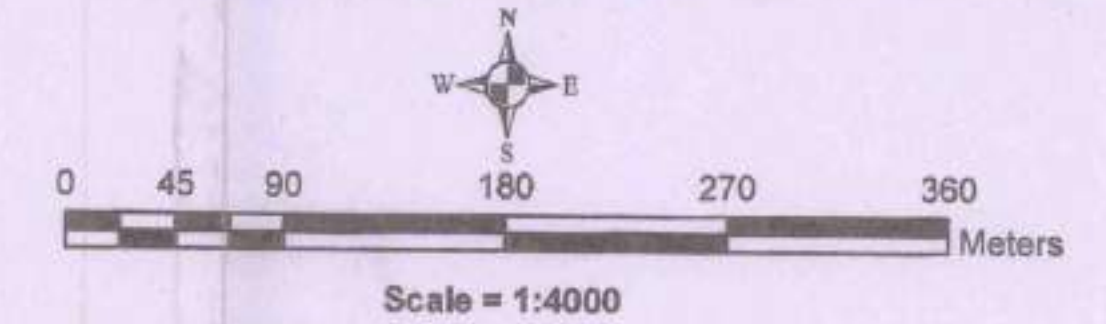


Divisional Forest Officer  
Cuttack Forest Division





**DGPS SURVEYED MAP SHOWING 1.5 TIMES OF SAFETY ZONE AREA OVER 0.915Ha. ON DEGRADED FOREST LAND IN MAHAGIRI P.F. UNDER SUKINDA FOREST RANGE OF CUTTACK FOREST DIVISION AGAINST THE DIVERSION OF 7.397Ha. FOREST LAND PERTAINING TO MAHAGIRI MINES (CHROMITE) OF M/S IMFA LTD.**



### Legend

- 1.5 Time Safety Zone Boundary
- 1.5 Time Safety Zone Boundary Pillar

### DGPS SURVEYED PILLAR COORDINATE

Pillar_No	Latitude	Longitude	Easting	Northing
1	21°00'23.61163"	85°45'09.68318"	370366.532	2323379.395
2	21°00'25.27291"	85°45'09.65973"	370366.254	2323430.481
3	21°00'26.89809"	85°45'09.63678"	370365.981	2323480.457
3A	21°00'26.87547"	85°45'07.90616"	370316.008	2323480.152
3B	21°00'26.84657"	85°45'05.71356"	370252.695	2323479.758
3C	21°00'25.08517"	85°45'06.57564"	370277.162	2323425.404
3D	21°00'23.61315"	85°45'07.29608"	370297.610	2323379.980

*[Signature]*  
Forest Range Officer  
Sukinda Range

*[Signature]*  
Asst. Conservator of Forests  
Cuttack Forest Division

*[Signature]*  
Divisional Forest Officer  
Cuttack Forest Division

*[Signature]*  
Spatial Planning & Analysis Research Centre Pvt. Ltd.  
E/11, Infocity, Chandaka Industrial Estate  
Chandrasekharpur, Bhubaneswar-751024 (INDIA)  
Ph: 0674-6679 301, 302, 303, Fax: 0674-6629 304

**DGPS Surveyed Conducted and Map Prepared By :-  
Spatial Planning And Analysis Research Centre Pvt. Ltd.,  
E/11, Infocity, Chandaka Industrial Estate,  
Bhubaneswar - 751024**





20th January, 2017

IMFA Building  
Bhubaneswar-751010  
Odisha, India

Corporate Identity No.  
L27101ON1961PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

**Divisional Forest Officer**  
**Cuttack Forest Division**  
**Ghatakula, Nuapada**  
**Cuttack**

**Sub: Submission of Certificate provided by State Bank of India towards deposit of payment for afforestation on degraded forest land over one & half time safety zone in respect of Mahagiri Mines (Chromite) through e-payment.**

**Ref: Your office demand letter vide memo no.372 dated 10.01.2017**

**Sir,**

With reference to the above, we are submitting herewith the certificate received from State Bank of India for deposit of Rs.1,73,145/- (Rupees one lakh seventy three thousand one hundred forty five only) in favour of ORISSA CAMPA in Corporation Bank. A/c No. 15082MIN107262016175 payable at Bangalore vide UTR No.SBIN717019283826 dated 19.01.2017 through e-payment module as per the online RTGS challan for Ad-HOC CAMPA dated 18.01.2017 towards payment for afforestation on degraded forest land over one and half time safety zone in respect of Mahagiri Mines (Chromite) of M/s.IMFA Ltd.

This is for your kind information and necessary action at your end.

Thanking you,

Yours faithfully

For: **Indian Metals & Ferro Alloys Ltd**

  
**(Sanjeev Das)**  
Sr. Vice President  
Head - Mining Business Unit.

Encl: As Above.

cc: Addl. PCCF (FD & NO, FC Act), Aranya Bhawan, BBSR.  
cc: RCCF, Angul Circle, Angul

Regd  
20/1/17

## AGENCY COPY

NEFT / RTGS CHALLAN for Ad-HOC CAMPA

Date : 18-01-2017

Agency Name.	Indian Metals & Ferro Alloys Ltd
Application No.	MIN187292016598
Location.	ORRISA
Address.	Mines Manager, Sukinda Mines(Chromite), MFS-IMFA,Jaipur
Amount(In Rs)	173145/-

Amount In Words :One Lakh Seventy-Three Thousand One Hundred and Forty-Five Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP0000633
Pay to Account No.	15082/MIN187292016598
Bank Name & Address:	Corporation Bank FCS Bangalore 21/1, 3rd floor Jallika Towers Mission Road Bangalore -560027

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

## BANK COPY

NEFT / RTGS CHALLAN for Ad-HOC CAMPA

Date : 18-01-2017

Agency Name.	Indian Metals & Ferro Alloys Ltd
Application No.	MIN187292016598
Location.	ORRISA
Address:	Mines Manager, Sukinda Mines(Chromite), MFS-IMFA,Jaipur
Amount(In Rs)	173145/-

Amount In Words :One Lakh Seventy-Three Thousand One Hundred and Forty-Five Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP0000633
Pay to Account No.	15082/MIN187292016598
Bank Name & Address:	Corporation Bank FCS Bangalore 21/1, 3rd floor Jallika Towers Mission Road Bangalore -560027

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

After making successful payment, User Agencies may send a line of confirmation through  
Email: [helpdeskcompa@corpbank.co.in](mailto:helpdeskcompa@corpbank.co.in)





ଭାରତୀୟ ଷ୍ଟେଟ୍ ବ୍ୟାଙ୍କ  
भारतीय स्टेट बैंक  
State Bank of India

ବାଣିଜ୍ୟିକ ଶାଖା : ଇନ୍ଦ୍ରକାନ୍ତ ଷ୍ଟାଣ୍ଡ, ପ୍ଲଟ୍-2, ଅଶୋକ ନଗର  
ଭୁବନେଶ୍ୱର- 751 008, ଜିଲ୍ଲା- ଖୁର୍ଦା (ଓଡ଼ିଶା)  
ବାଣିଜ୍ୟିକ ଶାଖା : ଇନ୍ଦ୍ରକାନ୍ତ ଷ୍ଟାଣ୍ଡ, ପ୍ଲଟ୍-2, ଅଶୋକ ନଗର,  
ଭୁବନେଶ୍ୱର - 751 008, ଜିଲ୍ଲା- ଖୁର୍ଦା (ଓଡ଼ିଶା)  
Commercial Branch: INDRAKANT House, Unit-II, Ashok Nagar  
Bhubaneswar - 751 008, Dist. : Khurda (Odisha)

Tel: (0674) 2532418 (DGM), 2534009 (AGM & COO), 2531445 (AGM & RM-I), 2530936 (AGM & RM-II), 2538078 (AGM & RM-III), 2530412 (GM-IB), 2535415 (GM-TF), Fax : (0674) 2639189, 2630616, 2630803, E-mail: sbi.06657@sbi.co.in, SFMS : SBININBB119

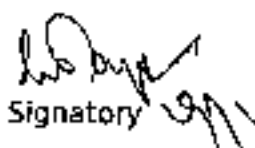
### TO WHOMSOEVER IT MAY CONCERN

Certified that we have remitted a sum of Rs. 1,73,145/- in the Bank A/c of  
ORRISA CAMPA

Please find the details as mentioned below:

Beneficiary name	:	ORRISA CAMPA
Account no.	:	15082MIN187292016598
Bank	:	Corporation Bank
Branch	:	FCS Bangalore 21/1, 3 <sup>rd</sup> Floor Jellita Towers Mission Road, Bangalore - 560027
IFSC Code	:	CORP0000633
Date of Remittance	:	19 <sup>th</sup> January 2017
UTR No.	:	SBIN717019283826

For State Bank of India

  
Authorised Signatory



IMFA Building  
Shubaneswar -751010  
Odisha, India

Corporate Identity No.  
L27101081961PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-M**

### **UNDERTAKING**

*We do hereby undertake to state that the period of diversion of forest land over 7.397 Ha within the Mining Lease area of Mahagiri Mines(Chromite) shall be co-terminus with the period of Mining Lease granted under Mines and Minerals ( Development & Regulation) Act,1957, as amended and the rules framed there-under.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*

## ANNEXURE- N

Details of payment in respect of the Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-PC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.

### CAMPA SPECIFIED FORMAT

Sl No	Particulars	Details
1	State/District/Forest Division to which proposal relates.	Odisha/ Jajpur/Cuttack Forest Division
2	Name of User Agency, Nature of the proposal.	Indian Metals & Ferro Alloys Limited, Mining
3	Extent of forest area involved.	7.397 Ha
4	Whether original or extension.	Original
5	If extension of lease, please clarify if proposal involves additional forest area, and if so Specify.	No, it is not an extension lease
6	Date of 1 <sup>st</sup> stage clearance	20.10.2016 (Stage-I approval issued by MoEF&CC,Gol vide letter No.F No.8-116/2002-PC(Vol. II) dated 20.10.2016.)
7	Extension of CAMPA charges, Head wise	
a	Compulsory Afforestation.	Rs 23,32,800/- (Rupees twenty-three lakh thirty-three thousand eight hundred only)
b	Additional CA.	NA
c	Penal CA	F&E Department,Govt of Odisha has recommended the representation of M/s.IMFA Ltd to MoEF & CC,Govt of India vide letter no.22686 dated 05.12.2016 to be considered for deletion of condition no.(x) of stage-I approval. Matter is pending with MoEF&CC,Gol
d	Afforestation in degraded forest area( i.e. one & half times of SZ forest area.)	Rs.1,73,145/- (Rupees one lakh seventy-three thousand one hundred forty-five only)
e	Catchment Area Treatment.	NA
f	Wildlife Management Plan.(Differential revised rate @ Rs.43,000/-)	Rs.12,54,209/- (Rupees twelve lakh fifty-four thousand two hundred nine only)
g	Additional Charges for diversion area falling under notified/ Protected area.	NA
h	Net Present Value.	Rs 53,99,310/- (Rupees fifty-three lakh ninety-nine thousand eight hundred ten only)
i	Penal NTV	F&E Department,Govt of Odisha has recommended the representation of M/s IMFA Ltd to MoEF & CC,Govt of India vide letter no.22686 dated 05.12.2016 to be considered for deletion of condition no.(x) of stage-I approval. Matter is pending with MoEF&CC,Gol
j	Cost of Plantation of dwarf species.	NA
k	Any other charges / Levies	NA
8	Details of bank Draft Details( Bank Draft no, date and amount) head wise against items indicated in para-7.	Details of payment to Ad-hoc CAMPA have been mentioned under point no.10

9	Whether deposited by RTGS/e-Payment, if so, the particulars and date of remittance.	User Agency has deposited in designated Ad-hoc CAMPA account against the demands raised by DFO, Cutback Forest Division as detailed below under point no 10							
10	Bank (Corporation Bank, Laxi Complex/ Union Bank of India, Sunder Nagar) in which deposited, with date of deposition	Sl No	Stage-1 approval condition no imposed by MoEF & CC	Name of the Scheme	Amount in Rs.	Mode of Payment in Ad-hoc CAMPA	Account No & Name of Bank	Draft No or UTR No of RTGS/IPSC	Date of Deposit.
		1	Condition No. (ii) & (vi) imposed by MoEF & CC, Govt	CA	Rs 23,32,800/-	e-payment	15082MEN187 292016835 (Corporation Bank)	UTR No- SBINR52016122 000019015 IPSC Code- CORP0000633	20.12.2016
		2	Condition No. (xi) imposed by MoEF & CC, Govt	One & half times 52 afforestation on degraded forest land	Rs 1,73,145/-	e-payment	15082MEN187 292016598 (Corporation Bank)	UTR No- SBINR52016122 000019015 IPSC Code- CORP0000633	19.01.2017
		3	Condition No. (A) imposed by F&E Deptt, Govt	RWLMP	Rs 12,54,209/-	e-payment	15082MEN187 292016480 (Corporation Bank)	UTR No- SBINR52016091 634462538 IPSC Code- CORP0000633	16.09.2016
		4	Condition No. (vii) imposed by MoEF & CC, Govt	NPV	Rs 11,59,810/-	RTGS	SB00025222 (Corporation Bank of India)	UTR No- SBINR52016122 000019015 IPSC Code- CORP0000633	21.05.2015
11	Any other remarks.								

For Indian Metals & Ferro Alloys Ltd.  
  
 (Sanjeev Das)  
 Sr Vice President & Constituted Attorney

Page 1 of 10

No. J-11015/345/2007-IA.II(M)  
Government of India  
Ministry of Environment & Forests  
\*\*\*\*\*

By Speed Post

Paryavaran Bhavan,  
C.G.O. Complex, Lodi Road,  
New Delhi-110 003.

Dated the 29<sup>th</sup> October, 2012

To

M/s Indian Metals & Ferro Alloys Ltd.,  
IMFA Building,  
B-4/147, Sardarjung Enclave,  
New Delhi-110 029  
E-mail: communication@imfa.in

Subject: Mahagiri Mines (Chromite) of Indian Metals & Ferro Alloys Ltd. at Village Kallapani, Dist. Jajpur, Odisha - environmental clearance - regarding.

Sir,

This has reference to your letter dated 21.03.2011, 14.11.2011 and 24.12.2011 on the subject mentioned above. The proposal is for enhancement of production from 0.078 MTPA to 0.3 MTPA including both opencast and underground mine operations for 0.3 million TPA. Earlier EC was granted for an annual production capacity of 78,000 tonnes (0.078 million tonnes) of chromite ore by opencast mechanized method only and also to allow to undertake development works for the underground working vide letter no. J-11-15/345/2007-IA II(M) dated 10<sup>th</sup> December 2008 as per the approved Mining Plan involving ML area of 73.777 ha. The project was earlier prescribed Terms of Reference (TORs) by the Ministry of Environment and Forests on 31.07.2007 for undertaking detailed EIA study for the purpose of obtaining environmental clearance.

2. In view of the stipulated conditions mentioned above, the proponent has got the mining scheme approved from the BM for continuation of opencast mine and start production from underground from 2010-11 and submitted a copy to this Ministry. The hydro-geological study had also been got done by Geo-hydrological Solutions, Bhubaneswar and submitted a copy to MoEF. With regard to hydro-geological study, it was stated that the overall hydro-geological scenario in the study area and overall impact of underground mining on the ground water regime has been assessed. Based on the detailed hydro-geological study, it was reported that the radius of Influence will be about 644 meters. The present status of groundwater development is reported at 41.59%, which will increase to 42.99% due to underground mining. It was also reported that the groundwater level in Mahagiri test well was observed at 127 mRL. The quality of water was reported to be potable and absence of hexavalent chromium in groundwater was reported. The quantity of mine discharge to be pumped will be 79.2 m<sup>3</sup>/hr. Life of mine is 28 years.



3. The total mine lease area of the project is 73.777 ha, out of which 66.38 ha is forestland and 7.397 ha is wasteland. The proponent has obtained Forest Clearance vide letter no. F.No.B-116/2002-FC dated 18.05.2005 for diversion of 63.91 ha forest land out of 66.38 ha. Forest Clearance for 2.47 ha of safety zone has not been obtained by the proponent.

4. The mine lease area forms part of the Mahagiri protected forest. Area proposed for mining is 7.41 ha, an area of 0.2 ha is kept for storage of topsoil, 5.72 ha for over burden dumps, 4.4 ha for mineral storage, 10.31 ha for infrastructure, 2.74 ha for roads, 3.08 ha for green belt, 0.4 ha for mineral separation plant and 39.467 ha is others (area untouched). Common township for Mahagiri and Sukinda Mine is outside the mine lease in an area of 8.2 ha, adjoining the northern boundary of Sukinda mine of the company. The Damshai Nallah is flowing at a distance of 2.1 km North West of the mine lease and the Ragda Reservoir is also located in the buffer zone of the mine at a distance of 5.7 km North West of the mine lease. No national park/wildlife sanctuary/biosphere reserve/tiger reserve etc. is reported to be located in the core and buffer zone of the mine. It was also noted that the mine lease is located within 2.7 km. of the elephant corridor and permission from Chief Wildlife Warden has been obtained vide letter no. 1314, 1WL-C-FC-518/09/10, dated 16-02-2010 and Rs. 152 lakhs on the basis of memo no. 7924 from DPD, Cuttack. The Daitari protected forest and three reserve forests namely Ranjaga RF, Dhalpahra RF and Birasa RF are in the buffer zone of the mine located at a distance of 3.8 km (N), 5.3 km (WNW), 5.08 km (S) and 6.2 km (WSW) respectively from the mine lease boundary.

5. The air quality near the exit of decline mouth has been monitored during September - October, 2011 and the results show the level to be within permissible limit. Further, the one month baseline AAQ data collected for the month of September-October, 2011 also showed the values within permissible limits. The collected dust fall was also analysed for its mineralogical composition and results furnished. The impact from underground mining on ambient air quality is expected to be from ventilation exhaust and transportation of mineral. It was also stated that 10/15 tonnes trucks will be used for transportation of mineral. Subsidence, due to underground mining would be negligible as back-filling of stopes is envisaged, for which purpose, necessary study on design of backfilling technology has been carried out by Central Institute of Mining and Fuel Research. Brahmani river sand has been found to be suitable for backfilling. It is estimated that from development of underground mine and ore production, about 1.0 lakh m<sup>3</sup> of waste will be generated till the end of conceptual period, which will be stacked within the mine lease area. All the other issues raised by the Committee were also clarified by the proponent. Necessary permission for withdrawal of 247m<sup>3</sup>/day of ground water from CGWA vide letter no. 21-4(107)/SER/CGWA/2008-2061 dated 06.02.2009.

6. The mine lease is in the name of M/s Indian Charge Chrome Ltd. It was clarified by the proponent that the Hon'ble High Court of Orissa has by its order and judgment dated 13.10.2006 sanctioned the composite scheme of arrangement and amalgamation between Indian Charge Chrome Ltd. and Indian Metals and Ferro Alloys Ltd. The scheme of amalgamation and / or merger sanctioned by the Hon'ble High Court has an effect of legally vesting inter-alia, all assets, properties, rights, titles, interests including

mining leases / rights, clearances, permits, licenses, statutory approvals of Indian Charge Chrome Ltd. in the merged entity i.e. Indian Metals and Ferro Alloys Ltd. by operation of law without any further acts or deeds. It was also stated that the Director of Mines, Orissa vide letter dated 17.1.2008 has recommended to Govt. of Orissa for its approval for transfer and execution of mine lease in favour of IMFA. IBM has approved mine plan in the name of IMFA. The earlier EC dated 10.12.2008 was also granted in the name of M/s IMFA.

7. The Ministry of Environment and Forests has examined the application as per EIA Notification 2006 and hereby accords environmental clearance subject to the proponent obtains the Forest Clearance for 2.47 ha of safety zone within a year and deposits the NPV value for the entire mining lease area, under the provisions thereof to the above mentioned Mahagiri Chromite Mining Project of M/s Indian Metals and Ferro Alloys Ltd. for enhancement of production from 0.078 MTPA to 0.3 MTPA and change from opencast to underground mine for 0.2 million TPA, at Village Kallapand, Distt. Jajpur, Odisha subject to implementation of the following conditions and environmental safeguards.

**A. Specific conditions**

- (i) The environmental clearance is co-terminous with the mine lease.
- (ii) The project proponent shall obtain consent to operate for the enhanced production from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.
- (iii) Forest Clearance for 2.47 ha of safety zone has not been obtained by the proponent. This Environmental Clearance is subject to grant of forestry clearance for diversion of 2.47 ha of safety zone within one year. The project proponent shall deposit the NPV value for the entire mining lease area.
- (iv) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil should be used for land reclamation and plantation.
- (v) The solid waste in the form of over burden, sub-grade ore and nickel ore bearing material shall be stacked separately.
- (vi) The over burden generated shall be stacked at earmarked dump site only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. The total height of the dump shall not exceed 30m. Proper terracing of OB dump should be carried out so that the overall slope shall not exceed 20 degree. 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 shall be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of



Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.

- (vii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the Damal Nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after the monsoon and maintained properly.
- (viii) Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and the over burden dump to prevent run off of water and flow of sediments directly into the Damal Nallah and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals. Storm water return system should be provided. Storm water should not be allowed to go to the effluent treatment plant during high rainfall / super cyclone period. A separate storm water sump for this purpose should be created.
- (ix) Dimension of the retaining wall at the toe of the over burden dump and the OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- (x) Mine water discharge and/or any waste water shall be properly treated to meet the prescribed standards before reuse/discharge. The run off from OB dump and other surface run off should be analyzed for  $Cr^{+6}$  and in case its concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.
- (xi) Effluents containing  $Cr^{+6}$  shall be treated to meet the prescribed standards before reuse/discharge. Effluent Treatment Plant shall be provided for treatment of mine water discharge and wastewater generated from the workshop and mineral separation plant.
- (xii) Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the mining operations.
- (xiii) Regular monitoring of water quality upstream and downstream of Damal nallah shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, the Central Groundwater Authority, the Regional Director, Central Ground Water Board, the State Pollution Control Board and the Central Pollution Control Board.

- (xiv) The project proponent shall ensure that the quality of decanted effluents from the tailing pond, if any, conform to the prescribed standards before discharge. The decanted water from the tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.
- (xv) The project proponent shall explore the possibility to reduce concentration of  $Cr^{6+}$  in the tailing pond, if any, in consultation with an expert scientific institution.
- (xvi) Plantation shall be raised in an area of 17.98ha including a 2.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, over burden dump, roads etc. in consultation with the local DFO/Agriculture Department. The tree density should be two thousands trees per hectare. At least 1500 trees per year shall be planted.
- (xvii) Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xviii) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xix) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers in and around the mine lease. The monitoring should be carried out four times in a year: pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to the Ministry of Environment and Forests, its Regional Office located at Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
- (xx) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xxi) Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.



- (xxi) Blasting operation shall be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxiii) Sewage treatment plant should be installed for the colony. ETP should also be provided for the workshop and wastewater generated from the mining operations.
- (xxiv) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xxv) Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- (xxvi) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxvii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna such as sloth bear, mouse deer, python etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.
- (xxix) A Final Mine Closure Plan along with details of Corpus Pond should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

#### B. General conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.

- (ii) No change in the calendar plan including excavation, quantum of mineral Chromite ore and waste shall be made.
- (iii) At least four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM<sub>10</sub>) and NO<sub>x</sub> monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be undertaken in consultation with the State Pollution Control Board.
- (iv) Data on ambient air quality [(RSPM (Particulate matter with size less than 10 micron i.e., PM<sub>10</sub>) and NO<sub>x</sub>] shall be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (v) Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on reject yards and haul roads, loading and unloading and at transfer points shall be provided and properly maintained.
- (vi) Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with earplugs / muffs.
- (vii) Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) All the applicable safety procedures will be adhered and Personal Protective Equipments like nose masks, safety shoes, hand gloves, apron, ear plug, ear muff, safety goggles, safety belt, etc., shall be provided to ensure that people working during construction and operational phase are protected.
- (ix) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (x) A separate environmental management cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organisation.
- (xi) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise




expenditure shall be reported to the Ministry and its Regional Office located at Bhubaneswar.

- (xii) The project authorities shall inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xiii) The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xiv) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.
- (xv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xvi) The State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsilidar's Office for 30 days.
- (xvii) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.
- (xviii) The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and

a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same shall be forwarded to the Regional Office of this Ministry located at Bhubaneswar.

9. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
10. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
11. The above conditions shall be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Orissa and any other Court of Law relating to the subject matter.
12. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


  
Dr. Sanku  
Director

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- (ii) The Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubaneswar.
- (iii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
- (iv) The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.
- (v) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- (vi) The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrasekharpur, Bhubaneswar-751023.
- (vii) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/119 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (viii) The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur-440 001.
- (ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (x) The District Collector, Keonjhar District, Government of Orissa.
- (xi) BI Division, Ministry of Environment & Forests, BI Division, New Delhi.



- (xii) Monitoring File.
- (xiii) Guard File.
- (xiv) Record File.

  
(Dr. S. S. S.)  
Director

No. J-11015/345/2007-IA.II (M)  
Government of India  
Ministry of Environment, Forests & Climate Change  
Impact Assessment Division

By Speed Post

3<sup>rd</sup> Floor, Vayu Wing,  
Indira Paryavaran Bhawan,  
Jorbagh Road, Akbarji,  
New Delhi-110 003

Dated: 17<sup>th</sup> March, 2015

To  
M/s Indian Metals and Ferro Alloys Ltd.,  
IMFA Building,  
B-4/147, Sardarjung Enclave,  
New Delhi-110 029  
E-mail: communication@imfa.in

Sub.: Mahagiri Mines (Chromite) of Indian Metals and Ferro Alloys Ltd. at  
Vihaga Kallapani, District Jaipur, Odisha -Amendment to the  
Environmental clearance regarding.

This is in continuation to our environmental clearance letter of even no. dated  
29.10.2012, EC amendment letter dated 02.01.2014 (by error mentioned as  
02.01.2013) and reference to your letter no. M dated 29.01.2015 requesting for  
amendment of EC issued.

2. The total mine lease area of the project is 73.77 ha out of which 66.38 ha is  
forest land and 7.397 ha is wasteland. The PP has obtained Forest Clearance for  
diversion of 63.91 ha of forest land and have now obtained the diversion for 2.47  
ha of safety zone under the FCA, 1980 vide letter no. B-116/2000-FC(vol.)  
dated 18.11.2014.

3. The request of PP for amendments to the Environmental Clearance has been  
examined in the Ministry in light of diversion for 2.47 ha of safety zone under the  
FCA, 1980 obtained vide letter no. B-116/2000-FC(vol.) dated 18.11.2014, it  
has been decided to delete the specific condition (B) on page 3 of 10 which read as  
follows:

*In EC letter dated 29.10.2012: 'the Forest clearance for 2.47ha of safety  
zone has not been obtained by the proponent. This Environmental  
Clearance is subject to grant of forestry clearance for diversion of 2.47 ha  
of safety zone within one year. The PP shall deposit the NPV value for the  
entire mining lease area'*

*In EC amendment letter dated 02.01.2014: 'The Forest clearance for  
2.47ha of safety zone has not been obtained by the proponent. This  
Environmental Clearance is subject to grant of forestry clearance for diversion of  
2.47 ha of safety zone by 31.01.2015, failing which the mining lease area will be*



reduced to the non forest area plus the forest area for which the project proponent has been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, the project proponent will need to get a revised mining plan approved from the Competent Authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed. The PP shall deposit the NPV value for the entire mining lease area. No mining activities are allowed in forest area for which the FC is not available."

4. It is clarified that EC is valid as per the EIA notification, 2006, which provides for validity of project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects.

5. All other terms and conditions mentioned in this Ministry's letter of even no dated 29.10.2012 shall remain the same.

6. This issues with the approval of the Competent Authority.

(Dr. U. Sridharan)  
Scientist 'P'

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- (ii) The Secretary, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
- (iii) The Secretary, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- (iv) The Secretary, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
- (v) The Chairman, Central Pollution Control Board, Parivash Bhawan, CBD- cum- Office Complex, East Arjun Nagar, Delhi-110032.
- (vi) The Chief Conservator of Forests, Regional Office (E2), Ministry of Environment and Forests, A-3 Chandrasekharapur, Bhubaneswar-751023.
- (vii) The Chairman, Odisha State Pollution Control Board, Parivash Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (viii) The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur-440 001.
- (ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (x) The District Collector, Jaipur District, Government of Odisha.
- (xi) Guard File.

(Dr. U. Sridharan)  
Scientist 'P'



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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-P**

**UNDERTAKING**

*We do hereby undertake to state that no labour camp shall be established on the forest land within the leasehold area of Mahagiri Mines (Chromite).*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**





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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-Q**

### **UNDERTAKING**

*We do hereby undertake to state that fuels preferably alternate fuels are being provided to the labourers and staffs working at the site and the same process will continue so as to avoid any damage and pressure on the nearby forest areas.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**

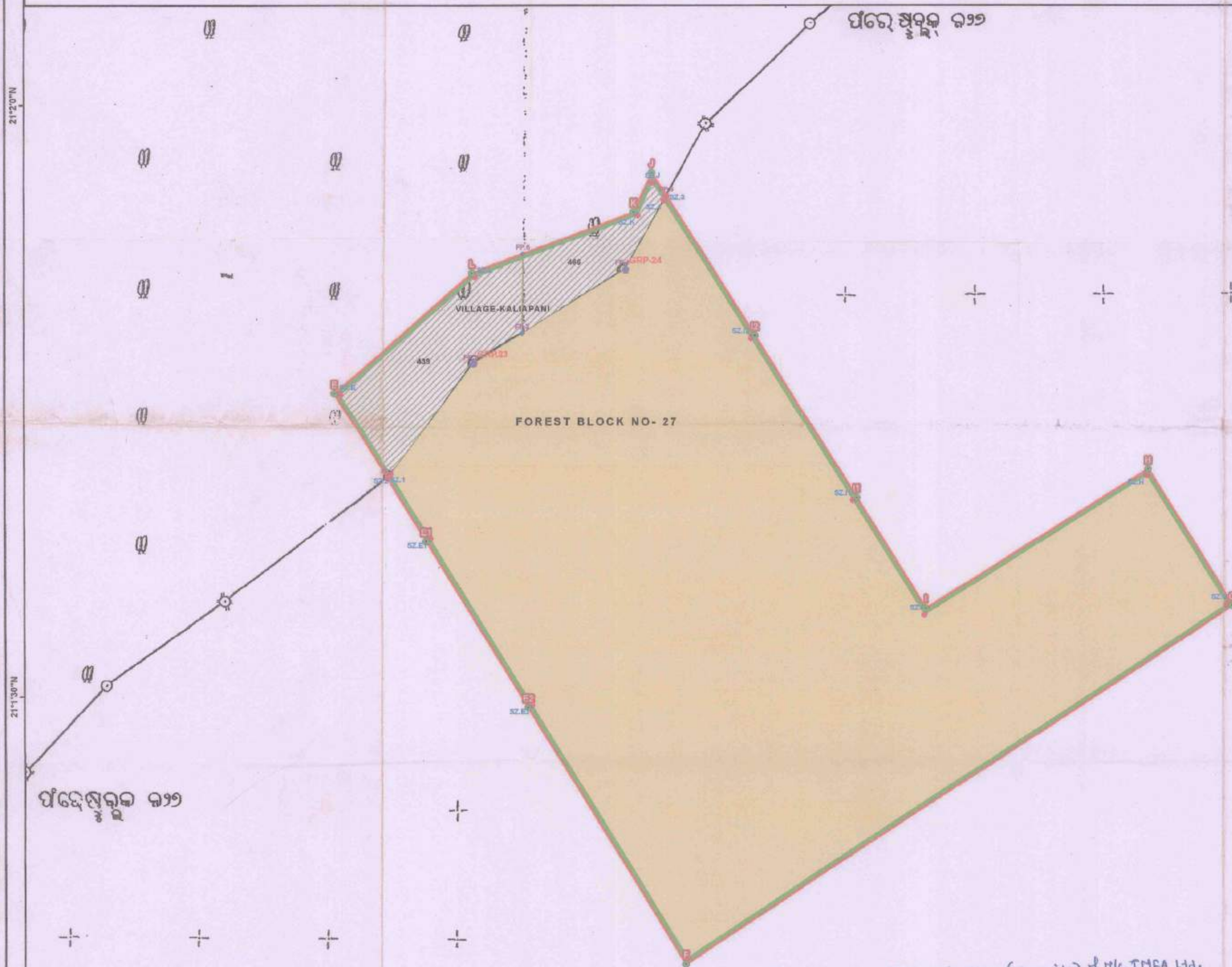


**DGPS SURVEYED MAP SHOWING FOREST AREAS PROPOSED FOR DIVERSION FOR MAHAGIRI MINES CHROMITE ( 73.777 Ha.)  
OF M/S IMFA Ltd. IN VILLAGE KALIAPANI & FOREST BLOCK NO-27 IN JAJPUR DISTRICT, ODISHA**

Scale : 1:4,000

Meters

0 125 250 500 750



- DGPS survey of forest areas proposed for diversion in Mahagiri Mines (chromite) of M/s IMFA Ltd. has been carried out by the user agency through M/s Geo Consultants Pvt. Ltd., Bhubaneswar.
- The submitted ML boundary and pillars with their co-ordinates are matching with that of surveyed by ORAC and the total ML area works out to 74.77 Ha. against the mentioned 73.77 Ha.
- In the submitted map, the mentioned already diverted 63.91 Ha. Forest area and 2.47 Ha. Safety zone area are not shown separately, so all the forest areas coming in the ML area are taken into consideration for verification and authentication.
- DGPS survey coordinates are verified by ORAC. Also the map showing forest areas including safety zone areas are verified with survey points/geo-referenced cadastral sheet and compared with Ortho-rectified Cartosat Satellite image and found that the map is correct at a confidence level of 95%.
- Part of the forest areas proposed for diversion including safety zone areas comes under Revenue forest category, in one cadastral sheet of the village Kaliapani and rest are under Forest Block No-27. Total forest areas proposed for diversion works out to 74.77 Ha. include 71.67 Ha. forest areas (6.65 Ha. Revenue forest and 66.02 Ha. in Forest Block No-27) and 3.09 Ha. Safety zone area (0.60 Ha. Revenue forest and 2.49 Ha. in Forest Block) from the submitted map filed against the mentioned 73.77 Ha. in the submitted land schedule (7.39 Ha. Revenue forest and 66.38 Ha. Forest Block area).

LEASE PILLAR COORDINATES OF IMFA MAHAGIRI CHROMITES MINES					
SL NO	PILLAR NO	LONGITUDE	LATITUDE	EASTING	NORTHING
1	E	85°46'24.94848"	21°01'45.51492"	372558.997	2325880.922
2	E1	85°46'29.95788"	21°01'37.96788"	372701.829	2325647.754
3	E2	85°46'35.52096"	21°01'29.61624"	372860.464	2325389.727
4	F	85°46'44.13144"	21°01'16.66740"	373105.994	2324989.674
5	G	85°47'13.58556"	21°01'35.03568"	373990.616	2325547.984
6	H	85°47'08.93904"	21°01'41.89476"	373828.088	2325759.895
7	I	85°46'57.02880"	21°01'34.78188"	373482.582	2325543.818
8	I1	85°46'53.25420"	21°01'40.32696"	373374.923	2325715.141
9	I2	85°46'47.66772"	21°01'48.59976"	373215.588	2325970.739
10	J	85°46'42.03048"	21°01'56.83512"	373054.786	2326225.211
11	K	85°46'41.05848"	21°01'54.82488"	373026.253	2326163.816
12	L	85°46'32.33820"	21°01'51.63456"	372773.769	2326067.443

SURVEYED GEO REFERENCE COORDINATES OF IMFA MAHAGIRI CHROMITES MINES					
SL NO	POINT NAME	LONGITUDE	LATITUDE	EASTING	NORTHING
1	GRP.2	85°46'20.05030"	21°02'33.42792"	372428.926	2327355.226
2	GRP.4	85°46'32.34378"	21°02'56.30308"	372789.186	2328055.861
3	GRP.5	85°46'15.78018"	21°02'56.17241"	372311.053	2328055.520
4	GRP.6	85°45'55.87584"	21°02'42.68855"	371733.312	2327645.356
5	GRP.7	85°45'37.21734"	21°02'36.85043"	371193.331	2327470.022
6	GRP.8	85°45'52.68750"	21°02'21.74508"	371636.293	2327002.100
7	GRP.9	85°45'09.85348"	21°02'19.09639"	370399.184	2326930.277
8	GRP.10	85°45'04.80294"	21°02'13.83468"	370252.125	2326789.630
9	GRP.12	85°46'35.42281"	21°02'13.33428"	372867.929	2326733.982
10	GRP.13	85°46'00.31903"	21°01'56.36730"	371850.559	2326220.083
11	GRP.14	85°45'07.18002"	21°01'32.62590"	370310.838	2325502.006
12	GRP.15	85°45'10.19490"	21°01'28.83138"	370396.964	2325384.652
13	GRP.17	85°45'45.04711"	21°01'18.52157"	371400.671	2325059.819
14	GRP.18	85°45'46.85938"	21°01'18.76339"	371453.049	2325066.849
15	GRP.20	85°46'00.20671"	21°01'16.38762"	371837.821	2324990.819
16	GRP.23	85°46'32.47582"	21°01'47.08163"	372776.667	2325927.423
17	GRP.24	85°46'40.65175"	21°01'51.86812"	373013.819	2326072.789
18	GRP.27	85°46'56.82541"	21°02'09.43589"	373484.841	2326609.390
19	GRP.29	85°47'12.65075"	21°02'15.67488"	373943.130	2326797.746
20	GRP.30	85°47'13.42254"	21°02'17.60360"	373965.860	2326856.880
21	GRP.33	85°47'41.29421"	21°02'43.90182"	374776.527	2327659.393
22	GRP.37	85°47'29.35126"	21°02'45.01231"	374432.051	2327696.146
23	GRP.41	85°47'04.90849"	21°02'57.76110"	373729.494	2328093.503
24	GRP.44	85°46'53.26825"	21°03'08.78297"	373396.094	2328434.965
25	GRP.45	85°46'53.48969"	21°03'09.42298"	373402.636	2328454.595
26	GRP.46	85°46'41.66917"	21°03'12.61480"	373062.202	2328555.347
27	GRP.47	85°46'34.99656"	21°03'04.96657"	372867.801	2328321.657
28	GRP.49	85°46'41.29955"	21°03'13.02108"	373051.629	2328567.921

SURVEYED SAFETY ZONE PILLAR COORDINATES OF IMFA MAHAGIRI CHROMITES MINES					
SL NO	PILLAR NO	LONGITUDE	LATITUDE	EASTING	NORTHING
1	SZ.E	85°46'25.28496"	21°01'45.46894"	372568.698	2325879.430
2	SZ.E1	85°46'30.17814"	21°01'38.09648"	372708.217	2325651.658
3	SZ.E2	85°46'35.74157"	21°01'29.74595"	372866.859	2325393.667
4	SZ.F	85°46'44.21046"	21°01'17.00971"	373108.355	2325000.185
5	SZ.G	85°47'13.22958"	21°01'35.10684"	373950.360	2325550.245
6	SZ.H	85°47'08.85928"	21°01'41.55786"	373825.703	2325749.558
7	SZ.I	85°46'56.94901"	21°01'34.44593"	373480.203	2325533.501
8	SZ.I1	85°46'53.03213"	21°01'40.19751"	373368.477	2325711.212
9	SZ.I2	85°46'47.44929"	21°01'48.46676"	373209.251	2325966.703
10	SZ.J	85°46'42.08972"	21°01'56.32661"	373055.802	2326209.564
11	SZ.K	85°46'41.28564"	21°01'54.64662"	373032.772	2326158.081
12	SZ.L	85°46'32.47475"	21°01'51.42395"	372777.660	2326060.940
13	SZ.1	85°46'27.83605"	21°01'41.16589"	372641.328	2325746.555
14	SZ.2	85°46'28.01633"	21°01'41.35871"	372646.579	2325752.444
15	SZ.3	85°46'42.83605"	21°01'55.65792"	373077.767	2326188.834
16	SZ.4	85°46'42.68275"	21°01'55.43125"	373073.288	2326181.898

SURVEYED FOREST POINT COORDINATES OF IMFA MAHAGIRI CHROMITES MINES					
SL NO	POINT ID	LONGITUDE	LATITUDE	EASTING	NORTHING
1	FP.1	85°46'27.83605"	21°01'41.16589"	372641.328	2325746.555
2	FP.2	85°46'32.42442"	21°01'47.06093"	372775.178	2325926.798
3	FP.3	85°46'35.08577"	21°01'48.62748"	372852.376	2325974.377
4	FP.4	85°46'40.64573"	21°01'51.90155"	373013.653	2326073.818
5	FP.5	85°46'42.83605"	21°01'55.65792"	373077.767	2326188.834
6	FP.6	85°46'35.08316"	21°01'52.63878"	372853.246	2326097.716

FOREST AREA & SAFETY ZONE AREA PROPOSED FOR DIVERSION OF M/s IMFA MAHAGIRI CHROMITES MINES						
SL NO	SABIK PLOT NO	MAP FOREST AREA IN Hect	MAP SAFETY ZONE AREA IN Hect	MAP PLOTS AREA Hect	SCHDULE AREA IN Hect	SABIK KISAM
1	439	3.813	0.307	4.20	5.16	Sal Jungle
2	466	1.842	0.216	2.06	2.23	Sal Jungle
	Forest Block No-27	66.023	2.407	68.51	66.38	Forest
	TOTAL AREA	71.676	3.042	74.77	73.77	

## Legend

- ORSAC SURVEYED M.L. Pillar (MMC)
- ORSAC SURVEYED M.L. Boundary (MMC)
- Surveyed Geo Reference Points
- Surveyed Forest Pillar
- ▨ Forest Plots Boundary
- Forest Block No-27
- Surveyed Safety Zone Pillar
- Surveyed Safety Zone Area

DGPS SURVEY CONDUCTED BY  
GEO CONSULTANTS PVT.LTD

Laxmi Sagar Bhubaneswar

3/3/16  
Sd/-  
Joint Director Mines  
Jajpur Road

3/3/16  
Sd/-  
Forest Range Officer  
Sahibgaon Range

3/3/16  
Sd/-  
REVENUE INSPECTOR  
KANKAPAL

3/3/16  
Sd/-  
TAHASILDAR  
SUKINDA

3/3/16  
Sd/-  
Asst. Conservator of Forests  
Cutback Forest Division.

3/3/16  
Sd/-  
Surveyor  
Gehardhanor

3/3/16  
Sd/-  
TAHASILDAR  
DAHAGADI

3/3/16  
Sd/-  
Surveyor Das  
Sr Vice President  
Head Corporate Affairs & Legal

3/3/16  
Sd/-  
Asst. Tahasildar  
Rajendrapur







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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

## ANNEXURE-S

### UNDERTAKING

*We do hereby undertake to do mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan shall be properly executed by us as per the approved mining plan from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act, 1980, Government of Odisha and the Addl PCCF (Central), Ministry of Environment and Forests & Climate Change, Eastern Regional Office, Bhubaneswar.*

(Sanjeev Das)

Sr. Vice President & Constituted Attorne



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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kallipani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-T**

### **UNDERTAKING**

*We do hereby undertake to state that the layout plan of the mining plan/proposal shall not be changed without the prior approval of the Central Government.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*





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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-28/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kallapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-U**

### **UNDERTAKING**

*We do hereby undertake to state that the forest land shall not be used for any purpose other than that specified in the proposal.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**



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**ANNEXURE-V**

**UNDERTAKING**

*We do hereby undertake to state that the forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without the prior approval of the Central Government.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*





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**ANNEXURE-W**

### **UNDERTAKING**

*We do hereby undertake to state that no damage to the flora and fauna of the adjoining area of mining lease shall be caused.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**



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**ANNEXURE-X**

### **UNDERTAKING**

*We do hereby undertake to state that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**





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**ANNEXURE-Y**

### **UNDERTAKING**

*We do hereby undertake to state that we will abide by the applicable recommendations of the State Government.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**

## Office of the Regional Chief Conservator of Forests, Angul

Memo No. GNB5 /SF FC-I(MG)27/2014 dated 27-12-16

To

The Divisional Forest Officer,  
Cuttack Division.

Sub:- Proposal for diversion of balance 7.397 ha of Sabik kisam forest land as on 25.10.1960 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 73.777 ha by M/s IMFA in Jajpur District, Odisha.

Ref:- Your Memo No.11177 dated 13.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action

S/N o.	Condition No	Name of the Scheme.	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion and choking of streams.	Rs.10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing and planting inside the mining lease area.	Rs.14,90,000/-
3	xxvii	Plan for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds and water bodies.	Rs 8,38,000/-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately

Encl: As above.

Regional Chief Conservator of Forests  
Angul

Memo No. GNB6 /dated

27-12-16

Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF Odisha for favour of information and necessary action with reference to his Memo No.21245/9F(MG)360/2016 dated 15.11.2016

Encl: As above

Regional Chief Conservator of Forests  
Angul

Memo No. GNB7 /dated

27-12-16

Copy forwarded to the Vice-President, M/s. IMFA Ltd., IMFA Building Bomkhal, Rasulpur, Bhubaneswar for information

Regional Chief Conservator of Forests  
Angul



OFFICE OF THE DIVISIONAL FOREST OFFICER: CUTTACK FOREST DIVISION  
GHATAKULA, NUAPADA, MADHUPATNA, CUTTACK-753010.  
E-mail [ld-dfo.cuttackforestdivision@yahoo.com](mailto:ld-dfo.cuttackforestdivision@yahoo.com), Fax-0671-2347611

Memo No. 49 / 5F (Misc)  
Dated, Cuttack the 03 January, 2017

To

The Sr. Vice President,  
M/s Indian Metals & Ferro Alloys Ltd.,  
IMFA building, Bomikhal, Rasulgarh,  
Bhubaneswar-751010.

Sub :- Proposal for diversion of balance 7.397 ha. of Sabik kissam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38 ha. of forest land for Chromite mining in their Mahagiri Chromite mines of 73.777 ha. in Jajpur District, Odisha under Cuttack Forest Division by M/s IMFA Ltd.

Ref: - Memo No.6485 dt.27.12.2016 of the Regional Chief Conservator of Forests, Angul.

Sir,

Please find enclosed herewith the following schemes approved by the Regional Chief Conservator of Forests, Angul for information and necessary action. You are requested to submit the point wise compliance in full of the Stage-I conditions imposed by Govt. of India, MoEF & CC to this office immediately for further action.

Sl. No	Condition No.	Name of the Scheme	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion & choking of streams.	Rs. 10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing & planting inside the mining lease area.	Rs. 14,90,000/-
3	xxvii	Plan for gap planting & soil & moisture conservation activities to restock & rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area within 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds & water bodies.	Rs. 8,38,000/-

Encl:- As above

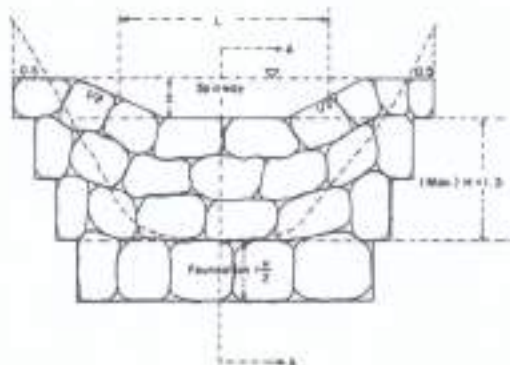
  
Divisional Forest Officer  
Cuttack Forest Division

Memo No. \_\_\_\_\_ /dt.

Copy alongwith copy of approved scheme forwarded to the Range Officer, Sukinda Range for information and necessary action.

Divisional Forest Officer  
Cuttack Forest Division

**SCHEME TO  
CHECK SOIL EROSION & REDUCE CHOCKING OF  
NALLA INSIDE THE LEASE AREA  
AGAINST DIVERSION OF 7.397 HECTARE OF  
FOREST LAND (SABIK KISAM) PERTAINING TO  
MAHAGIRI MINES (CHROMITE) LEASE OF  
M/S IMFA LTD, IN  
JAJPUR DISTRICT, ODISHA.**



(In compliance to condition no.(xxv) a of in-principle Approval of MoEF, Govt. of India vide letter no F.No-8-116/2002-FC (Vol-i) dated 20.10.2016)



## SCHEME TO CHECK SOIL EROSION & REDUCE CHOKING OF NALLA INSIDE THE LEASE AREA

---

### 1. Introduction.

**Mahagiri Mines (Chromite)** of IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kisam) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded **"In principle Approval"**. In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxv) needs checking of soil erosion, gap planting and Soil & Moisture Conservation activities, sowing & planting to check erosion etc. The Condition reads as follows.

**"Condition No (xxvi):** *Following activities, as per approved plan / schemes shall be undertaken by the user agency under supervision of the State Forest Department:*

- a. Mitigative measures to minimize soil erosion and choking of streams shall be implemented within a period of three year with effect from the issue of stage-II clearance in accordance with the approved plan in consultation with the State Forest Department.*
- b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with the approved schemes.*
- c. Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved schemes.*
- d. Stabilize the over burden dumps by appropriate grading/ benching, in accordance with the approved scheme, so as to ensure that the angle of repose at any given place is less than  $28^{\circ}$  ; and*
- e. No damage shall be caused to the top soil and user agency will follow the top soil management Plan."*

## 2. Present Scenario:

The Mining activities is being carried out in accordance with the approved modified mining scheme prepared by Sri MJ Raju and Sri P. Behera (RQP) approved by Regional Controller of mines, IBM, Bhubaneswar vide letter No MS/FM/24-ORI/BHU/2014-15 dated 06.04.2015. The Mining scheme is valid from 2015-16 to 2019-20. The salient points enumerated in the plan are

- ❖ Mining lease area is 73.777 hectare and started from 16.01.2006.
- ❖ The highest & Lowest Contour of the area is 330mRL & 147mRL. Regional chromite band no VI of Sukinda Chromite Belt is laying in the lease area having a general trend of ENE-WSW dipping 75 to 80degree towards SSE.
- ❖ The Southern side of the lease area is very steep where as it becomes gentle slope towards the northern side.
- ❖ The resource has been estimated to be 12.78 Million ton (X- sectional method) and 12.41 Million ton (L- sectional method) As on 01.11.2014.
- ❖ At present the Mining operation is fully mechanized where both Opencast and Underground mining has been adopted.
- ❖ Till date the overall slope of the mine is maintained with less than 30° with individual bench adequately sloped. The ultimate pit limit for opencast mining is 185mRL. Backfilling in the mined out area where the UPL has reached 185mRL is being concurrently done.
- ❖ Leaving a parting of 50m below 185mRL (Opencast Pit Limit) underground mining has started
- ❖ Trackless mining using LHD & LPDT has been adopted at underground mining.
- ❖ The in situ excavation schedule is as given below.

Year	Tentative Excavation in m <sup>3</sup>	Top Soil in m <sup>3</sup>	OB/SB/ IB in m <sup>3</sup>	ROM in m <sup>3</sup>		Waste ratio ( T/m <sup>3</sup> )
				Ore( m <sup>3</sup> )	Mineral Reject (m <sup>3</sup> )	
2015-16	133584	0	118000	15584	0	0.51
2016-17	119312	0	111000	8312	0	0.29
2017-18	67007	0	61000	6007	0	0.38
2018-19	0	0	0	0	0	NA
2019-20	0	0	0	0	0	NA
Total	319903	0	290000	29903		

Table 1 Situ Excavation



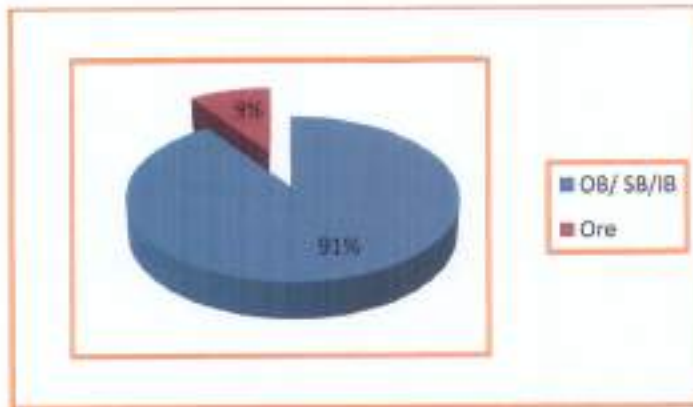


Figure 1 Situ Excavation Graphically

- ❖ The threshold grade has been kept as 10%  $Cr_2 O_3$  as per IBM guidelines and based on the usability of Ore at captive Plants, the cut off grade has been fixed at 30%  $Cr_2 O_3$
- ❖ Anticipated life of opencast working is 3 years i.e. upto 2017-18. So there shall be no generation of Ore & overburden beyond 2017-18 from opencast mines.
- ❖ The length & width of the dump yard is 505m and 100m respectively.(Area-4.70 ha) The top height will be 170mRL & bottom level 148mRL. The height of the dump is 22 meter.
- ❖ Dump will be of 2 benches / stages.
- ❖ By end of conceptual period, the probable overburden will be about 3.5 lakh Cum from open cast mining and 5.205 lakh Cum from Underground mining. It will be utilized for back filling of Opencast mined out area.
- ❖ During the year 2019-20, there will be production of 6.0 lakh Tones (1.56 lakhs cum) of ROM out of which OB will be around 0.257 lakh Cum.
- ❖ This will continue till conceptual period i.e. 15 years from 2020-21. The total overburden calculated to be 3.855 lakh Cum.
- ❖ The capacity of the present waste dump is to accommodate 10.50L Cum. As on 01.04.2014 the waste dump is containing 4.15 L Cum, leaving a balance of 6.35 L cum waste to be accommodated.
- ❖ There will be no sub grade ore production during conceptual period.
- ❖ The land utilization pattern is as given below.

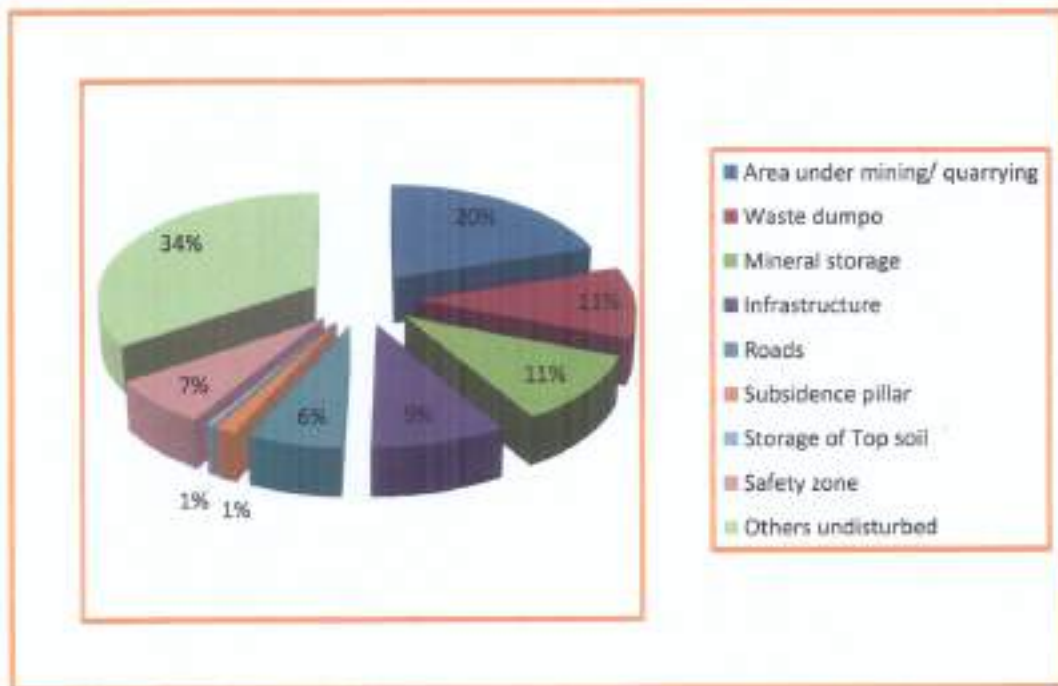


Figure 2 Land use pattern graphically

### 3. Salient points of Waste Management and Run off Management (as prescribed in the Mining scheme)

#### 3A. Waste management.

- The length & width of the dump yard is 505m and 100m respectively.(Area-4.70 ha)  
The top height will be 170mRL & bottom level 148mRL. The height of the dump is 22 meter.
- Dump will be of 2 benches / stages.
- By end of conceptual period, the probable overburden will be about 3.5 lakh Cum from open cast mining and 5.205 lakh Cum from Underground mining. It will be utilized for back filling of Opencast mined out area.
- During the year 2019-20, there will be production of 6 lakh cum of ROM out of which OB will be around 0.257 lakh Cum.
- This will continue till conceptual period i.e. 15 years from 2020-21. The total overburden calculated to be 3.855 lakh Cum.
- Coir matting shall be tried to stabilize waste dump slopes. Good quality grasses shall be planted with local small dwarf trees and shrubs.
- Terrace will be constructed at 20m height with inward slope for absorption of water avoiding creation of gullies on dump slopes.



- The capacity of the present waste dump is to accommodate 10.50L Cum. As on 01.04.2014 the waste dump is containing 4.15 L Cum, leaving a balance of 6.35 L cum waste to be accommodated.

### 3B. Runoff management.

On examination of locational map (Topo sheet F45N16) it is seen that there are two 1<sup>st</sup> order nalla flowing inside the ML area (pre mining situation) which drains to Damsala nalla of this valley which is situated at a distance of 2.3km from the project. After mining operation, the entire runoff of the ML area along with pumped out mining discharge are channelized to ETP. The annual rainfall during 2014 was 1675 mm. Although the lease area is 73.777 hectare, the catchment area is 54.3 ha due to hilly terrain of the area. For sukinda valley there is no available data indicating intensity of hourly rainfall. Considering available indicators / observation 15mm rainfall per hour has been taken up to calculate the peak runoff. The runoff from the ML area is calculated to be 815Cum / hour. The Mining Scheme indicates the following measures.

- Good quality grass is to be planted up to arrest / check runoff velocity.
- Dwarf trees / shrubs to be planted on dump slopes.
- Terrace at 20 m height to be maintained with inward slope to arrest water flow of outer dump slope resulting rills.
- The garland drain over 3597meter is being constructed & maintained.
- 6 (six) numbers of settling ponds are being maintained.
- Retaining wall 1110 meter has been constructed to arrest sliding dump.
- There is a provision to plant 1250 plants near quarry area during plan period.

## 4. Anticipated fallout.

### A. Failure of Dumps:

Three types of Dump Failure may occur in the present type of dump. These are

- Slope Failure.
- Toe failure
- Base failure.

(These are shown in the diagram)

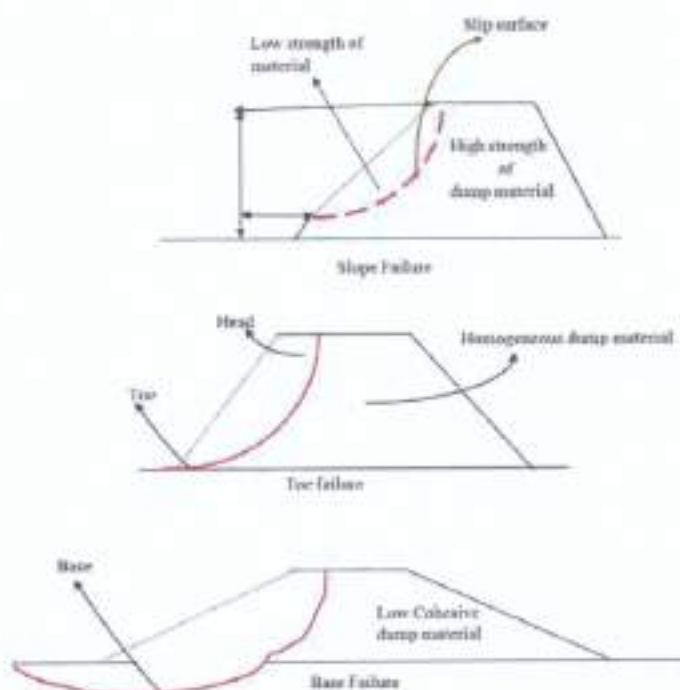


Figure 3 Dump failure slip line.

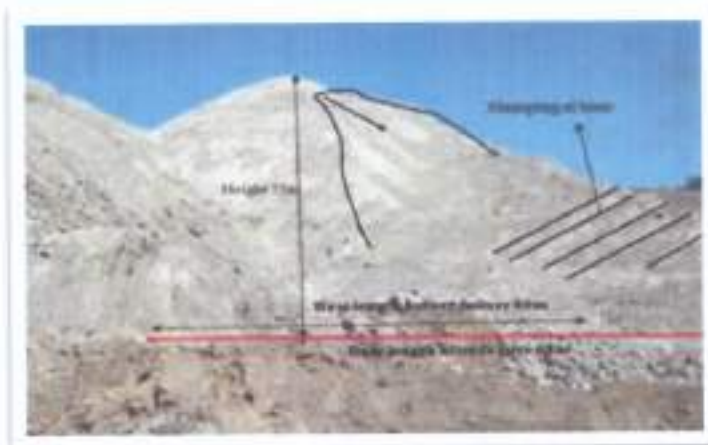


Figure 4 DUMP Failure stage.

### Reasons for failure.

- Ground water and surface water flow condition plays a critical role on the stability of dump slope. Frictional strength is reduced as the height of dump is raised, due to presence of water. The pore water pressure reduces the normal stress acting on material. The cohesive strength of weak geo-material will be further reduced due to presence of pore water pressure. Waste dump placed in a loose state, shear failure is often followed by static liquefaction which is complete loss of strength. The flow of water may enhance the seepage force, leading to formation and migration of tension crack.



- ii. Erosion also plays an important role in affecting the stability by surface weathering, ground water or surface water seepage, toe erosion and slope modification, ground water or surface runoff. Erosion changes the waste dump slope geometry and morphological character. The weathering and attrition of material at the toe of a potential mslope reduce the restraining force that may destabilize the slope. Erosion of void filling materials, or zone of percolation can efficiently decrease cohesion among grain boundaries. The cohesion strength notable reduce the rock mass shear strength. The decrease in shear strength may allow movement of dump slope along weak plane. In addition localized erosion may also result in increase permeability and ground water flow along the slope. This may lead to failure due to formation of gully and deep flow channels in dump.

iii. **Other affecting parameters are**

- Gradient of the Seam,
- Ground Water Regime
- Nature of Over burden Rock
- Presence of clay and Soil layers and their properties.
- Angle of Repose of the broken Over burden rock
- Cohesion of the Over burden Rock materials
- Height of OB Dump in one stretch
- Ultimate Height and Slope of Waste Dump
- Dump Stability Parameters Strip/Cut Width and Depth.

**B. Silt in Runoff**

The total surface area of the Dump is 4.7 hectare. Considering an average annual rainfall of 1500 mm the total precipitation that receives is 0.705 Lakh Cum. Considering evaporation losses etc. around 0.6 lakh cum of water goes as runoff that may carry silt from dump surface. The run off for the dump is flowing through the garland drains with check dams to settling pond. Hence no silt is allowed to go to outside the lease area.

**5. Measures suggested in the "In principle approval" & scheme for its Compliance.**

Condition No. (xxv) (a) *plan containing appropriate mitigation measures to minimize soil erosion and choking of streams shall be prepared and implemented.*

**I. Objectives.**

The objectives are

- To check soil erosion within the Lease area of 73.777 hectare including the OB Dump.
- Arrest Silts in the run off
- Treat the nalla / drain to reduce outgoing of silts to Damsala nalla.

## II. Methodology adopted.

In order to meet the condition it is proposed

- ✓ To reduce soil erosion by planting trees / grasses on the dump surface,
- ✓ Construct loose boulder check dams on the channels / garland drains carrying water from dump surface to settling tanks.
- ✓ Grass tufting on both sides of garland drains / channels (up to 0.45meters on both sides of channel).

## III. A Checking of soil erosion at dump site by sowing & Planting (Described at condition (xxv) (b) below.

## IV. Construction of Loose boulder Check Dams.

The length and depth of channel depth carrying runoff is 3597 m and 0.45 m to 1.00m respectively. It is suggested to have LBCD on the drainage flowing inside the Mining Lease area which is the main drainage system in the lease area. All the probable eroded silt will flows down to Damsala Nala if not arrested. The present vegetation / settling tanks (6 number) are effectively checking the silt from runoff.

The design of loose boulder check dams is furnished below.

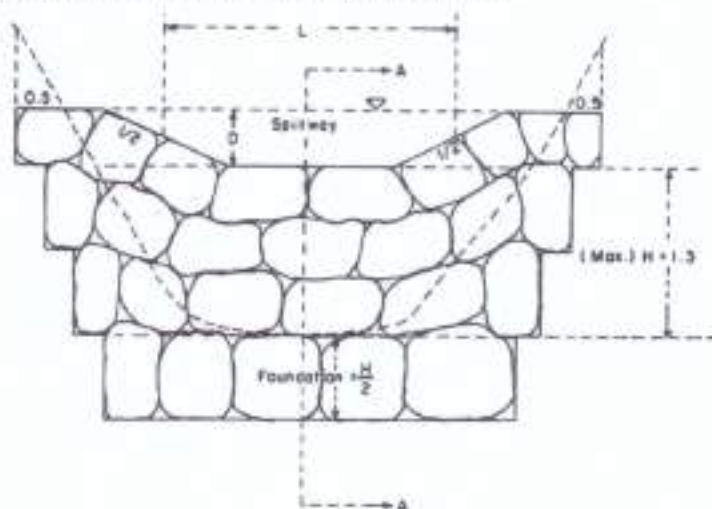


Figure 5 Design of Loose Boulder Check dam

## V. Description & Number of check dams to be constructed.

The LBCD is to be constructed along the channel where the depth is more than 0.75meter. such length of channel (having depth of 0.75 meter is about  $\frac{1}{3}^{\text{rd}}$  of the channel length i.e.  $\frac{1}{3}^{\text{rd}}$  (3597) m = 1199 m. It is suggested to have LBCDs of 30cm height covering the channel width (about 1.00m) at an interval of 200 m. all total 6 number of such LBCD can be constructed.



#### VI. Tufting of garland drains with grasses.

The garland drains on observation found to bear grasses (Dinanath). To make the channel more effective it is suggested to have grass tufting with doob grass (*Cynodon dactylon*) 0.45 m on both sides of garland drain. Available channel length is about 50% of total length i.e.  $\frac{1}{2}$  (3597) = 1798.5 or say 1800 meter.

#### VII. Maintenance of settling tanks.

There are 6 number of settling tanks through which all channeled water passes through. Major silt is being arrested / settled at the tank. Removal of silt from the tanks is periodically being carried out depending on silt accumulation.

#### VIII. Periodical de-silting of garland channels.

The garland drain (3597 m) is being silted up and at present the channel depth has been reduced to less than 40cm. It is suggested to remove the silt from the channel periodically and channel depth should be maintained at least 60cm so as to accommodate heavy intense rainfall. It will prevent spill up and damage to channels / roads etc. A three year Cycle is ideal.

#### VIII. Financial outlay.

i. The cost for loose boulder check dam is estimated as follows. The LBCD are of small nature length 1m and height 30cm and width 45cm. The boulders / stones obtained from mining activities can be utilized for the purpose. Rs2500/- per check dam is suggested Total cost Rs15000/-.

##### ii. For Grass tufting.

Grass tufting by Doob grass over 1800meter has been suggested. Width of grass tufting  $0.45\text{m} \times 2 = 0.9\text{m}$ . Total area to be tufted  $1800 \times 0.9 = 1620 \text{ m}^2$ . Collection of grass slips & tufting can be taken up at a cost of Rs 75 per sq meter. Total estimated cost  $1620 \times 75 = 1,21,500/-$

iii. Maintenance of Silting tanks & removal of Silt. It is being practiced as and when required. Maintenance once in three years is ideal. For 6 tanks @15000/- per tank is estimated. For 10years the cost comes to  $15000 \times 6 \times 3 = \text{Rs}2.70 \text{ lakh}$ .

##### iv. De-silting of Channels.

Channel length: 3597m

Width in average: 1.00m

Depth of Silt likely to be removed: 0.30 m

Volume of Earth to be removed in a cycle=  $1079.1 \text{ m}^3$

For 3 times within 10 years=  $1079.1 \times 3 = 3237.3 \text{ cum}$ . It will be carried out manually hence the estimated cost  $3237.3 \times 150 = \text{Rs}4, 85,595/-$

**vi. Total estimated cost.**

- a. For 6 nos of LBCD= Rs 15000/-
- b. For Grass tufting= Rs1, 21,500/-
- c. maintenance of silting tanks= Rs2,70,000/-
- d. De-silting of Channels: Rs4, 85,595/-
- e. Cost Escalation 15% of (Rs 15000/- + Rs121500/-+270000/-+485595/-) = Rs 133815/-
- f. Total estimated cost: Rs10, 25,910/- or say 10.26 lakh. (Rs Ten lakh twenty six thousand only)

**6. Implementing Agency.**

This prescription is to be implemented by the user agency.

**7. Monitoring & Evaluation.**

The implementation & its maintenance will be evaluated by the authority of the User Agency regularly. Carrying of silt in the release point to Damsala nalla is to be tested during rains to assess the effectiveness of the LBCD & Grass planting. This report may be submitted to DFO, Cuttack periodically for record and suggestions if any.



"CHANDANAM" a Forest & Wildlife Consulting Society has been assigned by the User Agency to prepare this scheme.

Prepared & submitted accordingly.

  
(B. Maharana D.F.S SB-I Rtd)

Dy. Conservator of Forests.

  
Forest Range Officer  
Sukinua Range

  
(Sri NK Rout, IFS. Rtd)


Dy. Conservator of Forests.



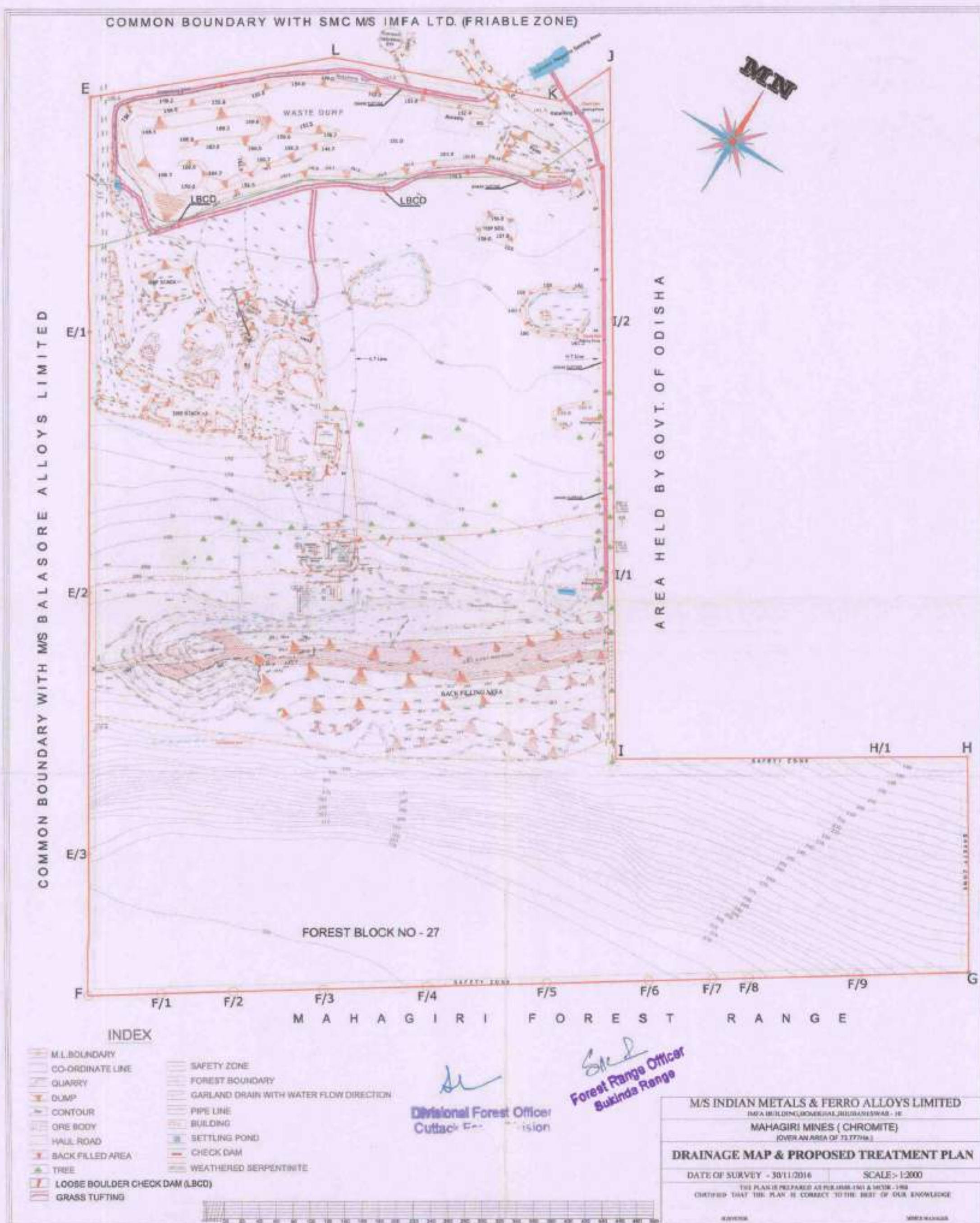
  
Divisional Forest Officer  
Cuttack Forest Division

  
Signature of Project Proponent

Approved Rs 10,26,000/-  
(Rupees ten lakh twenty six thousand) or Rs.

  
Regional Conservator of Forests  
Angul Circle





For Indian Metals & Ferro Alloys Ltd.

(Sanjeev Das)  
Sr. Vice President & Constituted Attorney





IMFA Building  
Bhubaneswar -751010  
Odisha, India

Corporate Identity No.  
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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A1**

**UNDERTAKING**

*We do hereby undertake to state that we would implement and execute the work under Mitigative Measures to minimize soil erosion and choking of streams within the leasehold area as per the approved plan under the proper guidance and supervision of the State Forest Department within a period of three years with effect from the issue of Stage-II clearance.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**



## Office of the Regional Chief Conservator of Forests, Angul

Memo No. 6485 /SF FC-I(MG)27/2014 dated 27-12-16

To

The Divisional Forest Officer,  
Cutback Division.

Sub:- Proposal for diversion of balance 7.387 ha of Sabik kisan forest land as on 25.10.1960 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 72.777 ha by M/s IMFA in Jajpur District, Odisha

Ref:- Your Memo No. 11177 dated 13.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action.

S.N o.	Condition No	Name of the Schema	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion and choking of streams.	Rs. 10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing and planting inside the mining lease area	Rs. 14,90,000/-
3	xxv	Plan for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds and water bodies	Rs. 8,38,000/-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately

Encl: As above.

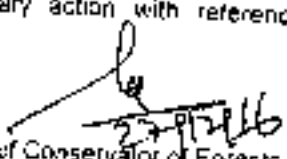
  
Regional Chief Conservator of Forests  
Angul

Memo No. 6486 /dated

27-12-16

Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No. 21245/BF(MG)360/2016 dated 15.11.2016.


Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 6487 /dated

27-12-16

Copy forwarded to the Vice-President M/s. IMFA Ltd. IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar for information

  
Regional Chief Conservator of Forests  
Angul

OFFICE OF THE DIVISIONAL FOREST OFFICER: CUTTACK FOREST DIVISION  
GHATAKULA, NUAPADA, MADHUPATNA, CUTTACK-753010.  
E-mail [ld-dfo.cuttackforestdivision@yahoo.com](mailto:ld-dfo.cuttackforestdivision@yahoo.com), Fax-0671-2347611

Memo No. 43 / SF (Misc)  
Dated, Cuttack the 03 January, 2017

To

The Sr. Vice President,  
M/s Indian Metals & Ferro Alloys Ltd.,  
IMFA building, Bomikhal, Rasulgarh,  
Bhubaneswar-751010.

Sub:- Proposal for diversion of balance 7.397 ha. of Sabik kissam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38 ha. of forest land for Chromite mining in their Mahagiri Chromite mines of 73.777 ha. in Jajpur District, Odisha under Cuttack Forest Division by M/s IMFA Ltd.

Ref:- Memo No.6485 dt.27.12.2016 of the Regional Chief Conservator of Forests, Angul.

Sir,

Please find enclosed herewith the following schemes approved by the Regional Chief Conservator of Forests, Angul for information and necessary action. You are requested to submit the point wise compliance in full of the Stage-I conditions imposed by Govt. of India, MoEF & CC to this office immediately for further action.

Sl. No	Condition No.	Name of the Scheme	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion & choking of streams.	Rs. 10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing & planting inside the mining lease area.	Rs. 14,90,000/-
3	xxvii	Plan for gap planting & soil & moisture conservation activities to restock & rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds & water bodies.	Rs. 8,38,000/-

Encl-As above

  
Divisional Forest Officer  
Cuttack Forest Division

Memo No. \_\_\_\_\_ /dt.

Copy alongwith copy of approved scheme forwarded to the Range Officer, Sukinda Range for information and necessary action.

Divisional Forest Officer  
Cuttack Forest Division



**SCHEME FOR  
CHECKING OF SOIL EROSION BY SOWING &  
PLANTING INSIDE THE ML AREA  
AGAINST DIVERSION OF 7.397 HECTARE OF FOREST  
LAND (SABIK KISSAM) PERTAINING TO  
MAHAGIRI MINES (CHROMITE) OF M/S IMFA LTD, IN  
JAJPUR DISTRICT, ODISHA.**



In compliance to condition no. (XXV) (b) of in-principle Approval of MoEF, Govt. of India vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016)

## SCHEME FOR CHECKING OF SOIL EROSION BY SOWING & PLANTING INSIDE THE MINING LEASE AREA

### 1. Introduction

**Mahagiri Mines (Chromite)** of IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kism) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded "In principle Approval". In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxv) needs gap planting and Soil & Moisture Conservation activities, sowing & planting to check erosion etc.

**"Condition No (xxv):** *Following activities, as per approved plan / schemes shall be undertaken by the user agency under supervision of the State Forest Department:*

- a. Mitigative measures to minimize soil erosion and choking of streams shall be implemented within a period of three year with effect from the issue of stage-II clearance in accordance with the approved plan in consultation with the State Forest Department.*
- b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with the approved schemes.*
- c. Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved schemes.*
- d. Stabilize the over burden dumps by appropriate grading/ benching, in accordance with the approved scheme, so as to ensure that the angle of repose at any given place is less than  $28^{\circ}$ ; and*
- e. No damage shall be caused to the top soil and user agency will follow the top soil management Plan."*

### 2. Present Scenario:

The Mining activities is being carried out in accordance with the approved modified mining scheme prepared by Sri MJ Raju and Sri P. Behera (RQP) approved by Regional Controller of mines, IBM, Bhubaneswar vide letter No MS/FM/24-ORI/BHU/2014-15 dated 06.04.2015.



The Mining scheme is valid from 2015-16 to 2019-20. The salient points enumerated in the plan are

- ❖ Mining lease area is 73.777 hectare and started from 16.01.2006.
- ❖ The highest & Lowest Contour of the area is 330mRL & 147mRL. Regional chromite band no VI of Sukinda Chromite Belt is laying in the lease area having a general trend of ENE-WSW dipping 75 to 80degree towards SSE.
- ❖ The Southern side of the lease area is very steep where as it becomes gentle slope towards the northern side.
- ❖ The resource has been estimated to be 12.78 Million ton (X- sectional method) and 12.41 Million ton (L- sectional method). (as on 01.11.2014)
- ❖ At present the Mining operation is fully mechanized where both Opencast and Underground mining has been adopted.
- ❖ Till date the overall slope of the mine is maintained with less than 30° with individual bench adequately sloped. The ultimate pit limit for opencast mining is 185mRL. Backfilling in the mined out area where the UPL has reached 185mRL is being concurrently done.
- ❖ Leaving a parting of 50m below 185mRL (opencast Pit limit) underground mining has started
- ❖ Trackless mining using LHD & LPDT has been adopted at underground mining.
- ❖ The in situ excavation schedule is as given below.

Year	Tentative Excavation in m <sup>3</sup>	Top Soil in m <sup>3</sup>	OB/SB/ IB in m <sup>3</sup>	ROM in m <sup>3</sup>		Waste ratio (T/m <sup>3</sup> )
				Ore (m <sup>3</sup> )	Mineral Reject (m <sup>3</sup> )	
2015-16	133584	0	118000	15584	0	0.51
2016-17	119312	0	111000	8312	0	0.29
2017-18	67007	0	61000	6007	0	0.38
2018-19	0	0	0	0	0	NA
2019-20	0	0	0	0	0	NA

Table 1Situ excavation schedule

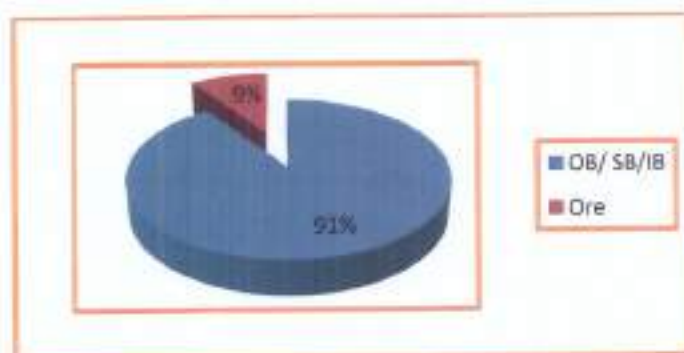


Figure 1 Situ Excavation schedule

- ❖ The threshold grade has been kept as 10%  $Cr_2O_3$  as per IBM guidelines and based on the usability of Ore at captive Plants, the cut off grade has been fixed at 30%  $Cr_2O_3$ .
- ❖ Anticipated life of opencast working is 3 years i.e. upto 2017-18. So there shall be no generation of Ore & overburden beyond 2017-18 from opencast mines.
- ❖ The length & width of the dump yard is 505m and 100m respectively. (Area-4.70 ha) The top height will be 170mRL & bottom level 148mRL. The height of the dump is 22 meter.
- ❖ Dump will be of 2 benches / stages.
- ❖ By end of conceptual period, the probable overburden will be about 3.5 lakh Cum from open cast mining and 5.205 lakh Cum from Underground mining. It will be utilized for back filling of Opencast mined out area.
- ❖ During the year 2019-20, there will be production of 6.0 lakh Tones (1.56 lakhs cum) of ROM out of which OB will be around 0.257 lakh Cum.
- ❖ This will continue till conceptual period i.e. 15 years from 2020-21. The total overburden calculated to be 3.855 lakh Cum.
- ❖ The capacity of the present waste dump is to accommodate 10.50L Cum. As on 01.04.2014 the waste dump is containing 4.15 L Cum, leaving a balance of 6.35 L cum waste to be accommodated.
- ❖ There will be no sub grade ore production during conceptual production.
- ❖ The land utilization pattern is as given below.



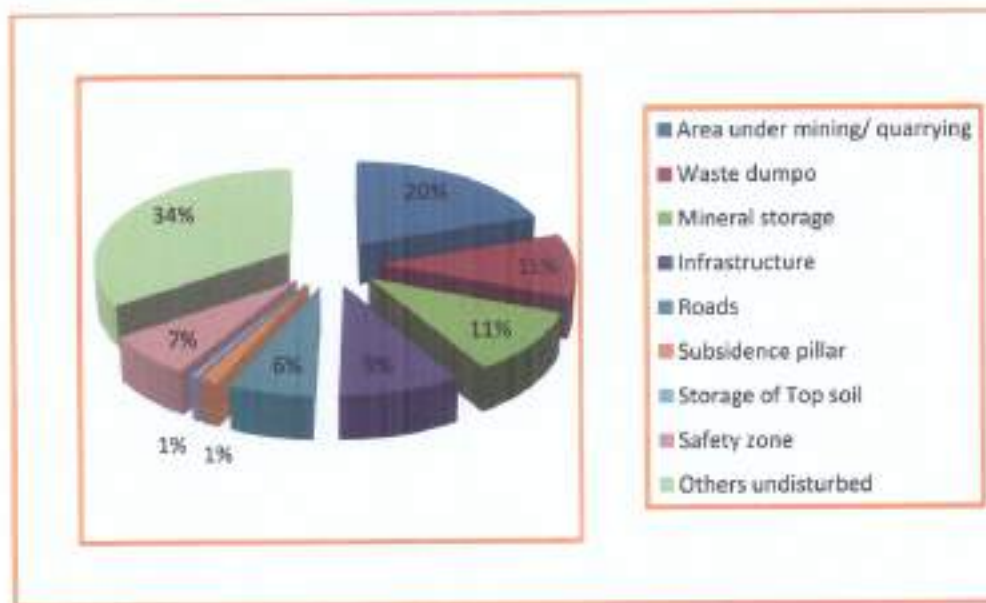


Figure 2 Land utilization pattern

### 3. Salient points of waste management (as prescribed in the current Mining Scheme)

- ❖ The length & width of the dump yard is 505m and 100m respectively.(Area-4.70 ha) The top height will be 170mRL & bottom level 148mRL. The height of the dump is 22 meter.
- ❖ Dump will be of 2 benches / stages.
- ❖ By end of conceptual period, the probable overburden will be about 3.5 lakh Cum from open cast mining and 5.205 lakh Cum from Underground mining. It will be utilized for back filling of Opencast mined out area.
- ❖ During the year 2019-20, there will be production of 6 lakh cum of ROM out of which OB will be around 0.257 lakh Cum.
- ❖ This will continue till conseptual period i.e. 15 years from 2020-21. The total overburden calculated to be 3.855 lakh Cum.
- ❖ Coir matting shall be tried to stabilize waste dump slopes. Good quality grasses shall be planted with local small dwarf trees and shrubs.
- ❖ Terrace will be constructed at 20m height with inward slope for absorption of water avoiding creation of gullies on dump slopes.
- ❖ The capacity of the present waste dump is to accommodate 10.50L Cum. As on 01.04.2014 the waste dump is containing 4.15 L Cum, leavinga balance of 6.35 L cum waste to be accomodated.

#### 4. Anticipated fallout.

##### A. Failure of Dumps:

Three types of Dump Failure may occur in the present type of dump. These are

- Slope Failure.
- Toe failure
- Base failure.

(These are shown in the diagram)

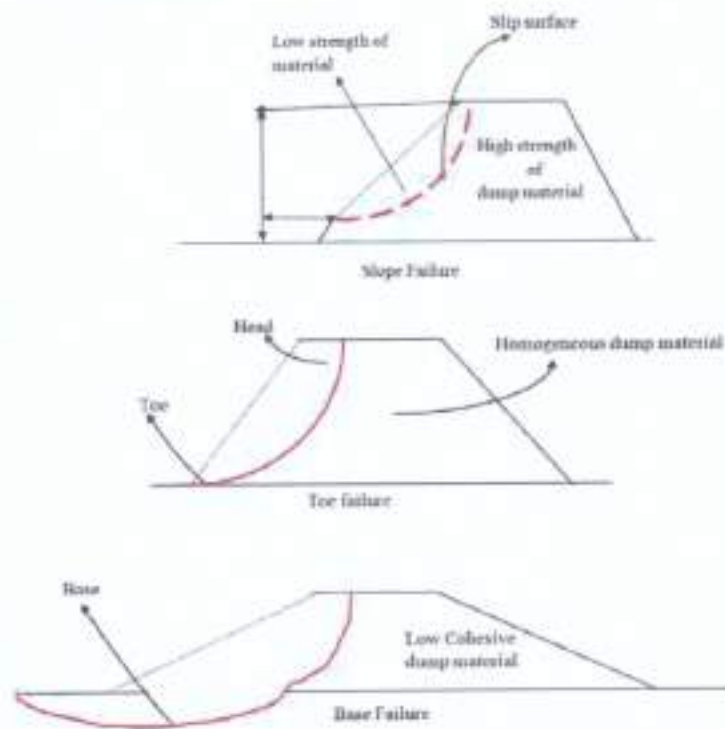


Figure 3 Dump failure line of slip.



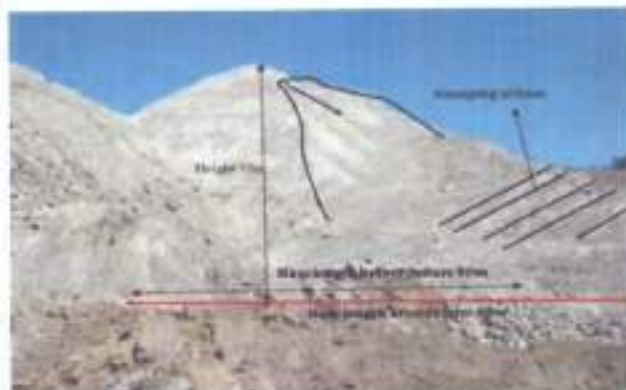


Figure 4 DUMP FAILURE SITUATION.

### *Reasons for failure.*

- i. Ground water and surface water flow condition plays a critical role on the stability of dump slope. Frictional strength is reduced as the height of dump is raised, due to presence of water. The pore water pressure reduces the normal stress acting on material. The cohesive strength of weak geo-material will be further reduced due to presence of pore water pressure. waste dump placed in a loose state, shear failure is often followed by static static liquefaction which is complete loss of strength. The flow of water may enhance the seepage force, leading to formation and migration of tension crack.
- ii. Erosion also plays an important role in affecting the stability by surface weathering, ground water or surface water seepage, toe erosion and slope modification, ground water or surface runoff. Erosion changes the waste dump slope geometry and morphological character. The weathering and attrition of material at the toe of a potential mslide reduce the restraining force that may destabilize the slope. Erosion of void filling materials, or zone of percolation can efficiently decrease cohesion among grain boundaries. The cohesion strength notable reduce the rock mass shear strength. The decrease in shear strength may allow movement of dump slope along weak plane. In addition localized erosion may also result in increase permeability and ground water flow along the slope. This may lead to failure due to formation of gully and deep flow channels in dump.
  - i. Other affecting parameters are
    - Gradient of the Seam,
    - Ground Water Regime
    - Nature of Over burden Rock
    - Presence of clay and Soil layers and their properties.
    - Angle of Repose of the broken Over burden rock
    - Cohesion of the Over burden Rock materials
    - Height of OB Dump in one stretch
    - Ultimate Height and Slope of Waste Dump
    - Dump Stability Parameters Strip/Cut Width and Depth.

**B. Silt in Runoff.**

The total surface area of the Dump is 4.70 hectare. Considering an average annual rainfall of 1500mm the total precipitation that receives is 0.705Lakh Cum. Considering evaporation loss etc around 0.60 lakh cum of water goes as runoff that may carry silt from dump surface. The run off for the dump is flowing through the garland drains with check dams to settling pond. Hence no silt is allowed to go to outside the lease area.

**C. Dust pollution due to wind / whorl wind.**

The average wind speed as noticed in post monsoon is 2.25m/s with a maximum speed of 6.13m/s. In winter the average speed is 1.31m/s with a maximum speed of 5.61m/s. This wind speed has a capacity to pick up heavy dust from dry surface of dump, ore stack & sub grade stack.

**D. Loss of life & property.**

Failure of dump may cause loss of life & property. It may put occupational hazards to workman.

**5. Measures suggested in the "In principle approval" & scheme for its Compliance.**

Condition No. xxv (b) Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion.

**5A. Area available for treatment & available soil condition.**

In the current mining scheme though there is provision to dump the overburden over an area of 4.70 hectare. There is steep slope area of 14.977 ha which remains untouched at present and will also remain as such.

**Soil Condition.**

The overburden soil contains weathered Serpentinite, Limonitic materials, Nickeliferous Limonite and lateritic soil. The Dump soil has very poor to no organic materials in it to hold water for growth of plants. The steep slope area remained untouched is hard rocky soil. It bears some dwarf trees with climbers & weeds.



**5B. Method to be adopted.**

In accordance to the condition imposed by the MoEF & Climate Change, seeds of grass, hardy tree species will be sown on the slope of the dump and trees will be planted outer line of deck/ bench and toe of the dump and untouched area. Seeds will be broadcasted or dibbled as per feasibility. The seeds of the following species will be considered.

**A. Seeds to be sown.**

- Bombax ceiba (Simili)
- Azadiracta indica (Neem)
- Acacia auriculiformis (Suna jhari)
- Cassia siamensis (san-Chakunda)
- Zyziphus mauritiana (bar koli)
- Dinanath Grass.
- Pennisetum typhoides (Napier Grass)

Name of species	Quantity to be sown in Kg.	% in the Mixture
Bombax ceiba, (Simili)	0.5	10
Azadiracta indica, (Neem)	1.25	25
Acacia auriculiformis, (Suna jhari)	0.75	15
Cassia siamensis, (san- Chakunda)	0.5	10
Zyziphus mauritiana, (bar koli)	0.25	05
<i>Pennisetum pedicellatum</i> (Dinanath Grass.)	1.25	25
<i>Pennisetum typhoides</i> (Napier Grass)	0.5	10
	5.00	100



### Method of sowing / time

Seeds will be broad casted at the pre monsoon period and afterwards. Before seed sowing it should be intermixed. No post care treatment is recommended

#### **A. Planting of Drought hardy species.**

Plants which can withstand extreme moisture stress condition / over head sunlight and poor soil organic content are to be planted. It is proposed to plant 3000 seedlings. Tree species to be selected for planting are

- i. Bombax ceiba, (Simili)
- ii. Erythrina suberosa, (Paladhua)
- iii. Azadiracta indica, (Neem)
- iv. Acacia auriculiformis, (Suna jhari)
- v. Cassia siamensis, (san- Chakunda)
- vi. Zyziphus mauritiana, (bar koli)
- vii. Aegle marmelos (bela)
- viii. Ficus bengalensis (Bara)





- B. As it is recommended to plant along the dump periphery (Toe area) and bench periphery. And available space along the untouched area.

**C. Planting Technique to be followed:**

Seedling of 8 month old / 1 year old will be procured from good nursery, Pitting will be done in month of March- April and planting will be done during June-July after break of monsoon and application of CDM. Post care will be taken as per prevailing practice / as given in the cost norm approved by PCCF, Odisha for avenue plantation.

**D. Cost Estimate.**

**a. For Sowing / dibbling of seeds:**

- Cost of seed Rs300/- kg. For 1 hectare 5kg seeds required. Hence total cost of seed for (4.7 ha+14.977ha) is Rs 29515/-
- Cost for Broadcasting / dibbling @3 person days per hectare. Hence the cost of sowing comes to  $19.677 \times 3 \times 260 = \text{Rs } 15350/-$
- Enhancement of Cost @15% =Rs6730/-
- Total cost for Sowing / dibbling of seeds =Rs51595/-

**b. Cost of Planting on dump toe / benches/ haul roads & Blank Space.**

- As per the approved cost estimate the cost covering a period of 5 year (0<sup>th</sup> yr to 4<sup>th</sup> yr) is Rs 416.80 per plant. Hence total cost for planting 3000 seedlings and post care comes to Rs12,50,400/-
- Enhancement of cost due to wage revision / inflation is also expected for which an additional cost of 15% is also suggested. i.e.  $1250400/- \times 15\% = \text{Rs } 1,87,560/-$
- Total cost for Planting (I + II) = Rs 14,37,960/-**

**c. Total project outlay.**

Item of Work	Total projected amount in Rs
a. Seed sowing & dibbling	Rs 51595.00
b. Planting on dump toe / benches.	Rs 1437960.00
<b>Total</b>	<b>Rs1489555.00 or say 14.90 lakh</b>

Table 2Total project outlay

Total cost for implementation of project (Sowing & Planting) is projected at Rs 14.90 lakh.  
(Rupees *Fourteen lakh and Ninety thousand only*)

E. Phasing of implementation.

For seed sowing / dibbling

Year	Area to be covered in ha	Quantity of seeds to sown / dibbled.	Cost projected.
2017-18	5	25	11400
2018-19	8	40	18240
2019-20	6.677	33.40	15225
Total	19.677	98.40	44865

Table 3 Phasing of implementation for seed sowing/ dibbling

For Planting on Toe / Benches.

Year	Number of Plants to be planted.	Cost projected @ Rs 416.80/ Plant
2017-18	1000	4,16,800/-
2018-19	1000	4,16,800/-
2019-20	1000	4,16,800/-
Total	3000	Rs 1250400/-

Table 4 For planting on Toe/ Benches





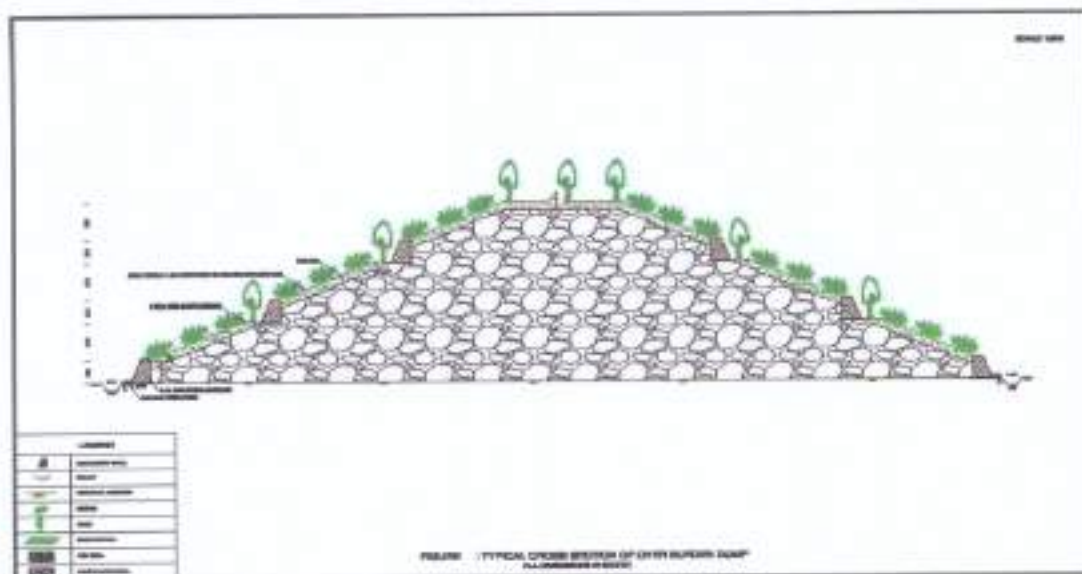


Figure 4 Planting design / grass position

## 6. Implementing Agency.

This prescription is to be implemented by the user agency.

## 7. Monitoring & Evaluation.

The implementation & its maintenance will be evaluated by the authority of the User Agency regularly. The survival percentage along with height growth / crown width are to be monitored regularly. The reporting to be done half yearly to DFO, Cuttack for his information & suggestion if any.



"CHANDANAM" a Forest & Wildlife Consulting Society has been assigned by the User Agency to prepare this scheme.

Prepared & submitted accordingly.



(B. Maharana OFS SB-I Rtd)

Dy. Conservator of Forests,



Forest Range Officer  
Sukinua Range



(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



Divisional Forest Officer  
Cuttack Forest Division



Signature of Project Proponent.



Approved for Rs. 11,90,000/-  
(Rupees Eleven Lakh Ninety Thousand) only.



Chief Conservator of Forests  
Angul Circle.





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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A3**

### UNDERTAKING

*We do hereby undertake to state that we would implement and execute the planting of adequate drought hardy plant species and showing of seeds to arrest soil erosion in the appropriate area within the mining lease as per the approved scheme under the proper guidance and supervision of the State Forest Department.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*

Office of the Regional Chief Conservator of Forests, Angul

Memo No. 32 /SF/FC-III/MS/27/2014 dated 02.01.16

To

The Divisional Forest Officer  
Cuttack Division

Sub:- Proposal for diversion of balance 7397 ha of Saluk kisan forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 73777 ha by M/s IMFA in Jaipur District, Odisha.

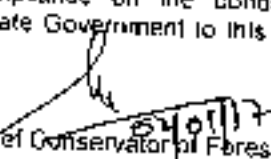
Ref:- Your Memo Nos. 12515 and 12517 both dated 24.12.2016.

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each for further action

Sl No	Condition No	Name of the Scheme	Financial outlay
1	xi(a)	Fencing, protection and regeneration of safety zone area.	Rs. 29,150/-
2	xi(b)	Afforestation on degraded forest land over one and half time safety zone.	Rs. 1,73,145/-
3	xxv(c)	Construction of check dam, retention/ toe walls to arrest sliding down of the excavated material along the contour.	Rs. 1,20,000/-
4	xxv(d)	Stabilise the over burden dumps by appropriate grading /benching	Rs. 8,55,00,000/-
5	xxv(e)	Top soil management	

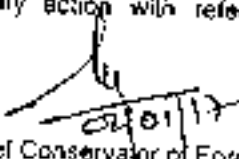
You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

Encl: As above.

  
Regional Chief Conservator of Forests  
Angul

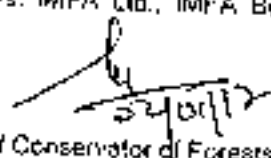
Memo No. 33 dated 02.01.16  
Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No 21245/9F(MG)360/2016 dated 15.11.2016.

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 34 dated 02.01.16

Copy forwarded to the Vice-President, M/s. IMFA Ltd., IMFA Building, Bomikhal, Rasulpur, Bhubaneswar for information.

  
Regional Chief Conservator of Forests  
Angul



**Scheme for construction of check dams,retention/toe wall  
in respect of  
Mahagiri Mines (Chromite), M/s IMFA Ltd,**



**Mahagiri Mines (Chromite), M/s IMFA Ltd.  
At/Po-Kaliapani, Dist-Jajpur, Pin-755047, Odisha**

## **PROJECT DETAILS**

Mining lease for Chromite over an area of 73.777 ha in village Kaliapani & Forest Block No. 27, in undivided Sukinda Tahasil of Jajpur district has been granted in favour of M/s Indian Metals & Ferro Alloys Limited (Earlier Indian Charge Chrome Limited now merged with Indian Metals & Ferro Alloys Limited) for a period of 30 years vide Steel and Mines Dept, GoO letter no: 6212, dated: 18.06.2005. Same has been executed on 20.09.2005 for a period of 30 years for exploitation of chromite ore and its captive consumption in own ferro alloys plants at Choudwar of Cuttack district and at Therubali of Rayagada district of Odisha. The opencast mining operations in the area commenced from 16.01.2006. The mine is under continued operation since then by opencast mining under Fully Mechanized category & underground development has been under progress since January' 2009. Production from underground workings started during 2013-14.

The Mining lease area is situated in Sukinda Valley which lies between the Mahagiri hills in village Kaliapani No-15 under Sukinda Tahasil and Forest Block no-27 under Danagadi Tahasil in Jajpur district of Odisha.

Mahagiri Chromite Mines of IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kisam) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded "In principle Approval". In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxv) (c) needs scheme for construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme. The condition reads as follows.

### **Condition No (xxv) (c):**

"construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme."

This scheme is prepared with an aim to comply the condition stated above.



**PURPOSE :** The purpose for construction of check dams across the drains provided for coursing of the run off water within the Mining Lease area and retention/toe walls around the overburden dumps is to check & settle the suspended solids flowing along with the run off water.

**PRESENT STATUS :**

**Present mining methods:** At present the mine is fully mechanized mine where both opencast and underground mining has been adopted. In opencast mine the ore and overburden is being extracted by opencast method using HEMM. Till date the overall slope of the mines is being maintained at less than  $30^{\circ}$  with, individual bench adequately sloped. The ultimate opencast pit limit is at 185mRL. Backfilling in the mined out areas where the UPL has reached 185mRL is being concurrently done. Leaving a parting of 50 m below 185 mRL (opencast pit limit), underground mining has started. Trackless mining using LHD & LPDT has being adopted at underground mines. Blast hole stoping with filling has been proposed as method of stoping as per Geo - technical study conducted by CIMFR, Dhanbad.

**Design Parameters opencast mine:**

Top RL of opencast mine: 233mRL

UPL of opencast mine: 185mRL

Bench Height: 6 mtrs

Bench Width: 10 mtrs

Overall Pit Slope angle: 30 degree

**Proposed mining methods:** The present method of opencast mining will continue for the whole opencast life of the mine. There is no change proposed in the method of opencast mining. The opencast mines will be ceased by 2017-18 as it reaches its design ultimate pit limit.

A number of garland drains, settling pond and retaining walls have been done. Details are as follows:

Garland drain: 3597 mtrs

Settling Pond: 6 nos of settling ponds

Retaining wall: 1140mtrs

Check Dam : 6

**Existing check dams, retention/toe wall and their status is summerised below:**

Garland drain, Check Dams & Settling Ponds	3597 mtrs long garland drain have been provided around the dumpyard, quarry etc.for channelizing the surface run-off. 6 nos of settling ponds & 5 nos of check dams have also been provided.
Settling Ponds	6 nos of settling ponds have been provided.
Total length of retention/toe wall	In order to check siltation, a retaining wall of 1140mtrs long have been provided at the toe of over burden dump wherever it is required. The dimensions of the retaining wall are 1.2m (Height) x 0.3 m(Width).

**Proposed check dams, Settling Ponds & retention/toe wall:** It is proposed to do the repair & maintenance of the existing 5 No check dams, desiltation of 6 nos of settling ponds and 1140 m length of retention wall, the year wise break up the same is given below :

Year	Details of Check dam,Settling Ponds & Retention wall proposed	
	Repair & maintenancance of Check dam & desiltation of Settling Ponds	Repair & maintenance of Retaining Wall
	No's	Mtrs
2016-17	5 nos of check dams & 6 nos of settling ponds	1140
2017-18	5 nos of check dams & 6 nos of settling ponds	1140
2018-19	5 nos of check dams & 6 nos of settling ponds	1140
Total	5 nos of check dams & 6 nos of settling ponds	1140



**Cost of Check dam, desiltation of Settling Ponds & Retention wall proposed**

Year	Cost details of Check dam & Retention wall proposed				
	Repair & maintenance cost of Check Dam & desiltation of Settling Ponds (Lump sum)		Repair & maintenance cost of Toe wall (Lump sum)		Total cost in Rs
	No of Check dams	Cost in Rs	Mtrs	Cost in Rs	
2016-17	5 nos of check dams & 6 nos of settling ponds	25,000/-	1140	15,000/-	40,000/-
2017-18	5 nos of check dams & 6 nos of settling ponds	25,000/-	1140	15,000/-	40,000/-
2018-19	5 nos of check dams & 6 nos of settling ponds	25,000/-	1140	15,000/-	40,000/-
Total	5 nos of check dams & 6 nos of settling ponds	75,000/-	1140	45,000/-	1,20,000/-

Surface plan of the Mining Lease area showing the Drainage pattern, check Dams & retention/toe wall is attached as Plate 1.

Implementing agency : User agency i.e the lessee M/s Indian Metals and Ferro Alloys Ltd.

  
Forest Range Officer  
Sukinda Range


  
Asst. Conservator of Forests  
Cuttack Forest Division

  
Divisional Forest Officer  
Cuttack Forest Division

For Indian Metals & Ferro Alloys Ltd.

  
Signature of Project Proponent.  
(Sanjeev Das)  
Senior Vice President  
Head-Mining Business Unit

Approved for Rs 1,20,000/-  
(Rupees one lakh twenty thousand) only.  
Page No 5

  
Regional  
Chief Conservator of Forests  
Angul Circle.

## **Retention/Toe Wall**





## **Retention/Toe Wall**

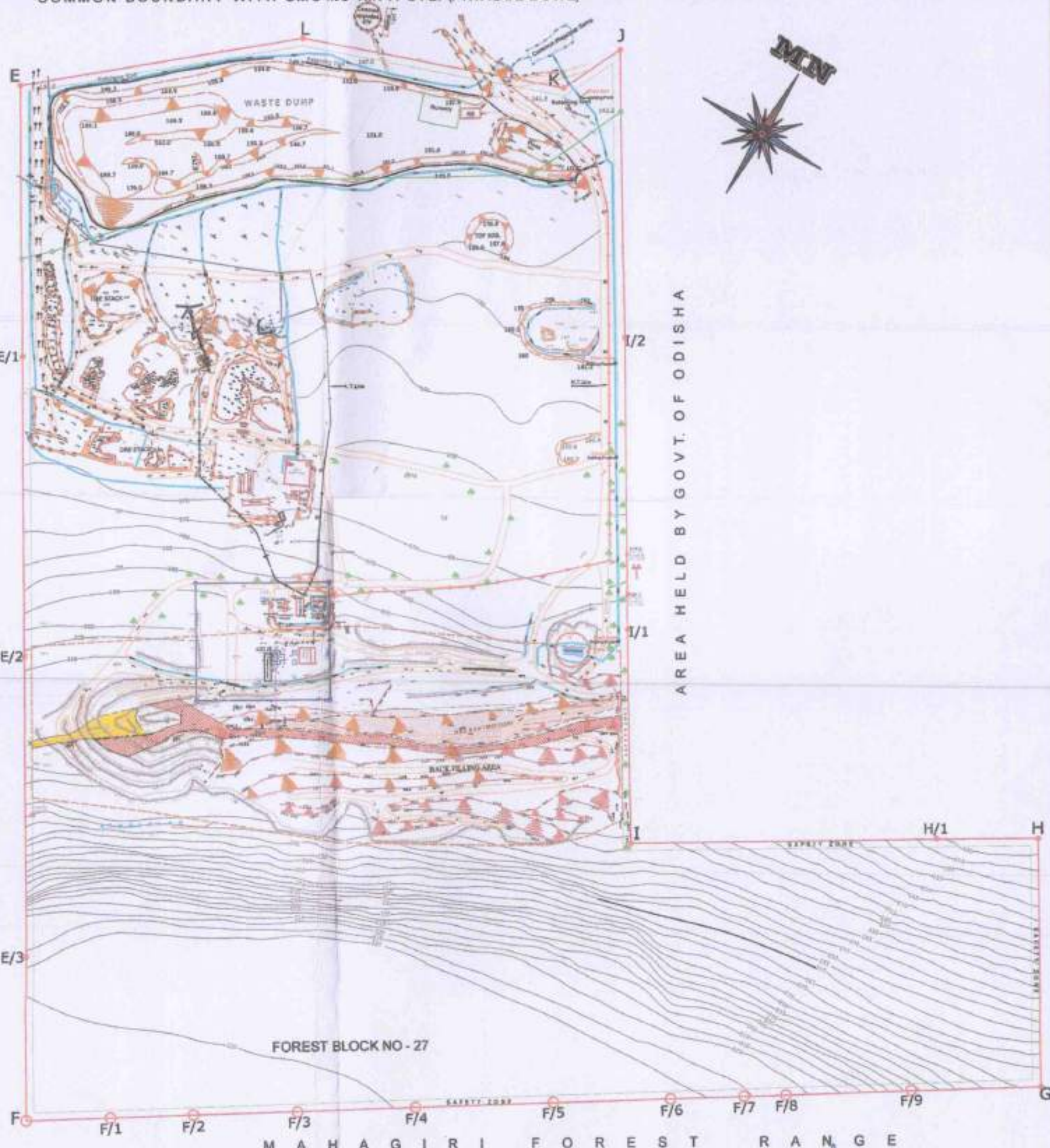




COMMON BOUNDARY WITH SMC MS IMFA LTD. (FRIABLE ZONE)

COMMON BOUNDARY WITH MS BALASORE ALLOYS LIMITED

AREA HELD BY GOVT. OF ODISHA



FOREST BLOCK NO - 27

INDEX

- |                  |   |
|------------------|---|
| M.L. BOUNDARY    | SAFETY ZONE                             |
| CO-ORDINATE LINE | FOREST BOUNDARY                         |
| QUARRY           | GARLAND DRAIN WITH WATER FLOW DIRECTION |
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| ORE BODY         | SETTLING POND                           |
| HAUL ROAD        | CHECK DAM                               |
| BACK FILLED AREA | WEATHERED SERPENTINE                    |
| TREE             |   |

For Indian Metals & Ferro Alloys Ltd.

(Sanjeev Das)  
Senior Vice President  
Head-Mining Business Unit

Divisional Forest Officer  
Cutback Forest Division

M/S INDIAN METALS & FERRO ALLOYS LIMITED	
IMFA BUILDING, BOMBAYAL, WESTBANGALORE - 10	
MAHAGIRI MINES (CHROMITE)	
COVER AN AREA OF 79.77 Hectare	
SURFACE PLAN SHOWING THE SETTLING POND & CHECK DAMS	
DATE OF SURVEY - 30/11/2016	SCALE - 1:4000
THE PLAN IS PREPARED AS PER MIM-IMFA & MCDR - 1986	
CERTIFIED THAT THE PLAN IS CORRECT TO THE BEST OF OUR KNOWLEDGE	

Forest Range Officer  
Sukhoda Range

Asst. Conservator of Forests  
Cutback Forest Division







IMFA Building  
Bhubaneswar -751010  
Odisha, India

Corporate Identity No.  
L27101ON1961PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A5**

### **UNDERTAKING**

*We do hereby undertake to state that we would implement and execute the construction of check dams, retention/toe walls to arrest sliding down of excavated material along the contour in accordance with the approved scheme under the proper guidance and supervision of the State Forest Department.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**

Office of the Regional Chief Conservator of Forests, Angul

Memo No. 32 /CF.C-III(MG)27/2014 dated 02.01.16

To

The Divisional Forest Officer,  
Cuttack Division

Sub: Proposal for diversion of balance 7397 ha of Saluk kisam forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in the Mahagiri Chromite Mines of 73.777 ha by M/s IMFA in Jajpur District, Odisha.


Ref: Your Memo Nos 12515 and 12517 both dated 24.12.2015.

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action

S.No	Condition No	Name of the Scheme.	Financial outlay
1	xi(a)	Fencing, protection and regeneration of safety zone area.	Rs. 29,150/-
2	xi(b)	Afforestation on degraded forest land over one and half time safety zone.	Rs. 1,73,145/-
3	xxv(c)	Construction of check dam, retention/ toe walls to arrest sliding down of the excavated material along the contour	Rs. 1,20,000/-
4	xxv(d)	Stabilise the over burden dumps by appropriate grading/benching	Rs. 655,00,000/-
5	xxv(e)	Top soil management	-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

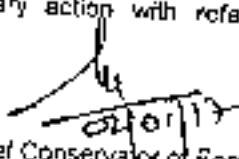
Encl: As above.

  
Regional Chief Conservator of Forests  
Angul

Memo No. 33 /dated 02.01.16

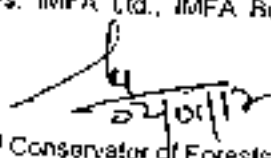
Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No 21245/3F(MG)380/2016 dated 15.11.2016

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 34 /dated 02.01.16

Copy forwarded to the Vice-President, M/s. IMFA Ltd., IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar for information.

  
Regional Chief Conservator of Forests  
Angul



## **Scheme for Stabilization of overburden dumps at Mahagiri Mines (Chromite), M/s IMFA Ltd,**



**Mahagiri Mines (Chromite), M/s IMFA Ltd.  
At/Po-Kaliapani, Dist-Jajpur, Pin-755047, Odisha**

## **PROJECT DETAILS**

Mining lease for Chromite over an area of 73.777 ha in village Kaliapani & Forest Block No. 27, in undivided Sukinda Tahasil of Jajpur district has been granted in favour of M/s Indian Metals & Ferro Alloys Limited (Earlier Indian Charge Chrome Limited now merged with Indian Metals & Ferro Alloys Limited) for a period of 30 years vide Steel and Mines Dept, GoO letter no: 6212, dated: 18.06.2005. Same has been executed on 20.09.2005 for a period of 30 years for exploitation of chromite ore and its captive consumption in own ferro alloys plants at Choudwar of Cuttack district and at Therubali of Rayagada district of Odisha. The opencast mining operations in the area commenced from 16.01.2006. The mine is under continued operation since then by opencast mining under Fully Mechanized category & underground development has been under progress since January' 2009. Production from underground workings started during 2013-14.

The Mining lease area is situated in Sukinda Valley which lies between the Mahagiri hills in village Kaliapani No-15 under Sukinda Tahasil and Forest Block no-27 under Danagadi Tahasil in Jajpur district of Odisha.

According to the Scheme of Mining approved by IBM, Nagpur, the total mineral reserve of chromite ore is 127.80 lakh tonnes and the total mineable reserve of chromite ore is 88.90 lakh tonnes. The annual production estimated from open cast including underground mines during the financial year 2016-2017 is 2.32 lakh tonnes and during the financial year 2019-2020 is 6.00 lakh tonnes.

The mining lease was granted on 20.09.2005 for a period of 30 years, i.e. upto 19.09.2035. The balance period of lease will be 19 years upto 2029. The lease period to be extended up to 2055 (19.09.2055) as per MMDR (D&R) Amendment Act, 2015. Therefore, balance mining lease period will be 39 years.

Reclamation of mined out quarry areas is being done concurrently with mining activities. Afforestation is being carried out in backfilled areas over mined out areas of opencast quarry in a phased manner. Necessary precautions is being taken for good survival rate and protection of plantations.



Mahagiri Chromite Mines of IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kism) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded "**In principle Approval**". In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxv) needs stabilize the overburden dump by appropriate grading/benching, in accordance with the approved scheme. The condition reads as follows.

**Condition No (xxv)(d):**

"Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angle of repose at any given place is less than 28°."

This scheme is prepared with an aim to comply the condition stated above.

**OPENCAST MINING:**

**a) Description on the existing as well as proposed method for excavation with all design parameters.**

**Present mining methods:** At present the mine is fully mechanized mine where both opencast and underground mining has been adopted. In opencast mine the ore and overburden is being extracted by opencast method using HEMM in conjunction with Deep hole drilling and blasting where ever required. Till date the overall slope of the mines is being maintained at less than 30° with, individual bench adequately sloped. The ultimate opencast pit limit is at 185mRL. Backfilling in the mined out areas where the UPL has reached 185mRL is being concurrently done. Leaving a parting of 50 m below 185 mRL (opencast pit limit), underground mining has started. Trackless mining using LHD & LPDT has being adopted at underground mines. Blast hole stoping with filling has been proposed as method of stoping as per Geo - technical study conducted by CIMFR, Dhanbad.

**Design Parameters:**

Top RL of opencast mine: 233mRL

UPL of opencast mine: 185mRL

Bench Height: 6 mtrs

Bench Width: 10 mtrs

Overall Pit Slope angle: 30 degree

**Proposed mining methods:** The present method of opencast mining will continue for the whole opencast life of the mine. There is no change proposed in the method of opencast mining.

**b) Year-wise tentative Excavation in Cubic Meters indicating development, ROM, pit wise.**

**I. In situ Tentative Excavation**

Year	Pit No	Total tentative Excavation (CuM)	Top Soil (CuM)	OB/SB/IB (CuM)	ROM (CuM)		Mineral reject	ROM/ Waste Ratio (Tonne/ CuM)
					Ore Ratio (CuM)	Mineral reject (CuM)		
1	2	3	4	5	6	7	8	9
2015-16	1	133584	Nil	118000	15584	Nil	Nil	0.51
2016-17	1	119312	Nil	111000	8312	Nil	Nil	0.29
2017-18	1	67007	Nil	61000	6007	Nil	Nil	0.38
2018-19	1	Nil	Nil	Nil	Nil	Nil	Nil	NA
2019-20	1	Nil	Nil	Nil	Nil	Nil	Nil	NA

**II. Dump rehandling (for the purpose of recovery of mineral):**

As the existing dump consists of waste overburden material, so there is no proposal for dump re handling for the purpose of recovery of mineral.

However, overburden from the dump yard shall be utilized for filling of underground voids after being suitably mixed with cement as per study report of CIMFR.

Individual year wise development plans and sections showing pit layouts, dumps, is shown in plate nos: 1 .



**Abstract of Opencast Working**

<b>Products</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>
OB (CuM)	118000	111000	61000
Usable grade ore (tonnes)	60000	32000	23129
OB (CuM) / Ore (t)	1.96	3.46	2.63

**Brief description of the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste.**

The opencast working extends in east & west direction along the strike of the ore body. The pit road is having a gradient of maximum 1 in 16. The overburden being excavated is utilised for back filling the mined out areas where the ultimate pit limit has reached 185mRL. There is a waste dump yard towards northern side of the leasehold area.

Size of existing quarry : Length: 594 mtrs, width: 140 mtrs.

Size of dump yard : Length: 505 mtrs, width: 100 mtrs

Leaving a parting of 50 meters from ultimate opencast quarry limit (185mRL), underground working has started from 135 mRL.

**Conceptual Mine planning up to the end of lease period:****Reserves and anticipated life of opencast working:**

The proved mineable reserve under UNFC 111 category as on 01.11.2014 is 129129 tonnes up to 185 mRL. During the period 01.11.2014 to 31.03.2015, it is proposed to exploit 14000 tonnes of ore. So, after 2014-15 the mineable reserve under UNFC 111 category shall be 115129 tonnes. During the scheme period it is proposed to exploit 115129 tonnes of ore from opencast mine during the first three years, i.e. from 2015-16 to 2017-18. Opencast mining has been proposed upto 185 mRL. Beyond this level though opencast mining is feasible, but it will be uneconomical to continue mining operation by opencast method because of the steep rise of the hill towards south of the hangwall, which will require high excavation of overburden in order to go deeper than 185 mRL for recovering ore. The ratio of ore and overburden will increase substantially, thereby making the opencast mining totally uneconomical. Therefore, anticipated life of opencast

working is 3 years, i.e. upto 2017-18. So there shall be no generation of ore & overburden beyond 2017-18 from opencast mines. However, backfilling activities will be carried out in the opencast mined out areas.

#### Ultimate Pit Size & Dump size:

The ultimate size of opencast working and dump yard is mentioned below. However, during the conceptual period the opencast working will be backfilled. The waste from dump yard will be utilized for filling underground mined out stopes after suitably mixed with cement.

	Opencast Working	Dump Yard
Length, mtrs	594 mtrs	505 mtrs
Width, mtrs	140 mtrs	100 mtrs
Top mRL	233 mRL	170 mRL
Bottom mRL	185 mRL	148 mRL
No of Benches/Stages	8 nos	2 nos

#### Waste material management:

By end of conceptual period, it has been calculated to excavate about 3.5 lakh CuM of overburden from opencast and 5.205 Lakh CuM of waste from underground, which shall be utilized for reclamation by back filling of opencast quarry, after reaching the ultimate opencast pit limit (185mRL).

Year	From O/C (in LCuM)	From U/G (in LCuM)	Total
2015-16	1.180	0.245	1.425
2016-17	1.110	0.255	1.365
2017-18	0.610	0.321	0.931
2018-19	0.000	0.272	0.272
2019-20	0.000	0.257	0.257
Conceptual	0.000	3.855*	3.855
<b>Total :</b>	<b>2.900</b>	<b>5.205</b>	<b>8.105</b>

\* During the year 2019-20, there will a production of 6 Lakh tonnes of ROM from underground mine and generation of waste from underground will be approximately 0.257 Lakh CuM. Thereafter, the underground mine will give a production of 6 Lakh tonnes of ROM per annum. Assuming, the level of production from underground to be



constant throughout the remaining life of underground mine, the rate of generation of waste will be approximately 0.257 Lakh CuM per annum. Therefore, total generation of waste from underground from 2020-21 to end of conceptual period (15 years) will be  $0.257 \times 15 = 3.855$  Lakh CuM.

The capacity of the present waste dump in the Northern lease area is to accommodate 10.50 LCuM. As on 01.04.2014 the waste dump is containing 4.15 LCuM, leaving a balance for 6.35 LCuM waste that can be accommodated.

Reclamation of mined out quarry areas shall be done concurrently with mining activities. Generation of overburden from opencast mine shall cease after 2017-18. There shall be generation of waste from underground workings only. This waste shall be utilized for backfilling of the mined out areas of opencast quarry.

Year	Backfilling in O/C Mines (in LCuM)	Dumping at waste dump yard (in LCuM)
2015-16	1.425	Nil
2016-17	1.365	Nil
2017-18	0.931	Nil
2018-19	0.272	Nil
2019-20	0.257	Nil
<b>Total :</b>	<b>4.25</b>	<b>Nil</b>

Afforestation shall be carried out in backfilled areas over mined out areas of opencast quarry in a phased manner. Necessary precautions shall be taken for good survival rate and protection of plantations. Coir matting shall be tried to stabilize the waste dump slopes. Good quality grasses shall be planted on the dump slopes with small growing local trees, shrubs etc. Terraces at a height of 20 m shall be constructed with inward slope for absorption of water avoiding creation of gullies on dump slopes.

**Nature and quantity of top soil, overburden / waste and Mineral Reject to be disposed off:** The area has lateritic soil / laterite / quartzite boulders alongwith ultramafic floats on the top where no working has been commenced within the targeted area for opencast mining. In the opencast mining area where work is in progress ultramafic along with big quartz boulder are encountered those are termed as waste.

No top soil is there any where. Chromite ore less than 10%  $\text{Cr}_2\text{O}_3$  is also termed as waste which usually comes with the ore zone as intermediate waste. The waste ranges in colour from brown, reddish brown, brownish black to black. The texture is sand to sandy loam. Waste from underground working mainly consists of fresh serpentinite & Dolerite.

**Rate of yearly generation of wastes and proposals for disposal of waste for next five years.**

The rate of yearly generation of wastes and over burden to be excavated in the next five years have been calculated and is given below:

	Year	Overburden from Opencast working in CuM	Waste from Underground development working in CuM	Total
Proposed during 2015-16 to 2019-20	First Year (2015-16)	1.180	0.245	1.425
	Second Year (2016-17)	1.110	0.255	1.365
	Third Year (2017-18)	0.610	0.321	0.931
	Fourth Year (2018-19)	0.000	0.272	0.272
	Fifth Year (2019-20)	0.000	0.257	0.257
	<b>Grand Total</b>	<b>2.9</b>	<b>1.350</b>	<b>4.25</b>

The year wise plan for management of overburden/waste is tabulated below:

Year	Backfilling in O/C Mines (in LCuM)	Dumping at waste dump yard (in LCuM)
2015-16	1.425	Nil
2016-17	1.365	Nil
2017-18	0.931	Nil
2018-19	0.272	Nil
2019-20	0.257	Nil
<b>Total :</b>	<b>4.25</b>	<b>Nil</b>

**Designed Capacity, Maximum height and spread of waste dump -**

The capacity of the present waste dump in northern lease area is to accommodate 10.50 LCuM. Till end of 2010-11, about 8.12 LCuM waste has been generated and put on the dump from which about 2.61 LCuM waste has been used in road making & filling of other infrastructure work, 1.39 Lakh CuM has been used for backfilling of quarried out area of



opencast pit and balance 4.12 lakh CuM overburden has been dumped. Waste from underground development during 2009-10 and 2010-11 is about 0.03 LCuM, which also dumped on the same waste dump. Thus as on 01.04.2011 the waste dump is containing 4.15 LCuM, leaving a balance for 6.35 LCuM waste that can be accommodated.

#### Proposals for protective measures.

Plantation shall be done over the waste dump and backfilled area. In a phased manner the dead end slopes of the waste dump/backfilled area shall be reclaimed. Good quality grasses shall be planted on the dump slopes with small growing local trees, shrubs etc. Terraces at a maximum height of 20 m shall be constructed with inward slope for absorption of water avoiding creation of gullies on dump slopes. A number of garland drains, settling pond and retaining walls have been done. Details are as follows:

Garland drain: 3597 mtrs

Settling Pond: 6 nos of settling ponds

Retaining wall: 1110 mtrs

#### Costing of the proposed protective measures:

Sl.No.	DETAILS					
	YEAR	2015-16	2016-17	2017-18	2018-19	2019-20
1	Backfilling, area in ha.	1.05	0.08	0.23	0.11	0.11
2	Afforestation on the backfilled area, area in ha.	0.16	0.1	0.14	0.1	0.1
3	Qty of back filling in Cum	1.43	1.37	0.93	0.27	0.26
4	No of plants to be planted	400	250	350	250	250
5	Expenses in Lakh Rs for back filling	286	274	186	54	52
6	Expenses towards plantation in Lakh Rs	0.8	0.5	0.7	0.5	0.5
7	Total expenses in Lakh Rs	286.80	274.50	186.7	54.5	52.5

Implementing agency : User agency i.e the lessee M/s Indian Metals and Ferro Alloys Ltd.

Forest Range Officer  
Sukinda Range

Asst. Conservator of Forests  
Cuttack Forest Division

For Indian Metals & Ferro Alloys Ltd.

Signature of Project PropONENT.  
(Sanjeev Das)  
Senior Vice President  
Head-Mining Business Unit

Approved by Rs. 8,55,00,000/-  
Crores Eight Hundred Fifty Five (Lakhs) only.

Asst. Conservator of Forests  
Amal Chandra

Divisional Forest Officer  
Cuttack Forest Division

Signature of Project Proponent.



**PLANTATION ON THE BACK FILLED AREAS.**





Plantation along the Overburden dump slope

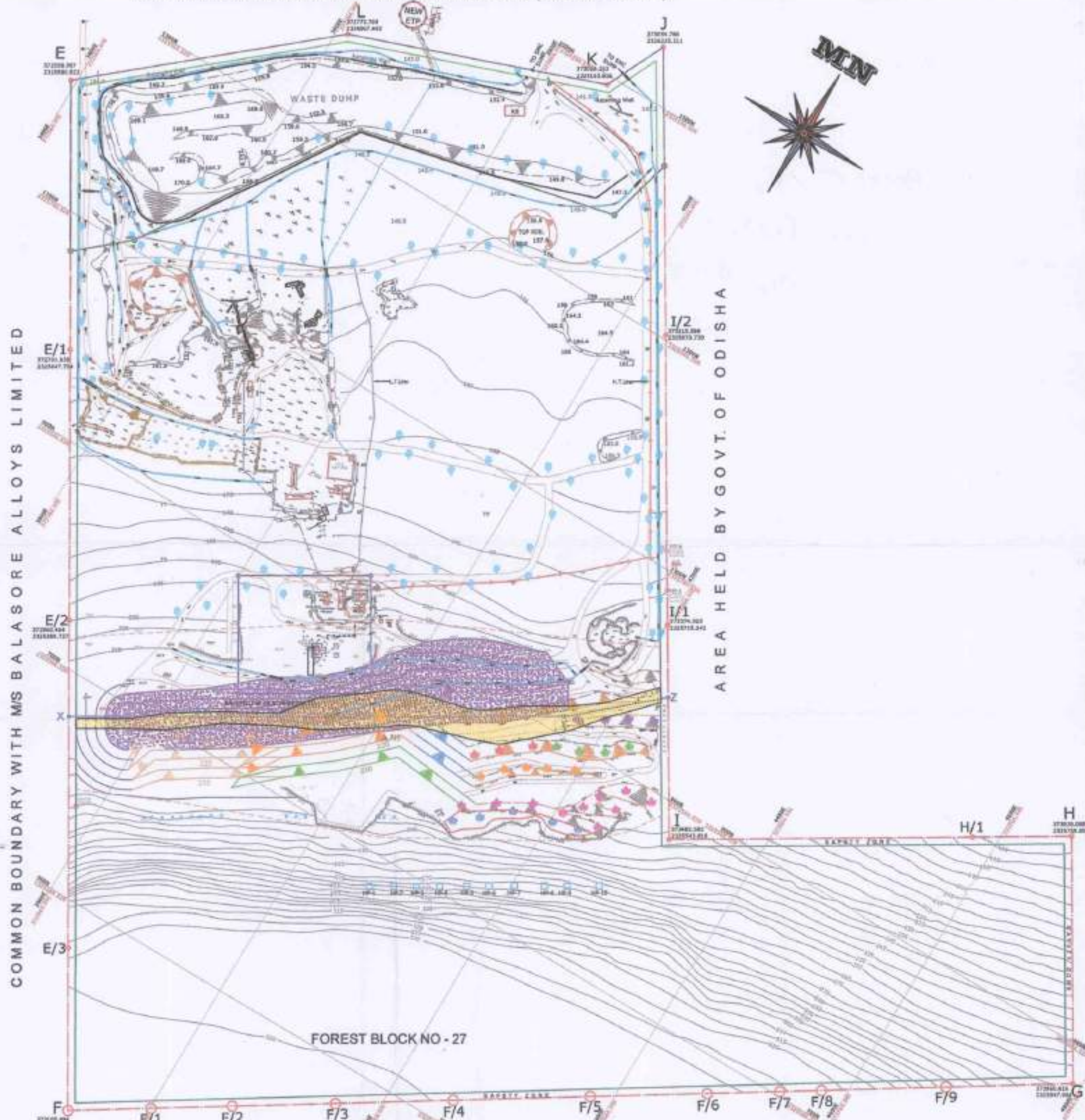
#### **PLANTATION ON THE OLD OVER BURDEN DUMP.**



COMMON BOUNDARY WITH SMC MS IMFA LTD. (FRIABLE ZONE)

COMMON BOUNDARY WITH MS BALASORE ALLOYS LIMITED

AREA HELD BY GOVT. OF ODISHA



FOREST BLOCK NO - 27

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- PLANTATION FOR 2014-15
- PLANTATION FOR 2015-16
- PLANTATION FOR 2016-17
- PLANTATION FOR 2017-18
- PLANTATION FOR 2018-19
- PLANTATION FOR 2019-20
- QUARRY IN SCHEME PERIOD
- CONCEPTUAL LIMIT
- SURFACE RIGHT AREA

YEARWISE BACK FILLING

- BACK FILLING 2015-16
- BACK FILLING 2016-17
- BACK FILLING 2017-18
- BACK FILLING IN CONCEPTUAL PERIOD

Asst. Conservator of Forests  
Cuttack Forest Division

Divisional Forest Officer  
Cuttack Forest Division

M/S INDIAN METALS & FERRO ALLOYS LIMITED  
IMFA BUILDING, DOMICILIAL, BIRUBANSWAR - 10

MAHAGIRI MINES (CHROMITE)  
(OVER AN AREA OF 73.777 Ha.)

PLAN SHOWING THE QUARRY, DUMP & BACK FILLED AREA

DATE OF SURVEY - 31/10/2014

SCALE - 1:4000

CERTIFIED THAT THE PLAN IS CORRECT TO THE BEST OF OUR KNOWLEDGE

Signature of Asst. Conservator of Forests

Signature of Divisional Forest Officer

(Sanjeev Das)  
Senior Vice President  
Head-Mining Business Unit

Signature of Forest Range Officer  
Sukinda Range





IMFA Building  
Bhubaneswar -751010  
Odisha, India

Corporate Identity No.  
L27101OR1941PLC000428

TEL +91 674 3051000  
+91 674 2580100  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A7**

### UNDERTAKING

*We do hereby undertake to state that we would implement and execute the stabilization of overburden dumps by appropriate grading/benching in accordance with the approved scheme, so as to ensure the angle of repose at any given place is less than 20°, under the proper guidance and supervision of the State Forest Department.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**

## Office of the Regional Chief Conservator of Forests, Angul

Memo No. 32 /SF/FC/IMG/27/2014 dated 02.01.16

To

The Divisional Forest Officer  
Cuttack Division.

Subj: Proposal for diversion of balance 7397 ha of Salik kisan forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 73.777 ha by M/s IMFA in Jajpur District, Odisha.

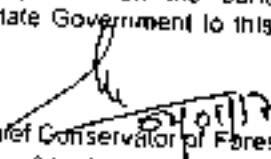
Ref: Your Memo Nos.12515 and 12517 both dated 24.12.2016.

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action

S.No	Condition No	Name of the Scheme	Financial outlay
1	xi(a)	Fencing, protection and regeneration of safety zone area.	Rs 29,150/-
2	xi(b)	Afforestation on degraded forest land over one and half line safety zone.	Rs 1,73,145/-
3	xxv(c)	Construction of check dam, retention/ toe walls to arrest sliding down of the excavated material along the contour	Rs 1,20,000/-
4	xxv(d)	Stabilise the over burden dumps by appropriate grading /benching	Rs.8,55,00,000/-
5	xxv(e)	Top soil management	-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

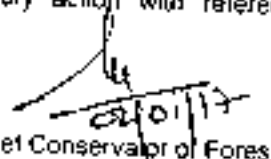
Encl: As above.

  
Regional Chief Conservator of Forests  
Angul

Memo No. 33 /dated 02.01.17

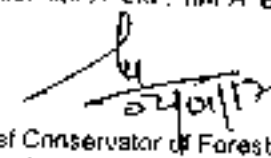
Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No 21245/9F(MG)360/2016 dated 15.11.2016.

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 34 /dated 02.01.17

Copy forwarded to the Vice-President, M/s. IMFA Ltd., IMFA Building, Bomikhat Rasulgari, Bhubaneswar for information.

  
Regional Chief Conservator of Forests  
Angul



**Plan for top soil management  
in respect of  
Mahagiri Mines (Chromite), M/s IMFA Ltd,**



**Mahagiri Mines (Chromite), M/s IMFA Ltd.  
At/Po-Kaliapani, Dist-Jajpur, Pin-755047, Odisha**

## **PROJECT DETAILS**

Mining lease for Chromite over an area of 73.777 ha in village Kaliapani & Forest Block No. 27, in undivided Sukinda Tahasil of Jajpur district has been granted in favour of M/s Indian Metals & Ferro Alloys Limited (Earlier Indian Charge Chrome Limited now merged with Indian Metals & Ferro Alloys Limited) for a period of 30 years vide Steel and Mines Dept, GoO letter no: 6212, dated: 18.06.2005. Same has been executed on 20.09.2005 for a period of 30 years for exploitation of chromite ore and its captive consumption in own ferro alloys plants at Choudwar of Cuttack district and at Therubali of Rayagada district of Odisha. The opencast mining operations in the area commenced from 16.01.2006. The mine is under continued operation since then by opencast mining under Fully Mechanized category & underground development has been under progress since January' 2009. Production from underground workings started during 2013-14.

The Mining lease area is situated in Sukinda Valley which lies between the Mahagiri hills in village Kaliapani No-15 under Sukinda Tahasil and Forest Block no-27 under Danagadi Tahasil in Jajpur district of Odisha.

Mahagiri Chromite Mines of IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kisam) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded "In principle Approval". In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxv) (e) needs no damage shall be caused to the top soil and the user agency will follow the top soil management plan.

The condition reads as follows.

Condition No (xxv) (e): needs no damage shall be caused to the top soil and the user agency will follow the top soil management plan.

This scheme is prepared with an aim to comply the condition stated above.



**PRESENT STATUS :**

**OPENCAST MINING:**

**Description on the existing as well as proposed method for excavation with all design parameters.**

**Present mining methods:** At present the mine is fully mechanized mine where both opencast and underground mining has been adopted. In opencast mine the ore and overburden is being extracted by opencast method using HEMM. Till date the overall slope of the mines is being maintained at less than 30° with, individual bench adequately sloped. The ultimate opencast pit limit is at 185mRL. Backfilling in the mined out areas where the UPL has reached 185mRL is being concurrently done. Leaving a parting of 50 m below 185 mRL (opencast pit limit), underground mining has started. Trackless mining using LHD & LPDT has being adopted at underground mines. Blast hole stoping with filling has been proposed as method of stoping as per Geo - technical study conducted by CIMFR, Dhanbad.

**Design Parameters opencast mine:**

Top RL of opencast mine: 233mRL

UPL of opencast mine: 185mRL

Bench Height: 6 mtrs

Bench Width: 10 mtrs

Overall Pit Slope angle: 30 degree

**Proposed mining methods:** The present method of opencast mining will continue for the whole opencast life of the mine. There is no change proposed in the method of opencast mining. The opencast mines will be ceased by 2017-18 as it reaches its design ultimate pit limit.

**Nature and quantity of top soil, overburden / waste to be generated :** The waste materials, which are being generated in the working quarry mainly comprises of weathered Serpentinite, Limonitic material, Nickeliferous Limonite & lateritic soil. **Top soil is not present in the quarry area. Hence there is no generation of topsoil from this mine.**


Year	Top Soil (CuM)	
	Generation	Storage
2016-17	Nil	Nil
2017-18	Nil	Nil
2018-19	Nil	Nil

Surface plan of the Mining Lease area showing the total land occupation by different purposes is attached as Plate 1.

Hence no activities prescribed in this scheme.

  
Forest Range Officer  
Sukinda Range

  
Asst. Conservator of Forests  
Cuttack Forest Division

For Indian Metals & Ferro-Alloys Ltd.  
  
Signature of Project Proponent.  
( Sanjeev Das )  
Senior Vice President  
Head-Mining Business Unit

  
Divisional Forest Officer,  
Cuttack Forest Division

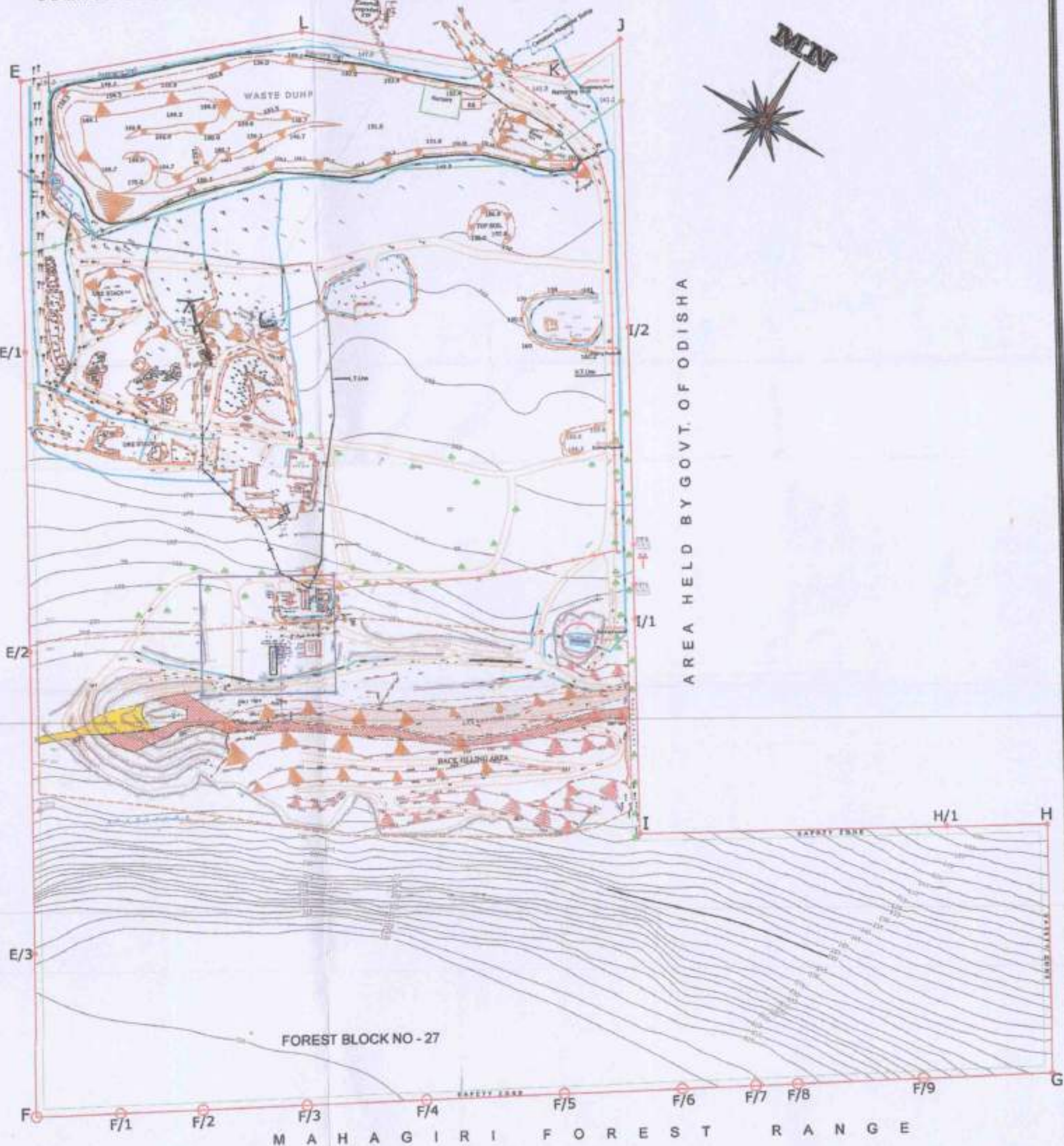


COMMON BOUNDARY WITH SMC MS IMFA LTD. (FRIABLE ZONE)



COMMON BOUNDARY WITH MS BALASORE ALLOYS LIMITED

AREA HELD BY GOVT. OF ODISHA



INDEX

- |                  |   |
|------------------|---|
| M.L. BOUNDARY    | SAFETY ZONE                             |
| CO-ORDINATE LINE | FOREST BOUNDARY                         |
| QUARRY           | GARLAND DRAIN WITH WATER FLOW DIRECTION |
| DUMP             | PIPE LINE                               |
| CONTOUR          | BUILDING                                |
| ORE BODY         | SETTLING POND                           |
| HAUL ROAD        | CHECK DAM                               |
| BACK FILLED AREA | WEATHERED SERPENTINE                    |
| TREE             |   |

For Ind. 311 Metals & Ferro Alloys Ltd.

Asst. Conservator of Forests  
Cuttack Forest Division

(Sanjeev Das)  
Senior Vice President  
Head-Mining Business Unit

M/S INDIAN METALS & FERRO ALLOYS LIMITED	
IMFA BUILDING, DOMERHALL, BHUBANESWAR - 75	
MAHAGIRI MINES (CHROMITE)	
(COVER AN AREA OF 73.77 Ha.)	
SURFACE PLAN	
DATE OF SURVEY - 30/11/2016	SCALE - 1:4000
THE PLAN IS PREPARED AS PER IND-101 & MCR - 100	
CERTIFIED THAT THE PLAN IS CORRECT TO THE BEST OF OUR KNOWLEDGE	
SURVEYOR	ENGINEER

Forest Range Officer  
Sukinda Range

Divisional Forest Officer  
Cuttack Forest Division



COLLECTORATE : JAIPUR

Ph. 06728-222001 (O), 222330 (R). FAX - 222087  
E-mail: [dm-jaipur@nic.in](mailto:dm-jaipur@nic.in), web site: [www.jaipur.nic.in](http://www.jaipur.nic.in)  
(ST & SC DEV. SECTION)

No. \_\_\_\_\_/Date. \_\_\_\_\_

To

The Divisional Forest Officer,  
Cuttack Forest Division, Chatakul,  
Nuapara, Cuttack.

Sub:- Issuance to certificate under Forest Rights Act, 2006 in  
connection with Mahagiri Chromite Mines of IMFA.

Ref:- Letter Dt. 05.06.2015 of Vice President, Head-Corporate  
Affairs & Legal, IMFA.

Sir,

In inviting a reference to the letter on the captioned subject  
cited above, I am directed to enclose herewith the model certificate  
[7.397 hectares] in Form-II for projects other than Inner projects under  
Forest Rights Act, 2006 in favour of M/s. IMFA Ltd. for Mahagiri  
Chromite Mines for taking further action at your end.

Yours faithfully,

Encl:- As above

  
District Welfare Officer,  
Jaipur

Memo No. 362 / Date. 26/2/16

Copy forwarded to the Vice President, Head-Corporate  
Affairs & Legal, IMFA Building, Bhubaneswar, 751010 for information  
and necessary action.

  
District Welfare Officer,  
Jaipur



**FORM-II**  
*(for projects other than linear projects)*  
Government of Odisha  
Office of the District Collector, Jajpur

No. ....358.....

Date. ....25.02.16.....

**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.) dated 3<sup>rd</sup> August 2009 wherein the MoEF issued guidelines on submission of evidence for having initiated and completed the process of settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition Forest Rights) Act, 2006 ('FRA' for short) on the forest land proposed to be diverted for non-forest purposes, it is certified that 7,397 hectares of forest land proposed to be diverted in favour of M/s. IMFA Ltd. for Mahagiri Chromite Mines in Jajpur district falls within jurisdiction of Kaliapani village in Sukinda tahsil.

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 7,397 hectares of forest land proposed for diversion. A copy of records of all consultation and meetings of Forest Rights Committee, Gram Sabha (s), Sub-Division Level Committee and the District Level Committee are enclosed as Annexure-A to Annexure-C.

(b) the proposal for such diversion (with full details of the project and its implementations, in vernacular/local language) have been placed before each concerned Gram Sabha of forest-dwellers, who are eligible under FRA;

(c) the each of concerned Gram Sabhas, has certified that all formalities/processes under the FRA have been carried out, and that they have given their consent to the proposed diversion and the compensation and ameliorative measures, if any, having understood the purpose and details of proposed diversion. A copy of the

certificate issued by the Gram Sabha of Kaliapani village is enclosed (as mentioned above).

(d) the discussion and decisions on such proposals had taken place only when there was a quorum of minimum 50% of the members of the Gram Sabha present;

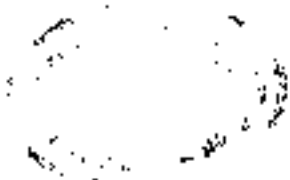
(e) the diversion of forest land for facilities managed by the Government as required under section 3 (2) of the FRA have been completed and the Gram Sabhas have given their consent to it;

(f) the rights of Primitive Tribal Groups and Pre-Agricultural Communities, where applicable have been specifically safeguarded as per Section 3 (1) (e) of the FRA.

Encl: As above

  
(Satya Kumar Mallick)  
Collector & District Magistrate,  
Jajpur



  
 ಕರ್ನಾಟಕ ಸರ್ಕಾರ  
 ಗ್ರಾಮಪಂಚಾಯತ್ ಕಾನೂನು

ಗ್ರಾಮ ಪಂಚಾಯತ್ :- ಕಾನೂನು  
 ಗ್ರಾಮಪಂಚಾಯತ್ :- ಕಾನೂನು  
 ಲೇಖನ : ೦೭. ೧೦. ೨೦೨೩  
 (ಕಾನೂನು)  
 ಷರತ್ತು :- ಮೊತ್ತ ೬. ೦೦. ೦೦

ಇದರ ೬. ೦೭. ೧೦. ೨೦೨೩ ರೀತಿ, ಕಾನೂನು ಮೊತ್ತ  
 ೬. ೦೦. ೦೦ ರೀತಿ ಗ್ರಾಮಪಂಚಾಯತ್ ಕಾನೂನು  
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7/10/15

7-10-20  
Forester  
Bureau of Section

John J. Murphy  
# 1075  
29100  
-2000 10000  
10000 10000

Kalpana Jena  
 ୧୨/୦୫/୧୫  
 ୧୨/୦୫/୧୫  
 Kalpana G.P.

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ආදර්ශයක් ලෙස  
Act as Mohanta Buchanchoo Intestacy

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 Bishnu Barua  
 Notary Bahadur,  
 Mahisa Barua  
 Sonoma, Mahisabari

Alalay Karjor. Kan  
3 = Mangar-Höle (E)

Se. Williams' Pink  
Se. G. M. - Scott's Emulsion

01-02/01/2018

# ଉତ୍କଳ ସାମାଜିକ କର୍ମୀଙ୍କ ତାଲିକା

P - Manoj Kumar Dasgupta

Q - ବିନୟ କୁମାର

R - Anil Kumar - Khandrao

S - ବିନୟ କୁମାର

T - Reena Munshi

U - ବିନୟ କୁମାର

V - Subhash Patra

W - ମନୋଜ କୁମାର

X - Santosh Kumar

PO - Shikha Limdasari

PP - ବିନୟ କୁମାର

PQ - ବିନୟ କୁମାର

PR - ବିନୟ କୁମାର

PS - ବିନୟ କୁମାର

PT - ବିନୟ କୁମାର

PQ - ବିନୟ କୁମାର

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PS - ବିନୟ କୁମାର

PT - ବିନୟ କୁମାର

Signature



- ୨୧ - <sup>L.T.P.</sup> ଡାକିନି - ଡେଭାଲ୍
- ୨୨ - ଡାକିନି - ହାତ
- ୨୩ - ଡାକିନି - ଡେଭାଲ୍
- ୨୪ - ଡାକିନି - ଡେଭାଲ୍
- ୨୫ - ଡାକିନି - ହାତ
- ୨୬ - <sup>L.T.P.</sup> ଡାକିନି - ଡେଭାଲ୍
- ୨୭ - <sup>L.T.P.</sup> ଡାକିନି - ଡେଭାଲ୍
- ୨୮ - <sup>L.T.P.</sup> ଡାକିନି - ଡେଭାଲ୍
- ୨୯ - <sup>L.T.P.</sup> ଡାକିନି - ଡେଭାଲ୍

୩୦ - Meena Mahakul

୩୧ - ଡାକିନି ଡେଭାଲ୍

୩୨ - ଡାକିନି ମହାକୁଳ

୩୩ - ଡାକିନି ମହାକୁଳ

୩୪ - ଡାକିନି ମହାକୁଳ

୩୫ - ଡାକିନି ମହାକୁଳ

୩୬ - ଡାକିନି ମହାକୁଳ

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୩୮ - ଡାକିନି ମହାକୁଳ

୩୯ - ଡାକିନି ମହାକୁଳ

୪୦ - ଡାକିନି ମହାକୁଳ

୪୧ - ଡାକିନି ମହାକୁଳ

୪୨ - ଡାକିନି ମହାକୁଳ

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43 - Dhanu Hanada

44 - ଶାନ୍ତ ଚନ୍ଦ୍ରମା

45 - ଶ୍ରୀ ଚନ୍ଦ୍ରମା

46 - ବାସନ୍ତୀ ପାଣି

47 - ମାଝି କଣା

48 - ପାର୍ବତ୍ୟ ବାଘେ

49 - ଶାନ୍ତ ଚନ୍ଦ୍ର

50 - Sambani Hanada

51 - ସନ୍ତୋଷୀ ପଦା

52 - ମାଳତୀ ପ୍ରାଣୀ

53 - Sambani Hanada

54 - ମାଳତୀ ମହା

55 - ପ୍ରାଣୀ ପଦା

56 - ମାଳତୀ ପ୍ରାଣୀ

57 - ମାଳତୀ ପ୍ରାଣୀ

58 - ମାଳତୀ ପ୍ରାଣୀ

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60 - ମାଳତୀ ପ୍ରାଣୀ

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62 - ମାଳତୀ ପ୍ରାଣୀ

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64 - ମାଳତୀ ପ୍ରାଣୀ

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#2013

65 - ନିଆଁ ମାଣ୍ଡା ବୁଝା

66 - ପ୍ରାଣୀଙ୍କୁ ଚାହିଁ

67 - ଉଲ୍ଲାସ ଚାହିଁ

68 - ଆକାଶର ସାମାନ୍ତ

69 - ଶକ୍ତିଶାଳୀ ଚାହିଁ

70 - Anjali Pradham

71 - Anantana Devi

72 - ବାହନ ସିନ୍ଧୁ

73 - ସରସ୍ୱତୀ ରାଜ

74 - ପ୍ରତିଷ୍ଠାପତି

L.T.F.T

75 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

76 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

L.T.F.T

77 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

78 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

L.T.F.T

79 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

80 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

81 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

82 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

83 - Anantana Tanti

84 - Anantana Tanti

L.T.F.T

85 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

86 - Kajal Nayak

87 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

88 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

89 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

90 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

91 - ପ୍ରାଣୀଙ୍କୁ ସାମାନ୍ତ

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1975



- 91 - ଚାପାମା - ଚନ୍ଦ୍ରମୁଖ  
 92 - ସାମୁଏଲ - ବିରା  
 93 - [redacted] ଡାକିଲି - ଚନ୍ଦ୍ରମୁଖ  
 94 - [redacted] ଚନ୍ଦ୍ରମୁଖ  
 95 - — ଡାକିଲି ମହାନ୍ତି  
 96 - — ଚନ୍ଦ୍ରମୁଖ  
 97 - — ବିରା ଚନ୍ଦ୍ରମୁଖ  
 98 - ଗାନ୍ଧୀ - ପାମ  
 99 - [redacted] ଡାକିଲି - ଚନ୍ଦ୍ରମୁଖ  
 100 - [redacted] ଡାକିଲି - ଚନ୍ଦ୍ରମୁଖ  
 101 - — ଚନ୍ଦ୍ରମୁଖ  
 102 - ଚନ୍ଦ୍ରମୁଖ  
 103 - ଚନ୍ଦ୍ରମୁଖ  
 104 - ଚନ୍ଦ୍ରମୁଖ  
 105 - ଚନ୍ଦ୍ରମୁଖ

106. Balhnan Pordhan  
 107. Pitabash Dehury  
 108. Hail ohar mehanen  
 109. Dushan Kumar Sera  
 110. Ashok Pordhan  
 111. Narayan Mahadur  
 112. Akhaya Kumar Mohan  
 113. Sakin Hareb  
 114. Lajaya Kumar Kar  
 115. Dapthaba Dehury  
 116. Ranjit Sahoo  
 117. Uma Sahu  
 118. Ganesh Tandi  
 119. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 120. କାଳୀକାନ୍ତ  
 121. Sadoughano Sera  
 122. Kabil Lachan Praman  
 123. Debendra Mahanta  
 124. Basanta Dehury  
 125. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 126. Deben Purty  
 127. Manas Dehury  
 128. Jyoti Pradhan  
 129. Sukadev Dehury  
 130. Kmal Hembram  
 131. Biswanath Nayak  
 132. Babul Das  
 133. Raju Hemraj - B. Nagar  
 134. Lita Prata Mahadur - B. Nagar  
 135. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ - B. Nagar  
 136. Manoj K. Mahanti, B. Nagar  
 137. Mangul Ho - B. Nagar  
 138. Ananda Chandra Pasah - B. Nagar  
 139. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ - B. Nagar  
 140. କାଳୀକାନ୍ତ  
 141. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ D. Nagar  
 142. Kanan, Tudu B. Nagar  
 143. Saroj Dehury B. Nagar  
 144. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 145. Mahesh Mahanta  
 146. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 147. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 148. Babulal Dehury  
 149. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ  
 150. Singhu Tudu  
 151. Saba Mahanta  
 152. Ratna Ho - B. Nagar  
 153. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

Tirumala  
 10/10/25

154. Subendu Banta  
 155. Surendra Mahanta  
 156. Nityananda Mahanta  
 157. Rakesh Lal Mahanta  
 158. Ananta Das  
 159. Ramu Tiya  
 160. Ramachand Mahanta  
 161. Durga Chandra

174. [Illegible]  
 175. [Redacted] x Durga Pradhan  
 176. Pandab Mahanta  
 177. Ramesh Ch Mahanta  
 178. Anur Dhar  
 179. Subram Tiya  
 180. Sampay Dehury

162. Harinar Mahanta  
 163. [Illegible]  
 164. [Illegible]  
 165. [Illegible]  
 166. [Illegible]  
 167. [Illegible]  
 168. [Illegible]  
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 170. Jakesis Ken Kanta

181. [Illegible]  
 182. Sukanta Das  
 183. [Illegible]  
 184. [Illegible]  
 185. Maheswar Pradhan  
 186. [Illegible]  
 187. [Illegible]  
 188. [Illegible]  
 189. [Illegible]

171. Manu Gopinath  
 172. Ragon Pradhan  
 173. [Illegible]

190. [Illegible]  
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 193. [Illegible]  
 194. [Illegible]  
 195. [Illegible]

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196. Motilal Upadhyay

197. Babul Debbari

198. Bijay Kumar

199. Sushanta Ojha

200. Aita Debbari

201. Ranesh Chandra Bishy

202. Chandra Bishy

203. Sushanta

204. Sushanta

205. Sushanta

206. Sushanta

207. Sushanta

208. Risha Mukherjee

209. Chandra Mukherjee

210. Sushanta

211. Sushanta

212. Sushanta

213. Ganesh Haritaga

214. Sushanta

215. Deban from Hembram

216. Ram Singh Choudhary

217. Bhanu Chandra Ray

218. Sushanta

219. Sushanta

220. Sushanta

221. Suban Maithi

222. Ranjan K. Bhowmik

223. Ranjan K. Bhowmik

224. Suban K. Bhowmik



Tinla Mandy  
1975

225. Barali dhin  
 226. Surendra Han hary  
 227. Gopaswar Mahanta  
 228. Haldar Nandananda  
 229.  $\text{ନିଉଁ ଶ୍ରୀମତୀ}$   
 230. Shikhan Tra  
 231. KAMA  
 232. Karthik Mahanta  
 233. Satoughan Mahanta  
 234.  $\text{ସୁଧାଂଶୁ ରାୟ}$   
 235.  $\text{ବିନୟନ ବିନୟ}$   
 236.  $\text{ସୁଧାଂଶୁ ବିନୟ}$   
 237. Rarist Mahanta  
 238. Mita Munda  
 239. Ranjan Karua  
 240. Bhagaban He n-brown  
 241. Barali Mahanta  
 242. Sri dhar Patra  
 243. Mani Raa, Pothary  
 244.  $\text{ସୁଧାଂଶୁ ରାୟ}$   
 245. Bizoynumar monaria  
 246. Prasanta Mahanta  
 247. R. J. R. C. Chandra -

248. Betti Duv Kumbary  
 249. Sanjay Karua  
 250. Sanaitan Chaithey  
 251. Sayar Pandey  
 252. Raju Kumar. Mahanta.  
 253. Biju Mahanta.  
 254. M. Munda  
 255. Ramakanta Patra

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|------------------------------|----------------------------|
| 256. Baluka Hanhaga          | 277. Kaurak Mohan          |
| 257. Jais Singh prady        | 278. Dr. S. S. Dhanu Ratan |
| 258. Basappa 14. G. H. S. S. | 279. N. K. S. S.           |
| 259. Rabin Chak              | 280. R. S. S. S.           |
| 260. A. S. S. S.             | 281. S. S. S. S.           |
| 261. S. S. S. S.             | 282. S. S. S. S.           |
| 262. D. S. S. S.             | 283. S. S. S. S.           |
| 263. R. S. S. S.             | 284. S. S. S. S.           |
| 264. L. S. S. S.             | 285. S. S. S. S.           |
| 265. M. S. S. S.             | 286. S. S. S. S.           |
| 266. R. S. S. S.             | 287. S. S. S. S.           |
| 267. S. S. S. S.             | 288. S. S. S. S.           |
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| 279. S. S. S. S.             | 300. S. S. S. S.           |
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| 354. S. S. S. S.             | 375. S. S. S. S.           |
| 355. S. S. S. S.             | 376. S                     |



- 302 - Arun Dehury
- 303 - श्री श्री लक्ष्मी
- 304 - Binod Dehury
- 305 - Kailashpradhan
- 306 - Bant Bahari
- 307 -  L.I.I.P. Dutta
- 308 -  Dutta
- 309 - Birendra Kumar
- 310 - Anand Kumar
- 311 - Subanta Kumar
- 312 - श्री श्री 108
- 313 - Madan pradhan
- 314 - Binod Madanta Khatun (Khatun)
- 315 - Gobinda Ch. Mohanta (Khatun)
- 316 - Anand Kumar Satia
- 317 - Birendra Kumar
- 318 - श्री श्री 108
- 319 - PINTO 108
- 320 - Sonu Kumar Mohanta
- 321 - श्री श्री 108
- 322 - Hiralal Mohanta
- 323 - Rakesh Chandra
- 324 - Anand Kumar
- 325 - श्री श्री 108
- 326 - Anand Kumar Mohanta
- 327 - Mahanta Prady

Jintha Munda

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Ashis Kumar Mahanty - 328

Avinash Mahanty - 329

Kantika Mahanty - 330

Sachin Mahanty - 331

Pratik Mahanty - 332

Ghanashyam Barik - 333

Santosh Barik - 334

Subrat Barik - 335

Swaraj Barik - 336

Rita Barik - 337

Pratik Barik - 338

Balaram Behera - 339

Pratik Behera - 340

Pratik Behera - 341

Pratik Behera - 342

Pratik Behera - 343

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2. 73 of photo impure - 746

1998 pambali gradicara - 797

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Maths party - 720

Penegoffen Michaela - 751

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79 of Taramangiraja - 754

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2.19 of Kanda Party - 7.5%

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Swarnajit Singh - 815

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- 817

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275 of Sara Dehura - 819

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୫୭୫. Anthony Kerketa

୫୭୬. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

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୫୮୧. Megharaj Majhi

୫୮୨. Bile Bera

୫୮୩. Suman Malwade

୫୮୪. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

୫୮୫. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

୫୮୬. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

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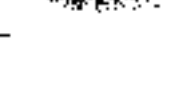

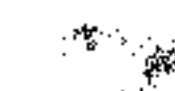


Tirumangal  
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- ୫୧୨ - ଶ୍ରୀମତୀ ଚନ୍ଦ୍ର  
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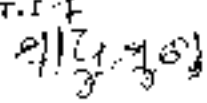


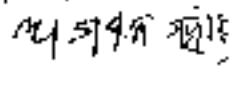

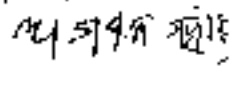
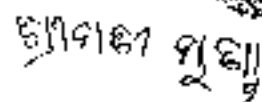

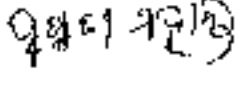

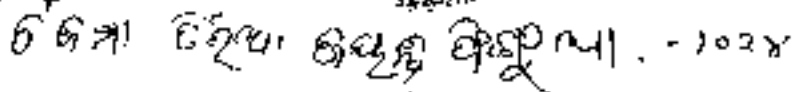



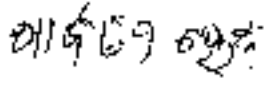

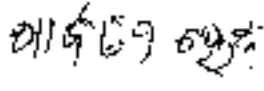

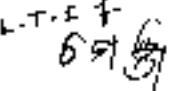
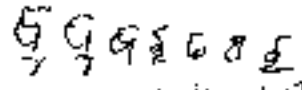
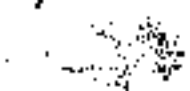
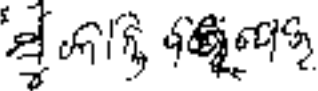

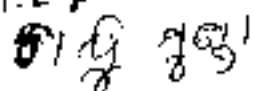
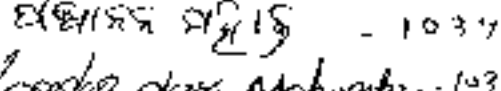
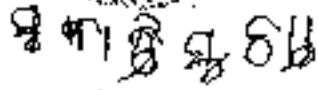
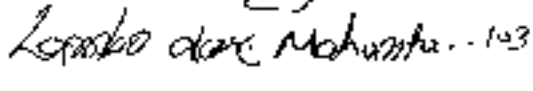

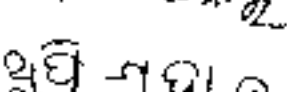
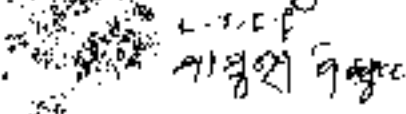
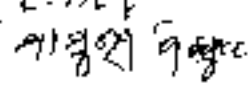
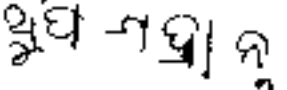
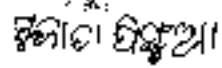
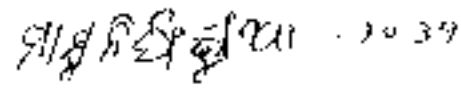
ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୩୬  
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 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୩୮  
 ମୂଳମୂଳ ମହାନ୍ତି - ୭୩୯  
 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୪୦  
 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୪୧  
 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୪୨  
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 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୪୪  
 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୪୫  
 Samil Chatur - ୭୪୬  
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 ମୁକ୍ତମଣି ମହାନ୍ତି - ୭୬୧

୭୫୮. Md. Abdul Husen  
 ୭୫୯. SK. Mustak  
 ୭୬୦. Sukhdev Khar  
 ୭୬୧. ସୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୬୨. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୬୩. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୬୪. Sunder Mumar  
 ୭୬୫. Lili Mani Besra  
 ୭୬୬. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୬୭. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୬୮. Prampdar Sani Besra  
 ୭୬୯. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୦. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୧. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୨. Santosh Kumar  
 ୭୭୩. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୪. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୫. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୬. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୭. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୮. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୭୯. ମୁକ୍ତମଣି ମହାନ୍ତି  
 ୭୮୦. ମୁକ୍ତମଣି ମହାନ୍ତି



- ୭୪୧ -  L.T. ୧୫୫ ମାମୁଁ ଚାଟାଉ *Manas Chatter* - ୭୭୪
- ୭୪୨ - *Manas Chatter*, ଯୁଗଳ ମହାନ୍ତି - ୭୭୫
- ୭୪୩ - ଯଶୋବତୀ ଷ୍ଟାଲ୍ ଶ୍ରୀମତୀ ମହାନ୍ତି - ୭୭୬
- ୭୪୪ -  L.T. ୧୫୫ ନିଶାମ୍ବର ମହାନ୍ତି *ସୁଧାଂଶୁ* - ୭୭୭
- ୭୪୫ -  L.T. ୧୫୫ ମାମୁଁ ଚାଟାଉ ଚିନ୍ମୟା ଚଟ୍ଟୋପାଧ୍ୟାୟ - ୭୭୮
- ୭୪୬ - ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ କବିତା ଚଟ୍ଟୋପାଧ୍ୟାୟ - ୧୦୦୦
- ୭୪୭ - X ନିଶାମ୍ବର ଚଟ୍ଟୋପାଧ୍ୟାୟ ୧୦୦୧ -  L.T. ୧୫୫ ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ
- ୭୪୮ - *Senender Patel* ୧୦୦୨ -  ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ
- ୭୪୯ -  L.T. ୧୫୫ ନିଶାମ୍ବର ମହାନ୍ତି *ନିଶାମ୍ବର* - ୧୦୦୩
- ୭୫୦ -  L.T. ୧୫୫ ନିଶାମ୍ବର ମହାନ୍ତି  L.T. ୧୫୫ ଶ୍ରୀମତୀ ମହାନ୍ତି - ୧୦୦୪
- ୭୫୧ - ଶ୍ରୀମତୀ ମହାନ୍ତି *ନିଶାମ୍ବର* - ୧୦୦୫
- ୭୫୨ - ଶ୍ରୀମତୀ ମହାନ୍ତି *ନିଶାମ୍ବର* - ୧୦୦୬
- ୭୫୩ - *Rajesh Kumar*  L.T. ୧୫୫ ଶ୍ରୀମତୀ ମହାନ୍ତି - ୧୦୦୭

*Trinamunda*  
୨୫/୧୨

- 1008 - Krishna chandni Sahoo 1024. Arunjo kabo Mahanta
- 1009 -  L.T.E.F.  Binora Mahanta - 1025
- 1010 -  L.T.E.F.  L.T.E.F.  1026 -  L.T.E.F. 
- 1011 -  1027 -  L.T.E.F. 
- 1012 - Bhina party 1028 -  L.T.E.F.  - 1028
- 1013 -  L.T.E.F.  L.T.E.F.  L.T.E.F.  1029 -  L.T.E.F. 
- 1014 -  L.T.E.F.  1030 - Susanti Karan
- 1015 - MANA PARTY 1031 - Kausalya Mahanta
- 1016 -  1032 - Ramala Teria - 1032
- 1017 -  L.T.E.F.  1033 - Sunil Ku Mahanta - 1033
- 1018 -  L.T.E.F.  1034 -  - 1034
- 1019 -  1035 -  - 1035
- 1020 -  1036 - Man mahant pinara
- 1021 -  1037 -  L.T.E.F. 
- 1022 -  1038 -  1039 - 
- 1023 - Saraswati Karan 1040 - Samuel Brown - 1040

Tim Jamarah  
10/10/15

1041 - Ashi Manu + ante

1042 - Ashi Manu + ante

1043 - Bipin Singh

1044 - Sanil Singh

1045 - Ashi Manu + ante

1046 - Ashi Manu + ante

1047 - Ashi Manu + ante

1048 - Ashi Manu + ante

1049 - Ashi Manu + ante

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Tirumala

7.10.15

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1070 - Kahi rayi Pivethan

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1141 - Bikram Mohanta

1142 - Babula Bera

1143 - ~~the~~ ନିଶିନିବେଶୀ

1144 - ନିଶିନିବେଶୀ ମାଧବୀ

1145 - Upendra Mohanta

1146 - ଚନ୍ଦ୍ରମତୀ ଚନ୍ଦ୍ର

1147 - ଅନନ୍ତ ଚନ୍ଦ୍ର

1148 - Bitu Singh

1149 - ଗୁମ୍ଫା ଚନ୍ଦ୍ର

1150 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1151 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1152 - ଚନ୍ଦ୍ରଚନ୍ଦ୍ର ଚନ୍ଦ୍ର

1153 - Rakesh Kumar

1154 - Bijay Kumar

1155 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1156 - Anthony Kerketa

1157 - ନିଶିନିବେଶୀ

1158 - Pradeep Soren

1159 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1160 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1161 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1162 - Megharaj Majhi

1163 - Balu Behera

1164 - Suman Sahoo

1165 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1166 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1167 - ନିଶିନିବେଶୀ ଚନ୍ଦ୍ର

1168 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

1169 - ଶ୍ରୀ ମାଧବୀ ଚନ୍ଦ୍ର

Pirindamoh

7/10/15

11/10/15





- 1223 - *Manjima Sonam* - 1223  
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- 1268 Raghunath Thakur
- 1269 - Kishan Mohan
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- 1292 - Satish Mahanta
- 1293 - Subash Mahanta
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- 1295 - Raghun Thakur
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Surendra Lal Sahoo,	- 1327
ଅମଳେନ୍ଦ୍ର ମିଶ୍ର	- 1328
ଦୀର୍ଘାୟ ଗାୟକ	- 1329
ସୁଶିଳା ଦାଶ	- 1330
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Madhava pr. maha.	- 1332
Anil Mohanta.	- 1333
ଆଦିତ୍ୟ ପ୍ରମୋଦ	- 1334
Abhaya Kumar Rout.	- 1335
Puspajali Patra.	- 1336
ଗୀତା ଶର୍ମା	- 1337
Rabuli Kumar Sahu.	- 1338
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 1723 [redacted] L.T.L.T.  
 1724 [redacted] L.T.L.T.  
 1725 [redacted] L.T.L.T.  
 1726 [redacted] L.T.L.T.  
 1727 [redacted] L.T.L.T.  
 1728 [redacted] L.T.L.T.

Trinika munda  
 1729 [redacted] L.T.L.T.

1729 - Santosh Dehury

1744 - Pradip Kumar Pradhan

1730 - [Redacted] LTI Sign of  
Chaitanya Mahapatra

1745 - [Redacted] LTI Sign of  
Chaitanya Mahapatra

1731 - Bankarson Dehury

1732 - Gopinath GZ/11

1746 - [Redacted]

1733 - [Redacted]

1747 - Jintamani Behara

1734 - [Redacted]

1748 - [Redacted]

1735 - [Redacted] LTI Sign of  
Bakul Patra

1749 - [Redacted]

1736 - [Redacted]

1750 - Ashok Kumar Pradhan

1737 - KMS Banader Chakrabarty

1751 - [Redacted]

1738 - Summa Dehury

1752 - Biku Behara

1739 - Aruna Dehury

1753 - [Redacted]

1740 - [Redacted]

1754 - [Redacted]

1741 - [Redacted] LTI Sign of  
Dinabandhu Dehury

1755 - Pinkuna Behara

1742 - [Redacted]

1756 - [Redacted] LTI Sign of  
Basanti Jena

1743 - [Redacted]

1757 - [Redacted]  
Dinabandhu  
[Redacted]


1757. Sarant Ch. Jena  
 1758. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1759. Hemanta Jena  
 1760. Surendra Jena  
 1761. Banolata Jena  
 1762. Bijayani Jena  
 1763. Preyabhai Jena  
 1764. Rangadhara Mahantaria  
 1765. Raban maharaja  
 1766. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1767. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1768. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1769. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1770. Mins Dehury  
 1771. [Redacted] LTI sign of  
 1772. ଶ୍ରୀ ଧର୍ମ ଚନ୍ଦ୍ର  
 1773. [Redacted] LTI sign of  
 1774. [Redacted] LTI sign of

1775. Manjula Dehury  
 1776. Manjula Dehury  
 1777. Manjula Dehury  
 1778. Manjula Dehury  
 1779. Kalyani Dehury  
 1780. Santosh Mohanty  
 1781. Anup Kumar Mohanty  
 1782. Anup Kumar Mohanty  
 1783. Anup Kumar Mohanty  
 1784. Anup Kumar Mohanty  
 1785. Anup Kumar Mohanty  
 1786. Anup Kumar Mohanty  
 1787. Anup Kumar Mohanty  
 1788. Anup Kumar Mohanty  
 1789. Anup Kumar Mohanty  
 1790. Anup Kumar Mohanty  
 1791. Anup Kumar Mohanty  
 1792. Anup Kumar Mohanty

Jinamungla  
 17835



1793 - Naba Kishore Pradhan

1794 -  Dehury

1795 -  LTI sign of  
ନିବେଦନ ପ୍ରଧାନ


1796 - ଜ୍ୟୋତ୍ସ୍ନା ପ୍ରଧାନ


1797 - ନିର୍ମଳା ପ୍ରଧାନ

1798 - ନିର୍ମଳା ପ୍ରଧାନ

1799 - ନିର୍ମଳା ପ୍ରଧାନ

1800 - ଶେଷବତୀ ପ୍ରଧାନ

1801 -  Pradhan

1802 -  LTI sign of  
ଆମ ଦେହୁରୀ

1803 - Ranjita Pradhan

1804 - ଶ୍ରୀମତୀ ପ୍ରଧାନ

1805 - ସୁଧା ପ୍ରଧାନ

1806 - ସୁଧା ପ୍ରଧାନ

1807 - ସୁଧା ପ୍ରଧାନ

1808 - ରୁନି ମନ୍ତ୍ର ପ୍ରଧାନ

1809 - ରାଜକନ୍ୟା ପ୍ରଧାନ

1810 - ରୁନି ମନ୍ତ୍ର ଦେହୁରୀ

1811 - ରାଜକନ୍ୟା ଦେହୁରୀ

1812 - Subasini Dehury


1813 - ନିର୍ମଳା ଦେହୁରୀ

1814 - ସୁଧା ଦେହୁରୀ

1815 -  LTI sign of  
ଆମ ଦେହୁରୀ

1816 - ନିର୍ମଳା ପ୍ରଧାନ

1817 - Ranjita Dehury

1818 -  LTI sign of  
ଆମ ଦେହୁରୀ

1819 - ନିର୍ମଳା ପ୍ରଧାନ

1820 - Jagannath Pradhan

1821 - ରାଜକନ୍ୟା ଦେହୁରୀ

1822 - ରୁନି ମନ୍ତ୍ର ଦେହୁରୀ

Jintha Pradhan

1823 - Jintha Pradhan

1824 - Jintha Pradhan


1823 - ପ୍ରାଚୀନ ଗ୍ରନ୍ଥ

1824 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1825 - Sajan Nayak

1826 - ବିଶେଷ ଗ୍ରନ୍ଥ

1827 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1828 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1829 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1830 - ବିଶେଷ ଗ୍ରନ୍ଥ

1831 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1832 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1833 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1834 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1835 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1836 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1837 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1838 - Kuni Kama

1839 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1840 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

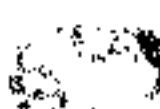
1841 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1842 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1843 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1844 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1845 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1846 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ

1847 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1848 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1849 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1850 -  LTI ସ୍ୱରୂପ ଓ  
ସୂଚକ ସମ୍ବନ୍ଧ



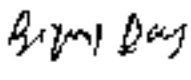
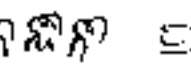
1851 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ


1852 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ


1853 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

1854 - ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ

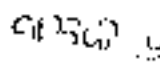
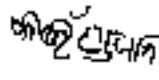
ଅନ୍ତରାଳ ଗ୍ରନ୍ଥ  
1855

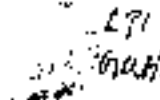
1855 -   
 1856 -  LTI Sign of  
Kuntal Pradhan  
 1857 -   
 1858 -   
 1859 - Mahasati Denary  
 1860 - Muna Patra

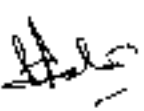
1861 -  LTI Sign of  
Kuntal Pradhan

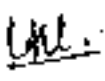
1862 -  LTI Sign of  
Kuntal Pradhan


1863 - Jayant Denary

1864 -   
 1865 - 


1866 -  LTI Sign of  
Kuntal Pradhan

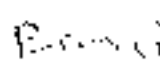
1867 - Sudhanshu Patra 

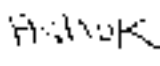
1868 - H.P. Patra: 

1869 - 

1870 - Kuntal Pradhan

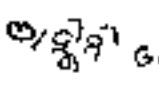
1871 - 

1872 - 

1873 - 


1874 - 

1875 -  LTI Sign of  
Kuntal Pradhan

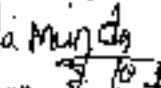
1876 - 

1877 - Rama Behara

1878 -  LTI Sign of  
Kuntal Pradhan

1879 - 

1880 -  LTI Sign of  
Kuntal Pradhan


 Kuntal Pradhan



1881 - ବ୍ରାହ୍ମ ଚନ୍ଦ୍ରାଣୀ

1882 - ଗୁଣ୍ଡୁଆ ଚନ୍ଦ୍ରାଣୀ

1883 - Kastika Dehuri

1884 -  LT1 Sign of  
Sahay Pradhan

1885 - ପୁର ଚନ୍ଦ୍ରାଣୀ

1886 - Gopala Dehuri

1887 - ବାଘା ଚନ୍ଦ୍ରାଣୀ

1888 - Gangadhar Dehuri

1889 - Jharna Pradhan

1890 - ଲୁଗୁଣ ପ୍ରଧାନ

1891 - ଶ୍ରୀରାମ ଜୀ

1892 - ଶ୍ରୀ ଜୀ

1893 sacrifice Kax

1894 Praveer Kumar Mahapatra

1895 ଶ୍ରୀରାମ ଚନ୍ଦ୍ରାଣୀ ବାଘା

1896 -  LT1 Sign of  
Gauria Dehuri

1897 - Laxmedhar Sutar

1898 - Ranganani mayi

1899 - ପ୍ରଦୀପ ଚାନ୍ଦି

1900 - ଶ୍ରୀରାମ ମାରି

1901 - ସର୍ବଜିତ ମାରି

Praveer Kumar Mahapatra  
1895

1902 - Bagar Beri  
 1903 - Baidan Munderi  
 1904 - ବିକାଶ ଚକ୍ର  
 1905 - Baidan Munderi  
 1906 - Pakashy Chakr  
 1907 - Lal Singh Chakr  
 1908 - Katta Chandra Purdy  
 1909 - Damburu Thar Singh  
 1910 - Ganeswar Chakr  
 1911 - ବିକାଶ ଚକ୍ର  
 1912 - Munsingh Gogoi  
 1913 - ବିକାଶ ଚକ୍ର  
 1914 - Radhika Kankal  
 1915 - Samit Baidan  
 1916 - Damburu Thar Singh  
 1917 - Basanti Kerai  
 1918 - ବିକାଶ ଚକ୍ର  
 1919 - ବିକାଶ ଚକ୍ର  
 1920 - Kishore Chandra  
 1921 - ବିକାଶ ଚକ୍ର  
 1922 - Basanti Kerai  
 1923 - Damburu Thar Singh  
 1924 - ବିକାଶ ଚକ୍ର  
 1925 - ବିକାଶ ଚକ୍ର  
 1926 - ବିକାଶ ଚକ୍ର  
 1927 - ବିକାଶ ଚକ୍ର

1928 -

1929 -

ବିକାଶ ଚକ୍ର  
 ବିକାଶ ଚକ୍ର

Jina Munda  
 1935





- 1944 - Kabita Mathur  
 1945 - Mahatma Gandhi  
 1946 - Rajendra Mathur  
 1947 - ~~1947~~  
 1948 - Rajendra Mathur  
 1949 - Rajendra Mathur  
 1950 - ~~1950~~  
 1951 - ~~1951~~  
 1952 - ~~1952~~  
 1953 - Suren Mathur  
 1954 - Deep Mathur  
 1955 - Ranjan Mathur

Jinfa Mathur  
 344-18-1015  
 1015-1015



Proceedings of Gramsabha Meeting Conducted as per Forest Right Act -2006

Name of Village: - Kaliapani

Location: - Kaliapani Shiva Temple premises

Gram Panchayat: - Kaliapani

Date & Time: - 07.10.2015 ( Wednesday), at 10 am

A Gramsabha Meeting was conducted at 10 am today, Wednesday the 7<sup>th</sup> of October, 2015 according to the agenda prepared earlier. All the Ward members of Kaliapani Revenue Village, members of SSGs, and the undersigned members were present at this Gramsabha Meeting.

Others present Included Government Officials, elected members of the Gram Panchayat and Senior Executives of IMFA as mentioned below.

1. Sarpanch, Kaliapani Gram Panchayat
2. Members , Kaliapani Gram Panchayat
3. Grampanchayat Executive Officer, Kaliapani Gram Panchayat
4. Revenue Inspector, R.I. Circle Kankadapala
5. Forester, Ransol Section
6. Welfare Extension Officer, Sukinda Block
7. Senior Executives, IMFA

At the outset, the local Sarpanch, Smt Jinita Munda was nominated as President by the Gramsabha members. Quorum being obtained as per rules the President began the Meeting and the following proposals were put up for discussion.

**Proposal- 1**

Letter No 1149, dtd- 20.06.2015 of District Welfare Officer, Jajpur and letter No 2249 dtd- 04.09.2015 of Block Development Officer, Sukinda were read out. The President requested for a detailed discussion on allowing the Indian Metals &



Ferro Alloys Limited owned 115.05 hectares Sukinda Mines (Chromite) located on Forest Land in Kaliapani Revenue Village of Sukinda Tehsil & Block, to be used by M/s IMFA for mining purposes, keeping in mind the interests of the Scheduled Tribe and Other Traditional Forest Dwellers and in recognition of the related (Recognition of Forest Rights) Act, 2006.

**Proposal- II**

Letter No 1136 dtd 19.06.2015 by District Welfare Officer, Jaipur and letter No 2296 dtd- 04.09.2015 by Block Development Officer, Sukinda were read out. The president requested for a detailed discussion on allowing Indian Metals & Ferro Alloys Ltd owned 7.397 hectares Mahagiri Mines (Chromite) located on Forest Land in Kaliapani Revenue Division of Sukinda Tehsil & Block, to be used by M/s Indian Metals & Ferro Alloys Ltd. for mining purposes, keeping in mind the interests of the Scheduled Tribe and Other Traditional Forest Dwellers and in recognition of the related (Recognition of Forest Rights) Act, 2006.

During the first phase of discussion the objectives of the Meeting and all information thereof were placed before the members present. In other words, the proposal for Forest Diversion and its ancillary issues relating to individual and Community rights of Scheduled Tribe and Other Traditional Forest Dwellers and of rights related to Forest Rights Act were put forth and explained by respective Govt Officers.

The above mentioned two proposals were discussed for long time in detail. Investigation reports prepared by respective Revenue Inspectors were read out. Detailed information on the location of the said land on the basis of land-maps & other related documents was placed before the members. As per the reports it was found that the kism of the land Ac 284.29 Dcml or 115.05 Hectares, applied for mining purpose by IMFA for its Sukinda Chromite Mines, is 'Pathara Bani' as per Hal record and 'Salajungle' as per Sabik record.

Similarly the kism of Ac 18.28 Dcml or 7.397 Hectares land applied for mining of Mahagiri Chromite Mines is "Pathar Bani" as per Hal record and "Salajungle" as per Sabik record.

Cont,d P-3

Keeping in mind the Diversion Proposal of rakaba 115.05 Hectares Forest Land of Sukinda Mines (Chromite) & rakaba 7.397 Hectares Forest Land of Mahagiri Mines (Chromite), the Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, related rules & regulations as well as reports submitted by the Revenue Inspectors were thoroughly discussed. It was found that neither any member/s of Scheduled Tribe or Other Traditional Forest Dwellers owned any land within the forest boundaries of Sukinda Mines (Chromite) and Mahagiri Mines (Chromite) nor they are using the said-land for agriculture or collection of minor forest products for their livelihood. Besides it was found that neither the communities nor any individual raised any demands during this Meeting.

The Gramsabha unanimously agreed and decided to support both the above mentioned proposals of M/s Indian Metals & Ferro Alloys Ltd, Bhubaneswar, to convert its 115.05 Hectares Forest land of Sukinda Mines (Chromite) and 7.397 Hectares Forest land of Mahagiri Mines (Chromite) into Non-forest land for mining purposes.

The Meeting concluded with the President offering vote of thanks to one and all present.

sd/  
Executive Officer  
Kaliapani Gram Panchayat

sd/  
Sarapanch  
Kaliapani Gram Panchayat

sd/  
Revenue Inspector  
Kankadpal

sd/  
Samiti Sabhya  
Kaliapani Gram Panchayat

sd/  
Forester  
Ransol Section

sd/  
Members of Forest Right Committee

sd/  
Villagers of Kaliapani Gram Panchayat participated in Grama Sabha

  
Divisional Forest Officer  
Cutback Forest Division

PROCEEDING OF THE MEETING OF THE SUB-DIVISIONAL LEVEL COMMITTEE ON  
DIVERSION OF FOREST LAND FOR NON-FOREST PURPOSE UNDER S.T & OTHER  
TRADITIONAL FOREST DEWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006  
HELD ON 31.12.2015 IN THE OFFICE CHAMBER OF SUB-COLLECTOR, JAJPUR  
\* \* \* \* \*

The Sub Divisional Level Committee meeting on Diversion of Forest Land for use of Non-Forest Land under Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 of Jajpur was convened on 31.12.2015 at 4.00PM under Chairmanship of Sub-Collector, Jajpur.

The following members of the committee were present,

1. Sri Ajay Kumar Sahoo, OFS, ACF, Cuttack
2. Sri Kamadeba Dehuri, P.S Member of Sukinda P.S
3. Sri Pandu Tiyyu, P.S Member of Badachana P.S
4. Smt. Sati Dehury, P.S, Member of Dharmasala P.S
5. Sri Debadutta Mahanta, OAS (I), BDO, Sukinda
6. Sri Nabakishna Jena, OAS (I), Tahasildar, Sukinda
7. Miss Chetna Sethy, OWS, District Welfare Officer, Jajpur
8. Sri Padan Charan Jena, ADWO, Jajpur
9. Sri Biswambar Nayak, Rep. of M/s. IMFA Ltd.
10. Sri Sushil Nayak, Rep. of M/s. IMFA Ltd.
11. Sri Salram Ch. Dash, Rep. of M/s. IMFA Ltd.
12. Sri Ranjan Ku. Pattanaik, Rep. of M/s. Balasore Alloys Ltd.

At the outset, the Chairman welcomed all the members present and initiated the discussion and intimated that the Gram Sabha of Kaliapani G.P has recommended the proposal for diversion of Forest Land amounting Ac. 18.28 dec. or 7.397 ha. for use of non-forest purpose by IMFA Ltd. for Mahagiri Chromite Mines and about Ac. 284.29 dec. or 115.05 ha. for Sukinda Chromite Mines & forest land about Ac. 159.29 dec. or 64.463 hec. for use of non-forest purpose by M/s. Balasore Alloys Ltd. for Kaliapani Chromite Mines before the SDLC for approval. The detailed village wise position is given below.



Name of the Agency	Name of the GP	Name of the Village	Area applied for
M/s. IMFA Ltd. (Mahagiri Chromite Mines)	Kaliapani	Kaliapani	Ac. 18.28 dec. or 7.397 ha.
M/s. IMFA Ltd. (Sukinda Chromite Mines)	Kaliapani	Kaliapani	Ac. 284.29 dec. or 115.05 ha.
M/s. Balasore Alloys Ltd. (Kaliapani Chromite Mines)	Kaliapani	Kaliapani	Ac. 159.29 dec. or 64.463 ha.


On verification of Grama Sabha proceedings forwarded by Block Development Officer, Sukinda, it is revealed that detail discussion was made in the Gram Sava/Palli Sava regarding Forest Right Act., 2006 and implementation of displacement and its implication and rehabilitation was explained to them in odia vernacular. Further, it is seen the people present in the Gram Sabha had agreed and haven given their written consent with recommendation for diversion of forest land of above extent for non-forest use by the M/s. IMFA Ltd. & M/s. Balasore Alloys Ltd. The above areas has been verified by the Revenue Inspector, Kankadapa for determining the possession of actual extent of Forest land by the individuals and communities for giving safeguard and recognition of Forest Rights Act- 2006. Moreover, it was found that no individual and community are in possession of the above scheduled land. The same has been confirmed by the Revenue Inspector, Kankadapa through Tahasildar, Sukinda,

Then the Chairman wanted to know regarding compensatory measure for afforestation taken by the mentioned mining authorities for the above land. The representatives present in the meeting have also confirmed that, correspondence have been made with the Tahasildar, Darpan/ Dharmanala vide Dist. office Letter No. 3015 Dt. 23.06.15 considering the Letter Dt. 05.06.2015 of Vice President, Head-Corporate Affairs & Legal, IMFA in respect of Mahagiri Chromite Mines & Sukinda Chromite Mines of IMFA & Tahasildar, Darpan/ Dharmanala vide Dist. Office Letter No. 3778 Dt. 05.08.2015 for M/s. Balasore Alloys Ltd. in respect of Kaliapani Chromite Mines for compensatory measure for afforestation. Records prepared with this effect have

also been placed before the committee for verification. After verification, the same is found correct.

Hence the committee unanimously decided to send the diversion proposal of above said land for use of non forest purpose by M/S. IMFA Ltd. & M/s. Balasore Alloys Ltd. for the above mines to District Level Committee.

The Meeting ended with vote of thanks to the Chair.

  
Sub-Collector-Cum-Chairman, SDLC  
Jaipur


Memo No. 35 / Date. 6/1/16

Copy forwarded to all members for information and necessary action.

  
Sub-Collector-Cum-Chairman, SDLC  
Jaipur


Memo No. 36 / Date. 6/1/16

Copy to Tahasildar, Sukinda/BDO, Sukinda for information and necessary action.

  
Sub-Collector-Cum-Chairman, SDLC  
Jaipur

Memo No. 37 / Date. 6/1/16

Copy submitted to the Collector, Jaipur for favour of kind information.

  
Sub-Collector-Cum-Chairman, SDLC  
Jaipur

PROCEEDING OF THE DISTRICT LEVEL COMMITTEE MEETING ON DIVERSION OF  
FOREST LAND FOR USE OF NON-FOREST PURPOSE UNDER ST & OTHER  
TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT,  
2006 HELD ON 09.02.2016 IN THE RESIDENTIAL OFFICE OF COLLECTOR

\*\*\*\*\*

The District Level Committee was convened on 09.02.2016 for conferment of Diversion of Forest Land for use of Non-Forest purpose under ST and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. The Collector-cum-Chairman presided over the meeting in presence of the following members

1. Sri Sudarsan Behera, OFS- I (SB), DFO., Cuttack
2. Sri Maheswar Panigrahi, OAS (S), Sub-Collector, Jajpur.
3. Sri Dibakar Munda, ZP Member, Zone No. 3
4. Smt. Sabita Behera, ZP Member, Zone No. 12
5. Smt. Tapaswini Matlik, ZP Member, Zone No. 39
6. Sri Debadutta Mahanta, OAS (I), BDO, Sukinda
7. Sri Nabakrishna Jena, OAS (I), Tahasildar, Sukinda
8. Miss Chetna Sethy, OWS, District Welfare Officer, Jajpur
9. Sri Padan Charan Jena, ADWO, Jajpur
10. Sri Sushil Nayak, Rep. of M/s. IMFA Ltd.
11. Sri Sriram Ch. Dash, Rep. of M/s. IMFA Ltd.
12. Sri Ranjan Ku. Pattanaik, Rep. of M/s. Balasore Alloys Ltd.

Initiating the discussion the Chairman desired to know about the verification report prepared by Tahasildar, Sukinda and the recommendation of Gram Sabha of Kaliapani village for the proposal of Diversion of Forest Land for use of Non-Forest purpose of Mahagiri Chromite Mines, Sukinda Chromite Mines of M/s. IMFA Ltd. & Kaliapani Chromite Mines of M/s. Balasore Alloys Ltd.

The DWO apprised before the committee that, the the Gram Sabha of Kaliapani G.P has recommended the proposal for diversion of Forest Land measuring Ac. 18.28 dec. or 7.397 ha. for use of non-forest purpose by IMFA Ltd. for Mahagiri Chromite Mines and about Ac. 284.29 dec. or 115.05 ha. for Sukinda Chromite Mines & forest land about Ac. 159.29 dec. or 64.463 hec. for use of non-forest purpose by M/s. Balasore Alloys Ltd. for Kaliapani Chromite Mines before the SDLC for approval. The detailed village wise position is given below.

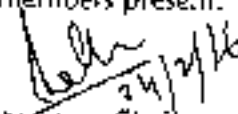
Name of the Agency	Name of the GP	Name of the Village	Area applied for
M/s. IMFA Ltd. (Mahagiri Chromite Mines)	Kaliapani	Kaliapani	Ac. 18.28 dec. or 7.397 ha.
M/s. IMFA Ltd. (Sukinda Chromite Mines)	Kaliapani	Kaliapani	Ac. 284.29 dec. or 115.05 ha.
M/s. Balasore Alloys Ltd. (Kaliapani Chromite Mines)	Kaliapani	Kaliapani	Ac. 159.29 dec. or 64.463 ha.

On verification of the Grama Sabha proceedings forwarded by Block Development Officer, Sukinda, it is revealed that detail discussion was made in the Gram Sava/Patti Sava regarding Forest Right Act., 2006 and its provision and the same was explained to them in odiya vernacular. Further, it is seen the people present in the Gram Sabha have agreed and given their written consent with recommendation for diversion of the forest land of above extent for non-forest use by the M/s. IMFA Ltd. & M/s. Balasore Alloys Ltd. The above areas has been verified by the Revenue Inspector, Kankadapa for determining the possession of land by any claimant under Forest Rights Act- 2006. Moreover, it was found that no individual and community are in possession of the above scheduled land. The same has been confirmed by the Revenue Inspector, Kankadapa through Tahasildar, Sukinda.

Further, the said proposal was also approved by the SDLC giving proper safeguard to the individuals and community claims as per Section 3 (1) (i) & 3(1)(e), 3(2) under Forest Rights Act, 2006 and recommended to DLC for approval. The detail elaborate discussion was made on the recommendation of the SDLC and the District Level Committee approved the Diversion of Forest Land for use of Non-Forest purpose by M/s. IMFA Ltd. & M/s. Balasore Alloys Ltd. referred above.

The committee resolved to submit certificate in favour of M/s. IMFA Ltd. & M/s. Balasore Alloys Ltd. for diversion of the above forest area by the Collector as Chairman of District Level Committee on Forest Rights Act, 2006.

The Meeting ended with vote of thanks to the members present.


  
24/2/16  
Collector-cum-Chairman,  
Jaipur



11311


Memo No. 340 /Date. 24/2/16

Copy forwarded to all members for information and necessary action.

  
Collector-cum-Chairman,  
Jajpur


Memo No. 341 /Date. 24/2/16

Copy forwarded to Tahasildar, Sukinda/ Block Development Officer, Sukinda for information and necessary action.

  
Collector-cum-Chairman,  
Jajpur

Memo No. 342 /Date. 24/2/16

Copy forwarded to the Director (ST)-cum-Additional Secretary to Govt., ST & SC Development Department, Odisha, Bhubaneswar for information and necessary action.

  
Collector-cum-Chairman,  
Jajpur

## Office of the Regional Chief Conservator of Forests, Angul

Memo No 6485/5F FC-I(MG)27/2014 dated 27-12-16

To

The Divisional Forest Officer,  
Cuttack Division.

Sub:- Proposal for diversion of balance 7397 ha of Sabik xisam forest land as on 25.10.1980 in addition to already diverted forest land for Chromite mining in their Mahagiri Chromite Mines of 73777 ha by M/s IMFA in Jajpur District, Odisha.

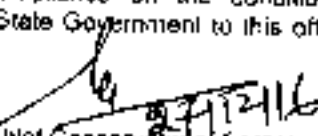
Ref:- Your Memo No.11177 dated 13.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action

S.N o.	Condition No	Name of the Scheme.	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion and choking of streams	Rs.10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing and planting inside the mining lease area.	Rs.14,90,000/-
3	xxvii	Plan for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds and water bodies	Rs.8.38,000/-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

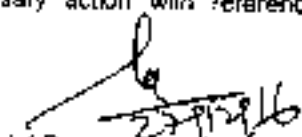
Encl: As above.

  
Regional Chief Conservator of Forests  
Angul.

Memo No 6486 dated 27-12-16


Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No.21245/9F(MG)360/2016 dated 15.11.2016.

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No 6487 dated 27-12-16

Copy forwarded to the Vice-President, M/s IMFA Ltd. IMFA Building, Bomikhal Resulgarh, Bhubaneswar for information

  
Regional Chief Conservator of Forests  
Angul

OFFICE OF THE DIVISIONAL FOREST OFFICER: CUTTACK FOREST DIVISION  
GHATAKULA, NUAPADA, MADHUPATNA, CUTTACK-753010.  
E-mail [ld-dfo.cuttackforestdivision@yahoo.com](mailto:ld-dfo.cuttackforestdivision@yahoo.com), Fax-0671-2347611

Memo No. 43 / SF (Misc)  
Dated, Cuttack the 03 January, 2017

To

The Sr. Vice President,  
M/s Indian Metals & Ferro Alloys Ltd.,  
IMFA building, Bomikhal, Rasulgarh,  
Bhubaneswar-751010.

Sub :- Proposal for diversion of balance 7.397 ha. of Sabik kissam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38 ha. of forest land for Chromite mining in their Mahagiri Chromite mines of 73.777 ha. in Jajpur District, Odisha under Cuttack Forest Division by M/s IMFA Ltd.

Ref: - Memo No.6485 dt.27.12.2016 of the Regional Chief Conservator of Forests, Angul.

Sir,


Please find enclosed herewith the following schemes approved by the Regional Chief Conservator of Forests, Angul for information and necessary action. You are requested to submit the point wise compliance in full of the Stage-I conditions imposed by Govt. of India, MoEF & CC to this office immediately for further action.

Sl. No	Condition No.	Name of the Scheme	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion & choking of streams.	Rs. 10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing & planting inside the mining lease area.	Rs.14,90,000/-
3	xxvii	Plan for gap planting & soil & moisture conservation activities to restock & rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds & water bodies.	Rs.8,38,000/-

Encl-As above

Memo No. \_\_\_\_\_/dt.

Copy alongwith copy of approved scheme forwarded to the Range Officer, Sukinda Range for information and necessary action.

  
Divisional Forest Officer  
Cuttack Forest Division

Divisional Forest Officer  
Cuttack Forest Division

## **SCHEME FOR**

**Gap planting and Soil and Moisture conservation activities  
to restock and rejuvenate the degraded open forests  
(Having crown density less than 0.4),**

**If any located in the area within 100 meters from outer  
perimeter of the mining lease.**

**Mahagiri Mines (Chromite) of M/s IMFA Ltd.**



Compliance to condition no.1 (xxvii) of "In principle approval Order F. No.8. 116/2002-FC (vol-I) dated 20.10.2016 of Govt. of India, MoEF & Climate Change, New Delhi.

**Scheme for gap planting and soil and moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.4), if any located in the area within 100mtr from outer perimeter of the mining lease.**



## 1. Introduction.

**Mahagiri Mines (Chromite)** of M/s IMFA Ltd is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kisam) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 have accorded **"In principle Approval"**. In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxvii) needs gap planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests adjacent to boundary. The condition reads as follows.

### Condition No (Xxvii):

*"User agency either himself or through the State Forest department shall undertake gap planting and Soil & Moisture conservation activities to restock and rejuvenate the degraded open forests (having Crown Density less than 0.40) if any located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF & CC before Stage-II Clearance."*

## 2. Description of Site.

After field visit, by the Experts, Forest Staff and Field functionary of Mahagiri Chromite Mines of IMFA Ltd, it is observed that area around Mahagiri Chromite Mines of IMFA mining lease has already been leased out to other lessees for chromite mining in three sides. Mahagiri Chromite Mining Lease is surrounded by the following mining leases:

Name of the lease	Name of the lessee	Located towards
Retrenched block of TISCO	Under sub-judice	East
Kaliapani chromite mining lease	M/s Balasore Alloys Ltd.	West
Sukinda Mines (Chromite)	M/s IMFA	North

On the Southern side of the lease area Mahagiri DPF exists. This boundary line passes close to the ridges and the pick height is about 330 MSL. As per the condition it is only possible to undertake gap planting and soil and moisture conservation activities to restock and rejuvenate the degraded open forests side where activities can be taken up. The crop density is around 0.15 to 0.20. Location detail is furnished below:

Forest Division	Cuttack
Forest Range	Sukinda
Name of Forest	Mahagiri DPF
Topography	Ridge of Mahagiri Hill range.
Soil quality	Rocky lateritic soil.
Crop Density of the vegetation of the site	0.15 to 0.20
Area to be covered	10.21 hectare

Table 1 Location details

In accordance with the aims & objectives of the condition and present soil condition, terrain and species available, the scheme of Aided Natural Regeneration (ANR) with planting of 400 plants per hectare with fencing on lower hill side is suggested and appropriate scheme is prepared as follows.

*The Location map is enclosed at Plate- I.*

### 3. Aims & Objectives:

As mentioned in the introductory paragraph, this scheme aims to comply the condition no. (xxvii) imposed vide letter F.No-8-116/2002-FC (Vol-I) dated 20.10.2016 of MoEF & Climate Change, New Delhi. The degraded forest is to be restocked by gap planting through ANR mode @400 seedlings/ha in blank area of the above mentioned forest located within 100 meters from the outer periphery of the mining lease. Along with the planting to enrich the present vegetation, soil conservation measures, Silvicultural Cleaning operation are also to be implemented for recharging ground water table, check erosion and thereby to improve the condition of the forest area. The southern boundary of forest patch also needs to be fenced with brush wood / hedge plants.

In addition, due to implementation of the work, the following benefits will also accrue.

- a) Improvement of the micro edaphic condition
- b) Prevention of grazing.
- c) Checking of illicit felling, fire occurrence and further degradation of the area
- d) Employment generation for the local people mainly to ST/SC
- e) Awareness of villagers will be boosted for protection of planted area and other areas of the DPF.

#### 3A. Area to be covered:

The South- Eastern mining lease boundary of Mahagiri Mines (Chromite) mining lease is 1021 meter. The operation will be carried out over 100 meter width. Hence the area needs to be treated  $(1021 \times 100) / 10000 = 10.21$  hectare.



### 3B. Technique to be adopted

As indicated above, ANR will be taken up @400 seedlings per hectare with spacing of 2.5mt x 2.5mt over 10.21 Ha of area. Here it is proposed for planting of species that can withstand over head sunlight, moisture stress condition and preferable non -browse able species. This plantation is to be maintained for a period of 10 years to achieve the goal.

#### 3B.1 Survey, Demarcation, Pillar posting.

The area to be surveyed by GPS and RCC pillars of size 4"x4"x6' (10cmx10cmx180cm) are to be fixed at conspicuous places of the boundary. One sign board is to be fixed at the site at appropriate place. Pillars will be numbered serially as per the map of the planting site. It is proposed to have grid line at 400 meter interval of 5 meter width for maintenance and management point of view. The line is to be maintained parallel to the ridge to avoid soil erosion.

#### 3B.2 Re-generation, Cleaning, Tending operation.

The area aimed to be improved through ANR contains vegetation with average crop height of 10 to 12 meter.

The existing crops need tending for their healthy growth. It needs removal of diseased, dead, malformed, defective tree growth. This is to be followed by removal of the same from the site to a safer place for distribution to local public for fire wood purpose. Very light tending operation is to be adopted as the site is very refractory & sensitive.

Eradication of weeds, climbers is badly needed to prevent their interference in the growth of valuable tree/regeneration so that root competition is prevented and maximum sunlight is allowed to the promising species. Besides removal / control of weeds & climbers, cutting of high stumps flush to the ground is required. The best time to take up the above works is March-April

#### 3B.3 Plantation

Attempts will be made to plant indigenous species that can withstand over head sunlight, moisture stress condition and preferable non -browse able species which are suitable to the site condition. Accordingly after field visit and observation in the field the following species are proposed to be planted.

1. *Pongamia pinnata*.
2. *Simaruba glauca*.
3. *Azadirachta indica*.
4. *Emblica officinalis*.
5. *Xylocarpus moritiana*.
6. *Dalbergia latifolia*.
7. *Alstonia scholaris*.

8. *Terminalia belerica*.
9. *Dyospyrus melanoxylon*.
10. *Dendrocalamus strictus*. etc

Before taking of plantation the following Pre-planting operation are required to be taken up.

#### **PRE-PLANTING OPERATION**

##### **a) Raising of nursery**

A temporary nursery will be raised near the plantation site with perennial water source facility and approach road to the nursery site. Nursery works will commence one year ahead of planting season to get second year seedling for plantation. 10% excess of seedling to be raised than required. Seedlings required:  $10.21 \times 400 + 10\% \text{ extra} = 4492$  no or say 4500 seedlings.

##### **b) Alignment and stacking and Pitting**

This will be taken up in the month of March-April. Pits of size 30 Cm x 30cm x 30cm are to be dug out with a spacing of 2.5mt x 2.5mt @400 plants per hectare.

#### **PLANTING OPERATION.**

C) Plantation will be done after first regular shower of monsoon and to be completed latest by end of August. Basal dose of NPK/DAP fertilizer @30gm per plant to be given. Utmost care is to be taken to apply Bio- insecticides @5gm per pit. Casualty replacement is to be taken up during 1<sup>st</sup> year of plantation just after one month of planting. 10% causality replacement is also suggested during 2<sup>nd</sup> Year.

#### **POST PLANTING OPERATION.**

##### **a) Weeding, soil working and application of fertilizer.**

Post planting operation is most vital in success of any planting programme. It is proposed to carry out two weeding, soil working and application of fertilizer during first year and one weeding & soil working in second year of plantation. During soil working, care should be taken to have half moon trench for plants on sloppy area. Weeding and soil working is also to be taken up once in third year and there after strict fire protection measures to be implemented up to ten years as per cost norm. Application of 30gms of NPK/DAP to be added to the soil per plant at the time of soil working during rains during 1<sup>st</sup> & 2<sup>nd</sup> year of plantation.

##### **b) Application of Bio-Insecticide**

To prevent infestation of seedling planted with diseases due to influx of insects and pests into the area, it is required to apply foliar and ground spray of Bio- insecticides at regular intervals on a sunny day in the afternoon.



### c) Fire line tracing and maintenance

Tender seedlings planted are subjected to damage by ground fire. Similarly the existing forest growths also get damaged due to fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundaries of plantation patches and forest growth area need to be scrapped to a width of 3mtr during February-March. The cut back materials and dry leaves along with fire lines should be separated and dumped in pits outside the plantation area.



### e) Watch and ward & Provision for Brush wood fencing.

i. **Watch & Ward.** Provision of watch and ward to protect the area from grazing, fire accident and other biotic interference, it is proposed to engaged one fire watcher.

ii. **Fencing.** Considering the biotic factors / grazing pressure it is felt to provide brush wood / Live hedge fencing on the southern side of the area to protect regeneration & planted seedlings. Taking the cost norm for fencing in the Bald Hill Plantation i.e. Rs 8080/- per hectare the cost provision comes to Rs 8080/- x 10.21= Rs82500/-

### f) Soil conservation measures

Soil & Moisture Conservation is to be taken up as per the cost norm. Contour Trenches / Loose Boulder structures are to be implemented in preference.



As the area is very refractory, extra cost of Rs 10000/- per hectare is prescribed for Soil & Moisture conservation purpose.

**g) Executing agency**

This programme will be implemented by the User Agency through the Divisional Forest Officer, Cuttack Division (State forest department).

**h) Inspection monitoring and evaluation**

The plantation is to be periodically inspected by the authority & Plantation Journal is to be maintained as per prevailing practice.

**i) Financial forecast**

The plantation shall be taken up in ANR mode @400 seedlings per hectare. The approved cost norm as per the estimate given in Annexure-II comes to Rs 38,806.00 per ha. Therefore the total financial outlay comes to Rs 38806 X 10.21 ha =Rs 3,96,210/-

Sl No	Activities	Unit	Rate in Rs	Quantum	Total amount in Rs
1	ANR with Planting of seedlings @400 per hectare	ha	38806	10.21	396210
2	SMC measures (additional )	ha	10000	10.21	102100
3	Fencing	ha	8080	10.21	82500
	Total				580810 or say 5.81 lakh.

Table 2 Financial Forecast

**(Rupees Five Lakh Eighty One Thousand only.)**

**Annexure –II**

**Cost Norm For ANR (@400 Plants per Hectare)**

**For ten year maintenance.**

Wage rate- @Rs200/-.

Sl.No.	Item of Work	Preferable period of Execution	Person days	Labour (Rs)	Material (Rs)	Total (Rs)
<b>0<sup>th</sup> Year</b>						
1	Survey, Demarcation and Pillar Posting, GPS Reading with mapping	Nov/ Dec	2	400	0	400
2	Site Preparation	Nov/ Dec	2	400	0	400
3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	Jan/ Feb	5	1000	0	1000



4	Nursery cost (6 months old seedling ) part @ Rs. 9.45/- seedling (Rs 6.67 in 0th year + Rs 2.78 in 1st year) for 440 seedlings (400+40)	Jan/ March	11	2200	735	2935
5	Contingency and Unforeseen Expenditure		0		165	165
	<b>Sub Total</b>		<b>20</b>	<b>4000</b>	<b>900</b>	<b>4900</b>

**1<sup>st</sup> Year**

1	Nursery cost (6 months old seedling ) balance part @ Rs 2.78 for 440 seedlings	Apr- Jul	5	1000	223	1223
2	Pitting 30 cm cube size	Feb/ Mar	12	2400	0	2400
3	Carriage and planting including casualty replacement	Jul/ Aug.	10	2000	0	2000
4	Complete weeding, Soil working, manuring	Aug /Sep	12	2400	0	2400
5	Cost of Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 1600.00 and Granular insecticides 5 gms/plant @ Rs 80/- per Kg = Rs 160.00	Aug /Sep	0	0	1760	1760
6	Cost of Chemical Fertilizer (a) Urea 70 gms/plant in two subsequent doses @ Rs 6/- per Kg = Rs 168.00 (b) NPK 50 gms/plant @ Rs 24/- per Kg = Rs 480.00 as basal dose		0	0	648	648
7	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoot etc.	Sep/Oct	15	3000	0	3000
8	Soil conservation measures (staggered trenches of dimension 2 m x 0.5 m x 0.5 m @ 60 nos per ha) or its equivalent	Sep/Oct	20	4000	0	4000
9	Fire line tracing and inspection path	Feb/ Mar	3	600	0	600
10	Watch & Ward	Aug- Mar	7	1400	0	1400
11	Contingency and unforeseen expenditure		0	0	319	319
	<b>Sub Total</b>		<b>84</b>	<b>16800</b>	<b>2950</b>	<b>19750</b>

**2<sup>nd</sup> Year**

1	Casualty Replacement including cost of seedling, carriage and planting.	Jul/Aug	2	400	378	778
2	Complete weeding and cultural operations	Sep/Oct	4	800	0	800

3	Soil working and manuring	Sep/Oct	4	800	0	800
4	Cost of Fertiliser and insecticide (a) Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 1600.00 (b) Granular insecticides 5 gms/plant for 40 plants 100 gms @ Rs 80/- per Kg = Rs 16.00	Sep/Oct	0	0	1616	1616
5	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
6	Soil conservation measures(Renovation of staggered trenches etc.)	Sep/Oct	8	1600	0	1600
7	Watch & Ward (Whole Year)	Apr-Mar	7	1400	0	1400
8	Contingency and unforeseen expenditure		0	0	362	362
	<b>Sub Total</b>		<b>26</b>	<b>5200</b>	<b>2356</b>	<b>7556</b>
<b>3<sup>rd</sup> Year</b>						
1	Complete weeding and cultural operations	Aug /Sep	2	400	0	400
2	Soil working	Aug /Sep	2	400	0	400
3	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
4	Watch & Ward (Whole Year)	Apr-Mar	7	1400	0	1400
	<b>Sub Total</b>		<b>12</b>	<b>2400</b>	<b>0</b>	<b>2400</b>
<b>4<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>5<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>6<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>7<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>8<sup>th</sup> Year</b>						



1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>9<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
<b>10<sup>th</sup> Year</b>						
1	Fire line tracing and inspection path	Feb/ Mar	1	200	0	200
2	Watch, Ward & Pruning	Apr-Mar	2	400	0	400
	<b>Sub Total</b>		<b>3</b>	<b>600</b>	<b>0</b>	<b>600</b>
	<b>Grand Total</b>		<b>163</b>	<b>32600</b>	<b>6206</b>	<b>38806</b>

**ABSTRACT.**

Year	Person days	Labour Component	Material Component	Total
0th Yr	20	4000	900	4900
1st yr	84	16800	2950	19750
2nd Yr	26	5200	2356	7556
3rd Yr	12	2400	0	2400
4th Yr	3	600	0	600
5th Yr	3	600	0	600
6th Yr	3	600	0	600
7th Yr	3	600	0	600
8th Yr	3	600	0	600
9th Yr	3	600	0	600
10th Yr	3	600	0	600
<b>Total</b>	<b>163</b>	<b>32600</b>	<b>6206</b>	<b>38806</b>

ABSTRACT.


Year	Person days	Labour Component	Material Component	Total
0th Yr	20	4000	900	4900
1st yr	84	16800	2950	19750
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4th Yr	3	600	0	600
5th Yr	3	600	0	600
6th Yr	3	600	0	600
7th Yr	3	600	0	600
8th Yr	3	600	0	600
9th Yr	3	600	0	600
10th Yr	3	600	0	600
Total	163	32600	6206	38806



"CHANDANAM" a Forest & Wildlife Consulting Society has been assigned  
by the User Agency to prepare this scheme.

Prepared & submitted accordingly.

  
Divisional Forest Officer  
Cuttack Forest Division

  
(B. Maharana OFS SB-I Rtd)

Dy. Conservator of Forests.

  
Forest Range Officer  
Sukinua Range


  
(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.

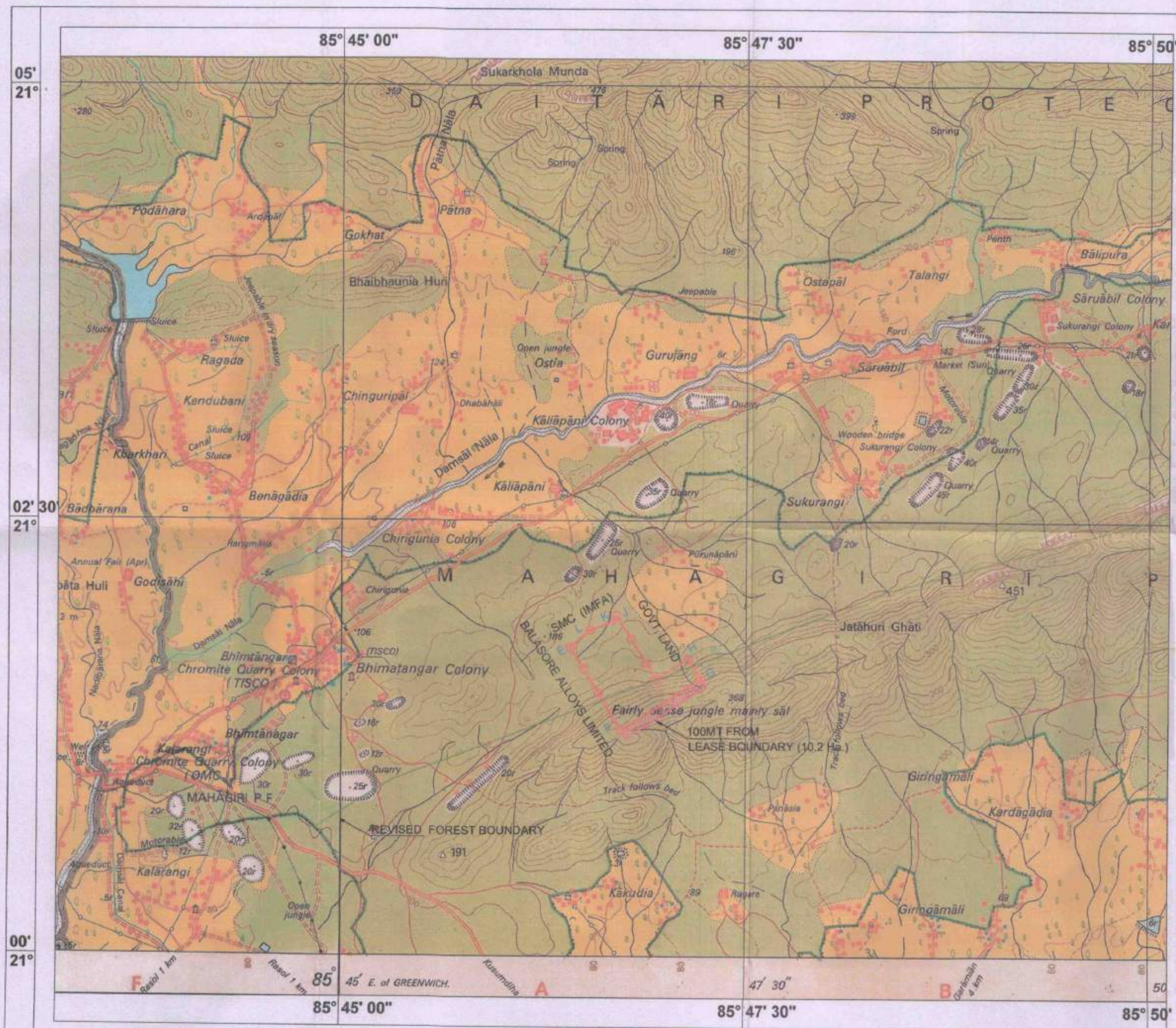





  
Signature of Project Proponent.

Approved at Rs. 5,81,000/-  
(Rupees Five Lakh Eighty One Thousand) only.

  
Chief Conservator of Forests.  
Angul Circle.





-  MAHAGIRI MINE (CHROMITE), IMFA
-  FOREST BOUNDARY
-  100 MTS FROM LEASE BOUNDARY OF AREA 10.2 HA.

TOPO SHEET NO :- F45N16 (73G/16)  
F45N12 (73G/12)

*S. L.*  
Forest Range Officer  
Sukinda Range

*S. L.*  
Divisional Forest Officer  
Cuttack Forest Division

For Indian Metals & Ferro Alloys Ltd.  
*(Sanjeev Das)*  
Sr. Vice President & Constituted Attorney

PLATE No-1

LOCATION MAP SHOWING THE MAHAGIRI  
MINE (CHROMITE) OF M/s. IMFA  
DISTRICT :- JAJPUR, ODISHA

LOCATION MAP

R.F. 1:30,000





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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A11**

**UNDERTAKING**

*We do hereby undertake to state that we will implement and execute the approved scheme for gap plantation & SMC activities to restock and rejuvenate the degraded open forest in Mahagiri DPF having crown density less than 0.40 within the 100 meters i.e. only available in the southern side perimeter of the mining lease, as other three sides of mining lease is surrounded by adjacent leases.*



(Sanjeev Das)

Sr. Vice President & Constituted Attorney



## Office of the Regional Chief Conservator of Forests, Angul

Memo No. 6185 /SF.FC-4(MG)27/2014 dated 27-12-16

To

The Divisional Forest Officer,  
Cuttack Division.

Sub. Proposal for diversion of balance 7.397 ha of Sabik kisan forest land as on 25.10.1950 in addition to already diverted forest land for Chromite mining in their Mahagin Chromite Mines of 73.777 ha by M/s IMFA in Jajpur District, Odisha


Ref:- Your Memo No.11177 dated 13.12.2016

The following schemes received vide your memo under reference are technically approved by the undersigned and returned herewith in 4 sets each, for further action.

S/N	Condition No	Name of the Scheme.	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion and choking of streams.	Rs.10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing and planting inside the mining lease area.	Rs.14,90,000/-
3	xxvii	Plan for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forest (having crown density less than 0.04) if any located in the area with 100 m from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds and water bodies	Rs 8,38,000/-

You are requested to submit full compliance on the conditions imposed by Government of India, MoEF & CC as well as State Government to this office immediately.

Encl: As above.

  
Regional Chief Conservator of Forests  
Angul

Memo No. 6186 dated 27-12-16

Copy along with the above approved scheme forwarded to the Addl. Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer FC Act), O/o Principal CCF, Odisha for favour of information and necessary action with reference to his Memo No.21245/SF(MG)380/2016 dated 15.11.2016

Encl: As above

  
Regional Chief Conservator of Forests  
Angul

Memo No. 6187 dated 27-12-16

Copy forwarded to the Vice-President, M/s IMFA Ltd., IMFA Building, Bomikhal, Razulgarh, Bhubaneswar for information

  
Regional Chief Conservator of Forests  
Angul

OFFICE OF THE DIVISIONAL FOREST OFFICER: CUTTACK FOREST DIVISION  
GHATAKULA, NUAPADA, MADHUPATNA, CUTTACK-753010,  
 E-mail ld-dfo.cuttackforestdivision@yahoo.com, Fax-0671-2347611

Memo No. 42 / 5F (Misc)  
 Dated, Cuttack the 23 January, 2017

To

The Sr. Vice President,  
 M/s Indian Metals & Ferro Alloys Ltd.,  
 IMFA building, Bomikhal, Rasulgarh,  
 Bhubaneswar-751010.

Sub :- Proposal for diversion of balance 7.397 ha. of Sabik kissan forest land as on 25.10.1980 in addition to already diverted forest land of 66.38 ha. of forest land for Chromite mining in their Mahagiri Chromite mines of 73.777 ha. in Jajpur District, Odisha under Cuttack Forest Division by M/s IMFA Ltd.

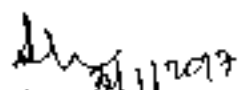
Ref: - Memo No.6485 dt.27.12.2016 of the Regional Chief Conservator of Forests, Angul.

Sir,

Please find enclosed herewith the following schemes approved by the Regional Chief Conservator of Forests, Angul for information and necessary action. You are requested to submit the point wise compliance in full of the Stage-I conditions imposed by Govt. of India, MoEF & CC to this office immediately for further action.

Sl. No	Condition No.	Name of the Scheme	Financial outlay
1	xxv(a)	Plan for mitigative measures to minimize soil erosion & choking of streams.	Rs. 10,26,000/-
2	xxv(b)	Checking of soil erosion by sowing & planting inside the mining lease area.	Rs. 14,90,000/-
3	xxvii	Plan for gap planting & soil & moisture conservation activities to restock & rejuvenate the degraded open forest ( having crown density less than 0.04) if any located in the area with 100 m. from the outer periphery of the mining lease.	Rs. 5,81,000/-
4	xxix	Plan for de-silting of village ponds & water bodies.	Rs. 8,38,000/-

Encl:- As above.

  
 Divisional Forest Officer  
 Cuttack Forest Division

Memo No \_\_\_\_\_ /dt.

Copy alongwith copy of approved scheme forwarded to the Range Officer, Sukinda Range for information and necessary action.

Divisional Forest Officer  
 Cuttack Forest Division

**SCHEME FOR DE-SILTATION OF VILLAGE POND  
COMING WITHIN 5KM RADIUS OF MAHAGIRI  
MINES (CHROMITE) OF M/S IMFA Ltd**

**AGAINST DIVERSION OF 7.397 HECTARE OF FOREST LAND (SABIK KISAM)  
IN  
JAJPUR DISTRICT, ODISHA.**



**(Compliance to condition no. xxix of in-principle Approval of MoEF &CC,  
Govt.of India  
vide letter no F.No-8-116/2002-FC (Vol-I) dated 20.10.2016)**

**Scheme for undertaking De-silting of the Village tanks and other water body Located within 5 Km from the mining lease boundary so as to mitigate the impact of siltation of such tanks/ water bodies.**

---

## **1. Introduction**

**Mahagiri Mines (Chromite)** of IMFA Ltd. is an ongoing mining project with total mining lease area of 73.777 ha for excavation of Chromite ore in Jajpur district, Odisha. This mining lease contains 7.397 Ha of forest land (Sabik kisam) for which the user agency has filed diversion application under section 2 of the Forest (Conservation) Act, 1980. The MoEF & CC, Government of India, New Delhi vide letter no F.No-8-116/2002-FC (vol-I) dated 20.10.2016 have accorded "**In principle Approval**". In the said order, a set of conditions have been stipulated for compliance before according final approval. The condition no (xxix) needs de-siltation of village tanks and other water bodies located within 5 Km from the mine lease boundary to be taken up to mitigate impact of siltation such tanks / water bodies. The condition reads as follows.

### **Condition No (xxix):**

*The User agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mining lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer, The User agency shall regularly undertake de-silting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks / water bodies. A detail plan for de-silting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF&CC before Stage-II approval."*

This scheme is prepared with an aim to comply the condition stated above.

## **2. Locational details**

Mahagiri Mines (Chromite) of IMFA Ltd is located in village Kaliapani in Sukinda tahasil of Jajpur District, Odisha. The lease area falls under Survey of India Topo sheet No.73G/16 (New No F45N16) and is bounded by Latitude: 21° 01'16.60" to 21° 01' 56.85"N; Longitude: 85° 46' 24.94" to 85° 47' 13.58"E.



After field visit by expert group, it is observed that the following tanks / water bodies fall within 5 Km from boundary of the mining lease area which need de- silting.

Sl No	Name of the village	Status of the Pond Owner ship.	Size. In Meter	Area in sq.M	Perimeter in Meter	Location	
						Latitude	Longitude
1	Ostia	Govt.	100x60	6000	320	21°03'15.8"N	85°46'18.7"E
2	Saruabil	Govt.	90x54	4860	288	21°03'20.087"N	85°49'11.989"E
3	Gurjang	Govt.	75x57	4275	264	21°03'43.996"N	85°47'17.286"E
4	Sukrangi	Govt.	45x46	2070	182	21°02'41.679"N	85°48'11.431"E
5	Kalarangiata	Govt.	68x42	2856	220	21°01'10.490"N	85°45'55.69"E
6	Rankia	Govt.	135x55	7425	360	21°00'59.054"N	85°50'57.387"E
7	Pimpudia	Govt.	127x120	15240	494	21°00'40.213"N	85°50'25.316"E
8	Kakudia	Govt.	75x64	4800	278	21°00'35.984"N	85°46'45.666"E
9	Giringmali	Govt.	40x35	1400	150	21°00'01.412"N	85°48'23.423"E
10	Kaduabandi	Govt.	70x50	3500	240	20°59'34.373"N	85°49'09.939"E
11	Kusumundia.	Govt.	90x55	4950	290	20°59'36.576"N	85°46'18.204"E
12	Kakudia (Purna panasia)	Govt.	40x30	1200	140	21°00'51.3"N	85°47'39.8"E
13	Jharanasahi	Govt.	30x25	750	110	21°01'14.5"N	85°48'56.7"E
14	Karadagadia (I)	Govt.	50x40	2000	180	21°00'53.0"N	85°49'08.4"E
15	Karadagadia (II)	Govt.	30x15	450	90	21°01'21.2"N	85°49'28.5"E
16	Giringamali	Govt.	30x15	450	90	21°00'48.6"N	85°48'59.3"E
17	Damnagar	Govt.	35x30	1050	130	21°01'33.8"N	85°49'56.2"E

Table 1LIST OF TANKS TAKEN UP FOR DE-SILTING.

(NB: out of 17 ponds / water tanks sl no 1-11 has been included in the similar scheme of OMC Ltd against South Kaliapani Chromite Mines. Sl no 15,16 & 17 will be taken up for this scheme. Balance Sl no 12,13,14 has been taken up by M/s IMFA for similar type of scheme against Sukinda Mines (Chromite) )

As such the following Ponds now considered for this scheme. These are as follows.

Sl No	Name of the village	Status of the Pond Owner ship.	Size. In Meter	Area in sq.M	Perimeter in Meter	Location	
						Latitude	Latitude
15	Karadagadia (II)	Govt.	30x15	450	90	21°01'21.2"N	85°49'28.5"E
16	Giringamali	Govt.	30x15	450	90	21°00'48.6"N	85°48'59.3"E
17	Damnagar	Govt.	35x30	1050	130	21°01'33.8"N	85°49'56.2"E

Table 2Ponds considered for this scheme

### 3. Topography:

The ponds are mostly on plain terrain. They are situated close to habitation.

### 4. Soil type.

The soil is hard and lateritic. The pond silt is basically of clay, silt and sand. The silts are soft and easily can be removed. The depth of siltation as observed varies from 30cm to 200cm. On an average 115cm or say 1 meter / 1.50 meter silt is proposed to be removed.

### 5. Climate:

The tract experiences a tropical climate. The rainfall is experienced from June- September. The summer is extremely hot & humid. The temperature rises up to 47<sup>o</sup>c during May. The average rain fall is about 1500mm.

### 6. Drainage:

The drainage pattern is decided by Mahagiri hill range & Daitari Hill Range. The Sukinda valley drains to Damsal Nalla which ultimately drains to Brahmani River after flowing about 29km. The nallas are as follows:

Sl No	Name	Distance from the project site in km	Flow Direction	Nature
1	Damsal nalla	~1.0km	N-NW	Perennial
2	Kanchamua nalla	~5.5	NW	Seasonal
3	Langal kantia nalla	~7.0km	NW	Seasonal
4	Pandara nalla	~5.5km	S	Seasonal
5	Sasubhuasuni nalla	~7.0km	N-NW	Seasonal
6	Petapet nalla	~9.0km	W	Seasonal
7	Nadi barana nalla	~4km	W	Seasonal
8	Pua gadhua nalla	~4.0km	W- NW	Seasonal
9	Patna nalla	~4.5km	N	Seasonal

Table 3 LIST OF NALA COMING WITHIN BUFFER ZONE.

### 7. Factors of siltation

Generally siltation is seen in ponds, lakes and other type of water bodies. The quantum of siltation varies in these places due to degree of deposition or setting of soil eroded from the locality, decaying of fallen leaves, grasses etc. and decomposed organic materials settled at bottom of ponds / water bodies. Mainly soil erosion causes siltation for ponds in this area along with washing away of other decomposed materials. Higher gradient and excess rainfall causes soil erosion from waste dump, excavated areas, naturally denuded surface etc. Air borne sand/dust along with vegetative materials falling on the pond / water bodies also attribute to siltation. Due to siltation there is decrease in the depth of the pond / water bodies and



obviously the storage capacity decreases. Therefore, de-siltation is essential at regular intervals by adopting various measures to ensure availability of water to the required extent i.e. as per capacity of the water bodies.

## 8. Methodology for De-siltation

Keeping in view the site condition it is proposed to take up de-siltation on a cycle of three year basis (i.e. each pond will be de-silted thrice within the plan period over 10 year) particularly during summer months when the pond / water bodies are dried up with exposed silts. Removal of silts is to be done either manually or mechanically basing on ground condition and quantity of silts accumulation. Silt accumulation occurs in the basal area of the tank which is roughly estimated to be 30% less of the aerial area. The estimated quantum of silt that is required to be removed is given in the table.

Sl No	Name of the village	Surface area in sq.M	Silt area to be operated in sq.m.	Quantum of Silt to be removed in M <sup>3</sup>	Estimated Cost in Rs. (Earth Work Only)	Method of Excavation.
1	Karadagadia (II)	30x15	364	546	74147	Mechanical
2	Giringamali	(30+6)/2 x15	208	416	56493	Mechanical
3	Damnagar	35x30	924	1155	156849	Mechanical
	Total			2117	287489	

Table 4 COST ESTIMATE

During excavation the excavated silt are to be put on the embankment of the pond with top height at least of 1 meter and base width 2.5meter basing on availability of land on periphery. The soil on embankment to be compacted and two inlets and two outlet pipes are to be fixed in the embankment (6" diameter PVC pipe or Cement Pipe). At least 10 saplings with bamboo gabion are to be planted on the North – South embankment.

## 9. Execution Planning.

As indicated above de-siltation will be carried out in a three year cycle. All the ponds will be de-silted thrice in the plan period.. The year wise work programme is as follows.

Sl No	Name of Village	Year of Execution									
		16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
1	Karadagadia (II)										
2	Giringamali										
3	Damnagar										

Table 5 EXECUTION PLAN.

NB- The blue colour represents year of execution of the pond concerns.

From the above it may be seen that each year one tank will be de-silted.

### 10. A. Cost estimate:

As per schedule of rate for earth work "Earth work in excavation by mechanical means (hydraulic excavation means over areas exceeding 30cm depth 1.5m in width as well as 10sqm. On plan including disposal of excavated earth lead up to 50 m and lift up to 1.5m disposal earth to be leveled and neatly dressed etc complete @Rs135.80/ cum. Basing on volume of earth work as indicated above Table No, cost estimate to be calculated. In addition cost of Inlet / outlet pipes, planting of 10 no of saplings at each pond an additional cost of Rs 5000/- per tank to be added. Year wise cost factor is calculated as follows.

### B. Year wise financial break up

Year	Name of Pond to be taken up	Volume of Earth work	Cost @Rs135.80/ cum	2% contingency	Fixing of Pipe etc.	Total Cost. In Rs
2016-17	Karadagadia (III)	546	74147	1483	5000	80630
2017-18	Giringamali	416	56493	1130	5000	62623
2018-19	Damnagar	1155	156849	3137	5000	164986
2019-20	Karadagadia (II)	364	49431	989	0	50420
2020-21	Giringamali	312	42370	847	0	43217
2021-22	Damnagar	924	125479	2510	0	127989
2022-23	No Work					
2023-24	Karadagadia (II)	546	74147	1483	5000	80630
2024-25	Giringamali	416	56493	1130	5000	62623
2025-26	Damnagar	1155	156849	3137	5000	164986
	Total Cost				Rs 8,38,104 or say 8.38 lakh	

Table 6 FINANCIAL BREAK UP

(Rupees Eight lakh thirty eight Thousand Only)

### 11. Execution:

This project of De-siltation of Village tank will be carried out by the user agency either by him or by outsourcing under their overall supervision.

### 12. Inspection and Monitoring.

The manner of execution & periodical monitoring will be made by the M/s IMFA Ltd authority. The Execution and achievements may be reviewed by the Divisional Forest Officer, Cuttack from time to time as possible. In case of some dispute if the earmarked tank could not be de- silted in assigned year it may be executed in the next year along with the next year's programme. If it will not be possible in the subsequent year then the site may be changed by the approval of DFO, Cuttack.



### 13. Conclusion:

After successful completion of the project it is felt in addition to ground water re-charge, the villagers / animals / birds will also get sufficient water during summer and the pond will not dry out throughout the year.



"CHANDANAM" a Forest & Wildlife Consulting Society has been assigned by the User Agency to prepare this scheme.

Prepared & submitted accordingly.




(B. Maharana OFS SB-I Rtd)

Dy. Conservator of Forests.

  
**Forest Range Officer**  
**Sukinua Range**

(Sri NK Rout, IFS. Rtd)


Dy. Conservator of Forests.



Signature of Project PropONENT.


  
**Divisional Forest Officer**  
**Cuttack Forest Division**

*Approved for Rs. 8,38,000/-  
(Rupees Eight Lakh & Thirty Eight thousand) only.*

  
**Regional**  
**Chief Conservator of Forests**  
**Amal Circle**



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*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore.*

**ANNEXURE-A13**

**UNDERTAKING**

*We do hereby undertake to state that, we shall implement and execute desilting of the village tanks and other water bodies located within 5 KM from the mine lease boundary as per the approved scheme with due consultation with DFO, Cuttack Forest Division.*

**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**



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**ANNEXURE-A14**

### UNDERTAKING

*We do hereby undertake to submit an annual self-compliance report indicating status of implementations against the conditions stipulated in the approval accorded for diversion of said forest land to the State Government, concerned Regional Office and this Ministry by the end of March every year.*

**(Sanjeev Das)**

*Sr. Vice President & Constituted Attorney*



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**ANNEXURE-A15**

**UNDERTAKING**

*We do hereby undertake to comply with any other conditions that the Eastern Regional Office of this Ministry, Bhubaneswar and State Government of Odisha may stipulate from time to time, in the interest of conservation, protection and the development of development of forest & wildlife.*

(Sanjeev Das)

Sr. Vice President & Constituted Attorney





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Odisha, India

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L27101OR1961PLC000028

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+91 674 2580300  
FAX +91 674 2580020  
+91 674 2580145

mail@imfa.in

www.imfa.in

*Proposal for diversion of 7.397 Ha forest area as per Sabik records as on 25.10.1980 being submitted with pursuance to the MoEF&CC circular No. F.No.8-78/1996-FC, dated 10.03.2015 in respect of Mahagiri Mines (Chromite), Village: Kaliapani, Dist: Jajpur, Odisha, of M/s. Indian Metals & Ferro Alloys Ltd for mining of chromite ore,*

**ANNEXURE-A16**

### **UNDERTAKING**

*We do hereby undertake to ensure compliance to provisions of all Acts, Rules, Regulations, Guidelines & Hon'ble Court Order(s) for the time being in force, as applicable to the project.*



**(Sanjeev Das)**

**Sr. Vice President & Constituted Attorney**



19<sup>th</sup> September, 2016

**Divisional Forest Officer**  
Cuttack Forest Division  
Ghatakula, Nuapada  
Cuttack

IMFA Building  
Bhubaneswar-751010  
Odisha, India

Corporate Identity No.  
127101081965MUC00428

TEL +91 674 3051000  
+91 674 2580100  
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**Sub: Submission of Certificate provided by State Bank of India towards deposit of differential cost of Regional Wild Life Management Plan in respect of Mahagiri Mines ( Chromite) through e-payment.**

**Ref: Your office demand letter vide memo no.7703 dated 10.08.2016**

Sir,


With reference to the above, we are attaching here with the certificate received from State Bank of India for deposit of Rs.12,54,209/-(Rupees twelve lakh fifty four thousand two hundred nine only) in favour of ORISSA CAMPA in Corporation Bank, A/c No. 15082MIN187292016480 payable at Bangalore vide UTR No.SBINR52016091634462538 dated 16.09.2016 through e-payment module as per the online RTGS challan for Ad-HOC CAMPA dated 14.09.2016 towards differential cost of Regional Wild Life Management Plan in respect of Mahagiri Mines ( Chromite) of M/s.IMFA Ltd.

*Received*  
*21/9/16*

This is for your kind information and necessary action at your end.

Thanking you,

Yours faithfully  
For: Indian Metals & Ferro Alloys Ltd

  
(Sanjeev Das)  
Sr.Vice President  
Head-Mining Business Unit.

Enclosed- As Above.

CC: Principal Secretary, F&E Deptt, GoO, Bhubaneswar  
CC: PCCF, Odisha, Aranya Bhawan, BBSR  
CC: Addl. PCCF(C), MoEF & CC, Regional Office, BBSR.  
CC: Addl. PCCF(NO & FD, FC Act), Aranya Bhawan, BBSR.  
CC: RCCF, Angul Circle, Angul  
CC: AIG of Forests, MoEF&CC, GoI, New Delhi  
CC: Collector, Jajpur, Odisha

## AGENCY COPY

NEFT/RTGS CHALLAN FOR AG-HODS GAMPA

Date: 14/09/2016

Agency Name:	Indian Metals & Ferro Alloys Ltd
Application No.	MIN187292016480
Location:	ORRISA
Address:	Miner Mangga, Sakinda Miner (Chromite), MS- MISA Jagpur
Amount/In Rq	1254203/-

Amount in Words: Twelve Lakh Fifty-Four Thousand Two Hundred and Nine Rupees Only

NEFT/RTGS to be made as per following details:

Beneficiary Name:	ORRISA GAMPA
IFSC Code:	ORRP0000535
Pay to Account No.	1608260187292016480
Bank Name & Address:	Corporation Bank FOS Bangalore 24/1, 3rd floor, Jilla Tower, High Road Bangalore -560027

This Challan is to be used for making payment to GAMPA by NEFT/RTGS only

## BANK COPY

NEFT/RTGS CHALLAN FOR AG-HODS GAMPA

Date: 14/09/2016

Agency Name:	Indian Metals & Ferro Alloys Ltd
Application No.	MIN187292016480
Location:	ORRISA
Address:	Miner Mangga, Sakinda Miner (Chromite), MS- MISA Jagpur
Amount/In Rq	1254203/-

Amount in Words: Twelve Lakh Fifty-Four Thousand Two Hundred and Nine Rupees Only

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Beneficiary Name:	ORRISA GAMPA
IFSC Code:	ORRP0000535
Pay to Account No.	1608260187292016480
Bank Name & Address:	Corporation Bank FOS Bangalore 24/1, 3rd floor, Jilla Tower, High Road Bangalore -560027

This Challan is to be used for making payment to GAMPA by NEFT/RTGS only

For making successful payment, User Agencies may send a line of confirmation through email to [indianmetals@corpbank.co.in](mailto:indianmetals@corpbank.co.in)



ଭାରତୀୟ ରେଷ୍ଟ ବ୍ୟାଙ୍କ  
भारतीय स्टेट बैंक  
State Bank of India

ବାଣିଜ୍ୟିକ ଶାଖା : ଚକ୍ରବର୍ତ୍ତୀ ଶାସନ, ପୁରୀ-୧୨, ପରମାର୍ଜ ଶାସନ  
 ପୁରୀ-୧୨, ୭୩୧ ୦୦୩, ଡି.ପି. ଶାସନ (କର୍ତ୍ତବ୍ୟ)  
 ଶାସନିକାଳୀୟ ଶାସନ : ଚକ୍ରବର୍ତ୍ତୀ ଶାସନ, ପୁରୀ-୧୨, ଅଧ୍ୟାୟ ୧୧, ୧୨  
 ପୁରୀ-୧୨, ୭୩୧ ୦୦୩, ଡି.ପି. ଶାସନ (କର୍ତ୍ତବ୍ୟ)  
 ଶାସନିକାଳୀୟ ଶାସନ : ଚକ୍ରବର୍ତ୍ତୀ ଶାସନ, ପୁରୀ-୧୨, ଅଧ୍ୟାୟ ୧୧, ୧୨  
 ପୁରୀ-୧୨, ୭୩୧ ୦୦୩, ଡି.ପି. ଶାସନ (କର୍ତ୍ତବ୍ୟ)

Tel: (0874) 858415 (DGM), 8534009 (AGM & GOG), 2531438 (AGM & RM-1), 2530018 (AGM & RM-2), 2530077 (AGM & RM-4), 2530012 (RM-3), 8534415 (GM-TR), FAX: (0674) 2535100, 2530415, 2532003, E-mail: sbp00077@npl.npl.npl, SFMS & BAHAMARTIS

WHOMSOEVER IT MAY CONCERN

Notwithstanding the fact that the following transfer is made in favour of DRASA KAMPA Corporation (INC. No. 19082411672001680) payable at Bangalore by depositing SBI Cash Credit A/c No. 1022990878 of Indian Metals & Ferro Alloys Limited.

Favourite—CARISA CARNEA

Date of payment	LTR NUMBER	Amount (₹)
19 September 2016	A.P. 1783 / 2016-17	12,54,200/-

(RUPEES TWELVE LAKH FIFTY FOUR THOUSAND TWO HUNDRED NINE ONLY)

~~CONFIDENTIAL~~





Government of Odisha  
Forest & Environment Department

-0-

No.10F (Cons) 61/2014 3110 /F&E, Bhubaneswar, dated. 14.02.17

From

Sri Debidutta Biswal, IFS,  
Special Secretary to Government.

To

The Assistant Inspector General of Forests,  
Govt. of India, Ministry of Environment & Forest and Climate Change  
(F.C.Division), Indira Paryavaran Bhawan,  
Jor Bagh, Aliganj Road  
New Delhi -110003

Sub: Proposal for diversion of balance 7.397ha. of sabik kiam forest land as on 25.10.1980 in addition to already diverted forest land of 66.38ha. for Chromite mining in their Mahagiri Chromite Mine of 73.777ha in Jajpur District, Odisha under Cuttack Forest Division by M/s Indian Metals & Ferro Alloys Ltd. (Proposal No. FP/ORMIN/18729/2016).

Sir,

I am directed to say that while furnishing above forest diversion proposal to MoEF&CC, it was observed by the State Government that since the previous forest clearance obtained by the lessee was not for underground mining and the environmental clearance under indicating about change of mode of mining to underground, it was suggested then that details of underground mining taken place already in this mine, shall be furnished along with proposal for change of land use pattern for consideration of MoEF&CC, Government of India. In compliance to such observation of the State Government, the Addl. PCCF(Forest Diversion)& Nodal Officer, FC Act has furnished the details with regard to underground mining activities already taken place and changes of land use pattern now proposed by the lessee for the entire ML area vide his letter No. 2215 dt 3.2.2017.

As indicated earlier while furnishing above forest diversion proposal pertaining to diversion of 7.397ha. of sabik kiam forest land, Mahagiri Chromite mines of M/s IMFA Ltd. is having ML area of 73.777ha. comprising of forest land entirely i.e. 66.38ha. of forest land as per Hal record and balance 7.397ha. of sabik kiam forest land as on 25.10.1980 The land use pattern earlier approved for 66.38ha. of forest land as per hal record is as under.

Sl	Purpose	Forest land in ha.
1	Mining/quarry	34.22
2	Storing of minerals/top soil	5.62
3	Storing of tools and machinery	0.86
4	Construction of road/ropeway/railines	4.18
5	Future exploration	19.03
Total		63.91
Safety zone		2.47ha.
Grand total		66.38

The land use pattern proposed for sabik kisan forest land of 7.397ha. is as under, which is yet to be diverted.

Sl. No	Purpose	Sabik kisan forest land ha.
1	Dumping of Overburden / sub grade ore	5.09
2	Mineral storage	0.805
3	Construction of Road	0.892
4	Safety Zone	0.61
Total		7.397

The lessee has now proposed for undertaking underground mining in this mining lease as per change in land use for the entire ML area of 73.777ha., which is as under.

Sl	Purpose	Forest(both bal and sabik) land in ha.
1	Area under Mining (Existing and proposed)	35.503
2	Over burden dump	5.09
3	Mineral and Sub-grade ore storage, processing plant	17.166

4	Storing of top-soil	0.25
5	Essential mining infrastructures	9.837
6	Roads	2.851
7	Safety zone	3.08
<b>Total</b>		<b>73.777</b>

The lessee has furnished the following documents/maps for perusal and consideration of its proposal for changes in land use plan in this lease which are enclosed in a volume attached herewith.


Sl. No.	Description of maps/documents	Annexures.
1	Details of land use pattern as earlier diversion, approved scheme of mining, sabik forest land applied for diversion	I
2	Map showing proposed Land use plan	II
3	Scheme of Mining(2015-16 to 2019-20)	III
4	Change in land use pattern for underground mining and allied activities for ML area of 73.777ha, duly authenticated by DDM, Jajpur road and DFO, Cuttack	IV
5	Index map showing proposed changes in land use plan duly authenticated by DDM, Jajpur road and DFO, Cuttack	V
6	DGPS surveyed map of ML area duly authenticated by ORSAC and DFO, Cuttack	VI
7	Note on the details of underground mining already taken place in the ML area authenticated by DDM, Jajpur road and DFO, Cuttack	VII
8	Underground Upto date Development Plan and Sections of ML area	VIII

From the Annexure VII, it is ascertained that underground mining activities have already taken place in the mining lease in violation of land use plan earlier approved by the MoEF, GoI vide their letter F.No. 8-116/2002-FC dt. 18.5.2005 in favour of ICCL(now IMFA Ltd.). Thus MoEF&CC, GoI may take note of the violation of land use plan committed by the lessee and impose appropriate penal measures for compliance by the lessee.




In view of the fact that change of mode of mining i.e. underground mode of mining has taken place in view of land use plan in the approved scheme of mining and environmental clearance order also mentions about underground mining in this lease, MoEF&CC, GoI may consider the changes proposed in land use plan of entire ML area of 73.777ha. subject to fulfillment of stipulations to be imposed by the Central Government.

Yours faithfully

 14/2/17  
Special Secretary to Government


Memo No. 3111 /Dt. 14.02.17

Copy along with the copy of enclosures forwarded to the Additional Principal Chief Conservator of Forests (Central), Government of India, Ministry of Environment, Forests and Climate Change, A/3, Chandrasekharpur, Bhubaneswar for information and necessary action..

 14/2/17  
Special Secretary to Government


Memo No. 3112 /R&E., Dated- 14.02.17

Copy forwarded to the Pr.C.C.F., Odisha /Principal Chief Conservator of Forests(WL) & CWLW, Odisha for information & necessary action with reference to letter No. 2215 dt. 3.2.2017 of PCCF, Odisha.

 14/2/17  
Special Secretary to Government


Memo No. 3113 /Dated. 14.02.17

Copy forwarded to the Regional Chief Conservator of Forests, Angul Circle/ Divisional Forest Officer, Cuttack Forest Division for information and necessary action..

 14/2/17  
Special Secretary to Government


Memo No. 3114 /Dated. 14.02.17

Copy forwarded to the Steel & Mines Department/ Collector, Jajpur for information and necessary action.

 14/2/17  
Special Secretary to Government

Memo No. 3115 /Dated. 14.02.17

Copy forwarded to the M/s Indian Metals & Ferro Alloys Ltd, IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar-751010, Odisha for information and necessary action.

 14/2/17  
Special Secretary to Government